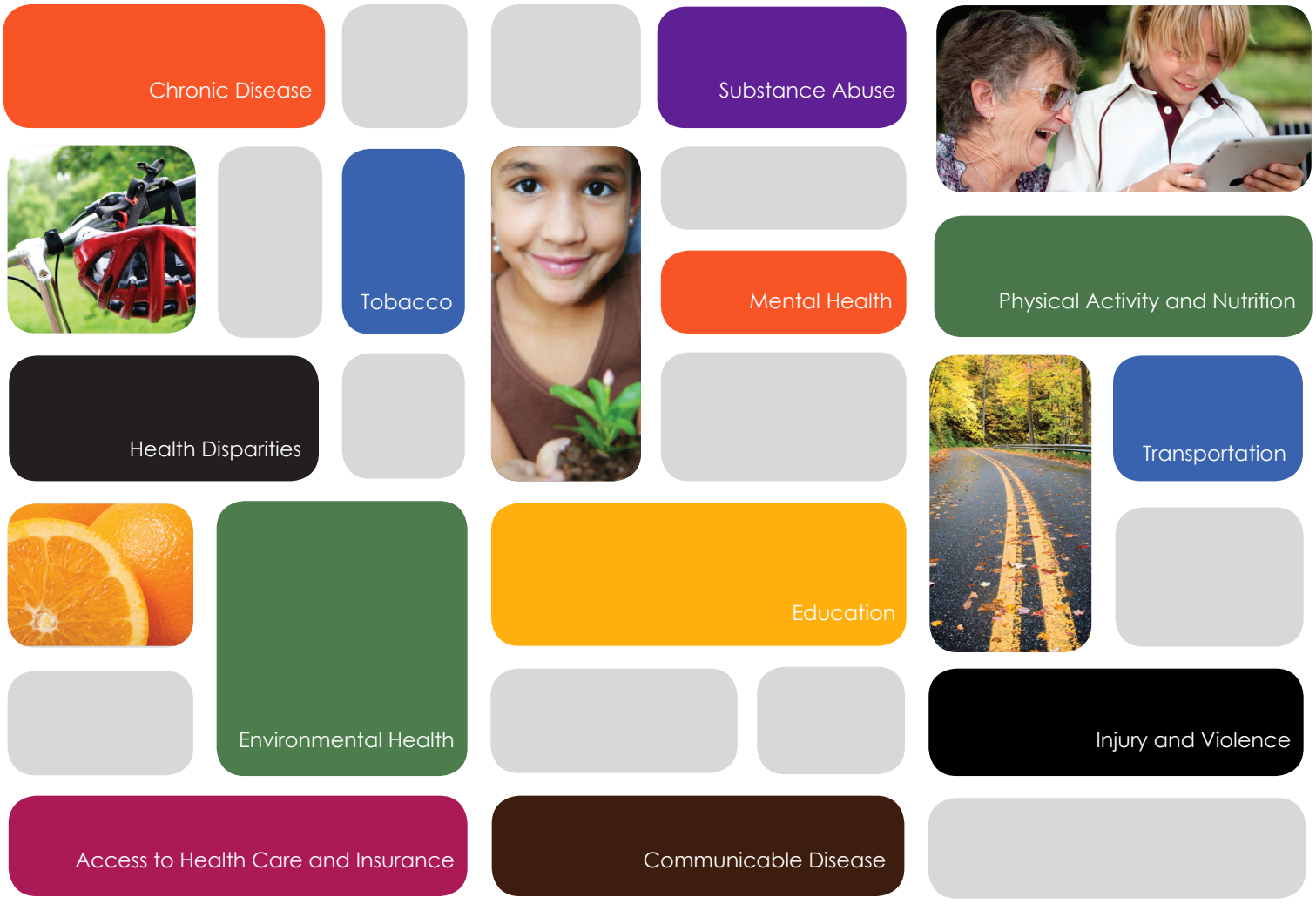
2011 ORANGE COUNTY COMMUNITY HEALTH ASSESSMENT



FULL REPORT

Submitted to the Division of Public Health, North Carolina Department of Health and Human Services by the Orange County Health Department and Healthy Carolinians of Orange County

December 2011

Orange County Health Department NCPH North Carolina Public Health

Healthy Carolinians of Orange County

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Community Health Assessment

Orange County, NC

Submitted to the North Carolina Department of Health and Human Services Division of Public Health

By the Orange County Health Department and Healthy Carolinians of Orange County

Healthy Carolinians of Orange County

Table of Contents

Dedication

Thank you to all Orange County residents both for your awareness of the community's health strengths and needs; and for your willingness to share your thoughts, opinions, and experiences with the Orange County Community Health Assessment Team.

May the ideas, projects, and solutions that evolve from this process be driven by and for members of the Orange County community.

Acknowledgements

This assessment would not have been possible without the help and support of many individuals and groups who work and live in Orange County. The Orange County Health Department and Healthy Carolinians of Orange County would like to thank the following individuals and groups for their assistance during the course of this assessment:

- The Community Health Assessment Leadership Team and all of the Healthy Carolinians partners and member agencies for their dedication and guidance in making this assessment a truly collaborative, *community-based* assessment by both being involved and involving others from all over Orange County in this process. See Appendix A for a full list of Community Health Assessment Team members and Appendix B for a list of individuals who contributed to each of the sections.

- The many volunteers who helped conduct the Community Health Assessment Surveys. Thanks to their help, valuable data from community members was collected and incorporated into this document, ensuring that the community's voice was heard throughout the process. A special thank you to Amanda Bartolomeo for helping to recruit and coordinate volunteers and to the Health Department's CERT/PHRC volunteers. See Appendix C for a list of volunteers.

- All of the community members who agreed to complete a survey, participated in a focus group, attended a community forum or annual meeting, provided valuable information about the health of Orange County, and helped prioritize issues that are most important to us.

- The Orange County Board of Health and the Orange County Board of Commissioners for their support of the community involvement process.

- Brian Carson, Steve Averett, and Miriam Coleman for assistance with survey sampling and GIS mapping.

- UNC Gillings School of Global Public Health, Biostatistics Professor Dr. Mike Bowling for assistance with survey sampling methods and instrument design.

- Michael Dolan Fliss for his help with survey data entry, analysis and reporting; as well as co-leading the community forum data presentations and assisting with report writing. Alicia Sparks for assisting with focus group transcription, Atlas TI analysis, and writing. A very special thank you to both for their enthusiasm, dedication, and thoughtfulness; and for their balanced and respectful reporting of many community voices.

- Wanda Hunter, David Caldwell, Elvira Mebane, Myra Austin, and Alexandra Lightfoot for their involvement with the Community Forum Planning committee. Thank you for trusting the process; and for making sure people were represented and heard throughout.

- Susan Clifford, Pam Diggs, Deborah Hamlin-Aggrey, Renee Kemske, Donna King, Iole Nall, and Candice Watkins-Robinson, of the Health Promotion and Education Services Division of the Orange County Health Department. Thank you for your tireless support, patience, enthusiasm, encouragement, and involvement. Go Team! High fives all around.

- Dr. Cheryll Lesneski and the spring 2011 PUBH 745 students at the UNC Gillings School of Global Public Health for their contributions to secondary data collection.

- Orange County Health Directors, Dr. Rosemary Summers (retired May 2011) and Dr. Dorothy Cilenti (Interim, June–October 2011), and Dr. Colleen Bridger (current) for their support and guidance throughout the assessment. Thank you for helping ensure the transition between leadership has been smooth, and that the community health assessment process remained strong throughout, from beginning to end.

- Orange County Health Department Staff for their contributions to this effort as members of the Leadership Team, section leaders, lead writers, and survey volunteers.

This assessment process was coordinated, and report compiled and edited by Nidhi Sachdeva, MPH, CHES, Healthy Carolinians Coordinator and Senior Public Health Educator for the Orange County Health Department. The second reader and editor was Dr. Dorothy Cilenti, Interim Health Director, Orange County Health Department.

Executive Summary

The 2011 Community Health Assessment (CHA) is intended to enable local public health officials to monitor trends in health status, determine priorities among health issues, and determine the availability of resources within the Orange County community to adequately address these priorities. The document seeks to be useful, relevant, actionable, and both reflective and forward-looking. It seeks to provide information for effective strategic community health planning.

The Orange County Health Department, and the Healthy Carolinians of Orange County (HCOC) task force with its 125 individual members from 80 partner agencies and community representatives, have worked collaboratively to complete the community health assessment. The proposed community health priorities were selected in September 2011 at the HCOC Annual Meeting.

Assessment Process

The CHA report is based on both primary and secondary data sources; and the participation of hundreds of individuals in various roles from November 2010 to December 2011. Secondary data was gathered from a wide range of sources that are cited throughout the document. To ensure that the true needs of the community were identified and addressed, the assessment process involved the community at every phase, including planning, data collection, evaluation, identification of health issues and community strengths, and the development of strategies to address identified problems.

A Community Health Opinion Survey (N=160) was used to collect primary quantitative data. Since one of the primary goals of the Healthy Carolinians of Orange County task force is to address health disparities and to identify needs of populations who are most disadvantaged, survey households were sampled from census blocks with the highest poverty percentage. Out of 700 households attempted, 160 individuals completed the 110 question survey. The survey, carried out by a team of 90 volunteers, and administered in multiple languages, covered various health topics, including quality of life in Orange County, community improvement, health information, personal health, family health/access to care, environmental health, emergency preparedness, health department services, and demographics. Survey findings are presented throughout the document under the *Quantitative Data: Survey* subheading.

In addition, nine focus groups were conducted, to give traditionally hard-to-reach populations an opportunity to share, and to gain a more well-rounded understanding of residents' health concerns in Orange County. Questions included in the focus group guide were intentionally broad, and explored definitions of health, community strengths, barriers to accessing care and information, etc. After this, five open community forums were held at different locations in Orange County, and nearly 200 residents participated. County residents were presented with the main findings from the quantitative survey and focus groups. The CHA's community-based qualitative findings are presented throughout the document under the *Qualitative Data: Focus Group* subheading.

Report Structure

The report is organized by chapters and sections that reflect key health areas, such as: social and economic determinants of health, like education, access to health care, transportation, and the built environment; physical and mental health; and environmental health. Each topic area in Chapters 4-9 is separated into subsections. The subsections address the impact and contributing factors on

health; the Healthy NC 2020 Health Objectives (if applicable); secondary data; community survey and focus group primary data results; an inventory of resources; a brief discussion on gaps, unmet needs, and emerging issues related to each specific topic area; and, when possible, a list of recommended strategies to consider in addressing the issue.

In discussing the health status and health-related issues in Orange County, the report covers most, if not all, of the topics covered in the 2009 report titled *Prevention for the Health of North Carolina: Prevention Action Plan*, prepared by the North Carolina Institute of Medicine (NCIOM) Task Force on Prevention; and it takes into account the objectives, strategies, and targets recommended for 2020 in each of the focus areas covered by the 2011 report titled *Healthy North Carolina 2020: A Better State of Health*, prepared by the NC Department of Health and Human Services, Office of Healthy Carolinians/Healthy Carolinians Governor's Task Force, and the NCIOM.

The report thus discusses Orange County health status in relation to the focus areas highlighted in the Healthy NC 2020 report. These thirteen areas are: tobacco use; physical activity and nutrition; injury and violence; maternal and infant health; sexually transmitted disease and unintended pregnancy; substance abuse; mental health; oral health; environmental health; infectious disease and foodborne illness; social determinants of health; chronic disease; and cross-cutting aspects.

For each of these focus areas, the Healthy NC 2020 report provides the current (2008/2009) status and 2020 targets; and these are the basis for the 2011 CHA report's discussion of OC's health status, progress, and planned or needed actions. In some instances, Orange County's current rates are already better than the 2020 targets.

Recent Progress

Orange County is doing reasonably well in terms of the health of its residents, though further progress is needed in some areas. Some indicators of recent progress are given below:

Health Rankings Data: Orange County is the second overall healthiest county in the state, according to 2011 County Health Rankings data. This data, published annually by the Robert Wood Johnson Foundation, allows residents to look at how healthy their county is, and to compare this to other counties in the state and nation. According to the latest report, Orange County ranked first for each health factor category except for physical environment where the county ranked 31. The county ranked second for mortality, and second for morbidity. The county's morbidity score decreased by two points since the 2010 report.

Health Self-Reports: Self-reported health is another relevant measure of overall population health. According to 2009 Behavioral Risk Factor Surveillance Survey data, 87.2% of Orange County adult residents rated their health as good, very good, or excellent, exceeding the state's current benchmark of 81.9%. This self-assessment was corroborated by the Community Health Opinion Survey conducted for this 2011 CHA. Of those who responded to the survey, a total of 81% self-reported that their overall health is excellent (23%), very good (35%), or good (23%). About 17% reported fair health, and 2% poor health.

Causes of Death: The leading causes of death in Orange County are very similar to the leading causes in the state of North Carolina. For Orange County in 2005-2009, the top five leading causes of death were cancer, diseases of the heart, cerebrovascular diseases, chronic lower respiratory diseases, and unintentional injuries. For each of these, the percentages and overall

pattern were roughly the same in Orange County and in NC. The age-adjusted death rates for Orange County were consistently below the rates for NC, for all of the top-10 causes of death except for suicide where it was slightly higher.

Causes of Hospitalization: The leading causes of hospitalization in Orange County and North Carolina are important, both as indicators of health status and drivers of health cost. In general, the ten leading causes of hospitalization are similar in Orange County and in North Carolina. In the county and state, cardio-vascular and circulatory diseases, pregnancy and childbirth, digestive system diseases, injuries and poisoning, and other diagnoses (including mental health) rank among the five leading causes of hospitalization.

Hospital Stay Rate: The "days stay rate" is an indicator of the time spent by a patient in the hospital, on average, for each of the leading causes of hospitalization. This rate is consistently lower in Orange County than in North Carolina.

Life Expectancy: The average life expectancy in Orange County, based on 2006-2008 numbers, is 80.8 years. The comparable figure for the state of North Carolina is 77.3 years.

Continuing Disparities

In Orange County, as in other parts of NC and the United States, health status depends in part on where one lives and the individual's racial, ethnic, and economic status. Some aspects of health disparities in Orange County are the following:

Race: A lifetime of health disparities shortens the lives of People of Color. The average life expectancy of African Americans living in Orange County is 76 years, while their white counterparts are expected to live until 81.3 years. Also, per CHA survey results, People of Color were 10% less likely to self-report very good or excellent health, and 10% more likely to report poor or fair health than white people.

In Orange County, as elsewhere in the state and nation, significant racial differences in morbidity and mortality continue to be documented. For example, during 2005-2009, the rate of death from diabetes complications for minority residents in Orange County was 3.4 times that of white residents. And the rate of minority-race infants born with low birth weight (and at risk for a host of developmental complications) in recent years was close to twice that for white infants. With a growing Latino population in Orange County, as well as elsewhere in the United States, it is important to increase an understanding of how to sustain good health among immigrants, refugees, and their offspring.

Ethnicity: Due to their cultural and linguistic diversity and their unfamiliarity with the US health care system, recent immigrants and refugees in Orange County face special challenges in accessing healthcare. Barriers related to language, health insurance, the high cost of health care, and the need for healthcare orientation and education are recurring themes among both groups. Both immigrants and refugees have voiced a need for better patient/provider communication, and the Latino community leaders in particular have emphasized a need for more/quicker appointments at the health centers that charge on a sliding-scale, where these populations tend to seek services.

Gender: The average life expectancy in Orange County, based on 2006-2008 numbers, varies by gender. Life expectancy for males living in Orange County is 78.5 years, while females are expected to live to 82.7 years. However, self-reports of health were not different by gender.

Income: It is expected that socio-economic status may significantly impact Orange County and NC life expectancies (due to availability of care, quality of life, etc.). However, among those responding to the Community Health Opinion Survey undertaken for this CHA, the highest income bracket was 10-20% more likely to characterize their health as excellent or very good than the lower two income brackets.

Place: Neighborhood conditions have an indirect effect on health by impacting the ease with which residents can make healthy choices related to diet, exercise, and safety. Where people live may also determine their proximity to environmental hazards, access to clean water and sewer, the quality of schools, the availability of affordable housing, and the opportunity for positive social interactions with neighbors.

Future Priorities

This 2011 Community Health Assessment report addresses these and other issues as they relate to the topics covered in various chapters. Besides covering the progress being made in various areas, the report highlights such aspects as ensuring that disadvantaged communities have greater access to health providers that understand their culture and language, provide affordable preventive services, prescribe effective and efficient treatment for diseases, and provide counseling services that encourage healthy habits, and reduce overall health care costs.

The "Top Ten" concerns of county residents who participated in the community forums are listed below, in the order of the number of votes they received from Forum participants:

1. Access to Health Care/Insurance: This includes the availability of health care services; affordability of services and health insurance; ability to navigate and understand the health system; physical access to services (including transportation and disability access); and information about health care.

2. Chronic Disease, Exercise, and Nutrition: Chronic disease refers to diseases that are long-lasting in nature. Physical activity and nutrition significantly contribute to good physical health. Regular physical activity and good nutrition can help prevent cancer, Type 2 diabetes, heart disease, stroke, and respiratory ailments, and can help one maintain a healthy body weight.

3. Mental Health: This refers to a wide range of conditions that affect one's mood, thinking, and behavior. Broad classes of mental illness include mood disorders (depression, bipolar disorder), anxiety disorders, psychotic disorders (schizophrenia), eating disorders, personality disorders, and addictive behaviors/substance abuse disorders.

4. Transportation: Accessible and affordable transportation is particularly an issue for those with limited incomes, physical or mental disabilities, or living in rural areas. Transportation affects one's ability to access services, employment, healthy foods, recreation, etc. Expanding active transportation (walking and biking) options and safety can help prevent

disease, reduce motor vehicle-related injury and deaths, improve environmental health, and improve equal access to resources.

5. Built Environment: This includes human-made structures such as housing, recreational facilities, sidewalks, streets, businesses, schools, parks, playgrounds and, more broadly, land use patterns. The built environment is important because it impacts both physical and mental health.

6. Cancer: This disease continued to be the leading cause of death in Orange County in 2010. It is estimated that nearly 80% of cancers are due to factors that can be prevented: tobacco use, poor nutrition, lack of physical activity, exposure to radiation, and other environmental factors. Many cancers are highly treatable with advanced screening.

7. Substance Abuse: This refers to the harmful or hazardous use of alcohol, tobacco, and other illegal drugs (including the misuse and illegal use of prescription drugs). It is related to underage drinking, impaired driving, mental health and addiction and injury related to alcohol and drugs.

8. Environmental Health: This includes air quality; drinking, and ground water quality; food safety and protection; sewer systems; solid waste management, and lead hazards.

9. Oral Health: This not only includes tooth and gum health, but other health conditions that may result from poor oral health. Issues in oral health include availability of affordable dental insurance, access to regular and preventive care, and population-specific issues like children's dental health, increasing refugee population needs, and linguistic barriers.

10. Injury: This is the chief cause of death and disability for people under age 44 and may be unintentional like those resulting from motor vehicle crashes, falls, burns, poisonings, drowning, etc.; or violent and intentional including sexual assault, child abuse, partner violence, homicide, and suicide. Like most chronic disease, injuries are preventable.

Subsequent to these community Forums, participants attending the HCOC Annual Meeting were asked to identify the "Top Five" issues on the basis of their importance and changeability. These health priorities, as determined by Annual Meeting participants to be of greatest concern to the Orange County community, were:

1. Access to health care, insurance, and information
2. Chronic disease, exercise, and nutrition
3. Mental health
4. Substance use
5. Injury

Next Steps

It is expected that this CHA report will be widely disseminated, and will influence strategic planning across the community. Healthy Carolinians of Orange County expects to develop a community-wide communication plan to assure broad dissemination of this report so that various entities contributing to the health of Orange County residents could suitably modify their programs, services, and resources to address the community health needs relevant to their stated missions.

The Healthy Carolinians of Orange County Council will also form committees or task forces to determine further actions to be initiated as a result of this report. It is likely that additional analysis of the issues and their underlying causes will be necessary in order to fully understand and respond to the identified needs.

By May 2012, the Healthy Carolinians partnership and committees will develop Community Health Action Plans detailing the strategies to be carried out to address the priority issues. The Partnership will continue to engage in ongoing evaluation, and will encourage collaboration between agencies and community groups to achieve better health outcomes.

It is hoped that this 2011 CHA report and its follow-up activities will be of use to community members and service providers alike, for all are working towards the common goal of making Orange County a healthy place to live, work, and play.

List of Tables

List of Figures

Chapter I Community Health Assessment Process

Section 1.01 Introduction

The NC Department of Health and Human Services requires Local Health Departments to conduct a community health assessment every four years. Regular assessment of a community's health enables local public health officials to monitor trends in health status, determine priorities among health issues, and determine the availability of resources within the community to adequately address these priorities. In addition, information gathered through the assessment lays the foundation for effective, strategic community health planning. A primary goal of the assessment process is to involve the community in every phase of the assessment, including planning, data collection, evaluation, identification of health issues and community strengths, and the development of strategies to address identified problems. Community involvement helps to ensure that the true needs of the community are identified, accurately represented, and addressed.

Information gathered through the assessment lays the foundation for effective, strategic community health planning.

Overview of the Assessment Process

To fully understand the community's perspective on health and determine what health issues the community considers to be most important to address in the coming years, a variety of people were involved in the assessment process. The Health Department, together with Healthy Carolinians of Orange County task force and its 125 individual members from 80 partner agencies and community representatives, worked collaboratively to complete the community health assessment. The assessment process began in November 2010 with the formation of a Community Health Assessment Leadership Team. A broad representation of county residents and staff from strategic agencies and organizations that have a solid understanding of the county and services available were recruited to participate.

The Community Health Assessment Leadership Team, made up of 50+ interested, committed agency and community members, guided the assessment process. The Team met monthly to determine its major tasks; develop a timeline and document outline; design and conduct the community health survey and focus group discussions; form subcommittees for secondary data collection and document writing; and plan the community forums. See Appendix A for a list of the Community Health Assessment Leadership Team members.

Data collection and analysis took place between January and September 2011. Both an opinion survey and targeted focus groups were conducted prior to hosting five community forums. The new community health priorities were selected in September 2011 at the Healthy Carolinians of Orange County Annual Meeting. Chapter 1, Section 2.C outlines the prioritization process and the County's new health priorities are listed in Chapter 2, Section 1. The final assessment was completed in December 2011.

Section 1.02 Methods

1.02.a Organization of Document

Chapter 1 includes an overview of the Community Health Assessment process and methods. Chapter 1, Section 2.C describes the process used to select the community health priority areas based on the data presented in this document and discussions with community members. There is a brief description of the five final priority areas of concern and the next steps in creating the Community Health Action Plans in Chapter 2.

The rest of the document is organized by chapters and sections that reflect key health areas, such as: social and economic determinants of health, like income, race, education, access to health care, transportation, and the built environment; physical and mental health; and environmental health. Each topic area in Chapters 4-9 is separated into subsections. The subsections address contributing factors and the impact on health; the Healthy NC 2020 Health Objectives (if applicable); secondary data; primary data including community survey and focus group results; an inventory of resources; a brief discussion on gaps, unmet needs, and emerging issues related to each specific topic area; and, when possible, a list of recommended strategies to consider in addressing the issue.

Orange County is a resource-rich community when compared to the majority of other counties in the state. Many of the most significant resources related to each specific topic are included under the *Inventory of Resources* subsections. By no means, however, do the resource lists include all resources in Orange County. For a more up-to-date listing of Orange County resources, one may consult the Triangle United Way 211 resource referral and information line or visit the website www.unitedwaytriangle.org. Links to outside resources are included where possible and appropriate. For a more complete, alphabetical list of resources in Orange County, please see Appendix O.

It should also be noted that the Healthy NC 2020 Objectives that are presented in this document are those that were created by the NC Department of Health and Human Services, State Office of Healthy Carolinians, the Governor's Task Force on Healthy Carolinians, and the NC Institute of Medicine in 2010. The Healthy NC 2020 Objectives are meant to represent the entire state. Whenever possible, the 2020 Objectives have been presented along with local data for the purposes of comparison. In some instances, Orange County's current rates already meet or exceed the NC 2020 targets. In other instances, there are little or no data available at the local level (that could be found), to measure against the NC 2020 goal. There are also some topic areas that do not have state objectives set for them.

This report is meant to be as comprehensive as possible. However, the data presented in the document reflect a snap shot in time. New services, programs, and data emerge daily, and given the economic climate, may also be cut or reduced, making it impossible for the document to include all of the most recent data and resources available in the community.

The goal of this document was to publish a report that is easy to navigate and enables the reader to quickly go to the section of interest and obtain information on a chosen topic. In the electronic version, please take advantage of the navigation pane and internal and external links to ease movement through and beyond the document. Internal links are underlined and in green font. External links are underlined and in blue.

An additional goal is for this document to be useful, relevant, actionable, and both reflective and forward-thinking. The Community Health Assessment Leadership Team hopes that this effort will be of use to community members and service providers alike, for all are working towards the common goal of making Orange County a healthy place to live, work, and play.

Working towards the common goal of making Orange County and healthy place to live, work, and play.

1.02.b Data Collection and Analysis

This report was created using both primary and secondary data sources. Primary data consist of new information gathered directly from the community through surveys, interviews, or focus groups. Secondary data is information that has already been collected by someone else.

A Community Health Opinion Survey was used to collect primary quantitative data for this report. Qualitative data were collected through focus groups, interviews, and community forum discussions. The complete survey instrument, focus group guides, and forum discussion questions are included in Appendices G-M in both English and Spanish.

Secondary data for this report were collected in several ways. Statistical data were gathered from local and state-wide organizations, as well as various local, state, and national level surveillance systems. Data on utilization and service delivery were also gathered from local service providers in the community.

Using both primary and secondary data yields in a more in-depth and reliable assessment of the specific factors that affect the community's health. See Appendix B for a list of individuals who contributed to this written assessment.

Primary Data

Quantitative Survey Sampling

Since the overall goal of the Healthy Carolinians of Orange County task force is to address heath disparities and to identify needs of populations who are most disadvantaged, survey households were sampled from census blocks with the highest poverty concentration.

Taking into account population density and to guarantee geographic dispersal of respondents—since much of the county lives outside of city/town limits and the rural/urban experience is very different—the county was divided into four geographic quadrants. Census blocks with the highest poverty rates from each quadrant were selected. From a base population totaling about 25% of Orange County's total population (covering about 20 census blocks), 800 households were randomly selected (200 from each quadrant) from the Orange County Planning/Land use/Tax database of addresses.

Sampling from blocks with a higher poverty rates did not guarantee that every household randomly selected would be low income, but simply that it was *more likely* to be. The goal was to effectively "skew" the data to lower income residents, while still maintaining a decent representation from all income brackets. Leadership Team members were successful in doing just this; and were assisted by Orange County GIS Team members and UNC Gillings School of Global Public Health Biostatistics Professor, Michael Bowling, to ensure adequate sampling methodology given the time available.

Each randomly sampled household was sent a letter stating that the household had been selected for a community health survey, and that volunteers would visit on certain days to request participation in the survey that could be conducted at that time or later. Local law enforcement and neighborhood associations were also notified. A copy of the notification letter sent is included in Appendix E.

Survey Instrument Design

The Community Health Assessment Opinion Survey consisted of 110 questions about various health topics. The survey instrument was adapted from the tool created by the NC State Office of Healthy Carolinians, tailored to fit local needs by the Community Health Assessment Leadership Team, reviewed by UNC Biostatistics Professor, Michael Bowling; and tested by Leadership Team members. Questions were sampled from model instruments that had been previously tested for validity.

The survey had nine sections: 1) Quality of Life in Orange County; 2) Community Improvement; 3) Health Information; 4) Personal Health; 5) Family Health/Access to Care; 6) Environmental Health; 7) Emergency Preparedness; 8) Health Department Services; and 9) Demographics. Questions were primarily multiple choice, with select open-ended opportunities. Surveys were all coded with a unique identification number.

The survey instrument was translated into Spanish. Telelanguage interpreters and translators were available to administer the survey in multiple languages via phone during follow-up calls.

Attempts to recruit selected households and administration of surveys were carried out by a team of 90 field volunteers, over the course of six days—two Fridays, two Saturdays, one Sunday afternoon in March and April and one Thursday evening in May. Field volunteers spent three days in the southern half of the county (south of I-40) and two days in the northern half of the county (north of I-40). To ensure continuity and reliability of data collected, all field volunteers participated in a training which covered safety plans and procedures for conducting surveys (i.e., techniques for conducting unbiased surveys, what to do if someone was not home or chose not to participate, and procedures for non-English speaking residents, etc.). Volunteers conducted surveys in teams of two individuals. Each team was assigned a specific list of addresses grouped by proximity. Surveys were conducted by hand (pen and paper), in person, door-to-door. All survey respondents were given a small incentive and a packet of resource materials for their participation. Households were also given the option to provide a phone number and complete the survey over the phone at a later time if more convenient. In an attempt to include every sampled household in the assessment, the survey was administered in two other languages: four in Spanish and one in Arabic.

Survey Data Analysis, Technologies, and Techniques

Of the 700 surveys attempted, 160 were completed.

Survey data were entered into a customized, form-based Excel database after data collection was complete. Data were then cleaned and analyzed within Excel. Given an explicit health disparities focus, there was interest in not just county averages, but breaking down responses by groups. Therefore, the data were analyzed through custom formulas and pivot-reports, comparing all question responses against multiple categories: age, income, race/ethnicity, and gender. Findings are presented throughout the document under the *Quantitative Data: Survey* subheadings.

Survey Population Demographics

Community informants came from different parts of the county and represented various racial, ethnic, and socioeconomic groups. In order to protect confidentiality and anonymity, no names or addresses are listed.

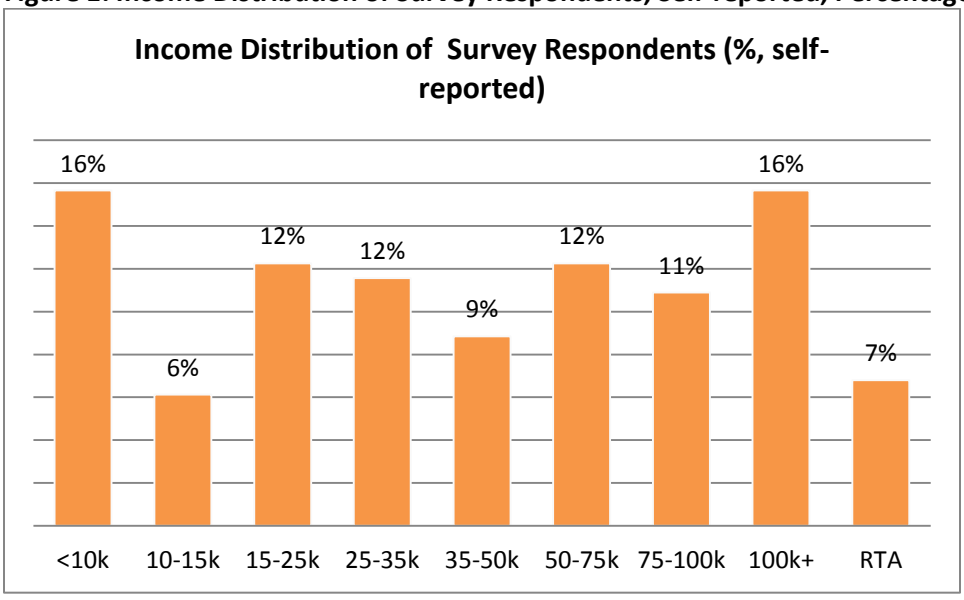
By zip code, 41% of survey respondents live in Hillsborough—the largest zip code in Orange County, covering the most geographic area with a relatively high population density. Twenty-nine percent of survey respondents reside in Chapel Hill, 16% live in Mebane-Efland, and the remaining 14% are in surrounding rural townships/areas.

Table 1: Percentage of Survey Respondents by Zip Code – Town Name

Zip Code - Name	Percentage
27278 - Hillsborough	41%
27514, 27516 - Chapel Hill	29%
27302 - Mebane	9%
27243 - Elfand	7%
27231 - Cedar Grove	5%
27572 - Rougemont	4%
27541 - Hurdle Mills	3%
27705 – Durham (Orange County)	1%

Of survey respondents, 46% had total household incomes of less than $35,000 last year and of these, almost half had household incomes of less than $15,000. Thirty-nine percent of respondents had a self-reported income of over $50,000. This is compared to a median county income (in the US or NC or Orange) of around $55,000, according to US Census data. These income data indicate that the attempt to disproportionately sample lower income households in the county was successful.

Figure 1: Income Distribution of Survey Respondents, Self-reported, Percentages*



**RTA means "Refuse to Answer"*

Average age of those surveyed was 53 years old, with two-thirds between 36 and 69 years of age. Those surveyed identified as 55% female and 45% male (no other gender options were given).

Seventy-nine percent of survey respondents identified as white and 13% as Black or African American, with the remaining 8% identifying as another race or ethnic group. This is representative of 2010 US Census numbers that describe Orange County as 74% white and 12% Black.

For the purpose of analysis and given the small numbers, the respondents who identified as another racial or ethnic group were grouped with the Black/African American respondents into a general "People of Color" category in order to compare health status and risk factors between white respondents and those who identify with a minority racial classification. This approach has drawbacks, however, because wide ethnic, cultural, and health differences may exist within that broad label.

Focus Groups

To complement the quantitative data collected in the survey, qualitative data were gathered from participants nine focus groups (involving 45 adults and 23 youth) conducted in April and May. The goal of the focus groups was to give traditionally hard-to-reach populations an opportunity to share their concerns about health; to further explore areas of interest where data are lacking or hard to interpret; and to gain a more well-rounded understanding of what health concerns are in Orange County.

Focus group guide questions were created by Community Health Assessment Team members and were intentionally broad; questions explored important aspects of good health, community strengths, barriers to good health, including access to health care and information. Follow up questions and prompts were tailored for the specific group.

Focus groups conducted as part of the Assessment were:

- Latino Immigrants
- Mental health consumers
- Older Adults (2)
- People from Burma
- Substance abusers
- Youth – High school (3)

Complete focus group question guides in English and Spanish are included in Appendix I, Appendix J, and Appendix K.

Focus Group Recruitment and Participation

Focus group participants were recruited from existing networks and relationships with relevant agency providers. This helped create a sense of comfort, trust, and sharing between the facilitator and participants, but may have led to an over-representation of participants who were already connected to services.

Each focus group was led by a facilitator who attended a training on how to facilitate, manage group dynamics, and encourage participation, with an orientation to the materials, technology, and question guide. Notetakers were trained on note-taking techniques. Training materials are included in Appendix H.

After being about informed the purpose of the assessment and steps to ensure confidentiality, adult focus group participants were asked to provide verbal consent to participate. Parents of youth participants were mailed passive consent letters with the opportunity to opt out of participation; and youth signed assent forms.

Focus Group Data Analysis, Technologies, and Techniques
All focus groups were digitally recorded, transcribed, coded, and analyzed by a single analyst using Atlas Ti. Each phrase was coded for content for easy sorting and retrieval. Codes for the discrete phrases were generated using both deductive and inductive coding. Deductive codes are those that derive directly from the topics in the question guide or document outline. Inductive codes are those that are added during analysis in order to reflect the content of responses. Codes were reviewed to generate themes. Then theme summaries with code frequencies were written across all groups per topic, and for specific populations (e.g. Latinos, or people from Burma).

Findings are presented throughout the document under the *Qualitative Data: Focus Group* subheadings. As with all focus groups, these results are not generalizable beyond the group of individuals who participated, but the data are potentially helpful in highlighting gaps, specific concerns, and adding richness and increased understanding to the quantitative results.

Focus Group Participant Demographics
Focus Group participants (45 adults and 23 youth; N=68) were asked to respond to several demographic questions in order to better describe their characteristics.

Fifty percent of adult focus group participants had an income of less than $35,000 per year with 29% making less than $15,000. Based on zip code, slightly more adult focus group participants lived in urban areas or within town limits than in the rural parts of the county. The adult groups were 62% female and 38% male with an average age of 52. Two-thirds of adult participants were between 40 and 70 years of age. This possible skew toward older age can be explained by the fact that two of the focus groups were conducted in senior centers and recruited only older adults. The youth focus groups were 74% female and 26% male. The average age was 15 years, with nearly 90% between 14 and 16 years old.

Secondary Data Collection

Secondary data were gathered from a wide range of sources that are cited throughout the document. Major sources of data include the NC State Center for Health Statistics; the US Census Bureau; NC Department of Health and Human Services, Division of Public Health; NC Department of Public Instruction; and NC Department of Environmental Health and Natural Resources, etc.

Publications used as secondary data sources included: the Prevention for the Health of North Carolina: Prevention Action Plan, prepared by the North Carolina Institute of Medicine (NCIOM) Task Force on Prevention; and the 2011 report titled Healthy North Carolina 2020: A Better State of Health. Also referenced were the State of the Environment reports, the Orange County Ten Year Plan to End Chronic Homelessness, State of the Local Economy Report, and others.

Three surveys were used extensively for local data: The NC Behavioral Risk Factor Surveillance Survey (BRFSS) conducted by the State Center for Health Statistics; the *Youth Risk Behavior Survey* (YRBS) conducted in the Chapel Hill-Carrboro City Schools and the *Communities That Care* Survey

conducted by the Orange County School district. Secondary data on utilization rates and services was also gathered from local sources such as OPC Mental Health, UNC Hospitals, Orange County Health Department, Chapel Hill-Carrboro City Schools, Orange County Schools, the Orange County Department of Social Services, and Piedmont Health Services.

1.02.c Prioritization Process

Community Forums

The Community Health Assessment's goals include identifying the community's health-related priorities and generating strategies that will serve as the foundation for the County's Community Action Plans.

These goals were partly met holding five open community forums—
co-hosted with Orange County Board of Health members to give attendees direct access to local policy makers—were held over a five week span (August to September) in different locations in Orange County. Nearly 200 residents attended the five forums.

Residents were presented with the main findings from the Assessment (quantitative survey results and focus group themes). These findings were organized into ten areas, identified by looking at the intersection of Healthy NC 2020 Objectives, top Orange County community survey issues, top focus group themes, and top ten leading causes of death in Orange County. The Top Ten Health Issues in Orange County that were identified and presented are listed alphabetically below. A summary list with definitions is included in Appendix M.

1. Access to Health Care, Insurance, and Information
2. Built Environment
3. Cancer
4. Chronic Disease, Exercise, and Nutrition
5. Environmental Health
6. Injury
7. Mental Health
8. Oral Health
9. Substance Use
10. Transportation

After a presentation of themes and supporting data, attendees at each forum gathered into small groups to reflect on and discuss what seemed to them to be the most important issues. Participants at each forum were asked to consider the following series of guiding questions within their small groups:

- Which facts or statistics caught your attention?
- What seems to be the most critical to/for you?
- Does any of this data change your perspective?
- How does this issue relate to your health and the health of your family? Your friends?
- How has this issue mattered to your neighborhood or community?

Attendees were then given a chance to vote individually on their priorities from among the ten issues presented (including the opportunity to suggest other health concerns not covered by the 10 priorities). Each individual was given five stickers to distribute over ten categories on a voting sheet, with the additional option of being able to "weight" their vote by placing up to two stickers in any category. They were instructed to vote individually, reflecting on their small group discussion, their

own health concerns, and those of their family, friends and neighbors. The votes were then totaled from all five community forums, yielding a reordered list of priorities based on votes. See Chapter 2, Section 1 on Orange County Priorities for discussion of results.

2011 Healthy Carolinians Annual Meeting

Finally, the tallied results from the five community forums were brought to the Healthy Carolinians of Orange County Annual Meeting. Attendees were tasked with taking the top-ranked issues from the forums and discussing them in terms of on-going efforts, issue overlap, and the strengths and challenges of HCOC to effect change in the identified health area.

The meeting agenda was much like the community forums and included a presentation of data, small group discussion, voting, report backs, and tallying of results. Annual Meeting small group discussions addressed the following questions

- Which issues are most critical to address in the next four years?
- What issues are changeable on a local level?
- Are we uniquely positioned to effectively address particular areas?
- Should Healthy Carolinians of Orange County take a lead role on certain issues?
- Is there community interest and energy around particular topics?
- The top ten issues can be divided into different, but sometimes overlapping categories. Which issues could be combined? Which should be separated?

Annual Meeting voting results mirrored those from the community forums indicating strong consistency between community members and agency providers about the most important health issues facing Orange County.

Next Steps

Orange County has many strengths and unmet needs. This report is an effort to provide a glimpse into the realities that exist within this community and to offer some direction on addressing community concerns.

A goal of the Orange County Health Department and Healthy Carolinians of Orange County is for the information gleaned from this document to be widely shared and utilized to influence strategic planning across the community. The Healthy Carolinians of Orange County Council will develop a community-wide communication plan to assure broad dissemination of this report. Municipal and county governments, boards of education, health and human service agencies and boards, business leaders, economic development committees, Chamber of Commerce, the faith community, civic groups, and community groups will be among those targeted. It is the hope that all of these entities will actively seek and find ways to utilize their programs, services, and resources to address the identified needs as is appropriate to their stated missions.

Healthy Carolinians of Orange County Council will also develop committees or task forces to determine further actions to initiate as a result of this report. It is likely that additional analysis of the issues and their underlying causes will be necessary in order to fully understand and respond to the identified needs. By May 2012, the Healthy Carolinians partnership and committees will develop Community Health Action Plans detailing the strategies to be carried out to address the priority issues. The Partnership will continue to engage in ongoing evaluation and encourage collaboration between agencies and community groups to achieve possible health outcomes.

Chapter II Community Priorities

Section 2.01 Orange County, NC: Top Concerns, Prioritization Results

Based on votes from the five community forums, Orange County's Top 10 Issues, ranked on "Importance" (1 being most important) are below. Included are the total number of votes per category and total percentage of total votes across all forums.

1. Access to Health Care, Insurance, and Information (141 total votes/22.1% of total forum votes)
2. Chronic Disease, Exercise, and Nutrition (104/16.3%)
3. Mental Health (86/13.4%)
4. Transportation (72/11.3%)
5. Built Environment (60/9.4%)
6. Cancer (45/7.0%)
7. Substance Use (44/6.9%)
8. Environmental Health (40/6.3%)
9. Oral Health (24/3.8%)
10. Injury (23/3.6%)

Write-ins included: Teen Pregnancy / Youth Health (5), Sexual health (6), Socio-economic Development (8)

Below are the five areas that were determined to be of greatest concern to the Orange County community after the Annual Meeting where attendees voted on "Importance and Changeability." The concerns listed here were selected by the community and are listed in the order of the numbers votes they received, ranked greatest to least (1 is the highest priority). More information on each of these areas can be found in the corresponding chapters throughout the document.

1. Access to Health Care, Insurance, and Information (66 votes)
2. Chronic Disease, Exercise, and Nutrition (62 votes)
3. Mental Health (59 votes)
4. Substance Use (32 votes)
5. Injury (27 votes)

Section 2.02 Healthy NC 2020 Objectives and NC Prevention Action Plan

This Orange County Community Health Assessment report affirms and builds upon the conclusions and recommendations of the 2009 report titled *Prevention for the Health of North Carolina: Prevention Action Plan*, prepared by the North Carolina Institute of Medicine (NCIOM) Task Force on Prevention; and the 2011 report titled *Healthy North Carolina 2020: A Better State of Health*, prepared by the NC Department of Health and Human Services, Office of Healthy Carolinians/Healthy Carolinians Governor's Task Force, and the NCIOM. In discussing the health status and health-related issues in Orange County, this report covers most, if not all, of the topics covered in the Prevention Action Plan; and takes into account the objectives, strategies, and targets recommended for 2020 in each of the focus areas covered by the Healthy NC 2020 report.

The Task Force on Prevention had identified the following ten preventable risk factors that contribute to the leading causes of death and disability in the state: tobacco use; diet and physical inactivity, leading to overweight or obesity; risky sexual behaviors; alcohol and drug use or abuse;

emotional and psychological factors; intentional and unintentional injuries; bacterial and infectious agents; exposure to chemicals and environmental pollutants; racial and ethnic disparities; and socioeconomic factors.

The Prevention Action Plan (PAP) had also noted that North Carolina's burden of chronic disease and preventable conditions was high and increasing steadily; and the state ranked poorly on such health comparisons as health outcomes, health behaviors, access to health care, and socio-economic measures. It sought a greater emphasis on preventing such conditions in the first place, but noted that this would require increased public health spending and reorienting the health system and its priorities from curative towards preventative care.

Accordingly, this 2011 Orange County Community Health Assessment addresses all the risk factors identified in the PAP, but focuses on each of these factors at the Orange County level. It also accepts the PAP view that prevention can save lives, reduce disability, improve quality of life, and in some cases decrease costs. It therefore encourages healthier lifestyle choices, such as more exercise, better nutrition, and reduced risky behaviors and alcohol and substance use at the individual and family levels; and it highlights the need for appropriate health services, policies, and environment at the community, organizational, county, and state levels.

A prevention strategy can save lives, reduce disability, improve quality of life, and decrease costs.

The CHA report also discusses the Orange County health status in relation to the focus areas highlighted in the Healthy NC 2020 report. These thirteen areas are: tobacco use; physical activity and nutrition; injury and violence; maternal and infant health; sexually transmitted disease and unintended pregnancy; substance abuse; mental health; oral health; environmental health; infectious disease and foodborne illness; social determinants of health; chronic disease; and cross-cutting aspects. For each of these focus areas, the Healthy NC 2020 report provides the current (2008/2009) status and 2020 targets; and these are the basis for the 2011 CHA report's discussion of OC's health status, progress, and planned or needed actions.

Chapter III Community Profile

Section 3.01 Demographics

3.01.a General Population

The population of Orange County has more than doubled in the past four decades, from 57,567 in 1970 to 133,801 in 2010, at about a 5.8% rate of increase every ten years. Since 2000, the population has grown by 13.2%. Growth is projected to continue and the current population is expected to increase to almost 154,000 by 2020, according to the County's Comprehensive Plan. In 2010, 5.1% of Orange County's total population was under five years old; 20.9% was under 18; 39.1% was under 25 years of age; 51.3% was between the ages of 25 and 65; and 9.6% were 65 or older. The median age was 33 years.[1] In 2010, Orange County was 52.2% female.[2]

In terms of where people reside, in 2010, 57% of Orange County residents lived in the southern "urban" areas of Chapel Hill and Carrboro, while the remaining 43% lived throughout the rural areas of the County.

Orange County continues to not only grow, but diversify in its growth. As per the 2010 U. S. Census, 74.4% of the Orange County population was white, 11.9% was Black, 8.2% was Hispanic or Latino of any race, and 6.7% was Asian. Though the percentage of Black residents is twice as much in NC than in Orange County, the diversity mix of other races across Orange County was roughly comparable with the percentages in North Carolina state, which had a 68.5% white, 21.5% Black, and 8.4% Hispanic or Latino population in 2010 (see Table below).

The pattern of racial and ethnic diversity differs somewhat across cities and towns in the county. The town of Hillsborough has the largest proportion (37.1%) of non-white residents, including 29.5% Black residents and 6.6% of Hispanic or Latino of any race. Orange County's Hispanic/Latino ethnic population has almost doubled from 4.5% in 2000 to 8.2% in 2010, with the highest concentration of Latinos in the city of Carrboro, comprising 13.8% of the city's population.[3] While Orange County's Latino population mirrored the percentage of Latinos across the state, the county's Asian population was considerably higher, 6.7% compared with 2.2% in the state. The highest concentration of Asians was in Chapel Hill, where in 2010 they comprised 11.9% of the population, up from only 4.1% in 2000.[4]

It is noteworthy that the largest minorities differ in the three main municipalities. The largest group of minorities in Hillsborough is made up of Black residents; in Carrboro, the largest group is Hispanic or Latino residents; and in Chapel Hill, the largest minority group is Asian.

Table 2: Race and Ethnicity Data, Percent of Total Population[5]

	North Carolina	Orange County	Carrboro	Chapel Hill	Hillsborough
White	68.5	74.4	70.9	72.8	62.9
Black	21.5	11.9	10.1	9.7	29.5
Hispanic or Latino of any race	8.4	8.2	13.8	6.4	6.6
Asian	2.2	6.7	8.2	11.9	1.7
American Indian and Alaska Native	1.3	0.4	0.4	0.3	0.6
Native Hawaiian and Other Pacific Islander	0.1	0.0	0.0	0.0	0.0
Some other race	4.3	4.0	7.5	2.7	3.3
Two or more races	2.2	2.5	2.9	2.7	2.1

[1] U.S. Census Bureau, 2010 Census. American Fact Finder. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&prodType=table
[2] U.S. Census Bureau, 2010 Census. American Fact Finder. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&prodType=table
[3] Census 2000 and Census 2010. http://www.census.gov/
[4] Census 2000 and Census 2010. http://www.census.gov/
[5] Census 2010, American Fact Finder 2. http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

3.01.b Immigrant and Refugee Populations

Immigrants from many countries now live in Orange County and the Census 2010 shows that the county's population is growing not only in size but also in terms of the new residents' countries of origin. The largest number of immigrants includes Latinos from various countries, refugees from Burma, and members of the Chinese, Asian Indian, and Korean communities.[1] Increasing numbers of Latinos and Asians are drawn to Orange County by its opportunities for education and work, a generally peaceful environment, and the welcoming approach of its refugee resettlement agencies.[2]

Since 2007, three new refugee resettlement agencies have opened in the Triangle area. A notable increase in arrivals took place during 2007-2009, and then declined somewhat over the past two years.[3] Census figures do not capture the numbers of refugees from Burma, but the Orange County Health Department, that records the number of communicable disease screenings completed on new refugees, shows that for the period July 2005-June 2011, 630 (95%) of the 666 new arrivals were from Burma.[4] Besides these direct arrivals, there is considerable migration into Orange County from other states and counties. Some refugees have also out-migrated to other parts of the state or commute from Orange County to distant locations such as Rockingham, NC for work. Local agencies and interpreters from Burma estimate the population from Burma to be about 700-1000 individuals, almost all residing in Chapel Hill and Carrboro.[5]

Table 3: Direct Refugee Arrivals, Orange County, NC[6]

Fiscal Year	New Direct Refugee Arrivals	Countries of Origin
2005-2006	19	14 Burma, 4 Cuba, 1 Iran
2006-2007	55	55 Burma
2007-2008	255	248 Burma, 4 Colombia, 3 Iran
2008-2009	194	181 Burma, 6 Bhutan, 4 Iran, 3 Iraq
2009-2010	57	54 Burma, 2 Congo, 1 Haiti
2010-2011	86*	78 Burma, 8 Laos
TOTAL	**666**	**Total from Burma: 630**

Latino immigrants into Orange County come from a variety of countries, communities, and religions, and have diverse educational and work backgrounds. The 2005-2009 American Community Survey 5-year estimates show the majority is from Mexico, but a substantial number are also from the Caribbean, and Central and South America.[7] Similarly, the refugee community from Burma is diverse, and is comprised of ethnic Karen, Chin, Burman (Burmese) and other ethnicities who also may speak different languages, come from different regions in Burma, and have varied educational experiences and reasons for fleeing their country of origin.[8]

Due to their cultural and linguistic diversity and their unfamiliarity with the US health care system, recent immigrants and refugees in Orange County face special challenges in accessing healthcare. Barriers related to language, health insurance, the high cost of health care, and the need for healthcare orientation and education are recurring themes among both groups.[9] Both immigrants and refugees have voiced a need for better patient/provider communication; and the Latino community leaders in particular have emphasized a need for more/quicker appointments at the health centers that charge on a sliding-scale, where these populations tend to seek services.[10]

Refugees from Burma often face special challenges in adjustment, due to past trauma coupled with the added stress of adjustment.[11] Because the community from Burma is here in smaller numbers,

and data are not collected or sorted by their particular ethnicities, most data for this population come from focus groups and issues raised during discussions with interagency coalitions. Data specific to Latino immigrants at the county level also continue to be scarce. Latino immigrants without legal documentation face unique obstacles when trying to access affordable secondary education, and they experience added stress due to their uncertain legal status.[12]

Various sections of this Assessment report discuss health issues that are recurring concerns among the immigrant and refugee populations. These topics include access to health care, insurance, and information; mental health; domestic violence; parenting/discipline and insect control assistance (e.g. bed bugs).[13] Data also show that among Latinos, adolescent pregnancy, motor vehicle injuries, and a high HIV incidence rate are also of special concern.[14] Since disaggregated statistics are not available for refugees from Burma, it is not known if these issues are more prevalent in that population.

Orange County is fortunate to have many agencies that have enhanced or created new services to meet the needs of the local immigrant and refugee populations. The Art Therapy Institute, OPC Area Program, Piedmont Health Services and the Chapel Hill-Carrboro City Schools have worked together to provide much-needed mental health services for refugees through the schools and at a local clinic. The Latino Health Fair (La Feria de la Salud), which is spearheaded by St. Thomas More Catholic Church, is another example of successful interagency collaboration. This event has provided annual health screenings, education, and referrals to hundreds of Latinos in Orange County for about a decade. The diversity of the community has also been recognized and supported by the Chapel Hill-Carrboro City Schools, which has dual language programs in Spanish and Chinese to assist those seeking to learn English and to encourage native English speakers to start learning foreign languages at an early age.

In addition, some specific agencies or projects have been formed with the sole intention of serving the needs of local immigrants. For example, El Centro Hispano opened in Carrboro in 2010, and began programming in many areas, including a women's health promoter program focused on breast health; El Futuro provides bilingual, bicultural mental health services locally; while UNC's Center for Latino Health serves as a hub and coordinator for bilingual internal medicine and specialty services at UNC. While there is still much room for growth and improvement, Orange County and particularly North Carolina has matured in its services to the Latino population in the last 10 years, as Latino-run media, Latino and other immigrant-led churches, and the number of bilingual professionals working at local agencies have increased.

The Health Department leads two coalitions—the Latino Health Coalition and a Refugee Health Coalition— through the Immigrant and Refugee Health Program. The Immigrant Refugee Health Program Manager provides technical assistance regarding Limited English Proficiency policies, health access issues, and language services to local and state agencies.

Unfortunately, little is known about the health needs and strengths of the other immigrant groups in Orange County. The specific needs and strengths of second-generation Latino immigrants have yet to be locally explored. There are also smaller populations of families and individuals from China, India, Korea, and Japan in Orange and surrounding counties such as Durham. More community engagement needs to take place with these groups in order to assess their health status, challenges, and assets.

[1] Census 2010, American Fact Finder 2. http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
[2] Susan Clifford. Immigrant and Refugee Health Manager, Orange County Health Department. Informal discussions and focus groups with clients and community members, coalition meetings.
[3] Orange County Health Department, Refugee Screening Logs, 2005-2011
[4] Orange County Health Department, Refugee Screening Logs, 2005-2011
[5] Minutes from Orange County Refugee Health Coalition meetings, 2009-2011
[6] Orange County Health Department, Refugee Screening Logs, 2005-2011
[7] Census 2010, American Fact Finder 2. http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
[8] Susan Clifford. Orange County Health Department. Informal discussions with clients and community members.
[9] Action Oriented Community Diagnosis Reports. http://www.co.orange.nc.us/health/ImmigrantandRefugeeHealthResources.asp and Healthy Carolinians of Orange County. 2011 Community Health Assessment Focus Group Notes.
[10] Healthy Carolinians of Orange County. 2011 Community Health Assessment Focus Group Notes.
[11] Minutes from 2009-2011 Orange County Refugee Health Coalition meetings
[12] Minutes from Orange County Latino Health Coalition meeting on July 22, 2010
[13] Healthy Carolinians of Orange County. 2011 Community Health Assessment Focus Group Notes.
[14] State Center for Health Statistics and Office of Minority Health and Health Disparities. July 2010. North Carolina Minority Health Facts: Hispanic/Latinos. http://www.schs.state.nc.us/SCHS/pdf/Hispanic_FS_WEB_080210.pdf

Section 3.02 Geography

Orange County covers 398 square miles of rolling hills with an average elevation of 470 feet above mean sea level. The County is comprised of three incorporated municipalities: the Town of Chapel Hill is the largest with a population of 54,397 as per the 2010 Census; Carrboro, adjacent to Chapel Hill, has a population of 19,582; and Hillsborough, the county seat, a population of 6,087. Orange County also includes a portion of the City of Mebane (which is mostly in Alamance County).

Orange County is surrounded by the following counties: Person (northeast), Durham (east), Chatham (south), Alamance (west) and Caswell (northwest).

Section 3.03 History

Originally inhabited by Native American tribes, the area that includes what is now Orange County, spanned 3,500 square miles. This large area also included all of present day Alamance, Caswell, Person, Durham, and Chatham counties as well as parts of Wake, Lee, Randolph, Guildford and Rockingham counties.

On September 9, 1752, following English settlement, Orange County was founded and was named after William of Orange (also King William III of England). County boundaries have changed considerably since the 1750s. In the second half of the eighteenth century, Hillsborough was the meeting place of the NC General Assembly and became an important town in the political life of the state for a short period.

For more information on the history of Orange County, please visit:
http://www.lib.unc.edu/ncc/ref/study/orange.html
http://www.visitchapelhill.org/locations/orange-county

Section 3.04 Land Use

Forest land is the predominant land use within the county, followed by farmland, though both are rapidly disappearing, as low density residential land use continues to expand. According to recent Commission for the Environment reports, urban sprawl is an increasing problem within Orange County. Orange County is a part of the Triangle region of NC, which has been rated as having the third highest incidence of urban sprawl in the nation.[1]

For trends in land use, natural setting, and other environmental characteristics, please visit the Orange County website http://www.co.orange.nc.us/planning/compre_cpupdate.asp.

[1] Smart Growth America. "Measuring Sprawl and Its Impact: The Character & Consequences of Metropolitan Expansion" http://www.smartgrowthamerica.org/sprawlindex/sprawlexecsum.html

Section 3.05 Faith and Spirituality

There are 165 established churches, synagogues and other faith organizations located in Orange County. These institutions provide a source of spiritual nourishment and also provide community support and resources to the residents of Orange County. As residents face the challenge of trying to stay connected to their community in an area where the population is growing and changing quickly, their spiritual homes become sources of social interaction, information exchange, and even health care.

Chapter IV Health Indicators

Section 4.01 Leading Causes of Death and Disability

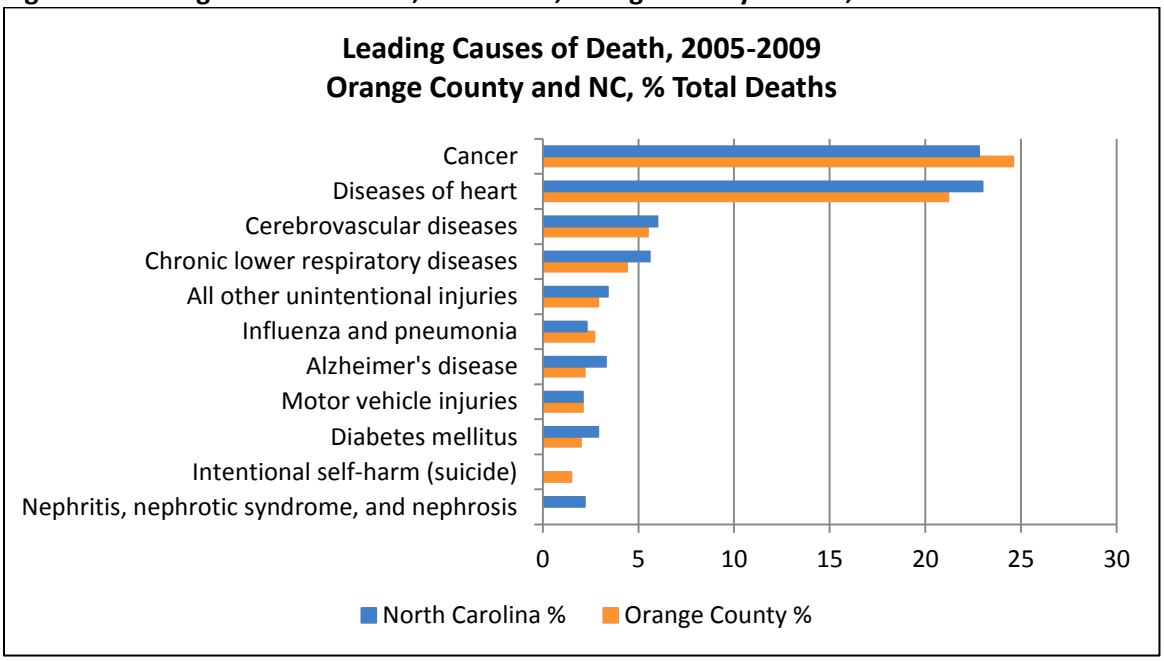
The leading causes of death in Orange County are very similar to the leading causes in the state of North Carolina. During the five-year period 2005-2009, almost 46% of the 3,595 deaths in Orange County were due to two primary causes—cancer and diseases of the heart. For Orange County (2005-2009), the top five leading causes of death were cancer (24.6%), diseases of the heart (21.2%), cerebrovascular diseases (5.5%), chronic lower respiratory diseases (4.4%), and unintentional injuries (2.9%). For each of these and other causes of death, the percentages and overall pattern were roughly the same in Orange County and in NC (See Table and Figure below), though in OC, the rates of death due to cancer and influenza were higher than for those for the state.

Table 4: Leading Causes of Death in Orange County, % and Number, 2005-2009[1]

OC Rank	Cause of Death	OC %	NC %	OC #	NC #
1	Cancer	24.6	22.8	859	86246
2	Diseases of heart	21.2	23.0	742	86920
3	Cerebrovascular diseases	5.5	6.0	191	22600
4	Chronic lower respiratory diseases	4.4	5.6	155	21228
5	All other unintentional injuries	2.9	3.4	100	12896

OC Rank	Cause of Death	OC %	NC %	OC #	NC #
6	Influenza and pneumonia	2.7	2.3	96	8632
7	Alzheimer's disease	2.2	3.3	78	12386
8	Motor vehicle injuries	2.1	2.1	74	8027
9	Diabetes mellitus	2.0	2.9	69	10906
10	Intentional self-harm (suicide)	1.5		51	

Figure 2: Leading Causes of Death, 2005-2009, Orange County and NC, % Total Deaths



To account for differences in demographic profile of the county and the state, the age-adjusted death rates (per 100,000 population) for Orange County and NC are given in Table and Figure below.

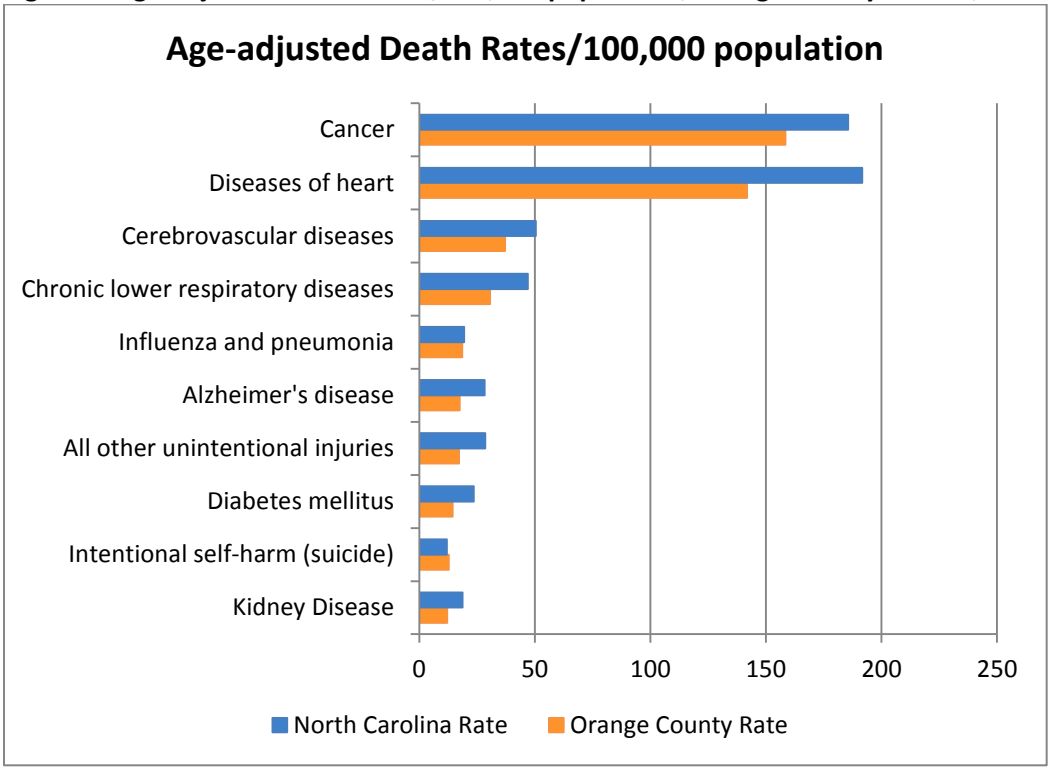
It is clear that for 2005-2009, the age-adjusted death rates for Orange County are consistently below the rates for NC, for all of the top-10 causes of death except for suicide where it is slightly higher. For example, for the top-2 leading causes, the rates for cancer deaths are 158.4 and 185.6 respectively in Orange County and NC, and for diseases of the heart the rates are respectively 141.8 and 191.7.[2] With the exception of suicide, this shows that Orange County is doing better on these health indicators than North Carolina.

Table 5: Age-adjusted death rates (per 100,000 population), Orange County and NC, 2005-2009[3]

OC Rank	Cause of Death	OC Rate	NC Rate
1	Cancer	158.4	185.6
2	Diseases of Heart	141.8	191.7
3	Cerebrovascular Disease	37.2	50.5
4	Chronic Lower Respiratory Diseases	30.7	47.0
5	Pneumonia and Influenza	18.6	19.4
6	Alzheimer's disease	17.5	28.3
7	All Other Unintentional Injuries	17.2	28.6
8	Diabetes Mellitus	14.5	23.6

OC Rank	Cause of Death	OC Rate	NC Rate
9	Suicide	12.8	12.0
10	Nephritis, Nephrotic Syndrome, and Nephrosis	12.1	18.7

Figure 3: Age-adjusted Death Rates/100,000 population, Orange County and NC, 2005-20094



In order to determine how Orange County compares to the NC 2020 Target Objectives, the Table below includes the latest available numbers for objectives related to the top 10 leading causes of death in OC. Not all causes have a corresponding 2020 Objective.

Table 6: Current Rates of Mortality in Orange County and NC vs. NC 2020 Targets

Objective	OC (Year)	NC (Year)	NC 2020 Target
Reduce the suicide rate (per 100,000 population)[5]	15.1 (2009)	12.9 (2009)	8.3
Reduce the pneumonia and influenza mortality rate (per 100,000 population)[6]	19.2 (2009)	18.3 (2009)	13.5
Reduce the cardiovascular disease* mortality rate (per 100,000 population)	39.0[7]	256.6 (2008)	161.5
Reduce the colorectal cancer mortality rate (per 100,000 population)[8]	7.6 (2009)	16.1 (2009)	10.1
Decrease the percentage of adults with diabetes.[9]	5.2% (2010)	10.4% (2010)	8.6%

** Cardiovascular disease is disease of the blood vessels - it affects everywhere, but is seen most in the heart (heart attack), the brain (stroke), and the aorta.*

In the county, the (age-adjusted) suicide rate of 15.1 per 100,000 population in 2009 is higher than the 2008 county and NC rates, and is higher than the Healthy NC 2020 target which may not adjust for age.

As for the influenza and pneumonia age-adjusted mortality rate, the Orange County and NC rates (2009) are respectively 19.2 and 18.3; both these rates are higher than the Healthy NC 2020 target rate of 13.5. However, the 2009 flu season was unusual given the H1N1 pandemic, and may be responsible for this spike since the 2008 rates were lower.

The 2009 age-adjusted death rate for cerebrovascular diseases in Orange County (39.0 per 100,000 population) is much lower than the rate for 2008 NC rate of 256.6. However, the death rates for cardiovascular disease and for colorectal cancer are not readily available since data are often not separated by specific cause (e.g. colorectal) and is instead categorized as an aggregate group (e.g. cancer).

Because of a small number of cases or base population, it is often misleading to look at numbers for one year; it is instead helpful to look at trends over time.

The leading causes of death have been relatively stable for the period 2005-2009, both for Orange County and North Carolina. Cancer and heart disease have consistently been the top two causes, for each of these five years. The percentage of cancer deaths in Orange County has ranged between 22.5% and 25.8%, but has been fairly stable (at about 23%) in North Carolina. The percentage of deaths from heart disease went up in Orange County from 17.8% in 2005 to 23.4% in 2007, but has dropped in subsequent years to 20.4% in 2009.[10] In contrast, the percentage of deaths in North Carolina due to heart disease has been relatively stable, at about 23% during the period 2007-2009. For the other diseases in the Top Five category, the percentages have been relatively low and relatively stable during this 5-year period (see Tables and Figures below).

Table 7: Trends, Five Leading Causes of Death in Orange County, %, by Year, 2005-2009[11]

OC Rank	Cause	2005	2006	2007	2008	2009	Avg 2005-09
1	Cancer	25.3	25.8	22.5	24.7	24.6	24.6
2	Diseases of heart	17.8	21.8	23.4	22.8	20.4	21.2
3	Cerebrovascular diseases	6.6	5.5	5.4	5.4	4.3	5.5
4	Chronic lower respiratory diseases	4.4	4.6	4.4	4.3	4.5	4.4
5	All other unintentional injuries	2.5	3.1	3.3	3.1	2.4	2.9

Figure 4: Trends, Five Leading Causes of Death, Orange County, %, by Year, 2005-2009

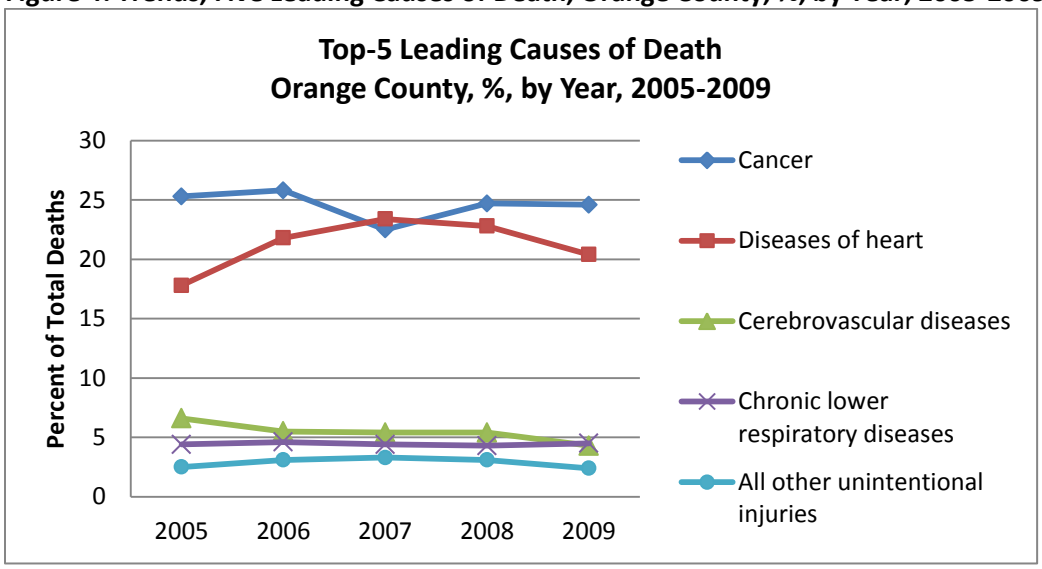
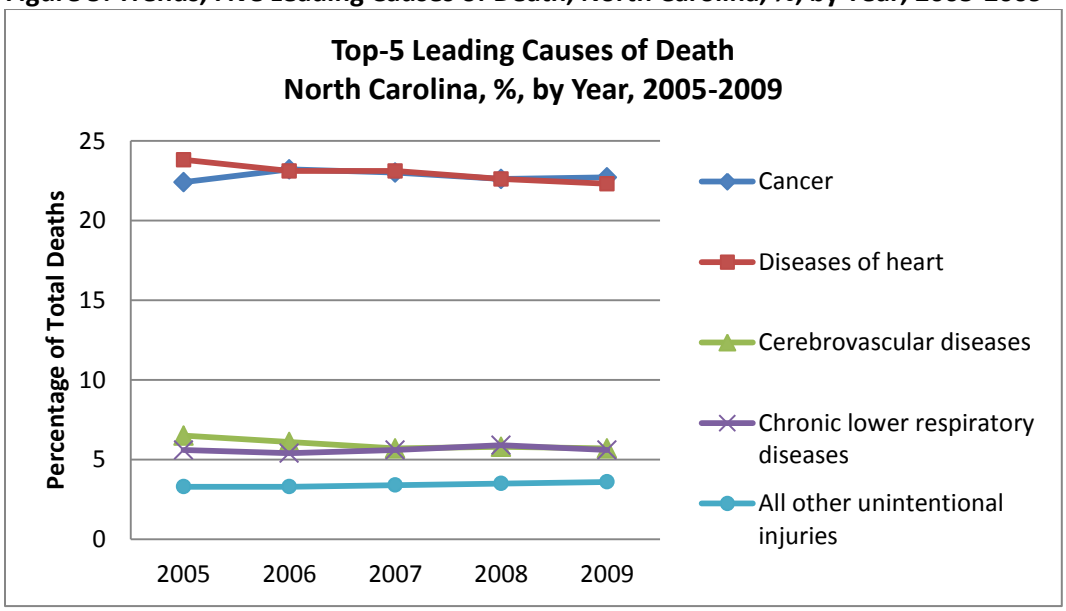


Table 8: Trends, Five Leading Causes of Death in North Carolina, %, by Year, 2005-2009[12]

NC Rank	Cause	2005	2006	2007	2008	2009	Avg 2005-09
2	Cancer	22.4	23.2	23	22.6	22.7	22.8
1	Diseases of heart	23.8	23.1	23.1	22.6	22.3	23
3	Cerebrovascular diseases	6.5	6.1	5.7	5.8	5.7	6
4	Chronic lower respiratory diseases	5.6	5.4	5.6	5.9	5.6	5.6
5	All other unintentional injuries	3.3	3.3	3.4	3.5	3.6	3.4

Figure 5: Trends, Five Leading Causes of Death, North Carolina, %, by Year, 2005-2009



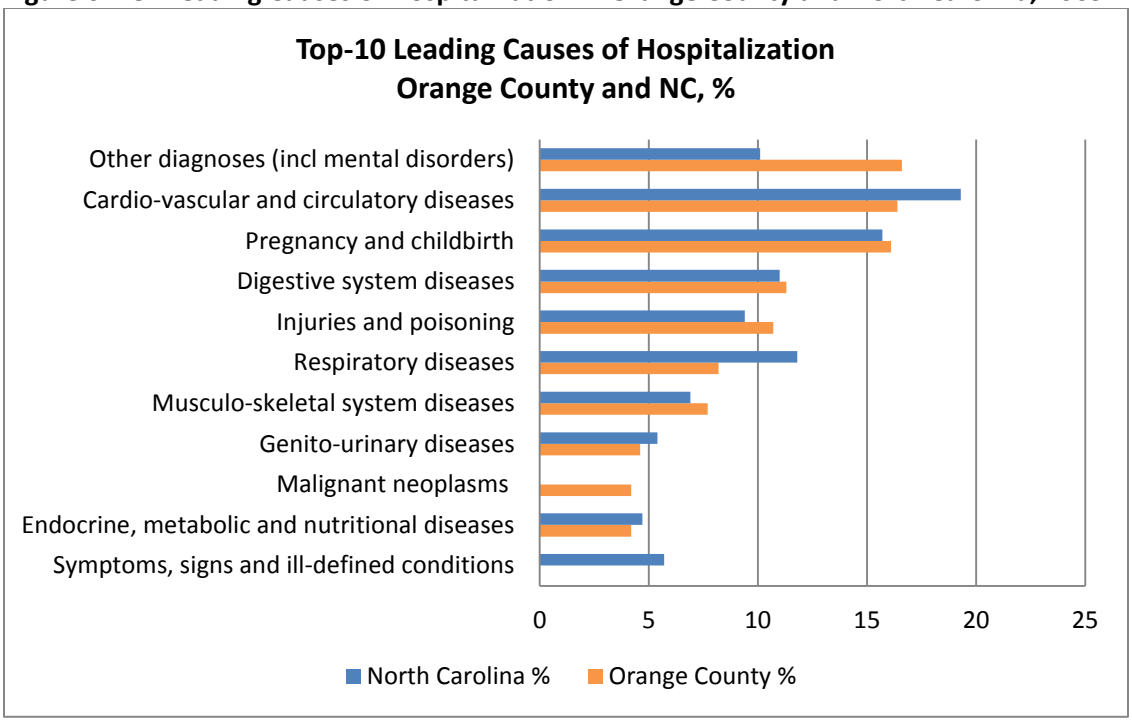
The leading causes of hospitalization in Orange County and North Carolina are important, both as indicators of health status and drivers of health cost. These causes are different from the leading causes of death (discussed above), and reflect the nature and pattern of the disease burden in the county and state, respectively.

In general, the ten leading causes of hospitalization are similar in Orange County and in North Carolina. In both the county and state, cardio-vascular and circulatory diseases, pregnancy and childbirth, digestive system diseases, injuries and poisoning, and other diagnoses (including mental health) rank among the five leading causes of hospitalization (see Table and Figure below).

Table 9: Ten Leading Causes of Hospitalization in Orange County and North Carolina, 2009[13]

Cause	Orange County %	North Carolina %
Other diagnoses (incl. mental disorders)	16.6	10.1
Cardio-vascular and circulatory diseases	16.4	19.3
Pregnancy and childbirth	16.1	15.7
Digestive system diseases	11.3	11
Injuries and poisoning	10.7	9.4
Respiratory diseases	8.2	11.8
Musculo-skeletal system diseases	7.7	6.9
Genito-urinary diseases	4.6	5.4
Endocrine, metabolic and nutritional diseases	4.2	4.7
Malignant neoplasms	4.2	
Symptoms, signs and ill-defined conditions		5.7

Figure 6: Ten Leading Causes of Hospitalization in Orange County and North Carolina, 2009[14]

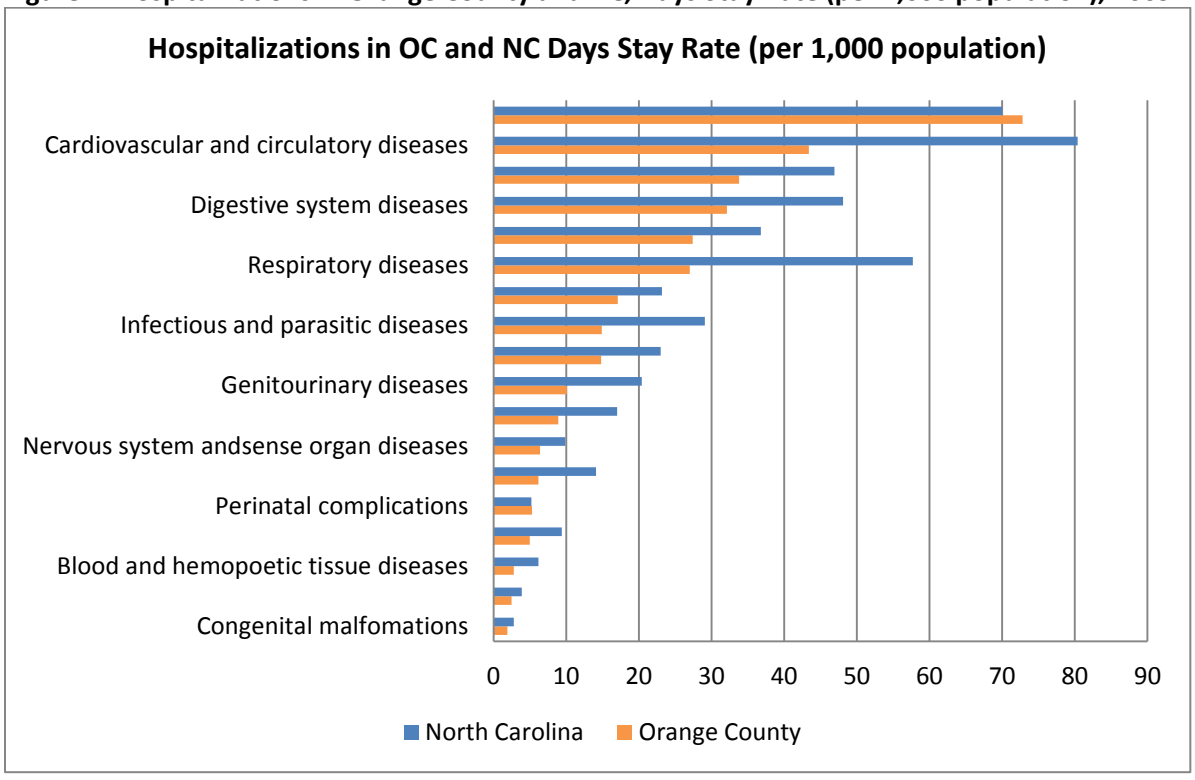


The "days stay rate" is an indicator of the average time spent by a patient in the hospital, on average, for each of the leading causes of hospitalization. The rate is consistently lower in Orange County than in the state (see Table and Figure).

Table 10: Hospitalizations in Orange County and NC, Days Stay Rate (per 1,000 population), 2009[15]

OC Rank	Cause	Orange County	North Carolina
1	Other diagnoses (incl. mental disorders)	72.8	70
2	Cardiovascular and circulatory diseases	43.4	80.4
3	Pregnancy and childbirth	27.4	36.8
4	Digestive system diseases	32.1	48.1
5	Injuries and poisoning	33.8	46.9
6	Respiratory diseases	27	57.7
7	Musculoskeletal system diseases	17.1	23.2
8	Genitourinary diseases	10.1	20.4
9	Endocrine, metabolic and nutritional diseases	8.9	17
10	Malignant neoplasms	14.8	23
11	Infectious and parasitic diseases	14.9	29.1
12	Symptoms, signs and ill-defined conditions	6.2	14.1
13	Nervous system and sense organ diseases	6.4	9.9
14	Skin and subcutaneous tissue disease	5	9.4
15	Blood and hemopoietic tissue diseases	2.8	6.2
16	Benign, uncertain and other neoplasms	2.5	3.9
17	Perinatal complications	5.3	5.2
18	Congenital malformations	1.9	2.8

Figure 7: Hospitalizations in Orange County and NC, Days Stay Rate (per 1,000 population), 2009[16]



[1] State Center for Health Statistics, North Carolina. Leading Causes of Death in Orange County, % and Number, 2005-2009. http://www.schs.state.nc.us/SCHS/data/lcd/lcd.cfm/
[2] NC State Center for Health Statistics. Age-adjusted death rates (per 100,000 population), NC and OC, 2005-2009. http://www.schs.state.nc.us/SCHS/data/databook/CD21A%20racesexspecific%20rates.rtf
[3] NC State Center for Health Statistics. Age-adjusted death rates (per 100,000 population), NC and OC, 2005-2009. http://www.schs.state.nc.us/SCHS/data/databook/CD21A%20racesexspecific%20rates.rtf
[4] NC State Center for Health Statistics. Age-adjusted death rates (per 100,000 population), NC and OC, 2005-2009. http://www.schs.state.nc.us/SCHS/data/databook/CD21A%20racesexspecific%20rates.rtf
[5] NC State Center for Health Statistics. Mortality Statistics Summary for 2009 North Carolina Residents Suicide http://www.schs.state.nc.us/SCHS/deaths/lcd/2009/suicide.html
[6] NC State Center for Health Statistics. Mortality Statistics Summary for 2009 North Carolina Residents Pneumonia and Influenza http://www.schs.state.nc.us/SCHS/deaths/lcd/2009/pneumonia.html
[7] NC State Center for Health Statistics. Leading Causes of Death. http://www.schs.state.nc.us/SCHS/data/lcd/lcd.cfm/
[8] NC State Center for Health Statistics. Mortality Statistics Summary for 2009 North Carolina Residents Cancer - Colon, Rectum, and Anus http://www.schs.state.nc.us/SCHS/deaths/lcd/2009/colorectal.html
[9] NC State Center for Health Statistics. 2010 Behavior Risk Factor Surveillance Survey Results: Orange County, Diabetes. "Have you ever been told by a doctor that you have diabetes?" http://www.epi.state.nc.us/SCHS/brfss/2010/oran/diabete2.html
[10] NC State Center for Health Statistics. Leading Causes of Death. http://www.schs.state.nc.us/SCHS/data/lcd/lcd.cfm/
[11] NC State Center for Health Statistics. Leading Causes of Death. http://www.schs.state.nc.us/SCHS/data/lcd/lcd.cfm/
[12] NC State Center for Health Statistics. Leading Causes of Death. http://www.schs.state.nc.us/SCHS/data/lcd/lcd.cfm/
[13] UNC Healthcare Hospital Data
[14] UNC Healthcare Hospital Data
[15] http://www.schs.state.nc.us/SCHS/data/databook/
[16] http://www.schs.state.nc.us/SCHS/data/databook/

Section 4.03 Life Expectancy and Health Status

Measures of health should be not only based on likelihood of disease-specific mortality rates, but also on overall longevity and well-being.

Healthy NC 2020 Objectives

Objective	Current (NC)	2020 Target
Increase average life expectancy (in years)	77.5 (2008)	79.5
Increase the percentage of adults reporting good, very good, or excellent health	81.9% (2009)	90.1%

Average life expectancy, based on 2006-2008 numbers, in Orange County is 80.8 years. However, this number varies by gender and race. Life expectancy for males living in Orange County is 78.5 years, while females are expected to live to 82.7 years. A lifetime of health disparities shortens the lives of people of color. The average life expectancy of African Americans living in Orange County is 76 years, while their white counterparts are expected to live until 81.3 years.

Average life expectancy in Orange County is higher than in NC (77.3 years). Breakdowns based on sex and race are included in the Table below. It is expected that socio- economic status may significantly impact Orange County and NC life expectancies (due to availability of care, quality of life, etc.), but these statistics are not available.

Table 11: 2006-2008 Orange County and NC Life Expectancies (in years) by Sex and Race[1]

				Race					
		Sex		White			African American		
Region	Total	Male	Female	Total	Male	Female	Total	Male	Female
OC	80.8	78.5	82.7	81.3	--	--	76.0	--	--
NC	77.3	74.5	80.0	78.1	75.5	80.7	73.8	70.1	77.2

Orange County is the second overall healthiest county in the state according to 2011 County Health Rankings data. The Robert Wood Johnson Foundation, in collaboration with the University of Wisconsin Population Health Institute, spearheaded the County Health Rankings: Mobilizing Action toward Community Health (MATCH) project. Counties in every state were ranked. Analysts mainly used public data that included vital statistics, disease rates, and Behavioral Risk Factor Surveillance System (BRFSS) findings to derive scores. Analysts also used US Census, Medicare, and American Community Survey data. The complete report allows residents to look at how healthy their county is and compare this to other counties in the state and nation. According to the report, rankings for health factors were based on the following categories: health behaviors; clinical care; social and economic factors; and physical environment. Orange County ranked first for each health factor category except for physical environment where the county ranked 31. Health outcome rankings were based on mortality (length of life) and morbidity (quality of life and birth outcomes). The county ranked second for mortality and second for morbidity. The county's morbidity score decreased by two points since the 2010 report.[2]

Self-reported health is often used as a measure of overall population health. According to 2009 Behavioral Risk Factor Surveillance Survey data, 87.2% of Orange County adult residents rated their health as good, very good, or excellent, exceeding the state's current benchmark of 81.9%.[3] It is interesting to note that respondents who had a household income above $50,000 were more likely to report "very good" and "excellent" health statuses than those with less than a $50,000 household income. Similarly, white respondents were more likely to report "very good" and "excellent" health statuses than minorities.

Primary Data: Survey

Of those surveyed, a total of 81% self-reported that their overall health is excellent (23%), very good (35%), or good (23%); 17% reported fair health, and 2% poor health. The highest income bracket was 10-20% more likely to characterize their health as excellent or very good than the lower two income brackets. People of color were 10% less likely to report very good or excellent health and 10% more likely to report poor or fair health than white people. Self-report of health was not different by gender.

[1] NC State Center for Health Statistics. Life Expectancy: North Carolina 1990-1992 and 2006-2008, State and County http://www.epi.state.nc.us/SCHS/data/lifexpectancy/

[2] The Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. (2011). Orange, North Carolina County Health Rankings. Accessed from www.countyhealthrankings.org/north-carolina/orange

[3] North Carolina State Center for Health Statistics. (2009). Behavioral Risk Factor Surveillance Survey Data: Orange County Health Care Access. Accessed from http://www.schs.state.nc.us/SCHS/brfss/2009/oran/topics.html#hca

Chapter V Social, Economic, and Environmental Determinants of H.E.A.L.T.H.

Section 5.01 Racial and Ethnic Disparities, Social Determinants of Health

In Orange County, as in other parts of NC and the United States, health status depends largely on where one lives and the individual's racial, ethnic, and economic status. Rates and outcomes of disease are significantly worse among economically disadvantaged and rural populations and among particular racial and ethnic minorities. While health disparities have long been recognized, they have been poorly understood. Typically interventions have focused on individual health behaviors or increasing access and acceptability of health services for poor people and minorities as opposed to larger societal mechanisms that might lead to poorer outcomes. New research is shedding light on these mechanisms, leading to a call for environmental, and policy change that address economic, structural, and racial inequities in society.[1]

Income. The relationship between health and income has come to be known as the health-wealth gradient in order to emphasize the strong relationship of the two throughout the income distribution. With each increasing gradient of wealth there is a documented increase in health and life expectancy.[2] Access to health insurance does not completely explain this relationship. Other factors like material deprivation, chronic stress, and reduced control over one's life experiences are theorized as other important explanations for the health-wealth gradient.[3] The health-wealth gradient suggests the need for a policy shift from focus on the individuals' habits and diseases to focus on social and economic issues that lead to illness.

Race. In Orange County, as elsewhere in the state and nation, significant racial differences in morbidity and mortality continue to be documented.[4] For example, during the period 2005-2009 the rate of death from diabetes complications for minority residents in Orange County was 3.4 times that of white residents.[5] And like the rest of the nation, the rate of minority race infants born with low birth weight (and thus at risk for a host of developmental complications) in recent years was close to twice that for white infants.[6]

For decades it has been assumed that race is merely a proxy for income, education, and social class, so rather than exploring the basis for racial differences in health, researchers have adjusted for race in analyses or restricted studies to a single race, while assuming that racial disparities were really due to differences in socioeconomic status. It is now clear that race threatens health, independent of wealth and social class. At every income level in the health-wealth gradient, Black Americans and American Indians fare worse than their white counterparts. The idea that racial disparities in health might be due to biologic or genetic differences between races has also been discounted as the Human Genome Project has demonstrated that humans are 99.9% identical genetically. Yet while scientists have abandoned the idea of race as a biological category that might be associated with particular health risks, race is acknowledged as an important social construct that has very real meaning for individuals' life experiences, including health.[7] Increasingly researchers are concluding that racial disparities in health outcomes are due to the effects of racism.[8] The impact of the chronic stress that has been investigated in relation to income inequality is also theorized as having a detrimental effect on the health of Black Americans and other minorities who endure the indignities and discrimination of living in a racialized society.[9]

Ethnicity. Nationally, immigrants to the US present an exception to the finding of poorer health and earlier mortality among persons with lower income, education, and minority racial status.[10] For example, new Latino immigrants, despite having lower than average income and education status, in addition to the stress of acculturation, suffer lower rates of chronic and mental illness than average native-born Americans. The reasons for Latino paradox are poorly understood. Current theories include close-knit communities and social support, hopefulness related to new opportunities, and healthier diets. Whatever the reason(s) are, the health of Latino immigrants worsens after the first five years of living in the US.[11] With a growing Latino population in Orange County, as well as elsewhere in the United States, it is important to increase the understanding of the strengths of these populations upon arrival, and how to sustain good health among immigrants and their offspring.

Place or residence. Neighborhood conditions have an indirect effect on health by impacting the ease with which residents can make healthy choices related to diet, exercise, and safety. Where people live also may determine their proximity to environmental hazards, access to clean water and sewer, the quality of schools, the availability of affordable housing and the opportunity for positive social interactions with neighbors.[12]

Response to disparities. The Healthy Carolinians of Orange County (HCOC) task force and the Health Department strive to reduce health disparities by helping to build a community where *all* residents have an equal opportunity to lead long, healthy, and productive lives. It is recognized that for residents to be healthy, they need clean air and water, nutritious food, a safe physical environment, access to parks and sidewalks, violence- and drug-free neighborhoods, good jobs and schools, safe housing, and transportation, etc. Healthy Carolinians recognizes that low income, rural and minority communities also need to be empowered to speak to their needs and to be instrumental in developing strategies that ensure the health and well-being of their families. To this end, community representatives from the HCOC Executive Committee helped plan and implement community forums as part of the Community Health Assessment. It is the aim of HCOC to strengthen partnerships with community and neighborhood associations as it moves into action planning and implementation of the next four-year plan. In addition, HCOC is committed to a greater focus on larger societal structures and policies as an important mechanism for addressing the social determinants of health.

This 2011 Community Health Assessment report addresses these and other issues as they relate to the topics covered in various chapters. The report highlights such aspects as ensuring that disadvantaged communities have greater access to health providers that understand their culture and language, provide affordable preventive services, prescribe effective and efficient treatment for diseases, and provide counseling services that encourage healthy habits, and reduce overall health care costs.

As mentioned in the methods section above, please note, for the purpose of analysis and given the small quantitative survey response numbers (N=175), the 8% other racial category was grouped with the 13% Black into a general “People of Color” category to help identify racial disparities in survey responses. However, it is recognized that there are often wide inherent differences within this broad label.

[1] Benjamin, R. Reflections on addressing health disparities and the national agenda. AJPH, 2010, Supplement 1, S7.

[2] Deaton, A. Policy implications of the gradient of health and wealth. Health Affairs, March/April 2002, 13-30.
[3] Cohen, S., J.E. Schwartz, E. Epel, C. Kirschbaum, S. Sidney, and T. Seeman. "Socioeconomic Status, Race, and Diurnal Cortisol Decline in the Coronary Artery Risk Development in Young Adults (CARDIA) Study," Psychosomatic Medicine, 68 (2006): 41-50.
[4] Healthy Carolinians of Orange County. 2010 State of the County Health Report. http://www.co.orange.nc.us/healthycarolinians/documents/2010_OC_SOTCH_FINAL.pdf
[5] Healthy Carolinians of Orange County. 2010 State of the County Health Report. http://www.co.orange.nc.us/healthycarolinians/documents/2010_OC_SOTCH_FINAL.pdf
[6] NC State Center for Health Statistics
[7] Smedley, A, Smedley, BD. Race as Biology Is Fiction, Racism as a Social Problem Is Real: Anthropological and Historical Perspectives on the Social Construction of Race. American Psychologist, 2005, 60,16-26; Tuchman, AM. Diabetes and race: A historical perspective, AJPH, 2011, 201: 24-33.
[8] J Ford, CL, Airhihenbuwa, CO. Critical race theory, race equity, and public health: Toward antiracism praxis, AJPH, 2010, Supp 1, S30-S35; Jones, CP. Levels of racism: A theoretic framework and a gardener's tale, AJPH, 2000, 90, 1212-1215; Kwate, NOA, Meyer IH. The myth of meritocracy and African American health, AJPH 2010, 100, 1831-1834).
[9] Green,TL & Darity, WA. Under the skin: Using theories from biology and the social sciences to explore the mechanisms behind the Black-white health gap. AJPH, 2010, Supp. 1, S36-S40.
[10] Blue, L. The ethnic health advantage. Scientific American, Oct. 6, 2011
[11] Franzini, L., Ribble, JC., Keddie, AM. Understanding the Hispanic paradox. Ethnicity and Disease, 2001,11, 496-5l 8.
[12] PolicyLink. (2007) *Why Place Matters: Building a Movement for Healthy Communities*. Accessed June 8, 2011 from: http://www.policylink.org/atf/cf/%7B97C6D565-BB43-406D-A6D5-ECA3BBF35AF0%7D/WhyPlaceMatters_final.pdf

Section 5.02 Housing, Homelessness, and Hunger

5.02.a Housing and Homelessness

Impact on Health and Contributing Factors

Affordable housing is housing that is priced so that households with low-incomes can afford to purchase it and those with very low-incomes can afford to rent it without paying more than 30% of their income for rent (including utilities) or mortgage (excluding utilities). If low-income households pay more than 30% of their income for housing, they likely will not have enough for other necessities.[1]

Directly related to housing is the problem of homelessness. According to US Department of Housing and Urban Development (HUD), a person is considered homeless if they reside in 1) a place not meant for human habitation such as a car, street, or abandoned building; or 2) an emergency shelter, transitional housing, or supportive housing for homeless persons who originally came from the streets. Individuals who are homeless often lack the income necessary to sustain permanent housing and may lack the means necessary to access needed services. Based on estimates from examples across the country, Orange County spends up to $1,600,000 per year on the chronic homeless population.

The high cost of living in Orange County prevents many from being able to own or rent housing here. Cost of living traditionally includes expenses like food and clothing, energy, transportation, and personal services. Additionally, individuals who pay over 30% of their income are at greater risk of becoming homeless. Under-employed, unemployed, and individuals with lower incomes also have a harder time finding affordable housing.

Homelessness is a complicated problem rising from the changing social, economic, political, and cultural conditions. Lack of affordable housing, insufficient income, and inadequate services are primary factors that lead to homelessness. In addition, domestic violence, substance abuse, and mental illness are all conditions that contribute to homelessness.

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Decrease the percentage of people spending more than 30% of their income on rental housing.	41.8% (2008)	36.1%

Secondary Data: Major Findings

The current economic and housing crisis has decreased tax revenues for the County and Towns; therefore there is a scarcity of available public funds to support housing initiatives. As mixed use/mixed income communities continue to add amenities to new home construction, home costs continue to rise in Orange County despite the current housing market slowdown. Also, as the population of Orange County continues to grow, the lack of affordable land has become a major barrier to the development of affordable housing, especially given that the Town of Chapel Hill and the County will not develop infrastructure beyond the Urban Services Boundary. There are a limited number of developers and builders who are willing to build affordable housing—the profit potential for middle and upscale housing draws most builders to that range of development. Also, the high cost of land, costly permitting fees, and the length of time to get housing projects approved is prohibitive to the development of affordable housing.[2]

Affordable housing in Orange County is a major issue. Frequently, those who work in the county note that they cannot afford to live here; those who live here say that the cost of their housing prevents them from using the services that exist here; and those who do not have housing at all face an almost insurmountable challenge in coordinating their housing, employment, social, and medical needs.

According to the Orange County Housing, Human Rights, and Community Development report, income needed to afford a two bedroom apartment in Orange County in 2010,[3] is $33,280, while in NC one would need an income of $28,710. The hourly wage needed to afford a two bedroom apartment in Orange County is $16.00 per hour, while in NC one would only need to earn $13.80 an hour.

Primary Data: Residents' Concerns

Quantitative: Survey

Of those surveyed, 46% believe affordable housing is difficult to find in Orange County, and 41% agree that homelessness is a problem in Orange County. Sixty-nine percent of survey respondents agree that panhandlers are a problem in Orange County. People under the age of 25 were much less likely to view panhandling as a problem than people over age 25 years.

Qualitative: Focus Groups

Through focus groups with a variety of populations, residents discussed the need for more homeless shelters that provide treatment for those with mental health and substance abuse issues. The need for shelters stemmed from discussions regarding the lack of affordable housing available in the county. Participants also discussed the quality of the shelters already in the county, and the kindness of the volunteers and staff at these shelters.

Current Initiatives and Activities

The Orange County Partnership to End Homelessness [the Partnership] seeks to prevent and end homelessness. Many community and faith-based organizations, nonprofit and governmental agencies, UNC students, and other community members work collaboratively to help achieve this goal. These include the Interfaith Council for Social Service, Orange Congregations in Mission, Neighbor House, and the Orange County Department of Social Services (DSS) which provide emergency shelter, financial assistance, and food to people who are homeless or at risk of becoming homeless. However, concerted efforts in recent years, the continuing recession, and high unemployment rate in the state and country are major challenges affecting homelessness in Orange County.

The Partnership has prepared a Ten-Year Plan to End Chronic Homelessness [the Plan], in which it has outlined its long-term goals and strategy. The Plan's five major goals are to: a) reduce chronic homelessness; b) increase employment; c) prevent homelessness; d) increase access to services; and e) increase public participation in ending homelessness. The Plan document outlines the strategies to be followed for achieving each of these goals. The main strategies and associated tactics/activities are included in the Plan (please see full report for more details regarding goals and specific strategies).

Highlights of recent progress made by the Orange County Partnership to End Homelessness are given below and in their recent 2010 Annual Report.

The Partnership's definition of the chronically homeless is "individuals with a disabling condition (substance abuse disorder, serious mental illness, developmental disability, or chronic physical illness or disability) who have been homeless either continuously for one entire year or four or more times in the past three years". The homeless are counted each year on one night in January, and the data for 2007-2010 (see Table below) includes those spending the night in homeless shelters, transitional housing programs, on the streets, in camps, etc.

Table 12: Orange County Point-in-Time Count of the Homeless, 2007-2010[4]

Number of Homeless	2007	2008	2009	2010
Adults	173	171	129	120
Children	35	24	27	15
Total homeless people	208	195	156	135
Chronically homeless	46	58	42	38

This data shows that despite the severe economic effects of the current recession, there were fewer "homeless" and "chronically homeless" people in Orange County in 2010 than in 2007. However, since the Partnership's "point in time" count does not include people doubled-up with friends or relatives, nor those staying in institutions who were homeless upon entering, such as hospitals, jails, or detox facilities, the numbers for 2007-2010 in the above Table vastly under-report the actual number of people who experienced homelessness in Orange County at one time or another during the years 2007-2010.

The Partnership's "Housing for New Hope" program provides outreach services (PATH) to homeless individuals, and helps them enroll in services and obtain housing. It contacted 400 homeless people in 2008, and 277 in 2009, and enrolled about 60 homeless people in each of

these years (see Table below). According to the Partnership, the number of homeless people contacted and offered assistance in 2008 was unusually high because it was the first full year that Housing for New Hope operated in Orange County, and making contact with individuals was a priority. The number served in 2009 was in line with the program's annual goal of 250, as staff focused on providing ongoing services and referrals. In 2010, the number of homeless people receiving housing increased slightly.

Table 13: The PATH Program, Street Outreach in Orange County, 2007-2010[5]

Street Outreach	2007 (6 mo.)	2008	2009	2010
Homeless people contacted and offered assistance	174	400	277	n/a
Homeless people enrolled in services	25	63	61	50
Homeless people receiving housing	5	27	13	16

For housing the homeless, the goal of the Orange County Ten-Year Plan to End Chronic Homelessness is to create 40 units of Permanent Supportive Housing for the chronically homeless. These units are apartments for people with disabilities, where they receive the services they need for independent living, such as mental health care, health care, employment services, etc. Twelve such units were created in the first three years of the Plan. Funding was provided by the US Department of Housing & Urban Development (HUD) through its Continuum of Care Funding grant to support the development of these housing units. The amount of HUD Continuum of Care grant funding received by Orange County has steadily increased from $150,000 in 2005 to $461,750 in 2010 bringing the total since 2005 to almost $2 million.

One of HUD's National Homelessness Objectives is employment of at least 20% of people that exit Transitional Housing (where people may stay usually up to two years while receiving case management) and Permanent Supportive Housing programs. In Orange County, over 40% of such people were employed in 2007; the figure rose to 50% in 2008, before dropping to 29% in 2009. The Partnership speculates that the drop from 2008 is due to the small number of people exiting these programs (six individuals in 2009), and the ongoing economic downturn.

Another of HUD's five National Homelessness Objectives is to increase the percentage of homeless persons moving from Transitional Housing Programs to permanent housing to at least 65%. The Orange County Department of Social Services, partnering with Housing for New Hope, received a grant of $1 million in September 2009 from the Homelessness Prevention and Rapid Re-Housing Program (HPRP). The Partnership to End Homelessness has played a key role in applying for and utilizing this grant. In 2010, the Partnership began fully implementing the program.

HPRP is a new HUD program that provides grant assistance to households that would otherwise become homeless, and helps those who have lost their homes obtain stable housing. In Orange County, the percentages of those who have moved from transitional to permanent housing were about 70%, 40%, 60%, respectively for 2007, 2008, 2009. These percentages reflect continuing problems of a tight labor market and the ongoing difficulties of securing permanent housing for the homeless.

For increasing access to services, the Partnership has hosted two SSI/SSDI Outreach, Access, and Recovery (SOAR) training activities. SOAR training has helped improve the approval rates and

reduce the waiting periods for applying for disability benefits for homeless individuals. The Partnership to End Homelessness trained a total of 33 case workers in three years (2007-2009).

Progress has also been made towards achieving the Ten-Year Plan's goal of increasing public participation in ending homelessness. Project Homeless Connect (PHC) is a one-day event that provides a wide range of services to people experiencing or at-risk of experiencing homelessness. In 2009, the 3rd annual PHC was held at the Hargraves Community Center and St. Joseph's CME Church in Chapel Hill. At this event, 235 individuals were provided services by over 50 service providers and 300 volunteers. New services included kidney function screening, vision screening, free reading glasses, photographic portraits, and a drumming circle. With each passing year, the PHC events have become bigger and better.

As members of the Partnership, many voluntary organizations are engaged in helping address the problems associated with homelessness in Orange County. One of these, the UNC Homeless Outreach Poverty Eradication (HOPE), is a student group working to help people who are impoverished or homeless. Its initiatives include HOPE Gardens, an urban farm that employs homeless people, which was launched in 2009 in partnership with the Chapel Hill Department of Parks and Recreation and Active Living by Design. HOPE Community Dinners are held monthly, and bring together as many as 100 people living on the street or in shelters with students and other community members. The HOPE Documentary Team has produced a 24-minute film exploring the issues of substance abuse and homelessness that is being distributed and shown around the community.

In addition, in May 2009 the Community Empowerment Fund (CEF) began providing micro-loans, savings opportunities, job readiness assistance, and financial services to the homeless; Talking Sidewalks, a literary magazine comprised entirely of prose and art by homeless individuals, has released three issues and hosted readings by the writers. In 2010, several additional activities have been undertaken by the Partnership, including preparation and distribution of a pocket guide of support services, a resource guide for accessing services, and the provision of disability benefit approvals through the SOAR program.

Community agencies and groups working on housing and homelessness issues in Orange County are:

- ARC of North Carolina
- Chapel Hill Training and Outreach Agency
- Chapel Hill-Carrboro YMCA
- Community Alternatives for Supportive Abodes
- EmPOWERment, Inc.
- Habitat for Humanity of Orange County
- Housing for New Hope
- Inter-Church Council Housing Corporation
- InterFaith Council for Social Service
- Neighbor House
- Orange Congregations in Mission
- Orange County Department of Social Services
- Orange County Partnership to End Homelessness
- PATH Program

- The Chapel Hill Planning Department
- The Community Home Trust
- The Hillsborough Planning Department
- The Joint Orange-Chatham Community Action Agency
- The Orange County Housing and Community Development Department
- The Town of Carrboro
- The Town of Chapel Hill Department of Housing
- The Town of Hillsborough
- USDA/Rural Development

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

In 2011, the Partnership intends to provide additional services to the homeless in Orange County. These include health, dental, behavioral health, legal, and child care services, as well as the provision of IDs and benefits (SSI/SSDI, Medicaid, food stamps). The top priorities moving forward will be the SOAR program and IDs for homeless individuals (which meet immediate needs of the homeless), and the provision of SSI/SSDI benefits application, dental services, health education and prevention, and support circles, all of which help achieve the longer term goals of the Partnership. In particular, the health education campaign will focus on the sheltered and at-risk homeless population, and will cover such topics as substance abuse and mental health, medical needs at home, nutrition, and chronic illnesses (diabetes, hypertension, etc.).

Also, some immigrants and refugees have had success with establishing homes through Habitat for Humanity and the OC Community Home Trust.

[1] Orange County Housing and Community Development website: accessed September 11, 2007 at http://www.co.orange.nc.us/housing/info_stats.asp.
[2] Orange County HOME Consortium. FY 2010-2011 Annual Action Plan. http://www.co.orange.nc.us/housing/documents/FY2010-2011ActionPlanedited2.pdf
[3] Orange County Housing and Community Development website: accessed November 2011 at http://www.co.orange.nc.us/housing/info_stats.asp. http://www.co.orange.nc.us/housing/info_stats.asp
[4] Annual Report of the Orange County Partnership to End Homelessness, 2010. http://www.co.orange.nc.us/housing/documents/OCPEH2010AnnualReport.pdf
[5] Annual Report of the Orange County Partnership to End Homelessness, 2010. http://www.co.orange.nc.us/housing/documents/OCPEH2010AnnualReport.pdf

5.02.b Hunger and Food Insecurity

Impact on Health and Contributing Factors

- *Hunger*: A condition in which people do not get enough food to provide the nutrients (carbohydrates, fat, protein, vitamins, minerals, and water) for fully productive, active and healthy lives.
- *Malnutrition*: A condition resulting from inadequate consumption or excessive consumption of a nutrient; can impair physical and mental health and contribute to or result from infectious diseases.
- *Vulnerability to hunger*: A condition of individuals, households, communities or nations who have enough to eat most of the time, but whose poverty makes them especially susceptible to hunger due to changes in the economy, climate, political conditions or personal circumstances.[1]

The terms food security and food insecurity have also become widely used in conversations about hunger. America's Second Harvest defines food security as "Access by all people at all times to enough food for an active, healthy life. Food security includes at a minimum: 1) the ready availability of nutritionally adequate and safe foods, and 2) an assured ability to acquire acceptable foods in socially acceptable ways (e.g., without resorting to emergency food supplies, scavenging, stealing, or other coping strategies)." By contrast, the definition for food insecurity is, "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways."[2]

The lack of nutritionally adequate foods is a significant risk factor for all types of poor health outcomes, particularly for children. Poor nutrition and hunger lead to learning disabilities, fatigue, and difficulty with social interaction.

Lack of adequate food is a problem for many residents in Orange County, as evidenced by the high number of people seeking food assistance through various programs. In a county with a high median income, it is troubling that so many residents are unable to make ends meet from month to month and may go hungry as a result.

As noted above, some people have enough food in ordinary circumstances but are particularly vulnerable to food insecurity during times of crisis, whether due to personal situations, unexpected weather conditions, or economic upheaval.

Healthy NC 2020 Objective

There are no Healthy NC 2020 Objectives specific to hunger and food insecurity.

Secondary Data: Major Findings

From 2008 to 2010, North Carolina had a food insecurity rate of 15.7%, a percentage higher than the national average.[3] County level data regarding food insecurity is unavailable, but expected to be slightly lower given than hunger is so closely linked with poverty numbers; Orange County has a higher average income as compared to the state. It is estimated that 7.7% of Orange County households received food stamps in 2010, as compared to 13.1% of households in NC.[4]

Primary Data: Residents' Concerns

Quantitative: Survey

Seven percent of all surveyed cut the size of or skipped meals in the last 12 months because there was not enough money for food. Two-thirds of the 7% (N=12) of survey respondents who skipped meals had to do so monthly. Responses were skewed by age: 13.2% of 25-50 year olds cut or skipped meals; no survey respondent (0%) under the age of 25 years and only 1.3% of those over 50 years cut or skipped meals because of money. Nearly 19% of respondents, who have an income of less than $25,000, cut or skipped meals in the past year.

Qualitative: Focus Groups

Issues of hunger and food security were not highlighted as primary concerns of many of the participants involved in the focus groups. Participants spoke positively of the food services available to low-income members of the community.

Current Initiatives and Activities

The Orange County Department of Social Services provides food stamps to residents in need who qualify.

The Interfaith Council for Social Service provided 78,566 hot meals through their Community Kitchen in fiscal year 2010-2011, with the help of volunteers and more than $750,000 in food donated by individuals and businesses. Their food pantry provided 17,278 bags of groceries and they provided an additional 868 holiday meals. A total of 3,500 requests for food, financial assistance, and help with utilities were granted as well.[5]

The Food Bank of Central and Eastern North Carolina serves the Orange County population and distributes food to local families. In addition, Kids Cafe is an after-school program that offers tutoring, nutrition education, mentoring, and nutritious meals to children at risk of hunger.

Orange Congregations in Mission (OCIM), a non-profit ministry in Northern Orange County, offers several programs to assist residents with emergency needs. OCIM delivers meals daily to rural Orange residents through their Meals on Wheels program. The Meals on Wheels program provides meals to individuals who are homebound (they cannot drive), are home alone during the day, and do not have someone available to prepare meals for them. OCIM also runs a Food Pantry.

People Offering Relief for Chapel Hill and Carrboro Homes (PORCH) is an all-volunteer, grass-roots, non-profit organization that aims to collect food for the hungry. PORCH supports several local food pantries, its Food for Families programs, as well as a new program designed to provide school students with supplemental snacks.

Orange County and Chapel Hill-Carrboro City Schools also provide free or reduced lunches to students.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The same factors that operate in the area of income, poverty, and employment contribute to the likelihood of an individual or a family to experience food insecurity or hunger. Because of the economic disparities, single mothers are more vulnerable, as are children, older adults, people with disabilities and minority racial and ethnic groups.

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[1] Food Bank of Central and Eastern North Carolina, Hunger Glossary, http://content.foodbankcenc.org/education/glossary.asp

[2] 2006 Hunger Study, America's Second Harvest, http://www.hungerinamerica.org/who_we_serve/Food_Insecurity/index.html

[3] US Department of Agriculture. Food Security in the United States: Key Statistics and Graphics http://www.ers.usda.gov/Briefing/FoodSecurity/stats_graphs.htm#geographic

[4] 2010 American Community Survey 1-Year Estimates. US Census. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?fpt=table

[5] The Inter-Faith Council for Social Service, Fall 2011 Newsletter. http://ifcweb.org/IFC_Fall11_Newsletter_final.pdf

Section 5.03 Education: Early Childhood and High School Graduation

Good health and good educational outcomes are mutually reinforcing. Research shows that student health-risk behavior and physical health have a noticeable impact on K-12 learning outcomes. Likewise, health education, general education, and physical education at the K-12 level have a positive impact on health outcomes for students and adults.[1]

Impact of student health on K-12 learning outcomes

Health-risk behaviors are associated with factors such as academic failure, attendance, test scores, and ability to pay attention in class.[2] Students engaging in sexual activity, substance abuse, and physical inactivity risk lower grades and the potential for dropping out of school. Similarly, students with chronic illnesses and obesity are more likely to be at an academic disadvantage, a factor often linked with high rates of absenteeism.

In 2009, the national Youth Risk Behavior Surveillance System—a system that monitors high school student health-risk behaviors and their correlation with academic achievement—found that students with higher grades were less likely to engage in health-risk behaviors; conversely, students who did not engage in health-risk behaviors received higher grades.[3] Students with higher grades were significantly less likely to have engaged in behaviors such as carrying a weapon, current cigarette use, current alcohol use, being currently sexually active, watching television three or more hours per day, or being physically active at least 60 minutes per day on fewer than five days.[4] High school graduation rates and sexual activity are prominently linked. Teenage pregnancy is said to be the leading cause of adolescent women dropping out of school, as 30 to 40% of female high school student drop-outs are mothers. Male students may also drop out of high school to support a child.[5]

There is emerging research regarding the connections between physical activity, nutrition, and academic performance. Research shows that children's cognitive processes improve with exercise and greater fitness levels.[6] Obesity, however, can hinder children's ability to learn. One study monitored the weights of 7,000 US school children from age five to around age eight. Normal weight girls, who were overweight by the end of third grade, performed less well in reading and math and had lower social skills ratings, while boys who became overweight had more absences from school.[7] A longitudinal study of young adults with chronic illnesses such as asthma, cancer, diabetes, or epilepsy suggests that these students often experience lower educational attainment than their peers.[8] Though research is limited, chronic illness often results in absenteeism that is linked to poor performance. Psychological, emotional, and behavioral problems such as depression, tiredness, stress, hunger, and abuse also significantly contribute to high school drop-out rates.[9] Food-insufficient children are more likely to receive lower math scores or repeat a grade while food-insufficient teens are more likely to be suspended from school.[10]

Impact of K-12 education and physical education on health outcomes

The Centers for Disease Control and Prevention (CDC) states that academic success is "an excellent indicator for the overall well-being of youth and a primary predictor and determinant of health outcomes.[11]" Students who complete high school exhibit marked lifetime health benefits, such as reduced mortality, decreased health conditions, and lower depression rates. In

addition, there is significant research advocating the importance of integrating health into education. Schools, communities, and states benefit from reduced health costs.

Studies have found that education exerts the strongest influence on health, more so than income and occupation, and that more formal education is associated with lower death rates.[12] Education leads to higher income levels, allowing individuals to purchase better medical care and healthier food. Graduates benefit from access to health resources and information, higher education, and supportive social networks—all of which are associated with better long-term health.[13] A recent research review suggested that investments to improve educational achievement "can save more lives than can medical advances.[14]" An Organization for Economic Cooperation and Development report found that education has the most substantial impact on adult health outcomes including mortality, physical health conditions, and depression while reducing health behaviors such as smoking, obesity, and physical activity.[15] In contrast, "the less schooling people have, the higher their levels of risky health behaviors such as smoking, being overweight, or having a low level of physical activity.[16]" Dropping out of high school is associated with health problems including substance abuse, injury, and unintended pregnancy.[17]

The *SoHealthi* 2008 state rankings—in which North Carolina ranked 35 out of 50 states and DC[18]—highlighted the strong correlation between health education and high school graduation rates.[19] The rankings found that states requiring health education spent less overall on health.[20] Coordinated School Health Programs that include both health education and physical education are gaining momentum. One study of third and fourth grade students found that students who received comprehensive school health education scored higher on reading and math assessments than a control group.[21] Students also benefit from a planned, sequential K-12 physical education curriculum, particularly for stemming obesity.[22] Physical education encourages lifelong physical activity, and adding time during the school day for physical activity does not appear to detract from students' academic performance.[23] According to the CDC, the majority of studies have found that student physical activity may actually help improve academic performance.

Healthy NC 2020 Objectives

The Healthy NC 2020 Objectives include five specific objectives that target school-age youth. Separate chapters or sections of this report are devoted to tobacco, substance abuse, and physical activity.

Healthy NC 2020 Objective	Current (NC)	2020 Target
Increase the four-year high school graduation rate.	71.8% (2008-2009)	94.6%

The four-year graduation rate for all North Carolina schools has gone up from 69.5% in 2007 to 71.8% in 2009 and 74.2% in 2010. The rate varies by ethnicity. It is 85.2% for Asian students, 79.6% for white students, 71.2% for multi-racial students, about 67.0% for Black and American Indian students, and the lowest 61.4% for Latino students.

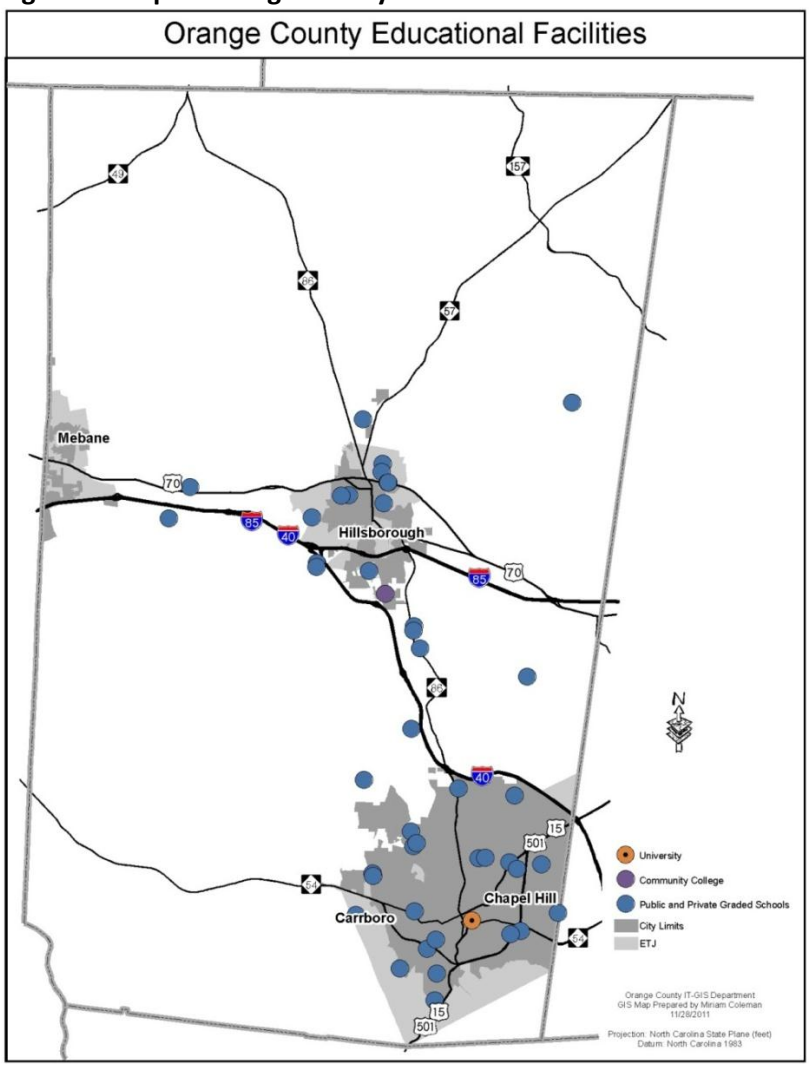
The four-year graduation rate for Orange County schools is higher than for all NC schools, and has gone up from 87.9% in 2007 to 88.3% in 2009 and 89.0% in 2010. As for all NC schools, the rate varies by ethnicity, but in Orange County the pattern is somewhat different. The rate is

100% for Asians, about 86% for white and multi-racial students, about 74% for Black students, and 70% for Latino students.

The four-year graduation rate for Chapel Hill Carrboro City schools has gone up as well, from 75.5% in 2007 to 81.4% in 2009 and 83.1% in 2010. For these schools too, the rate varies by ethnicity, with 92.5% for white students, about 92% for multi-racial and Asian students, 75% for Black students, and 66.2% for Hispanic students.

The steady increase in four-year graduation rates for Orange County and Chapel Hill-Carrboro schools could have a positive long-term impact on health status of young adults. Continued efforts are planned to help reach the Healthy NC 2020 targets and to close the gap in educational outcomes for different ethnic groups, especially for Black and Hispanic students.

Figure 8: Map of Orange County Educational Facilities



Schools (universities, community colleges, and public/private grade schools) are concentrated in city limits and the major corridors of I-85 and Hwy 86.

Primary Data: Residents' Concerns

Quantitative: Survey

Seventy-seven percent of those surveyed agreed that children have equal access to a good education in schools in Orange County. Of the 23% that disagreed, 10% strongly disagreed. Disagreement was skewed by income bracket—those who made less than $25,000 disagreed about equal access to education in schools more than those who made over $50,000 (21% disagree vs. 9% disagree).

Of those surveyed, 37.5% agreed that school drop-out is a problem in Orange County.

Qualitative: Focus Groups

When discussing education in Orange County, there was a lack of consensus among participants about the quality of the school systems in the county. One participant spoke highly of the school system in Chapel Hill saying that it is one of the main draws for residents to come here. Another voiced the opposite opinion and explained that the school system is great for students on both extremes—gifted and talented or learning disabled—but less supportive for students that are "middle of the road."

Others discussed the role of university, both in creating a more highly educated community and in increasing the education gap. Similarly, other participants have made it clear that education is highly valued in this community, but has set up the potential for elitism or inequality between those who have attended college and those who have not. Other groups talked about the need for more focused education, such as computer classes for adults, or drug and alcohol prevention for youth. Overall, it was clear that many participants felt that education was key to quality of life and health.

Current Initiatives and Activities

Both Chapel Hill-Carrboro City and Orange County Schools are working to prevent school dropout and acknowledge that there are multiple issues related to dropping out. For example, minority students and English Language Learners experience a significant achievement gap and may feel discouraged. Undocumented immigrant students may also feel stress and experience more obstacles to higher education opportunities due to their uncertain legal status. Residents are somewhat transient, especially if associated with the University, and young students may feel a lack of school connectedness. Individual, family, social, or emotional issues may also contribute to a higher likelihood of students dropping out of school. There is an ongoing focus in both districts to improve teaching by promoting best instructional practices and supplying funding as available to meet the needs of students who are at-risk academically. There are also efforts statewide, such as those through the Adelante Education Coalition, to address some of these barriers to education.

Chapel Hill Carrboro City Schools

School-based programs

- *Freshman Experience* or *Freshman Academy* are small learning communities, cluster in classes, taught by the same mentoring teachers who are building a communities

CHCCS Programs

- Prevention Intervention Plans
- Responsiveness to Instruction (RTI)

- Positive Behavior Interventions and Support (PBIS)
- Dual Language programs
- Alternative Pathways
- School Improvement Plans are designed to improve student achievement
- Thematic academies at each high school that provide a concentration of elective courses in an area of interest of a particular student, e.g. arts academy, social justice academy
- *AVID* focuses on students who are "in the middle", with academic potential, who would benefit from support to improve their academic record and begin college preparation. The mission is to close the achievement gap by preparing all students for college readiness and success in a global society.
- *Phoenix Academy High School* is a small, alternative high school for students who have not been successful in larger high school setting
- *Bridge Program* for high school students with mental health issues that have impeded their academic success
- *Blue Ribbon Mentor Advocate* program for students beginning in 4th grade and supported throughout middle and high school years

Collaborative programs with other school districts

- *Middle College at Durham Technical Community College* is for juniors and seniors and consists of students from three school districts. Students apply for admission and take both community college courses and honors level high school courses.
- *Triumph Academy* is a middle school day treatment for students who have severe mental health issues that impact school success.

Community-based programs

- *Boomerang* is a community-based alternative learning program for students who are suspended out-of-school for up to 10 days; emphasis on resiliency and making positive relationships with school and community adults.

<u>Orange County Schools</u>

Elementary Level

- 12 pre-K programs serving over 200 four year-olds
- Intense reading interventions for at-risk readers
- Free after-school programs located at three sites in the county

Middle School Level

- Free after-school programming for at-risk learners at each middle school
- Intense reading interventions for at-risk readers
- AVID program
- 6th Grade transition programs
- Therapeutic Day Treatment

High School Level

- Options for credit recovery through ACE program, free summer school and online course options
- 21 credit diploma
- Change in promotion policy to credits only for grade to grade advancement
- Revised attendance policy
- Security check-in machines installed at each high school
- 9th grade transition program

District Level

- Expansion of Partnership Academy facility and staff

- Pyramids of Intervention at each school
- Partnership with OPEC area mental health to offer school-based mental health services to selected elementary, middle and high school students
- District-wide dropout prevention committee in place to develop a comprehensive action plan
- Provided free computers to families in need through Kramden Institute
- Host yearly school-wide minority summits for parents as well as a district level parent summit focusing on how to support their children academically

[1] Please note: Though education, health, and social outcomes are widely held to be interdependent, there is a lack of understanding as to the patterns of causation. Academic success, health status, and risk behaviors tend to occur in a cyclical fashion among younger students, making analysis challenging. It is important to note that researchers are calling for more significant research on the pathways through which education leads to better health and longer life expectancy.

[2] "Student Health and Academic Achievement." Center for Disease Control National Center for Chronic Disease Prevention and Health Promotion. http://www.cdc.gov/healthyyouth/health_and_academics/index.htm

[3] "Student Health and Academic Achievement." Center for Disease Control National Center for Chronic Disease Prevention and Health Promotion. http://www.cdc.gov/healthyyouth/health_and_academics/index.htm

[4] "Health Risk Behaviors and Academic Achievement." Youth Risk Behavior Surveillance System, Center for Disease Control National Center for Chronic Disease Prevention and Health Promotion. 2009. http://www.cdc.gov/healthyyouth/health_and_academics/index.htm

[5] Freudenberg N, Ruglis J. "Reframing school dropout as a public health issue." *Preventing Chronic Disease*. 4(4). 2007. http://www.cdc.gov/pcd/issues/2007/oct/07_0063.htm

[6] Tomporowski, Phillip D. "Exercise and Children's Intelligence, Cognition, and Academic Achievement." *Educational Psychology Review*. 20. 2008. P. 111-131.

[7] Kellow, Juliette. "Obesity Affecting Education." Weight Loss Resources. http://www.weightlossresources.co.uk/children/obesity-affecting-education.htm

[8] Maslow, Gary et al. "Growing up with a Chronic Illness: Social Success, Educational/Vocational Distress. *Journal of Adolescent Health.* 2011.

[9] Freudenberg N, Ruglis J. "Reframing school dropout as a public health issue." *Preventing Chronic Disease*. 4(4). 2007. http://www.cdc.gov/pcd/issues/2007/oct/07_0063.htm

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[11] "Student Health and Academic Achievement." Center for Disease Control National Center for Chronic Disease Prevention and Health Promotion. http://www.cdc.gov/healthyyouth/health_and_academics/index.htm

[12] Freudenberg N, Ruglis J. "Reframing school dropout as a public health issue." *Preventing Chronic Disease*. 4(4). 2007. http://www.cdc.gov/pcd/issues/2007/oct/07_0063.htm

[13] Freudenberg N, Ruglis J. "Reframing school dropout as a public health issue." *Preventing Chronic Disease*. 4(4). 2007. http://www.cdc.gov/pcd/issues/2007/oct/07_0063.htm

[14] Freudenberg N, Ruglis J. "Reframing school dropout as a public health issue." *Preventing Chronic Disease*. 4(4). 2007. http://www.cdc.gov/pcd/issues/2007/oct/07_0063.htm

[15] Feinstein, Leon et. al. "What are the effects of education on health?" Organization for Economic Cooperation and Development. Measuring the Effects of Education on Health and Civic Engagement: Proceedings of the Copenhagen Symposium. 2006. http://www.oecd.org/dataoecd/15/18/37425753.pdf

[16] Freudenberg N, Ruglis J. "Reframing school dropout as a public health issue." Preventing Chronic Disease. 4(4). 2007. http://www.cdc.gov/pcd/issues/2007/oct/07_0063.htm

[17] "Student Health and Academic Achievement." Center for Disease Control National Center for Chronic Disease Prevention and Health Promotion. http://www.cdc.gov/healthyyouth/health_and_academics/index.htm

[18] "HealthTeacher Announces 2nd Annual SoHealthi Rankings for State Health Education and Outcomes." HealthTeacher. April 7, 2008.

[19] "HealthTeacher Announces 2 Annual SoHealthi Rankings for State Health Education and Outcomes." ConnectivHealth. April 7, 2008. http://www.connectivhealth.com/press.php?id=10

[20] "HealthTeacher Announces 2 Annual SoHealthi Rankings for State Health Education and Outcomes." ConnectivHealth. April 7, 2008. http://www.connectivhealth.com/press.php?id=10

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[22] "Making the connection: Health and student achievement." Society of State Directors of Health, Physical Education and Recreation. http://www.thesociety.org/pdf/makingtheconnection.ppt

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Section 5.04 Access to Health Care, Insurance, and Information

5.04.a Access to Health Care

Impact on Health and Contributing Factors

The ability to access quality and affordable health care services is a key component in a person's overall health. According to Healthy People 2020, health care access is defined as "…timely use of personal health services to achieve the best health outcomes."[1] Health care access impacts a person's quality and quantity of life, as it dictates when and how often a person can use the health care system to obtain preventive, diagnostic, and treatment services.

According to the Agency for Healthcare Research and Quality, there are three prerequisites to accessing healthcare services: 1) the ability to enter and navigate the healthcare system; 2) the ability to identify and use convenient healthcare locations; and, 3) the ability to establish a good working relationship with a medical provider where communication is easy.[2] These three steps require skills and resources that not every resident has. First, navigating the healthcare system is easier to do when a person has adequate financial resources and health insurance to pay for services. Having medical insurance can ease a person's financial burden. Second, gaining access to the best healthcare sites often requires the ability to travel within or outside the community. Last, to form a trusting relationship with a medical provider a person must feel comfortable with communicating and asking questions, which is generally the result of having a consistent provider or medical home. Not having these essential resources may lead to barriers that can keep a person from truly capitalizing on or benefiting from the preventive care and/or treatment plans available for maintaining health.

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Reduce the percentage of non-elderly uninsured individuals (aged less than 65 years)	20.4%	8%

The above Healthy NC 2020 Cross-Cutting Objective aligns perfectly with contributing factors for access to health care services. With increased access to care, a resident may have a better chance of improving health outcomes and increasing his or her life span. By reducing the number of uninsured individuals, it is believed that pressures placed on emergency rooms will be eased[3] as more individuals establish a medical home and fewer will delay receiving the care and medications needed for treating an illness.[4]

Secondary Data: Major Findings

For many Orange County residents, health care services are accessible. According to 2008-2009 county-level estimates of uninsured residents, 18.9% (21,854) of Orange County residents between 0-64 years of age were uninsured.[5] This percentage garnered a "mid-low" ranking in the report. The county has quality health and medical resources that include a nationally-ranked hospital (UNC Health Care System)[6], an accredited School of Public Health (UNC Gillings School of Global Public Health), a community health care center (Piedmont Health Services), a local health department (Orange County Health Department), and private medical practices.

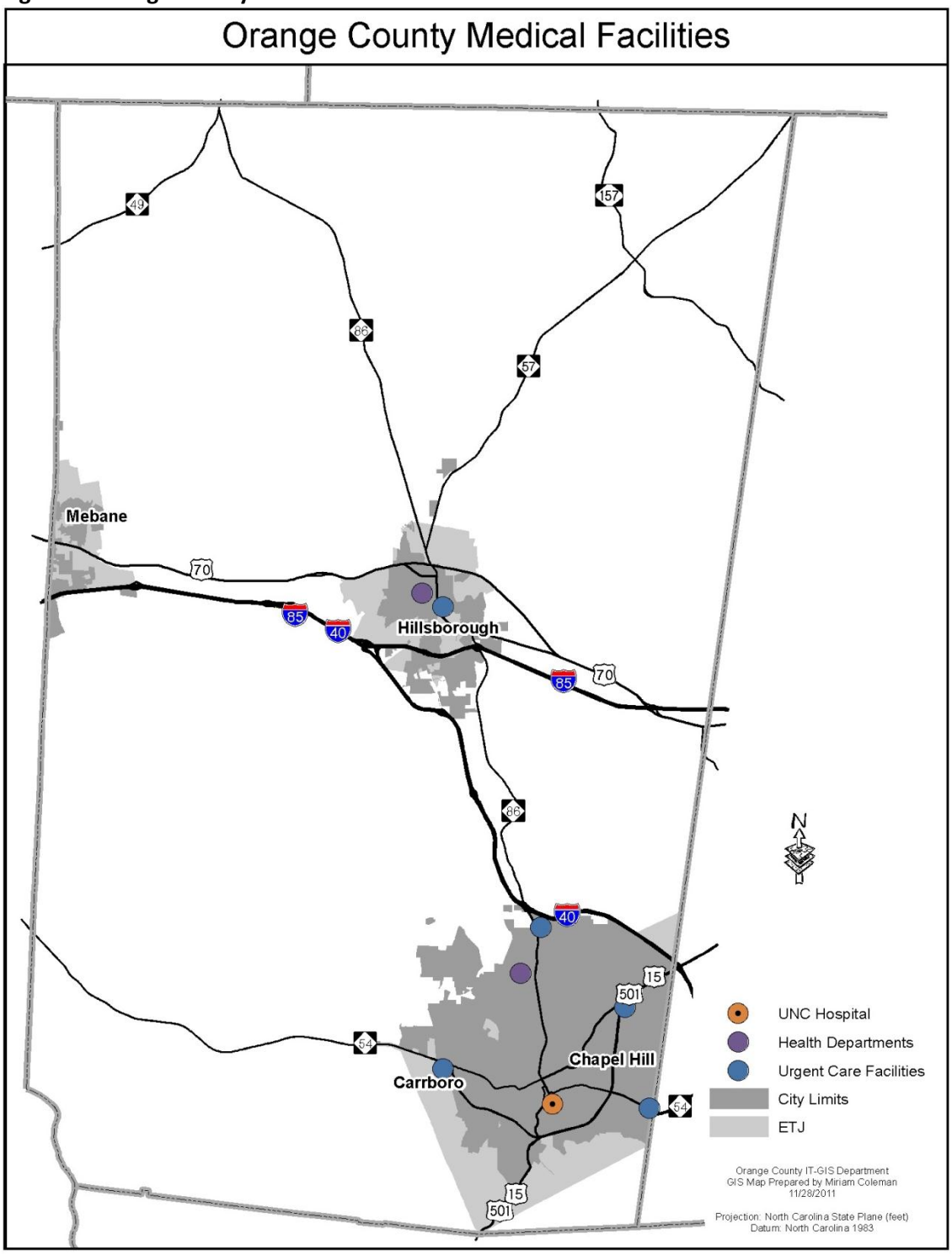
In addition, Orange County has the highest per capita number of physicians and dentists in the state with 88.9 physicians and 10.4 dentists per 10,000 population.[7] Research indicates that communities with a higher primary care provider to population ratio have better health outcomes, including lower infant mortality rate and higher life expectancy.[8] It is important to keep in mind that Orange County physician figures are somewhat misleading because the UNC Health Care System, which is owned by the State of North Carolina, employs many of these health professionals in Chapel Hill.

While Orange County has a strong public health and medical community, there are still many residents who cannot access the health care services available in this county.[9] As previously stated, close to 20% of residents are not insured. In addition to medical insurance, factors contributing to a resident's inability to access health care services include the concentration of health care resources in the southern part of the county, inadequate transportation systems in the central and northern part of the county; language barriers, recent relocation to the county from another country, and perceived disparities (or racism) within health care facilities. All of these factors were cited in previous Orange County Community Health Assessments in discussions on access to health care.[10]

The current recession is another factor that may be affecting residents' ability to access health services.[11] Towards the end of 2007, the country began realizing the effects of an economic downturn with business closings, layoffs, and less spending. North Carolina and Orange County were not spared from this reality. According to the 2009 North Carolina Economic Index, the state's unemployment rate rose between December 2007 and January 2009 from 4.7 to 9.7 percent.[12] Orange County was fortunate to have the lowest unemployment rate of all North Carolina counties during this timeframe; however, the NC Employment Security Commission reported that Orange County unemployment rates increased from 3.2 percent to 6.6 percent between 2007 and 2009.[13] The state's rise in unemployment rates is consistent with a rise in uninsured residents. In Orange County, estimates of non-elderly (0-64 years) uninsured rose from 16.8 percent in 2006-2007 to 18.9 percent in 2008-2009.[14]

Orange County's 2009 BRFSS data also reveals that 18.3% of Orange County residents do not have one or more persons that they considered a doctor or health care provider. Close to 28% of residents did not visit a doctor for a routine (general physical exam) checkup within the past year. In addition, 14.8% of county residents could not see a medical doctor due to cost. In 2007, just 10% of Orange County residents answered "Yes" to the same question showing that the number of residents who are unable to pay for medical services is increasing.[15]

Figure 9: Orange County Medical Facilities



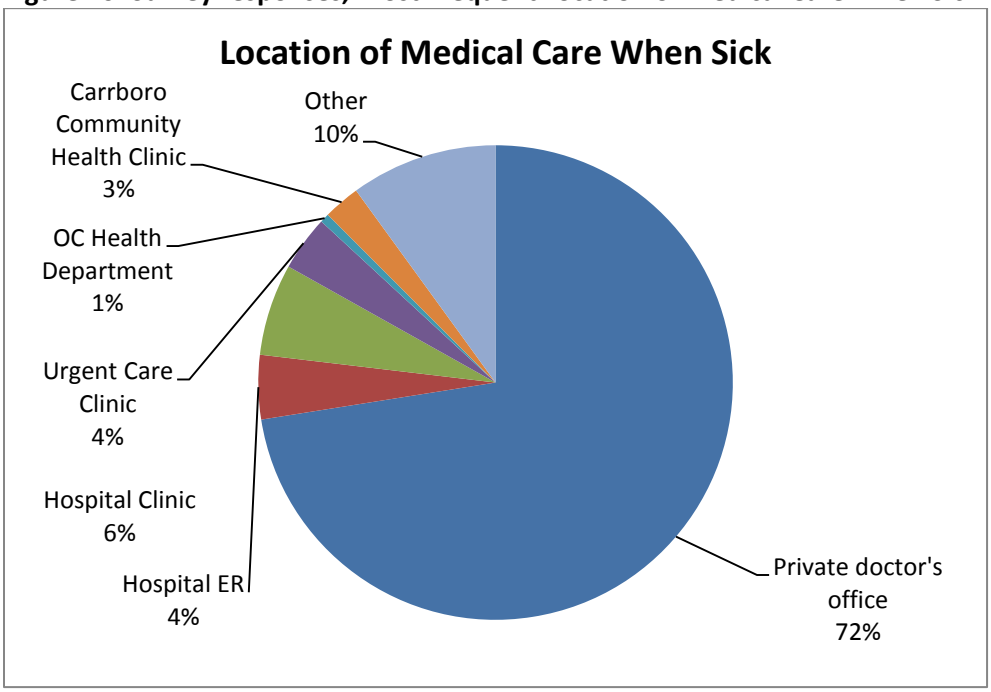
Medical facilities (hospitals, urgent care facilities, and health departments) in the county are all within city limits of Chapel Hill, Carrboro, or Hillsborough. This map does not include private physician or dentist offices.

Primary Data: Residents' Concerns

Quantitative: Survey

Survey respondents most often go a private doctor's office when sick (72%). Six percent of respondents go to a hospital clinic, 4% go to an urgent care clinic, 4% use the hospital emergency room, and 3% most often frequent the Carrboro community health clinic when sick.

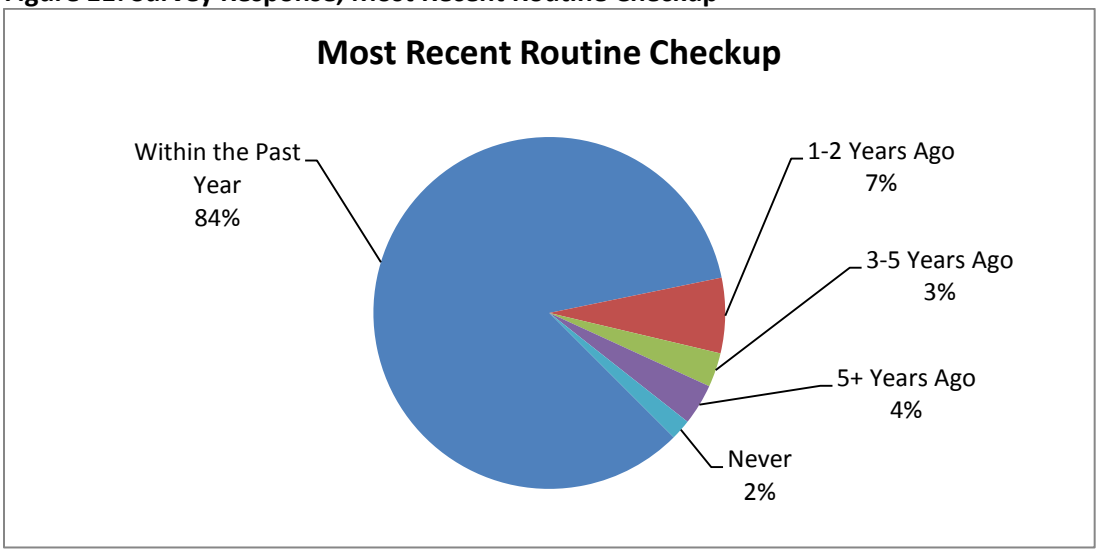
Figure 10: Survey responses, Most Frequent Location of Medical Care When Sick



Twelve percent of those surveyed said they have had problems getting health care they needed in the past year. Of those who listed specific problems getting health care, reasons included: did not have health insurance; could not afford the costs or deductible/co-pay was too high; for some other reason; could not get an appointment; did not know where to go; did not have a way to get there; and their insurance did not cover what they needed.

Eighty-four percent of residents surveyed visited a doctor for a routine checkup within the past year, 7% in the past one to two years, 3% three to five years ago, 4% over five years ago, and 2% had never had a routine checkup.

Figure 11: Survey Response, Most Recent Routine Checkup



Ten percent of those surveyed had problems getting a medically necessary prescription for themselves. Reasons cited were: could not afford the costs or their deductible/co-pay was too high; did not have health insurance; had insurance that did not cover what they needed; had problems with Medicare part D; and prescriptions were backordered and not available.

Sixty-one percent of those surveyed normally get their flu vaccine at a private doctor's office, 15% at their workplace, and 8% at their local pharmacy.

Regarding transportation, in order to get to health care, 87% of those surveyed usually drive themselves to appointments; 7% have someone else drive them; 4% take public transportation; 2% walk or bike; and less than 1% use the senior center, Orange or Social Services buses.

Qualitative: Focus Groups

Focus group discussions supported secondary data regarding barriers to accessing health care services in Orange County. According to outcome data, persons who had limited English proficiency, lower income levels, inadequate transportation, and/or inadequate insurance had more difficulty obtaining services. The limited English proficient groups in particular mentioned a lack of available appointments at affordable local health care centers as a particular barrier to access.

Current Initiatives and Activities

In North Carolina, poor, rural, and minority residents have more problems with accessing health care services.[16] According to the 2010 NC Racial and Ethnic Health Disparities Report Card, Latinos reported the largest percentage (29%) of adults who could not see a doctor in the previous 12 months due to cost. This group was followed by American Indians at 25%, Blacks/African Americans at 21%, Asian/Pacific Islanders at 16% and non-Hispanic whites at 14%.[17]

Orange County has become more ethnically and linguistically diverse. The Burmese/Karen refugee population from Burma is the newest Orange county resident group. An estimated 800-

1,000 people from Burma live in the Chapel Hill and Carrboro area.[18] Due to the economic downturn, fewer refugees have been arriving to the area since 2008.[19] All newly arrived refugees to Orange County have a communicable disease screening by Orange County Health Department Refugee Health. This screening includes tuberculosis assessment, Hepatitis B and HIV testing, immunizations and parasitology testing. Referral to primary care physician for exam is encouraged but not required.[20] Piedmont Health Services' Carrboro Community Health Center provides comprehensive care to the Burmese/Karen refugee population and served 471 clients in 2010.[21]

Services for the Latino immigrant community continue to improve. The UNC Latino Health Clinic has expanded its services and programs into areas such as cancer support and recently received the 2010 Diamante Award in Health and Science–a statewide award that honors organizations that are making significant contributions to the Hispanic Community of North Carolina.[22]

Transportation was cited in the 2007 Orange County Community Health Assessment as a barrier to accessing health care services for northern Orange and rural residents in particular. With no major public transportation advancements to connect north and south occurring or planned, it is not surprising that some residents cited transportation as a barrier to accessing health care in this 2011 survey. Orange County has limited public transportation particularly in the central and northern parts of the county. Residents without access to a personal vehicle may experience transportation difficulties. Efforts at increasing public transportation between Hillsborough and Chapel Hill have increased. Triangle Transit and Orange County continue to provide a public route (TTA Route #420) between Chapel Hill and Hillsborough that includes UNC Hospital. This route has a limited schedule and is not free. In July 2011, the Town of Hillsborough and county (through Orange Public Transportation) created the Hillsborough Circulator, which is a free in-town bus service that connects passengers to various destinations including the Durham Tech community college campus (Hwy 86), the Wal-Mart/Home Depot shopping center (Hampton Pointe Blvd.), downtown Hillsborough (King Street), Daniel Boone Antique Mall, Timbers Mobile Home Park, Fairview (Rainey Avenue in Fairview), and the Maxway shopping center on US 70 towards northern Orange County. The county's Orange Bus offers seniors (60+) and residents with disabilities transportation from their residence to their medical care providers or shopping. This service is available to the general public on a seat available basis.[23]

Medication access is also a concern and agencies are taking steps to bridge this gap. Piedmont Health Services has improved medication access for seniors and others by offering prescriptions at a low cost.[24] The Orange County Health Department has a limited number of low-cost, primary care medications available and the department's Medication Assistance Program locates available programs for chronic disease medications by using websites such as needymeds.com.[25] Many area pharmacies, such as Walmart, now offer the "$4 Program" that covers up to a 30-day supply of eligible drugs at commonly prescribed dosages. In addition, the NC MedAssist program expanded its services to all North Carolina counties in 2009 and provides available free medication to low-income, uninsured North Carolina residents that meet their eligibility criteria.[26]

Recent changes in Orange County that affect access to care are:

- Increased health and medical resources in the central to northern part of Orange County:
  - Three new medical practices have opened in Hillsborough since 2007 adding access to primary care providers and pediatric offices for the central to northern part of the county.

  - UNC Health Care System will build a satellite hospital in Hillsborough which will include a 68-bed main hospital facility and a physicians' office building. Project completion is expected for April 2013.[27]
  - Expansion of the Orange County Health Department's health and dental clinics in Hillsborough were completed in 2011. The health department recently completed renovations to the lower level of Whitted Human Services Center. The health clinic will expand to include more exam rooms and work space for nutrition services. The dental clinic recently expanded from four to eight operatories (exam rooms) to serve clients more efficiently.[28]
- Creation of the Affordable Care Act on the federal level to increase health care access for all Americans.

In addition to private doctors and dentists, area health care providers are:
- NC MedAssist
- Orange County Health Department
- Piedmont Health Services
- Student Health Action Committee (SHAC)
- UNC Center for Latino Health
- UNC Financial Assistance Care Pharmacy
- UNC Health Care System

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The Community Health Assessment survey provides new insight as to what residents think about health care access in the county and how many residents access health care services. One of the first survey questions asked what participants liked most and least about living in Orange County. According to survey data, "Access to quality medical care" (5%) and "Good public transportation, low-traffic roads and bike friendly roads" (6%) are within the top 10 things people like most about living in Orange County. More respondents (17%), however, felt that transportation, sidewalks/roads, and traffic were detractors for the county.

Most survey respondents reported visiting a private doctor when needing a flu vaccination (61%) and when sick (72%) Both findings indicate that many Orange County residents have a medical home that they can turn to for preventive care and treatment. In addition, 84% of respondents reported having a routine check-up within the last year, suggesting that many residents take advantage of the health care resources available to them.

Not surprising, survey data showed that not all residents are able to access health care services or have health insurance to make access easier and more affordable. Participants were asked to report whether in the past year they had problems getting needed health care. Twelve percent of respondents reported that they did have problems getting care. Some of the respondents who were unable to access care reported issues such as not having health insurance (or enough health insurance); being unable to afford deductibles or co-pays; not being able to schedule an appointment; and transportation. These are all consistent with national findings for why many people have difficulty accessing health care services.

Similarly, survey data showed that 10% of respondents had difficulty filling a needed prescription and, for some, this was due to high deductibles, lack of or inadequate health insurance, and medications that were out of stock.

Difficulty accessing health care and filling prescriptions was more common among persons earning less than $50,000 per year, females, and persons of color. It is interesting to note that BRFSS data shows that residents earning above $50,000 were more likely to report "very good" and "excellent" health statuses than those with less than a $50,000 household income. Similarly, white respondents were more likely to report "very good" and "excellent" health statuses than minorities.

Orange County Health Assessment survey data revealed that most respondents (87%) drove themselves to health care appointments while 7% were driven by someone else, 2% walked or biked, and 4% used public transportation. It is good to see a high percentage of persons who report using personal transportation to get health care services. This finding shows that transportation is not the largest barrier against accessing health care services in the county. However, focus group discussions showed that residents who rely on public transportation have more difficulty accessing services. Some Orange County Health Department staff who provide direct service report anecdotally that clients who rely on public transportation often have difficulty in maintaining appointments. According to a health department social worker, some clients who live in northern Orange use the Orange Public Transportation (OPT) system's Medicaid transportation bus to get to clinic appointments. However, use of this system is based on OPT's schedule and clients must request pick-up in advance of the appointment day. There are often appointment 'no shows' because clients cannot access OPT transportation services in a timely manner.[29]

Several participants provided examples of how personal or environmental limitations prevented them from accessing health care services. In one discussion, a participant with limited English skills shared a story in which she was denied health care services because she did not bring someone who could interpret information for them. In addition to showing how limited English skills can keep a person from getting needed care, this example also shows that some medical facilities in the county may not be equipped to serve non-English speaking clients who need care and information. In a second discussion, a person shared difficulties in getting to Whitted Human Services Center in Hillsborough from the southern end of the county for medical appointments via public transportation and walking. Participants expressed interest in having more urgent care clinics throughout the county to reduce dependency on emergency rooms for minor issues and reduce waiting times when receiving care.

According to a small, 2010 assessment of Karen refugee residents in Orange County, socioeconomic barriers have the greatest impact on health care access. Most of these residents use the public bus system. Some adult refugees are eligible for Refugee Medicaid for health care the first eight months of resettlement. Most families with children are eligible for NC Medicaid. When they lose their Refugee Medicaid, they changed health care usage patterns by postponing doctor appointments, seeking medical care only for emergency, not keeping follow up medical appointment and not filling necessary prescriptions.[30]

Since Access to Health Care was voted as the number one priority in Orange County, it is especially important to work together on plans to improve access. Some recommended evidence-based methods are as follows:

1. Improve resources available to uninsured residents that will help them navigate the health care system
    a. Develop a Navigators Program for persons new to the county and its health care system
    b. Develop educational materials explaining/promoting the free or reduced-cost health care resources available in Orange County. Develop a distribution plan to make sure information gets to appropriate audiences.
2. Expand access to clinical services in Orange County
    a. Expanding access to clinical services can improve health outcomes. Nonetheless, just guaranteeing access to a provider does not ensure that individuals will receive all the recommended health services. Studies have shown that adults and children generally only receive about half of the recommended health services.[31]
    b. Begin researching the feasibility of developing more urgent care facilities in the county and better promote existing centers. Urgent care facilities are needed, but should be used for urgent needs and not as a primary source of care. For a healthier county, there is the need to set a high value on providing access to primary care, continuity of care, and prevention for the citizens.
3. Provide education on how to access public transportation services in the county.
4. Develop a targeted public information campaign to promote prescription and medical services in the county. This will include promotion of free or reduced-cost health care medication assistance programs such as the $4 medication list, http://www.Needymed.com website, or individual pharmaceutical website to locate Medication Assistance Programs.

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5.04.b Access to Health Insurance

Impact on Health and Contributing Factors

Orange County residents' ability to get health insurance impacts all areas of their physical and mental health. Without insurance, many have problems getting needed health care and often delay or do not get care because of the cost. Although Orange County is ranked number one in the state for the ratio of primary care physicians to citizens, there are limited places for low cost or free medical care in Orange County. [1]

The uninsured tend to use emergency departments for their primary care needs and have limited access to preventive screening. UNC Hospitals Emergency Department (ED) data shows that many people visit the ED for conditions that may not be true emergencies. The UNC ED had 66,054 total patient visits from July 2009 through June 2010 and visits increased yearly from 2007-2010.[2] Additionally, many frequent the ED for severe mental health conditions and to obtain medication.[3]

According to *Prevention for the Health of North Carolina,* people with a regular primary care doctor more often get preventive services and have less hospitalizations because of earlier medical care.[4] Since the uninsured often delay care over time, they may have more serious conditions, more hospitalizations, and more disabilities when they finally seek care. Adults without health insurance have a higher chance of dying prematurely. Being uninsured impacts the productivity of employees and students. Employees with poor health may have increased absenteeism, and students with poor health may have difficulty learning.[5] Medical bills can cause severe financial and credit problems for the uninsured and is often the main reason why families cycle into poverty.[6]

There are seven insurance categories. It is important to review each category prior to discussing health insurance access. A brief description is provided in the table below.

Table 14: Insurance Categories and Descriptions

Insurance Categories and Descriptions	
Medicaid	Covers all individuals in Traditional and HMO Medicaid who are not receiving Medicare benefits In NC, Medicaid provides coverage for low-income infants, children and families who meet eligibility requirements. Recipients must be citizens or legal residents of the US, which eliminates undocumented workers from coverage.[7] The exception to this rule is "emergency Medicaid" for which undocumented individuals may qualify. Orange County DSS is the access point for this program.
Medicare	National insurance plan for most people age 65 and older. Has three main parts – A, B, and D ▪ Part A (hospital insurance) covers inpatient, hospice, home health, and nursing facility care. Most Americans pay for premiums by paying Medicare taxes while working. Those who do not, but meet certain requirements can buy coverage. ▪ Part B (medical insurance) covers physician, outpatient hospital, and certain home health services. Also covers durable medical equipment. Requires a monthly premium. ▪ Part D provides prescription coverage. Individuals must purchase a plan and the cost is dictated by the drugs covered.[8] Includes all individuals in traditional Medicare and Medicare HMO who are not also receiving additional benefits through Medicaid.
Dual Eligible Medicare	Medicare Dual Eligible includes all individuals currently enrolled in traditional Medicare and HMO Medicare who also receive additional benefits through Medicaid.
Private Employer Sponsored Insurance	Includes all individuals in HMO, FFS, or PPO plans offered as part of an employment arrangement.
Private Exchange Insurance	Private-Exchange includes all individuals who purchase insurance through an insurance exchange or insurance market place not associated with employment.
Private Direct Insurance	Individuals purchase insurance from an insurance provider and not through an employment agreement or insurance exchange.
Uninsured	Individuals (adult or child) without any insurance coverage.

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Reduce the percentage of non-elderly uninsured individuals (aged less than 65 years).	20.4% (2009)	8.0%

There are an estimated 1.7 million uninsured individuals aged less than 65 years living in North Carolina. The Patient Protection and Affordable Care Act (PPACA), passed by Congress in April 2010, will extend affordable care to millions of uninsured individuals across the country. However, each state is tasked with implementation of the PPACA, which includes educating uninsured individuals about insurance options available to them and helping them to enroll. Increasing health insurance coverage will increase access to care, including clinical preventive services.[9]

In 2009, the N.C Institute of Medicine and the Cecil B. Sheps Center for Health Services Research estimated that 18.9% of Orange County residents 0-64 years of age were uninsured, which is slightly lower than the 20.4% state benchmark.[10] That year, there were over 21,000 Orange County residents in that age group without insurance coverage. In 2006-2007, 17% of the Orange County 0-64 age group was uninsured compared to the state average of 19.5%.[11] Orange County's uninsured population is increasing along with the state and the nation during rising unemployment rates and an economic recession. Historically, Orange County has had a slightly lower uninsured rate than the state average in this age group.[12]

Secondary Data: Major Findings

Cost of health insurance is the main reason that people do not have coverage.[13] As employers face increasing costs of offering health insurance, some are passing greater premiums and cost sharing on to employees. Insurance premiums increased between five and 14% per year since the year 2000, but changes in workers' earnings are typically in the two to four percent range. Many workers are spending more of their income each year to pay for health insurance. Employers may reduce covered health benefits of insurance or limit wage increases to offset increases in premiums.[14] According to the 2020 NC Health Objectives, 35% of individuals employed part time or full time by small firms (1-24 employees) were uninsured, compared with only 10% of those employed by very large firms (more than 1,000 employees).[15]

Many individuals who must purchase their own health coverage in the private market find that option unaffordable. Blue Cross Blue Shield of North Carolina's (BCBSNC) website calculates a quote for the premium. The cost of a $2,500 deductible BCBSNC non-employer plan for a family of four has risen to $815 per month, a 36% increase from 2007. Other less expensive options were available but for less coverage and higher deductibles.[16]

Orange County's rate of uninsured residents has increased by five percent in the last decade. Between 2000 and 2001, Orange County ranked first in the state for the number of individuals age 0-64 with health insurance. At that time, only 13.8% (or approximately 15,000) of county residents were uninsured. There were approximately 21,000 people in Orange County without health insurance in 2009.[17] These individuals have limited choices for receiving health care. In response to this, Piedmont Health Services and the UNC HealthCare System partnered to form the Carolina Health Net (CHN), which is a partnership to provide medical homes and care coordination to the uninsured in Alamance, Lee, Chatham, Caswell, and Orange counties. The

program provides a full range of affordable services including medical, dental, pharmacy, lab, nutrition (including WIC) social work, and medical case management. Clients can receive care from bilingual providers and take advantage of extended service hours. [18]

Adults are more likely to be uninsured than children. In 2009, 18,281 (22.1%) Orange County adults aged 19-64 were uninsured compared to 3,573 (10.9%) children age 0-18.[19] The 19 to 29 age group has the highest uninsured rate in the state and nationally.[20,21] As of September 23, 2010, the Affordable Care Act requires insurance companies offering child coverage through a parents' plan to offer continued coverage for the child until age 26.[22] This extends the age limit and does not require student status for coverage.

Primary Data: Residents' Concerns

Quantitative: Survey

Twenty four percent of respondents between the ages of 25 and 50 years of age did not have health insurance and one third of respondents under 25 years did not have health insurance. Survey participants were asked to report how they paid for health care services. Persons earning between $25,000 and $50,000 were less likely to report having insurance coverage than those with less or more incomes. Respondents with incomes of $25,000 or less had the highest rate of coverage.

Participants were also asked to report how they pay for health care expenses. Responses to the question varied with 26% percent of respondents stating that they had insurance coverage through an employer, 19% paid out of pocket, 18% had Medicare, 14% purchased private health insurance, and 10% purchased private insurance through an employer.

Qualitative: Focus Groups

The overall theme to come out of each discussion was that health insurance was important to accessing health care services among all population levels. Discussions showed that some participants had difficulty with accessing and understanding health insurance coverage. Participants shared that limited language skills and a difficulty in understanding differences between the types of coverage contributed to concerns about health insurance. It was shared in all focus group discussions that people without health insurance would turn to the emergency room for care or avoid medical care altogether instead of seeing a physician.

Current Initiatives and Activities

In April 2011, there were 10,784 Orange County residents eligible for the Medicaid program. Of that total, 9,999 were eligible for Community Care of North Carolina/Carolina ACCESS (CCNC/CA) services. The CCNC/CA is a primary care case management health care plan for a majority of NC Medicaid recipients. The program's objective is to create community health networks to achieve long-term quality, cost, access, and utilization. The local network for Orange County is Access Care of Central Carolina and the access point to sign up for CA is with the Orange County DSS.[23] Unfortunately, only 74% (or approximately 7,400) of the eligible residents had enrolled in the program.[24] Further program expansion has occurred as part of the 646 waiver. This pilot provided funds to Piedmont Health Services, the parent organization for six community health centers located in Alamance, Chatham, Caswell, and Orange counties to manage group home patients (dually eligible) and Carolina Access patients in house. All Orange County Carolina Access Providers are also included in the 646 waiver.[25]

Children receiving Medicaid are also eligible for Health Check Services. Health Check encourages regular preventive health care with a primary medical home. [26]

Care Coordination for Children (CC4C) is a new program that is transitioning the Child Service Coordination (CSC) program into a population management model in partnership with Community Care of North Carolina (CCNC). CC4C services are provided for all Medicaid children birth to five years of age who are determined to be high-risk and qualify for services. High risk factors include the following: 1) children with special health care needs; 2) children who have or who are at an increased risk for chronic physical, behavioral or emotional conditions and need specialized health and social services; or, 3) children who are exposed to toxic stress in early childhood. The goal is to improve child health outcomes, targeting the highest risk and highest cost children. The Orange County Health Department's Family Home Visiting Services and Pregnancy Care Management are access points for the program. [27]

Pregnancy Care Management (PCM) services are provided for pregnant Medicaid recipients who are determined to be at risk for poor birth outcomes. The PCM model seeks to improve birth outcomes by providing targeted care management services to pregnant women with priority risk factors. Priority risk factors include: A history of preterm birth, a history of low birth weight, multiple gestation, fetal complications, chronic conditions which may complicate pregnancy, unsafe living environment (homelessness, inadequate housing, violence or abuse), substance use, tobacco use, missing two or more prenatal appointments without rescheduling, and inappropriate hospital utilization.[28]

North Carolina Health Choice (NCHC) for Children is a free or reduced price comprehensive health care program for children. The goal of the NCHC Program is to reduce the number of uninsured children in the State to ensure that the population served will be healthy and ready to learn and work. If a family makes too much money to qualify for Medicaid but too little to afford rising health insurance premiums, the child(ren) may qualify for NCHC. There is not a separate application for Health Choice. All children who are not eligible for Medicaid are evaluated for Health Choice.[29]

Additional groups working to increase access to health insurance are:

- Carolina Health Net
- Orange County Department of Social Services

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The finding that 19% of Community Health Assessment survey respondents pay out of pocket causes some alarm because the need to pay out of pocket for medical expenses could prevent a person from being able to afford other basic necessities like rent, gas, or food. Unfortunately, there are limited low-cost or sliding scale options for self-pay clients in Orange County. The Orange County Health Department and Carrboro Community Health Center are the only sliding scale providers. UNC Health Care has a financial assistance program that offers a discount program for uninsured patients; charity care that allows a qualifying patient with an income below 250% of Federal Poverty Guidelines to only be responsible for a copay (at least $25 per primary care clinic visit, $35 for specialist clinic visit, $50 per Emergency Department visit and $100 per admission); and a catastrophic care program in which eligible patients who do not

qualify for charity care, but have incurred significant hospital and physician costs can seek to have their medical debt reduced to 20% of their yearly income.[30]

Nationally, more than half of the uninsured adults have no education beyond high school, making them less eligible for higher skilled jobs that might provide insurance benefits.[31,32] Piedmont Health's Bilingual Children's Resource Coordination program served 238 Orange county Latino families in 2010. Of this, 108 primary caretakers of children birth to five years had educational levels ranging from less than elementary school to middle school/junior high (typically through ninth grade). There were only 34 caretakers with a high school diploma or GED; 10 caretakers with some college; and six with a BA/BS degree. Many Latin Americans from Mexico end their studies after ninth grade. Grades 10 through 12 are commonly seen as preparation for college in that country.[33]

The Burmese/Karen refugee population from Burma is the newest Orange County resident group, with an estimated 800-1,000 individuals living in Chapel Hill-Carrboro area. Some of the Burmese/Karen refugee adults in Orange County are eligible for Refugee Medicaid, which provides access to health care services during the first eight months of resettlement. When a person's Refugee Medicaid expires, they tend to change health care usage patterns by postponing doctor appointments, seeking medical care only for emergencies, not keeping follow up medical appointments, and not filling necessary prescriptions.[34,35,36]

The largest emerging issue in access to health insurance is the Patient Protection and Affordable Care Act (PPACA), which was passed by Congress in March 2010. The areas of reform in the PPACA include insurance, Medicare, Medicaid, prescription drugs, quality improvement, workforce, tax changes, long-term-care, prevention/wellness and malpractice.[37] According the North Carolina Institute of Medicine (NCIOM), this law was passed to deal with the dilemmas of increasing number of uninsured citizens, increasing health care cost, and quality in the current health system. [38]

Each state is tasked with implementing the PPACA.[39] The North Carolina Department of Insurance (NCDOI) and the North Carolina Department of Health and Human Services (NCDHHS) are managing implementation of North Carolina's plan. According to NCIOM:

> *The ACA is not perfect and is likely to be changed over time as we learn what works and what needs to be changed. However, it does provide the state with a unique opportunity to identify strategies that can expand health insurance coverage and improve access to health services.*[40]

The tables below show 2020 Insurance Coverage Estimates for Orange County by zip code with the proposed law changes. Based on these projections, there could still be over 10,000 uninsured Orange County citizens in 2020. This would reduce the uninsured group by over 50 percent based on the 21,000 uninsured Orange county citizens in 2009.

Table 15: 2020 Insurance Coverage Estimates for Orange County, NC by Zip Code[41]

ZIP	City/Town	Total 2020 Population	Medicaid Population	Medicare Population	Medicare Dual Eligible Population
27231	Cedar Grove	2,078	220	424	50
27243	Efland	4,330	286	830	97

ZIP	City/Town	Total 2020 Population	Medicaid Population	Medicare Population	Medicare Dual Eligible Population
27278	Hillsborough	24,148	1,699	4,642	545
27510	Carrboro	14,800	1,882	1,672	226
27514	Chapel Hill	39,612	8,660	4,675	664
27516	Chapel Hill	40,674	3,703	5,634	704
	TOTAL	**125,642**	**16,449**	**17,878**	**2,285**

Table 16: 2020 Insurance Coverage Estimates for Orange County, NC by Zip Code[42]

ZIP	City/Town	Total 2020 Population	Private Direct	Private ESI	Private Exchange	Uninsured
27231	Cedar Grove	2,078	121	930	163	169
27243	Efland	4,330	308	2,343	261	205
27278	Hillsborough	24,148	1,683	12,720	1,589	1,270
27510	Carrboro	14,800	910	7,520	1,440	1,151
27514	Chapel Hill	39,612	1,637	14,151	4,690	5,136
27516	Chapel Hill	40,674	2,837	22,156	3,216	2,423
TOTAL		**125,642**	**7,496**	**59,821**	**11,361**	**10,353**

According to http://www.healthcare.gov/, the Affordable Care Act would increase access to health care for many Americans thus reducing health disparities in a number of ways. Preventive services would be covered by more insurance plans including Medicare. The Act increases initiatives for more racial and ethnic diversity in health care professions, expands health care workforce and increases funding for community health centers. Insurance practice of discrimination will no longer be allowed. Women will no longer have to pay more for insurance based on gender, and people with health problems will no longer have to pay more for insurance. A new health insurance marketplace for affordable insurance coverage will be created in 2014.[43,44] Over a year after the ACA was signed, it is facing legal battles and budget cuts. The continuing implementation of the ACA is a work in progress.

Some recommended strategies to increase access to health insurance in Orange County are to:

1. Increase health insurance coverage by helping uninsured patients enroll in public or private health insurance.
2. Increase health insurance coverage by actively promoting new health insurance options made available under the Patient Protection and Affordable Care Act; help individuals enroll in public and private coverage
3. Educate residents without health insurance about how to obtain coverage that they qualify for
4. Long term: Increase economic development for the county to increase number of employers who offer health care insurance options to residents.

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5.04.c Access to Health Information and Health Literacy

Impact on Health and Contributing Factors

A discussion about access to health care and health information would be incomplete without a review of health literacy. A person's ability to comprehend health information can contribute positively to their health behaviors and outcomes. Health literacy is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions."[1] According to Holmes et al., health literacy extends beyond a person's reading and writing skills to also include the ability to comprehend spoken words; use numeracy and math skills for calculations; and navigate the health care system.[2] The American Medical Association explains that, while related to general literacy, health literacy requires different skills such as knowing health-related terms and the structure of health care forms.[3]

Several factors contribute to a person's ability to understand and use health information. In 2003, the US Department of Health and Human Services conducted the National Assessment of Adult Literacy (NAAL) and found that only 12% of adult Americans had a proficient health literacy level and 36% were between below basic (14%) or basic (21%). The study found that low health literacy was a problem across racial and ethnic groups, however Blacks/African Americans and Hispanics were found to have the lowest proficiency levels and highest below basic health literacy levels. The study found that education level contributes to health literacy. Only 24% of participants earning less than a high school degree had intermediate (23%) to proficient (1%) health literacy while 88% of participants with a bachelor's degree or higher had intermediate (58%) to proficient (30%) health literacy. The study also found that low health literacy rates increased with age and was highest among adults age 75 and older. Lastly, adults without medical insurance or using Medicaid and Medicare had lower health literacy incomparison to insured participants.[4]

Healthy NC 2020 Objective

Health literacy and the ability to access health information are not specifically mentioned in Healthy NC 2020 as determinants of health. The closest mention of these issues comes in the document's Social Determinants of Health section, which recognizes the connection between education level and health outcomes. According to this section, "Poverty, education level, and housing are three important social determinants of health. These three factors are strongly correlated with individual health. People with higher incomes, more years of education, and a health and safe environment to live in have better health outcomes and generally have longer life expectancies."[5]

Secondary Data: Major Findings

While helpful, the above Healthy NC 2020 objectives are not complete for addressing health information access and low health literacy. As previously stated, health literacy transcends income and education levels. A person with a college degree could still have difficulty with comprehending and following health instructions. In addition, a person who works within the health care field can still have limited reading and comprehension levels and difficulty with understanding medical and health information given to them.

Developers of Healthy People 2020 took a more progressive approach and set 13 objectives for Health Communication and Health Information Technology. The document recognizes the connection between an individual's health behaviors and their access to clear communication, personalized health information, and technology.

- HC/HIT-1: (Developmental) Improve the health literacy of the population
- HC/HIT-2: Increase the proportion of persons who report that their health care providers have satisfactory communication skills
- HC/HIT-3: Increase the proportion of persons who report that their health care providers always involved them in decisions about their health care as much as they wanted. HC/HIT-4: (Developmental) Increase the proportion of patients whose doctor recommends personalized health information resources to help them manage their health (Developmental)
- HC/HIT-5: Increase the proportion of persons who use electronic personal health management tools
- HC/HIT-6: Increase individuals' access to the Internet
- HC/HIT-8: Increase the proportion of quality, health-related Websites
- HC/HIT-9: Increase the proportion of online health information seekers who report easily accessing health information
- HC/HIT-10: Increase the proportion of medical practices that use electronic health records
- HC/HIT-11: (Developmental) Increase the proportion of meaningful users of health information technology (HIT)
- HC/HIT-12: (Developmental) Increase the proportion of crisis and emergency risk messages intended to protect the public's health that demonstrate the use of best practices
- HC/HIT-13: (Developmental) Increase social marketing in health promotion and disease prevention[6]

Behavioral Risk Factor Surveillance data for the county does not include questions related to patient-provider communication, difficulty with reading and understanding medical forms, or any other health literacy predictors.

According to the Orange County Literacy Council, low literacy and high school graduation rates are issues in the county. The Literacy Council's web site reports that 12% (or 8,615) of Orange County residents have literacy needs and most of these individuals live in the county's unincorporated areas.[7] The county's three incorporated towns—Hillsborough, Chapel Hill, and Carrboro—have the most health and medical resources within the county.

Primary Data: Residents' Concerns

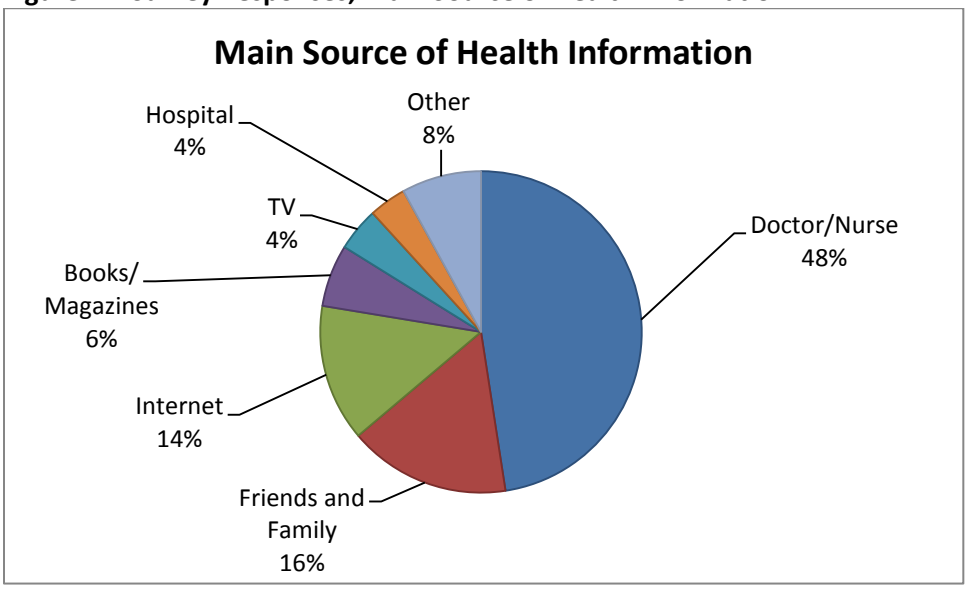
Quantitative: Survey

The 2011 Orange County Community Health Assessment is the first Orange County Community Health Assessment to ask residents a series of questions related to health information preferences and difficulty with understanding health and medical information. Survey respondents were asked to report primary sources for health information, comfort level in talking to health care providers, and ability to understand medical advice including prescription drug instructions. Respondents were also asked to report if they had access to the Internet at home.

According to survey results, most respondents (48%) received most of their health information from a doctor or nurse (medical provider). Following medical providers, 16% of reported

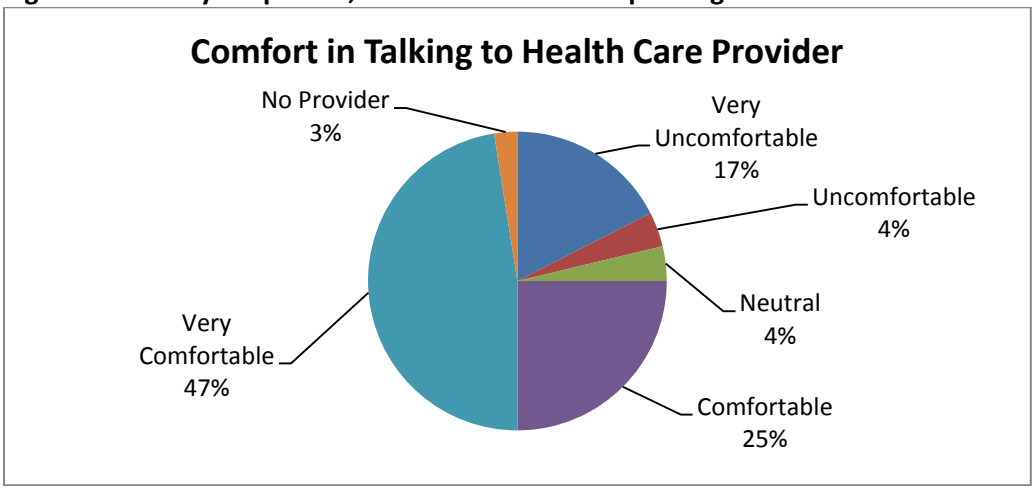
receiving health information from friends or family members and 14% reported receiving most of their health information from the Internet.

Figure 12: Survey Responses, Main Source of Health Information



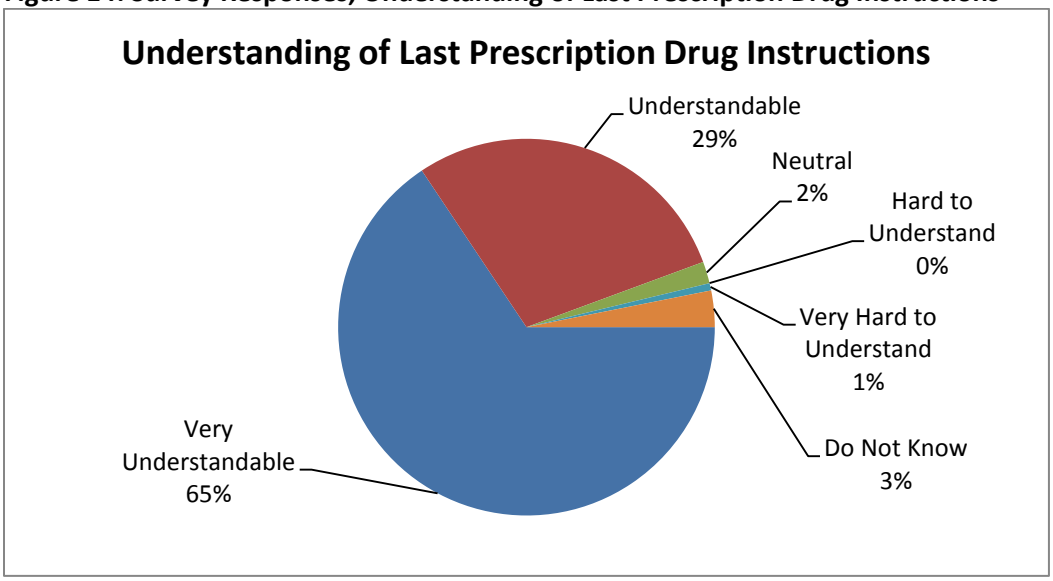
Forty-seven percent of respondents felt comfortable with talking to their medical provider about their health and 17% felt very uncomfortable with talking to their medical provider.

Figure 13: Survey Responses, Comfort Level when Speaking with Health Care Provider



One-third of respondents reported that they needed help with completing medical forms and reading bottle labels and health education materials. Ninety-four percent of respondents felt that their last set of prescription drug instructions were understandable.

Figure 14: Survey Responses, Understanding of Last Prescription Drug Instructions



Questions relating to emergency preparedness also provided insight as to how residents would prefer to receive certain health and safety-related information or news. According to survey results, 53% of respondents would get emergency information from television, 23% would get emergency information from the radio, and 4% would get information from neighbors/word of mouth.

Eighty-four percent of those surveyed had access to the Internet from home.

Qualitative: Focus Groups

Community Health Assessment Focus Group participants discussed the county's educational resources and the ability of residents to access health information. According to the outcome report, participants were divided about the quality of the public school systems in the county.

Focus group participants also explained that language barriers make it difficult to access health information. This sentiment was especially shared during focus groups with Latino and Burmese/Karen residents who discussed difficulties in understanding information given by medical providers and not knowing where to go to access health care services or information. Possible solutions for addressing access to health information issues included increasing adult education resources, increasing education about specific health risk behaviors, and having a central repository of health resource information in key community locations, the Internet, and through the phone. Preventive health education was also cited as a way to reduce health problems. Provider education was also suggested as a way to improve patient/provider communication and follow through on planned treatment.

Current Initiatives and Activities

According to Pfizer, Inc., health education and health communication are tools used in public health to achieve health literacy.[8] The Orange County Health Department is committed to using community-based and clinical health education to inform residents about community and personal health issues. Each division and program provides some level of health education to clients. The health department has an active Health Promotion and Education Services Division

that leads programming for nutrition services, health promotion, diabetes management, youth tobacco prevention, and immigrant and refugee health. In the Personal Health Services Division, a health educator leads the health department's public health preparedness volunteer programs and often provides disaster preparedness education within the community. Residents receiving care in health department clinics receive one-on-one education during appointments reinforced by take-home educational materials.

In 2007, the health department created a health education position that would focus on health communication. This position acts as a resource to all health department staff that want to use health communication strategies (e.g. low-literacy educational materials, social marketing, and technology) to inform an audience. In May 2011, the department added a Health Information Technology (IT) position to improve internal technology adoption and usage. Many health department programs are required by the state and other funding sources to report data electronically. In addition, billing and medical records operations are increasingly becoming online processes as the health care industry moves towards the goal of creating online medical records. Having an internal IT specialist will help the department meet demands for creating, using, and sharing electronic data.

There are several statewide health literacy resources available to public health professionals in Orange County.

- Health Literacy Universal Precautions Toolkit (NC Program on Health Literacy)
- North Carolina Health Literacy Council
- North Carolina Institute of Medicine
- North Carolina Program on Health Literacy
- Orange County Literacy Council/UNC Student National Pharmaceutical Association
- UNC School of Medicine - Faculty Development Program in Health Literacy and Aging

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Questions regarding health literacy and access to health information in this year's Assessment provide invaluable data for primary care providers as well as public health practitioners, administrators, and educators. Emergency management personnel (planning and response) may also find areas of this data helpful. The finding that most residents get health information from a doctor or nurse supports the general assumption that patients consider medical providers as one of the most credible sources of health information. Therefore, it is important that providers form trusting relationships with patients and provide information that is easy to understand to not only encourage compliance, but also facilitate accurate information sharing between family and friends. This finding also shows that it may be effective to use doctors or nurses as gatekeepers or credible spokespersons to get health information to a particular segment of Orange County residents seeking medical care.

Ninety-four percent of respondents felt that their last set of prescription drug instructions were understandable. This finding can be used to continue advocating for the role and use of patient navigators, medical office assistants, and even health educators within the clinical setting who can assist patients with reading health materials and completing health information forms.

The Internet has rapidly become a source for health, safety, and medical information. Most health organizations within the county use web pages and social media accounts to promote

services and dispense general health and safety information. According to the US Census, 67% of Americans had Internet access at home in 2007, but that only about 61% of North Carolinians did.[9] Orange County Health Assessment Survey results showed that residents living in both the northern and southern parts of the county have personal access to the Internet. Eighty-four percent of those surveyed had access to the Internet from home. Internet access was higher among younger and middle-aged adults and higher among those earning more than $25,000 per year. Even with a high percentage of Internet users in the county, only 14% of respondents reported using the Internet to get most of their health information and only 13% would use the Internet to get information during an emergency. These findings may indicate that traditional or non-digital forms of communication are still the most trusted methods for learning new health and safety information.

While the Internet can be a cost-effective method for disseminating health information, persons communicating health and safety messages must keep in mind that there are disparities among local Internet users when assessed by age, primary language, and income levels. Organizations may need to continue using multiple communication channels (e.g. print, broadcast, and oral) to deliver health information to help avoid missing an intended group.

The finding that only 4% would listen to word-of-mouth/neighbors for emergency information is lower than expected and indicates that people trust family and friends for some, but not all, types of health information.

As evidenced by the Healthy People 2020, more attention is being placed on the role and importance of health literacy and health information. However, funding cuts at national, state and local levels have prevented the NCIOM Health Literacy Task Force from fully implementing recommended health literacy activities.

Recommendations to increase access to health information and health literacy in Orange County are to:

- Work with the Greensboro Area Health Education Center to increase health literacy continuing education opportunities for public health practitioners and health care providers within Orange County.
- Promote collaboration between the health department, the NC Health Literacy Council, and community partners to create a local Health Literacy Task Force that can discuss and address issues of low-health literacy in Orange County.
- Partner with UNC Student National Pharmaceutical Association and the Orange County Literacy Council to assist with community based health literacy presentations.
- Per focus group data, consider offering education and orientation classes for the community (adults and youth), and begin discussing the possibility of developing a centralized health and wellness directory that lists health information resources within the county. The directory could be printed and mailed to all homes in the county (a method that will incur significant costs); placed within key locations across the county (e.g. health clinics; hospital; homeless shelter, libraries, and schools); placed online; or delivered by phone (another cost-prohibitive method).

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Section 5.05 Labor and Income

5.05.a Income, Poverty, and Economic Security

Impact on Health and Contributing Factors

The country's poverty rate has been increasing steadily for the past decade. As noted in the 2007 CHA report, the 2000 poverty rate of 11.3% had risen to 12.7% in 2004 and 13.3% in 2006. There has also been a dramatic increase in the number of Americans living in severe poverty, defined as those living on less than 50% of the income designated as the poverty line. In 2005, about 15.6 million Americans were experiencing severe poverty, one-third of whom were estimated to be children.[1]

The official poverty rate in 2010 was 15.%—up from 14.3% in 2009. This was the third consecutive annual increase in the poverty rate. Since 2007, the poverty rate had increased by 2.6 percentage points, from 12.5% to 15.1%. In 2010, 46.2 million people were in poverty, up from 43.6 million in 2009—the fourth consecutive annual increase in the number of people in poverty.

Between 2009 and 2010, the national poverty rate increased for non-Hispanic Whites (from 9.4% to 9.9%), for Blacks (from 25.85 to 27.4%), and for Hispanics (from 25.3% to 26.6%). For Asians, the 2010 poverty rate (12.1%) was not statistically different from the 2009 poverty rate. The number of people in poverty in 2010 (46.2 million) was the largest number in the 52 years for which poverty estimates have been published. Between 2009 and 2010, the poverty rate increased for children under age 18 (from 20.7% to 22.0%) and people aged 18 to 64 (from 12.9% to 13.7%), but was not statistically different for people aged 65 and older (9.0%).[2]

Poor health status is often strongly correlated with low levels of income. Poverty is linked to early mortality, as well as a greater burden of severe chronic and other diseases. The poor, whether employed or not, are generally less able to afford health care services or health insurance coverage for those services, and tend to delay treatment until the condition becomes severe. Other factors associated with poverty, such as substandard housing, a dangerous physical environment, lack of safe areas for walking and exercise, and lack of access to healthy food at affordable prices also lead to a significant reduction in health status.

Low levels of educational attainment are also often associated with poverty-related difficulties in meeting basic economic and other needs, which leads to poor health. The homeless are at a particular disadvantage, and face many challenges in finding jobs and working their way out of poverty into good health and economic security. They often remain economically impoverished and in poor health for long periods of time, and the twin conditions of poverty and ill health create a vicious downward spiral that is difficult to break.

The lives of low-income Americans are significantly impacted by societal and political factors, such as the country's worsening domestic economic conditions and the public policy responses that have been forthcoming or possible at the federal level in recent years. The impact of the national and global economic recession that started in 2008, has continued unabated since, and has been severe. As a result, a large number of Americans have slipped into poverty.

Domestic resources for addressing this poverty have been severely constrained by two expensive wars, and the need to spend large amounts of public funding for dealing with the unanticipated crises in the housing, banking, and financial sectors of the American economy. The economic downturn and cuts in budgets at the national, state, and local levels have reduced the funds available for adequately responding to the worsening plight of the poor. This has had an adverse impact on low-income individuals' access to adequate health care and preventive health services.

The federal poverty thresholds and guidelines are updated each year by the Census Bureau. The thresholds are used mainly for statistical purposes— for instance, preparing estimates of the number of Americans in poverty each year (i.e., all official poverty population figures are calculated using the poverty thresholds, not the guidelines.) The poverty guidelines are the other version of the federal poverty measure. They are issued each year in the Federal Register by the Department of Health and Human Services (DHHS). The guidelines are a simplification of the poverty thresholds for use for administrative purposes— for instance, determining financial eligibility for certain federal programs.[3]

Table 17: 2011 Department of Health and Human Services Poverty Guidelines

Persons in Family	48 Contiguous States and D.C.	Alaska	Hawaii
1	$10,890	$13,600	$12,540
2	14,710	18,380	16,930
3	18,530	23,160	21,320
4	22,350	27,940	25,710
5	26,170	32,720	30,100
6	29,990	37,500	34,490
7	33,810	42,280	38,880
8	37,630	47,060	43,270
For each additional person, add	3,820	4,780	4,390

Programs that use these poverty guidelines (or percentage multiples of the guidelines — for instance, 125% or 185% of the guidelines) in determining eligibility include: Head Start, the Food Stamp Program, the National School Lunch Program, the Low-Income Home Energy Assistance

Program, and the Children's Health Insurance Program. In general, cash public assistance programs (Temporary Assistance for Needy Families and Supplemental Security Income) do not use the poverty guidelines in determining eligibility; and the Earned Income Tax Credit program also does not use the poverty guidelines to determine eligibility.

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Decrease the percentage of individuals living in poverty.	16.9% (2009)	12.5%

Secondary Data: Major Findings

Orange County is a relatively affluent county in the state, with a median household income of $51,944 in 2009, which was higher than the median of $43,754 for North Carolina. For comparison, the Orange County median household income was also higher than that of neighboring Alamance and Durham counties, which were $43,103 and $48,770 respectively.[4]

Despite the affluence of Orange County in terms of median household income, the poverty situation in Orange County is worse than that in North Carolina. The 2010 Census shows that over 1.6 million of the estimated 9.3 million residents of North Carolina for whom poverty status had been determined, were living below the poverty level, indicating a poverty rate of 17.5% for the state. In comparison, of the estimated Orange County population of 124,207 for which poverty data was available, as many as 24,931 were estimated to be below the poverty level, i.e., over a fifth (20.1%) of the county's population was living on income below the federal poverty level.[5] However, one must keep in mind that a significant portion of Orange County's population are University students who are not employed or earning an income and are included in the Census.

The age and gender distributions of the North Carolina and Orange County populations living below the poverty level, as per the 2010 Census data, are given in Table below. In all categories except individuals under 18 years of age, the percent of the population living below the poverty level in 2010 was higher in Orange County than in North Carolina.[6] Gender disparities also exist, with the poverty rate for females higher than the rate for males in 2010.

Table 18: Percentage below the Poverty Level in NC and OC, by Age and Gender

	% Below Poverty Level	
	North Carolina	Orange County
Population for whom poverty status is determined	17.5	20.1
Age		
Under 18 years	24.9	22.2
18 to 64 years	16.2	20.8
65 years and over	9.9	11.3
Gender		
Male	16.2	18.4
Female	18.7	21.6

Poverty rates also vary by levels of educational attainment, with the rate decreasing for those with higher levels of education, as is the case at the state and national levels. However, the percent below the poverty level in Orange County is higher than the rate in North Carolina in all categories of educational attainment, as shown in the Table below.[7]

Table 19: Percentage below the Poverty Level in NC and OC, by Educational Attainment

	% Below Poverty Level	
	North Carolina	Orange County
Population 25 years and over	13.3	14.1
Less than high school graduate	30.9	54.0
High school graduate	15.0	21.2
Some college, associate's degree	11.3	14.2
Bachelor's degree or higher	4.0	4.5

Poverty levels are also associated with employment status. As expected, the 2010 Census data shows that those without employment have much higher rates of poverty, for both males and females, than those who are employed. Also, even for those who are employed, the poverty rate in Orange County is high (13.7); and for both males and females who are employed, the poverty levels are higher in Orange County than in North Carolina. As shown in the Table below, the only category for which the poverty rate is lower in Orange County than in NC is unemployed females (presumably because their household income is higher).[8]

Table 20: Percentage below the Poverty Level in NC and OC, by Employment Status

	% Below Poverty Level	
	North Carolina	Orange County
Civilian labor force 16 years and over	11.6	15.7
Employed - All	8.4	13.7
Employed - Male	7.6	11.0
Employed - Female	9.2	16.6
Unemployed - All	33.8	33.1
Unemployed - Male	30.9	45.2
Unemployed - Female	37.1	19.5

The duration of work experience during the last 12 months is also related to poverty rates for those who are 16 years and older. Only for those who worked full-time, year-round, was the poverty rate low (4.4%). In 2010, for all categories, the poverty rate was higher in Orange County than in North Carolina, which is consistent with the employment data shown above. Furthermore, the duration of employment mattered too. For those who had only worked part-time or part-year, the percent below the poverty level was a high of 21% for North Carolina, and was even higher (31.7%) in Orange County, as shown in the Table below.[9]

Table 21: Percentage below the Poverty Level in NC and OC, by Work Experience

	% Below Poverty Level	
	North Carolina	Orange County
Population 16 years and over	15.3	19.6
Worked full-time, year round	3.2	4.4
Worked part-time or part-year	21.0	31.7
Did not work	24.8	25.5

Primary Data: Residents' Concerns

Quantitative: Survey

Of those surveyed, 36.3% agreed that poverty is a problem in Orange County.

Qualitative: Focus Groups

Income and poverty was not discussed during the focus groups.

Current Initiatives and Activities

Many nonprofit and public agencies in Orange County are helping to address lower income residents' basic health needs. These agencies include the Orange County Health Department, the Department of Social Services, Piedmont Community Health Clinics, Literacy Council, and the Women's Center, among others. Faith-based organizations, such as the Inter-Faith Council, Orange Congregations in Mission, and the Durham Rescue Mission also work to address the needs of the poorer members of their community.

Other organizations seek to help residents overcome poverty by helping them improve job skills and employability, and thereby enhance income potential. These employment related issues are further discussed in the section that follows.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

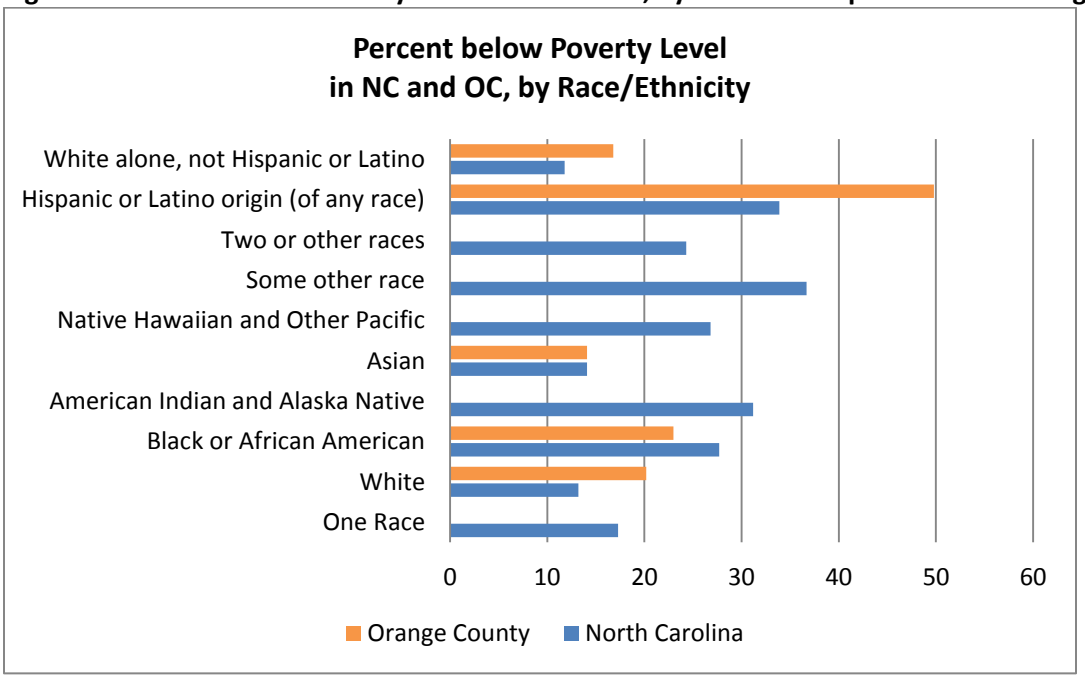
Two major sources of disparity in poverty levels are race and ethnic origin. In Orange County, as in North Carolina, those who are Black or African American are more likely to be poor than those who are white; but those who are Asian have a lower poverty rate (possibly due to differences in levels of education or their employment status). In Orange County, persons of Hispanic or Latino origin (of any race) are three times more likely to be poor than those who are white non-Hispanic or non-Latino. Also, for most categories for which data is available from the 2010 US Census, the poverty rate is about the same or higher in Orange County than in North Carolina, as shown in the Table and Figure below.[10]

Table 22: Percentage below the Poverty Level in NC and OC, by Race and Hispanic or Latino Origin

	% Below Poverty Level	
	North Carolina	Orange County
One Race	17.3	NA
White	13.2	20.2
Black or African American	27.7	23.0
American Indian and Alaska Native	31.2	NA
Asian	14.1	14.1
Native Hawaiian and Other Pacific	26.8	NA
Some other race	36.7	NA

	% Below Poverty Level	
	North Carolina	Orange County
Two or other races	24.3	
Hispanic or Latino origin (of any race)	33.9	49.8
White alone, not Hispanic or Latino	11.8	16.8

Figure 15: Percent below Poverty Level in NC and OC, by Race and Hispanic or Latino Origin



The U. S. Census data for 2010 shows that in Orange County, the poverty rate is high (13.7%) even for those who are employed. The poverty rate is even higher for those who are in part-time or part-year employment, or are unemployed, or with low levels of educational attainment, or female, or non-White.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The growing income inequality in the country since the 1980s has been well documented by independent observers, such as the Congressional Budget Office.[11] Increasingly, this inequality and its severe effect on the middle class and poor in America is being recognized as an economic and social public policy issue that needs to be tackled seriously during the short- as well as long-term. Other recent events that need to be addressed are the continuing economic recession, the growing national debt, the crises in the housing, banking, and financial sectors, and the rise in rates of poverty, unemployment, and under-employment. All these factors are driving increasing numbers of Americans into dire straits, and are making it more likely that they will be unable to receive or afford quality health care.

All states and counties, including North Carolina and Orange County, are being significantly impacted by these national trends and events. There is an urgent need to find ways of addressing their negative health consequences for residents of the state and county. The growing threat to public health in the country for the past several years is well known;[12]

continued concerted action at all levels of government and the private sector is needed to address it satisfactorily.

In Orange County, a document titled the *Orange County, North Carolina, 2030 Comprehensive Plan*, was adopted on 18 November 2008. It urges that economic development of the county receive high priority. Accordingly, the county has established Economic Development Districts in which public investment will be focused to stimulate and accommodate development in strategic locations that can be served by transportation systems and public infrastructure, and be convenient to housing opportunities.

The County's Economic Development Commission works with local, regional, and state governments and agencies to attract and promote the types of businesses suited to Orange County. These efforts focus on recruiting appropriate businesses that will provide jobs to local residents and provide a more balanced tax revenue structure that relies less on the generation of private property taxes. The County and Economic Development Commission have also identified Action Steps in the report titled *Investing in Innovation: Orange County Economic Development Commission Five-Year Strategic Plan*. To meet the demand for locally grown products, the county is working with Alamance, Chatham, and Durham counties to establish a value-added food processing center, where farmers and others could make value-added products, such as jams, pickles, or tamales.

In addition, Orange County's 2030 Comprehensive Plan has endorsed planning principle No. 7 that promotes economic prosperity and diversity. Hence, the Plan states that development of a diversity of new businesses and expansion of existing businesses should occur in Orange County. These and other related measures seek to ensure that the needs of all residents of the county, especially the poor and vulnerable, are addressed in an effective, efficient, and equitable manner.

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[1] Orange County Community Health Assessment Report, December 2007, p. 33.

[2] U. S. 2010 Census poverty figures. The data are from the Current Population Survey (CPS), 2011 Annual Social and Economic Supplement (ASEC), the source of official poverty estimates. The CPS ASEC is a sample survey of approximately 100,000 households nationwide. These data reflect conditions in calendar year 2010. Accessed 28 October 2011. http://www.census.gov/hhes/www/poverty/about/overview/index.html

[3] *Federal Register*, Vol. 76, No. 13, January 20, 2011, pp. 3637-3638. The poverty guidelines updated periodically in the Federal Register by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(2)." http://aspe.hhs.gov/poverty/11poverty.shtml

[4] Median income is the midpoint, where half the incomes are lower and half the incomes are higher than that figure. Accessed October 27, 2011 at http://quickfacts.census.gov/qfd/states/37/37135.html.

[5] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.

[6] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.

[7] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.

[8] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.

[9] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.

[10] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.

[11] As reported in the Atlantic magazine article "*Economic Inequality is Not a Myth*," by Derek Thompson, 26 October 2011. Accessed 28 October 2011. http://www.theatlantic.com/business/archive/2011/10/income-inequality-is-not-a-myth/247389/

[12] The Rising Prevalence of Severe Poverty in America: A Growing Threat to Public Health, S. Woolf, MD, R. Johnson, PhD, J. Geiger, MD, MS, Am J Prev Med 2006; 31(4), p. 332

5.05.b Labor and Employment

Impact on Health and Contributing Factors

Increased unemployment contributes significantly an increase in poverty and has adverse consequences on health status. Unemployment and under-employment impact health and is correlated in three significant ways.

First, because one of the benefits of employment is health insurance, those who are unemployed or have only part-time employment, often do not receive the benefit of health insurance coverage. Second, because employment status directly affects income and poverty, the under- or unemployed are disproportionately affected by the rising costs of health care. And third, in the absence of stable employment, it is difficult to accumulate personal savings and increase net-worth, and investments in long-term assets, such as homes, are put at risk or not possible at all.

All these factors have an adverse impact on an individual's long-term career success, health, and quality of life; these factors also negatively impact the overall health of the economy and the well-being of the entire population of the country.

Healthy NC 2020 Objective

There are no Healthy NC 2020 Objectives related to employment.

Secondary Data: Major Findings

According to the latest 2010 U. S. Census data, the unemployment rate in Orange County is lower than the rate in North Carolina, but is still unacceptably high. Overall, the unemployment rate in Orange County is 10.1% for males, and 9% for females; and is even higher (22%) for those below the poverty level and those with any disability (respectively, 22% and 41.1%), as shown in the Table below.[1]

Table 23: Unemployment Rate (%) in NC and OC, by Gender, Poverty Status, and Disability Status

	Unemployment Rate (%)	
	North Carolina	Orange County
Gender		
Male	12.3	10.1
Female	11.4	9
With own children under 6 years	14.7	6.7
Poverty status in the past 12 months		
Below poverty level	36.2	22
Disability status		
With any disability	23.2	41.1

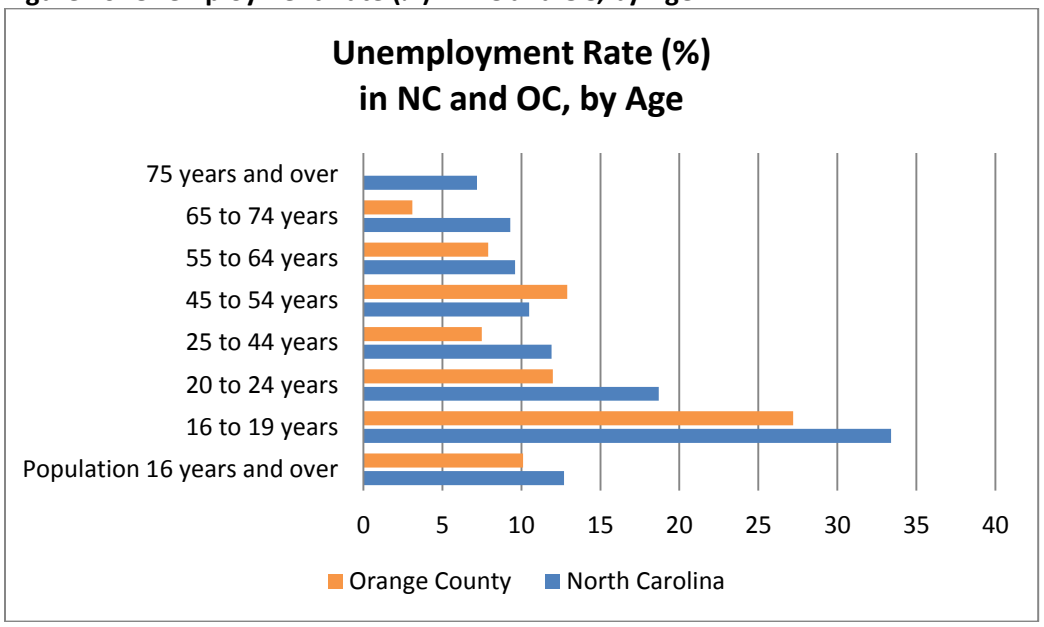
The rate of unemployment varies with age, both for North Carolina and for Orange County, as shown in the Table below.[2] As expected, those aged 16-19 have the highest rate of unemployment (27.2%), presumably because many of these individuals are full-time students. The categories with the next highest rates of unemployment (over 12%) are those just entering the labor force (20-24 year olds) and those aged 45 to 54 years, perhaps because they have been disproportionately affected by the recent economic downturn and related factors. The drop in unemployment rate in those older than 55 years is possibly due to their dropping out of the labor market in larger numbers as they grow older and cease looking for full-time employment.

Table 24: Unemployment Rate (%) in NC and OC, by Age

	Unemployment Rate (%)	
	North Carolina	Orange County
Population 16 years and over	12.7	10.1
16 to 19 years	33.4	27.2
20 to 24 years	18.7	12
25 to 44 years	11.9	7.5
45 to 54 years	10.5	12.9
55 to 64 years	9.6	7.9
65 to 74 years	9.3	3.1
75 years and over	7.2	0

The unemployment rate for most of these age brackets is lower in Orange County than it is for North Carolina. The only category for which the rate is higher in Orange County than in NC is those aged 45 to 54 years, as shown in the Figure below. [3]

Figure 16: Unemployment Rate (%) in NC and OC, by Age



The unemployment rate is associated with levels of educational attainment as well, as shown in the Table below. In Orange County, the rate of unemployment is highest (26.2%) for those with only a high school or equivalent education, and improves dramatically with the attainment of an associate (7%) or bachelor's or higher degree (3.7%). The pattern is similar in North Carolina as well, though at the state level the unemployment rate is highest (20.4%) for those with less than high school education, and improves steadily with higher levels of education.[4]

Table 25: Unemployment Rate (%) in NC and OC, by Educational Attainment

	Unemployment Rate (%)	
	North Carolina	Orange County
Population 25 to 64 years	11.1	9.1
Less than high school graduate	20.4	21.9
High school graduate (includes equivalency)	14.1	26.2
Some college or associate's degree	11	7
Bachelor's degree or higher	5.6	3.7

Primary Data: Residents' Concerns

Quantitative: Survey

Of those surveyed, 35% do not believe that good jobs are available for people who live in Orange County.

Qualitative: Focus Groups

The lack of employment opportunities was spoken about in many of the focus groups. The mental health consumers and substance users spoke of the difficulty in getting jobs with their particular challenges.

Others spoke of the presence of temporary agencies that did not meet the expectations of those who tried to use them. A participant of the Latino focus group discussed the need for better communication between employers and employees, especially when translation is necessary. These thoughts were echoed in the Burmese immigrant focus group as participants spoke about the difficulty in finding a job when one does not speak the language.

One participant spoke of the consequences of not being able to find employment and the connection with poverty and homelessness:

> *So you're looking for a job, you're trying…you get hired…so [then you] get let go, or whatever happens, you get fired, job runs out…But you're not there long enough to qualify for unemployment. For whatever reason, you're stuck…You go back to whatever job you had before, let's say it's a minimum wage fast food job where you don't make enough. It's difficult. You have no income whatsoever and next thing you know you're in a homeless shelter. You can't get a job. You don't get unemployment. You can't survive.*

Current Initiatives and Activities

Club Nova, a program of OPC-Mental Health, offers an employment program for people with persistent mental illness. They run the Club Nova Thrift Shop and also have a transitional employment program that places people in community jobs for a period of six to nine months. During that time the employee and employer receive support from Club Nova staff. In order to receive services, individuals must be referred by their doctor to Club Nova.

El Centro Latino provides skill-building classes to Latinos to aid them in developing the self-sufficiency skills required to achieve gainful employment. They offer English as a Second Language, Computer Literacy, and Driver's License classes. Through their Employment Program, they offer one-on-one consultation services to help clients determine personal skill level, search for employment possibilities, create a resume, and apply for positions.

The Orange County Department of Social Services offers a wide range of services for residents. Work First is North Carolina's TANF (Temporary Assistance for Needy Families) plan to help families move from welfare into jobs. Work First provides assistance with job search, vocational training, day care, transportation and time limited cash assistance to families with children under age 18 who meet income and resource guidelines. The Orange County Skills Development/Job Link Center provides career training services, labor market information and job placement information for county residents, and serves as the connection between employers and qualified workers.[5]

The North Carolina Employment Security Commission provides employment services, unemployment insurance, and labor market information to the State's workers, employers, and the public. Their stated mission is to promote and sustain the economic well-being of North Carolinians in the world marketplace by providing high quality and accessible workforce-related services. These services are intended to promote economic stability and growth, development of a skilled workforce, and a world class economy for North Carolina.[6]

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

As in other parts of the country and state, racial disparities in employment exist in Orange County too. As shown in the Table below, the unemployment rate for persons who are Black or African American (23.4%) is almost three times the rate (8.5%) for white residents. The unemployment rate for Blacks is higher in Orange County than it is in North Carolina (19.1%). However, the unemployment rate for white residents on Orange County is lower than the rate in North Carolina. Anecdotally, many refugees travel to neighboring counties (e.g. Rockingham, NC) for job as there are few employment opportunities available to them locally.

Table 26: Unemployment Rate (%) in NC and OC, by Race and Hispanic or Latino Origin

	Unemployment Rate (%)	
	North Carolina	Orange County
One race		
White	10.7	8.5
Black or African American	19.1	23.4
White alone, not Hispanic or Latino	10.5	8.2
Population 20 to 64 years	11.9	9.6

As in past years, a number of factors collectively influence employment status. These factors include gender, race and ethnicity, level of education, disability status, etc., and employment opportunities also depend on the state of the local and regional economy. Of these, as shown in the Tables above, education and race are key variables associated with the unemployment rate. Since Orange County has few manufacturing jobs that do not require high levels of education, those without a college degree are at a disadvantage while competing for jobs in the local economy.

Other difficulties in finding employment relate to other factors in residents' lives, such as lack of transportation or childcare, or personal histories of violence or substance abuse that make finding suitable employment less likely. In addition, since most of the stable employment is likely to be at the University and Hospital, and other government organizations, and there is an abundance of students willing to do unskilled or service-oriented work, it is more difficult for other residents to find jobs that are secure and well-paying.

On the positive side, as in past years, the University and the UNC Hospitals are the two largest employers in Orange County, followed by the Chapel Hill-Carrboro City Schools and the Orange County School System. Besides the Orange County Government and the town of Chapel Hill, there are a number of significant private sectors employers as well. Private sector jobs are predominantly in the retail, manufacturing, wholesale trade, construction, transportation, utilities, agriculture, and food service sectors; there are a variety of professional services positions as well.

[1] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.
[2] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.
[3] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.
[4] U.S. Census Bureau, 2010, American Community Survey. Accessed October 28, 2011. http://quickfacts.census.gov/qfd/states/37/37135.html.
[5] Orange County Department of Social Services, Annual Report 2004-2005, http://www.co.orange.nc.us/socsvcs/images/Annual%20Report%2004-05.pdf.
[6] Personal communication from Pamela Rich, Manager, ESC Hillsborough, September 12, 2007. See www.ncesc.com for more information.

Section 5.06 Transportation

Impact on Health and Contributing Factors

The CDC states that "there is a growing awareness across communities that transportation systems impact quality of life and health." Expanding active transportation (e.g. walking and bicycling) options and safety "has the potential to save lives by preventing chronic diseases, reducing and preventing motor-vehicle-related injury and deaths, improving environmental health, while stimulating economic development, and ensuring access for all people.[1]"

Research suggests that walking and bicycling for commuting is associated with lower risks of coronary heart disease,[2] and walking regularly is associated with reduced risk of cardiovascular disease.[3] The *Healthy North Carolina 2020* reports states that "[r]egular physical activity reduces the risk of heart disease, stroke, hypertension, and type 2 diabetes" as well as certain types of cancers.[4] Significantly, cancer, heart disease, and cerebrovascular disease are the top three causes of death in Orange County.[5]

In addition to transportation access, traffic congestion and air quality are also of primary concern for residents' health. Specifically, ozone (O_3) is formed when sunlight catalyzes a mixture of volatile organic compounds (VOCs) and nitrogen oxides (NO_X), which are emitted by motor vehicles, among other sources. According to the NC Division of Air Quality, ground-level ozone can cause respiratory symptoms, "particularly among sensitive groups: children, people with asthma and other respiratory ailments, and anyone who works or exercises vigorously outdoors."[6] In 2004, the United States Environmental Protection Agency designated the Triangle area (Chapel Hill-Durham-Raleigh) as being in non-attainment for its eight-hour ozone standard.

More recently, a study by the Center for Neighborhood Technology, reported on the website of *Forbes* magazine, found the Triangle to be the nation's most gas-guzzling:

> *The cities and suburbs of "The Triangle" are close enough that people don't think twice about driving from one to the other. Yet in doing so, the average*

> *household racks up 21,800 miles per year. Assuming an average 20.3 miles per gallon, that means burning through 1,074 gallons per year, about $4,200 at current prices.*[7]

The report suggests that the car-dependent transportation system of the Triangle not only causes air quality problems but also may reduce residents' disposable income that could be spent on other needs such as health care. Public transportation can help reduce the number of vehicles on the road, thus improving traffic congestion and air pollution, as well as provide household savings.

See Chapter 9, Section 1, Environmental Health, for additional information on air quality.

National Healthy People 2020

There are no NC Healthy 2020 Objectives specific to transportation. There are, however, National Healthy People 2020 Targets. Based on local baseline assessment and expert opinion, Orange County has set their own 2020 Targets for each national objective related to increasing use of alternative modes of transportation for work.

Healthy People 2020 Objective[8]	2005 - 2009[9] Baseline (Orange County, NC)	2020 Target
Increase work trips made by bicycling.	1.6 %	2%
Increase work trips made by walking.	5.4%	6%
Increase work trips made by mass transit.	6.5%	7%

For many residents in Orange County, including children/students, older adults, persons living with disabilities, and those who do not have access to a personal vehicle, the lack of transportation continues to be a barrier to accessing employment opportunities, medical care, recreational activities, and social services.

Residents in the northern, rural areas of Orange County face many barriers to transportation, which is not uncommon for rural areas across the US According to the Community Transportation Association, "nearly 40% of the country's transit dependent population – primarily senior citizens, persons with disabilities and low-income individuals – resides in rural areas. Yet in many of these communities, public and community transportation are limited or absent."[10] Furthermore, a study done by the Easter Seals, Project Action, indicated that a lack of transportation is one of the most frequently cited problems facing people with disabilities living in rural areas.[11]

Since 2000, Orange County has added over 15,000 residents.[12] Orange County's 55 years-and-over population has grown from 15.4% in 2000 to 21% in 2010.[13] In the coming years, as "baby boomers" continue to retire, Orange County will experience a disproportionate increase in older residents. As Orange County assesses the potential mobility issues for this segment of the population, it is important to consider and plan for their transportation needs. While the community has programs and services in place to provide transportation for older residents, many residents with disabilities, and those who live in rural areas continue to be isolated and frustrated by the lack of transportation.

Many Orange County residents living in urban areas – especially Chapel Hill and Carrboro – have access to more frequent local and regional transit service through Chapel Hill Transit (CHT) and

Triangle Transit, respectively. CHT operates a "hub-and-spoke" system with the UNC campus at the center. In addition to serving commuting trips and travel to various destinations, the system serves major health centers such as UNC Hospitals and institutions focusing on lower-income residents such as the Southern Human Services Center in Chapel Hill. A recent resident and passenger survey found that a majority of residents (86%) were satisfied with CHT services. More than two-thirds of respondents supported paying an increase in taxes to expand transit service. Residents felt the most important purposes of the system were getting people to and from work, providing transportation for lower-income residents, and protecting the environment by improving air quality.[14] At the same time, access to destinations on the weekends may be more problematic due to much lower or nonexistent transit service.

The Triangle Transit 420 Route connects downtown Hillsborough with downtown Chapel Hill and serves destinations such as UNC Hospitals, the Seymour Senior Center, and the Triangle SportsPlex. However, bus frequencies are low or nonexistent during off-peak hours and weekends.

There are several factors that contribute to lack of transportation for residents. One contributing factor is the cost of owning a car. According to the 2005-2009 American Community Survey (ACS), 7.4% of county households have no vehicle available.[15] The price of the vehicle combined with rising insurance rates, maintenance costs, gas prices, and county taxes make car ownership a luxury for many county residents. Secondly, some residents are unable to drive due to a disability or choose not to drive as a result of failing eyesight and slowed reaction time, which sometimes occurs due to advancing age. County residents without their own vehicle must rely on public transportation or on friends or family to get to their desired location. Conversely, county residents with access to regular public transportation and walking and bicycling facilities may choose not to own a vehicle. The 2005-2009 ACS found that over 10 percent of both Chapel Hill and Carrboro households did not own a vehicle, most likely due to the significant student populations of the towns.

Relying on public transportation and help from friends and family makes it difficult for these members of the community to engage in the ordinary activities of daily living, such as grocery shopping, doctors' appointments, recreational activities and social engagements. Additionally, without access to these vital services, residents may be more isolated from family and friends and less able to participate in community life. This lack of transportation can severely affect residents' quality of life. Access to adequate transportation services is imperative for many residents to remain independent and continue to engage in activities outside the home.

In 2009, there were 63,323 Orange County residents commuting to work; over 78% drove and of those residents 69% reported driving alone.[16] This is a slight increase from 2006 when 65.3% reported driving alone. The current percent change of the total number of commuters driving and the total number of commuters carpooling, falls within the margin of error and cannot be confidently stated. Without considering the 3.2% margin of error, the percentage of commuters driving has seen no significant change from 78.2% in 2006 and the number of residents carpooling has decreased by nearly 3%, from 12.9% in 2006 to 9.3% in 2009.

Since 2006, the percentage of commuters using public transportation has fluctuated between 6 to 8%.[17] However, the number of riders has steadily increased since 1999. In 2009, Chapel Hill Transit served a total of approximately 8 million passenger trips, a 34% increase from 5.9 million trips in 2006, and a 147% increase from 3.2 million trips in 1999.[18] According to the 2010 Chapel Hill Transit resident survey, half (50%) of the residents surveyed rarely or never used public transportation in

Chapel Hill-Carrboro; 17% of residents used it a few times a year, 11% used it several times a month, and 22% used it at least once a week.[19]

Since 1998, the number of automobiles registered in Orange County has increased from 1% to 3% each year, until 2008 at its peak of 99,960 automobiles. From 2008 to 2009, the number of cars registered in the county has leveled off. From 2009 to 2010 there has been a 2% reduction in the number of cars registered.

The reduction of registered cars can most likely be attributed to the unfavorable economic climate during this time but will surely grow as more residents locate to Orange County in the coming years. The North Carolina Office of State Budget and Management estimates Orange County will grow by over 21,000 residents by 2020, an increase of 15.7%.[20] As Orange County's population grows, the number of vehicles on the road will continue to increase, therefore affecting air quality, traffic congestion, and quality of life. Although interest in alternative transportation options is growing, these modes make up a small percentage of commuters in Orange County.

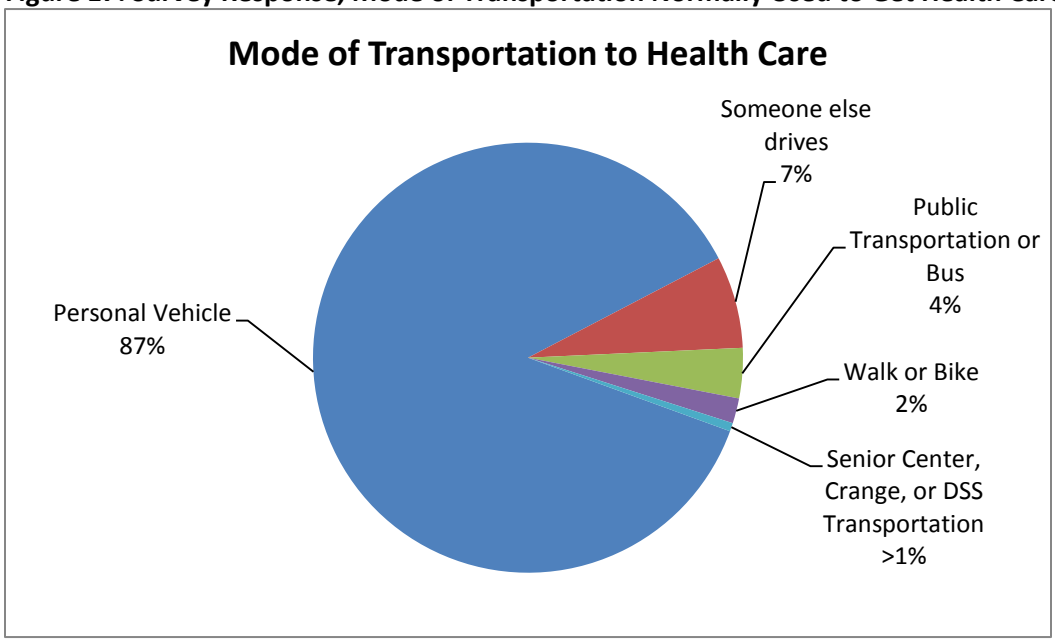
Primary data: Residents' concerns

Quantitative: Survey

Of those surveyed, 71% agreed that public transportation is available for people who need it. Disagreement was skewed by income, with the lower income bracket disagreeing more than the upper two income brackets.

Eighty-seven percent of residents who completed the survey drove themselves to health care appointments, 7% had someone else drive them, 4% took public transportation, 2% walked or biked, and less than 1% used the Senior Center, Orange, or Social Services buses.

Figure 17: Survey Response, Mode of Transportation Normally Used to Get Health Care



Qualitative: Focus Group

The transportation system in southern Orange County was frequently highlighted as a major attraction to Chapel Hill and Carrboro. As one participant said, "We're very fortunate in Chapel Hill for having a transportation system that doesn't cost anything." There were some critiques of the transportation system as well. Some feared what budget cuts in the county would do to the bus system. Others talked about how the bus schedule seemed to be tied to the university calendar so that community members could not take the bus at certain hours during the summer. Others discussed barriers in accessing transportation for the northern parts of the county: It leaves northern Orange County even more isolated because they do not have access. Many participants highlighted the need for better transportation in northern Orange County, especially in terms of being able to access health care and the hospitals in Chapel Hill and Carrboro.

Current Initiatives and Activities

Various agencies and community groups are working to improve transportation for residents in conjunction with other health promotion initiatives.

Chapel Hill Transit paratransit (EZ Rider) service provides origin-to-destination transportation to paratransit certified (eligible) individuals who are unable to use the accessible fixed route system due to their disability in conjunction with the Americans with Disabilities Act (ADA) of 1990. This door-to-door service connects riders with the places they need to go to mostly within an area determined by ADA standards.

Orange County Public Transportation operating as the Orange Bus, provides a variety of public transportation services to the citizens of rural Orange County (excluding Chapel Hill-Carrboro city limits). Transit options include public bus routes, pick-up, and drop-off for people with disabilities and older adults, and transportation to senior centers. The Orange Bus provides safe and efficient transportation to locations within and outside Orange County.

Triangle Transit operates regional bus and shuttle service, paratransit services, ridematching, vanpools, provides commuter resources, and an emergency ride home program for the Raleigh-Durham-Chapel Hill area including Apex, Cary, Chapel Hill, Durham, Garner, Hillsborough, Knightdale, RDU International Airport, Raleigh, the Research Triangle Park, Wendell, Wake Forest and Zebulon. Triangle Transit seeks to improve the region's quality of life by connecting people and places with reliable, safe, and easy-to-use travel choices that reduce congestion and energy use, save money, and promote sustainability, healthier lifestyles, and a more environmentally responsible community.

GoTriangle is a partnership of public transportation agencies, and organizations funded to promote commuter benefits in the Triangle region of North Carolina. They offer services that provide information on public transportation, ridesharing, bicycling, and teleworking services, incentives, and resources. GoTriangle partners work together to provide viable commuting options that enhance the quality of life in the region and improve accessibility to the communities' assets while reducing roadway congestion, air pollution, and oil consumption.

Emergency Ride Home, GoTriangle provides a voucher for a taxicab or rental car to commuters who live or work in Durham, Orange, or Wake counties. Each participant can take up to six trips per year. When individuals join Emergency Ride Home through ShareTheRideNC, free ride vouchers can be printed directly from the website.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The fact that nearly equal proportions of respondents *strongly agreed* (13.8%) as *strongly disagreed* (12.5%) that public transportation is available for people who need it is expected given the geographic variability of the survey sample. It may also relate to varying opinions on what constitutes "available". It may be the case that transit is generally available to some residents, but not at the time at which they need it. Even for the heavily-used Chapel Hill Transit system – the second-largest transit system by ridership in North Carolina – transit is frequent on weekdays when UNC is in session, infrequent on Saturdays, and virtually non-existent on Sundays. The variability was reflected in focus group responses: the public transportation system was a major attraction to Chapel Hill and Carrboro. At the same time, temporal and geographic differences (e.g., getting a bus during non-UNC months or the lack of a bus in northern/rural Orange County) were concerning to focus group participants.

Although two-thirds of respondents earning less than $25,000 agree that public transportation is available for people who need it, a 25% disagreement proportion suggests that more frequent service to communities with lower-income, transit-dependent populations should continue to be a mid-term and long-term goal of transit operators in Orange County. Chapel Hill Transit and Triangle Transit both operate paratransit service, and Chapel Hill Transit has addressed this goal by making use of the federal Job Access Reverse Commute (JARC) program to subsidize service to communities such as the Rogers Road neighborhood.

About 1 in 20 respondents (6%) stated that good public transportation, low-traffic roads, or bikeability were one of the things they liked about living in Orange County. At the same time, 17% stated that the lack of public transportation, bicycling facilities, and walking facilities was one of their least favorite things about living in Orange County, with another 3% citing "lack of supporting services, especially transportation". The most popular characteristics were the rural benefits of being less-developed and quiet (noted by 20% of respondents), suggesting that rural Orange County is a desirable place to live for residents whose families have owned the same farmland for many generations – and for whom rural living is a family tradition – or for some newcomers looking for relief from the pace and noise of urban living.

At the same time, every residential location decision involves trade-offs, and one trade-off of living in rural areas is that their less-developed, lower-density land use patterns make reliable public transportation challenging to provide. Transit is made more efficient by density, which allows a larger number of origins and destinations to be served by a shorter route. Conversely, as noted elsewhere in this chapter, rural demand-response services often incur a larger, per-trip subsidy than urban transit lines.

In Orange County, decision-makers must continually confront the difficult question of how to balance transit availability with a desire for rural living, especially as the aging population of rural Orange County becomes less proficient at, or comfortable with, driving alone.

Two potential solutions to this question – although focused mostly on commuting rather than health-care related trips – are carpooling and vanpooling. Carpooling takes advantage of the origin-destination flexibility of the automobile and makes it more efficient because more trips are served by the same automobile. The challenge is how to connect willing riders with available drivers. One resource is ShareTheRideNC.org, a website, funded by NCDOT and various transit providers in the

state, which matches carpool and vanpool trips. Triangle Transit has an active vanpooling program[21] that served 12.4 million passenger miles in 2010. While this was slightly less than the agency's regular bus service's 13.7 million passenger miles, vanpooling served far less *trips* (418,000 vs. 1.1 million on regular bus service),[22] meaning vanpool trips are, on average, longer. They also are more cost-effective, with an operating expense of $5.95 per passenger-trip compared to $9.13 for regular bus service. Vanpool vans are more fuel-efficient and are driven by employees themselves, who are part of an agreement with Triangle Transit. In some cases, employers subsidize vanpool service as an incentive to their vanpooling employees. Following a similar model for health-related trips may be challenging – given that health care transportation could be demanded at any time of the day – but a wide variety of options should continue to be considered to improve transportation to health care.

Focus groups' generally favorable view of walk- and bicycle-friendliness in Orange County suggests that decades of prioritization of walking and bicycling – especially in more urbanized areas – has resulted in better transportation choices for residents. With better transportation choices, active transportation that reduces obesity becomes more convenient, an important focal point for all nine focus groups. At the same time, the focus groups noted that there was room for improvement. Due to the relatively high proportion of State-maintained roads in the county (unlike most other states, North Carolina does not have county-maintained roads), jurisdictions must work with NCDOT to ensure that road improvements incorporate bicycle and pedestrian facilities. NCDOT, for its part, adopted a "Complete Streets" policy with a goal to "safely accommodate access and travel for all users."[23]

Residents who live in Chapel Hill and Carrboro often cite the fare-free public transportation provided in those municipalities as a significant benefit, while residents who live in Hillsborough and points north find it very difficult to commute to Chapel Hill and Carrboro for employment, health, or recreational reasons. The Orange Public Transportation (OPT) system has limited reach into the northern area of the county. Residents who live in the northern part of the county and who cannot utilize the on-demand service provided by OPT must find a way to get from their homes to the bus stop at Highway 86. From this point, residents can take the Triangle Transit 420 service to Hillsborough, Chapel Hill and the southern part of the county. However, it can be a challenge for residents to find transportation to and from their homes and the bus stop. While OPT has improved its services in response to residents' concerns, those without their own transportation still face significant barriers to transportation. This is of particular concern for residents in the middle to northern parts of the county, because the majority of services are located in the southern areas.

The hours of operation for transit services are also a major barrier, in both the northern and southern regions of the county. Residents who rely on public transportation for commuting to work, health care, and to recreational activities must plan around the bus schedule. This can be difficult, especially for those who need transportation during 'off-peak' hours. These riders often wait a long time for bus service after 5:00 p.m. and are faced with finding their own way after 10:00 P.M., when most bus service ends.

Bike lanes and sidewalks are also available in many parts of Chapel Hill and Carrboro for residents who wish to walk or bike to work and other activities. However, sidewalk and bike lanes are nonexistent in other parts of the county making it difficult for most residents to use alternative forms of transportation. Bond referendums have been passed to expand sidewalk and bike lane development in Chapel Hill and Carrboro. Active transportation is a common travel choice in Carrboro and Chapel Hill, and these bond referendums affirm their commitment to residents having

active transportation options. The Town of Carrboro's transportation network includes 26 miles of bike lanes, 36 miles of sidewalks, and 3 miles of shared-use paths for cyclists and pedestrians. Chapel Hill's transportation network includes 20 miles of bike lanes and 9 miles of shared use paths. In September 2010, the League of American Bicyclists designated Carrboro and Chapel Hill Bicycle Friendly Communities at the Silver- and Bronze-level, respectively. Carrboro became only the second community in the southeastern US to have received a Silver-level designation or higher. No additional towns in Orange County have received a designation.

Barriers to accessing care such as a lack of transportation emerged as the fifth leading social issue among residents who completed the 2007 Orange County Community Health Survey. In 2011, Access to Care was prioritized as number 1, with transportation issues often being cited as a contributing factor during community forums. This suggests that although residents from the northern part of the county have relied on community and social supports to help them with transportation, their need is still largely unmet. Public transportation for those who do not have cars of their own is an important part of their ability to access employment and services in the county. Given that the majority of services and opportunities are concentrated in the southern half of the county, the lack of transportation options available to many in the northern half is a significant problem. An ongoing challenge to providing demand-response service to rural areas is the cost of operations. One 2009 study found that the cost of rural, single-county demand-response transit systems generally range from $11 to $18 per passenger trip.[24] On the other hand, many communities accept this cost because of rural transit systems' mission as a public service to disadvantaged community members who need access to basic services.

The aging of baby boomers will present Orange County with unique challenges for addressing diverse mobility needs. As the older population increases, so will their mobility needs. Therefore, community planning efforts should consider all options for maintaining and improving older adult mobility. While improving current public transportation infrastructure is a must, it is also important to continue to provide opportunities for alternative forms of transportation that will reduce the number of cars of the road.

In recent years, the growing obesity epidemic has prompted an increase in funding to look at the built environment and ways to increase physical activity. For example, in October 2010, the Town of Carrboro launched the IMPACTS Project (Incentivizing More Physical Activity through Carrboro's Transportation System), a unique planning process made possible with a grant from the Physical Activity and Nutrition Branch of the NC Department of Health and Human Services, Division of Public Health. The purpose of the project is to identify policy barriers to physical activity, specifically through the lens of the transportation network, land use planning, and the built environment. In addition, funding from Safe Routes to School seeks to improve the health and well-being of children by encouraging them to walk and/or bike to school by providing community grants to build sidewalks and bicycle paths near schools. Carrboro and McDougle Elementary Schools and the Town of Carrboro have partnered to create a Safe Routes to School Action Plan and other programmatic activities to encourage safe walking and cycling to and from school. Orange County Transportation is also working on a Safe Routes to School Action Plan. Additional towns in Orange County can benefit from partnering with local schools to encourage alternative transportation to school, which may instill a healthy habit for children to be physically active from a young age.

Walking, cycling, and other forms of active transportation as part of county residents' everyday travel may help them achieve regular physical activity milestones using time they already need to devote to reaching destinations.

Current bus routes in the southern part of the county also prove difficult for new immigrants and refugees to navigate. Popular apartment complexes for these groups do not have direct routes to locations such as the Southern Human Services Center (to access the Health Department and Social Services). Having to transfer buses not only adds to challenges for those who are new to the area and are limited English proficient, but also adds extra time to their travel and potentially time off of work.[25]

Some recommended transportation related strategies to improve the health of Orange County residents are as follows:

- Increase and enhance pedestrian/cyclist infrastructure to encourage biking/walking for all trips.
  - Support the "Complete Streets" concept of providing facilities for all users, based on site-specific conditions.
  - Install sidewalks near schools, parks, recreational facilities, and other pedestrian generators.
    - Establish physical activity as a routine part of everyday life for all family members[26]
  - Plan and implement separated bicycle facilities, where appropriate, that buffer cyclists from motor vehicle traffic.
    - Greenways and shared-use paths
    - Cycle tracks (i.e. on-street bikeways physically protected from motor vehicle lanes by curbs, planters, bollards, or parked cars)
  - Plan and implement on-street bike lanes where right-of-way is limited for cycle tracks.
  - Plan and implement shared lane markings on narrow, lower speed urban streets where bike lanes are not practical.
  - Support pedestrian and bicycle safety education, as well as enforcement of safety laws
  - Carry out a pedestrian and bicycle safety education campaign. This could be county-wide or as part of a larger, regional campaign. Educate motorists, cyclists, and pedestrians on safe behaviors.
  - Work with county and municipal law enforcement agencies to ensure adequate level of enforcement of infractions that cause safety risks to active transportation users.
  - Pursue grant opportunities for pedestrian/cyclist infrastructure:
    - Safe Routes to School money
    - Childhood Obesity Prevention funding (i.e. Childhood Obesity Demonstration Prevention Project)
    - Health and Human Services grants
    - Small Town Economic Assistance Program (STEAP) grants can help fund sidewalk construction (awarded through Office of Policy and Management)
    - Community Transformation Grants (awarded through the Centers for Disease Control and Prevention)

- Expand transit systems in the county in order to better serve demand for trips to health care services and other destinations, thus increasing access to health care and reducing single-occupancy vehicle emissions.

- Develop a high-occupancy vehicle lane on I-40 to encourage carpooling. This is recommended in the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization's 2035 Long Range Transportation Plan.

- Locate park-and-ride facilities closer to major highways, which would alleviate rush hour-traffic from park and ride facilities to highways (e.g. the Friday Center park-and-ride causes traffic congestion along NC-54 during rush hour. If a park-and-ride was located closer to I-40 it would decrease the time commuters spend waiting in traffic along HWY-54 and the single occupancy vehicle portion of park-and-ride users commute).

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Section 5.07 Happiness, Hope, and Quality of Life

5.07.a Crime and Safety

Impact on Health and Contributing Factors

Orange County residents often state that they find the county to be a safe, secure place to live. However, service providers and community residents note that, where crime does exist, it tends to co-occur with other social and health problems, and is related in multiple ways to the disparities that exist in the community. However, there is agreement that the drug problem in Orange County is a much more serious and wide-spread issue that crosses all socio-economic lines. There is a complex overlap between substance use, mental health, economic disparities, crime and safety, and quality of life.

Orange County law enforcement agencies are noticing an upswing in the number of crimes committed by those in or affiliated with gangs. There have also been ongoing challenges presented to the community due to statewide mental health reform that have created barriers for juveniles and families accessing quality mental health and substance abuse treatment in a timely fashion. The influence of a major university has always influenced the community norms around substance use in Orange County. The "college-town" mentality creates an attitude of wider acceptance of under-age substance use and greater tolerance of public behavior regarding substance abuse, like public intoxication or noise violations. In the past four years there has been a positive shift of these community norms. Several initiatives have been started in the past four years in Orange County relating to these issues.

Healthy NC 2020 Objective

There are no Healthy Carolinians 2020 Objectives related to a safe and secure community.

Secondary Data: Major Findings

The following data was contributed by the law enforcement and public safety agencies serving Orange County: Chapel Hill Police Department (CHPD), Carrboro Police Department (CBPD), Hillsborough Police Department (HBPD), University of North Carolina Department of Public Safety (UNCDPS) and the Orange County Sheriff's Office.

Table 27: Number of Public Safety Agency Response Calls

	CHPD	CBPD	HBPD	UNCDPS	Sheriff
2008	33,925	15,919	N/A	12,710	36,814
2009	37,169	18,394	8,400	13,365	37,760
2010	> 9%	> 15.6%		13,893	> 9%

Index crimes include murder, rape, robbery, aggravated assault, burglary, larceny, motor vehicle theft, breaking and entering.

Table 28: Index Crime Rate per population of 100,000 reported by Orange County Law Enforcement

Year	Index	Violent	Property	Murder	Rape
2007	4,102.9	271.8	3,831.1	4.0	17.6
2008	3,584.4	254.2	3,330.1	7.8	15.6
2009	3,138.7	210.2	2,928.5	2.3	23.9
2010	2,975.7	172.5	2,803.2	1.5	19.6

Year	Robbery	Assault	Burglary	Larceny	MVT	Arson
2007	90.3	159.9	1,152.0	2,511.1	167.9	16.0
2008	127.1	103.7	1,041.2	2,111.9	177.0	10.9
2009	68.5	115.5	884.8	1,931.3	112.4	6.9
2010	54.2	97.2	921.8	1,777.4	103.9	6.0

In 2010 the overall crime index, the violent crime rate, the property crime rate, the murder rate, the robbery rate, the assault rate, the larceny rate, the motor vehicle theft rate and the arson rate were all at 10 year lows.

In the summer of 2011, representatives of five law enforcement agencies in the county (Chapel Hill Police Department, Carrboro Police Department, Hillsborough Police Department, Orange County Sheriff's Department and UNC Public Safety) were contacted to elicit their opinions about the current state of crime and safety in Orange County. The standardized telephone interview questions that were used to collect these data are below:

1. What would you say are the five biggest public safety issues facing Orange County right now?
2. What are the public safety concerns that are growing the fastest in Orange County?
3. What are the biggest challenges (i.e., gaps, resource needs, etc.) in our ability to meet the public safety concerns in Orange County?
4. In the past four years, what are the most important new developments in the county's ability to prevent and respond to public safety issues?

According to the representatives of these five Orange County law enforcement agencies, drug and alcohol issues, domestic violence, property crimes, and traffic issues are currently the biggest crime and safety issues in Orange County and the fastest growing problems. Each of these issues was mentioned by at least three of the five respondents as a leading and growing concern in the county.

- *Drug and alcohol issues* included increased distribution, underage drinking, substance abuse, substance/alcohol use while driving, and public drunkenness in the homeless population. There is a concern that there has been cutback on substance abuse services, (given cutbacks in mental health and court systems) and inadequate drug treatment facilities. Freedom House, a non-profit organization that provides residential crisis services, including substance abuse detoxification, and mental health crisis services, outpatient substance abuse and mental health services, community support, transitional living, and extended care, cannot serve the volume of people who need it.
- *Property crimes* included breaking and entering into private residences and vehicles and related thefts.

- *Domestic violence* included partner violence and stalking.
- *Traffic issues* included increased traffic and inadequate roadways, pedestrian and bicycle safety, road rage, and drunken driving.

In 2010, 167 juveniles were charged with 279 crimes. Of these offenders, 108 male and 59 were female. The racial breakdown for these juvenile offenders were 70 white, 63 African American, 19 Hispanic/Latino, 4 Asian and 2 multiracial. Thirty-five of the offenses were felonies, and the rest were misdemeanors or lesser offenses. These numbers have been fairly consistent over the past three years; however, the numbers of both offenses and juveniles are much lower than those reported in the 2007 assessment (270 juveniles were charged with 531 crimes).

The Chapel Hill-Carrboro City[1] (CHCCS) and Orange County Schools[2] (OCS) students were asked several questions related to crime and safety in schools in 2011. Though they were not asked the same exact questions, below are their responses to similar issues.

- 6.4% of CHCCS middle school students, 6.0% of CHCCS high schools students, and 8.6% of OCS students (combined middle and high school) reported not going to school because they felt unsafe.
- 38% of CHCCS middle school students, 8.2% of CHCCS high school students, were in a physical fight at school.
- 9% of OCS middle and high school students were in a physical fight, one or more times, on school property in the last 12 months.
- 30% of CHCCS middle school students, 13% of CHCCS high school students, and 28.5 of OCS students (middle and high combined) reported being harassed or bullied on school property.
- 15% of CHCCS middle school students report gang activity at their school and 3% have been in a gang in the past year; 18% of CHCCS high school students report gang activity at their school and 6% have been in a gang in the past year; 6.9% of OCS middle and high school students have ever been in a gang.
- 45% of CHCCS middle school students agree that harassment and bullying is a problem at their school and 28% agree that violence is a problem at their school
- 35% of CHCCS high school students agree that harassment and bullying is a problem at their school and 25% agree that violence is a problem at their school.

Primary Data: Residents' Concerns

Quantitative: Survey

Of those surveyed, 94% agreed that Orange County is a safe place to live.

Of those surveyed, 70.6% agreed that violent crime was a problem in Orange County. People under 26 and over 50 were much less likely to see violent crime as a problem (42%, 62%) than people age 25-50 (82%). People of color were less likely to see violent crime as a problem (59%) than white people (73%). The higher the income, the more likely respondents believe violent crime was a problem—58% of respondents who make less than $25,000; 71% of those who have an income of $25,000-$50,000, and 78% of those who have an income above $50,000 agreed. Men (68%) and women (73%) answered similarly, though women are slightly more likely to see violent crime as a problem. Forty percent of those surveyed agreed that property crimes like thefts and break-ins are a problem in Orange County.

Qualitative: Focus Groups

The participants in focus groups presented a wide range of perspectives on the issue of crime and safety in Orange County. Some expressed concern over increasing crime in the county, especially regarding an increased trend in break-ins and burglary. Other participants disagreed, instead saying that they thought Orange County was a safe place to live with limited crime.

Current Initiatives and Activities

There are six law enforcement agencies that serve Orange County. These include Carrboro (CBPD), Chapel Hill (CHPD), and Hillsborough (HBPD) Police Departments; Orange County Sheriff's Office; UNC Department of Public Safety (UNCDPS) and UNC Hospital Police. Neighborhood watch groups continue in some areas, and report their successes. The community sub-stations across the county continue to be an asset. The following Orange County law enforcement agencies provided staffing levels from 2006 and 2011:

Table 29: Orange County Law Enforcement Staffing Levels

	CHPD	CBPD	HBPD	UNCDPS	Sheriff
2006	118	38	28	50	135
2011	114	41	26	52	115

When asked about important new developments in the county's ability to prevent and respond to public safety issues, the law enforcement agency heads mentioned the many ways in which the public safety agencies are communicating better, both internally and with each other. They specifically mentioned the monthly Emergency Response Group meetings as an opportunity to develop relationships and compare information on training opportunities and the emergency response protocols. They also noted updated computer systems, and new radio systems.

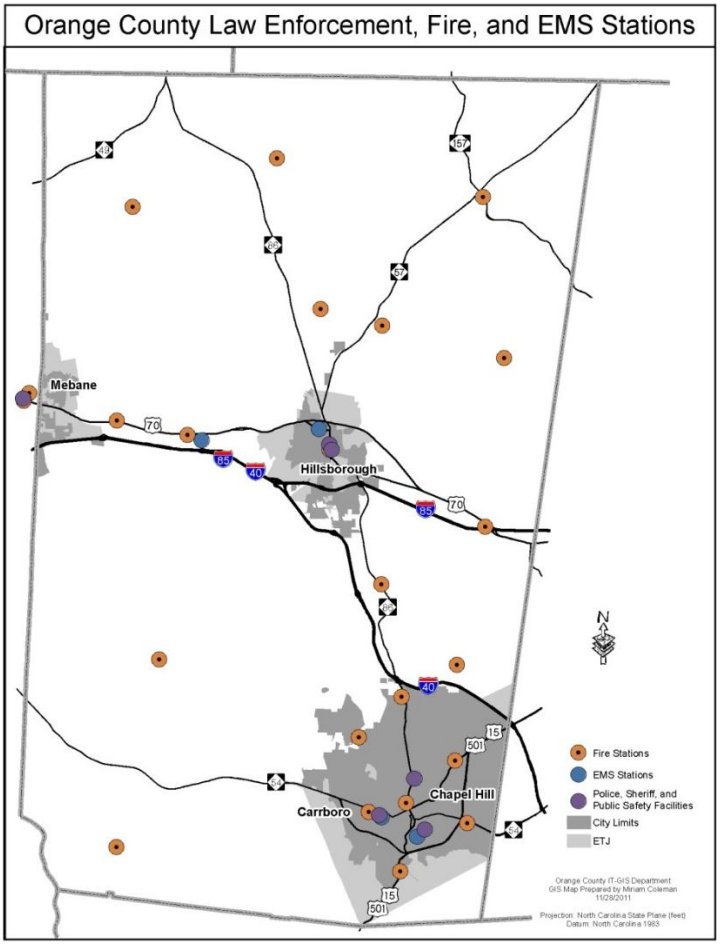
Several programs are also new in the past four years. Project Safe Orange is part of Project SAFE Neighborhoods, which is a "comprehensive, data driven approach to reducing illegal gun and gang related violence" in Orange County. The Crisis Intervention Team (CIT) is also a new development in the county. CIT is a partnership between law enforcement, the OPC Area Program and mental health system, and consumers/families to provide a specialized law enforcement response to people in serious mental health crises. The Alcohol Law Enforcement Response Team (ALERT) is a joint effort of the CHPD, CPD and UNCDPS along with the Coalition for Alcohol and Drug Free Teens to address underage drinking and social norms around teen substance use. There is also a new Mobile Crisis Intervention Unit that respondc from Freedom House when called to the scene by law enforcement for calls that involve addiction or substance abuse. Project Lifesaver is being implemented by the Orange County Sherriff's department to use electronic tracking devices with people who have cognitive conditions that can cause wandering (Alzheimer's, autism, etc.).

In Judicial District 15-B, which includes Orange and Chatham Counties, the Division of Community Corrections provides supervision of criminal offenders and promotes public safety in the community. Through the use of various programs, such as Intensive Supervision, Electronic House Arrest, the Drug Treatment Court, and the School Partnership Program, the staff of community corrections works to reduce recidivism and assist offenders in being productive members of society. The division also provides specialized supervision for certain special offender populations, including Sex Offenders, Community Threat Groups, and Domestic Violence Offenders.

Various other resources exist to aid in the reduction of crime, assist victims, and improve provision of services to help offenders become contributing members of society. These include the school resource officers program, community policing, special courts, such as two drug courts, a mental health court, and a teen court. There are programs such as Volunteers for Youth, and the Dispute Settlement Center that provide needed services in the community. Orange County continues to benefit from the cooperative stance of local justice and mental health systems. There are also programs that advocate for victims of crime including the Guardian Ad Litem program that works with child victims who have been placed in foster care, and court advocates provided by the Rape Crisis and Family Violence Prevention Centers.

In terms of public safety services, Orange County has 12 Fire Departments which operate across the county; four of them are completely volunteer: Caldwell, Cedar Grove, Efland and White Cross. The remainder has a mixture of paid staff and volunteer staff. These are: Chapel Hill, Carrboro, Orange Rural/Hillsborough, Eno, Mebane, North Chatham and New Hope. The Emergency Management Services employs over 150 people including the Fire Marshall and operates 911, emergency medical services, disaster response, and special operations response, (such as Halloween on Franklin Street, basketball and football games, race tracks, etc.) and includes the ambulance service for Orange County.

Figure 18: Orange County Law Enforcement, Fire, and EMS Stations



An emergency preparedness team continues to help coordinate services in the case of emergencies. This team is working together to assure that residents will be safe during emergencies and has a particular focus on reaching members of the Latino community with information to help them understand the state of emergency.

In addition to traditional policing roles, public safety agencies offer additional program such as:

1. *Community Services Units* facilitate and coordinate community watch programs, fraud prevention, crime prevention, gang prevention, security surveys, operation ID and affiliated programs.
2. *Traffic Units* promote traffic enforcement and safety.
3. *Crisis Units* provide crisis intervention and follow-up. Includes victim services, special population services, counseling, and resource connection.
4. *Housing Liaisons* coordinate with Public Housing Department in the development of programs for youth and residents within the housing community.
5. *ALE Liaison Officers* are involved in alcohol related code enforcement, prevention and educational programs. Along with this comes enforcement of alcohol law and compliance checks.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Social and economic disparities continue to affect crime and safety in the county. Between rural and urban areas, one difference is in response times by emergency responders (law enforcement and emergency medical responders). While there are sub stations for law enforcement around the county, rural parts of the county will have longer response times because they are farther from stations. The economic recession of the last three years has hit everyone in the county. Law enforcement cites an increase in domestic violence calls and suicide related calls in every socio-economic class in this economic downturn.

In the survey of law enforcement agency heads mentioned above, there was significant agreement among the responses to the question about the biggest concerns in the county's ability to meet public safety concerns. All five respondents discussed budget cuts to the law enforcement agencies. Comments like "They're asking us to do more with less" and "Tight budgets have exaggerated the needs" were common. Specifically, respondents mentioned:

- Not being able to get needed equipment
- Needing money to put toward crime prevention initiatives
- Needing more funding for schools
- Having inadequate human resources (not enough people to do the work)
- Concern that replacing retiring officers will be hard because of the non-competitive salaries offered in the county

Other gaps were also mentioned, although none of them as universally as financial ones. These included the lack of a computer-assisted dispatch system that would interface with the reporting software such that evaluation and mapping of trends would be much easier. There is also a lack of electronic monitoring for people under supervision by the Community Corrections Division (probation and parole) in Orange County. The lack of drug treatment facilities is the other side of the widespread drug abuse issue; Freedom House (the one facility in the county) cannot support the volume of people who need services and support. Another issue stems from state budget cuts to the state department of corrections which mean that the state is unable to accept prisoners from local jails. So local jails are filled with those awaiting transfer to state prison and there is no room for the

newly convicted. There is also a need for an overall strategy for addressing issues associated with homelessness.

As the population continues to grow, public safety officials urge the community not to become complacent in planning for public safety staffing and funding. A large, diverse population will bring with it changing public safety needs. Public safety services are doing more to provide their services in Spanish; given the crucial nature of those services, it will become more and more important that they truly operate a bilingual service.

Chapel Hill Police Department reports an upswing in gang related activity. Validation is difficult due to the subjectivity involved in identifying gangs and their actions. Generally reliable identifiers are graffiti and/or tagging within the community. Carrboro Police also reports a noticeable increase in these displays. Additionally, tattoos and past history are generally reliable. Less reliable are word of mouth indicators and clothing choices. This is a topic that the community has questions about. The best choices for addressing gang growth are education of youth and parents. Officers are being trained in this area educating citizens and giving advice concerning gang-related issues. Education and early intervention in regard to the dangers of gangs is paramount in slowing the spread of gang activity. Additionally, programs offering youth positive alternatives are very successful.

Chapel Hill Police Department reports that there has been change in the drugs that are being used. Among teens, alcohol is still the most widely used and most destructive to public safety. In addition, while marijuana and cocaine are still widespread, prescription medications, and synthetic drugs (e.g. bath salts) have increased dramatically. The challenge of synthetic drugs is that they will continue to outpace law enforcement—one can make a new substance illegal, but a change of a single molecule makes it a new substance that is not yet illegal. Among adults, after alcohol, the most prevalent issues are cocaine, crack, and marijuana.

The Chapel Hill Police Department report that there has been a huge increase in cyber bullying and other internet based crimes like fraud and identity theft in the area. Much of this is related to today's modern data driven society. Access to computers and other high tech gadgetry helps facilitate this crime. Prevention programs with emphasis on document and information protection are the best way to fight this problem. Law enforcement are constantly looking at new technology and training to mitigate this problem.

Like other responses, transcripts from the focus groups with immigrants and refugees echoed the sentiment that Orange County is a safe, peaceful place to live, but they also have concerns about drugs on the street and around their youth. Some immigrants and refugees have also shared that they did not have positive relationships with law enforcement in their home countries. As the population continues to diversify, it is important that law enforcement build positive relationships with the immigrant communities, and seek ways to ease the linguistic and cultural barriers that exist.

[1] 2011 YRBSS survey of Chapel Hill and Carrboro School System
[2] 2011 SmartTrack Communities that Care Survey of Orange County Schools

5.07.b Child Care/Early Childhood Care and Education

Impact on Health and Contributing Factors

Child care environments present the opportunity to improve health outcomes for large numbers of children at a time, and serve as the ideal setting to teach children about healthy behaviors that will help them to lead healthier lives. Health in the earliest years lays the groundwork for a lifetime of vitality. When developing biological systems are strengthened by positive early experiences, children are more likely to thrive and grow up to be healthy.[1] Excellent health promotes optimal brain development, which leads to increased learning capacity and school achievement.

Children attending out-of-home care, especially in groups larger than six, experience higher rates of illness, in particular ear infections, upper respiratory infections, and gastrointestinal tract illnesses.[2] Sound health and safety practices employed by child care providers will lead to healthier, safer child care environments, and a decrease in the amount of injuries and illnesses occurring. Absenteeism rates due to illnesses and injuries will be decreased, and time lost from work for families will be reduced. Approximately 5,000 children under age six in Orange County live in families where their sole parent or both parents work.[3] Having easy access to affordable, quality care for their children has an impact on the quality of life of these residents.

More than half of NC mothers return to work or school after delivery,[4] fueling the constant need for child care. Child care is the single most expensive item in a family's budget. Quality care in Orange County is costly, the most expensive in the state. Many families are forced to choose between work, leaving their children in inadequate and potentially unsafe care arrangements, or paying for housing, food, and other basic living necessities.

Healthy NC 2020 Objective

There are no Healthy Carolinians 2020 Objectives related to child care or early childhood education care and education.

Secondary Data: Major Findings

The average 5 Star Center rates (per month) in Orange County[5] are: Infant-toddler, $1121; 2-year-olds, $1011; and 3- to 5-year-olds, $943. The 75th percentile rates, by star rating, are as per the Table below.

Table 30: 2010-11 Orange County Market Rate Survey Child Care Center Rates/Month

	Infant-Toddler	2-Year Old	3-5 Year Old
1 Star	$836	$793	$750
2 Star	$650	$725	$720
3 Star	$1,092	$1,010	$949
4 Star	$1,210	$900	$925
5 Star	$1,300	$1,265	$1,100

Average annual fees paid for full-time center care for an infant in NC in 2010 were $8,508[6] compared to over $12,000 in Orange County. The average annual fees paid for full-time center care for a 4-year-old child in NC in 2010 was $7,260 compared to over $10,000 in Orange County.

Most families in Orange County cannot afford the full cost of child care. A single mother with one child earning $30,336 or less per year qualifies for subsidy if funds are available. If funds are unavailable, she would pay 37% of her gross income for child care at the county rate.[7]

There are two entities that disseminate subsidy in Orange County. The Orange County Department of Social Services (DSS) distributed $4.1 million dollars of state and federal dollars for child care subsidy for 988 children in FY 2011-2011. Orange County has also at times contributed funds for subsidy, but not recently. Five hundred and fifty children remain on the waiting list for subsidy from DSS.[8] Child Care Services Association (CCSA), as of May 2011, has paid $1,524,051 for child care subsidy for 752 children. Funding sources include the Orange County Partnership for Children, Triangle United Way, UNC Chapel Hill, the Towns of Chapel Hill and Carrboro, and other private donations. Over 500 children remain on their waiting list.[9]

Orange County in general enjoys high quality child care. According to CCSA, 83% of children birth to five years old enrolled in centers are in 4 or 5 star licensed centers; 69% enrolled in family child care homes are enrolled in 4 or 5 star licensed homes.

As of June 15, 2011, there are 112 licensed child care/early education programs in Orange County regulated by the Division of Child Development (DCD). This includes 31 Family Child Care Homes, 49 Centers, 18 Afterschool Programs, nine Chapel Hill Carrboro City Schools Pre-K/ Head Start/More at Four classrooms, and five Orange County Schools Pre-K/Head Start/ More at Four classrooms.

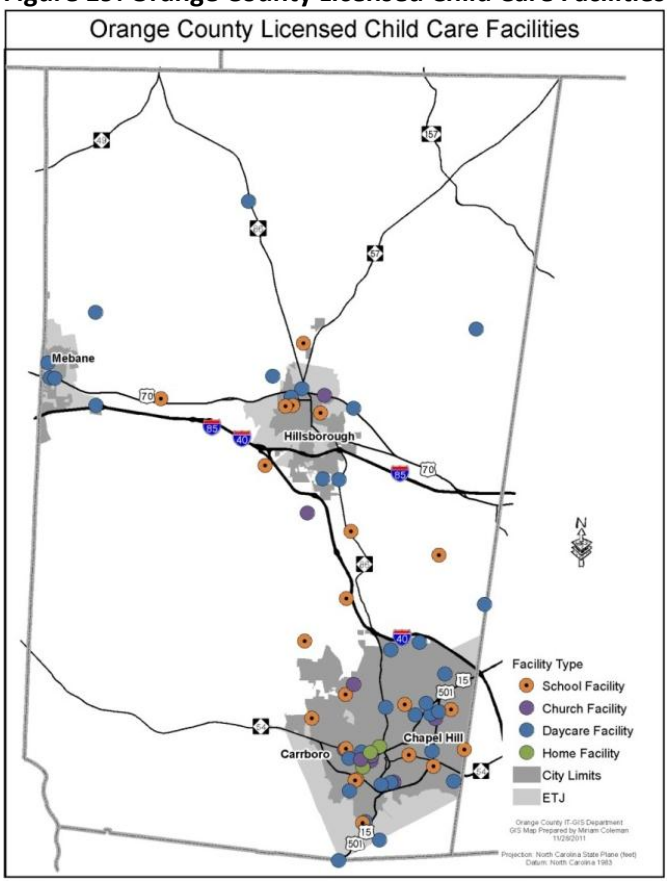
Per the DCD, there are 3,356 children age birth-12 years enrolled in centers, and another 152 in homes as of May, 31 2011.

The majority of child care is located in the southern half of the county. Of the 49 centers, 33 (67.3%) are located in southern Orange County in Chapel Hill (26), Carrboro (5), and Durham (2). Only 16 (32.7%) are located in northern Orange County in Hillsborough (11) and Mebane (5).

Of the 31 Family child care homes, 19 (61.3%) are located in southern Orange County in Chapel Hill (16) and Carrboro (3), while 12 (38.7%) are located in northern Orange County in Hillsborough (7), Mebane (4), and Efland (1).

There also exist legal, non-regulated preschool and child care programs in Orange County. There is no mechanism to track them, so their number, and how many children they serve, is unknown. No doubt there also exist unlicensed, non-regulated child care operations in Orange County as well.

Figure 19: Orange County Licensed Child Care Facilities



Licensed child care facilities are almost all within city limits or along major corridors, with few in rural areas of the county.

Primary data: Residents' concerns

Quantitative: Survey

Of those surveyed, 57% agreed that Orange County has good resources for parents of young children, including affordable, quality child care.

Qualitative: Focus Group

Child Care was not discussed during focus groups.

Current Initiatives and Activities

More at Four is a state-funded classroom-based educational program that targets at-risk or underserved four year olds. It is based on family income and other risk factors, and is designed to help these children be more successful in kindergarten. During fiscal yeat 2010-2011, 284 children were served throughout Orange County in a variety of settings (public schools and community child care centers). Effective July 1, 2011, the program will be renamed NC Prekindergarten Program (NCPK), and will be moved from the Department of Public Instruction to the Division of Child Development. A parent fee structure will also be put in place.

Head Start and *Early Head Start* are federally funded programs available in Orange County to serve families earning below the federal poverty guidelines. Head Start serves children ages three and four

years old, while Early Head Start serves children from infancy through age two years old. Eligible families receive child care at no cost, as well as a variety of services intended to meet the medical, dental, nutritional, and mental health needs of participating children.

There are two Head Start programs serving Orange County:

- The Chapel Hill-Carrboro Head Start Program of the Chapel Hill-Carrboro City School System
- The Orange County Head Start and Early Head Start program of the Chapel Hill Training-Outreach Project, Inc. which has services available to 80 three to four year olds, and 150 infants, toddlers, and pregnant women in Orange County. The four year olds are served in classrooms located in three elementary schools in northern Orange County, and the three year olds at the Fairview Child and Family Center located in Hillsborough. Early Head Start provides full year care at the Fairview Child and Family Center and several community child care partners.

These programs have responded to the needs of the growing, linguistically and culturally diverse population. Orange County Early Head Start employs a bilingual/bicultural worker from Burma who works with families from Burma who are in their program, and the Chapel Hill-Carrboro Pre-K/Head Start program has a site with two dual language (Spanish-English) classrooms.

Child Care Services Association (CCSA) is the local child care resource and referral agency for Orange County. Besides distributing scholarships (subsidy) to hundreds of families in need, CCSA provides child care referral services, staff training, and technical assistance to child care programs.

The *Orange County Partnership for Young Children* (OCPYC), the local Smart Start agency, provides funding for a variety of programs intended to improve the quality and affordability of child care. Besides providing funds for subsidy, funds were provided to improve the wages of child care workers (157 in FY 2009-2010), rewarding them for education and continuity of care. Programs intended to prevent obesity, promote dental health, and provide developmental and mental health screenings in child care were funded through grants. OCPYC funds a child care health consultant through the Health Department to improve the health and safety of child care settings, and a technical assistant through CCSA to improve overall quality of the child care programs in Orange County. OCPYC has been administering the state's *More at Four Program.*

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The downturn in the economy has led to child care programs closing (now 112 in 2011, versus 119 in 2007) and enrollment dropping (now 3,356 in 2011, versus 4,284 in 2007). Enrollment is down due to both higher unemployment rates among families, as well as lack of subsidy money to off-set the cost for families still working. Waiting lists for subsidy are long, necessitating children being placed in relative care or lower quality, less expensive care in order for families to work.

Child care providers continue to receive low pay ($19,090 in NC in 2010)[10] despite continually increasing educational requirements. The OCPYC funds to supplement salaries are being discontinued. Workers' hours are being cut back due to low enrollment at some programs.

Additional regulations intended to improve the quality of the very important early child care and education system are being put in place when the resources to execute them are dwindling.

[1] "The Foundations of Lifelong Health Are Built in Early Childhood". The Center on the Developing Child Harvard University. 2010 www.developingchild.harvard.edu
[2] Bradley, RH. "Child Care and Common Communicable Illnesses in Children 37-54 Months". 2003 National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network
[3] 2011 Child Care Services Association www.childcareservices.org
[4] NC PRAMS (Pregnancy Risk Assessment Monitoring System) NCDHHS February 2011
[5] 2011 Leslie English, Financial Analyst, NC Partnership for Children
[6] NACCRRA *2010 Child Care in the State of: North Carolina* www.naccrra.org
[7] Child Care Services Association 2011 www.childcareservices.org
[8] Tina Clark, Child Care Subsidy Supervisor, Orange County Department of Social Services
[9] Antonia Pedroza, Scholarship Program Director, Child Care Services Association
[10] NACCRRA *2010 Child Care in the State of: North Carolina* www.naccrra.org

5.07.c Built Environment: Sidewalks, Bike Lanes, and Greenways

Impact on Health and Contributing Factors

The term "built environment" is defined as human-made structures, such as sidewalks, streets, housing, businesses, schools, parks, and more broadly land use patterns. These patterns can have a profound effect on residents' physical, sociological, spiritual, and mental health. Lack of amenities in the built environment can diminish residents' access to recreational activities, social networks, healthcare, healthy food, and job choices, therefore affecting their overall happiness and quality of life.

This subsection focuses on how the built environment affects active transportation – walking and cycling – and physical activity. Section 5.06, Transportation, and Chapter 9, Environmental Health, have more information about walking and cycling facilities, air quality, water quality, and toxic chemicals.

It is commonly accepted that regular exercise is beneficial to both physical and mental health. The benefits of exercise help establish hope, happiness, and a general sense of well-being. Though a number of factors contribute to overall health, research is firmly establishing the many links between the built environment and health. For example, a growing body of research shows that where communities are not as easily walkable and are more dependent on cars, both adults and children walk less, a factor that can contribute to obesity.[1]

The influence of the built environment on how, and how much, people travel is perhaps the most-researched topic in the academic realm of urban planning.[2] Researchers usually focus on one or more of the following six "Ds", characteristics of the built environment studied as independent variables:

- Density of population, dwelling units, or jobs
- Diversity of land uses
- Design of the street network
- Destination accessibility
- Distance to transit
- Demand management (including parking supply and cost)[3]

The relationship between these variables and how people travel is complex, and unrelated factors – such as demographics, income, and weather – clearly influence how people travel as well. Nonetheless, a recent meta-analysis of over 200 studies by urban planning professors Reid Ewing and Robert Cervero reported that in particular the built environment's design and diversity

characteristics influence choices regarding mode of travel, especially walking. Intersection density (the number of street intersections in a given area) has the strongest influence, followed by distance to a store and jobs-housing balance.[4] This suggests that persons living in well-connected areas with a mix of land uses are more likely to walk than persons living in single-use areas with low connectivity.

Though some of the studies reviewed by Ewing and Cervero included both walking and bicycling as dependent variables, the meta-analysis refrains from reaching a definitive conclusion on how the built environment affects bicycling specifically.[5] The fact that Portland, OR, Minneapolis, Seattle, and San Francisco have four of the five highest bicycle commuting mode shares in the country suggests that rainy days, temperature, or hills are not insurmountable barriers to an active bicycling culture.[6] These metro areas have made bike facility connectivity and encouragement of bicycling a central part of their transportation policy.

The notion that *where* one lives influences *how* one lives points to the importance their surroundings. As noted above, several built environment characteristics have been shown to have varying degrees of influence on travel behavior of all kinds. Areas that have heavy traffic but few or no sidewalks or other pedestrian safety features have higher numbers of accidents involving pedestrians.[7] In addition, suburban sprawl can have an isolating effect on residents without cars and can limit access to vital economic opportunities and health services. Areas with numerous parks, sidewalks, bicycle lanes, and bicycle parking encourage physical activity and health. The lack of these amenities overtime can have dramatic effects on individual and public health.

Healthy NC 2020 Objective

There are no Healthy NC 2020 Objectives specifically focused on the built environment.

Secondary Data: Major Findings

Research in Orange County shows a connection between neighborhood characteristics and travel decisions. A 2004 study by UNC Planning professors Asad Khattak and Daniel Rodriguez comparing travel behavior in Southern Village – the neo-traditional neighborhood in Chapel Hill with a central commercial area and a modified street grid – and single-use neighborhoods in northern Carrboro found that single-family households in Southern Village made significantly fewer – and shorter – automobile trips compared to the northern Carrboro neighborhoods. Since both samples made about the same number of total trips, Khattak and Rodriguez surmised that Southern Village residents were substituting driving trips with walking trips.[8]

Although there is no quantitative data that specifically measures Orange County residents' quality of life, several assumptions could be made based on Gallup-Heathway's Well-Being Index[9] (WBI). The WBI is a survey that "provides an in-depth, real-time view of Americans' well-being" by surveying no fewer than 1000 American residents a day, 350 days a year.[10] The survey asks a series of 56 questions in the categories of life evaluation, emotional health, physical health, healthy behavior, work environment, and basic access. The WBI ranks cities, states, and congressional districts in their overall well-being and other measures. The 4th Congressional District, which represents all of Orange and Durham Counties and parts of Wake and Chatham Counties, ranked 8th out of the 436 Congressional Districts polled for overall well-being. This is an increase from 29th in 2009. Congressional District 4 was the only North Carolina congressional district to rank in the top quintile for overall well-being; it also ranked in the top quintile in five of the six categories. In healthy behavior, the district ranked in the second quintile.

Primary Data: Residents' Concerns

Quantitative: Survey

When asked an open question about what they like least about living in Orange County, 17% of respondents mentioned transportation, including biking lanes/resources and more walkability/ sidewalks. However, when asked what they like the most, 6% said good public transportation, low-traffic roads and bike friendly environment.

Qualitative: Focus Groups

Many focus group participants looked favorably upon the built environment of Orange County, speaking highly about the walking trails, bike friendly roads, and abundance of sidewalks. Others spoke of the abundance of parks in the community and accessibility to restaurants and amenities. Though there were some specific critiques, overall comments reflected on a built environment that is well equipped but still has room for improvement.

Current Initiatives and Activities

In September 2010 Chapel Hill was designated a bronze-level Bike Friendly Community by the League of American Bicyclists. Mayor Mark Kleinschmidt stated that "Chapel Hill will continue its efforts to become more accommodating to cyclists, whether they are recreational bicycle riders or serious bicycle commuters." To receive the award, which it will hold for four years, Chapel Hill's application was thoroughly reviewed and local cyclists consulted. In 2001 Carrboro was the first NC community to be distinguished bike-friendly and in 2004 Carrboro received the silver level.

UNC received a silver "Best Workplaces for Commuters" award in 2009, for it being an institution that encourages sustainable transportation and innovation, through the University of South Florida's National Center for Transit Research. Recipients of the award are deemed as places that offer outstanding commuter benefits, such as free or reduced bus passes.

Starting in spring 2010 with 80% of the project completed in May 2011, the Town of Hillsborough sidewalk project will construct over 8,000 feet of sidewalk on Faucette Mill Road, Revere Road and Nash Street in Hillsborough. The project, costing an estimated 1.4 million will link north-south Hillsborough, connecting neighborhoods and businesses. Notably, children attending the Hillsborough and Central Elementary schools will be able to walk to school safely.

For list of Parks and Recreation facilities in Orange County, please see Section 5.07.d Parks and Recreation.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Because the characteristics of the built environment have some influence on travel behavior, as discussed above, an important disparity is between urban and rural areas. In the Chapel Hill-Carrboro area, demographics and UNC policies limiting free parking on campus likely play a role in encouraging alternative choices regarding mode of transportation. Density and the destination accessibility of UNC and the Chapel Hill and Carrboro downtowns also are likely to contribute to the convenience of walking and bicycling. Carrboro had a 2009 population density of 3,142 persons per square mile, making it the densest municipality in North Carolina. Chapel Hill had a population density of 2,715, the third-highest figure in the state.[11] However, much of this population density can be attributed to student housing that is located adjacent to major arterial highways, such as NC-54 and Martin Luther King, Jr., Blvd., that hamper their accessibility for walking and bicycling trips.

These areas tend to have heavy transit use, which means that passengers at least make a walking or bicycling trip to the bus stop. Research suggests that the physical activity benefits of these transit access trips should not be ignored.[12]

In rural Orange County, bicycling is a popular recreational activity due to low-traffic rural roads and the bucolic scenery. However, in the less-walkable and less-bikeable areas of Orange County, residents may be more at risk for obesity and a decreased quality of life. In addition, areas with limited access to recreational amenities make it less convenient for residents to exercise regularly. It is important that residents in both rural and urban areas have the ability to access recreation and physical activity opportunities, the natural environment, full-service grocery stores, and adequate healthcare, to support residents' full potential to live a healthy, fulfilling life.

As previously mentioned, a growing body of research suggests that in communities dependent on cars, both the adults and children walk less, which can contribute to obesity and other negative health outcomes.[13] In addition, spending time in nature has been shown to positively influence mental health. Rural areas in Orange County have an abundance of beautiful open space but may lack accessibility to formal recreation areas. A disparity recognized in the 2007 Orange County Health Assessment was the lack of recreational opportunities in the northern part of the county. Currently, the southwest and northern areas of the county have fewer parks compared to the central and southeast areas. Residents without the financial means to pay for unsubsidized forms of recreation have to make the effort to locate those opportunities for recreation that are free. Those without private means of transportation are limited to opportunities that provide transportation, are on a convenient bus route, or are within walking distance.

Being consistently physically active has been proven to decrease the risk of depression and help maintain a positive mental state.[14] Creating a daily routine that incorporates physical activity is a great way to stay mentally and physically fit. This can be more easily accomplished if the surrounding environment encourages opportunities for physical activity. During the period 2005-2009, 5.4% and 1.6% of Orange County residents walked or biked to work, respectively.[15] This is higher than US averages (2.9% and 0.5%, respectively), and is primarily due to UNC-related commuting. For example, in Chapel Hill, 11.2% of commuters walked, and 2.6% biked during this period. In Carrboro, 3.0% walked, and 2.9% biked. This suggests a much lower percentage of walking and cycling in rural Orange County.

By walking or biking to school, children are inclined to be more physically active throughout the day, are more alert, and are able to create a habit of being physically active.[16] There are both positive and negative indications of the level of active school travel and safety in Orange County. Through Carrboro's Safe Routes to School program, supported by the federal Safe Routes to School program and administered by NCDOT, data has been collected on school travel at two schools – Carrboro Elementary and McDougle Elementary. According to student travel tallies, about 6 to 12% of students at these schools walked, while anywhere from 0.5 to 11% biked, with variability occurring between the two schools, due to time of year, as a result of encouragement events, or based on whether the trip was to or from school. For example, on Walk/Bike to School Day at Carrboro Elementary in May 2011, about 14% of students walked and 11% biked. At other times of the year, these mode shares are significantly lower. In 2009, the US averages were 13 to 16% walking and 2% cycling.[17]

School siting policies in Chapel Hill and Carrboro recommend that sidewalks and bike lanes be built adjacent to school facilities.[18] Unfortunately, these amenities do not connect to every surrounding neighborhood, which makes walking or biking to school difficult for those neighborhoods that lack sidewalks and bicycle facilities. This difficulty is compounded if students must cross busy or higher-speed roadways. In Carrboro, for example, children that live in one lower-income apartment complex less than a mile from school are nevertheless required to take a school bus because of the perceived lack of safe biking or walking routes. Several schools in Orange County are located in areas that discourage walking or biking, generally as a result of safety concerns. Both Orange County and Chapel Hill-Carrboro's Safe Routes to Schools programs are striving to increase the safety and convenience of active travel to and from school.

In addition to walking less, residents in outlying neighborhoods or rural areas who lack access to private transportation are more vulnerable to isolation, which can have a serious effect on their quality of life. These residents are dependent on their immediate surroundings for basic needs, such as food. Without safe access to a full-service grocery store, residents are at the mercy of the often-limited selection at the closest food outlet.

In a society in which obesity rates are soaring and stress and lack of balance are cited as major health concerns, providing opportunities for recreation and relaxation is increasingly important.

During 2005-2009, over 79% of Orange County residents drove to work.[19] Driving for utilitarian trips is necessary in parts of Orange County due to the distance between trip origins and destinations. This means residents must set aside additional time in their day to exercise, which may prove to be difficult. By encouraging denser, mixed-use developments with pedestrian and bicycle links to commercial areas and recreational facilities, Orange County can increase the number of residents who choose to bike or walk for commercial and recreational trips, even if they still need to drive to work.

Orange County has a number of bike paths, trails, and greenways; by continuing to invest in these resources Orange County can increase property values, tourism, and residents' overall quality of life. According to an NCDOT report, "Pathways to Progress," bicycle facilities and subsequent bicycle tourists in the Outer Banks bring $60 million into the region annually.[20] Building and linking existing pedestrian and cyclist friendly infrastructure can increase the economic and physical health of Orange County residents.

As the demographics of Orange County continue to change, the needs of the growing Latino and Burmese populations should be met with programming that appeal specifically to them. Making recreation and park information available in Spanish is an easy first step. Creating a centralized clearinghouse for information about park and recreation facilities, programs, and activities throughout Orange County would make it easier for all residents to pursue healthy, active lives.

Studies have found that safety concerns, lack of sidewalks, and the inability to afford travel to recreation facilities keep residents from walking more than they currently do.[21] In Orange County, as in most communities around the nation, there is a need for more sidewalks, trails, greenways, bike-lanes, and off-road paths. While Orange County has a number of these facilities, it is particularly important to create safe links between them to allow people to safely and easily get from one destination to another. Creating these links will create an extensive network of pedestrian and cyclist infrastructure that encourages residents to be more active.

Since recreation areas are an important part of the built environment and health, greater outreach and education are essential, especially for isolated residents such as seniors and those without access to an automobile. While teenagers tend to be less isolated due to their contact with school, due to lack of funding and transportation they nonetheless struggle to access the myriad of recreational opportunities available. Similarly, while opportunities for patrons with physical disabilities are available, they are not widespread enough to sufficiently meet the diverse interests and needs of that population. The Americans with Disabilities Act standards for public rights-of-way are under development. These draft standards, released for public comment in July 2011, should increase access for persons with disabilities for new or improved transportation facilities. The US Access Board, charged with developing these and other guidelines, is also beginning to develop standards specifically for shared use paths.

The following actions are recommended for improving the built environment in Orange County:

- Increase investment in sidewalks and bike lanes to fill in gaps in the walking and cycling networks.
- Ensure that development plans adhere to land use ordinance provisions relating to street connectivity.
- Promote, through comprehensive planning efforts, walkable environments where destinations are easily accessible.
- Promote low-cost physical activities such as walking, jogging, and biking; encourage walking groups; and sponsor county-wide walk-a-thons, marathons, and cycling events.
- Promote local parks and their amenities to marginalized populations, such as the Burmese and Latino communities.
- Promote use of county-wide amenities such as the new aquatic center in Chapel Hill and SportsPlex in Hillsborough.

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[3] Ewing, Reid and Cervero, Robert(2010) 'Travel and the Built Environment', Journal of the American Planning Association,, First published on: 11 May 2010 (iFirst)

[4] Ewing, Reid and Cervero, Robert(2010) 'Travel and the Built Environment', Journal of the American Planning Association,, First published on: 11 May 2010 (iFirst)

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5.07.d Parks and Recreation

Recreation opportunities affect the mental and physical health of residents in Orange County. Because of the demanding pressures families are feeling from work and economic worries, it is imperative that people take time to decompress, and refresh themselves for their mental and physical health. It is essential to provide a wide range of recreational options that meet the diverse physical, mental, and social interaction needs of county residents.

Because obesity is becoming increasingly prevalent among both adults and children, physical activity is a critical factor in promoting health. Availability of recreational opportunities is essential in keeping residents of Orange County active, healthy, and happy. It is important that Orange County residents know about the recreational opportunities available, have access to them, and feel safe while participating.

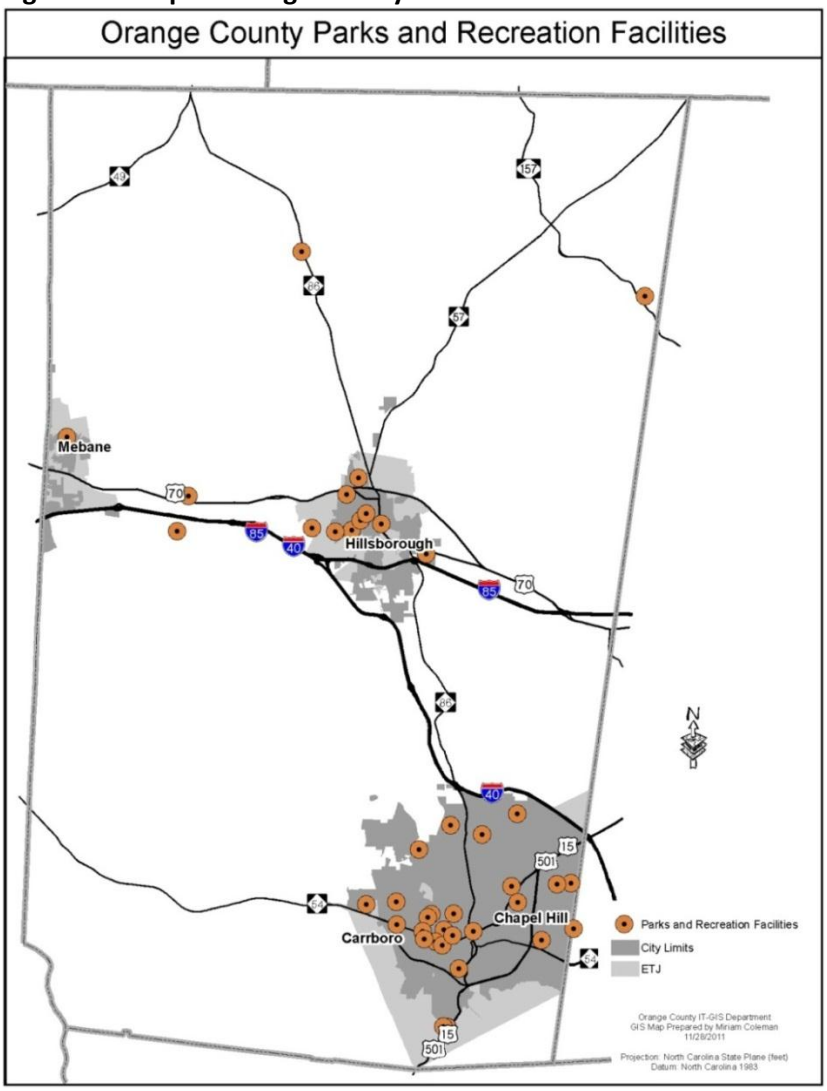
Healthy NC 2020 Objective

There are no objectives related specifically to parks and recreation.

Secondary Data: Major Findings

The County boasts three separate Parks and Recreation Departments offering numerous sports leagues, classes and facilities open to the public. There are also 40 public parks/recreational facilities and many miles of walking trails, including nine green-ways in the Chapel Hill-Carrboro area, the Botanical Gardens and in the rural sections of the County, four public tracts of Duke Forest, the Little River Recreation and Natural Area, and the Johnston Mill Nature preserve. There are four parks along rivers, and three include lakes with public access for boating and fishing.

Figure 20: Map of Orange County Parks and Recreation Facilities



County parks and recreation facilities are almost all within city limits of Chapel Hill, Carrboro, Hillsborough or Mebane.

Primary data: Residents' concerns

Quantitative: Survey

Three-fourths (75%) of those surveyed agreed that a lack of access to parks and recreational opportunities is a problem in Orange County

Qualitative: Focus Group

Across the populations involved in the focus groups, participants expressed an interest in recreational opportunities provided by the county. Across the focus groups, most of the participants agreed that there is a correlation between parks and recreation and health:

> *This is very important because there are many places where people are able to go outside to exercise. There are many places where mothers can bring their children. There are many walking paths and for bicycles…if we [families] like to exercise, there is somewhere to go.*

Current Initiatives and Activities

Orange County serves a multitude of people every year though classes, camps, and athletic activities for all ages and populations. Many of these activities include everything from art to yoga, as well as offering free parks and walking trails as an alternative to the high costs of health club memberships. Staff from throughout the county report that seniors and children are most likely to participate in formal recreational activities through Parks and Recreation programs.

The Orange County Department on Aging provides a broad range of wellness activities through their two Senior Centers—the Robert and Pearl Seymour Center and the Central Orange Senior Center. Activities include aerobics, yoga, Tai Chi, and strength training. They also have support groups, wellness screenings, and health education programs.

Orange County is actively promoting walking and biking, as well as the use of hiking trails, through the expansion of parks, more sidewalks and bike lanes, and free bus usage in Chapel Hill and Carrboro. The Orange County Government and the Healthy Carolinians of Orange County partnership created a comprehensive Recreation Map, which serves as a guide for all the public recreation areas in Orange County. The map is available at all Parks and Recreation Centers, the public libraries, Chamber of Commerce and the Health Department.

A Parks and Recreation Facility locator map has also been developed for facilitate easy access by the public. This locator map includes Parks and Recreational facilities of Orange County, Carrboro, Chapel Hill, Hillsborough, and Mebane. The map can be accessed at http://server2.co.orange.nc.us/ParkLocator; and information on parks and facilities can be searched by amenities available at each location.[1]

- Orange County Parks and Recreation
- Town of Chapel Hill Parks and Recreation
- Town of Carrboro Recreation and Parks
- City of Mebane, Recreation and Parks Department

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Disparities relate to the ability to and ease of access to parks and recreational facilities, especially for residents of Orange County who are unable to utilize the facilities due to financial or transportation constraints.

In a report completed by UNC Students, based on interviews with Fairview Community residents and service providers, the finding was that "Service providers and community members in Fairview both expressed a dire need for more recreational opportunities for children as well as adults."[2] Orange County has been working diligently to improve access by creating parks in areas that can benefit the underprivileged population. In the spring of 2011, Phase I of Fairvew Park was completed and the park opened in April.

Another oft-noted disparity is the lack of recreation opportunities for residents of northern and rural Orange County. The Little River Regional Park, a Durham/Orange County Partnership, was opened in 2004. More recently, in 2008, phase II of the Cedar Grove Park was completed and opened to the public, offering lighted ball fields, lighted basketball courts, a quarter-mile paved walking track, fishing area, picnic shelter, and two playgrounds.

To address issues of availability, access, and safety of recreational facilities, improvements are being made in location, public transportation, registration opportunities, and affordability of recreational opportunities. Since the last Community Health Assessment in 2007, several neighborhood parks have completed additional phases of construction, thus increasing accessibility for many neighborhood residents.

Hillsborough has made great strides with constructing sidewalks, and parks have been opened directly in communities that allow families easy access. Similarly, Orange County has undertaken many activities to improve access, and will continue to work towards a Parks and Recreation system that will meet the pressing recreational needs of all its residents.

Public safety is a priority in Orange County. Concerted efforts are made to ensure that people can safely utilize the recreational facilities. Adequate lighting and shelter are available in parks and sporting fields for evening and night use. More areas are patrolled by local law enforcement, which contributes to making the public feel safer.

Marketing for recreational opportunities has also been increased, and printed publications (Program Guides, FunFinder) as well as on-line resources have been strengthened. Traditional on-line (website) information has been supplemented with social media, such as Facebook and Twitter. This facilitates greater interaction with the public, a crucial step in improving communication with Orange County residents and increasing awareness of available recreational opportunities.

Both the Town of Chapel Hill Parks and Recreation Department and the Orange County Department of Environment, Agriculture, Parks and Recreation will be developing a new Park Master Plan. The process will involve input from residents, by way of survey or focus groups.

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Chapter VI Chronic Disease and Health Promotion

Section 6.01 Cancer

Impact on Health and Contributing Factors

Cancer continued to be the leading cause of death in Orange County in 2010. It has been ranked as the leading cause of death in 9 of the past 10 years, responsible for 859 deaths between the years 2005-2009, including from lung/bronchus cancer (245 deaths), female breast (69 deaths), colon/rectal (65 deaths), and prostate cancer (49 deaths).

Over the past few years, however, the total number of cancer deaths has decreased slightly in comparison with previous time periods; from 894 deaths during 1997-2001, to 864 deaths during the period 2001-2005. However, when adjusted for age, the death rate for cancer (per 100,000 population) has dramatically decreased from 214.4 in 1997-2001 to 158.8 for the period 2005-2009.

According to the National Cancer Institute, it is estimated that nearly 80% of cancers are due to factors that can potentially be controlled to reduce cancer risk. Controllable factors that contribute to the development of cancer include tobacco use, poor nutrition, and exposure to radiation. An estimated 80% of cancers of the large bowel, breast, and prostate are contributed to dietary factors. In addition, about one-third of cancer deaths are due to nutrition and physical activity (resulting in excessive weight).[1] A lack of education and awareness of screening or delayed screening can also contribute to high rates of cancer death. Likewise, lack of access to treatments or difficulty in accessing treatment options can lead to increased rates of cancer mortality. As individuals age, the chances of developing cancer increases, thus resulting in an older population with higher rates of cancer. With the findings from this cancer assessment, it is important to note that with community outreach, education, and research efforts focused on reducing the cancer burden among all people, the cancer health status, and outcomes among people living in Orange County can be improved across the continuum of cancer care.

Below are some recommendations from the American Cancer Society which reflect individual choices for reducing cancer risk based on nutrition and physical activity.[2]

ACS Recommendations for Individual Choices:

1. Eat a variety of healthy foods, with an emphasis on plant sources.
2. Adopt a physically active lifestyle.
3. Maintain a healthy weight throughout life.
4. Limit consumption of alcoholic beverages.

For more information on reducing cancer risk, visit www.cancer.org

Healthy NC 2020 Objective

Healthy NC 2020 Objective	Current (NC)	Current (OC)	2020 Target
Reduce the colorectal cancer mortality rate (per 100,000 population).	15.7 (2008)	12.7 (2008)	10.1

Orange County currently fails to meet the 2020 target. In 2008, the colorectal cancer mortality rate was 12.7 (per 100,000 population). African Americans in the county share the greatest burden with the rate of 30.1 (per 100,000) compared to 10.6 (per 100,000 population) for Caucasians.[3] Colorectal cancer is the third (3rd) leading cause of cancer deaths. Despite the numbers presented, colorectal cancer is treatable if detected early through screening.[4]

The incidence of cancer in Orange County is very similar to that in the state of North Carolina. During the period 2004-2008, in Orange County the overall incidence of all cancers (per 100,000 population) was 504 compared with 495.2 for the state. The only cancer that had a higher incidence rate in Orange County compared with North Carolina was female breast cancer.[5]

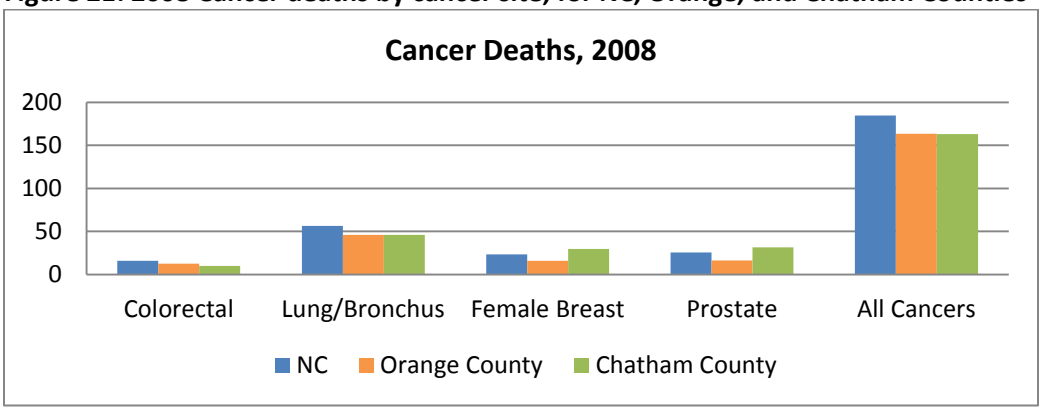
Table 31: Total number of cancer-related deaths and age-adjusted death rate, Orange County

Year	Deaths	Rate
2005-2009	859	158.8
2001-2005	864	189.3
1997-2001	894	214.4

In 2008, colorectal cancer was the third leading cause of cancer deaths in Orange County. The county's colorectal cancer mortality rate (per 100,000 population) was 12.7, higher than the Healthy NC 2020 target of 10.1. African Americans in the county had the greatest burden of this disease, with a rate of 30.1 per 100,000 population, compared with 10.6 for Caucasians.[6] Despite these numbers, colorectal cancer is treatable if detected early through screening.[7]

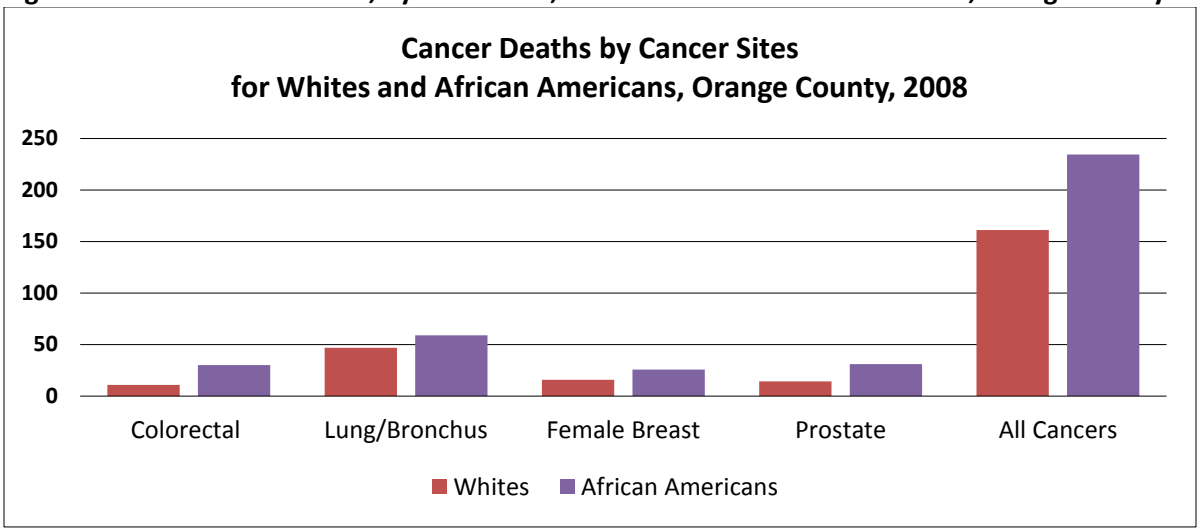
Orange County had lower cancer death rates in 2008 than the North Carolina state, across various cancer sites. Among all cancers, the death rate in Orange County (per 100,000 population) was 163.3, compared with the state death rate of 184.8 (see Figure below). While Chatham County, which serves as a peer county to Orange County, had higher death rates for both prostate and female breast cancer, both counties had similar rates for lung/bronchus and all cancers combined.

Figure 21: 2008 Cancer deaths by cancer site, for NC, Orange, and Chatham Counties[8]



However, when looking within the county, the difference in cancer deaths between racial groups was dramatic. Across every cancer site (i.e., for all common cancers), in 2008 African Americans in Orange County had a higher death rate than whites. For colorectal cancer mortality rate in 2008, for example, whites experienced a mortality rate of 10.6 per 100,000 population, compared with a mortality rate of 30.1 (i.e., about three times higher) for African Americans (see Figure below).[9]

Figure 22: 2008 Cancer deaths, by cancer site, for African Americans and whites, Orange County[10]



Primary Data: Residents' Concerns

Quantitative: Survey

In the area of cancer, respondents provided information on their screening behaviors, specifically for breast, prostate and colorectal cancer. For breast cancer, 35.5% of residents age 25-50 years have had a mammogram and 58.4% among those aged 50+. Among those aged 50+, 41.6% have never received a mammogram. When looking at screening by race/ethnicity, responses were close whereas 55.6% of whites stated they had never received a mammogram compared to 51.9% among People of Color. When asked the reason for not having received a mammogram, there was a lack of response among respondents. For the few that did respond, they stated their doctors saw no need for it; they put it off/did not get around to it; and could not afford it/no health insurance, among other reasons.

For prostate cancer, 59.7% of men had never received a PSA (prostate-specific antigen) or DRE (digital rectal exam) test. Among men of color, 85.2% had never received a PSA or DRE test as compared to 72.2% among white men. While the benefits of prostate cancer screening have not been established in terms of its ability to reduce mortality, it is important for men to be educated about prostate cancer and talk with a health care provider about screening.

A blood stool test known as FOBT (fecal occult blood test) or FIT (fecal immunochemical test) is commonly used to screen for colorectal cancer. Screening should begin at age 50 for those with no risk factors (other than age). Among survey respondents aged 50 and over, 51.9% had taken a blood stool test compared to 48.1% of respondents that have never taken a blood stool test. Among People of Color, 77.8% had never taken a blood stool test compared to 66.2% among whites.

Qualitative: Focus Groups

Only one out of the nine focus groups conducted expressed cancer as a primary concern with the priority being geared more towards prevention versus treatment (better detection and more funding for treatment and finding a cure). Across focus groups, participants raised the importance of physical activity and nutrition, two factors for reducing cancer risk. Focus group participants stated that many residents are not getting the nutrition or physical activity necessary for improving and maintaining their health and wellness.

Current Initiatives and Activities

Practicing routine screening and a healthier lifestyle (i.e. healthy diet, physical activity) are the best ways for reducing one's risk of some types of cancers. Early detection is the key to successfully fighting most cancers. As a part of routine health care, it is also important to discuss screening with health care providers to learn about the best options for individuals. Healthy Carolinians and the Orange County Health Department are working with many partners and community groups to continue to encourage and educate residents about screening as well as cancer prevention through healthier lifestyles: better eating habits, increased physical activity, and tobacco cessation.

Orange County is fortunate to have the state's new NC Cancer Hospital (opened 2009) and the Lineberger Comprehensive Cancer Center in Chapel Hill to provide the optimal cancer care and treatment for not only residents in Orange County but also across the state. These organizations offer state of the art testing and treatment for numerous health and medical conditions, including over 225 clinical trials. Community-based organizations are also available to provide wellness, educational and support services. Below is a list of local cancer resources available to assist

residents and cancer survivors with their cancer health care needs. This list is not all-inclusive of cancer-related resources in the county and only highlights a few that individuals may find useful.

- Carolina Well
- Cornucopia House Cancer Support Center
- Project CONNECT
- Prostate Health Education Network
- UNC Lineberger Comprehensive Cancer Center/NC Cancer Hospital
- UNC Nicotine Dependence Program

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

With these survey findings, it is important to note the differences in screening behaviors among whites and People of Color in the county as well as the high percentages of residents that have never been screened for breast, prostate and colorectal cancer. The average age of respondents was 53 years with approximately 66% between the ages of 36-69 years, which falls in line with the recommended ages for breast, prostate and colorectal cancer screenings. It is important that residents, especially the underserved and those at a higher risk for these cancers, be educated about the various cancer types and the benefits and risks of screening so that they might be able to make an informed decision about cancer screening.

Along similar lines, access to healthcare was of high concern across all groups. Residents spoke of the challenges to access care due to lack of insurance, transportation, and language barriers among other issues. Related to cancer, access to healthcare is critical for residents to access screening services for early detection and cancer treatment if needed. While access to healthcare is a pressing issue and challenge, it is important that residents are knowledgeable of the cancer services and types of assistance available in the community, especially among those underserved and at a greater risk for developing cancer.

Cancer deaths among minorities in Orange County are higher in all cancers presented than for Caucasians. While this finding is complex, efforts to promote prevention and early detection among minorities should consider cultural and other factors that may play a role in cancer outcomes.

Cancer clinical trials are research studies done with people to help find better ways to prevent, diagnose, and treat cancer. Less than 3% of all US adults with cancer have participated in cancer clinical trials. The numbers are smaller for people of color and older people. For 2000-2004, 4.6% of Caucasian cancer patients in Orange County enrolled in National Cancer Institute-designated clinical trials, compared to 2.3% of minorities.[11] Along with prevention and early detection efforts, it is important that individuals are made aware of and are knowledgeable about clinical trials to make informed decisions about what opportunities might be best for them. As more individuals are now living longer with and beyond cancer, the knowledge of and access to beneficial health resources for survivors, including cancer clinical trials, is an important part in ensuring optimal cancer care for all individuals, especially minorities and underserved populations.

The Guide to Community Preventive Services provides evidence-based strategies/interventions for improving cancer health status and outcomes that can be used by health organizations & providers.[12] After systematic review of available studies, increasing screenings[13] through both client and provider intervention approaches is recommended.

There are various types of screening methods for breast, prostate and colorectal cancer. The time at which an individual should begin screening depends on age, family history, and other factors. One should be sure to discuss screening with a healthcare provider to determine what is best for them.

Breast Cancer: Women age 40 and older should have a mammogram every 1-2 years.

Colorectal Cancer: People age 50 and older should be screened for colorectal cancer. The blood stool test (or FOBT) can be done every year.

Prostate Cancer: Doctor's recommendation for screening varies. Some encourage yearly screening for men over 50 and screening for men age 40 or 45 who are at a higher risk for developing prostate cancer such as African American men. Men should talk with a health care provider about screening for prostate cancer and what's best for them.

Some of the other key strategies/interventions mentioned in other sections of the report may also apply to improving cancer health status and outcomes (i.e. healthy eating, physical activity, smoking cessation).

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Section 6.02 Diabetes

Impact on Health and Contributing Factors

Diabetes is a group of diseases marked by high levels of blood glucose, resulting from defects in insulin production, insulin action, or both. When food containing carbohydrates is consumed, the body breaks down this food into glucose (sugar), which is the basic fuel for the body. Insulin is the body's hormone that helps glucose get into the cells to be used for energy. In Type 1 diabetes, the body does not make insulin; and in the more common Type 2 diabetes, the body does not make or use insulin properly causing blood glucose to rise, leading to extensive damage to the body over time.[1]

Diabetes can lead to very serious complications relating to the eyes, kidney, and nerves, and can cause premature death due to stroke and cardiovascular disease. However, persons with diabetes, in conjunction with their support network and their health care providers, can take steps to control the disease and lower the risk of complications. Management and treatment of diabetes encompasses dietary changes, exercise, insulin, and/or oral medication use, patient education, and self-care practices that enable people with diabetes lead normal lives.[2]

Diabetes has become the leading cause of kidney failure, non-traumatic lower-limb amputations, and new cases of blindness among adults in the United States today. Most importantly, it is the seventh leading cause of death in the United States, and contributes substantially to many of the top three causes of death, which include heart disease and stroke.

The American Diabetes Association (ADA) estimated that in 2006 the cost of diabetes for the residents of North Carolina was $5.6 billion, including excess medical care costs attributed to diabetes and its complications, and loss in productivity valued at $1.7 billion. In North Carolina, the disease accounts for 3.8% of all hospitalizations, with more than $279 million in total charges in 2007 alone.[3]

Even though diabetes can be controlled and managed, adopting healthy lifestyle behaviors and reaching or maintaining a normal Body Mass Index may help prevent or delay the onset of diabetes, even in high-risk populations.. Many factors contribute to the onset of diabetes. Risk factors include age > 45 years, family history, certain racial and ethnic groups, being overweight or obese, physical inactivity, having pre-diabetes or having a history of gestational diabetes.

Populations at increased risk, can take steps to prevent diabetes by losing 7% of body weight if overweight, by participating in moderate physical activity 30 minutes per day five days a week, and consuming a reduced calorie diet, low in fat , especially saturated fat.[4]

Other contributing factors for diabetes e include socio-economic factors, such as difficulties in managing the disease due to rural living conditions, social norms about healthy food consumption, availability, and affordability of healthy foods, access to health care and medications, and overall health literacy. Hence, improving the rates of diabetes in Orange County and the state needs to be thought of as a part of a long-term comprehensive approach to addressing the diabetes/obesity epidemics.

About 1.9 million people aged 20 years or older were newly diagnosed with diabetes in 2010 in the United States; and an estimated 79 million American adults aged 20 years or older are living with pre-diabetes.[5] Unfortunately in the United States, 215,000 of those less than 20 years of age were diagnosed with diabetes—Type 1 or Type 2 in 2010.[6]

Healthy NC 2020 Objective

Healthy NC 2020 Objective	Current (NC)	2020 Target
Decrease the percentage of adults with diabetes.*[7]	9.6% (2009)	8.6%

Secondary Data: Major Findings

Overall, North Carolina has managed to reduce all-cause mortality from diabetes during the period 2004-2009, with diabetes ranked as number five in 2003 and number seven in 2009. Diabetes Mellitus accounted for about 2,107 deaths in North Carolina in 2009, compared with 2,255 in 2005. From 2001-2005, age-adjusted diabetes death rates for North Carolina were about 27.6 per 100,000.

During that same period, Orange County had a rate of 17.8 per 100,000.

The 2005-2009 data show the age-adjusted death rate for Diabetes Mellitus at 24 per 100,000 in North Carolina and 15.3 per 100,000, in Orange County.[8] Over the past few years, the rate of decrease for the state of North Carolina has been greater than for Orange County. There are many possible reasons for this, including new state-wide programs and more public awareness; or lower baseline rates of disease in Orange County than in NC, which result in a slower rate of change.

There were 232,000 North Carolinians estimated to have undiagnosed diabetes and 376,000 estimated to have pre-diabetes, accounting for 1.25 million adults with high blood sugar in North Carolina in 2008.[9]

According to the Behavioral Risk Factor Surveillance Survey (BRFSS) data, the percentage of Orange County residents who have ever been told that they had diabetes has varied slightly in recent years, ranging from 5.6% in 2005, to 5.8% in 2007, 5.1% in 2009, and 5.2% in 2010. In contrast, the state has had small but steady increases, with the rate averaging 8.5%, 9.1%, 9.6%, and 10.4%, respectively, for the same years.

The 2006 Orange County BRFSS data estimated that only 55% of those diagnosed with diabetes had taken a course on diabetes management; but this rate has steadily increased since then. In 2008 it reached 60.2%, and continued to rise to 73.1% in 2010, well above the state level of 53.3%.[10] The BRFSS also estimated that in 2006, about 30% of people with diabetes had less than two A1C tests (recommended twice annually), and 36% had no foot exam in the previous year (recommended annually). Since then, Orange County has made tremendous strides, by steadily improving the rate of people with diabetes who have had less than two A1C tests annually. The rate was only 10.2% in 2009, down from 28% in 2008 and 22.1% in 2007. Orange County, again, has consistently shown better guideline compliance than the state.[11]

There has been concern about the number of residents who self-monitor their blood glucose as recommended. Recommendations vary, based on medication use, mealtimes, and overall blood sugar control; but the rates of those who check it at least once a day have increased from 81.4% in 2007 to 83.7% in 2009. Though this rate has not changed significantly, it is above the state rates of 83.3% in 2007 and 80.1% in 2009.[12]

Over the past five years there have been slight, but significant, changes in disparities among different groups in Orange County with regard to the diabetes rate (see Table below).[13]

Table 32: Disparities in Diabetes Orange County NC Residents, 2005 and 2010

		Yes		No		Borderline Diabetes	
		2005	2010	2005	2010	2005	2010
Gender	Male	4.1	4.2	94.5	95.4	1.4	0.4
	Female	7.1	6.1	90.0	91.7	1.6	1.1
Race	White	3.8	3.5	95.0	95.2	0.8	1.0
	Other	11.6	10.5	82.8	87.9	3.9	0.0
Age	18-44	1.5	2.3	96.4	96.9	0.9	0.0
	45+	10.8	8.1	87.0	90.0	2.2	1.6
Education Level	High school or less	6.5	8.0	90.4	91.3	1.7	0.7
	Some college	5.3	4.5	92.9	94.0	1.4	0.8

In 2010, the diabetes rate for those with a high school education or less was almost double the rate for those who have had some college (8% vs 4.5%); while the rate for non-whites is almost three-times the rate for white residents diagnosed with diabetes (10.5% vs. 3.5%). Females, those older than 45, and those with incomes below $50,000 per year, are all more likely to be told that they have diabetes than was the case in 2009, but this is a trend that has not remained consistent over the years. In 2007, residents with incomes above $50,000 per year had similar rates of diagnosed diabetes as those with lower incomes; and in 2008, males were marginally more likely than females to have been diagnosed with diabetes.

Primary Data: Residents' Concerns

Quantitative: Survey

Diabetes was not specifically asked about on the Community Health Opinion Survey.

Qualitative: Focus Groups

Diabetes was not discussed during the focus groups.

Current Initiatives and Activities

There are several initiatives in the county focused on diabetes prevention and management. The Orange County Health Department offers an American Diabetes Association Recognized Diabetes Self-Management Education (DSME) program available to adult residents with a diagnosis of type 2 diabetes. The program also targets those who have historically lacked access to such care including minority populations, the under/uninsured, those living in rural areas, and those lacking transportation to classes, and provides linguistically accessible services to those who participate. UNC Healthcare and Kerr Drug also offer DSME programs for targeted populations.

Several organizations in the county including the Health Department also offer Medical Nutrition Therapy (MNT) provided by Registered Dietitians for various conditions including diabetes and pre-diabetes. MNT is evidenced based and is proven to improve health outcomes and decrease healthcare costs from complications of uncontrolled diabetes. The Health Department's MNT services are offered on a sliding scale and some insurances are accepted.

The Health Department leads the county's diabetes task force, which is a group of medical professionals and community groups addressing the burden of diabetes in Orange County. The

Orange County Department on Aging offers chronic disease management classes including diabetes education, and works in partnership with the health department. They also offer bi-annual glucose screening.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

In regards to diabetes, more education is needed to help the community understand how to prevent diabetes and how to best manage diabetes once diagnosed. Particularly in the northern portion of the county where many low-income elderly people reside, more outreach could be done to educate and help them combat the complications of diabetes. The Orange County Diabetes Task Force identified a need for more Registered Dietitians, and diabetes classes/programs in the community. It was noted that many of these outreach educational efforts need to be provided in languages other than English due to the growing immigrant and refugee population in Orange County. There is also a recognized benefit from encouraging industries/companies to offer worksite health and wellness programs to promote healthy behaviors that prevent obesity and chronic disease. Access to primary care for low income residents continues to be a concern and is needed in order for them to receive the proper screening necessary to determine if they have diabetes and how to access the needed treatment, particularly medications and blood glucose testing supplies to prevent complications. To save medical costs, insurance companies should be encouraged to cover or expand coverage for Medical Nutrition Therapy and Diabetes Self-Management Education. Both evidence-based programs, MNT and DSME, have been proven to reduce the health impacts of diabetes and to improve the quality of life for those living with diabetes.

The number of children and adults who are overweight or obese is rapidly increasing and as a result, the number of people who have diabetes, especially children, is increasing at an alarming rate. With the increase in the problem of overweight and obesity in the US, healthcare providers and prevention educators need to be vigilant in educating the population about the importance of having their blood glucose checked when meeting certain diabetes risk factors, such as being overweight. Increasing the opportunities for safe play and exercise for both children and adults and improving the nutritional content of restaurant/fast food choices will help to ward off the potential for early onset of diabetes. It will be important that these health education messages and services be linguistically and culturally tailored, to meet the needs of all of the residents of Orange County.

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Section 6.03 Heart Disease and Stroke

Impact on Health and Contributing Factors

Heart disease and stroke are major causes of premature death and years of lost productivity. According to the American Heart Association, it has been estimated that "if all forms of cardiovascular disease were eliminated, the nationwide life expectancy would rise by nearly seven years."[1] In North Carolina, 1 in 5 heart disease deaths occur in people before the age of 65.[2] It is estimated that each person who dies from a stroke has had their life shortened by an average of 4.5 years.[3]

Stroke does not always cause death when it strikes. Many people survive strokes but are left with disabilities requiring lengthy terms of rehabilitation to regain strength, mobility, and cognitive and verbal skills. According to the CDC, in 2005 close to 1.1 million stroke survivors reported problems in carrying out basic daily activities such as walking three city blocks, lifting 10 pounds, or bathing.[4] The true cost of heart disease and stroke is greater than just dollars and cents, it also encompasses the human and societal costs brought on by lost productivity, disability and premature death.

Factors, that cannot be controlled, that increase the chances of experiencing heart disease or stroke include family history, age, or gender. Some risk factors are, however, influenced by lifestyle choices. These include elevated blood cholesterol, high blood pressure, family, diabetes, tobacco use and exposure to second hand smoke,[5] overweight and obesity, physical inactivity, a diet high in fat and sodium, and certain types of dental disease.[6] In addition to the primary risk factors listed above, secondary factors that can contribute to heart and cerebrovascular disease include stress, low socio-economic status, isolation, depression, and discrimination.[7]

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Reduce the cardiovascular disease mortality rate (per 100,000 population).	256.6 (2008)	161.5

Secondary Data: Major Findings

Heart disease is the second leading cause of death (behind cancer) in Orange County, NC.[8] Cerebrovascular disease (often resulting in a stroke) is the third leading cause of death in both the state and the county.[9] North Carolina is also part of a band of Southeastern States that have the highest rates of stroke in the nation. This stoke-prone region is often referred to as the "Stroke Belt."[10] In 2009 there were 137 deaths due to heart disease[11] and 29 due to cerebrovascular disease in Orange County; while state-wide there were 17,133 deaths due to heart disease and 4,391 attributed to cerebrovascular disease.[12]

Not only are both heart disease and stroke prevalent, but they are also very costly. In 2009, heart disease and cerebrovascular disease were Orange County's leading causes of hospitalizations and hospital expenses, at $31,730,269 for heart disease and $7,290,187 for cerebrovascular disease. The average length of hospital stay for heart disease and cerebrovascular disease was 4.3 days and 3.8

days respectively. The total direct hospital charges for heart disease in North Carolina are estimated to be nearly $3.4 billion, with an average charge per hospital stay exceeding $30,000.[13] These figures do not take into account the total costs of these diseases to the individual, families, and society.

Though heart disease is the second leading cause of death in Orange County, there have been some encouraging trends. Between the years 2001 and 2005 the age-adjusted death rate for heart disease in Orange County was 165.3 per 100,000;[14] and in 2009, it was 148.4 per 100,000.[15] With this current rate, the County has already surpassed the Healthy Carolinians 2020 heart disease target of 161.5 deaths per 100,000.

In North Carolina, the death rate due to cerebrovascular disease (stroke) is 50.3 per 100,000.[16] Like heart disease, Orange County's age-adjusted death rate for cerebrovascular disease is better than the state's, with a county rate of 39.0.[17]

Primary Data: Residents' Concerns

Quantitative: Survey

Heart disease and stroke were not included on the Community Health Opinion Survey.

Qualitative: Focus Groups

Heart disease and stroke were not discussed during the focus group discussions.

Current Initiatives and Activities

The UNC Wellness Center at Meadowmont (Chapel Hill) is a medical fitness facility owned and operated by UNC Hospitals. The mission is to help "people achieve optimal health in a safe and supportive environment by integrating professional resources, innovative programs and personalized service." It is a fee for service membership facility which offers a wide variety of health, wellness and fitness programs, nutrition and weight loss and physical therapy.

Two programs specifically designed to improve heart health are the UNC Cardiac Rehab program and the Bridge Program. Participants in both programs are referred by their physicians. The Cardiac Rehab program is a twelve-week outpatient program for individuals recovering from cardiac events or surgery. The program components include exercise, nutrition, medication management, stress management and psycho-social support. The Bridge is for individuals who do not need cardiac rehab, but would benefit from professional guidance in learning to exercise safely. Exercise sessions are supervised by nurses and exercise physiologists and health education is tailored for the participant's needs.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Despite these seemingly positive statistics, a closer examination of the data shows that some segments of the population are not doing as well as others.

There is a disparity in the heart disease and cerebrovascular disease death rates for whites and African Americans in Orange County. The heart disease death rate for African American males is 1.3 times the rate for white males. The disparity in heart disease death rates is even greater for females, with the rate for African American women being 1.77 times the rate for white women (see Table below).

Table 33: 2005-2009 Race-Sex-Specific Age-adjusted Death Rates per 100,000 for Heart and Cardiovascular Disease, Orange County, NC[18]

	Death Rates 2005-2009				
	White Males	White Females	African American Males	African American Females	Overall
Heart disease	176.8	103.5	225.1	183.0	141.8
Cerebrovascular disease	30.0	37.7	N/A[19]	47.3	37.2

One of the major risk factors for both heart disease and stroke is high cholesterol. As noted in the above Table, African Americans in Orange County (79.8%) are less likely to have ever had their cholesterol checked than are whites (92.7%).[20] If people are unaware of their cholesterol levels, they are unlikely to take steps to control their cholesterol. Even if they do make efforts to lower their risks of high cholesterol, without measuring cholesterol levels they have no way of knowing if the steps they are taking are working.

The causes of the disparity in health status between whites and other racial and ethnic groups, particularly African Americans, are multiple, ranging from family history to the effects of poverty, racism, and behaviors. Of all the risk factors, those most easily controlled are health behaviors such as smoking, diet, and exercise. The Table below shows the differences in the percentages of African American and white adults that engage in some health behaviors that may account for some of the health disparities in heart disease and strokes noted in North Carolina.

Table 34: Percentages of North Carolina Adults with Selected Risk Factors/Conditions, by Race/Ethnicity[21]

	African American	White
Current smoking (2006–2008)	22.4	22.2
Did not get recommended level of physical activity (2005-2007)	63.6	53.6
No leisure-time physical activity (2006–2008)	29.4	21.3
Consumption of less than 5 servings of fruits and vegetables per day (2005-2007)	82.2	76.2
Binge Drinking (2006–2008)	9.5	12.8
Overweight/Obese (2006–2008)	74.9	62.3

Nearly all Americans, regardless of their race or ethnicity need to be concerned about healthy lifestyles. More and more Americans are becoming overweight or obese as a result of calorie-laden diets and lack of physical activity. As obesity and overweight rates climb, the rates of heart disease and stroke may begin to increase rather than continue decreasing over time.

The aging of North Carolina and Orange County population is also likely to increase the incidence of cardiovascular disease, and may further slow or reverse the decades-long downward trend in death rates.

In determining actions needed to help maintain the decline of heart disease and stroke, it has been noted above that some risk factors—such as family history, age, gender and race—cannot be controlled. There are, however, a number of lifestyle factors that increase the risk of disease, and can be changed. Factors such as smoking, diets high in sodium and saturated fats, lack of regular

physical activity, high stress, and excessive alcohol consumption are lifestyle choices that can be altered. There is no one solution for motivating people to change their lifestyles to limit risky behaviors and adopt healthier ones. It will take a concerted effort by health professionals, law makers, and community members working together to bring about the big change needed.

The activities that could facilitate the needed attitudinal and behavioral changes include such measures as enacting laws or policies which make it harder to engage in unhealthy activities, such as limiting tobacco use in public spaces, offering healthy food and beverage options at public gatherings; improving access to healthy food by establishing more community gardens; or starting new or expanding days and times of existing farmers markets. Steps could also be taken to increasing opportunities to be physically active. These activities could include building sidewalks and bicycle trails/lanes and adding to or enhancing existing parks and outdoor facilities. These are but a few examples of strategies that could be employed to help reduce the rates of heart disease and stroke in Orange County and North Carolina.

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Section 6.04 Obesity

Impact on Health and Contributing Factors

The rates of overweight and obesity among Americans continue to increase, with about 63% of the adult population being overweight or obese.[1] Compared to other states, North Carolina has experienced one of the fastest growing rates of obesity over the past 10 years, with an alarming increase in overweight and obesity rates in all age groups. Currently, more than 65% of NC adults and 53% of Orange County residents are overweight or obese.[2] Children and adolescents are equally affected by the problem of overweight; and the rate of childhood overweight has more than doubled in the last 20 years.[3]

Being overweight or obese during any stage of life increases the risk for numerous health conditions, including type 2 diabetes, heart disease, stroke, gall bladder disease, sleep apnea, respiratory problems, some types of cancer, and osteoarthritis.[4] In Orange County, cancer, heart disease, and stroke are the leading causes of death; and clearly, overweight and obesity contribute to the burden of these diseases. If this trend continues, NC as a whole will have a sicker and less productive population.

Nationally "obesity rates among preschoolers ages 2 to 5 have doubled in the past four decades, and one in five children are overweight or obese by the time they reach their 6th birthday. This health crisis begins at an early age: over half of obese children first become overweight at or before age 2."[5] Of special concern are the long-term impacts of childhood overweight. Studies have shown that overweight children are 70% more likely to become overweight adults and suffer from chronic disease and other health related consequences at an earlier age.[6]

Several factors contribute to obesity. The American Obesity Association and the Centers for Disease Control and Prevention have identified a number of leading factors, including a lack of physical activity, sedentary behavior, unhealthy eating patterns, socioeconomic status, the environment, and genetics.[7]

While obesity is caused by a complex interaction between a person's behavior and their environment, weight gain is largely caused by an imbalance between the amount of energy consumed through food and drinks and the amount of energy expended through exercise and resting energy expenditure. An unhealthy lifestyle with a diet high in fat and low in whole grains, fruits, and vegetables, combined with low levels of physical activity, will lead to weight gain. Conversely, regular physical activity and a low-fat diet, rich in whole grains, vegetables, and fruits are key components to maintaining a healthy weight and good health.

While people may be aware of the need to be healthy, they face many barriers to eating healthy. These include the lack of knowledge about how to prepare nutritious meals, lack of time, cost, and an abundance of fast food and foods high in fats, sugars, and salt. Media and the prevalence of fast food establishments also influence the types of foods people eat. Additionally, Americans face many barriers to being more physically active, including lack of time, more time spent in sedentary activities (e.g., watching TV, working on the computer, and video games), reduced opportunity for physical activity during the school day, and residing in communities that do not support activities such as walking, biking, or playing outside. For some people, though certainly not all, advancing age also impacts their ability to be more active.

Also, research shows a strong association between breastfeeding and decreased incidence of overweight and obesity.[8,9] Breastfeeding is associated with many benefits, including pediatric weight status.[10] Arenz and his colleagues and Owen and his colleagues have reported that initiation of breastfeeding was associated with a reduced risk of pediatric obesity. [11,12] Furthermore, for each month of breastfeeding up to age 9 months, the odds of becoming overweight decrease by 4%. This decline results in more than a 30% decrease in the odds of becoming overweight for a child breastfed for nine months when compared with a child that was never breastfed.[13] Educating and supporting mothers and families about breastfeeding and its effect on pediatric obesity and related conditions is clearly beneficial.

Nationally "obesity rates among preschoolers ages two to five have doubled in the past four decades, and one in five children are overweight or obese by the time they reach their 6th birthday. This health crisis begins at an early age: over half of obese children first become overweight at or before age two."[14]

Of special concern are the long-term impacts of childhood overweight. Studies have shown that overweight children are 70% more likely to become overweight adults and suffer from chronic disease and other health related consequences at an earlier age.[15]

The same rising obesity trend is seen in women of child-bearing age; 56.7% of women who become pregnant are overweight, 30.2% are obese,[16] and women of color are disproportionately affected.[17] This is a particularly important public health issue because of both the immediate and down-stream effects for the mother and the infant. Being overweight or obese during pregnancy not only contributes to excessive gestational weight gain and weight retention postpartum, it is also associated with adverse short and long-term birth outcomes for the mother and the infant. Women who are obese and pregnant are at risk for increasing their BMI over time and developing chronic conditions such as Type 2 diabetes and cardiovascular disease.[18,19,20,21,22] Overweight or obese women who then have a subsequent pregnancy enter that pregnancy already overweight and the self-reinforcing, vicious cycle continues.

Infants of obese mothers have also been shown to have short and long-term adverse outcomes as a result of the mother's weight; short-term outcomes include macrosomia (excessive birth weight) and metabolic syndrome that predisposes the infant to the longer-term outcome of diabetes. Longer-term outcomes are the same as for the mother—obesity and Type 2 diabetes among other chronic conditions requiring long-term management. Female infants are then potentially predisposed to becoming overweight or obese pregnant women as they reach childbearing age, continuing the cycle across generations.[23]

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Increase the percentage of high school students who are neither overweight nor obese.	72.0% (2009)	79.2%
Increase the percentage of adults getting the recommended amount of physical activity.	46.4% (2009)	60.6%
Increase the percentage of adults who are neither overweight nor obese. [24]	34.6% (2009)	38.1%

Secondary Data: Major Findings

Adult Obesity

According to the 2009 BRFSS survey results for Orange County, 48.1% of residents 18 and older are overweight or obese, compared to the state average of 65.4%. In Orange County, unlike North Carolina as a whole, during the period 2007-2009, there was a decrease in the rate of those who are overweight or obese among all age groups. The overall rate had dropped from 56% to 48.1. However, the 2010 Orange County BRFSS results have revealed an increase to 53.2%. Overweight is classified as having a Body Mass Index (BMI) greater than 24, while obese is recognized as being greater than 29.9. Another 32.2% of adults are classified as overweight or having a BMI 25 or above.

Childhood Obesity

For young children, based on NC NPASS data gathered from those receiving Health Department and WIC services, it appears that the rate of overweight and obesity among Orange County 2-4 year olds has decreased. However, it should be noted that the total number of children included in the data set for 2009 was only 681, versus 996 children in 2008 when the rate was 28.2%, and 1,324 children in 2007 when the rate was 34.1%.

Among high school students surveyed in the 2009 YRBS in the Chapel Hill-Carrboro City Schools, 20.6% of middle school students believed themselves to be slightly overweight and 30% of these were trying to lose weight; while 23% of high schoolers describe themselves as overweight and 41.5% were trying to lose weight.[25]

Orange County has consistently outperformed the state of North Carolina in reducing and maintaining overall lower rates of overweight and obese children, as noted in the Table below.

Table 35: Childhood Overweight and Obesity Percentages, NC and Orange County*

	NC			Orange County		
Age	2002	2006	2009	2002	2006	2009
2-4	27.7%	30.9%	31.2%	35.8%	35.8%	25%
5-11	37.9%	42%	42.9%	42.4%	41.1%	28.2%
12-18	43.3%	46.8%	46.1%	46.9%	38.5%	40.5%
Overall Average	36.3%	39.9%	34.2%	41.7%	38.5%	26%

*Comparison of NC and Orange County Children Seen in Health Department and WIC Clinics who were at Risk for Overweight (>=85th to <95th percentile) and Overweight ($\geq$ 95th percentile).[26]

In terms of disparities among different groups of Orange County residents, the burden of obesity is being disproportionately carried by males, races other than white, persons with a high school education or less, those older than 44 years, and those with less than $50,000 annual income (see Table below).

Table 36: Disparities in Weight Orange County NC Residents, 2005 Compared to 2010[27]

		Recommended %		Overweight %		Obese %	
		2005	2010	2005	2010	2005	2010
Gender	Male	35.1	43.3	41.8	44.8	21.2	11.9
	Female	59.1	49.2	22.3	25.4	17.6	24.2
Race	White	52.0	53.1	30.8	29.7	15.8	16.5
	Other	29.6	24.3	35.9	52.7	33.0	22.5
Age	18-44	51.4	48.4	30.8	36.8	16.1	14.8
	45+	41.4	44.2	34.1	33.8	23.4	20.8
Education Level	High school or <	32.7	33.8	41.5	30.5	22.0	35.0
	Some college	52.5	49.1	28.8	36.4	18.2	14.0

It is interesting to note from the Table above, that in 2005 in Orange County, women were more likely to be overweight and obese than males, and the same trend is apparent in 2010; however, the gap has dramatically decreased. This is a stark change from 2003-2004, where more males were overweight or obese than females.

Consistently throughout the past five years, overweight and obesity are observed in all population groups, but obesity is particularly common among Hispanics/Latinos, African-Americans and American Indians, especially females of these groups. As in past years, the prevalence of overweight and obesity would consistently increase with advancing age for both males and females; however, in 2010 those aged 45 and above had a lower rate of being overweight than those 18 to 44 years old. Overall, more residents aged 18 to 44 are maintaining their recommended weights. Additionally, those with less education are more likely to be overweight and obese than those with higher education.[28]

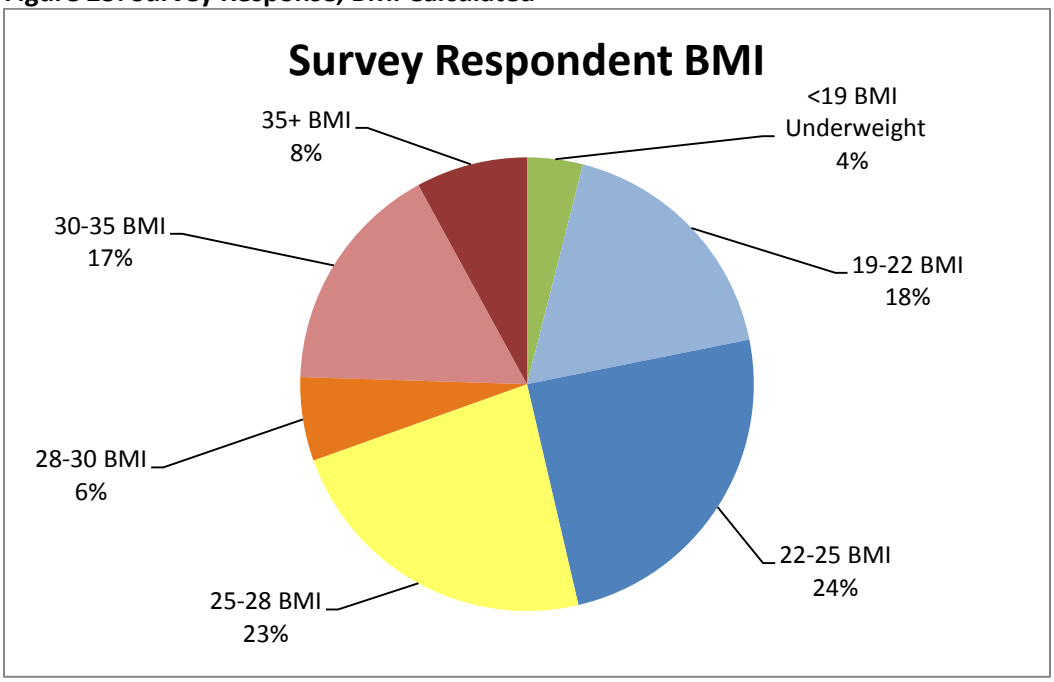
Primary Data: Residents' Concerns

Quantitative: Survey

BMI was calculated from respondent self-reported weight and height. In the United States, 19-25 BMI is considered clinically normal weight, 25-30 is considered clinically overweight, 30-35 is considered clinically obese, and 25+ is considered clinically morbidly obese.

Of those surveyed, 4% scored lower than 19 BMI (underweight) ; 42% scored between 19-25 (normal weight); 29% scored 25-30 BMI (clinically overweight); and 25% scored 30+ BMI (obese), with 8% with a 35+ BMI (morbidly obese).

Figure 23: Survey Response, BMI Calculated



Qualitative: Focus Groups

When discussing nutrition, many participants immediately jumped to the discussion of obesity and acknowledged the connection between the two.

Current Initiatives and Activities

The Health Department offers *Medical Nutrition Therapy* for residents of all age groups and for a variety of conditions include obesity prevention and management. Ninety-five percent of all referrals are related to obesity.

NAP SACC: Nutrition and Physical Activity Self-Assessment for Child Care was developed at the UNC Center for Health Promotion and Disease Prevention. It consists of a self-rating scale measuring nutrition and physical activity practices in child care centers. Centers choose areas for focus and improvement to reduce childhood obesity by improving nutrition and increasing physical activity. The project has been implemented in Orange County since 2007 sponsored by the Orange County Partnership for Young Children and conducted by the Child Care Health Consultant employed by Orange County Health Department. Since 2007, 16 child care centers in Orange County have completed the self-assessment and received subsequent services that include training and education for center staff and parents, as well as working towards self-selected goals for improvement in both nutrition and physical activity at each participating center. Over 1,000 children in Orange County have been reached by this program.

Preventing Obesity by Design (POD) is a project of the Natural Learning Initiative (NLI) in the NCSU School of Design, in collaboration with the NC Partnership for Children and BCBSNC. POD was established to develop outdoor learning environments on playgrounds in childcare centers in 10 counties across North Carolina. In 2009 Orange County Partnership for Young Children (OCPYC) was chosen as one of 10 partnerships to implement the program. The Children's Learning Center in Hillsborough was chosen as a model site in 2009 and Chapel Hill Day Care in Southern Village in

2010. Both centers have received a small grant from BCBSNC and design services from NLI as well as technical assistance from Child Care Services Association and OCPYC. The premise of POD is that by improving the outdoor environment children and care takers will be encouraged to spend more time outside, moving more and bringing the educational experience outside.

SHAPE NC is an expansion of POD including the same program partners as POD with the addition of Be Active Kids and NAP SACC. The goal is to develop Model Early Learning Centers across North Carolina that will feature an Outdoor Learning Environment designed by NLI at NCSU, and implement both the NAP SACC and Be Active kids programs. OCPYC was again selected to be one of 8 counties to receive the SHAPE NC grant in 2011 and is currently working with Spanish For Fun Academy in Chapel Hill to redesign their play space to include a large circulating path for riding and pulling toys, walking and running which has been proven to increase physical activity. The design will also add plants and trees to provide shade, greenery and natural spaces, nutrition will be improved through NAP SACC and opportunities for physical activity will increase via the implementation of Be Active kids. Once completed, Spanish for Fun will serve as the model center for Orange County and host trainings and tours for other centers interested in improving their outdoor environments and implementing programs to improve the health of young children where they spend many hours each week. The long range goal of SHAPE is to develop 30 Model Early Learning Centers across the state by the end of 2013.

The Orange County Partnership for Young Children initiated the Healthy Kids Campaign in 2007 to collaboratively and comprehensively address the issue of childhood obesity. The campaign goal was to establish innovative and research-based programs designed to increase healthy eating and physical activity in young children and families in Orange County. Resulting projects have included the Move It! program which provided $12,593 in scholarships to 62 children during fiscal year 2008-2009 to Carrboro and Orange County recreation and parks departments, the YMCA and Sportsplex to promote physical activity programs for children ages 5 and under.

The Partnership also began the Growing Healthy Kids community gardening project in 2007 which is now in its 4th year and has been funded by both the Health and Wellness Trust Fund and the Robert Wood Johnson Foundations *Salud! America* grant. In collaboration with multiple community partners three community gardens have been established providing space for 45 families with young children to grow their own produce. Garden education, cooking classes, children's programming and supplies are provided free of charge to participating families. Priority is given to lower-income families. Seventy-five families have been served by the project over four years.

The Orange County Health Department conducted a Child Health Program Review and prepared a Self-Assessment Action Plan in the fall of 2010. A multidisciplinary team of health department staff and community agency representatives determined that the high rate of childhood obesity in the county was one of the top three issues affecting children's health. They set as a goal the development of a comprehensive, multi-level, multi-component plan to address the issue of pediatric obesity to include the 2-4 year old age group.

In collaboration with the UNC School of Nursing students, the Healthy Carolinians of Orange County Health Promotion (HP) Committee created Pediatric Obesity Toolkits for four Orange County medical clinics in 2009. The HP Committee has since expanded the initiative and partnered with school nurses from both Orange County school districts in 2010. All eighteen elementary school nurses were trained on Universal Assessment guidelines, Staged Treatment strategies, and

Motivational Interviewing skills for reinforcing positive behaviors and counseling against negative behaviors or risk factors. Pediatric Obesity Initiative Toolkits containing educational handouts, assessment tools, resources, posters, etc. were provided to each school nurse.

The HP Committee, in collaboration with the Orange County Partnership for Young Children, Orange County Schools, Chapel Hill/Carrboro YMCA, Be Active NC, Head Start and More at Four created the Healthy Classroom Challenge (HCC), a new initiative to reinforce the importance of physical activity and better nutrition. Physical Education and classroom teachers introduced the same Eat Smart Move More message each week during the month of March; and then, with their students, created original performances that incorporated the messages and physical movement. These routines were then performed at Annual Healthy Kids Day event in April to reinforce these healthy messages with children, their families, and the Orange County community. Participating teachers received mini-grants to go towards nutrition education and physical education equipment for their classrooms.

Both Chapel Hill-Carrboro City and Orange County Schools have joined the Alliance for a Healthier Generation, an American Heart Association and William J. Clinton Foundation collaborative.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

A general conclusion regarding obesity is that Orange County is not meeting the current Healthy NC 2020 objectives for the percent of children or adults who are overweight or obese. However, adults are making greater strides in seeking to surpass the state averages, while the older children of Orange County continue to fall behind the state average. Greater attention needs to be given to eating and physical activity patterns that focus on consuming fewer calories, making informed food choices, and being physically active. This would help Orange County residents attain and maintain a healthy weight, reduce their risk of chronic disease, and promote overall health.

Of particular concern is the disparity in overweight and obesity between Hispanic and non-Hispanic children. Based on NC NPASS data from 2009, 18.7% of Hispanic children ages 2-18 were overweight compared to 15% of Non-Hispanic children and 23.1% of Hispanics were obese compared to 15.6% of non-Hispanics. Overall rates of overweight and obesity among Hispanics ages 2-18 are more than 10% higher than the rates among non-Hispanics. Future programs should be tailored linguistically and culturally so that messages appropriately reach and serve the needs of Hispanic children and their families.

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Section 6.05 Physical Activity and Nutrition

6.05.a Physical Activity

Impact on Health and Contributing Factors

A lack of physical activity indisputably has a negative effect on health, and is contributing to the increase in obesity in the US and North Carolina. It is recommended that adults receive at least 150 minutes of moderate-intensity physical activity per week. Children and adolescents are recommended to receive one hour of physical activity daily.[1] Meeting these recommendations for physical activity (PA) can help prevent cardio-metabolic conditions such as type 2 diabetes, heart disease, respiratory ailments, high blood pressure, stroke, atherosclerosis, and osteoporosis. Physical activities, along with nutrition, is a key intervention for individuals to reach a healthy body weight, for unlike genetics, metabolism, environment, culture, and socioeconomic factors, physical activity is a relatively modifiable health risk behavior.[2]

The Center for Disease Control and Prevention expounds how physical activity can reduce one's risk of dying early from leading causes of death, like heart disease and some cancers in two ways: 1) people who are physically active for about seven hours a week have a 40% lower risk of dying early than those who are active for less than 30 minutes a week; and, 2) one does not have to do high amounts of activity or vigorous-intensity activity to reduce risk of premature death. One can reduce their risk of dying early by doing at least 150 minutes a week of moderate-intensity aerobic activity.[3]

Many factors contribute to the lack of physical activity in North Carolina. Notably, the reliance of technological adoptions in the home, workplace, and schools has reduced the innate need to be active in order to survive. Technology like televisions and the internet can promote sedentary behavior. Over the last 50 years the daily occupation-related energy expenditure has decreased by over 100 calories, contributing to higher body weights and poorer health outcomes.[4] Moreover,

America's car dependent society coupled with the design of sprawling communities, make people opt out of physically active transport, like biking or walking. Lastly, many school environments have eliminated or reduced recess or physical education programs.[5]

According to the Behavioral Risk Factor Surveillance System, 46.4% of adult North Carolinians (N= 5,393) were meeting the recommended levels of physical activity per week in 2009. In 2007, a fewer number of adults were receiving the recommended amount of physical activity (44%). Thus, there has been an increase in adults receiving the recommended amount from 2007 to 2009.

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Increase the percentage of high school students who are neither overweight nor obese to 79.2%	72.0% (2009)	79.2%
Increase the percentage of adults getting the recommended amount of physical activity to 60.6%.	46.4% (2009)	60.6%

Secondary Data: Major Findings

Detailed data from the 2011 Youth Risk Behavior Surveys of the Chapel Hill-Carrboro City School System show that for most questions in the survey, middle school students surpassed high school students in the amount of physical activity they performed and the level of intensity. The data on the amount and level of physical activity is given in the two Tables below.[6]

Table 37: Amount and Level of Physical Activity by CHCCS Middle and High School Students, 2011

1. During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?	0-2 Days	3-5 Days	5-7 Days
Middle School	11.7%	35.32%	52.96%
High School	37.58%	29.31%	33.1%

2. On how many of the past 7 days did you exercise or participate in physical activity for at least 20 minutes that made you sweat and breathe hard?	0-2 Days	3-5 Days	5-7 Days
Middle School	13.3%	34.3%	52.4%
High School	37.91%	31.99%	30.09%

Table 38: Amount and Level of Physical Activity by CHCCS Middle and High School Students, 2011

1. On a typical school day, how much time do you spend being physically active in minutes?	0-30 Minutes	30-60 Minutes	60-90 Minutes	90+ Minutes
Middle School	17.04%	43.49%	22.8%	16.67%
High School	33.65%	31.04%	13.98%	21.43%

2. On a typical weekend day, how much time do you spend being physically active?	0-30 Minutes	30-60 Minutes	60-90 Minutes	90+ Minutes
Middle School	14.59%	28.21%	22.46%	34.74%
High School	28.44%	25.59%	19.19%	26.78%

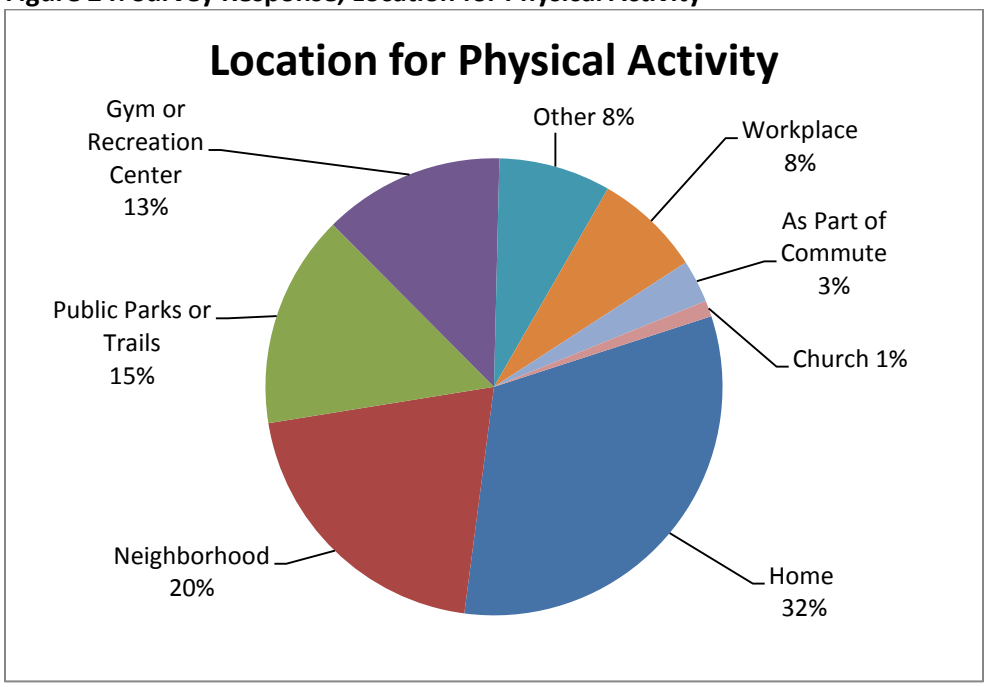
Primary Data: Residents' Concerns

Quantitative: Survey

Average frequency of exercise for all respondents was one day per week. Thirty percent of survey respondents exercise five or more times a week. Twenty-eight percent of respondents exercise three days per week; 26% are physically active 1-2 days a week; and 17% of respondents do not exercise. This was not skewed by age or income, though men tended to exercise five or more days a week more often than women (40% males vs. 22% females). White respondents exercise more often than People of Color (33% vs. 15%, respectively, exercised five or more days); and People of Color did not exercise at all (zero days per week) more often than white people (37% vs. 12%, respectively).

Reasons why surveyed residents do not exercise are because they: do not have enough time (15%); have little motivation (15%); are too tired (10%); do not have enough sidewalks (8%); and, have a physical disability that prevents them from exercising (7%), among others.

Figure 24: Survey Response, Location for Physical Activity



Qualitative: Focus Groups

Physical activity was highlighted as an important aspect of health across all nine focus groups. As addressed previously in the built environment and parks and recreation sections, the presence of walking trails, sidewalks, parks, and bike lanes all aid community members by making exercise fairly accessible. Despite the built environment, participants recognize the increasing rates of obesity and diabetes in the county. Participants highlighted existing programs available in the county that encourage physical activity. While there are some activities available, and some have access to safe areas to exercise, there is still a concern that many are not getting the physical activity they need.

Current Initiatives and Activities

The Intergovernmental Park Work Group (IGPWG) was established in 2000 to promote work on joint siting, design, and management of school and park sites across jurisdictions. The IGPWG helps to

build a strong parks and recreation program within Orange County by forming partnerships inter-jurisdictionally and otherwise with groups such as OWASA and UNC. In February 2010, the IGPWG proposed to link the NC Mountains-to-Sea trail (MST) with three pre-existing trails found within Orange County including, the Bolin and Morgan Creek greenways in Carrboro.

The Orange County Department of Environment, Agriculture, Parks and Recreation (DEAPR) provides online, interactive park maps. The maps include amenities offered at the parks, such as game courts (basketball, tennis), swimming pools, disc golf facilities, camping sites, etc.[7]

The Orange County Planning Department in conjunction with the NC Department of Transportation Division of Bicycle and Pedestrian Transportation, printed 20,000 copies of a colorful brochure at $0.60 each, highlighting bike routes and bike tourism in Orange County.[8] This map is also available online at http://bikecarrboro.com/library/pdf/OrangeCountyBicyclingMap.pdf.

The Orange County NC Parks and Recreation Department celebrated its opening of the Eurosport Soccer Center in August 2009 in Efland. The center contains five full size fields, a smaller youth field, a shade shelter, and a one-half mile perimeter-walking track. In addition, there is a concession building with restrooms, office space, equipment storage, first aid room, and team room. The US Soccer Foundation provided funding assistance for the project.[9]

In September 2010 Chapel Hill was designated a bronze-level Bike Friendly Community by the League of American Bicyclists. Mayor Mark Kleinschmidt stated that "Chapel Hill will continue its efforts to become more accommodating to cyclists, whether they are recreational bicycle riders or serious bicycle commuters." To receive the award, which will hold for four years, Chapel Hill's application was thoroughly reviewed and local cyclists consulted. In 2001, Carrboro was the first NC community to be distinguished bike-friendly; in 2004, Carrboro received the silver level award.

UNC received a silver "Best Workplaces for Commuters" award in 2009, for it being an institution that encourages sustainable transportation and innovation, through the University of South Florida's National Center for Transit Research. Recipients of the award are deemed as places that offer outstanding commuter benefits, such as free or reduced bus passes.10

With 80% of the project completed in May 2011, the Town of Hillsborough sidewalk project will construct over 8,000 feet of sidewalk on Faucette Mill Road, Revere Road and Nash Street in Hillsborough. The project, costing an estimated 1.4 million will link north-south Hillsborough, connecting neighborhoods and businesses. Notably, children attending the Hillsborough and Central Elementary schools will be able to walk to school safely.[11]

The Chapel Hill-Carrboro YMCA is partnering with the Orange County Department of Environment, Agriculture, Parks and Recreation to offer programming in the Efland Cheeks community. The Y offers an Efland Cheeks Y Day Summer Camp located at the Community Center.

Healthy Carolinians of Orange County received an *Eat Smart Move More NC* community grant for $15,420 to be used from 2010-2013 to fund the *Preparing Lifelong Active Youth* (PLAY) *to Move More* Program. This program is targeted at middle-school children enrolled in after-school programs with the intent to increase physical activity among three Orange County middle-schools. UNC collegiate athletes support children enrolled in the program by visiting twice a month, introducing

new ways of being active, encouraging them to be more active and healthier, and serving as role models for lifelong physical activity and academic success.[12]

In 2007, the Chapel-Hill Carrboro City Schools received a three year Carol M. White Physical Education Program (PEP) Grant to initiate, expand, and improve their physical education programs. This grant helps the school district make strides towards achieving the state-wide physical activity standards.[13]

In 2009 the *Move It!* Program, a part of the Orange County Partnership for Young Children's Healthy Kids Campaign, provided 50 families scholarships for their children to partake in physical activity programs. Prior, 76% of the children had never participated in local physical activity programs.[14]

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Concerning physical activity, there is a large disparity between non-Hispanic Blacks and white rates. For whites, 48.5% received the recommended amount of PA in 2009, and 46.9% in 2007. Contrary, only 37.2% of Blacks in 2009 and 37.7% in 2007 achieved the amount of recommended physical activity.[15] These results highlight the discrepancy between the rates of physical activity among various racial groups and the need to cater public health messages towards particular groups of the population to increase levels in the aggregate population.

There remains much work to be done in the realm of physical activity and health. Many disparities exist within America's population today contributing to poor health outcomes, notably among the non-Hispanic Black population and Hispanic populations, oftentimes due to lower socio-economic status and other social determinants of health. For instance, in 2010, obesity was more common among non-Hispanic Black teenagers, 29%, than Hispanic teenagers, 17.5%, and non-Hispanic Caucasian teenagers at 14.5%. For women ages 40-59, approximately 52% of non-Hispanic Blacks and 47% of Hispanics are obese; whereas the prevalence is 36% for non-Hispanic Caucasians.[16]

An emerging issue is the rise in adolescent and childhood obesity. Nearly one in three children is overweight or obese. From 1980 to 2008 the rate of obesity more than tripled, from 5% to 17% among children and adolescents. It is imperative that measures be taken to lessen this epidemic, for an obese teenager has over a 70% greater risk of becoming an obese adult.[17]

Although Orange County continues to work towards increasing the physical activity among its population, there are many unmet needs. First, there is only one free, public swimming pool, the A.D. Clark Pool, located at the Hargraves community center in north Chapel Hill which only operates from Memorial to Labor Day. Second, despite the abundance of parks in the Chapel Hill-Carrboro and Hillsborough vicinities, there is a lack of recreational space or athletic sports fields in the rural parts of the county, particularly in the Southeast and Northern areas. Thus, the rural populations of the county do not have access to as many free recreational spaces as urbanites. Furthermore, most of the community centers and exercise facilities that offer physical activity classes in the county require payment, isolating indigent members of the population who may need more group encouragement to partake in physical activity.

The lack of public transportation in general is problematic for those without private means to reach Orange County recreation locales. For rural residents, public transport access to city parks is for the most part infeasible. Orange County should ensure that the rural members of the population have access to all the recreational facilities it offers.

6.05.b Nutrition and Access to Healthy Foods

Impact on Health and Contributing Factors

Healthy eating is associated with reduced risk for many diseases, including the three leading causes of death: heart disease, cancer, and stroke. Healthy eating in childhood and adolescence is important for proper growth and development, and can prevent health problems such as obesity, dental caries, and iron deficiency anemia.[18] Eating and physical activity patterns that are focused on consuming fewer calories, making informed food choices, and being physically active can help people attain and maintain a healthy weight, reduce their risk of chronic disease, and promote overall health.

Currently, in the United States, 66% of the adult population is overweight, and of that 33% are obese.[19] 74.5 million Americans (34% of US adults) have hypertension, which is a major risk factor for the many diseases—such as heart disease, stroke, congestive heart failure, and kidney disease—that are the top causes of morbidity and mortality in the US Increased blood pressure can attribute to obesity.[20] About one in two men and women—approximately 41% of the population—will be diagnosed with cancer during their lifetime. Studies have shown that dietary factors are associated with risk of some types of cancer, including breast (post-menopausal), endometrial, colon, kidney, mouth, pharynx, larynx, and esophagus.[21]

Moreover, 25.8 million children and adults in the United States—8.3% of the population—have diabetes. Nearly 11% of the population aged 20 years and older have diabetes, and the onset of this disease is profoundly influenced by diet and physical activity.[22] Additionally, 7 million Americans have undiagnosed diabetes and 79 million are pre-diabetic, further reinforcing the importance of community-wide efforts to support healthy behaviors and disease prevention.

Nutrition is a bigger component to living a long and healthy life than many people realize. It is important that the contributing factors be addressed, and people become aware of what is needed to create healthier communities. Since nutrition plays a major role in obesity and disease, starting with a healthy diet can pave the way for better life style choices. A diet which focuses on consuming fewer calories, making informed food selections, and instilling those healthy habits in youth is important to improving the overall health of Americans.

In April of 2011, USDA unveiled the federal government's new food icon, *MyPlate*, to serve as a reminder to help consumers make healthier food choices. *MyPlate* is a new generation icon designed to prompt consumers to think about building a healthy plate at meal times. The new *MyPlate* icon emphasizes the fruit, vegetable, grains, protein, and dairy food groups. Additional information is available from www.ChooseMyPlate.gov.

Many factors have contributed to the current poor nutritional habits that have led to the obesity epidemic American adults and children currently face. Many of these factors have occurred over the long term, and have included such trends as increased access to fast foods, rising prices of fruits and vegetables, marketing of high sugar and high fat foods to children, and a widespread reduction in physical activity at all ages. Malnutrition and limited access to fresh healthy foods have contributed as well, and is a problem too for some Orange County residents. (The report's section on Hunger provides additional information on this issue.)

The availability and affordability of health foods is an issue, particularly for those with insufficient financial resources. There have been many efforts over the past few years to make healthy foods

more affordable for low-income individuals. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides supplemental foods to low-income women, infants, and children at nutritional risk. Since October 2009, WIC packages have included a fixed-value voucher for purchasing fruits and vegetables along with additional whole grain products and low fat dairy. It is possible for an adult to obtain a 2,000 calorie diet for $2 to $2.50 per day that meets the recommendations of the 2010 Dietary Guidelines for Americans for vegetable and fruit consumption.[23]

However, even those with adequate financial resources often fail to meet the recommended goals for consumption of fruits and vegetables. Fresh fruits and vegetables can be less appealing because they spoil more readily than other types of foods, and many vegetables require someone skilled to prepare and cook them in order to be consumed. In some rural communities, the availability of these foods is limited; these areas are sometimes referred to as "food deserts." For families in which parents work and children often have to cook for themselves, the task of increasing the consumption of vegetables becomes more of a challenge.

Although the WIC vouchers should help increase fruit and vegetable consumption for all WIC participants, regional price variations lead to different buying power—and nutritional benefits—across the country. Twenty of the most commonly purchased fruits and vegetables cost 30-70% more in the highest priced market areas than in the lowest, suggesting that WIC participants in more affluent regions might be able to purchase fewer fruits and vegetables than those living where these items are more affordable.[24,25] Gaps such as these are very important considerations when trying to create a healthier environment in communities.

Among school-age children, the choice of foods in school food programs, school cafeterias and vending machines have an effect on the type of foods eaten more often. The types of food offered to children in schools and the availability of soda and high-fat, high-sugar snacks in vending machines at schools are matters of concern.

Good nutrition begins in infancy. Research shows that there is a strong association between breastfeeding and the decreased incidence of overweight and obesity.[26] The duration of breastfeeding is inversely related to pediatric obesity. In Harder et al., the greater duration of breastfeeding the lower the odds of overweight.[27] The family and home environment also influence the types of foods children eat. Children often rely on their parents to shop for food and prepare meals, thus it is important for parents to model healthy behaviors and make an effort to purchase healthy foods and prepare meals at home rather than dining out. The media and the prevalence of fast food establishments also influence the types of foods people eat.

Nutritional health literacy also needs to be improved. Many adults indicate that they lack the knowledge about what food choices are healthy, as well as how much they should eat (portion control). In a 2006 study, it was found that patients demonstrated deficits in understanding nutrition labels, and that poor label comprehension was highly correlated with low-level literacy and numeracy skills. However, even those patients with higher literacy had difficulties interpreting labels. Over the past years, the US Food and Drug Administration has been promoting changes in order to make food labels more comprehensible in order to make following dietary recommendations easier for everyone.[28]

Another important consideration for achieving goals in nutrition relate to the increasingly sedentary lifestyles of Americans. Fast foods and office desk jobs are only a few examples of why snacking on convenient but unhealthy foods have been the norm of American society and one of the reasons for the unsettling rates of obesity. Luckily, over the past few years there has been a drive in commercial food advertising and sales to provide healthier foods. Schools have also begun working to try and provide healthier choices to children. Overall, these efforts are still in their infancy and there is much more to be done.

Keeping these barriers in mind, it is important to understand some of the USDA recommendations. The 2010 guidelines are that individuals should increase vegetable and fruit intake and eat a variety of vegetables, especially dark-green and red and orange vegetables and beans and peas. Currently, the USDA recommends five to 13 servings of fruits and vegetables (depending on age and activity level) to be consumed daily. However, the CDC's Behavioral Risk Factor Surveillance System surveys for 2009 show that North Carolinians continue to fall rather short of this recommendation.[29]

These recommendations need to be followed for several reasons. First, most vegetables and fruits contribute considerably to the quantity of nutrients that are under-consumed in the US, including folate, magnesium, potassium, dietary fiber, and vitamins A, C, and K. Second, their consumption may reduce the risk of many devastating chronic diseases. There is moderate evidence to suggest that intake of at least 2/2 cups of vegetables and fruits per day is correlated with a reduced risk of cardiovascular disease which is the leading cause of death in the United States [30]

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Increase the percentage of adults who report they consume fruits and vegetables five or more times per day.*	20.6% (2009)	29.3%

Secondary Data: Major Findings

According to Behavioral Risk Factor Surveillance Survey (BRFSS) data, the percentage of Orange County residents who consume five or more servings of fruits or vegetables per day decreased from 32.3% in 2005 to 23.5% in 2007, but then increased to 31.1% in 2009. Orange County has continued to surpass the state of North Carolina, which only had an average of 20.6% in 2009.[31] For the period 2005-2009, females, whites, persons older than 44 years who have some college education, and persons with incomes greater than $49,000 per year consistently consume more fruits and vegetables than other groups.

According to the 2009 Chapel Hill-Carrboro City Schools Youth Risk Behavior Survey (YRBS), 52.7% and 42% of middle and high school students respectively consumed fruit two or more times per day; and 26.5% of middle school students and 21.5% of high school students ate vegetables three or more servings per day.[32] Current dietary guidelines recommend that both children and adults should consume five or more servings of fruit and vegetables every day for good health.[33] The data collected by both the YRBS and the BRFSS suggest that few residents are eating the recommended amount of fruits and vegetables for a healthy diet. However, it is promising that Orange County residents are doing far better than other citizens of North Carolina in the consumption of fruits and vegetables.

The 2009 Chapel-Hill Carrboro City Schools YRBS examined student dietary behaviors related to the consumption of milk and breakfast daily. Results show that 33.3% of high school students drank two or more glasses of milk per day, but 73.9% had consumed soda in the last week.[34] Current recommendations are for children to drink three glasses of low-fat milk per day or to consume at least three sources of calcium-rich foods per day.[35] The data suggests that few children are drinking the recommended amount of milk per day. Furthermore, the YRBS data revealed that in 2009, 48.1% of high school students reported eating breakfast every day, compared with 58.3% in 2007. The corresponding figures for middle school students were 66.7% in 2009, versus 75.4% in 2007.[36] Continued advertising to minors and promotion of fast foods continues to encourage people to make unhealthy choices, with dire consequences.

The Affordable Care Act signed in 2010 will provide much-needed support and nutritional information to consumers. A provision in the Act requires calorie labeling on chain restaurant menus, menu boards and drive thru displays, as well as vending machines to better educate consumers about healthy choices and options. As stated by the Center for Science in the Public Interest nutrition policy director, Margo G. Wootan: "Congress is giving Americans easy access to the most critical piece of nutrition information they need when eating out. While it's a huge victory for consumers, it's just one of dozens of things we will need to do to reduce rates of obesity and diet-related disease in this country.[37]"

Primary Data: Residents' Concerns

Quantitative: Survey

Of those surveyed, 58% had less than one fast food meal or snack a week; 33% had fast food 1-3 times a week, and 8% had fast food four or more times a week.

Seventeen present of respondents have five or more servings of fruits and/or vegetables each day, 48% had 3-4 servings, 35% had two or fewer servings. These results were skewed by income—the lowest two income brackets were twice as likely to eat two or fewer servings a day; upper income bracket was twice as likely to eat more than 3 servings a day as those making under $25,000; and by race (People of Color were almost twice as likely to eat two or fewer servings as white people).

Of those who responded to the survey, 59% do not drink soda or sweet tea, 31% drink 1-2 glasses a day, and 9% drink three or more glasses a day.

Qualitative: Focus Groups

When discussing nutrition, many participants immediately jumped to the discussion of obesity. Others discussed nutrition as it related to their culture. Overall, most participants agreed that more education regarding healthy food options would be beneficial for all members of the community.

Current Initiatives and Activities

The Orange County Health Department offers nutrition counseling (Medical Nutrition Therapy) to help prevent or manage certain medical conditions. Patients meet with the Registered Dietitian to develop a personalized plan to help prevent or better manage medical conditions or simply to improve the way they feel. Medical Nutrition Therapy (or MNT) is available to all Orange County residents and Orange County Government employees (and their immediate family members). Fees are charged on a sliding scale ($15 minimum fee) and may be covered by insurance. The health

department currently accepts BCBSNC, Cigna, Medicare and Medicaid; other insurances may also cover MNT. Services are provided in both Hillsborough and Chapel Hill clinics.

The Healthy Carolinians of Orange County's Health Promotion Committee is working with Chapel Hill-Carrboro City Schools and the UNC Gillings School of Global Public Health to create technology-based SmartBoard nutrition lessons that correspond with NC's standard course of study for grades kindergarten through fifth grade.

Orange County Schools' New Hope Elementary was selected to participate in the US Department of Agriculture Fresh Fruits and Vegetables Program, which began September 2010. New Hope Elementary is the first school within the county to receive this grant. To qualify for the program, Elementary schools must have more than 50 percent of students participating in the free or reduced lunch program. The school received $31,194 for the year in federal funds for the program, which aims to introduce elementary school students to healthy foods by providing them with fresh produce daily. School staff hopes to foster healthy eating habits in the children and their families as well as address childhood obesity.

During the 2009-10 fiscal year, Orange County Partnership for Youth Children completed the second full implementation cycle of the Growing Healthy Kids Project. Across the three garden locations in Carrboro, the Project worked with children and their families to learn healthy eating through growing their own vegetables. The Orange County Cooperative Extension program provided leadership for developing the garden sites, and provided a part-time community garden coordinator. After completing the program, parents reported a significant increase in the number of fruits and vegetables available in their home.

The Orange County Partnership for Youth Children is a 2010 Refugee Agricultural Partnership Project (RAPP) recipient. The federal grant was open nationally to agencies both public and private, with funding going to 10 other projects throughout the United States. The Partnership was the only agency from North Carolina to receive money in this round of funding.

In 2011, the Orange County Health Department began a community garden revitalization project in partnership with NC Cooperative Extension Master Gardeners. The ultimate goals of the project are to 1) increase access to healthy foods in the historically lower-income community of Fairview in Hillsborough, NC; and 2) increase participation in a local community garden. In addition, the Orange County Health Department will create a social marketing campaign around the garden to encourage use. Through community gardening research the Orange County Health Department, in partnership with Healthy Carolinians of Orange County has established a communication and support network for community garden leaders, managers, and members in the Triangle region to learn from one another and leverage resources.

Through a grant from the US Office of Refugee Resettlement, the Partnership will be expanding its current Growing Healthy Kids community garden program to accommodate the growing refugee population in Orange County. The award is for three years, with $77,000 for the initial year of the project. The purpose of the RAPP project is to educate and enable refugee families, especially the Burmese and Karen, to create a sustainable, healthy food source as well as to develop English language skills and eventually supplemental income. Along with plots of land, families will receive training on a variety of topics, including farming in NC, marketing and business development.

The Hillsborough, Eno River, and Efland, and Carrboro Farmer's Markets (CFM) and NC Farm Fresh have increased in popularity, and are working to make local foods and fresh fruits and vegetables more available to the community.

The CFM strives to provide greater support for local farmers; and to increase awareness of the importance of sustainable agriculture and access to locally grown fresh fruits and vegetables in the local community. The Market has been a participating member of the Farmers' Market Nutrition Program's WIC since 2005 and the Senior program since 2009. These programs provide food vouchers to low-income Orange County residents, redeemable at local farmers' markets.

The CFM is also home to the Farmer FoodShare Program. Started in 2009 by farmers and volunteers, program provides fresh locally grown food to people at risk for hunger, while also supporting farmers and enhancing community economic development. The Farmer Foodshare programs act as a source of community innovation to incubate self-sustaining projects that address poverty, hunger and farm loss. FarmShare works with community partners to build an inclusive, economically viable and socially just local food system in North Carolina.

In its first year, the program raised over 10 tons of locally grown food for the food insecure in four counties. The Farmer FoodShare Program has now spread to over five area Markets in NC: Carrboro, Farrington, Foothills, South Estes and Western Wake Farmers Markets. As of September 2010, Farmer FoodShare has delivered 17 tons of top-quality farm food to over 16 nonprofit agencies in five NC counties (Chatham, Cleveland, Durham, Orange, and Wake). This includes several thousand pounds of food purchased, worth over $5,000. Currently, the CFM is supporting the Interfaith-Council for Social Service and Farmer FoodShare's "Farm Fresh for the Holidays" Campaign. The campaign is collecting and distributing fresh, locally grown food for holiday meals.

Starting in May 2010, the CFM began accepting Electronic Benefit Transfer (EBT)/Supplemental Nutrition Assistance Program (SNAP; food stamps), and Credit, and Debit cards. Through the Leaflight 21st Century Farmers' Market Program, RAFI-USA's Tobacco Reinvestment Grant, and support from many other community partners–such as UNC's Center for Health Promotion and Disease Prevention team, Orange County Department of Social Services, and The Splinter Group–the Market was able to provide extensive marketing and outreach to the Orange County community. Marketing efforts sought to increase awareness of EBT use at the CFM, since research shows that not being able to use EBT is a primary deterrent to shopping at farmers' markets.[38]

"Market Match" program incentives also helped draw in new customers by giving an additional $20 of free Market money for any EBT shopper that spent $20 of the benefits at the Market. The Market has now expanded Match to include additional funds for first time EBT shoppers that bring a friend to the Market. Bus advertisements, radio interviews, Spanish/English translated materials, flyers, events, and other activities targeted new community members to shop at the Market.

Use of EBT/SNAP benefits at the CFM grows steadily with available Match incentives. The number of unique SNAP customers increased by over 22% in the 2nd month and SNAP recipients came to the CFM more often than credit customers (1.6 versus 1.3 times per month). One out of five customers that use their card at the Market is a SNAP participant. The goal is to continue increasing new EBT/SNAP customer attendance and familiarity with the Market in 2011, through more outreach, on-site programming, and a greater number of bilingual program materials. The program faces the

challenge of funding staff positions; so much of the program's future growth will be dependent on volunteers.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

According to the 2009 YRBS, there are still many disparities between racial groups in relation to the consumption of healthy foods. Eating two or more servings of fruit each day and drinking soda was significantly less likely for African Americans, while eating three or more servings of vegetables each day was significantly more likely for Asian students. Drinking soda over the past weeks was significantly more likely for high school-aged African Americans and Hispanics. Drinking two or more glasses of milk was significantly more likely for white students and significantly less likely for African-American and Hispanic students.[39]

Overall, the data show that Hispanics and African Americans do far worse at achieving the recommended levels of healthy food consumption; and middle school students consistently outperform high school students in most of these categories (the exception is that middle school students consume more soda per week). Access to healthy foods, such as fresh fruits and vegetables, continues to be a challenge for low income families. As mentioned earlier, many live in "food deserts." In 2009, WIC implemented the first change to the WIC food package in 30 years, offering participants the ability to purchase fruits and vegetables and many more high-fiber options.

A pilot program running in seven NC counties during the spring and summer of 2011 has linked three USDA-affiliated food assistance programs for senior citizens, WIC clients, and Food and Nutrition Services (FNA/food stamps) participants to encourage and enable them to use any of their benefits at participating farmers markets. The Carrboro Farmers' Market in Orange County was one of the participating markets. The pilot project will be evaluated for future expansion at the end of the 2011 season.

With introduction of the new USDA *My Plate* website and resource, a more systematic and pragmatic approach is being adopted towards improving nutritional outcomes. The focus is moving away from numbers and restrictions on what to eat to more emphasis on providing healthy options and exercising personal choice. As the population continues to increase in weight, more and more young people are becoming diabetic earlier, significantly reducing their quality of life and expected lifespan. According to former Surgeon General Richard Carmona, today's youth may be the first generation of children that will have a shorter life expectancy than their parents.

The 2010 NC Institute of Medicine Prevention Action Plan recommends strategies for improving nutritional outcomes at the individual, community, school, employer, and policy levels.[40] These recommendations are worth following, and are listed below.

Individual Level: *Eating Smart*

- Good nutrition is essential to good health and can be done by choosing more fruits and vegetables, increasing high fiber foods, choosing lean proteins and low fat dairy. A good diet can protect one from heart disease, high blood pressure, and type 2 diabetes and improve one's total quality of life.
- Choosing nutritional dense foods rather than high sugar, high foods that are calorically dense, but nutritionally void and help to maintain weight and improve health indicators.

- Cooking at home instead of eating out, filling the plate with more fruits and vegetables and drinking plenty of water in place of soda, sweet tea or other sweeten beverages can help to reduce calories consumed and increase intake of essential vitamins and minerals.
- Talk with a health care provider or dietitian for more assistance. Visit http://www.myeatsmartmovemore.com or http://www.letsmove.gov for more ideas and suggestions. To find an RD, go to www.eatright.org and click on "Find a Registered Dietitian."

Community Level: *Encourage all residents to eat smart and move more.*

- Encourage and support local school boards and schools to serve only healthy foods and beverages and to implement quality physical education programs.
- Work with faith based organizations to provide information and support to members to improve health and in the consumption of health foods.
- Encourage child care centers and after-school programs to incorporate healthy eating and physical activity into their practices and support breastfeeding.
- Build active communities by making sidewalks, greenways, and biking and hiking trails safe and easy to use. Create joint-use agreements between school recreational facilities and parks to provide all community members with more places to be active.
- Develop and implement an evidence-based obesity prevention plan.

School Level: *Help students eat smart and move more.*

- Implement healthy child nutrition standards in all elementary, middle, and high schools, and cafeteria, all vending machines, and school stores.
- Ensure students receive high-quality physical education.
- Create joint-use agreements between school recreational facilities and parks to provide all community members with more places to be active. Encourage and facilitate walking and biking to school using the Safe Routes to School program.

Employers: *Promote good nutrition.*

- Promote healthy foods and drinks in cafeterias, break rooms, and vending machines at all times.
- Ensure healthy foods are visible and accessible to everyone.
- Post nutrition information at point-of-selection and use icons to identify healthy items.
- Modify and/or establish vendor contracts to bring in healthy foods and beverages.
- Regularly host a farmers' market or provide a farm stand.

Policy: *National Menu Labeling*

- Ensuring that all chain restaurants are complying with the national menu labeling provision by reinforcing calorie labeling on chain restaurant menus, menu boards, drive through displays, and vending machines. This includes chains with 20 or more outlets.
- Encouraging the food market to provide more healthy food options for customers. All of these food options and locations should take into account cultural shopping preferences (e.g., tiendas, Asian markets, etc.) and linguistic needs around labeling.

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Section 6.06 Mental Health, Substance Use and Abuse, and Tobacco

6.06.a Mental Health and Substance Use

Impact on Health and Contributing Factors

Mental illness refers to a wide range of mental health conditions that affect one's mood, thinking, and behavior. Broad classes of mental illness include mood disorders (depression, bipolar disorder), anxiety disorders, psychotic disorders (schizophrenia), eating disorders, personality adaptations or disorders, and addictive behaviors/substance abuse disorders. Experts at the Mayo Clinics suggest that a variety of genetic and environmental factors may contribute to the onset of illness including inherited traits, biological factors, life experiences, and brain chemistry.[1] The Mental Health Chapter in the 2007 Orange County Health Assessment also highlights stress as a significant factor. "Stress contributes to the likelihood of the emergence of mental health disorders, and poverty and violence are both sources of stress. The interplay of poverty and mental illness frequently leads to a self-reinforcing negative spiral."[2]

Mental disorders and substance abuse disorders may be caused by a combination of these factors, complicating efforts to understand how to prevent them. If these conditions go undiagnosed or untreated, they can have serious consequences leading to disrupted daily functioning, failure in school, unemployment, disability, social isolation, family conflicts, addiction, or suicide.

Many studies have shown that adults with a mental illness are much more prone to having multiple medical disorders than adults without a mental illness. For instance, individuals with schizophrenia tend to live significantly shorter lives than their non-mentally-ill peers on average; older studies estimate a 20% shorter lifespan, and newer data suggests 30-40% reduction in potential life-years, with only 30-40% of that reduction attributable to suicide and injury.[3] Furthermore, those with both a mental illness and a substance abuse disorder were even more vulnerable to medical problems.[4]

The National Survey on Drug Use and Health measures symptoms and behaviors in individuals to produce an estimate of illness, its impact, and implications for policy and treatment. In 2008 the survey divided the mental health population into two categories of severity for the first time, AMI (any mental illness) and SMI (severe mental illness), depending on the degree of impairment the disability caused. This study estimated that in 2008, 19.5 % of all U.S. adults experienced mental illness (AMI), and 4.4% dealt with severe mental illness (SMI). In 2008, an estimated 8.3 million adults (3.7%) had serious thoughts of suicide in the past year. The rate was 3.9% among women and 3.4% among men. The rate was highest among young adults aged 18 to 25 (6.7%) compared with adults 26 to 49 (3.9%) and adults aged 50 or older (2.3%).

Among adults aged 18 or older in 2008, 2.3 million (1.0%) made suicide plans in the past year, and 1.1 million (0.5%) reported attempting suicide. As a result of a suicide attempt in the past year, 0.5 million adults reported staying overnight in a hospital.[5]

In an article titled "Assessing the Economic Costs of Serious Mental Illness" in the Journal of *Psychiatry*, Dr. Thomas Insel estimated that serious mental illness is associated with an annual loss of earnings totaling $193.2 billion in the U.S. He further states that healthcare expenditures on mental illness account for 6.2% of the nation's spending on total health care.[6] These figures, while probably conservative, show the alarming burden mental illness can have on society as a whole. In 2008, an estimated 22.2 million persons (8.9% of the population aged 12 or older) were classified with

substance dependence or abuse in the past year based on criteria specified in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV). Of these, 3.1 million were classified with dependence on or abuse of both alcohol and illicit drugs, 3.9 million were dependent on or abused illicit drugs but not alcohol, and 15.2 million were dependent on or abused alcohol but not illicit drugs.[7]

Addiction is a chronic, relapsing disease that follows a predictable and progressive course that may result in death if left untreated. Treatment of substance abuse disorders costs Medicaid hundreds of millions of dollars annually in medical care, suggesting that early interventions for substance abuse could enhance positive treatment outcomes and save considerable amounts of money.[8]

If symptoms are recognized and treated early, many of the distressing and disabling effects of a mental illness and substance dependence may be prevented or minimized. Prevention efforts need to be focused on identifying stressors, establishing screening processes for high risk and early onset of problems, and increasing knowledge on how to access early intervention and crisis services.

Healthy NC 2020 Objectives

Objective	Current (NC)	2020 Target
Reduce the suicide rate (per 100,000 population)	12.4 (2008)	8.3
Decrease the average number of poor mental health days among adults in the past 30 days	3.4 (2008)	2.8
Reduce the rate of mental health-related visits to emergency departments (per 10,000 population)	92.0 (2008)	82.8
Reduce the percentage of high school students who had alcohol on one or more of the past 30 days. *	35.0% (2009)	26.4%
Reduce the percentage of traffic crashes that are alcohol-related.	5.7% (2008)	4.7%
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%

Secondary Data: Major Findings

Mental Health

In North Carolina, the rate of suicides has remained relatively constant over the period of 2000-2009 with a rate ranging from a low of 11.6/100,000 to a high of 13.2/100,000. The suicide rate in Orange County, however, has seemed to fluctuate without any set trend between this same time period, ranging from a low of 5.8/100,000 (population: 117,883) to a high of 18.5/100,000 (population: 116,049).[9]

One way of measuring poor mental health days is to look at presence of stress and lack of emotional support. In Orange County, emotional support has been captured through a BRFSS survey question between the years 2005-2009. The question asked was, "How often do you get the social and emotional support you need?" While the responses varied, nearly two-thirds of the respondents stated that they had either "Always" or "Usually" received the social and emotional support they needed. However, there has been a decrease in those that have answered "Always" from a high of 53.9 in 2006 to a 5-year low 44.3% in 2009.[10]

As is true for any subjective self-report breakdown by demographic, equivalent percentages (e.g. comparable stress by race scores) do not necessarily compare, in that different groups may have different norms of reporting (under and over reporting) and another group may score very differently with the same characteristics (in this case, stressors). However, given "perceived stress" is still a health indicator, these scores may have relevance for the individual demographics, but are most likely not useful for comparisons (saying this group or that group has more stress than another, for instance).

According to the most recent data available on hospitals in North Carolina, over 10% of visits to the Emergency Department (ED) involved people with primary or co-morbid diagnoses of mental illness or substance use or abuse, over a quarter of which reported those issues to be the primary cause of the visit.[11]

UNC's Crisis and Emergency Services provide the ED services in Orange County. Not all of their admissions are from Orange County, however. In 2010, the ED had between 5,000 and 5,800 ED arrivals per month, of which between 11% and 16% (approximately 600 and 900 respectively) were psychiatric patients.[12] Numbers for 2011 seem to be elevated slightly, but more significantly, the time that psychiatric patients spend waiting in the ED for discharge, transfer, or admission is increasing both around the state, and at UNC.[13]

Substance Abuse

Results from the CDC's 2009 Youth Risk Behavior Surveillance System found that compared to the United States, North Carolina has a lower number of high school students who had alcohol on one or more of the past days.[14] The UNC Highway Safety Research Center, however, mentions a study that found the percent to be higher than the national average at 43%.[15]

Though there is no comprehensive dataset on alcohol use by high school students in Orange County, small-sample data is available. The 2011 SmartTrack *Communities That Care Survey* (N=160) assessed 10th graders in Orange County High Schools. When asked what their use was in the past 30 days, 20% reported some beer drinking, 25% reported drinking other alcohol, and 20% reported marijuana use. More than 25% of 10th graders reported that they had one or more beers in the past three months, while 36% reported drinking other alcohol during the same time period.[16]

Another *Communities That Care* survey administered by Orange County Schools in spring 2008 included 957 middle school students and 333 high school students in northern Orange County who were demographically representative of the district as a whole. Sixteen percent of middle school students and 32% of high school students reported alcohol use within the past 30 days. High school students reported being thirteen years old on average when they first used alcohol.[17]

Access is a significant factor contributing to underage drinking. Seventy-four percent of 10th graders in the 2008 *Communities That Care* study in Orange County schools reported that alcohol in any form was available to them with some frequency, and 40% said that it was available frequently or always.[18] Age of first use and regular use resulting from that access are important corollaries to consider, as early adopters are prone to addiction as adults at higher rates than those who begin using as older adolescents or adults.[19]

As of 2009, North Carolina ranked 10th highest in the nation in the percentage of driving under the influence (DUI) related deaths.[20] According to the UNC Highway Safety Research Center, totals for alcohol-related car crashes in North Carolina over the past decade have ranged from a low of 4.7% to a high of 6.5%.[21] The Healthy NC 2020 target objective of 4.7% would return the state to its ten-year low, set in 2003. The data (see Tables below) show that Orange County fits well within the range of NC statistics; hence, this state goal is still relevant for the county.

Table 39: Percent Alcohol Related Car Crashes in North Carolina 2000-2009[22]

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Non-Fatal Crashes	8.4%	8.9%	8.1%	6.9%	7.5%	7.8%	7.7%	8.1%	8.6%	8.3%
Fatal Crashes	30.5%	24.5%	24.5%	24.5%	25.6%	26.8%	25.2%	29.2%	30%	29.4%
Total Crashes	6.1%	6.5%	5.5%	4.7%	5.0%	5.1%	5.2%	5.4%	5.7%	5.5%

Table 40: Percent Alcohol Related Car Crashes in Orange County, 2000-2009[23]

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Non-Fatal Crashes	6.8%	8.1%	9.3%	7.2%	8.0%	8.9%	7.8%	11.2%	9.9%	9.9%
Fatal Crashes (#)	35.2%	29.2%	6.7% (1)	23.1%	6.7% (1)	18.8%	53.3% (8)	9.1%	10.5%	21.4%
Total Crashes	4.9%	6.0%	5.2%	4.6%	5.0%	5.5%	4.3%	5.5%	5.9%	5.1%

In 2007-2008, 8.0% of the US population aged 12 or older had used an illicit drug in the past month, and the percentage was similar in 2006-2007 (8.1%). In 2007-2008, estimates of past month use of illicit drugs ranged from a low of 4.1% in Iowa to a high of 13.3% in Rhode Island for persons aged 12 or older. Five states showed significant changes from 2006-2007 to 2007-2008 in the percentage of persons aged 12 or older who used an illicit drug in the past month. Iowa, Louisiana, and Wyoming all had decreases, while North Carolina, Hawaii and Oregon all had increases.[24]

According to the US Department of Health and Human Service's Substance Abuse and Mental Health Service's Administration (SAMHSA), the percentage of individuals aged 12 years and older who report any illicit drug use in the past 30 days has increased in North Carolina from 7.2% between 2006-2007 to 7.8% between 2007-2008. This is higher than the 2020 target of 6.6%. For comparison, the national numbers have decreased in these same reporting periods from 8.1% to 8.0%.[25]

In 2009, similar to the nation as a whole, alcohol is the most frequently used substance in rural Orange County, with 16% and 32% of middle and high school students reporting its use within the past 30 days, respectively. Also similar to the nation as a whole, marijuana use is of increasing concern in rural Orange County; and at the high school level has surpassed cigarette smoking as the second most frequently used substance. As expected, illicit drug use, with the exception of marijuana, was infrequent at both school levels."[26]

According to the North Carolina Harm Reduction Coalition (NCHRC), an agency that works with drug users In Orange County, North Carolina has around 50,000 injection drug users (IDUs). IDUs get exposed to HIV, Hepatitis, STIs, and risk drug overdose when they share their drug paraphernalia and syringes. This not only reduces their health status, but leads to costs to society.

Also, police, children, and public workers sometimes get accidental needlesticks from IDUs and syringes abandoned in the public domain. One in three police officers in North Carolina gets a needlestick; 28% get multiple sticks. Moreover, North Carolina's fourth leading cause of death for

18-50 year olds is drug overdose; and there are approximately 1000 fatal drug overdoses in the state each year. Over 175,000 active crack users reside in NC. [27]

These statistics show the need for prevention measures to reduce the rates of illicit drug use and substance use in North Carolina and Orange County. By increasing education regarding the dangers of disease transmission via drug use, rates of HIV and Hepatitis C can be reduced. Similarly, educating younger populations about the risks of illicit drug use may help to prevent increasing prevalence rates among Orange County's youth.

Primary Data: Residents' Concerns

Quantitative: Survey

In the Community Health Assessment Survey, 18% of the survey respondents reported that they smoked or used tobacco. About 26% of those surveyed agreed that substance abuse (drugs and alcohol) is a problem in Orange County, 54% disagreed, and 20% strongly disagreed.

In addition, about 56% of those surveyed agreed that lack of mental health and substance abuse resources is a problem in Orange County, 26% disagreed, and 19% strongly disagree. About 4% of those surveyed had problems getting the mental health or substance abuse services they needed during the past 12 months. Of the 4% that had problems getting care, barriers described were that they did not have health insurance, could not afford the costs or said the deductible/co-pay was too high, had insurance that did not cover what they needed, or did not know where to go.

Of those surveyed, 52% always got the social and emotional support they needed, 24% usually got support, 10% sometimes, 12% rarely, and 2% never got the support they needed. This was not skewed by age, gender or race, but was different by income bracket—those making less than $25,000 reported higher scores for never or rarely getting support than the other income brackets (e.g. 31% rarely vs. 3%/16% for $25,000-50,000 annual income, and 0%/7% for those with income above $50,000). People of Color were 10% more likely to only rarely get the support they needed, and 10% less likely to always or usually get the support they needed, than white people.

Thirty-eight percent of those surveyed self-reported high day-to-day levels of stress, 48% reported moderate day-to-day-stress, and reported 13% low stress.

Overall, the youth school survey data was consistent between the southern and rural/northern areas of the county, across both school districts, with the following common themes:

- Alcohol and marijuana are the substances used most often among high school students, followed by tobacco. Prescription drug abuse was portrayed as much less common but like alcohol, tobacco, and marijuana, prescription pills were described as easy to obtain. (Substance use is very low among middle school students although they are very aware of the issue and believe it is very prevalent in high school.)
- Youth are very aware of the potential *extreme* negative consequences of alcohol such as drinking and driving, violence, addiction, Black outs and alcohol poisoning. Despite this, alcohol use is often seen as "not a big deal" and a way to deal with stress and connect with others.
- Alcohol is very easy to obtain, the most common sources being parents, older friends, or older siblings. Shoulder tapping (asking a stranger to buy alcohol for them) and gas stations were also mentioned, but seem to be less common sources. Multiple participants across focus groups stated that "weed" or marijuana is even easier to obtain than alcohol and is often sold and used at school.

- Alcohol use is easy to conceal from parents, most of whom do not know about their child's alcohol use or are not concerned about moderate use as long as they are in a "safe" place.
- The most common location for alcohol use is at a peer's home when parents are away or not monitoring their teenager's activities, with larger parties becoming more common among upperclassmen. Some participants also mentioned specific locations such as wooded areas, parking lots, and neighborhood parks.

Qualitative: Focus Groups

Across all focus groups, mental health was highlighted as an issue that needs attention in Orange County. Many participants spoke of homelessness that disproportionately affects those living with mental health issues. Participants spoke of barriers to mental health services, such as a lack of insurance, and how the issue affects entire communities and neighborhoods. One participant said:

> *For mental health, there's a lot of adults out there not getting treated. And, having a lot of untreated adults can make neighborhoods not safe, can make kids not safe, can make situations not safe for everybody. And you know, a lot of adults don't have insurance, don't have the ability to do that, so they're going untreated and doing the best that they can but in some instances they can't always function the way we want them to function so it makes it difficult on everyone."*

One participant believes that, *"if you have a mental health issue, you got to go crazy before you get help. If you are trying to get help before you get to the crazy, you can forget it. You have to be crazy.*"

This quote speaks to the idea that in Orange County residents have to be at an extreme or in crisis mode before they can receive help. This may mean that those who are living with mild to moderate mental illness may not be able to get help needed.

Many participants recognized the quality of the mental health care that is available in the county, with one member of the focus group pointing out the Club Nova program in particular, saying:

> *Them doors have been open and it's kept me out of the cold. It's connected me with people who have given me directions and shown me love, shown me how to be patient when things aren't going well. Sometimes when a crisis comes about, the first thing I would do is, I would try to go back to my old ways. But she told me, "just let the storm…the storm is going to be there, but just go through the storm, Just hold on" and connecting me with different organizations. All the people who have been there, and seeing people with other mental illness that I see every day, and we may not be the same people but we in the same group. And me seeing them helped me and that means a lot to me*.

Participants of the focus group acknowledged an increase in treatment options, including services for dual diagnosis and more crisis centers. The mental health services currently being provided are excellent; the challenge is accessing the care, finding stable housing, and being linked in to a network of services.

Substance abuse was also highlighted by a majority of focus groups as a dominant concern for Orange County. As discussed earlier in the crime and safety section, some participants were

concerned about the drug trade happening on the streets of Chapel Hill and the violence it has the potential to create.

Others worry about the lack of treatment options available to those battling substance abuse issues, with one person saying: "*I don't think there's enough treatment* [options] *for people that want to try to not have to be in a rehab facility for addiction*." Similarly, many participants expressed the difficulty of being in detox facilities that take people away from their homes, families, and jobs. One person commented:

> *I know an addict who has a job that would love to have the treatment but if he goes into treatment he's going to lose his job. And not having the insurance he's not going to get up to a three day detox any way. He does three days. It's the 4th day that's the problem. The 4th day may be the pay day or whatever. There has to be something built, basically on that intensive in home model that can be used for adult addicts that would give them the support like it does with the families of having the mentally ill children, but at the same time they could still work, because we're in a community that you have to have a certain level of income in order to be able to function, so if you have the intensive care like that they could still work.*

This issue of losing employment due to detox options helps explain the relationship between substance abuse, unemployment, and homelessness, and offers a place to begin mitigating this cycle. Programs such as 12 Step meetings appear to be readily available and a positive characteristic of Orange County. One participant said: "*For the adults, there are AA meetings every day of the week and several times of day over at the BPW, and I think that's very good."* These services are a positive step in the direction of addressing the cycle discussed above.

As part of the Community Health Assessment process, youth focus groups were held at Chapel Hill, East Chapel Hill, and Carrboro High Schools on the topic of alcohol and substance use. The information gathered at these sessions was compared to data collected at similar youth focus groups in Hillsborough and northern Orange County in the spring of 2010. In 2010, students in the Chapel Hill-Carrboro City Schools (CHCCS) focus groups were all high school-aged, 14-16 years old. While student participating in the Orange County Schools (OCS) focus groups included middle school-aged youth, a majority of which were eighth or ninth graders. The majority of high school students were white, however, Black, Hispanic/Latino, American Indian, Asian, and multi-racial students were also represented.

By and large, these students reported that their parents "sometimes" talked with them about staying away from alcohol, not getting drunk, and not using prescription drugs intended for others. Youth were less likely to report parental communication about staying away from prescription drugs than they were to report parental communication about staying away from alcohol and not getting drunk. All youth believed that students would get into a lot of trouble if they were caught with alcohol or prescription drugs not intended for them at school or a school event, but they felt it was only not much or somewhat likely that they would be caught.

A sizable minority of Orange County Schools high school students had drank alcohol in the past year (47.1%); while more than half of Chapel Hill-Carrboro City Schools high school students had drank alcohol in the past year (56%). Students were much less likely to report getting drunk (23.5% and 39%, for OCS and CHCCS high school students, respectively), than they were to have reported

drinking alcohol. Recreational prescription drug use was relatively uncommon, with only three high school students reporting use in the past year. No CHCCS students reported having taken prescription drugs not prescribed to them by their doctor.

Current Initiatives and Activities

OPC Area Program is the local management entity that oversees publicly-funded mental health, developmental disability, and substance abuse services (MH/DD/SAS). OPC's most recent needs assessment may be accessed at www.opcareaprogram.com. The Quality Management Team at North Carolina DMH/DD/SAS tracks effectiveness of community systems; this data is referred to as Progress Indicator data (www.ncdhhs.gov/mhddsas/statspublications/reports). Because OPC serves Orange, Person and Chatham counties, the Progress Indicator data reported below covers all three counties.

Progress Indicator data from the 2nd quarter of fiscal year 2010-2011 (the most recent available) shows mixed results with regard to NC DMH/DD/SAS performance standards. The Table below selects the indicators pertinent to adult and child/adolescent mental health (AMH and CMH) and adult and child/adolescent substance abuse (ASA and CSA).

Table 41: Progress Indicators for Adult and Child/Adolescent Mental Health and Substance Abuse, OPC Services to Persons in Need

	State Average	OPC 2nd Quarter FY 2010-11	Performance Standard	SFY 2011 Goal
AMH Penetration	51%	35%	37%	40%
CMH Penetration	55%	53%	40%	40%
ASA Penetration	11%	9%	8%	10%
CSA Penetration	9%	17%	6%	9%

OPC's penetration rate (rate of providing services to persons in need) for child and adolescent substance abuse continues to be the highest in the state, and reflects a significant increase since the initiation of the Progress Indicator reports. OPC's penetration rate for adult substance abuse continues to rise, and met the performance standard for the third consecutive quarter. OPC also exceeds the state performance standard in provision of services to persons in need for child mental health. While the adult mental health penetration rate also continues to rise, it still remains below the state's performance standard of 37%.

In this context, it should be noted that Orange County has been rated second in the state for lowest number of uninsured;[28] and that Progress Indicator reports do not reflect the high percentage of privately insured individuals in the OPC catchment area whose services are not reflected in the data. Furthermore, Progress Indicator data do not include individuals receiving services paid for by non-Unit Cost Reimbursement (non-UCR) funds, including grant-funded substance abuse services. While OPC's provider network includes sufficient providers for these disability and age groups (see Provider Sufficiency, OPC Area Program Community Needs Assessment March 2008), OPC continues to track service rates and consider strategies to improve them.

The Timely Initiation measure for substance abuse has continued to rise, and is the second highest in the state. OPC's performance on this measure (two visits within 14 days) reflects especially well

on local providers of publicly-funded services because it means that they are keeping consumers engaged.

Orange County has one of the best maternal substance abuse treatment programs in the nation. UNC Horizons is a residential treatment program based in the Department of Obstetrics and Gynecology at the University of North Carolina at Chapel Hill. Horizons services may be accessed through a health provider, the Orange County Health Department, Orange County Social Services, or the judicial system.

The OPC Area Program, in collaboration with Chapel Hill Police Department Crisis Unit, Freedom House Recovery Center, and partnering advocacy organizations launched Crisis Intervention Team (CIT) training for local law enforcement with a community informational meeting in August 2009. Every law enforcement agency in Orange County—the police departments of Chapel Hill, Carrboro, Hillsborough; the Orange County Sheriff's Office; and the public safety departments of UNC-CH and Durham Tech is currently participating in CIT implementation.

CIT is a pre-booking jail diversion program designed to improve the outcomes of police interactions with people with mental illness, developmental disabilities, and/or substance abuse disorders. A major goal is to keep persons with serious mental illness out of the criminal justice system for misdemeanor charges. The CIT Program represents a formalized partnership among mental health/developmental disability/substance abuse, consumer advocacy, and law enforcement agencies.

The Mental Health Association in Orange County (now Mental Health America of the Triangle) in collaboration with Healthy Carolinians of Orange County and OPC Area Program, the primary funder, launched The Pro Bono Counseling Network (PBCN) in January 2009. PBCN matches uninsured clients who do not qualify for publicly-funded services and underinsured clients with no other means of receiving mental health services with a counselor who provides at least eight pro bono counseling sessions.

MHA of the Triangle has strengthened and expanded its Compeer Program, which matches caring, qualified, and trained volunteers with adults and children in need of supportive friendships for the purpose of reducing the stigma associated with mental illness and improving the quality of life for persons served. Compeer hired a dedicated, part-time coordinator in 2010.

Triumph Academy provides day treatment programs for middle school students in both Orange County school districts (Orange County Schools and Chapel Hill Carrboro City Schools) Triumph, LLC, both school districts and OPC Area Program collaborated to launch Triumph Academy in 2010.

El Futuro, is North Carolina's non-profit resource for Latino mental health and substance abuse treatment services, with offices in Carrboro and neighboring cities of Durham and Siler City.

Other recent initiatives related to mental health include the following:

- OPC Area Program provided funding to increase short-term school-based mental health treatment in both Orange County school districts.

- Horizons opened Daybreak, a perinatal residential substance abuse treatment program in Chapel Hill, and began providing Substance Abuse Comprehensive Outpatient Treatment (SACOT), a higher level of care than they had been providing previously.

- Freedom House Recovery Center opened a state of the art Facility Based Crisis unit. Mobile Crisis, Walk-in and Facility Based Crisis services are provided or operate out of this location at New Stateside Drive in Chapel Hill 24 hours a day, seven days a week, 365 days a year. Over the past three years these critical services have become firmly established, and are utilized by a wide variety of constituents (consumers and families, law enforcement, schools, etc.).

- Reclaiming Futures, a national program to screen all adolescents involved in the juvenile justice system for mental health and substance abuse needs with referral to evidence-based treatment, was implemented through a partnership between Mental Health America of the Triangle, the Department of Juvenile Justice and OPC Area Program with funding from Kate B. Reynolds Charitable Trust and the Robert Woods Johnson Foundation in 2009.

- The Orange Partnership for Drug and Alcohol Free Youth (OP) was created in 2010 through a partnership between Healthy Carolinians of Orange County and Mental Health America of the Triangle. In 2011, the OP was awarded a five-year, federal *Drug Free Communities* grant for $625,000 to support evidence-based public health strategies to foster a community environment where young people can have safe, healthy, and productive lives free from alcohol and drugs. NOP focuses on the northern and rural parts of the county served by the Orange County School district.

- The Coalition for Alcohol and Drug Free Teens in Chapel Hill and Carrboro is an alliance of organizations, individuals and other stakeholders who work collaboratively to prevent underage drinking and teen drug use by advancing education, strategic enforcement and effective policies and initiatives. This coalition's focus is on the Chapel Hill-Carrboro City School district.

- The UNC Center for Excellence in Community Mental Health was established in 2008. Services historically provided by the Schizophrenia Treatment and Evaluation Program (STEP) for people with schizophrenia and other severe and persistent mental illness were expanded with the creation of the STEP Community Mental Health Clinic in 2009, and a new partnership with XDS in March of 2011. Piedmont Community Clinic is piloting a project with UNC CECMH's XDS to integrate behavioral health into their primary healthcare services.

- OPC Area Program continues their Refugee Mental Health Project, piloted in 2009, which co-locates culturally competent behavioral health services at Piedmont Community Clinic, the primary provider of health services for the local refugee population, one evening each week. The project also includes fall and spring art therapy groups for women in the community and appropriate training in cultural competency for local providers including all crisis services providers.

- The NC Art Therapy Institute continued to provide services for school aged refugee children, in partnership with the Chapel Hill-Carrboro City Schools, and provided a community-based women's fabric art therapy group for refugees from Burma.

- OPC continues to offer training series to increase use of evidence-based practices. The fourth cohort of therapists is beginning a year-long training program on Trauma-Focused Cognitive Behavioral Therapy. Other training programs include Seeking Safety and Structured Psychotherapy for Adolescents Responding to Chronic Stress.

- In 2011 OPC graduated their first class of Peer Support Specialists, people with mental illness who are trained to work as professionals for local providers to assist others in mental health recovery.

- OPC Area Program continues to work with providers to increase the quality of community based interventions to reduce the use of less effective residential care.

- KidSCope has trained therapists in the evidenced-based models of Parent Child Interaction Therapy and Child Parent Psychotherapy for children under five.

- Faith Connections on Mental Health, an interfaith coalition, was formed in January 2008 to offer education, advocacy and support within the faith community and has offered three well-attended programs focused on the role of faith communities in helping persons with mental illness or substance abuse obtain support.

- UNC School of Social Work faculty member Jodi Flick established the Survivors of Suicide Loss Support Group in January 2009. The group met monthly at the United Church of Chapel Hill until June 2011, when they began to offer meetings twice a month.

This list below provides a sample of agencies working on Mental Health and Substance Abuse issues in the area. For more comprehensive listings of service providers, explore these resources:

- OPC Area Program at 919-913-4000 or www.opcareaprogram.com for the list of agencies that provide services in the Orange county area,
- Healthy Carolinians of Orange County/MHA of the Triangle's Directory of Mental Health Services http://mhatriangle.org/information-treatment-support/treatment/
- NC's Division of MH/DD/SA Services website for a list of the approved Comprehensive Area Behavioral Healthcare Agencies (CABHAs), http://www.ncdhhs.gov/mhddsas/cabha/cabha_certificationlist_06-03-11.pdf.

Additional local organizations working on Mental Health and Substance Abuse issues are as follows. An alphabetical listing with more details is included in the Appendix.

- Alcoholics Anonymous, Narcotics Anonymous, and Smart Recovery
- Carolina Outreach, LLC
- Chapel Hill Carrboro City Schools
- Chapel Hill Survivors of Suicide Loss Support Group
- Club Nova
- El Futuro
- Freedom House Recovery Center
- Listing of Oxford Houses by county
- Lutheran Family Services
- National Alliance on Mental Illness-Orange County (NAMI-OC)

- Orange County Schools
- Drug Treatment Court or Community Resource Court (Mental Health Court)
- The Caramore Community, Inc.
- UNC Center for Excellence in Community Mental Health
- UNC Department of Psychology Community Clinics
- UNC Emergency Psychiatry Service
- UNC Healthcare's Alcohol and Substance Abuse Treatment Program (ASAP)
- UNC Hospitals Department of Psychiatry Walk-in Clinic
- NC ALLIES (A Local Link to Improve Effective Services)

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Mental health and substance abuse (MH/SA) are significant issues in Orange County, based on feedback at the community forums, surveys, and focus groups. Residents reported moderate to high levels of day-to-day stress (86%), a belief that substance abuse is a problem in the county (26%), and county data shows that suicide has emerged as one of the top ten causes of death in the county since the last Community Health Assessment report in 2007.

The survey data and other secondary data explored during the County Health Assessment process have presented some inconsistencies. According to the survey data, 56% of respondents believe that lack of MH/SA resources in the county is a problem, but only 4% who needed services reported having trouble accessing them when needed. OPC LME, the local mental health entity, reports high rates of insured persons in the county, and reports meeting the state goals for serving individuals in need in a timely fashion in all but one area, based on state Progress Indicator data. However, a small percentage of people surveyed through the CHA either do not know about county services, or feel they cannot access them due to stigma, lack of adequate insurance or funds for co-pays, lack of knowledge, or other barriers. Efforts to inform the public about existing services, like the Mental Health Directory maintained by Healthy Carolinians of Orange County partner Mental Health America of the Triangle, need to continue and grow.

Disparities in what kind of insurance a person has, and what it covers, may have even more of an effect on access to care than income, as people with low income may have good coverage through Medicaid. People in the middle income bracket reported slightly more difficulty accessing services for MH/SA needs than individuals with either higher or lower income. For this reason, changes in health care coverage that will emerge over the next decade will be critical to meeting the MH/SA needs of many in the county.

The 2011 focus group data provided some specifics on gaps and unmet needs from people who had experience with the issues. Needs mentioned during the focus groups included care that reaches out to the homeless population, more affordable housing as a platform from which to begin to meet other needs, more options for outpatient substance abuse treatment, and more jobs for people in recovery. Discussions by committee members have highlighted needs for awareness and intervention for the increasing prevalence of prescription drug abuse; continued efforts to integrate mental health, substance abuse and physical health monitoring and treatment; reduction of stress and trauma by reducing community and family violence; changes in laws that will allow for increased services for injection drug users; scarce crisis resources (hospital beds and others) made worse by overreliance on crisis services; system stability; and increased prevention efforts.

Based on the data collected in these focus groups, it is clear that that additional effort is needed to decrease alcohol, marijuana, and prescription drug availability through home, social and retail sources in addition to parental education strategies for monitoring teen behavior. The middle to high school transition as well as obtaining a driver's license are key time periods that often correspond with increased substance use, and should be targeted with increased prevention measures.

Lastly, although most focus group participants are very educated about the severe and immediate negative consequences of substance abuse, many teenagers, and some adults perceive that these consequences are easily avoided by taking certain preventive measures, such as not driving. The lesser but more frequent consequences—such as lower grades, hurt relationships, regretted behavior, and even compromised brain development—are not widely recognized, and educational strategies should address this gap in understanding. Youth also commonly stated that some teenagers drink out of boredom and lack of other social activities to engage in within their communities. Strategies to increase the amount of healthy social outlets for teens are difficult to sustain, but should be addressed locally.

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6.06.b Tobacco

Impact on Health and Contributing Factors

Tobacco use remains the leading preventable cause of death in North Carolina.[1] Approximately 13,000 adults aged 35 and older die a smoking-related death every year in the state.[2] Half of all smokers will die from smoking-related diseases.[3] Smoking accounts for approximately 30% of all cancer deaths and 87% of all lung cancer deaths.[4] Lung cancer is the leading cause of cancer death among both men and women.[5] Smokers are at increased risk for at least 15 types of cancers, including oral, esophageal, pancreatic, cervical, bladder, stomach, and kidney cancers. In addition, smoking is also a major cause of heart disease, cerebrovascular disease, chronic bronchitis, and emphysema, and is associated with gastric ulcers.[6] Smokers are more likely to experience heart attacks and strokes.[7]

According to 2008 data, 10.4% of women smoked during pregnancy. Smoking during pregnancy accounts for approximately 20% to 30% of low birth weight babies, up to 14% of preterm deliveries, and about 10% of all infant deaths.

Most adults who smoke tried their first cigarette well before the age of 18, with the peak age of first use being between 11 and 13 years old.[8] When smoking is started at a young age, it often becomes a life-long habit. Factors associated with youth smoking include low socioeconomic status, perceptions that tobacco use is normal (since it is used by peers and/or parents), lack of parental support or involvement, low levels of academic achievement, low self-esteem, and aggressive behavior.[9]

Environmental risk factors, such as easy access and availability of tobacco products, cigarette advertising and promotion (including in movies), and affordable prices for tobacco products, make smoking among young people more common.[10]

Tobacco advertising and promotion increases the likelihood of youth smoking initiation and prevalence. The tobacco industry spends over $15 billion each year on advertising.[11] Tobacco companies are also creating new ways to package their products to appeal to youth. In recent years, tobacco companies have introduced a variety of candy, fruit, and alcohol-flavored cigarettes, cigars, and smokeless tobacco products in colorful packaging. Emerging smokeless and dissolvable tobacco product packaging mimics items that appeal to youth such as candy tins, lip balm, and cell phones.

Besides cigarettes and cigars, tobacco companies are heavily advertising smokeless tobacco products such as snuff, chew, snus (a “spitless,” moist powder tobacco pouch), and dissolvable nicotine products for use in settings where smoking is prohibited. However, these products too are harmful and can lead to nicotine addiction. Smokeless tobacco contains 28 cancer-causing chemicals and can cause oral and pancreatic cancers, tooth decay, and gum recession.[12]

In 2009, President Obama signed into law the Family Smoking Prevention and Tobacco Control Act, which gives the US Food and Drug Administration the authority to regulate the manufacturing, marketing, and sale of tobacco products.[13] FDA regulations now ban products like flavored

cigarettes and misleading labels such as “light” and “low tar.” However, other flavored tobacco products such as little cigars, snus, and dissolvable tablets still remain. The release of new products and new packaging that circumvents this law continues.

Nonsmokers are also at risk from the dangers of inhaling secondhand smoke. In 2006, the Surgeon General’s Report concluded that there was no safe level of exposure to secondhand smoke. Secondhand smoke exposure can cause premature death, and has been linked to heart disease and lung cancer in nonsmokers. Youth exposure to secondhand smoke can lead to hindered lung development, respiratory and ear infections, and asthma.[14]

According to the 2004 Surgeon General’s Report, research has shown that smoking and/or exposure to secondhand smoke is associated with various detrimental health effects. For example:

- Men who smoke have chromosome changes or DNA damage in their sperm. This can affect male fertility, pregnancy viability (or the likelihood that the pregnancy will continue to delivery), and may produce anomalies or birth defects in their children.[15]
- Maternal smoking prior to conception and during pregnancy is associated with: problems with fertility or the ability to get pregnant; changes in hormone levels that promote ovulation and maintain the pregnancy;[16] increased risk of an ectopic or tubal pregnancy, which can be life-threatening;[17] increased maternal heart rate and blood pressure;[18] increased risk of miscarriage;[19] poor fetal growth;[20] increased risk of fetal loss or stillbirth;[21] increased risk of preterm delivery;[22] increased risk of placenta previa,[23] and placental abruption,[24] which place both mother and baby at risk for death; increased risk for preterm premature rupture of membranes (PPROM);[25] and increased risk of low birth weight.[26]

Children born to mothers who smoke during pregnancy have: increased risk of Sudden Infant Death Syndrome (SIDS) by 20-30%. In fact, smoking is considered the greatest preventable cause of SIDS;[27] increased risk of birth defects, including cleft palate and/or cleft lip,[28] as well as heart defects,[29,30] and clubfoot;[31] impaired neurological and intellectual development; long-term negative impacts on language and cognitive development;[32] lower scores on math and spelling achievement tests;[33] risk for mental retardation, which increased with the number of cigarettes smoked;[34] and lower levels of "good" HDL cholesterol, which may increase their risk of heart attack and stroke later in life.[35] Even full-term, healthy-looking babies of smokers have been found to be born with narrowed airways and reduced lung function.[36]

However, there are still many women who smoke during pregnancy, which can be detrimental to their health, their baby’s health, and the health of those around them who are exposed to secondhand smoke.

Neonatal health-care costs attributable to maternal smoking in the US are approximately $366 million per year, or an average of $704 per maternal smoker.[37]

Healthy NC 2020 Objectives

Objective	Current (NC)	2020 Target
Decrease the percentage of adults who are current smokers.	20.3% (2009)	13.0%
Decrease the percentage of high school students reporting current use of any tobacco product.	25.8% (2009)	15.0%

Objective	Current (NC)	2020 Target
Decrease the percentage of people exposed to secondhand smoke in the workplace in the past seven days.	14.6% (2008)	0%
Reduce the percentage of women who smoke during pregnancy.	10.4% (2008)	6.8%

Secondary Data: Major Findings

According to Behavioral Risk Factor Surveillance System data, Orange County meets the Healthy Carolinians objectives for current adult smokers. Only 11.5% of county residents report smoking some days or every day in 2009, compared to 20.3% statewide.[38] The percentage of adult smokers in Orange County is significantly lower than that of the state. The percentage of Orange County and North Carolina adult smokers has decreased steadily over the last several years.

Based on combined data for Orange County Schools and Chapel Hill-Carrboro City Schools, Orange County has met the Healthy Carolinians objectives for tobacco use among high school students. Only 14.5% of high school students report using tobacco (cigarettes, cigars, smokeless tobacco) in the past 30 days.[39]

As is true for alcohol and other drugs, students in both school systems believe that their peers use tobacco at much higher rates (between two and three times higher) than self-reported rates indicate their use to be. Whether students overestimate others' use, or under-report their own, is unclear. Teen tobacco use rates have decreased steadily in both NC and Orange County since 2003 when statewide funding for teen tobacco use prevention and cessation began.[40]

The percentage of people exposed to secondhand smoke in the workplace was 14.6% for North Carolina. This percentage included both those exposed 1-6 days and those exposed all 7 days. In Orange County, 8.1% of people were exposed to secondhand smoke in the workplace. The largest difference between the state of North Carolina and Orange County was seen in people exposed all 7 days: 7.8% (NC) vs. 1.3% (Orange County).[41]

There is a correlation between exposure to secondhand smoke and education. Almost 43% of respondents exposed to secondhand smoke over a 7-day period had a high school education or less. Only 0.7% of the respondents with some level of college education or higher were exposed to secondhand smoke over a 7-day period.[42]

Household income too is correlated with secondhand smoke exposure. Of those with a household income less than $50,000 annually, 27.6% were exposed to secondhand smoke over a 7-day period. In contrast, only 1.5% of respondents with a household income greater than $50,000 were exposed to secondhand smoke over a 7-day period.[43]

Both in Orange County and North Carolina overall, the percentage of mothers who smoked during pregnancy has been decreasing since 1994. In Orange County there was a 68% decrease in smoking during pregnancy between the five-year periods 1994-1998 and 2004-2008. In North Carolina overall, the decrease between the same two periods was 73%.[44]

Primary Data: Residents' Concerns

Quantitative: Survey

The following survey results were gathered relating to tobacco use and attitudes from respondents:

- 38% believed it is wrong for teenagers to smoke cigarettes, 58% believed it is very wrong. 14% of those under age 25 believe it was only a little wrong for teens to smoke, the largest "little wrong" score for any age category. The responses for chewing tobacco are identical to those for smoking cigarettes.
- Of those surveyed, 70% do not have any tobacco in the home; and 29% do not lock up their tobacco if in the home.
- 78% believed all government owned buildings and grounds should have the same restriction as NC bars and restaurants (100% smoke-free), though this opinion differed by income bracket (72% of respondents who have an income of less than $25,000, 83% with income between $35,000 and $50,000, and 91% of respondents who make $50,000 and above). 85% of those who do not smoke support the smoking ban on all government owned property, while 62% of those who smoke support it.
- 21% of those surveyed think there is too much smoking advertising in their community
- 18% of those surveyed smoked or used tobacco products. This was skewed by race, with nearly twice as many people of color smoking (30%) as white people (16%). Use was not significantly different by age or gender, but skewed by income bracket: 4% of those making over $50,000 smoke, and 27% and 36% smoke in the $25,000 and $25,000-$50,000 brackets respectively.
- 33% of current smokers would go to their doctor first if they wanted to stop smoking; 26% would go elsewhere (mostly quitting themselves or with friend support); 19% do not know where they would go if they want to quit; 15% do not want to quit; and 7% would go to a pharmacy.

Qualitative: Focus Groups

Discussion about substance abuse among youth in focus groups conducted with high school students focused mainly on underage drinking of alcohol. Youth in all three focus groups agreed that tobacco use was not as common among their peers as use of alcohol and marijuana. Although youth tobacco rates have declined, the need remains for continued teen tobacco prevention funding to ensure that these trends are not reversed.

Current Initiatives and Activities

Tobacco.Reality.Unfiltered. (TRU) is a statewide youth-led movement dedicated to preventing teen tobacco use in North Carolina. Orange County Health Department, Orange County Schools and Chapel Hill-Carrboro City Schools have collaborated to coordinate a county-wide Youth Tobacco Use Prevention Program. Established through a grant from the now abolished North Carolina Health and Wellness Trust Fund (HWTF), the program's goals are to reduce the number of youth who start and use tobacco products, eliminate youth exposure to secondhand smoke, and reduce tobacco-related disparities among priority population youth. Some of the strategies used to achieve these goals include increasing youth and parental awareness and engagement, supporting enforcement of 100% Tobacco-Free Schools policies, educating tobacco merchants on the laws around the sale of tobacco products to minors, promoting cessation resources such as QuitlineNC, and mobilizing community support for policies that reduce exposure to secondhand smoke.

Since 2003, Orange County TRU Teens have been making a difference in their schools and community by leading many tobacco prevention activities and advocacy efforts. Orange County TRU

recruits peer educators from the five local high schools. Since 2007 the Orange County TRU program has expanded from two community-based groups (Chapel Hill and Hillsborough) to five school-based clubs each with a TRU Club Advisor. However, due to state budget cuts 2011-2012 could be the last year of funding for teen tobacco prevention programs across the state. During this last year, Orange County will continue to build sustainability in the schools and work on tobacco control efforts in the community that will have positive impacts on youth beyond the next year. The NC Alliance for Health, an independent, statewide advocacy coalition, has identified reinstatement of tobacco prevention funds as one of its priority policy issues to advocate for in 2011-2012.

The NC Tobacco Use QuitLine is a convenient, confidential and free phone service available to North Carolinians to help them quit using tobacco. Once callers phone in for quit assistance, a trained quit coach calls them back several times to offer support throughout the quit attempt. The Quitline is available to both youth and adults in many languages from 8 a.m. until 3 a.m., every day. If the tobacco user lets their health care provider know they are ready to quit within 30 days and would like to have a Quit Coach call them they may sign the Fax Referral Form. The provider would then fax the form to the Quitline. With fax referral, all of the Quitline services are available to the tobacco user, and they do not have to make the first call. Since 2007 with funding from the North Carolina Health and Wellness Trust Fund (HWTF), QuitlineNC services expanded to later hours and offered nicotine replacement therapy to college students who called. However, with the abolishment of HWTF in the state budget passed in June 2011, it is likely that these services will be scaled back significantly if NC's tobacco prevention funding is not reinstated.

The Minute to Ask website was developed by HWTF and provides useful, easy and quick-to-follow strategies when asking and treating patients with tobacco dependence. This website targets health care providers (e.g. - doctors, nurses, dentists, etc.) who are instrumental in helping patients quit in a tailored way.

Quit Now NC! was developed by NC Prevention Partners (NCPP) in 2002 and serves as a communication hub and educational tool for healthcare professionals. The Tobacco Cessation Research Library allows individuals to search for the latest articles to keep informed and to help patients quit using tobacco. NCPP's Quitline Champion Challenge to the NC Tobacco Quitline, is a competition that is open to all NC hospitals to increase QuitlineNC fax referrals.

The National Cancer Institute's Smokefree.gov is intended to help residents or and their loved ones quit smoking. The information and professional assistance available on this website can help to support both immediate and long-term needs of those trying quit smoking and stay quit. Smokefree.gov allows smokers to choose the help that best fits their needs. Individuals can get immediate assistance in the form of:

- A step-by-step quit smoking guide
- Information about a wide range of topics related to smoking and quitting
- An interactive US map highlighting smoking information in each state
- LiveHelp, National Cancer Institute's instant messaging service
- National Cancer Institute's telephone quitline, 1-877-44U-QUIT
- Local and state telephone quitlines, 1-800-QUIT-NOW
- Publications to download, print, or order

BecomeAnEX.org is a project of National Alliance for Tobacco Cessation to help people quit smoking. The EX Plan is a free, web-based quit smoking program, one that can show smokers a whole new

way to think about quitting. It is based on personal experiences from ex-smokers as well as the latest scientific research from the experts at Mayo Clinic. The EX Plan has three main steps: 1) How to Quit Smoking, 2) Quit Smoking, and 3) Staying Quit. Information is available in English and Spanish and mainly targets adults. Once registered, one can join the EX online community to get support from others trying to quit and download the EX plan iPhone App.

The UNC Nicotine Dependence Program (NDP) provides leadership for implementing comprehensive tobacco use treatment services and disseminating resources for promoting tobacco free communities. NDP offers services to tobacco users who are UNC Hospital outpatients, inpatients or UNC employees. Located in the University of North Carolina School of Medicine's Department of Family Medicine, NDP carries out its mission through:

- Treatment services for tobacco dependence
- Training in tobacco use treatment for health care providers
- Technical assistance related to policy and system change
- Research to advance tobacco use treatment knowledge and practice

ASPIRE (A Smoking Prevention Interactive Experience) is a web-based multimedia program developed by The University of Texas M. D. Anderson Cancer Center for adolescents. ASPIRE uses animations, videos, and interactive activities to communicate the facts about smoking and tobacco use, as well as, offers skills to adopt a tobacco-free lifestyle. With broadband internet access, ASPIRE can be used at home, in the classroom, the computer lab, the library or at any public computer. ASPIRE is evidence-based, and is available free of charge. Chapel Hill-Carrboro City Schools and Orange County Schools recently began using ASPIRE for Alternative to Suspension (ATS) when tobacco violations occur on school campuses. For more information on the ATS program contact the school nurse or counselor's office.

MyLastDip offers a family of unique research-tested, self-help programs designed specifically to help chewing tobacco users quit for good. Developed by researchers with over 40 years' experience in helping chewers quit tobacco, these web-based programs have been funded by research grants from the National Cancer Institute (US National Institutes of Health). MyLastDip programs are free to use.

Freedom from Smoking Online is the American Lung Association's online, web-based smoking cessation program. Registration is required. Information is available in English and Spanish.

The North Carolina Tobacco Prevention and Control Branch (TPCB) works to improve the health of North Carolina residents by promoting smoke-free environments and tobacco-free lifestyles. Their goal is to build capacity of diverse organizations and communities to implement and carry out effective, culturally appropriate strategies to reduce deaths and health problems due to tobacco use and secondhand smoke. A comprehensive list of additional tobacco cessation resources and materials for health professionals not already listed above can be found on the TPCB's website.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Data on disparities among different groups indicate that younger, less educated, non-Hispanic white and American Indian women are more likely to smoke during pregnancy compared with their older, more educated counterparts. Women on Medicaid are more than three times as likely to smoke during the last three months of pregnancy as are women with private insurance. In addition, smoking rates are higher among women who enter into prenatal care later in pregnancy. Of the

women who smoked three months before pregnancy, 45% quit during pregnancy; and among the quitters during pregnancy, 52% relapsed within six months after delivery.

Responses to the Community Health Assessment survey and focus groups demonstrate that Orange County residents recognize that substance abuse (drugs and alcohol) is a problem. Of those surveyed, 25.6% agreed that substance abuse is a problem in Orange County. When specifically asked about teenagers using tobacco, 96% of respondents thought it was wrong or very wrong for teens to smoke cigarettes or use smokeless tobacco. Of all substances in question (tobacco, alcohol, marijuana, prescription drugs), only prescription drugs had a higher percentage of respondents (98%) saying that it was wrong for teens to use them. Most respondents either did not keep tobacco in their homes (70%) or kept it locked up. Only 29% of respondents did not lock up their tobacco. Alcohol and prescription drugs were more likely not to be locked up if in the home, (60% and 76%, respectively). Although People of Color and those who made less than $50,000 annually were less likely to have alcohol in their homes, they were more likely to have tobacco. Of white respondents, 73.7% did not have tobacco in the home vs. 59.3% of People of Color. Of those making $50,000 or more, 82.6% did not have tobacco in the home vs. $25,000 - $50,000, 58.1%; and less than $25,000, 64.6%.

According to the local Health Assessment opinion survey, 18% of respondents currently smoke or use tobacco products.[45] Similar to the previously discussed questions, this response was skewed by race, with nearly twice as many People of Color smoking (30%) as white people (16%). Use was not significantly different by age or gender, but skewed by income bracket: 4% of those making over $50,000 smoked, with 27% and 36% smoking in the below $25,000 and $25,000-$50,000 income brackets, respectively. These results are similar to BRFSS data and indicate the need to focus tobacco prevention and cessation efforts on policy change and education targeting communities of color and low income where the risk of tobacco use is greater. The most striking predictor of smoking continues to be education, however this disparity also widened since 2007. According to 2010 BRFSS data, 40.1% of those with a high school education or less reported current smoking. While only 6.2% of those with some college education or more reported current smoking.[46]

Similarly, although only 21% of those surveyed think there is too much smoking advertising in their community, this response was also skewed by race (29.6% People of Color vs. 18.8% white) and income (27.1% for below $25,000, 16.1% for those between $25,000-$50,000, and 18.8% for those above $50,000). Prevalent tobacco advertising is a risk factor for smoking initiation.[47] Literature shows that there is a higher density of unhealthy ads such as tobacco in Black and Latino neighborhoods.[48] Using this data and mapping the density of tobacco advertising in communities of color and near schools in Orange County would illustrate the need for stricter tobacco policies to reduce the amount of tobacco advertising in these areas.

Of tobacco users surveyed, 85% indicated that they wanted to quit by responding where they would go first if they needed help. Although it is positive to see that most tobacco users want to quit, the results indicate that more education is needed about available tobacco cessation resources. Most tobacco users (33%) would go to their doctor first if they wanted to stop smoking, 26% would go elsewhere (mostly quitting themselves or with friend support), 19% do not know where they would go, 15% do not want to quit, and 7% would go to a pharmacy. Increasing awareness about the toll-free QuitlineNC helpline and educating providers about this resource important.

With regard to environmental health and tobacco use, nearly half (49%) of all those surveyed supported a ban on using tobacco anywhere on government owned outdoor facilities including parks and recreation land. About 55% of those who do not smoke supported the smoking ban on government outdoor spaces, and only 28% of those who smoked supported the smoking ban in outdoor government owned facilities. These numbers are lower than expected. The suspicion is that respondents were less likely to agree to a government "restriction prohibiting tobacco use" (as the question was asked) than to a policy that prevented exposure to secondhand smoke. The way the survey question was designed may have encouraged respondents to answer in a particular way.

In 2011, the Orange County Health Department received a national grant to convene an action planning meeting of local government and community representatives to discuss tobacco bans in outdoor spaces. This data shows that many Orange County residents, particularly non-smokers would support such a ban.

The actions needed to reduce smoking during pregnancy include the following: a) prevent smoking initiation among young people by increasing the unit price for tobacco products and conducting mass media campaigns in combination with other interventions (such as school-based and community education) that effectively prevent young people from starting to smoke in the first place; b) help pregnant women quit and prevent relapse. Because pregnant women who have received brief smoking cessation counseling are more likely to quit smoking, clinicians should offer effective smoking cessation interventions to pregnant smokers at the first prenatal visit, throughout the pregnancy, and after delivery. Increasing the price for tobacco products could also reduce smoking rates during pregnancy and relapse after delivery;[49] and c) Medicaid coverage of smoking cessation counseling services and medications is associated with lower smoking rates among women.

Tobacco legislation has increased significantly since 2007 both in NC and the US. Highlights include all NC school districts are now 100% Tobacco-Free, all 127 full service hospitals in NC became 100% tobacco free campus-wide, and smoking is now prohibited inside restaurants and bars. In 2009, the NC cigarette tax increased to 45 cents. According to the NC Tobacco Prevention and Control Branch, the 10 cent increase from 35 cents was not enough to impact smoking rates but does raise revenue. All UNC system and NC Community College System campuses now have smoke-free buildings and 88% have policies restricting smoking outdoors.[50] A summary of NC tobacco legislation is included below:

Table 42: NC Tobacco Control Legislation Passed Since 2007[51]

Effective Date	Legislative Bill	Policy
January 2, 2010	House Bill 2	Prohibits smoking in restaurants and bars. Requires smoke-free lodging facilities that serve food—(up to 20% of guest rooms may allow smoking). Very limited exemptions, including cigar bars that meet requirements; private clubs—country clubs or non-profit membership clubs. Allows local government authority to pass some further restrictions for all government grounds and other public places.
March 1, 2010	Senate Bill 167	Prohibits smoking or the possession of tobacco products on the premises of NC correctional institutions.
August 1, 2008	Senate Bill 1086	Prohibits tobacco use in public school systems anywhere, anytime, by anyone—100% Tobacco-Free Schools (TFS) policy.

Effective Date	Legislative Bill	Policy
		Mandates that the remaining 26 school districts that have not currently passed a 100% TFS policy must adopt and enforce the policy by August 1, 2008.
January 1, 2008	House Bill 24	Prohibits: 1) smoking in buildings owned, leased or occupied in state government; and 2) authorizes local governments to regulate smoking in buildings and transportation vehicles owned, leased, or occupied by local governments. Does not prohibit smoking in local government facilities, only allows them to adopt local regulations (partial repeal of preemption). Also, this authorization applies only for local government buildings and transportation systems, not other public places.
July 1, 2007	Senate Bill 862	Allows UNC constituent institutions to regulate smoking on campus buildings and grounds (100 linear feet from buildings).
October 1, 2007	House Bill 1294	Prohibits smoking in long-term care facilities, nursing homes, psychiatric institutions, etc.

In 2008 with the passing of House Bill 24, the Health Department introduced an amendment to the county tobacco ordinance that prohibited tobacco use inside all government buildings, vehicles, and grounds of health and human services buildings. The Orange County Board of County Commissioners passed the amendment as an ordinance. The Health Director also encouraged each municipality to adopt similar ordinances. Although Orange County is headed in the right direction, there is currently no comprehensive county or city ordinance that prohibits tobacco use on all government grounds including outdoor areas such as parks and recreational facilities. The Town of Hillsborough adopted an ordinance prohibiting smoking in their parks, however, there is need for improvement on signage, awareness, and enforcement. In June 2011 the Board of County Commissioners approved a facilities use policy that prohibits tobacco use within or on the premises of county facilities, except in designated areas. However, it is unclear how the policy will be enforced or promoted. With such strong NC legislative momentum around tobacco control and expanded policies in neighboring Durham and Raleigh, now is the time to advance.

Under House Bill 2, commonly known as the NC Smoke-Free Restaurants and Bars Law, a local government may adopt a local law restricting or prohibiting smoking that is more restrictive than the state law.[52] This law permits counties and localities to restrict tobacco use in government buildings, local government grounds, government-owned vehicles, parks, and public places. Boards of Health have authority to pass rules that may cover these areas in the entire county, including municipalities. The Board of County Commissioners must approve the rule. Given that local governments in NC have never had this kind of authority, now is the time to advance policies to protect citizens from the dangers of secondhand smoke and model positive health behaviors for Orange County youth.

Federal law also advanced tobacco prevention and cessation efforts. On June 22, 2009, President Obama signed into law the Family Smoking Prevention and Tobacco Control Act, which gives the US Food and Drug Administration (FDA) the authority to regulate the manufacturing, marketing and sale of tobacco products. Under the law, tobacco companies may no longer use terms such as “light,” “mild” or “low tar” on cigarette packaging and packages will picture graphic warning labels to make them more effective. Among other things, states (or localities) may now take such new action as limit the number or size of tobacco product ads at retail outlets and prohibit the

placement of tobacco products and tobacco product ads near cash registers (to reduce impulse purchases by smokers trying to quit).[53]

Education on the dangers of smokeless and other emerging tobacco products continues to be important. As more localities and states pass smoke-free policies, tobacco companies continue to market products that are easily concealed for smokers to get their nicotine. The Health Department's Youth Tobacco Use Prevention Program has held trainings with TRU peer educators, school administrators, and health providers to raise awareness about the harmful effects these emerging products cause.

Areas that could be strengthened locally include taking a comprehensive approach to tobacco control in the community and increased education to the public and staff about current and future tobacco policies. A tobacco coalition could help guide these efforts. A new tobacco coalition in Orange County would be the first time members from various public sectors and the university come together at one time to discuss comprehensive tobacco control strategies. This type of coalition has been needed for a long time. New partners and community input is needed to make these efforts successful. Due to recent budget decisions by state legislators, 2011-2012 could be the last year of funding for youth tobacco prevention programs throughout the state. Therefore, it is important to do as much as possible this year to build sustainability and impact environmental change that would benefit county residents.

In light of abolishment of the Health and Wellness Trust Fund, QuitlineNC services will be reduced due to lack of renewed funding if legislators do not decide to reinstate tobacco prevention funds. This cut presents a gap in the free support offered to tobacco users who want to quit. More insurance plans should offer preventative benefits to help cover the cost of smoking cessation aids such as nicotine patches, gum, and medications to aid in quitting. Nicotine replacement therapy and some medications are currently covered by both the State Health Plan and the County Health Plan for Orange County Government employees. However, the county health insurance plan is expected to change in 2012.

The following recommendations are based on the North Carolina Institute of Medicine's Prevention Action Plan and the current state of tobacco control in NC and Orange County:

Sustainability and Capacity Building

- Build sustainability within each school district to continue TRU Clubs and youth-led tobacco prevention activities after grant funding ends in 2012.
- Build capacity in schools and healthcare provider offices for tobacco prevention and cessation through trainings and technical assistance from the Health Department.
- Incorporate tobacco prevention and cessation messages into all health promotion and chronic disease prevention programs.

Tobacco Tax

- Given that NC has the 7th lowest cigarette tax in the nation, it is recommended that community groups advocate for an increase in North Carolina's cigarette excise tax by at least $1.00.[54]
- Support an excise tax increase on other tobacco (non-cigarette) products to a tax rate equivalent with that of cigarettes.
- Advocate for use of revenue generated from the increased taxes on tobacco to support tobacco prevention and cessation efforts.

Smoke-Free Policies

- Create a new tobacco coalition of representatives from local government, community groups, UNC-Chapel Hill, and UNC Hospitals to develop an action plan for tobacco control and prevention advancement within Orange County.
- Until a comprehensive smoke-free law is passed by the state, the Board of Health should adopt a new rule banning tobacco use on all local government grounds and outdoor areas, including parks and recreational facilities. The Board of County Commissioners should then approve this rule as an ordinance to cover the county and its municipalities.
- Advocate for an amendment to current NC smoke-free laws to mandate that all worksites and public places are smoke-free.

Cessation

- Promote the QuitlineNC toll-free helpline to tobacco users who want to quit.
- Educate health care providers on how to counsel patients to help them quit and prescribing appropriate medications.

Tobacco-related disparities

- Build capacity of local community and school groups to educate youth about the dangers of tobacco and the disparate affects it has on various communities.
- Recruit representatives from community groups serving priority populations to serve on the new tobacco coalition.

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Section 6.07 Oral Health

Impact on Health and Contributing Factors

It is important that adequate and affordable dental services be available to all residents. Oral health is much more than having healthy teeth and also includes gums, ligaments, and bone; the hard and soft palate; tissue lining of the mouth and throat; the tongue, lips, and salivary glands, etc. Poor oral health can adversely affect many health-related issues. Research shows that people with periodontal (gum) disease are almost twice as likely to suffer from coronary artery disease as those without periodontal disease;[1] and the use of tobacco in any form substantially increases the risk for dental cavities.[2] Poor oral health can also have other health, social, and financial consequences. For example, dental caries left untreated can lead to needless pain and suffering, compromised nutrition, swollen faces, diminished self-esteem, increased susceptibility to other medical conditions, missed school days, and avoidable high health care costs.[3]

Though national surveys conducted during the past three decades show a decline in the overall prevalence of dental caries in the US, it remains a serious problem for children. As reported in 2000, fewer than 10% of the children nationwide under age six had made a preventive dental visit. The prevalence of untreated caries in children two to five years of age living in poverty was close to 80%, and was not declining as it was for older children. The estimated dental bill to restore children's decayed teeth exceeded two billion dollars in the US, making it one of the most uncontrolled diseases of children.[4]

Poor oral health is due to a number of complex and interrelated factors attributed to individuals, dentists, employers, and insurers. Oral health begins with the individual taking responsibility for his or her behavior. This includes oral hygiene and sound home care practices, healthy diet and nutrition, avoidance of tobacco and alcohol, and periodic preventive dental visits. A lack of awareness of the importance of oral health can affect whether the individual practices the appropriate lifestyle behaviors to prevent oral health problems.

Other factors that contribute to poor oral health status include lack of dental insurance. Without such insurance, many are unable to get the needed dental care to prevent oral health problems. However, even when dental insurance is available, some populations, particularly those with low socioeconomic status, experience other barriers in getting oral care.[5]

North Carolina has one of the lowest pediatric dentist-to-populations ratios in the country, and the problem is exacerbated by the retirement of a large number of pediatric dentists who provide more comprehensive dental care to young children than general dentists.[6] Historically, NC pediatric dentists are four times more likely to participate in Medicaid, and they care for a greater proportion of Medicaid patients relative to their absolute supply than do general dentists.[7]

The primary reason for many dentists' reluctance to participate in the Medicaid program is low reimbursement rates that frequently do not cover the cost of providing the services.[8] In response to dentists' complaints about the burdensome paperwork associated with Medicaid, the state has made significant changes in Medicaid reimbursement and operations to simplify the program for dentists.

According to primary caregivers of Medicaid-insured children in North Carolina, there are non-financial barriers as well, including fear of and anxiety about dental visits.[9] Parents also report that the practice behaviors of dental professionals make it difficult for them to get needed dental services for their children. Searching for a provider, arranging an appointment where choices are severely limited, finding transportation, and trying to take off from work, all leave families exhausted, dissatisfied, and discouraged. Families who successfully negotiate these barriers are faced with additional barriers in the dental care setting, including long waiting times, restrictive office policies, and judgmental and disrespectful behavior from providers because of their public assistance status or their race. To avoid encountering such attitudes and behaviors, some families postpone or cancel dental visits for their children.

Healthy NC 2020 Objective

Healthy NC 2020 Objective	Current (NC)	2020 Target
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%
Decrease the average number of decayed, missing, or filled teeth among kindergartners.	1.5 (2008-09)	1.1
Decrease the percentage of adults who have had permanent teeth removed due to tooth decay or gum disease.	47.8% (2008)	38.4%

Secondary Data: Major Findings

There has been an increase in the number of patients treated at the Orange County dental clinic. The number has increased from 3,722 in 2007 to 4,126 in 2009. There has also been a noticeable increase in the number of adults trying to access the clinic's services. The waiting time for an adult to be seen at the dental clinic for a non-emergent needs is approximately 14 months. There has also been a large increase in Burmese patients during the past year due to the relocation of Burmese refugees into the Carrboro area.

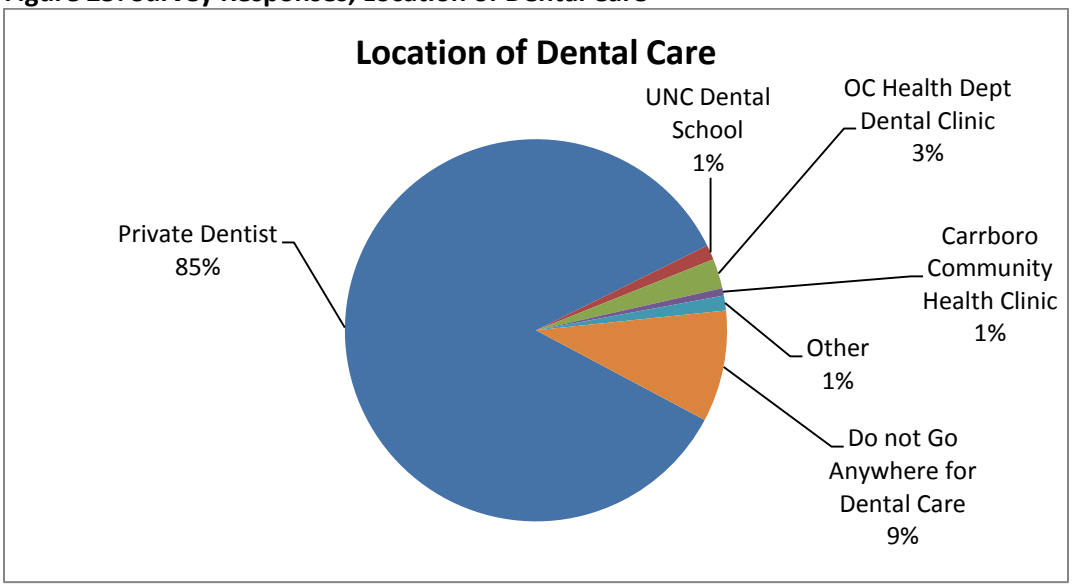
With the reduction in funding to the Oral Health Section, Orange County no longer has a State Hygiene staff position, which has necessitated the elimination of the annual screening of Kindergartners and Fifth Graders. This has also caused the elimination of the Seal Orange County Kids Program; and has eliminated obtaining yearly data from the annual screening program.

Primary data: Residents' concerns

Quantitative: Survey Data

The results of the various community surveys undertaken for the 2011 Community Health Assessment showed that 85% of those surveyed receive dental care at a private dentists' office, 9% do not go anywhere for care, and the remaining 6% go to various clinics (see Figure below).

Figure 25: Survey Responses, Location of Dental Care



When asked if during the past 12 months, survey respondents had problems getting the dental care they needed from any type of dental care provider or facility, 17% of those surveyed said they had problems getting the dental care they needed. Younger residents (below 25 years old) did not report having problems, but 14.5% of those between the ages of 25 and 50, and 7.9% of those above 50 years of age reported having problems.

Among the middle-income bracket ($25,000-50,000 annual income), where most uninsured people fell, 23% reported having had problems getting dental care in the last year, mainly because they either did not have dental insurance or were not able to afford their deductible or co-payment. In terms of gender, 8.5% of males and 12.5% of females reported having problems getting the needed dental care; as did 11.1% of Persons of Color, and 10.6% of whites who responded to the survey.

Respondents said that they had encountered a variety of problems in getting the dental care they needed. In terms of the number of such respondents, 12 persons said they did not have dental insurance, 12 could not afford the costs or their deductible/co-pay was too high. Other barriers mentioned to receiving the dental care needed included insurance not covering what was needed; not knowing where to go or having transportation to get there; or the provider did not take their insurance or Medicaid.

Qualitative: Focus Group

When discussing oral health, many participants of the focus groups spoke of a need for more affordable dental care options. The Student Health Action Coalition (SHAC) clinic was listed as an option for those with limited financial means; but, it was also clear that the clinic's resources are limited, and adult residents of Orange County cannot always get dental care. Residents report that since they know that dental care has a major impact on how one feels and how other body systems work, adults should be able to get services. Respondents feel that there are many things that dental care and the SHAC clinic cannot do, and this can affect their physical and mental health. The focus groups thus point to the need for more accessible dental care for all residents in the county.

Current Initiatives and Activities

The mission of the Orange County Health Department's Dental Health Service is to "prevent and reduce the incidence of tooth decay, periodontal disease, loss of teeth, pain, infection, and oral cancer through dental assessments/screenings, dental health education, sealant promotion, and treatment for those residents of Orange County with low income or inadequate access to dental care."

The Carrboro Community Health Center (operated by Piedmont Health) provides dental care services for adults and children; and payment is based on a sliding-scale fee.

The UNC School of Dentistry operates student-run and faculty-run dental clinics which require appointments and full reimbursement for services. The UNC School of Dentistry is open to all residents. Residents must apply to become a new member and are required to pay a moderate fee. UNC School of Dentistry also has an emergency/urgent care clinic for individuals experiencing pain.

The UNC SHAC Dental Clinic is now located in the UNC School of Dentistry.

The NC Division of Medical Assistance maintains listings of dental practices that accept Medicaid and health choice:

- For Medicaid list, visit www.ncdhhs.gov/dma/dental/dentalprovlist.pdf
- For Health Choice list, visit www.ncdhhs.gov/dma/dental/hcdentalprovlist.pdf

Those without access to the Internet can contact the NC Care Line Information and Referral Service for the list of Medicaid and Health Choice dental providers in Orange County. Call 1-800-662-7030 (English/Spanish) to speak with a live person between the hours of 8:00 a.m. to 5:00 p.m. Monday through Friday.

The "Into the Mouths of Babes" program trains medical providers to deliver preventive oral health services, including application of fluoride varnish, to high-risk children under age four who receive NC Medicaid. There are several medical providers that have been trained in Orange County - including Health Department providers.

ZOE! is a project designed to Zero Out all early childhood tooth decay in children enrolled in Early Head Start (EHS) programs in North Carolina. It builds on previous efforts in medical and dental offices to reduce tooth decay, and is funded by a 5-year grant (2008-2013) from the National Institutes of Health. ZOE! adds an important community-based group of high-risk children to the efforts to reduce tooth decay in North Carolina. The EHS program in Orange County is participating in this project.

Since 1994, the Orange County Partnership for Young Children (local Smart Start) has funded a dental program that identifies and follows up on young children with untreated dental needs. Screening occurs in child care and preschool programs. Dental education is provided, and programs are encouraged to establish tooth-brushing routines (which are currently not a requirement for licensed child care providers). Approximately 1,400 children were screened in FY 2009-2010, and 81 were referred for treatment.[10] The program will no longer be funded by OCPYC beginning in FY 2011-2012, but will instead be supported by Orange County.

Safety Net Dental Clinics are non-profit dental facilities where low income families or individuals can go for dental care. Most clinics accept insurance, NC Medicaid, and NC Health Choice for Children. Many of these clinics also provide services on a sliding-fee scale to low-income patients who have no dental insurance. There are Safety Net Clinics in most of NC's 100 counties. In Orange County these clinics are located at the Orange County Health Department and the Carrboro Community Health Center.

As of November 2010, Orange County is one of twelve counties in NC with no state-funded Oral Health Section preventative dental program, including a state public health hygienist.

The Health Department is pleased that Orange County is in the top three counties in the state for oral health statistics. It is already well below the statewide average of 1.5 for decayed, missing, and filled teeth for kindergarten children, and most 5th graders are caries free. In fiscal year 2009-10 the Health Department served 826 dental patients in the Carrboro clinic, with a total number of 1,735 patient visits. The Hillsborough clinic served 1,210 patients, with a total number of 2,391 patient visits. This is a fairly typical picture for service delivery. Each location had difficulty scheduling all of the patients that requested an appointment for twice-a-year cleanings.

The Health Department has one full-time dentist, a part-time dental hygienist, 4 dental assistants, and 2 front office assistants. In addition, the Department contracts with a dentist for one day a week, and with the UNC School of Dentistry for a Graduate Program Dental Resident to provide treatment services.

As part of a 2009-2010 study done for the Board of Health, maps were prepared that showed where Orange County residents receive dental services from the Health Department. These maps showed that patients from all areas of the county travel to the Hillsborough location to receive dental services, and the majority of patients in the Carrboro location were from the immediate Chapel Hill and Carrboro area.

Approximately 45% of the operation of the clinics was supported by patient fees and third party reimbursement (insurance, including Medicaid and private insurance)—leaving 60-65% supported from the county general fund. The Carrboro location was in rental space, but the Hillsborough location is county-owned property. Orange County provides services to Orange County children and adults on a sliding fee scale, with 250% of the federal poverty level being the 100% pay level. While the dental clinic does not limit services to low-income individuals, that is clearly the focus. About 50-60% of the patients served in each location do not have Medicaid or insurance coverage and fall below 80% on the self-pay scale.

At the request of the Board of County Commissioners, in 2010 the Board of Health studied options for dental service delivery and reluctantly decided that consolidating services in Hillsborough would be a better use of staffing and equipment resources. The Carrboro Dental Clinic moved to Hillsborough in July 2011.[11] Staff communicated with patients about the transition of services, and educated patients about public transportation options to the Hillsborough location. Dental clinic clients were informed of the transition timeline through mailings, announcements in service locations, website updates, and personal contact during clinic appointments.

The County's dental clinic, operated by the Orange County Health Department, provides treatment for low income and Medicaid eligible children and adults. The health department clinic in

Hillsborough (after consolidation of the services previously also provided in the Carrboro clinic which has been closed), is now an eight chair clinic that operates five days per week instead of the two days it operated prior to the consolidation. It provides routine dental treatment including fillings, extractions, and cleanings to residents of Orange County, primarily to patients who are Medicaid eligible, to low-income residents (on a sliding fee scale basis), and to children covered under North Carolina Health Choice; but the health department clinics see any resident. They also provide emergency dental treatment within 24 hours to patients who experience pain/infection and swelling.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

As significant as oral health is, not everyone achieves the same extent of oral health. Despite the availability of safe and effective means of maintaining oral health, such as water fluoridation, many still experience preventable dental conditions, such as dental decay, periodontal disease, and tooth loss. Sadly, for some, oral diseases remain lifelong conditions.

As mentioned earlier, 17% of all residents surveyed stated that they had problems getting the dental care that they needed. These respondents primarily fell into the middle-income bracket ($25,000-50,000 annually). Of the respondents in this bracket, 23% responded having problems getting dental treatment in 2010; and most of these said that this was due to either not having dental insurance or not being able to afford their deductible or co-payment. This is where most of the uninsured respondents fell. Of the respondents who stated that they used the Orange County Dental Clinic, 13% were in the below $25,000 group and 10% were in the $25,000-50,000 group. It is this group that comes into the Department's dental clinic seeking help.

There is over a year's waiting list for adults to come into the clinic. Even without having a waiting list for children, it is getting more difficult to schedule children in a timely manner. One of the reasons for this was the inefficient use of both staff and facilities. The Carrboro clinic operated two days per week, and the Hillsborough clinic three days per week. The same staff operated out of both clinics, so neither clinic was used to its full potential. There was also a large increase not only in adult patients but also in both Hispanic and Burmese/Karen children. The use of interpreters was limited due to both budget issues and availability. With the closing of the Carrboro clinic it is now possible to more efficiently schedule patients, but this may prove a hardship for families to get to the Hillsborough clinic due to transportation issues.

With the de-funding of the Smart Start Program by the State, the Orange County Commissioners have elected to fund this program for one more year. This will facilitate reaching the goal of increasing the percentage of 1-5 year olds enrolled in Medicaid who see a dentist. Hopefully this program will continue to be funded as it is the only way of educating the parents of these children about the importance of routine dental care.

With the loss of the Orange County's State Public Hygienist this past year, the clinic does not have the ability to track this data. Due to the demographic changes in Orange County, the clinic is seeing more kindergartners with decayed, missing, or filled teeth. With the increase in both Hispanic and Karen/Burmese populations, there is also an increased need for dental care in this segment of the population. This is due to lack of adequate dental care and oral hygiene instruction for the refugees from Burma before they arrive in the United States, and also due to cultural differences in diet and oral hygiene practices.

The clinic is also experiencing an increase in the number of adults who have had permanent teeth removed due to tooth decay or gum disease. This increase is likely due to the fact that people have lost their jobs or have lost their dental coverage. They are also having a harder time affording their deductible or co-pay fees; and there are very limited options for adults in Orange County to receive reduced fee dental care. This is causing people to wait longer to come to the dentist, and who only come in on an emergency basis, which usually results in loss of the tooth.

For meeting the county residents' oral health needs in the short term, there is need to increase staff and chairs at the Orange County Health Department's dental clinic so as to decrease the wait time for adults to be accepted into the program. The consolidation of clinics into one clinic in Hillsborough has allowed an increase in the number chairs to eight, but there is still a need to consider increasing staff to more efficiently utilize the new clinic. There is also a need to re-open a dental clinic in the southern part of Orange County as soon as it is economically feasible to better serve this segment of Orange County residents; and there is need to partner with the UNC School of Dentistry to add other Residency Programs, such as a Pediatric Dental Resident, to increase the types of services the clinic can provide.

For meeting needs in the longer term, the Orange County Board of Health has recommended the option of having a full-time dental clinic in Hillsborough and a full-time dental clinic in the Chapel Hill/Carrboro area to the Board of County Commissioners as a 10-year goal. At a regular meeting on September 21, 2010, the Board of County Commissioners accepted the Board of Health's recommendation that contained three components: 1) consolidate services in Hillsborough with an eight chair clinic this fiscal year; 2) add staff to fully utilize the eight chair clinic in 2012-13; and, 3) begin planning for a resumption of dual service centers to open two clinics by 2021. The Board of Health plans to continue working towards this goal in the coming years.

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Section 6.08 Reproductive Health

6.08.a Pregnancy, Fertility, Unintended Pregnancy, and Abortion

Impact on Health and Contributing Factors

Approximately 40% of pregnancies in NC are unintended. Having an unplanned pregnancy is known to generate significant health, social and economic problems. Unintended pregnancies are those that are reported to have been either unwanted or mistimed at the time of conception.[1]

Having an unplanned pregnancy is known to generate significant health, social, and economic problems, including: a) late entry into prenatal care; b) increased risk of pregnancy ending in preterm birth and low birth weight babies; c) increased risk of depression, physical abuse, and relationship issues with partners; d) increased risk of relationship issues with the baby, including potential for abuse or neglect; e) decreased likelihood that the baby will be breastfed or placed on its back to sleep, helping to reduce the risk of Sudden Infant Death Syndrome; f) disruption of mother's education/career goals; and g) financial hardships for the family.[2,3,4]

Additionally, in North Carolina the issues of obesity, tobacco use, and mental health concerns are present in many women prior to conception, all of which also contribute to the potential for poor birth outcomes.[5]

According to the National Campaign to Prevent Teen and Unplanned Pregnancy, over $7.7 billion has been saved in North Carolina since 1991 as a result of teen pregnancy prevention efforts. Yet, the financial cost of teen childbearing to NC taxpayers still exceeds $392 million annually.[6] Not only is the cost in dollars and cents, but also the current and future quality of life is affected - for the adolescent, her family, her partner and his family, and the child him/herself.

There are more than 200 risk factors for teen pregnancy, including level of education, socio-economic status, future opportunities, how a teen relates to parents or peers, and self-esteem.[7] The National Institutes of Health (NIH) reports that teen parents are more likely to have more children overall, to live in poverty, and to be two grade levels behind their peers in school, or not complete a high school education. Also, if the teen had a previous history of substance abuse, they often returned to the use of substances by six months after delivery. Physical risks for pregnant teens include: placenta previa, pregnancy induced hypertension, premature delivery, anemia, toxemia, low birth weight, and intrauterine growth restriction. Also, teens are at greater risk for abuse or death during a pregnancy (death by violence is the second leading cause of death during pregnancy).

The children of teens have higher incidence of developmental problems; and the younger the mother, the greater the risk of infant death during the first year. Children often experience inadequate growth and are at greater risk for infections and chemical dependence. Additionally, boys born to teen mothers are more likely to be arrested and go to jail.[8]

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Decrease the percentage of pregnancies among adults that are unintended.	39.8 % (2007)	30.9%

Secondary Data: Major Findings

Measures of reproductive health that positively affect a community's growth include the number of total pregnancies, and the number of live births. Although there was a slight decrease from 2005 to 2006 in Orange County, both total pregnancies and live births have remained relatively stable between the years 2006 through 2009.[9] The factors that negatively influence a community include the number of induced abortions, infant mortality, low birth weight, and the percentage of mothers who smoke during pregnancy.

In NC, only 55% of pregnancies resulting in live births are intended.[10] In other words, the percentage of unintended pregnancies (45%) is much higher than the NC figures for 2007 as well as the Healthy NC 2020 target of 30.9%.

From 2006-2008, the majority of mothers in NC who reported unintended pregnancies were unmarried African American women under the age of 20. While women under age 20 reported that almost 70% of their pregnancies were unintended, approximately 60% of women aged 20-24 also reported that their pregnancies were unintended. The percentages declined for the 25-44 years old women and the over-35 years old women; nevertheless, both of these age groups reported a significant number of unintended pregnancies.[11]

Locally, while Hispanic women may meet certain risk criteria, they are not eligible for all the services designed to prevent or assist a woman facing an unintended pregnancy. "Hispanic women, a large and growing ethnic minority group in the US, have an unintended birth rate over twice the national average. However, little is known about unintended birth among Hispanic immigrants."[12]

A study supported by NC Healthy Start examined minority women's views on pregnancy intention in North Carolina. It found that African American, American Indian, and Latina women think it is important to plan a pregnancy. Yet, most women do not really know how to do so. Most women who came from large families wanted smaller families of their own. The economic situation, or being able to afford children, was the main factor influencing family size for African American women, whereas Latina women stated that family size was primarily influenced by the ability to give the children more opportunities than they had, as well sufficient love and attention.

Women did not have, but wanted complete and accurate information, on all contraceptive choices. They mainly sought information from female family members (especially sisters and mothers) and friends. They also felt that it was extremely important to provide girls and young women with the information they need in order to delay pregnancy.

Both Latino and African American men wanted more children than the women did, yet women are more likely to control reproductive health decisions. Latino fathers were more likely to be present and involved than African American fathers. Partners of African American men believe that men of this race are less likely to fulfill the responsibilities of fatherhood. Men in both groups expected women to be in charge of not getting pregnant. Women in the American Indian and Latina groups also stated that men were unwilling to get vasectomies because of fear of losing their manhood.[13]

Table 43: Pregnancy, Fertility, and Abortion Rates per 1,000 Population by Race (2009): Females Aged 15-44[14]*

	Pregnancy Rate			Fertility Rate			Abortion Rate		
Residence	Total	White	Minority	Total	White	Minority	Total	White	Minority
North Carolina	78.9	74	85.4	65.1	66	62.8	13.4	7.7	21.9
Orange County	48.6	44.2	54.5	36.7	36.3	37.9	11.7	7.8	16.2

**Definitions: Pregnancy Rate refers to the number of pregnancies divided by the female population aged 15-44 multiplied times 1,000. Fertility Rate is the number of live births per 1,000 women aged 15-44 divided by the female population aged 15-44 multiplied times 1,000. The Abortion Rate is the number of reported induced (elective) abortions divided by the female population aged 15-44 multiplied times 1,000.*

The data for Orange County indicates that in 2009 there were a total of 1,717 known pregnancies in Orange County. The county fertility rate was much lower than the state rate, and was approximately the same for white and minority women. The overall pregnancy rate was considerably lower than the state average; but the pregnancy rate was higher for minority women than white women. The abortion rate in Orange County was similar to the state rate, but the rate for minorities was more than twice the white abortion rate. Approximately 400 induced abortions are reported per year in Orange County.[15]

The data indicates that Orange County had 1,297 live births in 2009. The county live birth rate was lower than the state rate; and the minority live birth rate was slightly higher than the white rate, at both the county and state levels.[16]

Primary Data: Residents' Concerns

Quantitative: Survey

The survey did not cover questions regarding reproductive care.

Qualitative: Focus Groups

Reproductive care issues were not discussed explicitly during the focus groups.

Current Initiatives and Activities

Abortion Providers

- Eastowne OB/GYN
- Planned Parenthood of Central North Carolina
- UNC Hospitals – Abortion Clinic

Vasectomy Providers

- Orange County Health Department
- Planned Parenthood of Central North Carolina (above)
- Private Urologists

Infertility Resources

- Chapel Hill Tubal Reversal Center
- North Carolina Center for Reproductive Medicine

- Orange County Health Department Pregnancy Care Management (PCM) / Pregnancy Medical Home (PMH) and Postpartum/Newborn Home Visiting Program
- UNC Reproductive Endocrinology and Infertility

Additional Family Planning Service Providers and Community Programs are, but not limited to:

- Adolescent Parenting Program (APP)
- Be Smart Family Planning Program
- Chapel Hill Carrboro City Schools - Blue Ribbon Mentor-Advocate Program
- El Centro Hispano
- Looking for Adoption in North Carolina
- Piedmont Health Services
- Planned Parenthood – De Joven a Joven program (for Latino youth)
- The Women's Center - Teen's Climb High Program
- UNC-Hospital

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The overall pregnancy rate and fertility rate for Orange County is considerably lower than the state average. The abortion rate in Orange County is similar to the state rate, with minorities having more than twice the white abortion rate.

Orange County has the lowest teen pregnancy rate in the state, yet NC has the 14th highest rate in the nation. Teen parents are more likely to live in poverty, drop out of high school, and abuse substances and there are increased health risks for both the mother and the baby.

A concern highlighted in the Community Health Survey and Focus Groups was obesity, with 62% of survey respondents reporting being overweight, obese or morbidly obese. Obesity during pregnancy increases the risk of diabetes and other adverse outcomes. Substance abuse, mental health concerns, and moderate to high stress levels were also identified as problems in both the survey and focus groups, all of which adversely impact pregnancy outcomes and the well-being of the family. Other factors brought forth in the survey and/or focus groups that negatively impact reproductive health include: violence against women, lack of access to health care, and lack of sexual health education.

When comparing the rates between whites and minorities, there are a disproportionate number of young, African American women who report unintended pregnancies. Young Hispanic women will need further monitoring, especially since they may meet certain risk criteria but may not qualify for public programs aimed at helping women prevent or cope with an unintended pregnancy. Regardless of race, ethnicity, age, or marital status, unintended pregnancy is a preventable condition and deserves adequate attention and intervention.

Addressing the needs, rights, and challenges of teen parents protects the future of multiple generations. Preventing repeat teen pregnancies is also important in that nearly 30% of teen pregnancies in NC involve teens who have already had at least one baby.

Latina teens in NC also face special challenges. Cultural variances, language barriers, and differences of opportunity are just a few of the factors that contribute to a high pregnancy rate in this population – nearly triple the state's overall rate.[17] Also, whereas less than 10% of all students reported being physically forced to have sex, nearly 20% of Latinas report this.[18]

The actions that could promote adolescent health and encourage responsible sexual behavior include the following: a) prevent teen pregnancy and unplanned pregnancy by providing young people with essential education, supporting academic achievement, encouraging parent/teen communication, promoting responsible citizenship, and building self-confidence; b) promote responsible behavior by both men and women; c) promote responsible policies in the public and private sectors; d) promote healthy adolescence through advocacy and collaboration—work with school systems, the Department of Public Instruction and legislators to ensure that students receive effective sexuality education; e) empower families, communities, and educators to help teens become healthy, contributing adults; f) train health educators and community groups in evidence-based curricula and programs; g) help parents teach their children about sexual health and healthy lifestyles; and, h) target two key vulnerable populations: young families and the state's Latina population.

In addition, the following actions could help reduce the high rates of unintended pregnancy in Orange County: a) continue development and implementation of the newly established Pregnancy Care Management Program/Pregnancy Medical Home Initiative; b) increase rates of postpartum visits to address family planning needs; c) increase the provision of contraceptive and inter-conception (spacing of children) counseling in primary care settings with both female and male patients; d) increase opportunities to reach women of all ages who are at high risk for unintended pregnancies or who may be experiencing an unintended pregnancy; e) continue development of culturally appropriate and linguistically sensitive family planning programs; f) provide information on the symptoms of depression and available resources to at-risk women and/or partners, even if the woman is not currently showing signs of depression or anxiety—information should be provided at primary care, prenatal and/or pediatric appointments; and g) provide opportunities for young girls and women of child-bearing age to make lifestyle changes, especially in regard to weight management, smoking cessation and alcohol consumption prior to becoming pregnant.

Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) and Intersex people suffer disproportionately from the adverse health effects of living in the shadow of stigma, stress, and violence, which leads to a greater need for mental health, substance use treatment, and sexual health services. Studies have shown that health disparities related to sexual orientation and gender identity are due in part to lower rates of health insurance coverage and a lack of cultural competency in the health care system. However, some clinics are starting to provide sexual and reproductive health care services specifically for lesbian, bisexual and queer women, and transgender people.

Health and Human Services (HHS) recently announced the administration's plans to begin collecting health data on LGBTQ populations in order to help researchers, policy makers, health care providers and advocates to identify and address health disparities afflicting these communities.[19]

American family structures are quite varied. The 2000 US Census reported that 5.5 million couples were living together who were not married, up from 3.2 million in 1990. Although, the majority of unmarried-partner households had partners of the opposite sex, an estimated 594,000 households reported partners of the same sex. Furthermore, there are approximately two million American children under the age of 18 who are being raised by parents in a same-sex relationship.[20]

HHS efforts will also provide guidance on the array of training and technical assistance available to state child welfare agencies to support LGBTQ youth, caregivers, and foster and adoptive parents.[21]

Additionally, in order to become parents, some members of the LGBTQ community may seek out the use of assistive reproduction techniques, including conventional in-vitro fertilization (IVF), IVF with Egg Donation and IVF with Surrogacy.

Approximately five percent of American adolescents (ages 13-18) identify as LGBTQ.[22] They may have difficulty accessing information and support services as educators, health care providers, and parents may avoid discussing the topic, leaving LGBTQ youth misinformed and unaware of important sexual and reproductive health issues.

LGBTQ youth are more likely to have had sex than their heterosexual peers, more likely to have had multiple partners, and more likely to have had sex against their will. They also have an increased risk of STIs, including HIV, and are twice as likely to have an unintended pregnancy.[23]

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6.08.b Infant Mortality and Low Birth Rate

Impact on Health and Contributing Factors

Infant mortality refers to the death of a baby in its first year of life. Infant mortality rates are the number of infant deaths for every 1,000 live births within a given timeframe, usually one year. Infant mortality is a social problem with medical consequences, and is often used as a measure of the general health of a community.

There are many risk factors associated with infant mortality. These include previous premature or low birth weight baby, less than optimal health before a woman becomes pregnant, smoking during pregnancy, exposure to secondhand smoke during pregnancy, and inadequate nutrition and insufficient intake of folic acid (a B vitamin) before and during pregnancy. Other risk factors include using street drugs and alcohol during pregnancy, baby's exposure to secondhand smoke after birth, infant sleeping on its stomach, close spacing between pregnancies, and maternal infections – including reproductive tract infections, sexually transmitted diseases and periodontal (oral) infections during pregnancy.[1]

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Reduce the infant mortality rate (per 1,000 live births).	8.2% (2008)	6.3%
Reduce the infant mortality racial disparity between whites and African Americans.	2.45% (2008)	1.92%

Secondary Data: Major Findings

Infant Mortality: Fetal and Infant Death Rates

In 2009, North Carolina's infant mortality rate was the lowest in the state's history. However, the state still exceeds the national average, with over 1,000 infant deaths in 2009.[2] The most prevalent causes of infant mortality were birth defects, prematurity, low birth weight, and Sudden Infant Death Syndrome (SIDS).[3]

The infant mortality rate in North Carolina has steadily decreased over the past three five-year periods. In 2008 the statewide infant mortality rate was 8.2 deaths per 1,000 live births. In Orange County however, there was an increase in infant mortality rate during the five-year period 2004-2008, reversing the previous downward trend for the 1994-1998 and 1999-2003 periods. The infant mortality rate in Orange County went from 5.8 in 1999-2003 to 8.2 in 2004-2008.[4]

Tables below show the number and rate of fetal and infant deaths in the five-year period from 2005 through 2009. The last of the Tables below shows the disparity that exists for Black infants in the state.

Table 44: Fetal Death Rates per 1,000 Deliveries (2005-2009)

	Total Fetal Deaths	Total Fetal Death Rate	White Fetal Deaths	White Fetal Death Rate	Minority Fetal Deaths	Minority Fetal Death Rate
North Carolina	4,296	6.7	2,250	4.9	2,046	11.2
Orange County	29	4.3	17	3.3	12	7.8

Table 45: Infant (less than 1 Year) Death Rates per 1,000 Live Births (2005-2009)

	Total Infant Deaths	Total Infant Death Rate	White Infant Deaths	White Infant Death Rate	Minority Infant Deaths	Minority Infant Death Rate
North Carolina	5,289	8.3	2,764	6	2,525	14
Orange County	46	6.9	28	5.4	18	11.8

Table 46: Black Infant (less than 1 Year) Death Rates per 1,000 Live Births (2005-2009)

	Total Births	Total Deaths	Death Rate
North Carolina	150,715	2,317	15.4
Orange County	929	17	18.3

Low Birth Weight

The percentage of low birth weight babies in Orange County is lower than the percentage for North Carolina as a whole, as shown in the Table below. However, Orange County reflects the same racial/ethnic disparity in low birth weights that the state does, although the percentage figures are slightly lower.

Table 47: Number and Percent Low Birth Weight Births by Race (2005-2009)

	Total Low Birth weight		White Low Birth weight		Minority Low Birth weight	
	Number	Percent	Number	Percent	Number	Percent
North Carolina	58,461	9.1%	33,970	7.4%	24,491	13.6%
Orange County	512	7.7%	344	6.7%	168	11%

Primary Data: Residents' Concerns

Quantitative: Survey

The survey did not cover questions regarding infant mortality and birth rate.

Qualitative: Focus Groups

Issues related to infant mortality and birth rate were not discussed explicitly during the focus groups.

Current Initiatives and Activities

- Adolescent Parenting Program
- Care Coordination for Children (CC4C)
- Children's Developmental Services Agency (CDSA)
- NC Healthy Start Foundation
- Orange County Health Department Postpartum/Newborn Home Visiting Program
- Period of Purple Crying® Program
- Pregnancy Care Management (PCM)/Pregnancy Medical Home (PMH)
- Text4baby

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Although the infant mortality rate in NC has been declining, racial and ethnic disparities in infant mortality persist. The death rate of African American babies is nearly 2.5 times the death rate of white babies. Of all the racial/ethnic disparities in the state, this disparity is the greatest.[5] Infant mortality rates are higher among infants born to mothers who are adolescents, unmarried, have lower educational levels, had a fourth or higher order birth, or did not obtain adequate prenatal care.[6] While it is difficult to fully explain the causes of all infant deaths, there are known or suspected maternal and infant health factors that contribute to infant mortality.

Much work remains in the area of education and support for parents/caregivers for making lifestyle changes that reduce harm to infants. The changes needed include stopping smoking before getting pregnant, placing infants on their backs to sleep, and using available resources to address health care needs before and during pregnancy. Other measures that would help include counseling women in attaining a healthy weight prior to getting pregnant, educating women on spacing between pregnancies, and helping women and health care providers understand the link between good oral health and perinatal health.

In addition, the following actions would help reduce infant mortality: a) increase outreach efforts to inform the community of services and resources available to women of child-bearing age and new parents; b) increase the number of women being screened for risk factors during their initial and subsequent prenatal visits; c) prioritize care/case management services to the highest risk pregnant women and infants, exploring and assisting them with barriers to adequate health care; d) continue efforts to raise awareness of SIDS, the Back to Sleep campaign and the new federal requirements regarding crib safety; e) develop and implement an education program for women of child bearing age regarding the role appropriate weight and good oral health play in having a healthy baby; and f) partner with health care providers to ensure that inter-conception care (between pregnancies) and counseling is incorporated into obstetrical care.

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6.08.c Men's Reproductive Health

Impact on Health and Contributing Factors

Historically, sexual and reproductive health issues have focused on women. However, men also require educational and counseling services in order to protect their own health and well-being, and also to prepare them to be good partners and fathers. Yet, men's sexual and reproductive health needs frequently go unaddressed, often due to a lack of awareness that such needs even exist, as well as lack of access to health care services in general.

Although sexuality education is taught to young men in school, nearly one-third have had intercourse prior to the instruction. Data indicate that young men often fail to discuss AIDS, sexually transmitted infections (STIs), or birth control with their parents. Additionally, to fill their knowledge gaps men and boys often turn to their peers, who may have inaccurate information.[1]

Typically, most men in the US begin having intercourse by age 17, and are sexually active for approximately 10 years before getting married. Approximately 25% of adolescent men begin having sex by age 15. Up to half of unmarried men report having two or more partners in the past year; and overall contraceptive use is relatively high (80% - 87%) among men of all ages.[2]

With regard to STIs, prior to ever having intercourse, men may engage in activities such as oral sex that put them at risk for STIs. Men often do not have symptoms of chlamydia and gonorrhea; therefore up to half of all cases are not reported. Rates of STIs are highest among young, poor, and minority men. Overall, one in six men has genital herpes (an incurable viral infection). Chlamydia and gonorrhea (treatable bacterial infections) are highest among young men in the early 20s. Eighty percent of those living with HIV are men.

There are racial disparities in STI rates: gonorrhea is reported 40 times as often in Black men than in white men, and 31% of Black men have genital herpes. The HIV infection rate is also higher for Hispanic than for whites, but less than that for African Americans.[3] Untreated STIs can lead to sterility, increased vulnerability to HIV infection, and transmission of infections to female partners that may affect their pregnancies, future health, and fertility.

Pregnancy – either planned or unplanned – is one potential consequence of men's sexual behavior. Men aged 25-49 years are involved in 3.7 million pregnancies in the US each year that result in 2.8 million births (over one million unplanned) and 800,000 elective abortions. Men under age 25 are involved in an additional 1.7 million pregnancies, resulting in just over one million births and 600,000 abortions. Fatherhood comes earlier for low income men, minority men, and those with less education.[4]

Healthy NC 2020 Objective

There is no Healthy NC 2020 Objective for men's reproductive health.

Secondary Data: Major Findings

In North Carolina in 2007, syphilis rates in men increased by 31%, and chlamydia rates increased by 22%.[5]

Primary Data: Residents' Concerns

Quantitative: Survey

The survey did not cover questions regarding men's reproductive health.

Qualitative: Focus Groups

Issues related to men's reproductive health were not discussed explicitly during the focus groups.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Various factors contribute to lack of awareness about men's sexual and reproductive health needs. Men often lack access to health care; and family planning and reproductive services often target women. Also, sexuality education is often too little and too late; and there is not a male-equivalent of the obstetrician/gynecologist.

Men's reproductive health goals should include the following: prevention of unintended pregnancies; protection of themselves and their partners against STIs, including HIV; screening and treatment for STIs; fathering children when desired; overcoming fertility problems; avoiding violent and coercive relationships; engaging in sexual activity that is respectful of themselves and their partners; and being part of strong, fulfilling relationships.[6]

The following actions are recommended for improving men's reproductive health and behavior: a) policymakers, advocates, providers, and men themselves should be made aware of the need for services and work to incorporate men's sexual and reproductive health needs into health care regimens; b) younger men need counseling, education, information, and skill-building services to help them make informed decisions, take responsibility for their actions, and effectively communicate; c) older men may need more medical reproductive health care such as infertility services, vasectomy, and reproductive tract disease care;[7] and d) sexual and reproductive health topics to be addressed may include men's sexual behavior and risk for/prevention of STIs, as well as pregnancy, childbearing, and abortion.

[1] Sonfield, A. (2002). Guttmacher Report on Public Policy.. Looking at Men's Sexual and Reproductive Health Needs. Retrieved from http://www.guttmacher.org/pubs/tgr/05/2/gr050207.html
[2] Sonfield, A. (2002). Guttmacher Report on Public Policy.. Looking at Men's Sexual and Reproductive Health Needs. Retrieved from http://www.guttmacher.org/pubs/tgr/05/2/gr050207.html
[3] NC Minority Health facts: Hispanics/Latinos July 2010
[4] Sonfield, A. (2002). Guttmacher Report on Public Policy.. Looking at Men's Sexual and Reproductive Health Needs. Retrieved from http://www.guttmacher.org/pubs/tgr/05/2/gr050207.html
[5] Overall Trends. (2007). Community Voices: Healthcare for the Underserved.
[6] Overall Trends. (2007). Community Voices: Healthcare for the Underserved.
[7] Overall Trends. (2007). Community Voices: Healthcare for the Underserved.

Chapter VII Communicable Disease

Communicable diseases spread to humans from other humans, animals, insects, and the environment.

Communicable diseases impact morbidity of residents throughout Orange County and in some cases may lead to death. Additionally, the effects of time lost from work or school can impact an individual's health and well-being. Broader public health and community-wide concerns include the impact and expense of large-scale outbreaks of communicable diseases in the community.

The reported communicable diseases and conditions in Orange County are summarized in the Table below, for the period 2007-2010.

Table 48: Reported Communicable Diseases and Conditions in Orange County by Year, 2007-2010[1]

	Number of Cases/Number of Contacts			
Disease/Condition	2007	2008	2009	2010
Campylobacter	22/0	14/14	16/15	11/17
CJD	0	0	1/0	0/1
Clostridium Difficile	0	0	1/0	0
Cryptosporidium	8/0	1/0	1/1	2/4
Cyclosporiasis	0	--	0	--
Dengue	1/0	2/0	0	2/0
E.coli (Shiga-toxin producing)	11/201	6/2	6/5	1/3
Ehrlichiosos (granulocytic)	0	1/0	0	4/0
Ehrlichiosos (monocytic)	4/0	7/0	16/0	9/0
Encephalitis (arboviral)	0	1/0	0	0
Encephalitis (viral)	0	1/0	0	0
Foodborne Other/unknown	0	1/0	4/0	0
Group A Strep (invasive)	4/0	3/0	1/1	1/0
Haemophilus influenza, invasive	1/0	1/0	3/3	2/0
Hepatitis A	2/0	4/5	0	1/4
Hepatitis B (Acute)	2/0	5/5	4/2	1/1
Hepatitis B (Chronic)	49/0	32/0	41/2	17/0
Hepatitis B (Perinatal)	0/1	1/0	0	3/2
Hepatitis C (Acute)	0	1/1	2/0	1/5
H1N1 Flu (while reportable)	--	--	48/33	--
Influenza Death (< 18 yo)	0	--	1/0	0
Leptosporiasis	0	--	0	1/0
Lyme	5/0	11/0	62/--	11/0
Malaria	1/0	1/0	1/--	0
Measles	2/0	1/0	0/2	0
Meningococcal Disease	0	1/4	1/25	0
Meningitis (Pneumococcal)	0	2/0	0	0
MRSA outbreaks	--	4/0	2/0	0
Mumps	0	0	3/4	6/58
Pertussis	1/0	17/377	32/64 + 8 schools & 2 day cares	2/51
Plague	0	0	0/1	0
Q Fever	0	0	0	1/0
RMSF	17/0	66/0	43/--	19/0
Rabies (Animal)	--/358	--/370	--/268	--/303
Salmonellosis	54/0	19/43	17/29	25/50
Shigellosis	10/0	3/10	0	3/1
Vibrio	0	--	0	1/5

Current Initiatives and Activities

Medical providers and laboratories are required by law to report communicable diseases to the local Health Department. There are 75 reportable diseases/conditions in North Carolina. Outbreaks, a higher than usual occurrence of a particular disease or condition, are also reportable, though individual cases of the disease are not required to be reported. The specified length of time within which the condition must be reported depends on the severity and communicability of the condition. Some are to be reported within 24 hours, some within seven days. Health Directors are responsible for assuring that investigation and follow-up occur for each reported disease or condition. The urgency of the follow-up varies according to the disease, as does the extent of follow-up required.

In summer 2008, an electronic disease reporting system, known as the North Carolina Electronic Disease Surveillance System (NCEDSS), began to be used in North Carolina. Electronic reporting allows local health departments to receive reports more efficiently than via paper and phone reporting. It also allows for more timely investigation and follow-up.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Communicable disease investigation and follow-up is an ongoing core function of public health. Having a major university and a major medical center in the southern part of the county, with the northern part of the county being more rural, contributes to disparities and unmet needs. Public transportation is much more widely available in the southern end of the county, but negotiating the bus system can be time consuming and challenging, especially for non-English speakers. Most individuals live in apartment complexes where there is not a direct route to the Health Department, and they must navigate transfers and appropriately time their routes in order to arrive on time to appointments. Although public transportation options between Hillsborough and Chapel Hill are improving, there are still large areas of the county with no access to public transportation. Persons for whom transportation is a challenge are less likely to be diagnosed promptly, and are less likely to be able to comply with certain follow-up recommendations due to more limited access to care.

The population of Orange County is diverse, with many residents speaking limited or no English. This is especially true in the southern part of the county. The number of different languages spoken makes access to service more challenging.

Refugees are individuals fleeing from persecution in their homelands who have been designated for resettlement elsewhere in the world. Local health departments are required to provide communicable disease screenings to all refugees within 30 days of arrival in their counties. Refugees resettling in the United States carry a significant burden of infectious diseases as a result of exposures in their countries of origin and the circumstances of their migration. Overseas screening is required before entry, but it incompletely assesses infectious diseases in refugees. Domestic health assessment has the potential to provide more comprehensive assessment for infectious diseases. Screening protocols ideally should test for tuberculosis, hepatitis B, and intestinal and other parasites, and should include mechanisms for providing or updating immunizations. Testing for other infectious diseases, including malaria, hepatitis C, human immunodeficiency virus, and sexually transmitted diseases can be performed on the basis of clinical signs and symptoms. Children 16 and younger should also have a blood lead evaluation. As a Civil Surgeon for refugee immunizations only, the Health Department also facilitates the completion of I-693 forms, providing proof of immunizations or immunity for refugees applying for permanent residency in the United States. This is a service that most local health departments perform.

An increase in cases of TB and hepatitis B is often noted during years in which there are large numbers of refugees arriving from high-risk countries.

The number of refugees who have settled in Orange County during the past four years is given in theTable below. The number has decreased dramatically since a peak of 210 in 2008. This may be related to the economic downtown in 2008, for the number of refugee arrivals in a given county is often influenced by the availability of appropriate job opportunities in the area.

Table 49: Refugee Arrivals in Orange County, by Year, 2007-2010[2]

	2007	2008	2009	2010
Refugee arrivals in Orange County	158	210	108	51

In order to better serve this population and all residents of Orange County, and to increase access to communicable disease screenings and treatment, it is recommended that the County explores more extensive transportation options into the rural parts of the county; continues to offer medical staff the opportunity to learn other languages; and increases cultural awareness of immigrant and refugee populations, in particular.

[1] Community Health Services Section, Orange County Health Department, May, 2011
[2] Community Health Services Section, Orange County Health Department, May, 2011

Section 7.01 Vaccine-Preventable Diseases

Vaccine-preventable diseases are diseases that can usually be prevented by obtaining required or recommended vaccinations prior to exposure to the illness. Immunizations are widely recognized as one of the most important public health strategies ever employed. With the development and improvement of vaccines, vaccine-preventable disease rates have declined dramatically. A notable achievement has been the elimination of smallpox from the world due to successful vaccination efforts. For more than 50 years, there have been vaccines routinely required or recommended to prevent a number of childhood illnesses.

Children who have not been appropriately vaccinated are at risk of serious diseases that are still present in the population. Vaccines required by North Carolina Immunization Law for day care and school entry provide protection against 10 diseases. These are diphtheria, tetanus, pertussis (whooping cough), polio, measles, mumps, rubella, haemophilus influenza type B (Hib), hepatitis B and varicella (chicken pox). While valid medical and religious exceptions are recognized and allowed, the vast majority of children in NC are fully vaccinated against these diseases within 30 days of entering school or childcare. The requirement for vaccination against chickenpox only applies to children born on or after April 1, 2001.

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Increase the percentage of children aged 19-35 months who receive the recommended vaccines	77.3% (2007)	91.3%

Current Initiatives and Activities

Historically, all required immunizations and many recommended immunizations have been free in NC for anyone 18 years of age and younger. Though recent budget challenges have led to some restrictions on who can receive free vaccinations, the *Vaccines for Children* program provides free vaccines for children (up to 18 years) who are uninsured or are underinsured (i.e., vaccines not covered by insurance); children who are Medicaid eligible; unaccompanied minors without proof of insurance presenting to Title X clinics; and children who are Native Americans or Alaskan Natives.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Children with insurance that requires a co-pay or whose insurance only covers partial cost are no longer eligible for free vaccines. Medical practices that do not bill specific insurance companies must require payment from the parent, and then the parent must request reimbursement.

Efforts to increase parental awareness and knowledge of the continued need for immunizations in older children are needed. More diligent tracking of compliance with recommended vaccines in older children and adolescents is also needed.

7.01.a Influenza and H1N1

Impact on Health and Contributing Factors

Among older adults, flu and pneumonia are the leading vaccine-preventable diseases.

Adults age 65+ are at greater risk of pneumonia and influenza than the rest of the population, as are those with chronic lung disease, heart disease, and compromised immune systems. Health care workers and residents of nursing homes and long-term care facilities are also at greater risk. In addition, new immigrants are at risk of vaccine-preventable disease if they have not received vaccinations in their home countries.

Flu and pneumonia vaccine campaigns are implemented annually in an effort to decrease morbidity and mortality from these illnesses. Flu vaccine components vary from year-to-year, based on the strains projected to be the most predominant for the upcoming season. Historically, older adults and those with certain underlying medical problems were primarily targeted for flu vaccines due to the increased likelihood of complications in these groups. In the last four to five years, an increased emphasis on vaccinating healthy children, adolescents, and adults has occurred throughout NC.

Healthy NC 2020 Objectives

Objective	Current (NC)	2020 Target
Reduce the pneumonia and influenza mortality rate (per 100,000 population)	19.5 (2008)	13.5

Influenza and pneumonia was the sixth leading cause of death in Orange County from 2005-2009. See Chapter 4, Section 1 for more details.

Primary Data: Residents' Concerns

Quantitative: Survey

Survey data from Orange County residents indicated that 71% of those <25 years of age, 55% of those 25-50 years of age, and 39% of those over 50 years reported having had flu vaccine within the last year.

Cost was the predominant reason given for not being vaccinated. Sixty-one percent of those having the vaccine reported that they received it from their primary care provider; 15% reported receipt through their workplace.

Qualitative: Focus Groups

Vaccine-preventable diseases were not discussed in the focus groups.

Current Initiatives and Activities

The 2009-2010 flu season was unique because it was the year of Pandemic H1N1 Flu. North Carolina's first case was recorded in April 2009 and Orange County's first case was identified in May 2009. Planning for addressing the possible epidemic was challenging because it was not known when and how much vaccine would arrive, and what its formulation would be. Hence, in the early weeks, demand far-exceeded supply. To reserve the vaccine for those expected to be the most-seriously affected, restrictions had to be placed on who could be vaccinated initially, and strict control measures were put in place to help prevent the spread of the Flu.

School nurses were deeply involved in education, prevention, and control measures. Local health departments coordinated vaccine ordering and distribution to county medical providers in the early weeks. Antiviral distribution was also managed initially through health departments. Testing had to be developed for the specific strain, and interpretation of results was challenging in the early weeks. Initially, H1N1 cases were reportable; so all cases and their contacts had to be interviewed, were provided treatment as required, and were reported to the NC Communicable Disease Branch. When the seasonal flu vaccination season began, providers were vaccinating against both H1N1 and seasonal flu. Most flu during this year ended up being H1N1; there were few seasonal flu cases.

The Orange County Health Department gave more than 9100 doses of H1N1 vaccine, and coordinated the transfer of 4350 doses to other providers. The Orange County Health Department also gave 2552 doses of seasonal flu vaccine (in comparison with 1800-2000 doses given during a normal year). The number of flu shots given by the Orange County Health Department increased by almost 600% over those given during a normal year.[1] Federal money was used to allow the hiring of temporary staff to assist with flu vaccinations. Luckily, the disease proved to be less severe than initially feared. With these H1N1 funds, special outreach to immigrant and refugee populations was expanded, in locations such as a Latino Health Fair and an apartment complex with large immigrant and refugee populations.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The public health system works diligently to increase the number of persons who have received flu and pneumonia vaccinations. The Orange County Health Department provides influenza vaccinations by offering flu clinics throughout the county at various community settings including rural churches and the Health Department. Additionally, in an effort to facilitate the receipt of influenza vaccination for senior citizens, for whom the risk of complications from influenza illness is

greatest, several clinics are held in the Orange County Senior Centers each year. Private physicians and other clinics also provide the vaccinations each autumn in an effort to immunize as many residents as possible, especially those at high-risk against these illnesses. Many pharmacies, grocery stores, and "minute clinics" in retail shops now offer flu shots, making immunization against preventable illnesses more accessible.

With new illnesses emerging, such as H1N1, it is vital that people understand the importance of receiving vaccinations against influenza and pneumonia.

As Orange County continues to grow and diversify, it will be important to educate and provide culturally and linguistically appropriate assistance to new residents about how and where to access immunizations. Increasing the Health Department's ability to receive reimbursement from a variety of immunization companies would improve access for some residents.

[1] Community Health Services Section, Orange County Health Department, May, 2011

Section 7.02 Infectious Diseases (Not Sexually Transmitted)

Impact on Health and Contributing Factors

Substance abuse, including use of non-sterile needles for drug injection and unsafe sexual practices, may contribute to the spread of Hepatitis B.

The influx of foreign-born individuals from Tuberculosis (TB) endemic countries has contributed to the rise in cases of TB disease in NC. Orange County TB data from 2007-2010 is summarized in the Table below.

Table 50: Reported Tuberculosis in Orange County, by Year, 2007-2010[1]

	Number of Cases/Number of Contacts			
Disease/Condition	2007	2008	2009	2010
LTBI	85/--	72/--	65/--	41/--
TB	27/455	16/99	11/5	11/9
MOTT*	38/--	12/0	22/--	12/--

*Mycobacterium other than TB (MOTT) cases are often suspected of being TB until lab tests can prove otherwise. Patients with MOTT are often started on TB medication regimens until their diagnosis is confirmed and TB is ruled out.

Current Initiatives and Activities

Tuberculosis cases, suspects, and contacts are followed-up closely due to the potential for large numbers of persons who can be infected by anyone with active TB disease, and also due to the potential severity of TB. Active TB is treated with multiple drugs taken over a six to nine month period of time. Medications for TB are usually administered daily or twice-weekly. Patients with active TB disease must have each dose of medication used to treat their condition supervised by a medical provider, usually a Health Department staff person. Potential contacts with a person with an infectious TB test must be followed for three months from the date of their last possible exposure.

Many persons are infected with TB but do not have active tuberculosis. These persons are not contagious, and are said to have "latent TB infection" (LTBI). Preventative medication taken for nine

months is recommended for individuals with latent TB infection to prevent their infection from developing into active disease. Treatment for both active TB and LTBI is provided at no charge through local health departments.

[1] Community Health Services Section, Orange County Health Department, May, 2011

Section 7.03 Sexually Transmitted Infections

Impact on Health and Contributing Factors

In 2009, 1,710 new individuals with Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome disease (HIV/AIDS) were diagnosed and reported in North Carolina. These cases were added to the estimated 35,000 persons living with HIV in the state, including those unaware of their HIV status. The estimated lifetime medical cost for a newly HIV-infected person is about $367,000 (in 2009 dollars). This burden of disease and expense for treating it illustrate the critical need for adequate funding of HIV prevention and care efforts in the state. Because infected persons who receive proper care are less likely to transmit the disease, each infection prevented saves lives and dollars.

Many persons newly diagnosed with HIV are also diagnosed with AIDS at the same time or within six months of testing positive for the virus. These "late testers" represented about 28% of all new HIV disease reports in NC in 2009. This further supports the need for HIV testing to be made an essential part of routine health care for sexually active persons. Accordingly, the Division of Public Health has launched several initiatives aimed at increasing HIV testing in venues such as jails, prisons, STD clinics, emergency departments, and community health centers. In 2009, the NC State Laboratory of Public Health (NCSLPH) performed about 231,353 HIV tests, which is an 8% increase from the 214,648 tests performed in 2008. Testing through the NCSLPH includes testing from most of these special initiatives and local health departments, and has helped identify at least 30 percent of all new HIV cases each year.

As in the case of many other diseases, HIV is disproportionately distributed among the state's economically disadvantaged and racial and ethnic population groups. It is important to recognize these differences so that HIV prevention and care efforts can be better directed.

The 2009 adult and adolescent rate of new HIV diagnoses for non-Hispanic Blacks (69.7 per 100,000) was more than nine times the rate for whites (7.7 per 100,000); and the rate of new diagnoses for Latinos (28.8 per 100,000) was almost four times that for whites. The rate for Native Americans (11.5 per 100,000) was just slightly higher than for whites. The highest rate of new HIV cases (106.3 per 100,000) was found among adult and adolescent Black males.[1] The largest disparity is between adult and adolescent white and Black females: the HIV rate for Black females (38.7 per 100,000) was about 14 times higher than that for white non-Hispanic females (2.7 per 100,000). The ratio of male-to-female HIV disease cases diagnosed has risen from 2.7 in 2005 to 2.9 in 2009. Much of the increase in HIV disease cases over the past few years is attributed to more male HIV disease cases being diagnosed; the number of cases for females has remained relatively constant.

Familiarity with gender and racial/ethnic differences is important, but understanding the behavioral risk is also critical. Risk of HIV transmission is very different for males and females. In 2009, 72% of new adult and adolescent HIV disease cases for males were attributed to men who have sex with

men (MSM), 23% to heterosexual sex, 3% to injecting drug use (IDU), and 2% to MSM who also inject drugs (MSM/IDU). For adult and adolescent females, heterosexual sex accounted for 96% of HIV disease cases in 2009.

The proportion of HIV reports among MSM has increased over the past few years for all racial/ethnic groups. In 2009, MSM accounted for 88% of white non-Hispanic male HIV reports, 67% of Black non-Hispanic male reports, and 64% of reports for other minority males. The state's Partner Counseling and Referral Services program showed an increasing proportion of men who indicated MSM risk during follow-up of both HIV and syphilis cases. In 2009, 64% of interviewed males with early syphilis and 56% of those interviewed with HIV indicated MSM risk. According to Counseling, Testing, and Referral system data, persons reporting MSM risk have consistently had the highest percent of HIV positive test results.

Injecting drug use (including MSM/IDU) accounted for about 5% of male adult and adolescent HIV disease cases in 2009, and about 4% of female cases. Prevention activities aimed at reducing HIV transmission through injecting drug use remains very important to comprehensive HIV prevention strategies. There is substantial evidence that needle exchange programs are effective in reducing HIV risk behavior and HIV seroconversion among injecting drug users. About 15% of cases with HIV disease had IDU as their identified risk.

Heterosexual sex as a primary risk accounts for 42% of all (male and female) 2009 adult and adolescent HIV disease reports, and was the principal risk for females (96%), especially younger females (100% of likely female adolescent exposures). Heterosexual HIV disease cases for 2009 were higher among minority males (29%–31%) than among white males (7%). Indications of heterosexual risk-taking behavior can be found in the high rates for other sexually transmitted infections.

Trends in new HIV disease cases indicate prevention needs; trends in new AIDS cases and estimates of persons living with HIV or AIDS can indicate service and care needs. Of the people who have been reported and were listed as living with HIV/AIDS, 70% were males and 30% were females. With respect to race/ethnicity, 67% were Black non-Hispanic, 26% were white non-Hispanic, and 5% were Hispanic.

In 2009, 957 new AIDS cases were diagnosed and reported in North Carolina, up slightly from the previous year (N=928, 2008). According to the CDC, North Carolina ranked 10th among all states and the District of Columbia in the number of new AIDS cases diagnosed in 2008; and is ranked 11th in the nation for estimated number of persons living with an AIDS diagnosis.

From July 1, 2008 through June 30, 2009, the Ryan White Part B program served 7,480 total unduplicated clients. Additionally, from April 1, 2009 to March 31, 2010, 6,321 individuals were enrolled in the NC AIDS Drug Assistance Program (ADAP). The demographics of Ryan White Part B clients and ADAP enrollees were similar to the observed demographics of persons living in North Carolina with HIV/AIDS. In calendar year 2009, an estimated 24% of persons living with HIV/AIDS were estimated to be not "in care." The estimated number of persons living with HIV with unmet need (or not in care) was 26%, as compared with 21% of persons living with AIDS.

In addition to HIV and AIDS, ten other sexually transmitted conditions and diseases (STDs) are reportable to the NC Department of Health and Human Services (NCDHHS). Chlamydia was the most prevalent STD, with 43,734 cases reported in 2009. Despite improvements in recent years, severe

racial disparities are noted for gonorrhea in North Carolina (14,811 reported cases in 2009). Among males, the rate for Blacks in 2009 was over 29 times that for whites (non-Hispanic). Disparities among females were less severe than for males, with the gonorrhea rate 14 times higher for Black females than for white females in 2009.

Since 2003, early syphilis rates in North Carolina have resumed a gradual annual increase to a rate of 5.6 per 100,000 in 2008. In 2009, however, North Carolina experienced a significant outbreak of new syphilis cases. Nine hundred thirty seven (N=937) new cases of early syphilis (primary, secondary and early latent) were reported. These new cases represented an 84% increase in cases over the 509 cases reported in 2008. Increases in morbidity were noted for almost all demographic groups as well as among persons already infected with HIV. This increase in syphilis is cause for concern because infections increase the risk for contracting HIV, and high STD rates are markers for high-risk sexual practices.[2]

Healthy NC 2020 Objectives

Objective	Current (NC)	2020 Target
Reduce the percentage of positive results among individuals aged 15 to 24 tested for chlamydia.	9.7% (2009)	8.7%
Reduce the rate of new HIV infection diagnoses (per 100,000 population).	24.7 (2008)	22.2

Besides these Healthy NC 2020 Objectives, the NC Communicable Disease Branch has developed additional objectives related to HIV. These are to increase and improve referrals to care for persons newly diagnosed with HIV; ensure that those infected with HIV remain in care; and increase HIV testing for all residents.

According to the Table below, the number of Gonorrhea cases in Orange County has remained fairly stable over the past four years, and has ranged from a low of 77 cases in 2008 to a high of 96 cases in 2007. The number of Chlamydia cases reported in Orange County has gone up substantially in recent years, from 233 cases in 2007 to 356 cases in 2010.[3]

Table 51: Sexually Transmitted Disease Cases in Orange County by year, 2007-2010[4]

	2007	2008	2009	2010
Gonorrhea cases	96	77	82	95
Chlamydia cases	233	327	379	356
Syphilis cases	8	3	9	1
HIV cases diagnosed in OC	19	14	9	9
Newly diagnosed HIV cases among OC residents[5,6]	82	72	12	9
AIDS* cases diagnosed in OC	3	6	1	1
AIDS cases among OC residents[7,8]	3	35/30	5	1

*Persons with AIDS were often reported previously with HIV infection. The AIDS diagnosis means that the person progressed from being infected with HIV to having full-blown AIDS. In NC, about one-fourth to one-third of the new HIV disease reports represent persons who are initially diagnosed with HIV infection and AIDS at or very near the same time (concurrent).

The number of newly diagnosed HIV cases among county residents has decreased over the years, with 82 residents newly diagnosed with HIV in 2007 and only nine residents diagnosed with HIV in 2010 (see Table above).

Current Initiatives and Activities

In accordance with the objectives set by NC's Communicable Disease Branch, county health staff make concerted efforts to increase HIV testing for all residents, make referrals for persons newly diagnosed with HIV, and ensure that HIV-infected persons remain in care. These efforts will be continued in the coming years so that the currently-low rate of HIV cases can be maintained or reduced even further.

North Carolina' rules regarding testing for HIV/AIDS changed effective April 1, 2008. Some of these changes, which have potentially impacted the numbers of cases diagnosed, are: 1) the requirement for pre-test counseling before testing for HIV was dropped, making testing a much quicker process; and 2) the need for a specific consent form for HIV testing was dropped. This means that when receiving other lab testing as part of a medical evaluation, HIV is now a more- routinely included test. These changes are likely resulting in more people being tested for HIV.

Also, as noted above, the NC STD surveillance data system has undergone extensive changes in 2008, as North Carolina has implemented NC EDSS (NC Electronic Disease Surveillance System). Thus 2008 data may include cases that are not newly-diagnosed but are newly-reported due to reporting changes.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The highest point in the HIV epidemic occurred in 1992 in North Carolina and then moderated from 1995 to 2009. The number of HIV disease cases diagnosed in 1992 represented a time when HIV incidence was likely at its peak. From 1995 to 2009, the epidemic was relatively stable; however, changes in reporting practices contributed to the fluctuations during this period, especially for 2002. The increase in cases in 2007 and 2008 was at least partially a result of efforts to increase HIV testing, like the *Get Real. Get Tested* campaign, and might not necessarily represent new incidence.

[1] N.C. Epidemiologic Profile for HIV/STD Prevention & Care Planning. Executive Summary N.C. DHHS iv Communicable Disease. December 2010. http://epi.publichealth.nc.gov/hiv/epiprofile1210/Epi_Profile_2010.pdf

[2] N.C. Epidemiologic Profile for HIV/STD Prevention & Care Planning. Executive Summary N.C. DHHS iv Communicable Disease. December 2010. http://epi.publichealth.nc.gov/hiv/epiprofile1210/Executive_summary.pdf

[3] North Carolina Communicable Disease Surveillance Unit. HIV/STD Quarterly Surveillance Report: Vol. 2010, No. 4. December 2010. http://epi.publichealth.nc.gov/hiv/pdf/vol10no4.pdf

[4] NC HIV/STD Prevention and Care Section. NC Division of Public Health. NC HIV/STD Quarterly Surveillance Report. 2011. http://www.epi.state.nc.us/epi/hiv/stats.html.

[5] North Carolina Communicable Disease Surveillance Unit. HIV/STD Quarterly Surveillance Report: Vol. 2008, No. 4 http://epi.publichealth.nc.gov/hiv/pdf/vol08no4.pdf

[6] North Carolina Communicable Disease Surveillance Unit. HIV/STD Quarterly Surveillance Report: Vol. 2010, No. 4. December 2010. http://epi.publichealth.nc.gov/hiv/pdf/vol10no4.pdf

[7] North Carolina Communicable Disease Surveillance Unit. HIV/STD Quarterly Surveillance Report: Vol. 2008, No. 4 http://epi.publichealth.nc.gov/hiv/pdf/vol08no4.pdf

[8] North Carolina Communicable Disease Surveillance Unit. HIV/STD Quarterly Surveillance Report: Vol. 2010, No. 4. December 2010. http://epi.publichealth.nc.gov/hiv/pdf/vol10no4.pdf

Section 7.04 Outbreaks

Notable Communicable Disease Events/Outbreaks

Below are notable communicable disease events and outbreaks between 2007 and 2010. [1]

2007

- Shiga toxin producing *E.coli* in one child care center involving numerous contacts
- Shiga toxin producing *E.coli* in sports team with multiple team and social events involving lots of contacts
- Cryptosporidium concern at aquatic facility
- Large TB investigation and follow-up in detention facility involving numerous contacts and a very mobile population
- Active TB in UNC student
- MRSA concerns at UNC fraternity

2008

- Pertussis outbreak involving two schools
- Continued TB investigation in detention facility and related facilities
- TB case in high school with multiple contacts
- Active TB in UNC student

2009

- Follow-up of nationwide recall of salmonella-infected peanut butter
- Norovirus-like outbreak in dorm
- Lead investigation following possible exposure in child care center
- Norovirus-like outbreak in fraternity
- 18 cases of pertussis and 706 contacts involving 11 schools and three childcare centers
- Norovirus outbreak on long term care facility
- Norovirus-like outbreak in a workplace

2010

- Active TB in UNC student

Depending on the illness and the number of persons involved, outbreak response can become extremely costly, not only to the involved persons and groups, but also for the Health Department and other agencies or facilities involved.

[1] Community Health Services Section, Orange County Health Department, May, 2011

7.04.a Foodborne Illness

Impact on Health and Contributing Factors

Foodborne diseases are caused by the improper processing, preparation, or storage of foods. Lack of appropriate hand washing and food preparation techniques may contribute to food-borne illnesses both at home and in public eating establishments. The ingestion of pathogens in food can cause severe illness and death. While many think of only gastro-intestinal problems related to food borne illnesses, serious consequences such as reactive arthritis and neurological damage may result from

some foodborne diseases. Food handling practices, infected food-handlers, improper food holding temperatures, hand washing frequency, cross contamination of food contact surfaces, presence of rodents and insects, and improper sanitation of food contact surfaces can all result in foodborne illness.[1]

Healthy NC 2020 Focus Areas

Objective	Current (NC)	2020 Target
Decrease the average number of critical violations per restaurant/food stand.	6.1 (2009)	5.5

Primary Data: Residents' Concerns

Quantitative: Survey

When asked which environmental issues stand out as significant problems in Orange County, 5% of survey respondents answered food safety (restaurant cleanliness, safety of produce and other foods).

Qualitative: Focus Groups

Outbreaks of foodborne diseases were not discussed during focus group conversations.

Current Initiatives and Activities

Inspections of restaurants and food stands are a critical preventative measure in communicable disease control. Inspections assure that certain standards are met and food service establishments are complying with necessary measures to prevent food-borne illnesses. A critical violation at a restaurant or food stand is one that would result in enforcement action by local Environmental Health staff if not corrected within 10 days. In Orange County, 90-95% of critical violations are resolved within the 10 days allowed.

Current inspection information is available on the Orange County Health Department website at https://public.cdpehs.com/NCENVPBL/establishment/ShowEstablishmentTablePage.aspx?ESTTST_CTY=68.

[1] Healthy Carolinians 2010, North Carolinas Plan for Health and Safety, Page 92

Section 7.05 Public Health Emergency Preparedness

Impact on Health and Contributing Factors

After September 11, 2001, as terrorism in general, and bioterrorism as a specific possibility became a national priority, and US public health officials placed more attention on public health emergency preparedness.

Public health agencies at the federal, state, and local levels evaluated existing and developed new emergency response plans. The North Carolina Department of Public Health responded by developing the Office of Public Health Preparedness and Response (PHP&R) in 2002, which developed seven Public Health Regional Surveillance Teams (PHRSTs) to help local health departments plan for public health emergencies.[1] Local health departments across the State (including Orange County) received grant funding from State and Federal sources to develop and/or

improve emergency response plans, emergency preparedness education programs, volunteer cadres for surge capacity, and response exercises.

While Orange County does not have a major densely populated city (considered most vulnerable to attack) within its limits, its position as an academic community increases the threat and vulnerability for terrorism. The county also has research, medical, and sporting facilities that could be targeted by terrorists. The county's farming community makes agricultural bioterrorism a possible threat and the proximity to Research Triangle Park also creates a risk for the county.

Public health preparedness also extends to natural disasters. According to Federal Emergency Management Agency (FEMA), there have been twelve major disaster declarations in North Carolina within the past ten years.[2] NC has experienced tornadoes, hurricanes, severe winter storms (snow and ice), tropical storms, and flooding. Severe storms (tropical, winter, and ice) have been the most common natural disaster for North Carolina with eight storms declared between 2000 and 2010.

Primary data: Residents' concerns

Quantitative: Survey

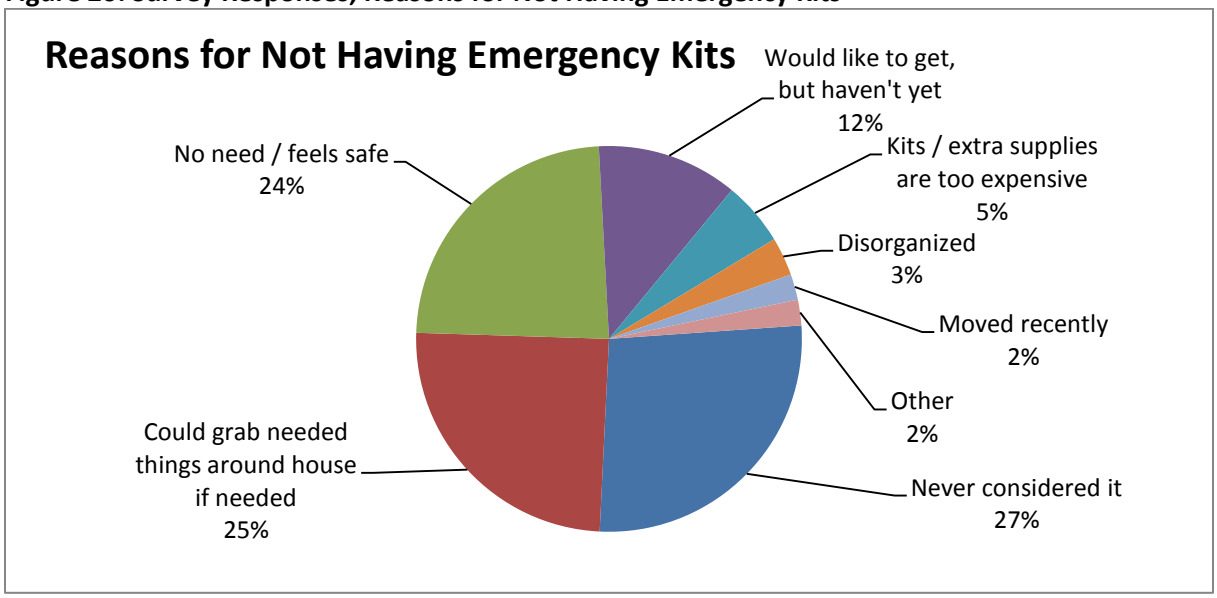
Responses to various preparedness related survey questions are included below.

Ninety-five percent of those surveyed had smoke detectors. Thirty-five percent of those surveyed have carbon monoxide (CO) detectors, 56% do not, and 9% do not know whether their house has a CO detector.

Forty-nine percent of those surveyed had a basic emergency supply kit. Of the 54 people surveyed that had emergency kits: 31% had supplies for 1-3 days; 41% for 4-7 days; 15% for 8-14 days; 4% for 2 weeks to 1 month; and 9% had supplies for more than 1 month.

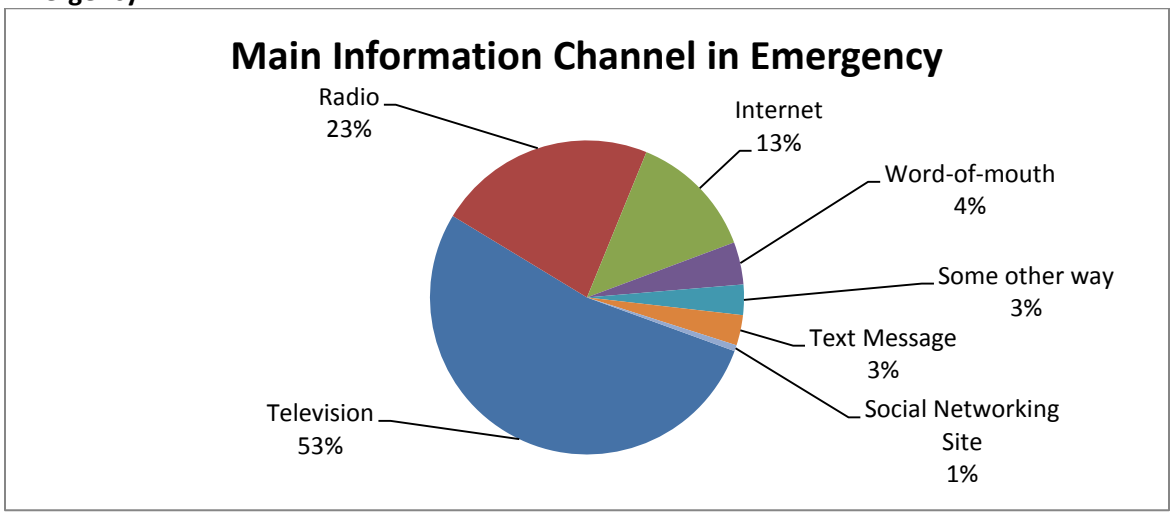
Of those surveyed who listed reasons for their household not having a basic emergency supply kit: 27% never considered it; 25% thought they could grab needed things around house, if needed, without a dedicated kit; 24% thought there was no need or felt safe; 12% would like to, but had not put one together yet; 5% thought kits and extra supplies were too expensive; 3% felt they were too disorganized; 2% moved recently; and 2% listed other reasons.

Figure 26: Survey Responses, Reasons for Not Having Emergency Kits



In the case of a large-scale disaster, 53% of those surveyed would get information from authorities in an emergency from television, 23% from radio, 13% from the internet, 4% from neighbors or word-of-mouth, 3% from text message, and 1% from a social networking site. Other responses included: Battery operated radio, radio, weather radio, battery operated scanner, and campus siren.

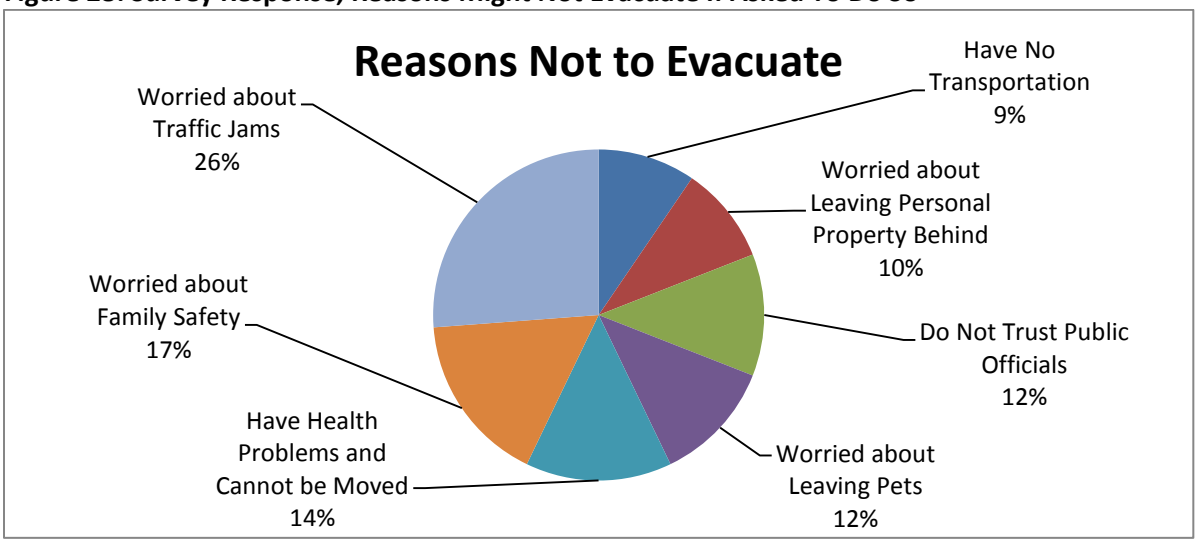
Figure 27: Survey Response, Main Way of Getting Information from Authorities in a Large-Scale Emergency



Sixty-five percent of those surveyed would definitely leave if public authorities announced a mandatory evacuation from their neighborhood or community due to a large-scale disaster or emergency; 21% would probably leave; 12% might leave; and 3% would definitely not evacuate. Men were less likely to "definitely" leave than women (57% vs. 72%) and more likely to only "probably" leave (26% vs. 16%).

Of the 42 respondents that said that they might not evacuate if asked to do so, 26% worried about traffic jams and not being able to get out; 17% worried about family safety; 14% had health problems and could not be moved; 12% worried about leaving pets; 12% did not trust public officials; 10% worried about leaving behind personal property; and 9% had no transportation.

Figure 28: Survey Response, Reasons Might Not Evacuate If Asked To Do So



Current Initiatives and Activities

The 2007 Orange County Community Health Assessment had indicated a need for increased community education in public health preparedness and in knowing how to prepare for public health emergencies. An increased awareness of the need to prepare is also critical.

The goal of Orange County emergency preparedness efforts is to create an informed and well-prepared community. North Carolina provides funding to support local county preparedness efforts. Certain requirements come with the funding. These are to (a) develop a comprehensive Continuity of Operations Plan (COOP) plan to assure the continuation of necessary functions in time of public health emergencies; (b) develop a Pandemic Influenza Plan (PIP) in order to be prepared in the event of a flu or other communicable disease outbreak or similar event; and (c) develop a Strategic National Stockpile Plan and Point of Dispensing Plans to be prepared to dispense medications to the population of the entire county in the event of an emergency requiring mass treatment or prophylaxis.

Other areas that Orange County must consider in its preparedness efforts are the ability to open and maintain shelters for the entire county, and planning for the university population of more than 28,000 students and their concerned parents worldwide that would likely be in communication during an emergency event.

The Orange County Health Department shares a registered nurse with the Person County Health Department who serves as the Emergency Preparedness Coordinator for both counties. This position works closely with Orange County Emergency Services, UNC Hospitals, other county preparedness coordinators, and North Carolina Emergency Preparedness staff to coordinate efforts to improve Orange County's preparedness.

In planning for the county as a whole, preparedness activities must also identify and plan for populations at increased risk for health and other problems during a public health emergency. In Orange County, groups identified as being at increased risk include limited English proficiency (LEP) residents, persons without adequate transportation, and persons with physical, mental, or emotional problems that limit their ability to care for themselves and their families.

FEMA's Community Preparedness Division and National Citizen Corps conducted a survey in 2009 and found the most common barrier mentioned for individuals not preparing for public health emergencies is that Emergency Responders would be available to help.[3] However, large-scale public health emergencies, like the 2009 H1N1 influenza pandemic, may quickly overwhelm primary health and medical responders. Hence it is important to have a reserve of volunteers who can help meet local needs after a disaster, either natural or man-made. The Orange County Health Department (OCHD) coordinates two volunteer emergency preparedness programs, the Public Health Reserve Corps (PHRC) and the Community Emergency Response Team (CERT).

The PHRC is one of the Health Department's community-based volunteer programs. The PHRC consists of health professionals and other community members with specialized skills that strengthen the Health Department's ability to respond to local public health emergencies. A majority of the PHRC volunteers are public health professionals such as Registered Nurses, Social Workers, Pharmacists, etc., but this is not a requirement. The PHRC mission is to provide trained and credentialed medical and non-medical volunteers for increased capacity during public health emergencies and for on-going public health programs offered by the Orange County Health Department and its partner agencies. The PHRC is a Medical Reserve Corps (MRC) unit, which is a component of the National Citizen Corps programs. The MRC program was created after September 11, 2001 as an approach to organize, recruit, and train volunteers before disasters occur.

PHRC volunteers participate in community activities such as flu clinics, health screenings, health/education fairs, disaster exercises, serving on public health committees, etc. Volunteers have also participated in several local, state, and national deployments, such as Hurricane Katrina and the NC tornados in 2011. From 2007 to 2010, Orange County PHRC volunteers have contributed approximately 1,600 volunteer hours.[4]

Another key component of the PHRC is training. Emergency Preparedness training, such as CPR, First Aid, Psychological First Aid, Mass Care and Shelter, etc., are offered to PHRC volunteers on a regular basis. The program also partners with the local Red Cross to offer some of these training opportunities. The American Red Cross provides relief to victims of disasters and helps people prevent, prepare for, and respond to emergencies. The Red Cross works with community partners to provide practical and helpful awareness and educational information to residents of Orange County. The Red Cross also provides safe shelter, food, clothing, and health and mental health services to address those immediate disaster-caused needs.[5]

The CERT program, which started training in Orange County in 2007, is another emergency preparedness volunteer program, which is a partnership between the OCHD and Orange County Emergency Services. The CERT program is also a component of the National Citizen Corps programs. The purpose of the Orange County CERT program is to teach citizens how to provide basic emergency response services after a disaster when emergency services are delayed or unavailable.

The primary goal of the Orange County CERT program is to increase the number of Orange County residents who are able to address immediate emergency needs following a disaster in their community when assistance from emergency service personnel is delayed. The secondary goal of the CERT program is to reduce the number of injuries that result from residents' attempt or inability to respond to an emergency. The Orange County CERT Program is a 5-week training program that teaches participants how to provide basic emergency response services after a disaster.

Orange County CERT volunteers participated in approximately 500 volunteer hours from 2008-2010.[6] Volunteers become "registered volunteers" by completing ten emergency preparedness training modules, such as Disaster Medical Operations, Light Search and Rescue, Fire Safety, Personal Safety, Team Organization, etc. The program has recruited a number of community groups, including churches, retirement communities, UNC-CH campus members, local businesses, etc. One target group for preparedness in Orange County is identifying and planning for the at-risk population, including non-English speaking persons and those who do not have transportation. A Spanish-speaking team has been recruited and undertook CERT training in June 2011. Two CERTs have been trained in the Meadowmont retirement community, and another in the Carol Woods' retirement community.

For more information

- Orange County Public Health Reserve Corps: http://www.co.orange.nc.us/health/BecomeAVolunteer.asp
- National Medical Reserve Corps: http://www.medicalreservecorps.gov/HomePage
- Citizen Corps: http://www.citizencorps.gov/
- Orange County Community Emergency Response Team http://www.co.orange.nc.us/health/CERTProgram.asp
- National Community Emergency Response Team: http://www.citizencorps.gov/partnersandaffiliates/cert.shtm
- Orange County Emergency Services: http://www.co.orange.nc.us/emergency/Emergencypreparedness.asp
- Central NC Red Cross: http://centralnorthcarolina.redcross.org/

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Survey findings described above indicate that younger adults and lower income respondents were not as prepared as others who completed the survey. Survey results showed a very high percentage of respondents having a smoke detector; however, a low percentage of people have CO detectors. Since, smoke detectors are required of rental properties and for final inspections in new homes, and have been heavily promoted, prevention campaigns should focus on the importance and education of having a CO detector. While FEMA reported the most mentioned barrier for individuals not preparing for public health emergencies is that Emergency Responders would be available to help, this Community Health Assessment survey showed the highest percentage of respondents had never considered it. Based on the second- (respondents reported that they would grab items around the house if needed) and third- (they felt safe) most common reasons for not having a preparedness supply kit ready, Orange County still needs to provide a lot of education to stress the importance of preparing for a public health emergency.

A commonly reported reason not to evacuate in the past has been the concern about leaving pets behind; however, this survey showed only 12% reported this concern. Since shelters were last opened in the county, plans have been made to offer sheltering of appropriately vaccinated dogs at

one shelter location in the county. The survey also indicates that 35% (over a third) of respondents would not evacuate in a large-scale disaster or emergency if instructed to by authorities because of transportation issues—26% of respondents are worried about traffic jams and not being able to get out, and 9% do not have transportation. This is further indication that transportation issues must be addressed in Orange County, especially within rural areas.

New immigrants and refugees are among the most vulnerable during emergencies, since they are not oriented to the climate and local resources, and may not be connected to media or other sources of critical information. Sometimes immigrants and refugees have not experienced positive relationships with law enforcement in their home countries, so relationship building is critical to establishing trust and communication with the community.[7] Although CERT has started to reach out to Spanish-speaking communities in the county, more outreach and education are needed with immigrant and refugee community leaders. In addition, there is a need for more culturally and linguistically appropriate campaigns and materials to provide preparatory guidance.

[1] Davis, M.V., MacDonald, P., Cline, J.S., & Baker, E.L. (2007) Evaluation of public health response to hurricanes finds North Carolina better prepared for public health emergencies. Public Health Reports, 122:17-26.
[2] Federal Emergency Management Agency. North Carolina Disaster History. http://www.fema.gov/news/disasters_state.fema?id=37.
[3] Citizen Corps (2011) "Personal Preparedness in America": 2009 Survey. Retrieved from: http://www.citizencorps.gov/downloads/pdf/ready/2009_Citizen%20Corps_National%20Survey_Findings_SS.pdf
[4] Amanda Bartolomeo, Coordinator, Orange County Public Health Reserve Corps, May 2011.
[5] Tim Bothe, Director of Emergency Services, Central NC Red Cross Chapter, 5/5/11.
[6] Amanda Bartolomeo, Coordinator, Orange County Public Health Reserve Corps, May 2011.
[7] 2011 CHA Focus Group Discussions

Chapter VIII Injury and Violence

This chapter covers injury-related health issues including both unintentional injuries (e.g. motor vehicle crashes, falls, poisonings, drowning, etc.) and intentional injuries (e.g. sexual assault, child abuse, domestic violence, suicide, etc.).

Unintentional injuries are the leading cause of death for all North Carolinians from the ages of 1-44, and the fifth leading cause of death overall. They also remain a leading cause of death in Orange County. Intentional injuries (or violence) are likewise pervasive and are a leading cause of death and hospitalization, especially for youth aged 15-35. Between 2007 and 2010, suicide rose to be the ninth leading cause of death of Orange County residents. It is the only cause of death that entered the top ten causes of death in that time period. The prevention of both unintentional injuries and violence are complex, and require the involvement of many sectors: public health, mental health system, law enforcement, social service agencies, health care professionals, faith community, community members, and others.

A new section on human trafficking has been included in this report in response to a growing awareness of these issues (since the last community health assessment) in Orange County, as well as in North Carolina and the country.

Section 8.01 Unintentional Injuries

Impact on Health and Contributing Factors

Unintentional injuries are injuries caused from motor vehicles, biking, walking, falls, poison, choking/suffocation, cut/pierce, bite/sting, fire arm, fire, and drowning. Unintentional injuries are a leading cause of death among Americans of all ages. In 2009, 4,158 people in the state of North Carolina died from unintentional injuries.[1] Motor vehicle collisions (MVCs), a leading cause of injury-related death, caused 1,394 deaths in North Carolina in 2009.

The statistics, however, are even more striking for the young. Unintentional injuries are the leading cause of death for North Carolinians aged 1-44, accounting for 30% of all deaths in this age group.[2] Injuries happen disproportionately to the young. Therefore, they cause a greater number of potential years of life lost than any other cause of mortality.[3] For example, in North Carolina in 2007, cancer caused many more deaths than did unintentional injuries (17,478 versus 4,389). However, since cancer mostly kills those over the age of 50 and injuries mostly kill those under the age of 50, the years of potential life lost to injuries (87,341) was far greater than the potential life lost to cancer (61,073).[4] In 2009, in Orange County, unintentional injuries killed more people aged 1-44 than heart disease, cancer, stroke, diabetes, HIV, influenza and pneumonia combined.[5] Still, Orange County is among the counties in the state with the lowest overall rates of unintentional injury death.

Death due to injury reflects only part of a larger problem. There is also significant morbidity caused by unintentional injuries. For every injury related death there are numerous hospitalizations, emergency department visits, and physician visits for injury. The Centers for Disease Control and Prevention reports that in 2007 injury caused 180,000 deaths, 2.8 million hospitalizations, 29 million emergency department visits, and over $406 billion lost in medical costs and lost productivity across the nation.[6] In North Carolina, the costs of medical expenses and lost productivity (e.g. lost time at work) for unintentional injuries in 2005 alone were over $3 billion.[7] The physical and emotional effects of injury can be extensive and wide-ranging, and in some cases, such as spinal cord injury and traumatic brain injury, the injury can cause a life-long disability.[8]

There are many different kinds of unintentional injuries, thus there are many different contributing factors. A few are consistent across all injuries: age, alcohol and drug use are among the most important. The rest of this section will focus primarily on three causes of unintentional injury: motor vehicle crash (the leading cause of injury death across all ages), unintentional poisoning (the fastest growing cause of injury death and morbidity), and falls (the leading cause of injury death among seniors and the leading cause of non-fatal injury across all ages).

As noted above, unintentional injuries affect those under the age of 44 most significantly. But again, differences exist. Drowning is much more common in the very young (it is second only to motor vehicle crash as the leading cause of injury death among North Carolinians aged 1-9).[9] Poisoning, and in particular the recent epidemic of prescription drug poisoning, is causing more deaths among adults aged 35-55 than any other age. In fact in this age range, poisoning kills as many NC residents as do motor vehicle crashes.[10] Falls and fall-related deaths are much more common among senior citizens. North Carolina residents over the age of 65 are more likely to die from falls than from any other injury, and are almost twice as likely to die from a fall than from a motor vehicle crash.

Alcohol use is a risk factor for all injuries, with motor vehicle crash being the most familiar example. Many highway fatalities and other injuries are related to alcohol and other drug use. Between 2005 and 2009, in Orange County, 23% of deaths caused by motor vehicle crashes were alcohol-related.[11] Death in residential fires and drownings (among teenagers) are also highly correlated with alcohol use.

Motor Vehicle Crashes

In addition to age and alcohol use, other significant contributing factors to motor vehicle crash and injury include driving experience, distracted driving, speed, and use of restraints (seatbelts and car seats). Drivers who are younger and less experienced have higher crash rates. According to the CDC, "inexperience increases the crash risk for new drivers of all ages. However, younger novice drivers crash at higher rates than older novice drivers. These higher crash rates may be due in part to developmental factors such as peer influence, poor perception of risk, and high emotionality."[12] Motor vehicle injuries and deaths among children can be contributed to driving with someone who had been drinking, unrestrained children, or child restraint systems that are not used correctly.

Many policy interventions have been instituted to help prevent motor vehicle related injuries and deaths. For example, laws regarding seat belt and child safety seat use, graduated drivers licensing, and maximum blood alcohol levels, are in place. Additionally, auto makers have made changes to vehicle features to make them safer, and changes have been made to highway design to enhance auto safety. Currently, many states are implementing laws around cell phone use while driving. Advances in these fields have contributed to a dramatic decline in motor vehicle related deaths over the last 30 years.[13]

Poisoning

Unintentional poisoning among children typically results from them getting into household substances or medications. Contributing factors other than age include safe storage. Unintentional poisoning among seniors often results from confusion around medications. The main epidemic of unintentional poisoning right now is among adults, and is being fueled primarily by overdose of prescription drugs.[14] Use of opioid narcotics, chronic pain, and history of addiction are all contributing factors to this problem.[15]

Falls

Factors that contribute to falls, especially among older adults, include poor eyesight, medications, obstacles in the home, poor lighting, and limited mobility. Gender is also a contributing factor. Men are more likely to die from a fall, but women are more likely to have a fall and suffer an injury as a result.[16]

Healthy NC 2020 Objective

Objective	Current	2020 Target
Reduce the unintentional poisoning mortality rate (per 100,000 population).	11.0 (2008)	9.9
Reduce the unintentional falls mortality rate (per 100,000 population).	8.1 (2008)	5.3

In Orange County there were nine deaths from unintentional poisoning in 2009. Between 2006 and 2009 there were 34 deaths from unintentional poisoning, for a rate of 6.8 deaths per 100,000.[17] In Orange County there were no deaths from falls in 2009. Between 2006 and 2009 there were 5 deaths from falls for a rate of 1.0 death per 100,000.[18]

Motor Vehicle Crash

In Orange County, from 2005 to 2009, there were 75 fatal crashes with 77 fatalities.[19,20] In 2009, motor vehicle crash was the 10th overall leading cause of death in the state and the 9th overall leading cause of death in Orange County. All of these deaths were among white Orange County residents.

Table 52: Leading Causes of Death Related to Injury, Orange County 2009[21]

	Motor Vehicle Injuries			Other Unintentional Injuries		
	Number	% of all deaths	Rank	Number	% of all deaths	Rank
NC Total	1394	1.8	10	2,764	3.6	5
Orange Co. Total	12	1.8	9	16	2.4	8
Race						
White	12	2.3	9	15	2.9	8
Minorities	0	--	Not a leading cause of death	1	--	Not a leading cause of death
Sex						
Male	7	2.3	8	9	2.9	7
Female	5	1.4	10	7	1.9	6

The 2010 Behavioral Risk Factor Surveillance Survey (BRFSS) asked Orange County residents about health behaviors that could affect injury-related morbidity and mortality. When asked if they had driven in the past 30 days when they had "perhaps drunk too much alcohol", 7.7% of respondents said Yes. This was the highest rate of any county sampled and significantly higher than the state rate of 2.8%.[22] A large majority of Orange County residents surveyed (89.3%) reported always wearing a seatbelt when they drove a car, a rate slightly below the state average (91.3%).[23]

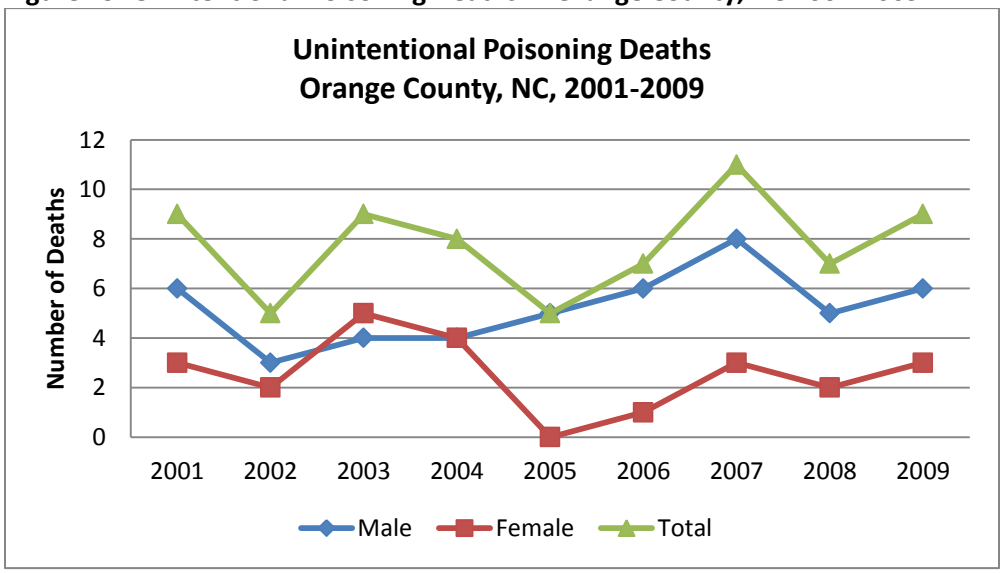
Poisoning

Unintentional poisoning is the fastest growing cause of injury death in the state. Between 1999 and 2007 the rate of these deaths in North Carolina increased by 183%.[24] In Orange County, between 2001 and 2009, 70 people died from unintentional poisoning.[25] In North Carolina, more than 75% of unintentional poisoning deaths are from prescription and over-the-counter drugs.[26] Approximately two-thirds of these deaths were of men (See Table below). Almost all of these deaths (68) were caused by medicines and drugs; the others were alcohol poisoning. Of the 68 drug related deaths, 61 were caused by narcotics and hallucinogens.[27]

Table 53: Unintentional Poisoning Deaths in Orange County, NC 2001-2009[28]

Year	Number of Deaths		
	Male	Female	Total
2001	6	3	9
2002	3	2	5
2003	4	5	9
2004	4	4	8
2005	5	0	5
2006	6	1	7
2007	8	3	11
2008	5	2	7
2009	6	3	9
Total	47	23	70

Figure 29: Unintentional Poisoning Deaths in Orange County, NC 2001-2009[29]



Falls

The 2010 BRFSS asked Orange County residents about their history of falls. Results indicate that in the previous three months, 10.9% of adults 45+ had fallen once; and 7.7% of adults had two or more falls, compared to 9.2% and 6.1% respectively, statewide. Of those who had fallen, 47.5% of them had sustained injuries, compared to 30.4% statewide.[30] In 2009, five Orange County residents died from falls; four were female and one was male.[31]

Primary data: Residents' concerns

Quantitative: Survey

There were no questions regarding unintentional injuries in the 2011 survey.

Qualitative: Focus Group

Unintentional injuries did not come up as a topic in the focus group discussions.

Current Initiatives and Activities

Orange County has several initiatives to address motor vehicle and other injury issues. Orange County Safe Communities Coalition works to promote awareness of injury and its impact on the community. Coalition members provide information, resources, training, and support for injury prevention initiatives and activities within Orange County. In collaboration with AAA and Orange County courts, Safe Communities provides a Driver's Improvement Program in English and Spanish that is based on court referrals. Income from the driver improvement program is used to fund mini grants for injury safety projects.

In the face of continued delay in NC passing a statewide law on distracted driving, the town of Chapel Hill passed a city ordinance to ban cell phone use while driving. Text messaging while driving is illegal in NC.

The problem of prescription drug overdose is still new enough that there are few proven evidence-based prevention efforts. Efforts to address it are being implemented nationwide and are starting to be evaluated. For example, North Carolina is among a few states that has a "Prescription Drug Monitoring System" that can be used by physicians to check whether a given patient has received controlled medications from another provider in the state. The North Carolina Controlled Substances Reporting System is available to all health care providers who are licensed to prescribe controlled substances. Providers and pharmacists can enroll with the system at http://www.ncdhhs.gov/mhddsas/controlledsubstance/#access.

The North Carolina Department of Public Welfare's Medicaid program has implemented a policy that restricts one prescriber and one pharmacy to those Medicaid recipients who have exhibited doctor-shopping behaviors. A county-wide chronic pain initiative in Wilkes County, North Carolina is educating physicians on this issue and distributing Naloxone (a medicine that can reverse a narcotic induced overdose) to patients who receive narcotics. Safe Kids North Carolina has spear- headed statewide medication drop off campaigns where citizens can dispose of excess prescription drugs.

There are significant efforts at the state and national level to reduce senior falls. Some interventions, like Tai Chi and other exercise programs that increase balance and strength have been shown to reduce falls. Local Orange County Senior Centers and various recreation programs have strengthening and flexibility programs for older adults. In addition, the CDC recommends that seniors have their medications reviewed by a pharmacist or physician to check for interactions that may cause dizziness, etc. They also recommend regular vision checks and home modifications to decrease tripping hazards (like area rugs or stairs without railings) and increase lighting.[32]

The North Carolina Falls Prevention Coalition is co-sponsored by the Division of Public Health's Injury and Violence Prevention Branch and the UNC Chapel Hill Institute on Aging, the NC Division on Aging and Adult Services, and the Carolina Geriatric Education Center. More information can be accessed at their website: http://www.med.unc.edu/aging/ncfp/.

The Triangle J Area Agency on the Aging is a good resource generally for seniors. They provide in-home and community based services that can help decrease the likelihood of falls and improve the overall quality of life for seniors.

The Remembering When Curriculum, which focuses on fire and fall prevention for older adults, has been offered by the Cooperative Extension and Department on Aging.

The Chapel Hill Fire Department holds a Child Safety Seat Clinic at Fire Station 2. Safety seats are available for purchase if needed. The Fire Department also provides free smoke detectors for residents who cannot afford to buy them. They are also available to assist with getting the fire detectors mounted and placed properly.

The Orange County Fire and Emergency Management Services offer a number of programs that are preventive in nature, such as the "Welcome to the World" program for infant safety at home, and comprehensive home safety inspections for all residents – but particularly for those who are more home-bound.

The UNC Injury Prevention Research Center is also a valuable resource in the community in providing research addressing the causes and prevention of injury in the community.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The data above indicates that in 2009, in Orange County, mortality due to motor vehicle crashes and unintentional injuries disproportionately affected males and whites. At the state level, motor vehicle injury is the number two cause of death for Hispanics/Latinos.[33] Orange County has lower percent of deaths due to unintentional injuries (2.4%) compared to NC as a whole (3.6%), and the same percentage of motor vehicle deaths compared to NC as a whole, 1.8%.

According to the 2010 BRFSS data, men, whites, adults between ages 18 and 44, and persons with incomes more than $50,000 were most likely to drive after drinking alcohol. Women, whites, and those with income greater than $50,000 were most likely to always wear seatbelts when driving, although none of these differences reached statistical significance.[34]

Although Orange County is meeting Healthy Carolinians 2020 targets for deaths due to falls and unintentional poisoning, there are still a significant number of fatalities and injuries from these and other causes in the state. Motor Vehicle Crash injury and death continues to be Orange County's leading cause of death for young people and young adults. Distracted driving is the biggest emerging issue concerning these deaths and injuries. Unintentional poisoning will become the leading cause of death in the state in 6 years (2017) if the trajectory of that epidemic does not change.[35] Work needs to be done to encourage physicians to use the state's Controlled Substance Reporting System and to educate physicians on the treatment of chronic pain and the use of opioid narcotics. Citizens need to understand the potentially fatal consequences of not taking prescription drugs as they are intended (or for whom they were prescribed) and the danger of keeping unused prescription drugs in their homes. As the county population ages, the issue of falls will only increase.

There is also need for continued awareness and education efforts about the consequences of drinking and driving, distracted driving and car seat safety/proper use. Overdose from prescription drugs is the fastest growing emerging injury issue; and it will require many different approaches from different sectors. Recently arrived immigrants and refugees need to be educated about local laws and resources around highway safety.

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Section 8.02 Suicide

According to the CDC, on an average day in the US, 94 persons complete suicide, and it is estimated that there are 25 suicide attempts for every completed suicide.[1] At the national, state, and county level, suicide kills more people than homicide. Overall, suicide is the third leading cause of death for North Carolinians aged 10 to 34.[2]

In 2008, suicide was the fourth leading cause of injury death in North Carolina and was among the top five leading causes of injury death for North Carolinians aged 10 years and older.[3]

Two primary factors contributing to suicide are substance abuse and mental illnesses. Depression, which is the second leading cause of life lived with a disability in the state, is a leading cause of suicide.[4,5] Studies have shown a high incidence of psychiatric disorders in suicide victims at the time of their death, with the total figure ranging from 87.3% to 98% of individuals with mood disorders (depression and bipolar) and substance abuse. Other factors contributing to suicide include difficulty in coping, inescapable suffering or fear, stress, life pressures and adverse environments.[6,7,8]

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Reduce the suicide rate (per 100,000 population). *	12.4 (2008)	8.3

Secondary Data: Major Findings

In Orange County in 2009, there were 20 reported suicides or 15.1 per 100,000 population.[9] This was higher than the statewide average of 12.4 per 100,000, and much higher than the Healthy NC 2020 Objective of 8.3 per 100,000.

By 2009, suicide was the sixth overall leading cause of death in Orange County.[10] During the years 2005-2009, for residents aged 0-19 suicide was the seventh leading cause of death overall; for Orange County citizens aged 20-39 it was the second, and for 40-64 year olds it was the fourth leading cause of death.

The 2009 Youth Behavioral Risk Survey (YRBS) found that youth (9th-12th graders) in North Carolina are significantly more likely to have attempted suicide in the previous 12 months than youth nationwide.[11]

While it is difficult to draw conclusions from this data, one could speculate that Orange County's higher than average rate may be explained by its lower than average African American population and higher than average white population. Whites complete suicide at more than twice the rate of African Americans.[12] The Orange County statistics are consistent with this trend, and with the fact that men complete suicides at a much higher rate than do women. Of the 20 deaths in 2009, 12 were white men, four were white women, and four were minority men and women. Three quarters

of these deaths (15) were among residents aged 20-54, and the remaining were deaths among older citizens aged 55-75.

Primary data: Residents' concerns

Quantitative: Survey

Suicide was not covered in the 2011 Community Survey.

Qualitative: Focus Group

Suicide was not discussed in focus group discussions.

Current Initiatives and Activities

Please see Chapter 6, Section 6, Mental Health for resources related to suicide.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Suicide deaths are more common among men and whites. Suicide attempts are more common among women and minorities.[13]

Suicidal thoughts are common among teenagers. In 2009, 13.8% of US high school students reported that they had seriously considered attempting suicide during the 12 months preceding the survey; and 6.3% of students reported that they had actually attempted suicide one or more times during the same period.[14] It is reported that for every completed suicide among teens and young adults (aged 15-24 years) there are 100-200 attempted suicides.

Adolescence is a very difficult developmental stage for anyone. But for lesbian, gay, bisexual, transgender, and queer (LGBTQ) youth it is especially difficult, given that they experience more harassment, intolerance, discrimination, and rejection than their peers. LGBTQ are up to four times more likely to attempt suicide than their heterosexual peers; therefore, suicide prevention efforts need to be especially targeted to the needs of this community. However, the overall goal should be to create a safe culture for all youth, both in school and at large.

Still, suicide is also an issue for senior citizens, among whom there are an estimated four attempts for every completed suicide. In other words, youth are attempting suicide with a relatively low completion rate (perhaps as a cry for help), while seniors who decide to try to take their own lives are much more likely to die from the action.[15]

Orange County data points to a need to explore reasons for the high rates of suicide, and to focus prevention efforts in communities that are most affected by suicide. Treatment and prevention services for suicide are linked to mental health services; see Chapter 6, Section 6 for additional data on Mental Health).

The county and national mental health systems have undergone a significant organizational change, including a shift away from providing direct services to mentally ill clients. As a result of this change, the mental health system has become more fragmented, making it difficult for residents to access counseling and psychiatric services. Limited availability of services to those living with mental illness in Orange County may affect the suicide rates. The economic recession of the past few years is also a likely contributor to the rising rates of suicide.

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Section 8.03 Homicide

Impact on Health and Contributing Factors

Homicide is a completely preventable cause of death. Arguments, abuse or conflict, intimate partner violence, drug involvement, and serious crimes are the most common event or circumstances for homicides.[1]

On an average day in the United States, 53 persons die from homicide and a minimum of 18,000 persons survive interpersonal assaults.[2] Nationally, homicide is the second leading cause of death for persons aged 15 to 34 years, and the leading cause of death for African American/Blacks in this age group.[3] In North Carolina, homicide is the second leading cause of death for this age group, regardless of race. In Orange County for this age group, homicide is the fourth leading cause of death.[4]

Of course, these deaths are only part of the impact of assault. As the CDC states, "The number of violent deaths tells only part of the story. Many more survive violence and are left with permanent physical and emotional scars. Violence also erodes communities by reducing productivity, decreasing property values, and disrupting social services."[5]

Accessibility of firearms is a major contributor to the incidence of homicide. Homicides are most often committed with guns, especially handguns. Homicides of teenagers and young adults are much more likely to be committed with a gun than homicides of persons of other ages. Across the

country, for every fatality caused by a firearm, approximately three more persons received non-fatal gunshot wounds.[6]

Substance abuse is also a contributor. In national surveys, 33% of state prisoners and 22% of federal prisoners said they had committed their offense while under the influence of drugs. About 60% of mentally ill and 51% of other inmates in state prison were under the influence of alcohol or drugs at the time of their current offense.[7] Homicide is also more likely to occur as a result of an argument between individuals who know each other than between strangers. A majority of homicide victims (85%) knew the perpetrator.[8]

While one generally thinks about homicide as an issue of teenagers and young adults, there is another age group for which it is a leading cause of death: children (1-9 years). These child maltreatment homicides are few in number compared to the older groups, but still a significant cause of death in these age groups and catastrophic to families and communities. All the contributing factors relating to child abuse and neglect apply to these deaths.

Healthy NC 2020 Objective

Objective	Current (NC)	2020 Target
Reduce the homicide rate (per 100,000 population).	7.5 (2008)	6.7

In Orange County in 2009, there were two homicides. Death rates with numbers below 10 cannot be calculated.

Secondary Data: Major Findings

Between 2008 and 2009, all violent crime (except for rape) in North Carolina decreased; and the murder rate in NC decreased by 20%.[9] Between 2009 and 2010, all violent crime in NC decreased, and the murder rate too decreased, this time by 4%.[10] Orange County's annual murder rate cannot be reliably calculated because the numbers are too low, but OC' rates have always been below both the state rate and the rate targets. There was an overall decrease in homicides in the county in the 2000s. The cumulative murder rate in Orange County from 2001-2005 was 4.4 deaths per 100,000 population, and that dropped to 3.4 deaths per 100,000 population for 2006-2009.[11]

Behavioral Risk Factor Surveillance Survey data from 2004 (the last survey that asked questions regarding gun safety) indicates that 25.7% of Orange County residents have a gun in the home, significantly lower than the state rate of 40.9%. Of these, 29.6% keep a loaded gun in the home. The availability of handguns is important in Orange County and across the nation, because handguns are the most common weapon used to commit homicide.[12]

Primary data: Residents' concerns

Quantitative: Survey

Of those surveyed, 44% have a gun or firearm in the home.

Qualitative: Focus Group

Several focus groups addressed concerns surrounding drug use and the perceived violence that results from the use and selling of drugs in the community.

Current Initiatives and Activities

Please see Chapter 5, Section 7.A, Crime and Safety for resources related to homicide.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Data on race and sex of homicide offenders is not available for Orange County. However, state- level data indicates that more men than women commit acts of homicide;[13] and national data indicates that individuals 15 to 34 years old and Black males have the highest rates of deaths due to homicide.

Given the role of mental health and substance abuse in homicide, the rates of substance abuse in the County, and the limited mental health and substance abuse resources in the community, focusing on substance abuse treatment and prevention may also help reduce the incidence of homicide.

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Section 8.04 Intimate Partner Violence

Impact on Health and Contributing Factors

Intimate partner violence (IPV) can be defined as, “aggressive or controlling behavior by a person toward a partner in order to have power over that person’s actions”.[1] The term encompasses physical, emotional, and sexual abuse occurring in an intimate relationship, whether with a current or former girlfriend, boyfriend, partner, or spouse.

The CDC estimates that 4.8 million women and 2.9 million men experience intimate partner violence each year.[2] In 2007, there were 2,340 deaths from IPV in the US, with 70% of the victims female and 30% male.[3] A North Carolina study of femicide found that more than half the women studied were killed by current or former intimate partners, and at least two-thirds of those deaths were preceded by domestic violence.[4]

The 2009 YRBS found that youth (9th-12th graders) in North Carolina were significantly more likely to report having been hit, slapped, or physically hurt on purpose by a boyfriend or girlfriend than youth nationwide.[5]

IPV can have a myriad of consequences for survivors. There are the physical consequences which include both direct injury from abuse (bruises, cuts, broken bones, burns etc.) and the long term effects from chronic stress (fibromyalgia, irritable bowel syndrome, sexually transmitted disease, pregnancy difficulties, central nervous system problems, etc.). There are also numerous psychological consequences of abuse which can include depression, suicidal behaviors, anxiety, difficulty sleeping, symptoms of post-traumatic stress disorder, and others. Women with a history of IPV are also more likely to display behaviors that present further health risks (e.g., substance abuse, alcoholism, suicide attempts) than women without a history of IPV. More severe experiences of violence have been associated with activities such as risky sexual behavior, substance abuse, unhealthy eating behaviors, and overuse of health services.[6]

The economic costs are staggering as well. The CDC provides the following data:[7]

- Costs of IPV against women in 1995 exceed an estimated $5.8 billion. These costs include nearly $4.1 billion in the direct costs of medical and mental health care, and nearly $1.8 billion in the indirect costs of lost productivity.
- When updated to 2003 dollars, IPV costs exceed $8.3 billion, which includes $460 million for rape, $6.2 billion for physical assault, $461 million for stalking, and $1.2 billion in the value of lost lives.
- Victims of severe IPV lose nearly 8 million days of paid work—the equivalent of more than 32,000 full-time jobs—and almost 5.6 million days of household productivity each year.

Drug and alcohol abuse increases the risk of intimate partner violence.[8] In addition, research indicates that witnessing or being a victim of family violence as a child increases one's chances of being both a victim and perpetrator of intimate partner violence later in life. "A combination of individual, relational, community and societal factors contribute to the risk of being a victim or perpetrator of IPV. Understanding these multilevel factors can help identify various points of prevention intervention."[9]

Healthy NC 2020 Objective

There are no Healthy NC 2020 Objectives related to intimate partner violence.

In 2009, 66,320 people sought help from domestic violence centers in North Carolina. The Family Violence Prevention Center of Orange County provided services to 805 clients in 2009.[10]

Secondary Data: Major Findings

In 2010, as part of the Behavioral Risk Factor Surveillance Survey (BRFSS), North Carolina added a series of questions about occurrences of physical or sexual violence. There were three questions about sexual violence and three about physical violence. (For results from the questions on sexual violence see Section 5 of this chapter). The three questions asked if the respondent had ever been "pushed hit, slapped, kicked or physically hurt" by three different perpetrators: 1) a stranger, 2) a current or former partner, or 3) someone they knew, not including a partner or former partner (i.e. an acquaintance). Orange County rates were consistent with the state rates for all three questions (see Table below).

Table 54: Orange County Responses to 2010 BRFSS questions about Physical Violence (N=287)[11]

Relationship to Perpetrator	% Yes, in the past 12 months	% Yes, more than 12 months ago	% No
Physical Abuse by Stranger	2.6	14	83.4
Physical Abuse by a Current or Former Partner	0	16.2	83.8
Abuse by Friend or Acquaintance (not current/former partner)	3.5	10	86.5

It is important to remember with these statistics that they are definitely an under-report of the incidence of violence since many people do not report abuse and the sample (287 Orange County residents) was very small and may not accurately represent all of Orange County.

The Family Violence Prevention Center (FVPC) of Orange County saw 802 clients in the 2008-09 fiscal year, 805 clients in the 2009-2010 fiscal year, and 761 clients in 2010-2011. The decrease in clients in the past year is probably due to a reduction in staff visits to the courts; clients no longer served by FVPC were seen by the Orange County Sheriff's Office. The clients served by FVPC represent the county racially and ethnically (see county demographics); approximately 75% of clients are white, 15% African-American, 12% Latino, and 2% Asian. Ninety-six percent (96%) of FVPC clients are female. These numbers have not changed significantly over the last several years.[12]

While the demographics of the clients being seen by the FVPC has not changed much in past years, the needs of those clients has changed, especially with the economic recession. The Executive Director of FVPC notes:

> *What has changed in the last few years has been the needs of our clients. The financial needs of our clients have skyrocketed. More of our clients are without jobs, without adequate resources to find alternate housing or engage a lawyer to gain custody of their children. The recession has been particularly difficult for our clients and some are unable to leave their current situations because of the lack of financial resources.*[13]

The FVPC is also seeing more dating violence among teenagers. This may be due in part to an increased presence in the schools by the FVPC. It may also be fueled by the growing opportunities for exploitation and abuse that come from new technology (cell phones, FaceBook, etc.) for which safety measures are less well understood.

Primary data: Residents' concerns

Quantitative: Survey

Forty-seven percent of those surveyed agreed that violence against women (or domestic violence) is a problem in Orange County.

Qualitative: Focus Group

The focus group discussions on the theme of injury and violence varied greatly between population sub-groups. The focus group with people from Burma highlighted a concern regarding domestic violence within their community. Participants spoke openly about their concerns, with some saying that it is within their "culture or tradition," part of gender relations and a generational issue for men to discipline the women of the family through physically hitting her and emotionally abusing her. This notion was supported by a majority of the other participants involved in the focus group, as

many talked about experiences they had with domestic violence and their attempts to remain within cultural boundaries while wanting to secure their family's safety. One participant pointed out that it is not just men who commit acts of violence, but women as well. Another shared that it also affects the children to witness this abuse. In addition, they mentioned cultural issues such as shame and not trusting in the available services as reasons for not calling to report the abuse.

Some of the participants of the Latino immigrant focus group echoed these concerns, suggesting that solutions may be relevant and useful across ethnicities and cultures. Language in addition to culture was also voiced as a barrier to service.

Participants suggested a type of training and education to help reduce rates of violence in their communities. They suggested that efforts need to be directed to both men and women, but need to be implemented separately for each group given the gender roles and expectations within the sub-culture. In addition, staff who speak their language fluently or interpreters would assist in quickly linking women to needed services.

Current Initiatives and Activities

The Family Violence Prevention Center (FVPC), Orange County Rape Crisis Center, and the Chapel Hill police crisis unit all provide both intervention services and prevention at a community level. The FVPC provides 24 hour crisis counseling, on-going support groups, safety planning with clients, court advocacy, community education, primary prevention in schools, financial assistance to clients, support with emergency shelter placement (since there is no IPV shelter in the county, they work with the homeless shelter for women and children or with IPV shelters in other counties), and resource referrals. The UNC Hospital Beacon Program provides advocacy, counseling, case management, referrals to community agencies and health care providers, personal support, and medical evaluations for patients of UNC Healthcare who are experiencing intimate partner violence.

In 2009, UNC Chapel Hill created a new position on campus for an Intimate Partner Violence Prevention Coordinator. The coordinator was able to obtain a state "Rape Prevention and Education" grant and hire a staff member to implement this grant. The two of them have developed and implemented a new bystander intervention initiative to reduce intimate partner and sexual violence on campus. They are an important new resource for violence prevention on campus and in the community.

Towards the end of 2010, the Orange County Refugee Health Coalition, facilitated by the Orange County Health Department, started addressing the issue of domestic violence. A student report back in 2007 indicated that there was a problem with domestic violence in the community, but at that time, many members did not want to discuss it.[14] However, more recently community members (such as those in the focus group), and service providers have noted an increase in domestic violence and have encouraged attention to the issue. The coalition brought together many services providers for an awareness meeting in April 2011, and is continuing focus on interagency collaboration to meet the language and cultural and educational needs of the population.[15]

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

National data suggest that women are more likely than men to be victims of intimate partner violence, and that intimate partner violence against women is more lethal than that against men. In addition, low income women, minorities, women with lower levels of educational attainment, and persons with disabilities are more likely to experience intimate partner violence.[16] Evidence

regarding Latina women's risk for intimate partner violence relative to non-Latina women has been conflicting.[17,18,19]

The growing populations from Burma and Latin America highlight the fact that cultural and language barriers can make it much harder for immigrant women to access both formal services and informal social supports that can help survivors separate from abusers.

Service providers in Orange County who work with victims of intimate partner violence recognize that geographic disparity exists with regard to access to community resources for victims or survivors of intimate partner violence. For example, Orange County Rape Crisis and the Family Violence Prevention Center (FVPC) both attempt to serve all of Orange County. In 2010, FVPC staffed an office in Hillsborough in addition to their main office in Chapel Hill, but women in many parts of the county were still unable to access services.[20] Lack of reliable transportation presents a particular hardship for victims of intimate partner violence since perpetrators often use social isolation and withholding of resources, like the family's money or car, to control their victims.

Because lack of availability of transportation may be a significant barrier for individuals experiencing intimate partner violence, there appears to be a need to increase accessibility of services for residents of rural Orange County. Residents and providers also expressed a wish that Orange County should have a shelter for victims of domestic violence. Although the Family Violence Prevention Center has a good working relationship with shelters in other counties, it would serve Orange County residents better to have a shelter located in the county.

More and better data about intimate partner violence among minority groups is needed in order to give providers a better picture of trends within the various segments of the community. In terms of work with refugees and immigrants, there is a need cultural outreach and education for newcomers to the area. There is also a need for local agencies to have funds designated for language accessibility and cultural adaptation of services in the areas of outreach, education, victim services, and batterers' treatment.

Advances in technology seem to favor the abuser who wants to track their victim. It is increasingly difficult for clients to keep their locations confidential. GPS tracking, which seemed like such a valuable means for tracking offenders, is instead being used more often by stalkers to find their victims.[21] It is often difficult for service providers to keep on top of all the different things that someone needs to do in order to protect the anonymity of their location. FVPC is also seeing a lot of ID theft (abuser using technology to "steal" victim's identity resulting in ruined credit, inappropriate bills, debts, etc.) which is another form of economic abuse.[22]

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Section 8.05 Sexual Violence

Impact on Health and Contributing Factors

Key Facts[1,2]

- Every two and a half minutes, someone is sexually assaulted in America.
- One in six American women have been victims of sexual assault, and one in 33 men.
- In 2007, there were 248,300 victims of sexual assault.
- About 44% of rape victims are under age 18, and 80% are under age 30.
- Since 1993, rape/sexual assault has fallen by over 60%.

Sexual assault can be defined as "any unwanted sexual contact or attention achieved by force, threat, bribe, manipulation, pressure, trickery, or violence." Sexual violence may be physical or non-physical and includes rape, attempted rape, child abuse, incest, stalking, and sexual harassment. Most survivors report having known their perpetrator. The NC Department of Justice reports that there were 1954 women raped in North Carolina in 2010.[3] The definition of rape used in these reports is "Forcible Rape - The carnal knowledge of a female forcibly and against her will. Assaults or attempts to commit rape by force are also included."[4] In North Carolina law, the term rape only includes penile penetration of the vagina; all other sexual assaults (including any rape of a male) is considered a "sexual offense" which is a lesser crime than rape.[5] This narrow definition allows for reduced sentencing and protections for women and men for whom the emotional and physical experience of rape (hands, foreign objects) is identical to penile insertion.

Sexual violence is a widespread problem that affects women disproportionately. About one in six women are victims of sexual violence in their lifetime. Although sexual violence disproportionately impacts women, one in eight men reports experiencing some form of sexual violence in their lifetimes. In both men and women the rate at which sexual violence actually occurs may be significantly higher because many incidences of sexual violence go unreported. Sexual violence affects a person's mental and physical well-being for years beyond the occurrence of the event.

Mental health consequences for survivors include depression, anxiety, post-traumatic stress disorder, substance abuse, and suicidal ideation.

There are many factors that contribute to the likelihood that a given individual will perpetrate sexual violence. According to the CDC, risk for perpetration includes individual, relationship, community, and society level factors: being male, having friends that are sexually aggressive, witnessing or experiencing violence as a child, alcohol or drug use, and being exposed to social norms or shared beliefs that support sexual violence.[6]

Healthy NC 2020 Objective

There are no Healthy NC 2020 Objectives related to sexual violence.

Secondary Data: Major Findings

According to the State Bureau of Investigation there were 31 rapes reported by law enforcement in Orange County in 2009, and 26 rapes reported in 2010.[7] In contrast, the Orange County Rape Crisis Center provided direct services to 288 clients (190 direct survivors of assault and 98 friends, family, acquaintances, providers, etc.) in the 2009-2010 fiscal year, and 408 clients (277 direct survivors of assault and 131 friends, family, acquaintances, providers, etc.) in the 2010-2011 fiscal year.[8]

Primary data: Residents' concerns

Quantitative: Survey

Fifty-four percent of those surveyed agreed that rape or sexual assault is a problem in Orange County.

Qualitative: Focus Group

Sexual violence did not come up as a topic of discussion during the focus groups.

Current Initiatives and Activities

The Orange County Rape Crisis Center (OCRCC), with offices both in Chapel Hill and Hillsborough, offers a 24 hour crisis hotline, support groups for survivors of sexual violence, including primary and secondary survivors, primary prevention, and community education programs for schools, businesses, churches and other places of worship, and other interested groups. In addition, the Orange County Rape Crisis Center offers companion services to survivors who receive treatment at the UNC Emergency Department following a sexual assault. Survivors are accompanied by someone who is trained to serve as an advocate for the survivor during the examination process. The center also has bilingual service providers and has completed four years of its Latina/o Services Program. In the 2009-2010 year they provided services to 21 Spanish speaking clients, and in the 2010-2011 fiscal year this rose to 47 Spanish speaking clients.

The Rape Crisis Center coordinates a county-wide Sexual Assault Response Team that works like a taskforce to bring consistency to the way that sexual assault cases are handled throughout the county by the seven law enforcement jurisdictions, along with medical, criminal justice, campus health, and advocacy groups. In addition to providing immediate response to sexual assault survivors in crisis, the Center conducts support groups and provides short term therapy as well. Other services include medical and legal advocacy, community education, and referral to other community resources.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Sexual assault victims are disproportionately women and children, adolescents, and young adults. The CDC reports that 60% of female victims were first raped before age 18. Twenty-six percent of female survivors were first raped before age 12, and 35% were first raped between the ages of 12-17. Almost 70% of male victims were first raped before the age of 18, with 41% of those victims raped before the age of 12, and 28% first raped between the ages of 12-17.[9]

About 90% of sexual assault victims are females.[10] While 80% of all victims are white, minority women are at greater risk, with Native American/Alaskan Native women and mixed race women being at especially high risk.[11]

According to the NC Office on Disability and Health, "women living with disabilities are five times more likely to be sexually assaulted than women without disabilities. Nationally, about 85% of women with disabilities have experienced domestic violence. At least 76% of adults with cognitive disabilities have been sexually assaulted. In addition, services may not be accessible and inclusive for these women."[12]

Although OCRCC has some services for Spanish speaking clients, language is still a barrier. There are not necessarily any Spanish speakers on the Sexual Assault Response Team, and there are other languages (especially those spoken by immigrants from Burma and China) that the agency is not able to serve. County-wide, provision of services to non-English speaking victims of sexual assault is a challenge. For example, the courts mandate an interpreter for criminal cases, but not for civil cases. For victims of sexual assault who do not qualify for a "Domestic Violence Protection Order" there is a "Non-Contact Order"; however, both of these are civil cases and so do not trigger the provision of an interpreter by the courts.

Other areas in which the OCRCC see unmet needs are in reaching some underserved populations. These include lesbian, gay, bisexual, transgender, and queer clients, men, child victims of sexual assault (CSA), adult survivors of CSA, rural clients, undocumented clients, people with disabilities, sex workers, homeless, and substance abusers. There is a particular gap for child victims of sexual assault who are abused by a non-care giver. Child Protective Services (CPS) is only available to children when the perpetrator is a family member or care giver. OCRCC is working with the Beacon Program at UNC Hospitals to coordinate care for child victims not covered by CPS, but OCRCC does not have the child specific facilities that would be necessary to provide the best possible services for these young survivors.

Everywhere, having blind (anonymous) reporting is very important for a survivor to be able to report and receive medical care without being forced into prosecuting or investigating if they choose not to. Most law enforcement now accepts blind reporting. However, in order to have the Crime Victims Kit used in the treatment, there has to be a police report filed. So if a survivor reports anonymously and does not file a police report, they have to pay $1000 dollars out of pocket that would otherwise be covered by crime victim services.

Human trafficking was noted in the 2007 Community Health Assessment as an emerging issue and it continues to be of concern to staff at OCRCC. In response to this identification, Human Trafficking now has a separate section in this chapter (See Section 8.07).

An ongoing challenge is getting more men involved in the movement to end sexual violence. It is important to engage men in providing education and advocacy to survivors of sexual violence.

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Section 8.06 Child Abuse and Neglect

Impact on Health and Contributing Factors

As mentioned in the 2007 Orange County Community Health Assessment, there are many negative social and economic effects of child abuse and neglect.[1] A cost analysis conducted by Prevent Child Abuse America determined that direct and indirect costs of child abuse and neglect are $103.8 billion a year.[2] Costs of intervention and treatment for child abuse and neglect are estimated to be $10,000/year/child, plus court costs to investigate a case resulting in foster care.[3] Children who experience child maltreatment may suffer both immediate and long-term physical, behavioral, and psychological consequences.[4] A forty-year study of abused and neglected children found that half of these children had been convicted of serious crimes, were mentally ill, had substance abuse problems, or died at an early age. Child abuse increases an individual's chances of delinquency and adult criminality (including violent crimes) by over 40 percent.[5] Furthermore, it has been suggested that one-third of all maltreated children will abuse or neglect their own children as adults.[6]

While children of all races, ethnicities, religions, cultures, and socioeconomic strata are victims of child maltreatment,[7] there are certain factors that may increase the likelihood of a child experiencing maltreatment. Low socioeconomic status, living with a parent and his/her unmarried partner, parental substance abuse parental history of maltreatment, and parental mental illness all increase the risk of a child experiencing abuse or neglect.[8,9]

Healthy NC 2020 Objective

There are no Healthy Carolinians 2020 Objectives related to child abuse and neglect.

Secondary Data: Major Findings

In Orange County, 33.9 per 1,000 reports of child abuse or neglect were investigated in 2009.[10] This is lower than the state rate of 56.1 per 1,000.[11] The county rate of investigations has decreased

since 2003, while the state rate has stayed relatively constant.[12] The rate of substantiated reports for the state and county are not available; however, it is possible to examine the number of substantiated cases. In Orange County, 43 reports of child abuse and neglect were substantiated in 2009.[13] This number represents a fraction (0.38%) of the reports substantiated across the state (11,252).[14] The number of substantiated reports has been steadily decreasing for both the state and the county over the past decade.[15]

During fiscal year 2009, 933 children were reported for child abuse, neglect, or dependency in Orange County. Of those, 295 (31.6%) were substantiated, found in need of services, or had services recommended or provided.[16] While the number of children reported in 2009 is less than in 2006-2007 (1,284), roughly the same percentage (30%) were substantiated in 2006-2007.[17]

Primary data: Residents' concerns

Quantitative: Survey

Fifty-seven percent of those surveyed agreed that child neglect is a problem in Orange County.

Qualitative: Focus Group

Child neglect was not a theme discussed during the focus group conversations.

Current Initiatives and Activities

The Orange County Rape Crisis Center conducts programs in nearly every public Kindergarten through 4th grade class in the county, along with many middle school and high school classrooms These programs, focused on personal safety, lead to many disclosures of possible sexual as well as other forms of abuse. To a lesser extent, the Family Violence Prevention Center of Orange County, with offices in Chapel Hill and Hillsborough, provides community education on this issue. Prevention services are offered by a number of organizations.

The Department of Social Services, Mental Health Association of the Triangle, and El Futuro offer education for parents who have been or are at risk of becoming abusive or neglectful.

The Orange County Prison offers parent education programs to incarcerated parents. The prison, in collaboration with Forgiving Ministries, holds a One Day with God Camp for fathers and their children and offer a follow-up program, Fabulous Fathers, for fathers who went to One Day with God camp to meet once a month and learn about how to be a good father.

If a child has been physically or sexually abused they may be examined through the Child Medical Evaluation program.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Children from low socioeconomic (SES) families are more than five times as likely to experience maltreatment than children not from low SES families.[18] Girls are more than five times as likely to experience sexual abuse than boys.[19] However, according to the 2009 Child Maltreatment Report, more boys died as a result of child maltreatment than girls (2.36 boys per 100,000 boys, compared to 2.12 girls per 100,000 girls in the population).[20]

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Section 8.07 Human Trafficking

Impact on Health and Contributing Factors

Human trafficking is a form of modern-day slavery. It greatly affects the most vulnerable: women and children. It involves the act of recruiting, transporting, transferring, harboring or receiving a person through the use of force or threats, coercion, abduction, deception or other means, for the purposes of exploitation. Every year, thousands of men, women, and children fall into the hands of traffickers in their own countries and abroad. According to the Polaris Project (a leading organization in the United States that combats all forms of Human Trafficking), more people are held in slavery today than at the height of the transatlantic slave trade.

There are two major types of Human Trafficking. The Trafficking Victims Protection Act (TPVA) of 2000 defines sex trafficking and labor trafficking as follows:

- Sex Trafficking is the use of a person for the purpose of a commercial sex act in which the commercial sex act is induced by force, fraud, or coercion, or in which the victim induced to perform such an act is less than 18 years of age.
- Labor Trafficking is use of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

Victims of Human Trafficking face many physical health risks, including drug and alcohol addiction, physical injuries (broken bones, concussions, burns, vaginal/anal tearing), traumatic brain injury, sexually transmitted infections (e.g., HIV/AIDS, gonorrhea, syphilis), sterility, miscarriages, menstrual problems, TB, hepatitis, malaria, pneumonia, and forced or coerced abortions.[1]

Psychological trauma includes mind/body separation/disassociated ego states, shame, grief, fear, distrust, self-hatred, suicide, and suicidal ideation, Posttraumatic Stress Disorder (PTSD), acute anxiety, depression, insomnia, physical hyper-alertness, and self-loathing. Victims may also suffer from traumatic bonding – a form of coercive control in which the perpetrator instills in the victim fear as well as gratitude for being allowed to live.[2]

Human trafficking is a leading source of income for organized crime and other criminal enterprises in the United States, bringing an estimated $8 billion to $10 billion a year in profit to the criminal enterprises involved.[3] Traffickers include organized crime, loosely organized family networks, and individuals. After the illegal trade of weapons and illicit drugs, human trafficking is the next most profitable business for organized crime.[4]

The problem in the United States has become so serious that President Barack Obama recently declared January "National Slavery and Human Trafficking Prevention Month" to raise awareness about this criminal enterprise that now generates approximately $32 billion dollars annually worldwide (a three-fold increase from dollars generated in 2004).[5]

Healthy NC 2020 Objective

There are no Healthy NC 2020 Objectives related to Human Trafficking.

Secondary Data: Major Findings

The United Nations estimates that between 14,500 and 17,500 men, women, and children are trafficked into the United States every year.[6] More than 80% of the victims are female, and 70% of these victims are forced into the commercial sex trade.[7] The FBI estimates that approximately 23% of those trafficked into the United States arrive in the Southeast.[8] Reports of trafficked or potentially-trafficked victims have been documented across North Carolina, both in cities and rural areas.

According to a recent (July 2010) WBTV report out of Charlotte, North Carolina ranks 8th, as the most likely place in the United States where trafficking takes place. There are many reasons for this ranking, including the fact that human traffickers take advantage of the I-40, I-85, and I-95 network of highways to recruit, enslave and traffic victims. Traffickers and their victims typically move from

one place to another and purposely do not establish roots or ties to the community, so access to major highways and interstates is ideal. Both Interstate-40 and I-85 travel through Orange County.

North Carolina is also a top-ten agricultural state which attracts approximately 100,000 migrant farm workers (60,000 of which are Latinos) who can also be lured into forced labor and servitude. According to Legal Aid of NC, agricultural production in North Carolina is a $46 billion industry which involves the 5th most farm workers of any state. Unfortunately, this industry remains intertwined with extreme exploitation and, for some, modern-day slavery.

In addition, there are nine active military bases in North Carolina (two Air Force, two Army, one Coast Guard, three Marine, and one Navy), which can serve as magnets to sex traffickers and traders. According to a 2001 report by the Coalition Against Trafficking in Women (sponsored by the National Institute of Justice), sex businesses thrive around military areas in the Southeast.[9] In 2004, and in response to this growing problem on bases, the Pentagon drafted a "court martial" policy to reduce sex trafficking wherever American soldiers, sailors, Marines, and airmen are stationed.

The good news is that North Carolina passed a bill in 2007 which makes Human Trafficking a felony and offers state assistance to victims. As of July 2011, all new law enforcement officers in NC must receive training in identifying and responding to human trafficking situations.

Primary data: Residents' concerns

Quantitative: Survey

Human Trafficking was not covered in the 2011 community survey.

Qualitative: Focus Group

In the focus group conversations, human trafficking was not discussed.

Current Initiatives and Activities

Shocked by trafficking statistics in NC, State Senator and Orange County resident Eleanor Kinnaird, drafted Senate Bill 547, a measure that would create a state commission on human trafficking. (http://www.ncleg.net/Sessions/2011/Bills/Senate/PDF/S547v0.pdf). As of August 2011 it was still in committee.

The North Carolina Coalition Against Human Trafficking (NCCAHT) is coordinating statewide work on human trafficking. One of their activities is to promote the creation of local Rapid Response Teams (RRT)s who do crisis response in the first 72 hours after a victim is identified. These teams coordinate medical, mental health, housing, law enforcement, legal, and basic needs for the victim. The Triad RRT was the first one established in the state. The Triangle RRT (Orange, Durham and Wake Counties) is in the final states of developing protocols and inter-agency understandings. The taskforce that has been establishing this team has recently lost the support of a grant-funded coordinator at the Wake County Legal Aid, but is optimistic that the team can finalize its structure and function soon. At that time it will start advertising its availability providing direct, coordinated services to victims.[10]

If someone suspects trafficking, local law enforcement departments can be contacted. There is also a National 24/7 Human Trafficking Resource Center at 1.888.373.7888 that one can call for more information or to report a potential non-emergency trafficking situation. Suspected Human

Trafficking can also be reported at the National Center's Cyber Tipline at 1-800-THE-LOST or online at www.CyberTipLine.org. The FBI Human Trafficking Hotline is also available 24/7 at 1.866.252.6850.

Established in 2004 as a collaboration between the NC Attorney General's Office, NC Coalition Against Human Trafficking, and several other organizations, the North Carolina Coalition Against Human Trafficking (NCCAHT) is a group of professionals from multiple fields (including law enforcement, legal services, social services, policy, etc.) that works to raise awareness about human trafficking across North Carolina, support efforts to prosecute traffickers, and identify and assist victims.

The statewide North Carolina Stop Human Trafficking coalition brings together community and civic groups, faith-based organizations, and interested individuals working together to end trafficking.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Children are highly desired in both sex and labor trafficking and are often exploited in the commercial sex trades, performing the same jobs as adults in prostitution, pornography, and sex tourism. Outside of the illicit sex trade, children are regularly found in domestic service, migrant farm work, hotel or restaurant work, and sweat shops. Many of the victims of sex trafficking within the United States are runaways or women who have been kidnapped. According to a recent study, of the 1.6 million missing or abandoned children in the United States, over 40,000 are at risk for sexual endangerment or exploitation.[11]

Victims of labor trafficking, like sexual trafficking victims, are often kept isolated to prevent them from seeking advice or help. Traffickers “coach” them to answer questions with a cover story about being a student or tourist and they are constantly escorted and watched.[12] Victims are often Blackmailed using their status as an undocumented alien or participating in an “illegal” industry. People who are trafficked often come from unstable and economically devastated places as traffickers frequently take advantage of vulnerable populations characterized by oppression, high rates of illiteracy, little social mobility, and few economic opportunities.[13]

Trafficking is a large, global problem, but it often remains an invisible issue at both global and local levels. There are numerous barriers that contribute to identifying victims, including, but not limited to:

- Trafficking victims can be very hidden
- Victims are kept moving by traffickers
- Lack of awareness of trafficking among general public and health, legal, and human service professionals
- Law enforcement often detains and removes possible victims before they can be interviewed, identified, and assisted by legal counsel[14]

Most important next steps include:[15]

- Build awareness of human trafficking (among both service providers and the general public) to increase identification;
- Develop services for victims. Currently the services being developed are based on services for trauma victims and some on victims of torture and refugees. Victims of human trafficking have overlap with all of these, but do not fall completely in any of these categories; and,
- Research and evaluation on what is being done and if it is effectively working.

[1] Department of Health and Human Services, Sex Trafficking Fact Sheet www.acf.hhs.gov/trafficking
[2] Department of Health and Human Services, Sex Trafficking Fact Sheet www.acf.hhs.gov/trafficking
[3] U.S. Department of Justice, Civil Rights Division, Anti-Trafficking News Bulletin, July, 2004
[4] U.S. Department of Justice, Civil Rights Division, Anti-Trafficking News Bulletin, July, 2004
[5] International Labor Organization, A global alliance against forced labor: 2005, http://www.dreamcenter.org/new/images/outreach/RescueProject/stats.pdf
[6] U.S. Department of Justice, Civil Rights Division, Anti-Trafficking News Bulletin, July, 2004.
[7] U.S. Department of Justice, Civil Rights Division, Anti-Trafficking News Bulletin, July, 2004.
[8] University of North Carolina at Chapel Hill's Carolina Women's Center April 3-4, 2010 conference, Combating Sex
[9] Coalition Against Trafficking in Women, Sex Trafficking of Women in the United States, International and Domestic Trends, March 2001. http://www.uri.edu/artsci/wms/hughes/sex_traff_us.pdf
[10] Personal communication with Patrice Patterson-Garling Child Abuse Social Worker
UNC Hospitals Beacon Child and Family Program, July 15, 2011
[11] U.S. Department of Justice: Office of Juvenile Justice and Delinquency Prevention. Runaway/Thrown-away Children: National Estimates and Characteristics, NISMART Series: 2002.
[12] Department of Health and Human Services, Labor Trafficking Fact Sheet. www.acf.hhs.gov/trafficking.
[13] Department of Health and Human Services, Labor Trafficking Fact Sheet. www.acf.hhs.gov/trafficking
[14] North Carolina Human Trafficking Task Force, U.S. Department of Justice, Federal Bureau of Investigation, April, 2007
[15] Personal communication with Patrice Patterson-Garling Child Abuse Social Worker. UNC Hospitals Beacon Child and Family Program, July 15, 2011

Chapter IX Environmental Health

As noted in the Healthy NC 2020 and Healthy People 2020 reports, the environment in which individuals live and work affects their health, the health disparities they face, and as a consequence, the high quality of life they seek to enjoy.[1,2] Individuals who already have health risks will be most affected by environmental issues through the exacerbation of current disease. Efforts to improve environmental health must address those factors that are most likely to impact an individual's risk of exposure and disease.[3]

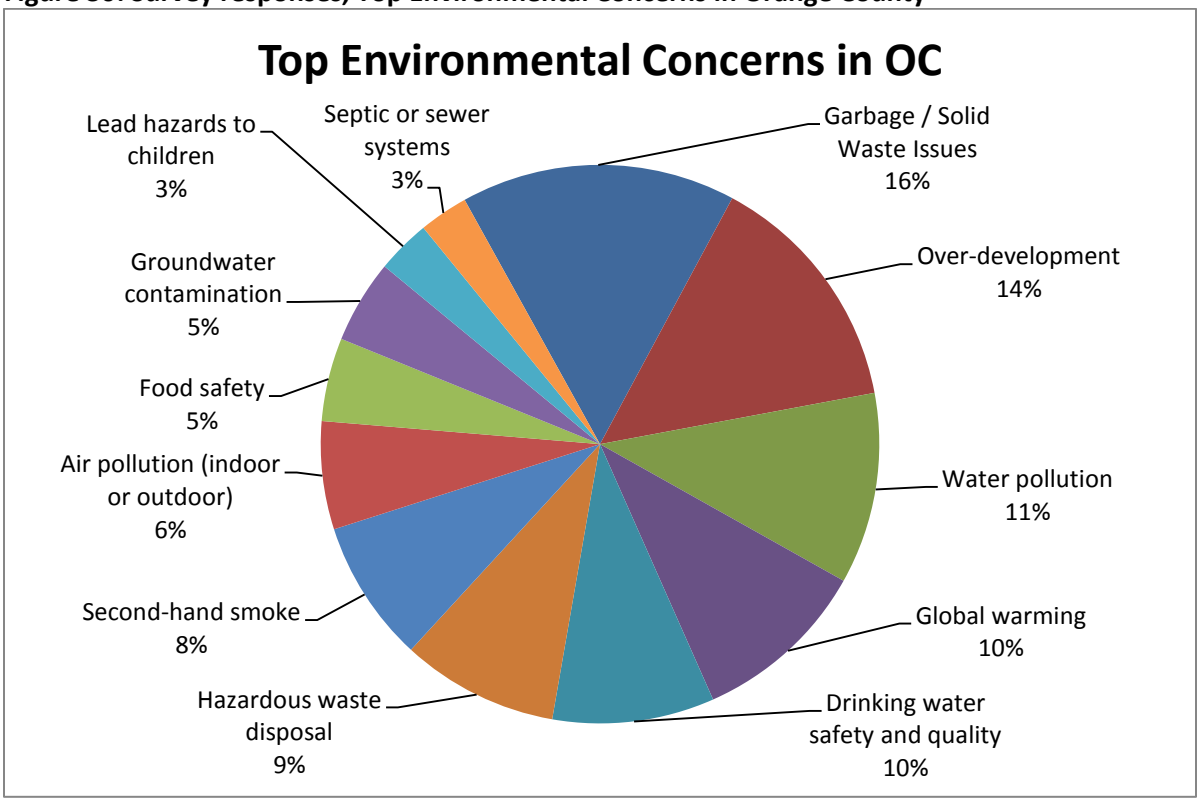
The excellent quality of life within Orange County continues to attract new persons to the area. As the County experiences continued expansion, one challenge is accommodating this growth while maintaining the high quality of life that current residents enjoy. This chapter discusses the current state of Orange County's environment and its impact on human health. Three determinants and indicators of health—Air Quality, Drinking Water, and Lead Hazards—are highlighted below in light of their potential impact and relevance for Orange County and its residents.

Primary data: Residents' concerns

Quantitative: Survey

The Community Health survey asked respondents to rate several categories of environmental concerns. The following chart (Figure 9.1) represents those responses. The concerns were distributed fairly consistently over the wide variety of topics. An equivalent number of survey respondents agreed that "pollution is a problem in Orange County" (87%) while also believing that "people who live in Orange County have equal access to clean air, water, and well-maintained public spaces" (86%).

Figure 30: Survey responses, Top Environmental Concerns in Orange County



Qualitative: Focus Group

Environmental health concerns were discussed in a variety of the focus groups and a myriad of concerns were brought up, ranging from sanitation to clean water to air quality to recycling and more.

Many participants expressed pleasure with the Orange County environment, with one stating, "the physical environment is so nurturing here. We have such a devotion to our trees and our gardens." The recycling program in Orange County also received high praises.

Focus group discussion points are further reported in specific topic sections below.

[1] Healthy People 2020; Accessed on March 14, 2011, http://www.healthypeople.gov/2020/default.aspx
[2] North Carolina Institute of Medicine. Healthy North Carolina 2020: A Better State of Health. Morrisville, NC: North Carolina Institute of Medicine; 2011. Accessed on March 14, 2011 at: http://publichealth.nc.gov/hnc2020/index.htm
[3] North Carolina Institute of Medicine. Healthy North Carolina 2020: A Better State of Health. Morrisville, NC: North Carolina Institute of Medicine; 2011. Accessed on March 14, 2011 at: http://publichealth.nc.gov/hnc2020/index.htmhttp://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=12

Section 9.01 Air Quality

Impact on Health and Contributing Factors

The US Environmental Protection Agency (EPA) calculates the Air Quality Index (AQI) for six major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead. For each of these pollutants, EPA has established national air quality standards to protect public health.[1] The air quality index is measured on a scale of 0 – 300, and includes the following familiar codes:[2]

Table 55: National Air Quality Index Standards

Color	AQI Range	Level of Health Concern
Green	0-50	Good
Yellow	51-100	Moderate
Orange	101-150	Unhealthy for sensitive individuals
Red	151-200	Unhealthy
Purple	201-300	Very Unhealthy
Maroon	301-500	Hazardous

Ozone is one of the six major air pollutants measured in the AQI that have the potential to affect health in Orange County. 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.[3]

Motor vehicle exhaust, industrial emissions, gasoline vapors, and chemical solvents, as well as natural sources emit pollutants such as carbon monoxide (CO), nitrogen oxides (NOx), and volatile organic compounds (VOC) that help form ground-level ozone. Sunlight and hot weather cause ground-level ozone to form in harmful concentrations in the air.[4] On the days where AQI reaches higher than 100, persons sensitive to air pollutants may experience health effects due to ozone exposure. Such exposure can lead to respiratory symptoms, disruption in lung function, and inflammation of airways.[5]

Healthy NC 2020 and Healthy People 2020 Objectives

Healthy NC 2020 Objective	Current (NC)	2020 Target
Increase the percentage of air monitor sites meeting the current ozone standard of 0.075 ppm.	62.5% (2007-2009)	100.0%
Healthy People 2020 Objective	**Current (US)**	**2020 Target**
EH-1: Reduce the number of days the Air Quality Index (AQI) exceeds 100.	11 Days (2008)	10 Days

Secondary Data: Major Findings

The NC Department of Environment and National Resources Division of Air Quality provides regional data for air quality indicators. Though there are no ozone monitoring sites located within Orange County, the air quality status in the county can be inferred from the ozone monitoring stations located throughout the Raleigh-Durham-Chapel Hill (Triangle Region).

From 2004 through 2009, the Triangle Region was designated as a non-attainment area with respect to the 8-hour ozone standard (0.08 ppm) that was in effect at the time.[6] Ozone was a significant concern in 2005 when Orange County experienced 9 days of unhealthy air quality due to high levels of ozone.[7] In 2008, the US Environmental Protection Agency (EPA) revised the 8-hour ozone primary standard downward to 0.075 ppm. This set of standards is currently under review and reconsideration by the US EPA. Though spikes can occur in the concentration of ground-level ozone during the hot summer months, for the past year the Triangle Region has met the 8-hour ozone standard of 0.075 ppm referenced in the Healthy NC 2020 objective. As of December 2010, the area was re-designated as an ozone attainment-maintenance region.[8] Attainment indicates an area is considered to have air quality as good as or better than the national ambient air quality standards as defined in the Clean Air Act.[9] This status could change once EPA completes its review of the current ozone standard.

Air Quality Index

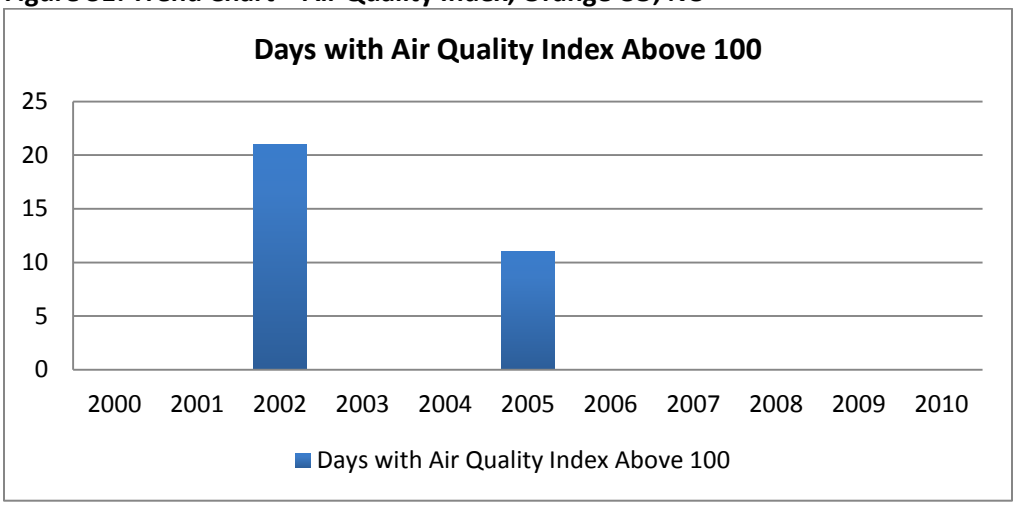
In the early 1970s, the EPA listed six major air pollutants that affect the quality of ambient air and established concentration limits for these pollutants. These limits are known as the National Ambient Air Quality Standards (NAAQS). Primary limits or standards were established to protect human health; and secondary standards were established to protect human welfare and the quality of life. Through the years, the NAAQS have been revised and amended to account for evolving scientific understanding of air pollution and its impacts.

Currently, the six criteria pollutants are: [10]

- Ozone O_3
- Particulate matter $PM^{2.5}$ and PM^{10}
- Carbon Monoxide CO
- Sulfur Dioxide SO_2
- Nitrogen Dioxide NO_2
- Lead Pb

The Figure below shows the number of days Orange County has exceeded an Air Quality Index (AQI) of 100. Since 2005, Orange County has met the Healthy People 2020 objective of having less than 11 days per year with an AQI greater than 100.

Figure 31: Trend Chart – Air Quality Index, Orange CO, NC[11]



Primary data: Residents' concerns

Quantitative: Survey

In the Community Health Survey, of those respondents who identified concerns about the environment, 6% mentioned that they were concerned about indoor air quality or outdoor air pollution.

Qualitative: Focus Group

In the focus groups, there was little mention of concerns about air quality in specific terms. One person expressed concern over pollution attributed to the burning of coal at the University, while many others expressed pleasure with the overall environmental quality of Orange County's air.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

Orange County air quality appears to be acceptable at the present time. This is perhaps a reflection of having few industrial point sources, and a relatively low level of urban development. There are certain factors, however, that are not controllable, such as climate and weather patterns, and impact from activities in neighboring counties. Although ground-level ozone can be present in both rural and urban areas, those living and working in urban areas may be subject to increased health risks. In addition, individuals at increased risk from the health effects of ozone exposure include children, people with asthma and lung disease, older adults, infants, and active people of all ages.[12]

Strategies recommended to improve air quality[13] and to assure continued maintenance of air quality in Orange County:

- **Individual** - Carpool, use public transportation, combine errands, conserve electricity;
- **Organizational** - Work with community coalitions for strong state air pollution control measures; advocate for energy-saving and pollution-minimizing practices;
- **Schools and Child Care** - enforce a "no idling" policy in carpool lanes and parking lots to improve air quality;
- **Community** - Establish carpools, public transportation, or bike-friendly community transportation systems; implement low-impact development requirements by zoning boards;
- **Public Policies** - Encourage implementation of fuel alternatives; support policies that promote stronger emission standards for vehicles; support policies that promote reduction of power plant emissions.

[1] Environmental Protection Agency six common air pollutants; Accessed on June 16th, 2011; http://www.epa.gov/air/urbanair/
[2] AIRNow guide to the Air Quality Index; accessed June 16, 2011; http://www.airnow.gov/index.cfm?action=aqibasics.aqi
[3] Healthy North Carolina 2020, accessed on June 16, 2011; http://publichealth.nc.gov/hnc2020/docs/HNC2020-FINAL-March-revised.pdf
[4] US Environmental Protection Agency, Ground Level Ozone; accessed on June 16, 2011; http://www.epa.gov/glo/
[5] North Carolina Institute of Medicine. Healthy North Carolina 2020: A Better State of Health. Morrisville, NC: North Carolina Institute of Medicine; 2011; Accessed on March 14, 2011; http://publichealth.nc.gov/hnc2020/index.htm
[6] North Carolina Division of Air Quality, Recommendation On 8-Hour Ozone Nonattainment Area Boundaries; Accessed on June 16, 2011; http://daq.state.nc.us/planning/ozone/o3boundary/NC_Proposed_Boundaries_2009.pdf
[7] 2010 Orange County, North Carolina, Air Pollution Ozone Days Archived, Accessed June 16, 2011; http://www.countyhealthrankings.org/north-carolina/orange/29/archived-data/2010
[8] North Carolina Division of Air Quality; Current Nonattainment and Maintenance Areas; Accessed June 16, 2011; http://daq.state.nc.us/planning/ozone/o3boundary/Existing_NAA_Boundary_Map.pdf
[9] US EPA; Terms of Environment: Accessed on June 16, 2011; http://www.epa.gov/OCEPAterms/aterms.html
[10] NC DENR Division of Air Quality; Accessed on April 27, 2011; http://daq.state.nc.us/monitor/monitoring_overview_05082007.pdf
[11] Environmental Protection Agency, Air Quality Trends, Accessed on March 15, 2011; http://www.epa.gov/airtrends/aqtrends.html#airquality
[12] North Carolina Institute of Medicine. Healthy North Carolina 2020: A Better State of Health. Morrisville, NC: North Carolina Institute of Medicine; 2011. Accessed on March 14, 2011 at: http://publichealth.nc.gov/hnc2020/index.htm

[13] North Carolina Institute of Medicine. Healthy North Carolina 2020: A Better State of Health. Morrisville, NC: North Carolina Institute of Medicine; 2011. Accessed on March 14, 2011 at: http://publichealth.nc.gov/hnc2020/index.htm

Section 9.02 Drinking Water Quality

Impact on Health and Contributing Factors

Contaminants in water and air can have adverse health consequences. Both short-term and chronic exposure to pollution can present serious health risks. The National Primary Drinking Water Regulations (NPDWRs or primary standards) are legally enforceable standards that apply to public water systems. Primary standards protect public health by limiting the levels of contaminants in drinking water.[1] The safety of drinking water can be measured in terms of whether Maximum Contaminant Levels (MCL) are met for various pollutants present in water that could affect health. MCL standards for drinking water quality are set by the United States Environmental Protection Agency (EPA). An MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act.

Healthy NC 2020 Objective

Healthy NC 2020 Objective	Current (NC)	2020 Target
Increase the percentage of the population being served by community water systems with no maximum contaminant level violations.	92.2% (2009)	95.0%

Public Water Supplies

Citizens living in the municipal areas of Orange County and in some limited unincorporated areas are served by the following community public water systems:

Table 56: Public Water Systems in Orange County

Provider	Population Served	Number of MCL Violations Since 2006[2]
Orange Water and Sewer Authority (OWASA)	79,400; Chapel Hill, Carrboro, and UNC	None (0)
Town of Hillsborough	13,000; Hillsborough & surrounding areas	1
Orange Alamance Water System (OAWS)	< 3,000; Efland/Mebane Corridor	1
Town of Mebane	< 3,000; Mebane	3
City of Durham	< 3,000; Eastern edge of Orange County	1

Of the Orange County population served by community water systems, approximately 78% are served by the Orange Water and Sewer Authority (OWASA). OWASA has had no maximum contaminant level (MCL) violations since 2006. The utility was recently awarded the prestigious Phase IV "Excellence in Water Treatment" award from the Partnership for Safe Water for surpassing Federal EPA standards. Other public water providers serving Orange County have sporadically exceeded MCL standards, but only for common water disinfection byproducts. For 2010, as 97% of

the population provided with public water was served by water suppliers with no MCL violations, Orange County has met the Healthy NC 2020 objective during this year.

Private Well Water Supplies

The balance (between 30% and 40%) of the population in Orange County relies on groundwater wells for their drinking water source. There are 28 public community water wells regulated by the state, serving subdivisions and mobile home parks. The rest of the residential population is served by privately owned wells. Regular monitoring of water quality for private wells is not required, but is offered as a service by the Orange County Health Department as well as by private companies. In July 2008, the Orange County Health Department instituted a required sampling for all newly constructed wells.

For county residents using well water as their drinking water source, two naturally occurring elements, radon and arsenic, have been found in groundwater and also have the potential to adversely affect health.

Radon – Radon is a naturally occurring radioactive element found in most groundwater in North Carolina. It is a product of the decay process of uranium that is present in the earth's crust.[3] The US EPA estimates that radon in drinking water causes about 168 cancer deaths per year, 89% of which are from lung cancer caused by breathing radon released from drinking water, and the remaining 11% are from stomach cancer caused by drinking radon-containing water.[4]

The EPA has proposed a recommended MCL for radon in drinking water of 300 picocuries per liter (pCi/L)[5] for states, like North Carolina, that have not adopted a multimedia mitigation program to reduce radon exposure, although these drinking water standards have not yet been adopted. While the regulations would not apply to individual private wells, the Orange County Health Department offers radon testing kits and educational information on radon exposure risks.

In 2001, the USGS conducted a groundwater study in Orange County. Of the 51 groundwater samples collected throughout Orange County, the median radon level in the drinking water was 586 pCi/L[6.] Further sampling of 142 wells in Orange County has shown that 41% contained radon levels in excess of 300 pCi/L.[7]

Arsenic - Arsenic is a naturally occurring, metal-like substance that is found in small amounts in rocks in the earth's crust and in groundwater. In addition, arsenic in groundwater can be present as a result of the release of hazardous material. Arsenic is a recognized carcinogen, and most human exposure is through ingestion. Ingested arsenic is transmitted through the bloodstream and may concentrate within internal organs, skin, hair, and nails.[8]

In October 2001, the US EPA lowered the MCL for arsenic in public water supplies from 50 parts per billion (ppb) to 10 ppb. Furthermore, the North Carolina Division of Public Health has recommended a non-regulatory public health goal of 0.0017 ppb for arsenic in drinking water. The lowest level of arsenic detectable by the State Laboratory of Public Health is 5 ppb.

Arsenic found in the groundwater in Orange County is considered to be naturally occurring as there are few, if any, industrial sources in the county. Arsenic in groundwater tends to be more prevalent in the areas underlain by the type of geologic formations that predominate in Orange County.

Through an ongoing sampling program undertaken by the Orange County Health Department, data shows that of the 567 wells sampled from November 2009 through May 2011, 25 (4.4%) showed a detectable level of arsenic above 5 ppb. Nine of these wells (1.6%) had arsenic levels above the MCL of 10 ppb.

Primary data: Residents' concerns

Quantitative: Survey

In the Community Health Survey, of those respondents who identified concerns about the environment, 10% mentioned that they were concerned about drinking water quality and safety.

Qualitative: Focus Group

While most residents (86%) agreed there was equal access to clean air and water in Orange County, water issues were not frequently discussed as major concerns by most of the focus groups. One focus group expressed concerns about proximity to the landfill and potential for contamination of groundwater and other environmental features.

Current Initiatives and Activities

The Orange Water and Sewer Authority (OWASA) is a public, non-profit agency that provides water, sewer (wastewater) and reclaimed water services to the Carrboro-Chapel Hill community including the University of North Carolina at Chapel Hill located in southern Orange County, North Carolina.

H2Orange is a multi-departmental initiative to provide, share, and discuss information on water resources in Orange County including reservoir levels, surface water data, drought information (historic/current), water conservation strategies, stormwater, erosion control, and climate information. H2Orange takes a lead role in coordinating drought response among County departments, and in reviewing data and information for regional water resource programs and projects.

It is the responsibility of the Public Water Supply Section of the NC Department of Environment and Natural Resources Division of Water Quality to regulate public water systems within the state under the statutory authority of G.S. 130A Article 10. Public water systems are those which provide piped drinking water to at least 15 connections or 25 or more people 60 or more days per year.

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

The utility-based community water supplies serving Orange County citizens are already meeting the Healthy NC 2020 objective with respect to the Maximum Contaminant Level (MCL) violations. The fact that several of the water suppliers have had violations of disinfection byproducts limits in recent years is a cause for concern. Most utilities attempt to address this problem by switching disinfection methods from chloramines to chlorine in the spring of each year, and by more frequent flushing of water lines. Both of these measures are intended to remove infectious byproducts from the water distribution system.

Other non-utility community water supplies in the county serving mobile home parks and subdivisions experience periodic MCL violations. The Public Water Supply Section of Department of Environment and Natural Resources requires corrections and customer notifications when these violations occur. Private water supplies and those community supplies that fall below the threshold

of 15 connections/25 persons served, (e.g. small mobile home parks and rental apartments) may have little or no monitoring for water quality.

Studies have shown that ingesting water with elevated arsenic levels can cause various ailments, including thickening and discoloration of the skin; skin cancer; bladder, liver, kidney, and prostate cancers; digestive problems such as stomach pain, nausea, vomiting, diarrhea; and numbness or "tingling" of hands and feet. Many of these health effects are frequently seen with other illnesses, so detecting arsenic poisoning is often difficult. Unborn babies, young children, people with long term illnesses, and the elderly are at greatest risk from arsenic exposure.

Arsenic is commonly tested by the Orange County Health Department through the regularly requested inorganic sampling services. The current minimum level of detection for arsenic in drinking water is not adequate to assure that the North Carolina public health goal is met. This goal is lower than the detection limit used by the NC state laboratory of public health by a factor of almost 3000. Whenever arsenic levels fall at or above the detection limit of 5 ppb, the well owner is provided with an arsenic advisory notice to help make them aware of the risk and what remedies are available.

The Health Department offers test kits for radon, but very few homeowners request that their well water be tested for radon. It is likely that most homeowners do not know the level of radon in their drinking water source. If detected, radon in well water can be removed by installing an aeration or filter system.[9] Similarly, it is fairly simple to test for radon in indoor air, and if it is detected at a concentration that is cause for concern, the radon level can be addressed by installing special venting systems.

Strategies[10] recommended to address water quality in Orange County are:

- Individuals should properly use and dispose of hazardous materials like motor oil and pesticides, and should use pesticides and fertilizers in moderation.
- The community should implement low-impact development requirements by Zoning Boards; should follow best available technology for specific contaminants in community water systems, and refer to EPA guidance for simultaneous compliance when making treatment changes; and should perform regular monitoring of the water supply as required by the Safe Drinking Water Act and the North Carolina Drinking Water Act.
- Public policies should include water rates that support future infrastructure needs of community water systems.

The other strategies recommended are to:

- Increase public awareness of radon and arsenic in the County, and encourage well owners to have their water tested for these elements. In addition, homeowners should be encouraged to test their indoor air for radon.
- Implement a drinking water monitoring program for community water supplies that are not currently regulated by the PWS section of DENR. (e.g. mobile home parks, multi-unit rentals)
- Encourage the State Laboratory of Public Health to lower the arsenic detection limits to allow a better assessment of the safety of water supplies with respect to the NC public health goals.

[1] US EPA Drinking Water Contaminants; Accessed on March 14, 2011; http://water.epa.gov/drink/contaminants/#List
[2] North Carolina Public Water Supply Branch; Drinking Water Watch; Accessed April 25, 2011; https://www.pwss.enr.state.nc.us/DWW/

[3] NC Cooperative Extension Service , Water Quality and Waste management; Accessed May/10/11; http://www.bae.ncsu.edu/programs/extension/publicat/wqwm/he396.html ,
[4] US Environmental Protection Agency, Proposed Radon in Drinking Water Regulation; Accessed April 1, 2011; http://water.epa.gov/lawsregs/rulesregs/sdwa/radon/regulations.cfm
[5] US Environmental Protection Agency, Proposed Radon in Drinking Water Regulation; Accessed April 1, 2011; http://water.epa.gov/lawsregs/rulesregs/sdwa/radon/regulations.cfm
[6] Cunningham William L, Daniel Charles C, Investigation of Ground-Water Availability and Quality in Orange County, North Carolina, 2001, http://nc.water.usgs.gov/reports/wri004286/pdf/report.pdf
[7] Sampling results on record at Orange County Health Department.
[8] US Environmental Protection Agency, Basic Information about the Arsenic Rule, Accessed March 18, 2011, http://water.epa.gov/lawsregs/rulesregs/sdwa/arsenic/index.cfm
[9] United States Environmental Protection Agency. Basic Information about radon in drinking water; Accessed on March 24, 2011; http://water.epa.gov/lawsregs/rulesregs/sdwa/radon/basicinformation.cfm
[10] NC Institute of Medicine. NC Prevention Action Plan (2009). http://www.nciom.org/wp-content/uploads/NCIOM/projects/prevention/finalreport/PreventionReport-July2010.pdf

Section 9.03 Lead Hazards

Impact on Health and Contributing Factors

According to the Centers for Disease Control and Prevention (CDC), approximately 250,000 children in America aged 1-5 years have blood lead levels greater than 10 micrograms of lead per deciliter of blood (ug/dL). This is the level at which the CDC recommends public health actions be initiated. Lead poisoning can affect nearly every system in the body.[1]

While potentially harmful to individuals of all ages, lead exposure is especially harmful to children under six years of age because it affects their developing brains and nervous systems. Ingesting or swallowing lead-contaminated materials is the primary way that children get lead poisoning at home. Small children are particularly susceptible because of their constant hand-to-mouth activity.[2] Lead exposure of women of child-bearing age can also adversely affect developing fetuses during pregnancy.

Children exposed to lead can have stunted growth; mental problems, including low IQ or learning problems; and severe lead poisoning, which can cause seizures, coma, and even death. Typical sources of lead exposure may include painted or plastic toys; lead-based paint in older homes, which can chip or form a harmful dust; soil, vinyl and plastic products, imported candy, lead-glazed pottery, fishing tackle, and some home remedies, such as azarcan and greta; and drinking water pipes with lead-based solder.

Healthy NC 2020 Objective

There are no Healthy NC 2020 Objectives for prevention of lead hazards.

Healthy People 2020 Objectives

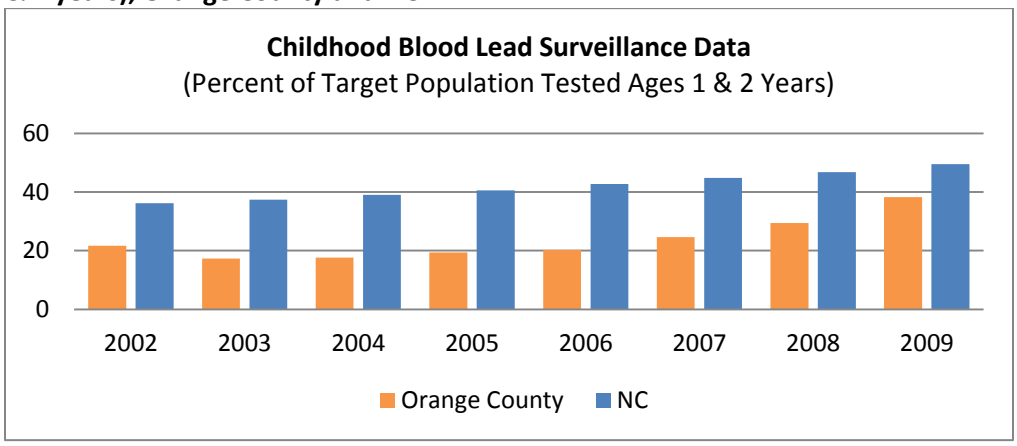
Objective	Current (US)	2020 Target
EH-8.1 Eliminate blood lead levels in children.	0.9 percent of children had elevated blood lead levels (2005-2008)	
Reduce the mean blood lead levels in children.	1.5 µg/dL average blood lead level in children aged 1 to 5 years (2005-2008)	1.4 µg/dL average blood lead level in children aged 1 to 5 years

Secondary Data: Major Findings

Blood lead testing is recommended for all children at ages 12 and 24 months. Discovery of lead in children's toys, mini-blinds, candy, and other household products makes the testing of all children important, regardless of perceived risk. Screening is required by law for all Medicaid, Health Choice, and children in the Women, Infant, Children (WIC) program. Testing is usually done by the child's primary care provider. The laboratories that conduct the blood lead analyses are required by general statute to report all blood lead results to the North Carolina Childhood Lead Poisoning Prevention Program (CLPPP) which currently coordinates clinical and environmental services aimed at eliminating childhood lead poisoning.

The CLPPP tracks the number and rate of children in the target population (12 and 24 month olds) who are screened for blood lead level. The following chart (Figure below) reflects the rate of childhood lead screening for Orange County as compared with North Carolina state.[3]

Figure 32: Childhood Blood Lead Surveillance Data Percentage of Target Population Tested (age 1 & 2 years), Orange County and NC



The following data (Table above) illustrates the number of Orange County children with elevated blood lead levels detected over the past five years. The numbers are relatively low, and ranged from a high of five cases in 2007 and a low of one case in 2006 and 2009.

Table 57: Number of Children under the Age of 6 with a Blood Lead > 10 ug/dL[4]

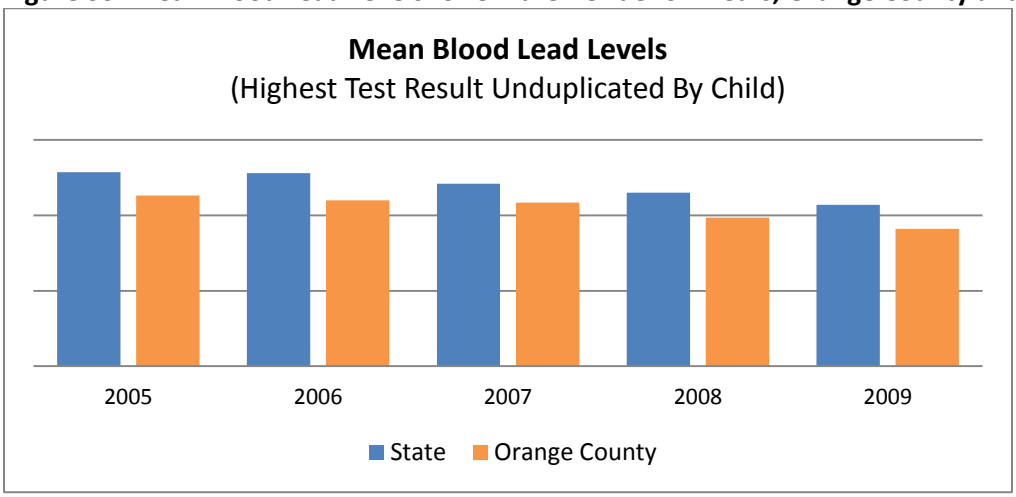
	NC		Orange County	
Year	Tested > 10 *	Confirmed > 10 **	Tested > 10	Confirmed > 10
2005	1,385	348	8	4
2006	1,264	294	6	1
2007	1,074	271	12	5
2008	932	216	11	2
2009	853	176	8	1

*Highest test result unduplicated by child

**Two consecutive levels ≥ 10 within six months

The following chart (Figure below) illustrates the average (mean) blood lead levels for children under the age of six for Orange County, as compared with the North Carolina average.

Figure 33: Mean Blood Lead Levels for Children Under Six Years, Orange County and NC[5]



Primary data: Residents' concerns

Quantitative: Survey

In the Community Health Survey, of those respondents who identified concerns about the environment, 3% mentioned that they were concerned about lead hazards to children.

Qualitative: Focus Group

The focus group discussions did not mention concerns regarding lead hazards in the county.

Current Initiatives and Activities

The Orange County Health Department responds to reports of elevated blood lead levels in children under six by assuring that the health care provider conducts the required follow-up and by providing an environmental assessment of the child's home and surroundings to identify and eliminate potential lead hazards. The Orange County Health Department monitors the statewide electronic lead monitoring system (NC LEAD) in order to prompt the necessary follow-up. The Orange County Health Department notifies health care providers of special testing requirements for refugee populations.

In addition, community efforts include working with the refugee and immigrant population and providing education and alerts regarding commercial products containing lead

The goal of the UNC Center for Environmental Health and Susceptibility is to bring together a broad group of environmental health researchers to understand the mechanistic basis of chemical toxicity and integrate this knowledge with epidemiology in order to reduce the burden of environmentally related disease.

The Childhood Lead Poisoning Prevention Program (CLPPP) of the NC Children's Environmental Health Branch coordinates clinical and environmental services aimed at eliminating childhood lead poisoning. NC CLPPP also provides technical assistance, training and oversight for local inspectors to

assure healthy and safe conditions. Among the program's other activities are early identification, surveillance, abatement enforcement, monitoring inspections and risk assessments.[6]

Interpretations: Disparities; Emerging Issues; Gaps and Unmet Needs; and Strategies

People living in older homes built before 1978 can be more at risk of exposure to lead-based paint. Housing price-range alone may not be an accurate indicator of lead-based paint exposure. While it is typical for lower income housing to be considered a significant source of lead exposure, the risk can be prevalent in higher income historic districts where older homes may have multiple layers of lead-based paint.

In addition to exposure risks from lead-based paint, more and more household products and children's toys are discovered each year that present lead hazards to children. Because housing alone does not determine lead exposure, it is important that parents follow the recommendations to have their children tested by their pediatrician at the recommended intervals.

Surveillance data for Orange County has always shown target population screening rates below the state average. Even though the rates have risen over the last eight years, there is much room for improvement. One significant limitation of the tracking method used by the Division of Environmental Health is that the state allows medical providers to use a questionnaire to exempt certain patients from universal testing. Patients are not necessarily tested if they are non-Medicaid, not enrolled in WIC, and live in one of the several low-risk zip code areas designated in Orange County. If the patient is excluded from testing by using the screening questionnaire, this event is not tracked.

In addition to screening children at 12 and 24 months, the CDC recommends the testing of all refugee children six months to 16 years old at entry to the US, and a repeat testing for those under six years of age three to six months after refugee children are placed in permanent residences.[7] Orange County has very few children who are detected with elevated blood lead levels. This could be attributed to several factors, including the low childhood screening rate, the prevalent age and type of housing in this area, or education and awareness levels of parents.

The average (mean) blood lead levels for children under the age of six in Orange County is lower than the average statewide, and has declined every year since 2005. The 2010 data is not yet available through the Children's Environmental Health Branch. However, the 2005-2008 annual average level for children in Orange County was 2.15 ug/dL, compared with the national average of 1.5 ug/dL during that time period; and the 2009 average for Orange County was 1.82 ug/dL, compared to the Healthy People 2020 goal of 1.4 ug/dL. This implies that even with the steadily declining average levels, Orange County should implement strategies to assure that the average blood lead levels will soon meet the Healthy People 2020 objective.

The following strategies are recommended for further reduction of lead hazards in Orange County:

- Urge the Division of Environmental Health, DENR to resume compiling lead screening rates by county, and make that data readily available so that local health departments can track the need for intervention with health care providers.
- Urge the DEH to discontinue the recommendation of allowing providers to exempt patients from the lead testing based on zip code location or on the use of the screening questionnaire.
- Continue working with healthcare providers in the county to increase education about lead hazards and the importance of screening all children at 12 and at 24 months.

- Educate parents of young children about lead hazards and the importance of lead screening at 12 and 24 months of age. Education efforts could be enhanced during Pregnancy Care Management (PCM) and Care Coordination for Children (CC4C) encounters.

[1] Centers for Disease Control and Prevention; accessed on June 11, 2011; http://www.cdc.gov/nceh/lead/
[2] NC Department of Health and Human Services, Epidemiology Branch; accessed on June 11, 2011; http://www.epi.state.nc.us/epi/lead.html
[3] Data compiled from the Children's Environmental Health Branch, Division of Environmental Health, DENR; Accessed May 5th, 2011; http://www.deh.enr.state.nc.us/ehs/children_health/Lead/lead.html
[4] Prepared by North Carolina Childhood Lead Poisoning Prevention Program
[5] Prepared by North Carolina Childhood Lead Poisoning Prevention Program
[6] Children's Environmental Health Branch, Division of Environmental Health, Department of Environment and natural resources; Accessed May 20, 2011; http://www.deh.enr.state.nc.us/ehs/Children_Health/About_CEHB/about_cehb.html
[7] CDC Refugee Health Guidelines; Accessed June 16, 2011; http://www.cdc.gov/immigrantrefugeehealth/guidelines/lead-guidelines.html

List of Appendices

Appendix A. Community Health Assessment Team Members

Orange County Community Health Assessment (Leadership) Team	
Community Partners	
Name	**Agency/Organization**
Myra Austin	Orange County Department on Aging
Glenn Bowles	Orange County Planning Department
Jeff Brubaker	Carrboro Transportation
David Caldwell	Community Member, Rogers-Eubanks Neighborhood Association
Robin Clark	Chapel Hill Police Department
Suzanne Deobald	Triangle United Way
Pam Dickens	NC Office on Disability and Health
Michael Dolan Fliss	Independent Consultant
Mariana Garrettson	UNC Injury Prevention Research Center
Marianne Hark	Mental Health America of the Triangle, Orange Partnership for Alcohol and Drug Free Youth
Selden Holt	UNC Center for Excellence in Community Mental Health/STEP Community Mental Health Clinic
Wanda Hunter	Community Member, At-Large/UNC HPDP
Alexandra Lightfoot	UNC Center for Health Promotion and Disease Prevention
Elvira Mebane	Community Member, United Voices of Efland
Heather Miranda	Piedmont Health Services
Chris Moran	Inter-Faith Council of Social Services
Janaki Nicastro	Freedom House Recovery Center
Jodi Schur	Community Member, At-Large
Denise Shaffer	Department of Social Services
Mark Sullivan	Mental Health America of the Triangle
Kevin Tull	UNC-Health Care
Anissa Vines	Board of Health
Ardra Webster	Orange County Parks and Recreation
Brandolyn White	UNC ECHO Program
Donna Williams	Orange County Schools
Stephanie Willis	Chapel Hill-Carrboro City Schools
Peggy Yonuschot	Orange-Person-Chatham Area Program (MH&SA)

Orange County Community Health Assessment (Leadership) Team	
Orange County Health Department Staff	
Amanda Bartolomeo	Emergency Preparedness
Judy Butler	Communicable Disease
Susan Clifford	Immigrant and Refugee Health
Dorothy Cilenti	Interim Health Director (June - October 2011)
Michael Day	Dental Services
Pam Diggs	Health Promotion and Youth Tobacco Coordinator
Pat Dodson	Personal Health Services
Kathy Glassock	Clinical Services
Kathleen Goodhand	Social Work/Home Visiting Services
Deborah Hamlin-Aggrey	Health Promotion and Education Services
Renee Kemske	Nutrition Services
Donna King	Health Promotion and Education Services
Betsy Knop	Social Work Supervisor
Tom Konsler	Environmental Health
Patty Rhodes	Child Health
Nidhi Sachdeva	Healthy Carolinians of Orange County
Cristina Sansone	Health Promotion and Education Services
Wayne Sherman	Personal Health Services
Rosemary Summers	Health Director (Retired May 2011)
Sue Young	Social Work/Home Visiting Services
Candice Watkins-Robinson	Health Communication

Appendix B. List of Contributors by Chapter and Section

Executive Summary	
Nidhi Sachdeva, MPH, CHES	Orange County Health Department

Chapter 1.00 – Community Health Assessment Process	
Nidhi Sachdeva, MPH, CHES	Orange County Health Department
Michael Dolan Fliss, MSW	Bright Roots Consulting

Chapter 2.00 – Community Priorities	
Nidhi Sachdeva, MPH, CHES	Orange County Health Department

Chapter 3.00 – Community Profile: Demographics, Immigrant and Refugee Populations, Geography, History, Land Use, Faith and Spirituality	
Glenn Bowles	Orange County Planning Department
Nidhi Sachdeva, MPH, CHES	Orange County Health Department
Susan Clifford, MPH, MSW	Orange County Health Department

Chapter 4.00 – Health Indicators: Leading Causes of Death, Hospitalization; Life Expectancy, Health Status	
Kevin Tull	UNC Healthcare
Nidhi Sachdeva, MPH, CHES	Orange County Health Department

Section 5.01 – Racial and Ethnic Disparities	
Nidhi Sachdeva	Orange County Health Department
Wanda Hunter	Community Member, Retired

Section 5.02 – Housing, Homelessness, Hunger	
Nidhi Sachdeva, MPH, CHES	Orange County Health Department

Section 5.03 – Education	
Denise Morton, Ph.D	Orange County Schools
Diane Rocker, MPH	Orange County Schools
Diane Villwock, Ph.D	Testing & Program Evaluation
Donna Williams, BA, M.Ed	Orange County Schools
Jennifer DeLaRosa	Chapel Hill-Carrboro City Schools
Jill Kerr, BSN, MSN, FNP, Dr.NP	Chapel Hill-Carrboro City Schools
Jill Rigsbee, BSN	Orange County Schools
Leigh McFalls, BSN	Orange County Schools
Stephanie Willis, BSN, MPH	Chapel Hill-Carrboro City Schools

Section 5.04 – Access to Health Care, Insurance, and Information	
Anita J Hill	AccessCare of Central Carolina
Candice Watkins Robinson, MA	Orange County Health Department
Claudia Rojas	UNC Center for Latino Health

Cynthia Latta, FNP	Orange County Health Department
Diane Perry RN, Section	Orange County Health Department
Heather L. Miranda, RD, LDN,	Piedmont Health Services, Inc.
Jennifer Reed Morillo	NC Refugee Health Program NC DHHS / Division of Public Health
Katherine K. Glassock, RN	Orange County Health Department
Kathleen Goodhand, MSW	Orange County Health Department
Kevin M. Tull	University of North Carolina Health Care System
Lori Giang	NC MedAssist
Pat Dodson, BS, RN, PHN II	Orange County Health Department
Rebekah Hermann, RN	Orange County Health Department
Sabrina R. Simon	Piedmont Health Services, Inc.
Susan Clifford, MSW, MPH	Orange County Health Department
Suzanne Deobald	United Way of the Greater Triangle

Section 5.05 – Labor and Income	
Nidhi Sachdeva, MPH, CHES	Orange County Health Department

Section 5.06 – Transportation	
Dolly Soto, MCRP	Town of Carrboro, Planning Department
Jeff Brubaker, MCRP	Town of Carrboro, Planning Department

Section 5.07.a – Crime and Safety	
Robin Clark	Chapel Hill Police Department
Mariana Garrettson, MPH	UNC Chapel Hill Injury Prevention Research Center

Section 5.07.b – Child Care	
Patty Rhodes	Orange County Health Department

Section 5.07.c – Built Environment	
Dolly Soto, MCRP	Town of Carrboro, Planning Department
Jeff Brubaker, MCRP	Town of Carrboro, Planning Department

Section 5.07.d – Parks and Recreation	
Ardra Webster	Orange County Department of Environment, Agriculture, Parks & Recreation

Section 6.01 – Cancer	
Brandolyn White, MPH, CHES	Carolina Community Network Center to Reduce Cancer Health Disparities, UNC-Chapel Hill
Veronica Carlisle, MPH	Carolina Community Network Center to Reduce Cancer Health Disparities, UNC-Chapel Hill

Sections 6.02 - 6.05 – Chronic Disease, Heart Disease, Stroke, Diabetes, Physical Activity and Nutrition	
Ali Starling	Student, UNC Gillings School of Global Public Health
Cintasha Frazier	Student, UNC Gillings School of Global Public Health and UNC School of Medicine
Deborah L. Hamlin-Aggrey, MPH, CHES	Orange County Health Department
Donna King, MPH	Orange County Health Department
Heather Miranda, RD, LDN	Piedmont Health Services, Inc.
Maria Hitt, BSPH	Orange County Partnership for Young Children
Nidhi Sachdeva, MPH, CHES	Orange County Health Department
Renee Kemske, MPH, RD, LDN	Orange County Health Department

Section 6.06 – Mental Health, Substance Abuse/Use, and Tobacco	
Aimee Vandermark, LCSW	Mental Health America of the Triangle
Alicia Sparks	North Carolina Harm Reduction Coalition
Carolyn Crowder, LCAS, P-LCSW	Freedom House Recovery Center
Janaki Nicastro	Freedom House Recovery Center
Julie Hasken	Student, UNC Gillings School of Global Public Health
Pam Diggs, MPH	Orange County Health Department
Peggy Yonuschot, MSW, LCSW	OPC Area Program
Selden Holt, MSW, LCSW	UNC Center for Excellence in Community Mental Health
Stephanie Willis, BSN, MPH	Chapel Hill Carrboro City Schools
Susan Spalt	NAMI-Orange County

Section 6.07 – Oral Health	
Michael Day, DDS	Orange County Health Department
Nidhi Sachdeva, MPH, CHES	Orange County Health Department

Section 6.08 – Reproductive Health	
Becky Carver	Planned Parenthood of Central NC, Inc.
Betsy Knop, LCSW	Orange County Health Department
Carol Lorenz, P.T., PhD	Center for Women's Health Research at UNC
Pat Casper, MSW, LCSW	Orange County Department of Social Services
Patty Rhodes, RN-BC	Orange County Health Department
Susan Young, PhD Candidate, RN	Orange County Health Department.
Tania Connaughton-Espino, MPH	Ipas

Chapter 7.00 – Communicable Disease and Public Health Preparedness	
Amanda Bartolomeo	Medical Reserve Corps, Orange County Health Department
Emily Sickbert-Bennett, PhD, MS, CIC	UNC Hospitals
Jeff Jones	Orange County Health Department
Judy Butler, RN	Orange County Health Department
Margaret Anne Dow, RN, CSN	Orange County Schools
Nidhi Sachdeva, MPH, CHES	Orange County Health Department

Pat Gentry, RN	Orange County Health Department
Stephanie Willis, BSN, MPH	Chapel Hill/Carrboro City Schools
Sue Rankin, RN	Orange County Health Department
Thevy Chai, MD	Campus Health Service, UNC CH
Wayne Sherman, RN, MPH	Orange County Health Department

Chapter 8.00 – Injury and Violence	
Angela Oberleithner	Orange County Partnership for Young Children
Hudson Fuller	Family Violence Prevention Center
Krista Park Berry	Orange County Rape Crisis Center
Mariana Garrettson, MPH	UNC Chapel Hill Injury Prevention Research Center
Patrice Patterson-Garling	UNC Hospitals Beacon Child and Family Program
Patrick Loebs, MSW, MPH	Children's Environmental Health Initiative, Nicholas School of the Environment, Duke University
Rachel Braver	Duke University Law Student (formerly with NC Legal Aid)
Robin Clark	Chapel Hill Police Department

Chapter 9.00 – Environmental Health	
Ardra Webster	Orange County Department of Environment, Agriculture, Parks, and Recreation
Barbara Pringle	Orange County Health Department
Bill Kaiser	Orange County Commission for the Environment Air Quality Committee
Cheryll Lesneski	UNC Gillings School of Global Public Health
Connie Pixley	Orange County Health Department
David Caldwell	Rogers/Eubanks Neighborhood Association
Gary Saunders	NC DENR, Orange County Commission for the Environment Air Quality Committee
Glen Bowles	Orange County Planning Department
Lucy Adams	Orange County Commission for the Environment Air Quality Committee
Rich Shaw	Orange County Department of Environment, Agriculture, Parks, and Recreation
Susan Rankin	Orange County Health Department
Team Whirlpool Students	Veronica Eubanks, Jason Berg, Christy Crowley, Cynthia Simmons
Tom Davis	Orange County Department of Environment, Agriculture, Parks, and Recreation
Tom Konsler	Orange County Health Department

Appendix C. List of Survey Volunteers

1. Andy Adams
2. Kari Altman
3. Myra Austin
4. Carol Baker
5. Delia Barrick
6. Amanda Bartolomeo
7. Ellen Bonus
8. Karen Bronson
9. Jeff Brubaker
10. Brenda Buescher
11. Latitia Chavious
12. Elaine Chim
13. Rushina Cholera
14. Alex Collins
15. Michelle Dorminy
16. Jean Eddleman
17. Marcie Ellison
18. Tina Evans
19. Cathy Ferniany
20. Anne Fishel
21. Marietta Fort
22. Stephanie Frederick
23. Carrie Furberg
24. Leovita Galeana
25. Jeanne Gartner
26. Desma George
27. Kathy Glassock
28. Kathleen Goodhand
29. Deborah Griffin
30. Deborah Hamlin-Aggrey
31. David Hecht
32. Wanda Hunter
33. Marsha Jepsen
34. Thomas Jepson
35. Amy Jones
36. Jeff Jones
37. Leanne Jones
38. Carla Julian
39. Jessica Kelly
40. Jill Kerr
41. Mary Kerr
42. Donna King
43. Betsy Knop
44. Liska Lackey
45. Shin-Yi Lao
46. Lorraine LaPointe
47. Julie Lauffenburger
48. Joanna Lea
49. Hannah Martin
50. Mollie Mayfield
51. Mary McGuire
52. Zelda Moore
53. Andrea Mulholland
54. Iole Nall
55. Lela Nelson
56. Nick Nguyen
57. Khanh Nguygen
58. Elyse Nieves
59. Julie O'Neil
60. Jaime Palacios
61. Cleo Pantermakis
62. Rushil Patel
63. Pam Petch
64. Connie Pixley
65. Kelly Quinn
66. Patty Rhodes
67. Madonna Rimele
68. Chris Deery
69. Nidhi Sachdeva
70. Lynn Scheuermann
71. Jodi Schur
72. Jennifer Sharpe
73. Denise Shaver
74. Harriet Sherman
75. Wayne Sherman
76. Marie Sinkiewicz
77. Irene Slydel
78. Stuart Smith
79. Tina Stark
80. Ali Starling
81. Barb Steckler
82. Wendy Thigpen
83. Nancy Toracco
84. Fang Wang
85. Candice Watkins-Robinson
86. Rose Watson-Ormond
87. Ardra Webster
88. Betsy Wiedenheft
89. Greg Yavelak
90. Seonae Yeo

Appendix D. Map of Survey Locations

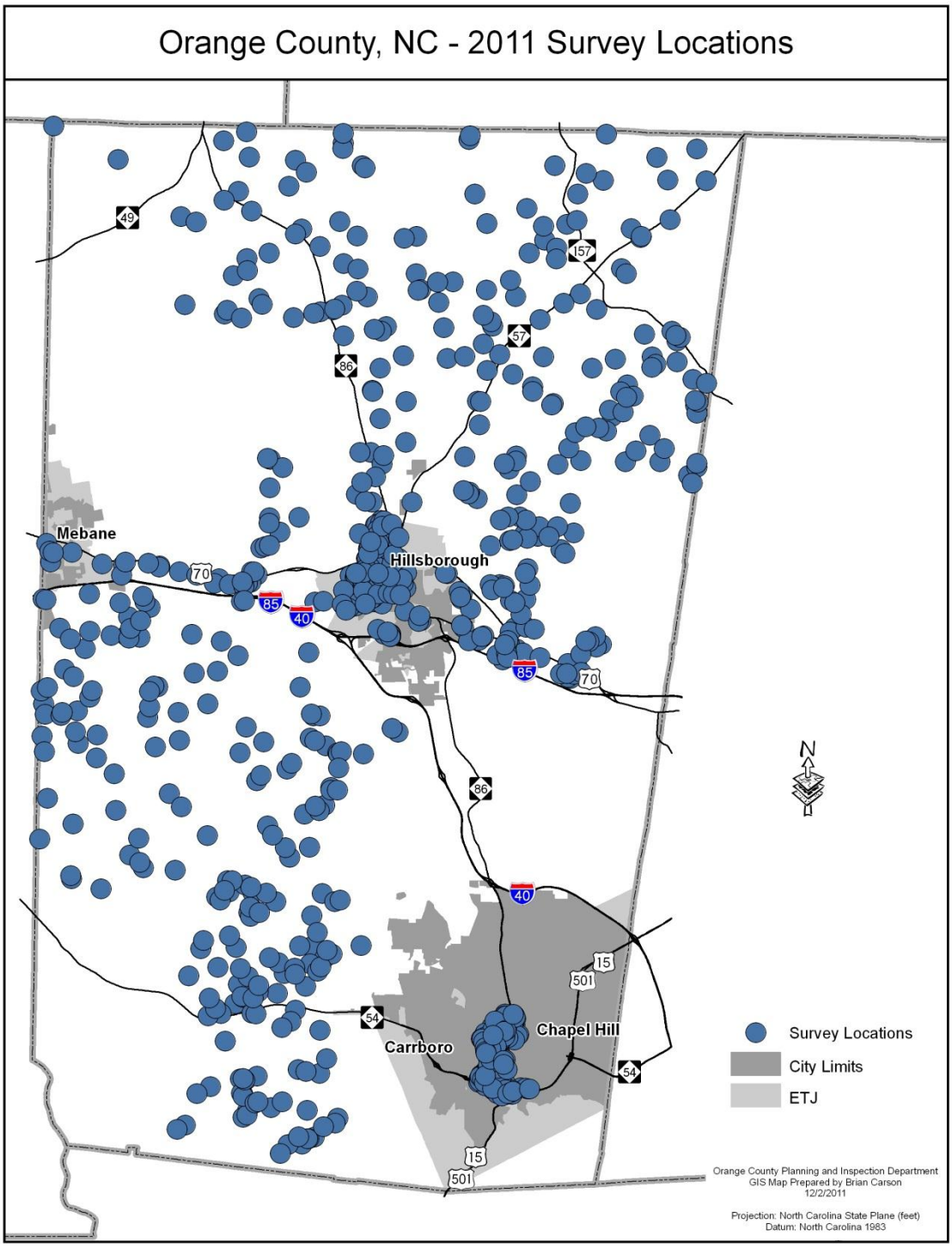


Figure 34: 2011 Community Health Assessment Sampled Survey Locations

Appendix E. Notification Letter Sent to Randomly Selected Households

ORANGE COUNTY HEALTH DEPARTMENT

Rosemary L. Summers, MPH, DrPH
Health Director

Richard E. Whitted Human Services Center
300 West Tryon Street
Post Office Box 8181
Hillsborough, NC 27278
Phone: (919) 245-2411
Fax: (919) 644-3007
www.co.orange.nc.us/health

♦

Finance and Administrative Operations

Dental Health Services

Environmental Health Services

Health Promotion and Education Services

Personal Health Services

♦

300 West Tryon Street

Hillsborough, NC 27278

PH: (919) 245-2411
FAX: (919) 644-3007

March 15, 2011

Dear Orange County Resident:

I am writing to ask for your help in a Community Health Assessment study that the Orange County Health Department will be doing over the next two weeks. This study is part of an effort to learn what health issues are important to Orange County residents like you.

Did you know North Carolina ranks 35th among U.S. states in terms of our overall health? In fact, for most of the past 20 years, our rank has been even lower! As the Orange County Health Director I believe it is my responsibility to make every effort to make sure that people living in Orange County, like you, are able to use services that are available in the county to improve overall health and well-being. To accomplish this very important goal, I need your help!

Your household is one of a small number in which people are being asked to give their opinions on important matters that affect the health of Orange County residents. Your address was picked completely at random from people living in Orange County. Over the next two weeks a volunteer will drop by your house and ask for your opinions or those of another adult living at your household. They will be wearing a health department identification badge and t-shirt. This is your chance to "talk" to policy makers like me and the board of health about things in Orange County that relate to your health. The results of this study will be used to pick health concerns that need more attention in our county.

This survey is completely voluntary and confidential. This means that your name will not be connected to any of your answers. You can help us very much by taking a few minutes out of your day either this weekend or next to share your experiences and opinions about Orange County with our volunteers.

You will receive a small gift as our way of saying thanks for your help. Please secure pets for the safety of our survey teams.

If you have any questions or comments about the study we would be happy to talk with you. You can call Nidhi Sachdeva in English at 919.245.2440 or email nsachdeva@co.orange.nc.us.

If you would like a Spanish-speaking interviewer to contact you, please call 919.644.3350 and leave a message with your name, address and phone number and tell us that you are calling about the survey. Someone who speaks Spanish will call you as soon as possible.

Thank you very much for helping with this study.

Sincerely,

Rosemary L. Summers, MPH, DrPH
Health Director

ORANGE COUNTY HEALTH DEPARTMENT

Rosemary L. Summers, MPH, DrPH
Health Director

Richard E. Whitted Human Services Center
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♦

Finance and Administrative Operations

Dental Health Services

Environmental Health Services

Health Promotion and Education Services

Personal Health Services

♦

300 West Tryon Street

Hillsborough, NC 27278

PH: (919) 245-2411
FAX: (919) 644-3007

15 de marzo del 2011

Estimado Vecino del Condado de Orange:

Le escribo para pedir su ayuda en un estudio de Evaluación de la Salud en la Comunidad, que el Departamento de Salud del Condado de Orange va a realizar en las próximas dos semanas. Este estudio es parte de un esfuerzo para aprender cuales son los problemas de salud que son importantes para personas, como usted, que viven en el Condado de Orange.

¿Sabía usted que Carolina del Norte está en el 35^{avo} lugar en los Estado Unidos en cuanto a nuestra salud en general? ¡De hecho, en la mayoría de los últimos 20 años, hemos estado incluso en los lugares más bajos! Como Directora de Salud del Condado de Orange creo que es mi responsabilidad hacer todo esfuerzo posible para asegurar que las personas, como usted, que viven en el Condado de Orange, puedan tener acceso a los servicios disponibles en el condado para mejorar la salud y el bienestar. Para lograr este tan importante objetivo, ¡Necesito su ayuda!

Su hogar es uno de un pequeño grupo a los cuales se les está pidiendo dar su opinión sobre asuntos importantes que afectan la salud de los que viven en el Condado de Orange. Su dirección fue elegida completamente al azar de entre las personas que viven en el Condado de Orange. Durante las próximas dos semanas un voluntario va a ir a su casa y a pedir sus opiniones o la de los otros adultos que vivan en su casa. Los voluntarios llevarán su identificación oficial y una camiseta con una insignia del departamento de salud. Esta es su oportunidad de "hablar" con los que crean las políticas, como yo y la junta directiva de salud, sobre cosas en el Condado de Orange relacionadas con su salud. Los resultados de este estudio se usarán para elegir los asuntos de salud que necesitan recibir más atención en nuestro condado.

Esta encuesta es totalmente voluntaria y confidencial. Esto significa que su nombre no va a estar conectado a ninguna de sus respuestas. Usted nos puede ayudar muchísimo al tomar unos cuantos minutos de su día, este o el próximo fin de semana, para compartir sus experiencias y opiniones sobre el Condado de Orange, con nuestros voluntarios.

Usted recibirá un pequeño regalo como nuestra manera de agradecerle por su ayuda. Por favor guarde o ponga en un lugar seguro a sus mascotas por la seguridad del personal que estará realizando la encuesta.

Si tiene preguntas o comentarios sobre el estudio, estaremos encantados de hablar con usted. Puede llamar a Nidhi Sachdeva en inglés al 919.245.2440 ó enviar un correo electrónico a nsachdeva@co.orange.nc.us.

Si desea hacer preguntas en español o ser contactado por un entrevistador que hable español, por favor llame al 919.644.3350 y deje un mensaje con su nombre, dirección y número de teléfono y díganos que está llamando sobre la encuesta. Alguien que hable español le llamará lo más pronto posible.

Muchas gracias por ayudar con este estudio.

Atentamente,

Rosemary L. Summers, MPH, DrPH
Directora de Salud

Appendix F. Orange County Community Health Assessment Survey, 2011 – English

ID Number _____

2011 Orange County Community Health Opinion Survey

Date	*COMMENTS*	*Response Code*

Code	Description
PH1	No One Home
PH2	Language Barrier ☐ Spanish ☐ Other: _____ (Call back to complete? Provide phone number)
PH3	Break Off Before Survey Completed (Call back to complete? Provide phone number)
FH1	No one in HH eligible ▪ Under 18 years of age ▪ Non-resident of Orange County
FH2	Household Refusal
FH3	Unoccupied/Vacant/Demolished House
FH4	Selected Address Not a Household
FH5	Other Nonresponse (Describe)
FH6	Completed Questionnaire

(P indicates pending and F final disposition)

ADMIN ONLY

Follow Up?

Phone Number _____

Survey Complete?

☐ **YES**

Date _____

Initials _____

ID Number _____

2011 Orange County Community Health Opinion Survey

READ THE FOLLOWING SECTION TO EACH POTENTIAL PARTICIPANT:

Hello, I am _____ and this is _____ representing the Orange County Health Department *SHOW BADGES*. **We are conducting a survey of our community to learn more about the health and quality of life in Orange County. The Orange County Health Department and Healthy Carolinians of Orange County will use the results of this survey to help address the major health and community issues in our county. Maybe you remember a letter that you should have gotten in the mail recently that described the survey** *SHOW LAMINATED LETTER*.

Your address was one of many randomly selected from our county. The survey is completely voluntary, and it should take about 40 minutes to complete. There are no right or wrong answers. You may refuse to answer any question. Your answers will be completely confidential. The information you give us will not be linked to you in any way.

NON-ENGLISH LANGUAGE RESPONDENTS ONLY

IF RESPONDENT IS SPANISH-SPEAKING ONLY

GIVE RESPONDENT A COPY OF THE LAMINATED LETTER IN SPANISH TO REVIEW. SHOW RESPONDENT THE MESSAGE BELOW ON LAMINATED SHEET AND OFFER A PEN TO WRITE DOWN THEIR PHONE NUMBER BELOW.

We are conducting a community health survey. You may have received a letter about this in the mail. Unfortunately, we do not have a Spanish-speaking Interviewer available at this time, but if you would like to participate in the survey, please write your telephone number below and we can have a Spanish-speaking Interviewer call you later. Thank you for understanding.

Phone Number: _____

Estamos realizando una encuesta de la salud de la comunidad. Usted puede haber recibido una carta al respecto en el correo. Desafortunadamente en este momento no tenemos disponible a un entrevistador que hable español, pero si usted desea participar de la encuesta, por favor, escriba su número de teléfono aquí abajo y un entrevistador que hable español puede llamarle más tarde. Gracias por su comprensión.

Número de teléfono: _____

IF RESPONDENT DOES NOT SPEAK ENGLISH OR SPANISH

GIVE RESPONDENT A COPY OF THE LETTER IN ENGLISH. IF YOU CAN, ASK THEIR LANGUAGE AND RECORD BELOW.

Language: _____

READ THE FOLLOWING TO RESPONDENT AND OFFER A PEN TO WRITE DOWN THEIR PHONE NUMBER.

We are conducting a community health survey. We are sorry that we do not have interviewers available today who speaks that language. If you would like someone to call you later, please write your phone number below.

Phone Number: _____

Would you be willing to participate? ☐$_1$YES ☐$_0$NO
(IF NO, STOP THE SURVEY HERE AND THANK THE PERSON FOR HIS OR HER TIME.)

ELIGIBILITY
Do you live in Orange County? ☐$_1$YES ☐$_0$NO
(IF NO, STOP THE HERE AND THANK THE PERSON FOR HIS OR HER TIME.)

I will now begin asking questions. If you realize that you have already participated in this survey this year, let me know, and I can stop.

BEGIN SURVEY

PART 1: Quality of Life in Orange County

These first questions are general ones about the quality of life in Orange County. In these questions, and all the ones that follow, there is no right or wrong answer. We are just interested in your honest opinion, based on what you have seen or experienced.

I am going to read several statements about what it is like to live in Orange County. Please tell me how much you agree or disagree with each statement by saying: "Strongly agree", "Agree", "Disagree", or "Strongly disagree" with each of these statements. *READ THE ANSWER SET AFTER EACH ITEM UNTIL THE RESPONDENT DEMONSTRATES THAT S/HE REMEMBERS THE ANSWER CHOICES.*

Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
1. Good jobs are available for people who live in Orange County.	☐$_4$	☐$_3$	☐$_2$	☐$_1$
2. In Orange County, people can get the health care they need.	☐$_4$	☐$_3$	☐$_2$	☐$_1$
3. People can find affordable housing in Orange County.	☐$_4$	☐$_3$	☐$_2$	☐$_1$
4. Orange County has good resources for parents of young children including affordable, quality child care.	☐$_4$	☐$_3$	☐$_2$	☐$_1$
5. Orange County is a good place to grow old.	☐$_4$	☐$_3$	☐$_2$	☐$_1$
6. People living in Orange County are treated fairly regardless of their physical characteristics, economic status, backgrounds or beliefs.	☐$_4$	☐$_3$	☐$_2$	☐$_1$
7. Orange County is a safe place to live.	☐$_4$	☐$_3$	☐$_2$	☐$_1$

Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
8. People living in Orange County have access to healthy food.	☐4	☐3	☐2	☐1
9. Children have equal access to a good education in schools in Orange County.	☐4	☐3	☐2	☐1
10. In Orange County, there are good services available for people who need help.	☐4	☐3	☐2	☐1
11. In Orange County, public transportation is available for people who need it.	☐4	☐3	☐2	☐1
12. People who live in Orange County have equal access to clean air, water, and well-maintained public spaces.	☐4	☐3	☐2	☐1

13. What do you like <u>most</u> about living in Orange County? *PROBE FOR CLEAR SHORT ANSWER(S). RECORD 1-3 ANSWERS AND MOVE TO THE NEXT QUESTION.*

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

CONTINUE TO NEXT PAGE

14. **What do you like least about living in Orange County?** *PROBE FOR CLEAR SHORT ANSWER(S). RECORD 1-3 ANSWERS AND MOVE TO THE NEXT QUESTION.*

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

PART 2: Community Improvement

The following statements relate to things that you might, or might not, see as problems in our county. Specifically think about whether you think this is a problem in our community. Just like before, please tell me how much you agree or disagree with each statement by saying: "Strongly agree", "Agree", "Disagree", or "Strongly disagree" with each of these statements. *READ THE ANSWER SET AFTER EACH ITEM UNTIL THE RESPONDENT DEMONSTRATES THAT S/HE REMEMBERS THE ANSWER CHOICES.*

Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
15. Lack of access to parks and recreational opportunities is a problem in Orange County.	☐1	☐2	☐3	☐4
16. Pollution is a problem in Orange County.	☐1	☐2	☐3	☐4
17. Violent crime is a problem in Orange County.	☐1	☐2	☐3	☐4
18. Property crimes like thefts and break-ins are a problem in Orange County	☐1	☐2	☐3	☐4
19. Homelessness is a problem in Orange County.	☐1	☐2	☐3	☐4
20. Panhandlers are a problem in Orange County.	☐1	☐2	☐3	☐4
21. Immigration is a problem in Orange County.	☐1	☐2	☐3	☐4

Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
22. Discrimination against immigrants is a problem in Orange County.	☐1	☐2	☐3	☐4
23. Racism is a problem in Orange County.	☐1	☐2	☐3	☐4
24. Discrimination against persons with disabilities is a problem in Orange County.	☐1	☐2	☐3	☐4
25. Discrimination against gays, lesbians, bisexual or transgendered people is a problem in Orange County.	☐1	☐2	☐3	☐4
26. Child neglect is a problem in Orange County.	☐1	☐2	☐3	☐4
27. Violence against women (or domestic violence) is a problem in Orange County.	☐1	☐2	☐3	☐4
28. Rape or sexual assault is a problem in Orange County.	☐1	☐2	☐3	☐4
29. School drop-out is a problem in Orange County.	☐1	☐2	☐3	☐4
30. Substance abuse (drugs and alcohol) is a problem in Orange County.	☐1	☐2	☐3	☐4
31. Lack of mental health and substance abuse resources is a problem in Orange County.	☐1	☐2	☐3	☐4
32. Poverty is a problem in Orange County.	☐1	☐2	☐3	☐4
33. Lack of resources for an aging population is a problem in Orange County.	☐1	☐2	☐3	☐4

Part 3. Health Information

34. Where do you get most of your health-related information? Do you get your health information most of the time from… *READ CHOICES; ASK R TO CHOOSE ONLY ONE*

☐1 Friends and family
☐2 Doctor/nurse
☐3 Pharmacist
☐4 Hospital
☐5 Health department
☐6 Church
☐7 Child's school
☐8 the Internet
☐9 TV
☐10 Radio
☐11 Help lines
☐12 Books/magazines
☐13 Newspaper
☐14 or from someone or somewhere else? Please specify *WRITE IN*

_____

35. Many people find some medical advice and words difficult to understand. Do you ever get help from others when filling out forms, reading prescription bottle labels, insurance forms, and/or health education sheets?

☐ 1 YES
☐ 0 NO
☐ 88 DO NOT KNOW
☐ 99 REFUSED TO ANSWER

36. What is your comfort level with talking to your medical provider and asking questions about your health? Would you say that you are... *READ CHOICES AND ASK TO CHOOSE ONE*

☐ 1 Very uncomfortable
☐ 2 Uncomfortable
☐ 3 Neutral
☐ 4 Comfortable
☐ 5 or Very comfortable talking with your medical provider and asking questions about your health
☐ 77 NO HEALTH CARE PROVIDER
☐ 99 REFUSED TO ANSWER

37. How well did you understand the last set of drug prescription instructions given to you by your medical provider or pharmacist? Would you say the drug prescription instructions were…*READ CHOICES AND ASK THEM TO CHOOSE ONLY ONE.*

☐ 1 Very understandable
☐ 2 Understandable
☐ 3 Neutral
☐ 4 Hard to understand
☐ 5 or Very hard to understand
☐ 88 DO NOT KNOW
☐ 99 REFUSED TO ANSWER

38. How or where do you normally dispose of, or throw away expired and old medicines? *PROBE FOR CLEAR SHORT ANSWER(S). RECORD 1-3 ANSWERS AND MOVE TO THE NEXT QUESTION.*

a. _____

b. _____

c. _____

CONTINUE TO NEXT PAGE

PART 4: Personal Health

These next questions are about your own personal health. Remember, the answers you give for this survey will not be linked to you in any way.

39. Would you say that, in general, your health is…*READ CHOICES AND ASK THEM TO CHOOSE ONLY ONE.*

☐5 Excellent
☐4 Very good
☐3 Good
☐2 Fair
☐1 or Poor
☐99 REFUSED TO ANSWER

IF THE PERSON BEING INTERVIEWED STARTS TALKING ABOUT A FAMILY MEMBER'S HEALTH PROBLEMS, SAY: I am sorry to hear about that. Maybe some of the answers you give today will help us and our community leaders address some of these types of issues. Right now we'd like to focus just on your own health.

40. The following questions are about screening for different types of cancer. *ASK FEMALE RESPONDENTS. IF MALE, SKIP TO QUESTION 42* **Have you ever had a mammogram?** *IF ASKED*: A mammogram is an x-ray taken only of the breast by a machine that presses against the breast.

☐1 YES *SKIP TO Q43*
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

41. What are reasons why you have not had a mammogram? Is it because… *READ ANSWER CHOICES AND MARK ALL THAT APPLY.*

☐1 You did not need it/did not know you needed this type of test
☐1 Your doctor did not say you needed it
☐1 You have not had any problems
☐1 You put it off/didn't get around to it
☐1 It is too expensive or you have no insurance
☐1 Getting a mammogram is too painful, unpleasant or embarrassing
☐1 You are too young
☐1 You do not have a doctor
☐1 There is no reason or you have never thought about it
☐1 or for some other reason _____
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

42. *ASK MALE RESPONDENTS. IF FEMALE, SKIP TO QUESTION 43* **The prostate-specific antigen test (PSA) and digital rectal exam (DRE) are tests used to check men for prostate cancer. Have you ever had a PSA or DRE test?**

☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

43. A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?

☐$_{1}$ YES
☐$_{0}$ NO
☐$_{88}$ DO NOT KNOW
☐$_{99}$ REFUSED TO ANSWER

44. The next questions are about exercise and nutrition. How many days a week do you do moderate physical activity for at least 30 minutes that makes you break a sweat?

☐$_{0}$ Zero days *SKIP TO Q46*
☐$_{1}$ One to two (1-2) days a week
☐$_{2}$ Three (3) days a week
☐$_{3}$ Five (5) or more days a week

45. Where do you go to exercise or engage in physical activity? Do you go to …*READ ANSWER CHOICES. CHECK ALL THAT APPLY.*

☐$_{1}$ a gym or recreation center
☐$_{1}$ a Public parks or trails
☐$_{1}$ at Home
☐$_{1}$ in a Neighborhood
☐$_{1}$ a workplace
☐$_{1}$ a Church
☐$_{1}$ or do you exercise as part of your daily travel/commute *IF ASKED*: For example, do you walk or bike to work, school or other places?)
☐$_{1}$ Or somewhere else? _____
☐$_{99}$ REFUSED TO ANSWER

46. What are the reasons you do not exercise? Is it because…*READ OPTIONS. MARK ALL THAT APPLY*

☐$_{1}$ You do not have time
☐$_{1}$ It is too expensive to exercise
☐$_{1}$ You do not have convenient exercise facilities
☐$_{1}$ You do not have child care
☐$_{1}$ There is too much traffic in your neighborhood
☐$_{1}$ There are not enough sidewalks in your neighborhood
☐$_{1}$ There are not enough bike lanes in your neighborhood
☐$_{1}$ You have no one to exercise with
☐$_{1}$ There is crime in your neighborhood
☐$_{1}$ You do not have the motivation to exercise
☐$_{1}$ You do not like to exercise
☐$_{1}$ You don't know how
☐$_{1}$ You don't like other people to see you exercise
☐$_{1}$ You are too tired
☐$_{1}$ You don't know where to exercise
☐$_{1}$ You have a physical disability that prevents you from exercising
☐$_{1}$ Exercise makes you feel worse
☐$_{1}$ Because your job is physical/ involves hard labor
☐$_{1}$ Or is it some other reason: _____ *WRITE IN RESPONSE*
☐$_{88}$ DO NOT KNOW
☐$_{99}$ REFUSED TO ANSWER

47. In the last 12 months, did you or others in your household ever cut the size of your meals or skip meals because there was not enough money for food?

☐1 YES
☐0 NO *SKIP TO Q49*
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

48. How often did this happen? Did you cut the size or skip meals…

☐1 Almost every month
☐2 Some months, but not every month
☐3 or Only in one or two months
☐99 REFUSED TO ANSWER

49. About how many times a week did you eat fast food for a meal or a snack? Was it…

☐1 Less than one time
☐2 One to three (1-3) times
☐3 or Four (4) or more times
☐99 REFUSED TO ANSWER

50. About how many servings of fruits and/or vegetables did you eat each day? Did you eat…

☐1 Five or more
☐2 Three to four
☐3 or Two or fewer servings
☐99 REFUSED TO ANSWER

51. About how many regular sodas or glasses of sweet tea did you drink each day?

☐1 Zero
☐2 One to two (1-2)
☐3 Three (3) or more
☐99 REFUSED TO ANSWER

BMI CALCULATION

52. About how much do you weigh without shoes? *WRITE IN NUMBER*

Weight: _____ pounds
☐99 REFUSED TO ANSWER

53. About how tall are you without shoes? *WRITE IN NUMBERS*

Height: _____ feet _____ inches
☐99 REFUSED TO ANSWER

54. Now I will ask you questions about flu vaccines. During the past 12 months, have you had a seasonal flu vaccine? *IF YES, PROBE FOR SHOT OR SPRAY. IF ASKED*: A flu vaccine can be a "flu shot" injected into your arm or spray like "FluMist" which is sprayed into your nose.

☐1 YES, FLU SHOT *SKIP TO Q56*
☐2 YES, FLU SPRAY *SKIP TO Q56*
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

55. What stops you from getting a flu vaccine?

☐1 It costs too much
☐2 You are healthy and do not need it
☐3 Shots make you sick or hurt
☐4 You are afraid to get a shot
☐5 Or some other reason? _____
☐99 REFUSED TO ANSWER

56. Where do you go normally go to get vaccinated against the flu? *DO NOT READ THE OPTIONS. MARK ONLY THE ONE THEY SAY. IF THEY CANNOT THINK OF ONE, READ:* **Would you say...***READ RESPONSES.*

☐1 a private doctor's office
☐2 a community health clinic
☐3 the Health Department
☐4 a local pharmacy
☐5 another retail location like a grocery store or minute clinic
☐6 your workplace
☐7 or some other place? Other: _____
☐99 REFUSED TO ANSWER

Part 5. Family Health/Access to Care

57. Where do you go <u>most often</u> when you are sick? *DO NOT READ THE OPTIONS. MARK ONLY THE ONE THEY SAY. IF THEY CANNOT THINK OF ONE, READ:* **Do you go to...** *READ RESPONSES*

☐1 a private doctor's office
☐2 a hospital emergency room
☐3 a hospital clinic
☐4 a urgent care clinic
☐5 the Orange County Health Department
☐6 the Carrboro Community Health Clinic
☐7 or some other place_____
☐99 REFUSED TO ANSWER

58. Do you have health insurance or some type of health plan that helps you pay medical expenses?

☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

CONTINUE TO NEXT PAGE

59. What are the different ways you pay for healthcare, for example, when you go to the doctor or emergency room? *IF THEY ASK WHAT KIND OF DOCTOR, REPLY ANY KIND EXCEPT DENTAL OR EYE.* **Would you say you...** *CHECK ALL THAT APPLY*

☐1 pay in full with cash, check or credit card
☐1 pay in installments with cash, check, or credit card
☐1 use Private health insurance you bought yourself from an insurance company
☐1 use Private health insurance your employer or spouse's employer provides
☐1 use Private health insurance that you purchased from your employer or workplace
☐1 use Medicare
☐1 use Medicaid or Health Choice
☐1 use The military, Tricare, CHAMPUS
☐1 use Veterans' Administration benefits
☐1 use the Indian Health Service
☐1 is there another way you sometimes pay? Other: _____
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

60. In the past 12 months, did you ever have problems getting the health care you needed from any type of health care provider or facility?

☐1 YES
☐0 NO *SKIP TO Q62*
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

61. What were some problems you had getting the health care you needed from any type of health care provider or facility?...*READ CHOICES. CHECK ALL THAT APPLY.*

☐1 did you not have health insurance
☐1 Could you not afford the costs or your deductible/co-pay was too high
☐1 you didn't have a way to get there
☐1 your insurance didn't cover what you needed
☐1 you couldn't get an appointment
☐1 you didn't know where to go
☐1 No one there speaks your language (specify language_____)
☐1 No interpreter available (specify language_____)
☐1 Can you think of any other reason? _____
☐99 REFUSED TO ANSWER

62. About how long has it been since you last visited a doctor for a routine physical exam or wellness checkup? Do not include times you visited the doctor because you were sick or pregnant. Was it...

☐1 Within the past year (anytime less than 12 months ago)
☐2 One to two (1-2) Years Ago
☐3 Three to five (3-5) Years Ago
☐4 More than 5 Years Ago
☐5 or you have never had a routine physical or wellness checkup
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

63. In the past 12 months, did you have problems getting a medically necessary prescription for yourself?

☐1 YES
☐0 NO *SKIP TO Q66*
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

64. What were some problems getting a medically necessary prescription for yourself the problems you had? Was it because…*READ CHOICES. CHECK ALL THAT APPLY.*

☐1 you could not afford the costs or your deductible/co-pay was too high
☐1 you did not have health insurance
☐1 your insurance didn't cover what you needed
☐1 you had a problem with Medicare Part D
☐1 the pharmacy would not take your insurance or Medicaid
☐1 you didn't have a way to get there
☐1 you didn't know where to go
☐1 no one there speaks your language (specify language_____)
☐1 no interpreter available (specify language_____)
☐1 can you think of any other reason? _____
☐99 REFUSED TO ANSWER

65. Where do you go <u>most often</u> for dental care? *DO NOT read the options. Mark only the one they say. If they cannot think of one, read:* **Do you go to...** *READ RESPONSES*.

☐1 a Private Dentist's office
☐2 UNC Dental School
☐3 the Orange County Health Department Dental Clinic
☐4 the Carrboro Community Health Clinic
☐5 or some other place_____
☐6 You do not go anywhere for dental care
☐99 REFUSED TO ANSWER

66. In the past 12 months, did you ever have problems getting the dental care you needed from any type of dental care provider or facility?

☐1 YES
☐0 NO *SKIP TO Q68*
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

67. What some of the problems you had getting the dental care you needed from any type of dental care provider or facility? Was it because…*READ CHOICES. CHECK ALL THAT APPLY.*

☐1 you did not have dental insurance
☐1 you could not afford the costs or your deductible/co-pay was too high
☐1 you didn't know where to go
☐1 your insurance didn't cover what you needed
☐1 you didn't have a way to get there
☐1 the dentist would not take your insurance or Medicaid
☐1 you couldn't get an appointment
☐1 no one there speaks your language (specify language_____)
☐1 no interpreter available (specify language_____)
☐1 Can you think of any other reason? _____
☐99 REFUSED TO ANSWER

68. In the past 12 months, did you ever have problems getting the mental health or substance abuse services you needed from any type of medical care provider or facility?

☐$_{1}$ YES
☐$_{0}$ NO *SKIP TO Q70*
☐$_{88}$ DO NOT KNOW
☐$_{99}$ REFUSED TO ANSWER

69. What some of the problems you had getting the mental health or substance abuse services you needed? Was it because… *READ CHOICES. CHECK ALL THAT APPLY.*

☐$_{1}$ did you not have health insurance
☐$_{1}$ you could not afford the costs or your deductible/co-pay was too high
☐$_{1}$ you didn't have a way to get there
☐$_{1}$ your insurance didn't cover what you needed
☐$_{1}$ you couldn't get an appointment
☐$_{1}$ you didn't know where to go
☐$_{1}$ No one there speaks your language (specify language_____)
☐$_{1}$ No interpreter available (specify language_____)
☐$_{1}$ Can you think of any other reason? _____
☐$_{99}$ REFUSED TO ANSWER

70. How often do you get the social and emotional support you need? Would you say...

☐$_{4}$ Always
☐$_{3}$ Usually
☐$_{2}$ Sometimes
☐$_{1}$ Rarely
☐$_{0}$ or Never
☐$_{99}$ REFUSED TO ANSWER

71. How would you describe your day-to-day level of stress? Is it...

☐$_{3}$ High
☐$_{2}$ Moderate
☐$_{1}$ or Low
☐$_{99}$ REFUSED TO ANSWER

72. What mode of transportation do you normally use to get to health care (doctor's office, health department, etc.)? *READ CHOICES. PLEASE SELECT ONE OPTION USED MOST OFTEN* **Do...**

☐$_{1}$ you drive in your personal vehicle
☐$_{2}$ does someone else drive you
☐$_{3}$ do you use public transportation or bus
☐$_{4}$ do you pay for a taxi or other transportation service
☐$_{5}$ do you use Transportation provided for through the senior center, Orange Bus, Social Services, etc.
☐$_{6}$ you walk or bike
☐$_{7}$ or do you have no transportation
☐$_{8}$ or is there some other way of getting there. Specify: _____
☐$_{99}$ REFUSED TO ANSWER

73. Are you the parent or caregiver of children under the age of 6? This includes step-children, grandchildren, or other relatives.

☐1 YES
☐0 NO *SKIP TO Q76*
☐99 REFUSED TO ANSWER

74. Think about your youngest child. Have you or another adult taken them for their regular Well Child visit in the last 12 months?

☐1 YES *SKIP TO Q76*
☐0 NO
☐99 REFUSED TO ANSWER

75. If No, why not? Was it because… *CHECK ALL THAT APPLY*

☐1 You can't find a doctor.
☐1 You can't afford to pay what the doctor charges.
☐1 There is a wait list to get an appointment with a doctor.
☐1 You don't have transportation to get to the doctor's office.
☐1 It is hard for you to get the time off from work to go to the doctor.
☐1 You don't know when your child should get a Well Child check up.
☐1 You don't have child care for your other children.
☐1 You have difficulty talking to doctors about your child's needs.
☐1 It is difficult to understand/be understood by the doctor about your child's needs.
☐1 Is there anything else that makes it hard for you to participate in activities? (Please specify)
WRITE IN SHORT RESPONSE _____
☐99 REFUSED TO ANSWER

76. Are you the parent or caregiver of children between the ages of 13 and 19? Includes step-children, grandchildren, or other relatives.

☐1 YES
☐0 NO
☐99 REFUSED TO ANSWER

How wrong do you think it is for teenagers to do the following behaviors? Please tell me if is "Very wrong", "Wrong", "A little wrong" or "Not wrong" *IF ASKED:* For this survey, "teenagers" are defined as young people 13-19 years of age.

Behavior	Very Wrong	Wrong	A Little Wrong	Not Wrong
77. Smoke cigarettes?	☐4	☐3	☐2	☐1
78. Use smokeless or chewing tobacco	☐4	☐3	☐2	☐1
79. Drink alcohol	☐4	☐3	☐2	☐1
80. Get drunk	☐4	☐3	☐2	☐1
81. Use marijuana?	☐4	☐3	☐2	☐1
82. Take prescription drugs not given to them by a doctor?	☐4	☐3	☐2	☐1

If you have it in the home, do you lock-up your:

83. Tobacco?	☐$_0$ NO	☐$_1$ YES	☐$_3$ NOT IN THE HOME
84. Alcohol?	☐$_0$ NO	☐$_1$ YES	☐$_3$ NOT IN THE HOME
85. Prescription drugs?	☐$_0$ NO	☐$_1$ YES	☐$_3$ NOT IN THE HOME
86. Firearms and guns?	☐$_0$ NO	☐$_1$ YES	☐$_3$ NOT IN THE HOME

PART 6: Environmental Health

All restaurants and bars in North Carolina are now required to be smoke-free, that is, there is no smoking allowed in enclosed areas. Many, but not all government buildings are tobacco-free inside and within 50 feet of the buildings.

87. Do you think that all government owned buildings and grounds should have this same restriction prohibiting all tobacco use?

☐$_1$ YES
☐$_0$ NO
☐$_{88}$ DO NOT KNOW
☐$_{99}$ REFUSED TO ANSWER

88. Do you think that people using government owned outdoor facilities, such as parks and recreation land, should also be restricted from using tobacco anywhere on the property?

☐$_1$ YES
☐$_0$ NO
☐$_{88}$ DO NOT KNOW
☐$_{99}$ REFUSED TO ANSWER

89. Do you think there is too much tobacco advertising in your community?

☐$_1$ YES
☐$_0$ NO
☐$_{88}$ DO NOT KNOW
☐$_{99}$ REFUSED TO ANSWER

90. Do you currently smoke or use tobacco products? (Includes regular smoking in social settings.)

☐$_1$ YES
☐$_0$ NO *SKIP TO Q92*
☐$_{88}$ DO NOT KNOW
☐$_{99}$ REFUSED TO ANSWER

CONTINUE TO NEXT PAGE

91. Where would you go for help first if you wanted to quit? *READ LIST OF OPTIONS. MARK ONLY ONE CHOICE*

☐1 Quit Line NC
☐2 Doctor
☐3 Church
☐4 Private counselor/therapist
☐5 Pharmacy
☐6 Health Department
☐7 I don't know
☐8 Other: _____
☐9 Not applicable; I don't want to quit
☐99 REFUSED TO ANSWER

92. Please look at this list of environmental issues. *HAND RESPONDENT LAMINATED SHEET "ENVR".* **Which of these things stand out for you as significant environmental problems in Orange County? Choose three. This question is not asking about you and your family, but which three of these issues are problems in our community as a whole. I will read the list out loud as you read along.** *READ LIST OUT LOUD AS RESPONDENT FOLLOWS ALONG. MARK THREE CHOICES, NO RANK ORDER.*

☐1 Air pollution (indoor air quality or outdoor pollution)
☐1 Over-development (ex. sprawl, water/sewer management, noise pollution, light pollution, loss of open space)
☐1 Garbage / Solid Waste Issues (access to recycling, illegal dumping, litter)
☐1 Food safety (restaurant cleanliness, safety of produce and other foods)
☐1 Hazardous waste disposal (Batteries, motor oil, pesticides, paint)
☐1 Lead hazards to children (lead paint in houses, contaminated soil)
☐1 Septic system or sewer system problems
☐1 Water pollution (streams, creeks, rivers)
☐1 Groundwater contamination (leaking underground tanks, industrial leaks)
☐1 Drinking water safety and quality
☐1 Exposure to second-hand smoke
☐1 Global warming
☐1 Other _____
☐0 No concerns at this time
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

Part 7. Emergency Preparedness

93. Does your household have working smoke detectors?

☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

94. Does your household have working carbon monoxide detectors?
☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

95. Does your family have a basic emergency supply kit? (These kits include water, non-perishable food, any necessary prescriptions, first aid supplies, flashlight and batteries, non-electric can opener, blanket, etc.)
☐1 YES
☐0 NO *SKIP TO Q97*
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

96. If Yes, how many days do you have supplies for?
_____ *WRITE NUMBER OF DAYS*
☐99 REFUSED TO ANSWER

97. What are the reasons your family does not have a basic emergency supply kit?

a. _____

b. _____

c. _____

98. What would be your main way of getting information from authorities in a large-scale disaster or emergency? Would you say a... *CHECK ONLY ONE.*
☐1 Television
☐2 Radio
☐3 Internet
☐4 Print media (ex: newspaper)
☐5 Text message (emergency alert system)
☐6 Neighbors/Word-of-mouth
☐7 Social networking site
☐8 or some other way? (describe) _____
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

99. If public authorities announced a mandatory evacuation from your neighborhood or community due to a large-scale disaster or emergency, would you…
☐3 Definitely *SKIP TO Q101*
☐2 Probably
☐1 Maybe
☐0 Or definitely not evacuate or leave
☐99 REFUSED TO ANSWER

100. What would be the main reason you might not evacuate if asked to do so? *CHECK ONLY ONE.* **Would it because…**

☐1 you have no transportation
☐2 you do not trust public officials
☐3 you are worried about leaving property behind
☐4 you are worried about personal safety
☐5 you are worried about family safety
☐6 you are worried about leaving pets
☐7 you are worried about traffic jams and not being able to get out
☐8 you have health problems and cannot be moved
☐9 or some other reason? Describe _____
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

Part 8: Health Department Services

101. Have you used Orange County Health Department medical services in the past two years?

☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

102. Have you used Health Department dental services in the past two years?

☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

103. The current clinic hours of the Health Department are Monday through Friday, 8:00AM to 5:00PM with extended hours on Tuesday and Thursday until 6:30PM. If you or your family were in need of services, would these hours be convenient for you?

☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

104. The current Health Department dental clinic hours are Monday through Friday, 8:00AM to 5:00PM. If you or your family were in need of services, would these hours be convenient for you?

☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

105. The Orange County Health Department has locations in both Hillsborough and Chapel Hill. The Health Department in Hillsborough is located at 300 West Tryon Street. What are some reasons that may prevent you or your family from receiving services from the Health Department's Hillsborough location. Is it because…

☐$_1$ You get care somewhere else
☐$_1$ the location is not convenient
☐$_1$ you couldn't afford the costs
☐$_1$ you didn't have a way to get there
☐$_1$ you can't get an appointment
☐$_1$ you don't know where to go
☐$_1$ No one there speaks your language (specify language_____)
☐$_1$ No interpreter available (specify language_____)
☐$_{99}$ REFUSED TO ANSWER

106. The Health Department in Chapel Hill is located at 2501 Homestead Road. What are some reasons that may prevent you or your family from receiving services from the Health Department's Chapel Hill location. Is it because…

☐$_1$ You get care somewhere else
☐$_1$ the location is not convenient
☐$_1$ you couldn't afford the costs
☐$_1$ you didn't have a way to get there
☐$_1$ you can't get an appointment
☐$_1$ you don't know where to go
☐$_1$ No one there speaks your language (specify language_____)
☐$_1$ No interpreter available (specify language_____)
☐$_{99}$ REFUSED TO ANSWER

Part 9. Demographic Questions

The next set of questions are general questions about you, which will only be reported as a summary of all answers given by survey participants. Your answers will remain anonymous.

107. How old are you?

_____ *WRITE IN AGE AS A NUMBER* ☐ REFUSED TO ANSWER

108. Are you Male or Female? *IN MOST CASES, THIS QUESTION CAN BE ANSWERED BY THE INTERVIEWER WITHOUT ASKING.*

☐$_1$ MALE ☐$_2$ FEMALE ☐$_{99}$ REFUSED TO ANSWER

109. What is your race? *PLEASE CHECK ALL THAT APPLY. IF OTHER, WRITE IN RACE.*

☐$_1$ WHITE
☐$_2$ BLACK OR AFRICAN AMERICAN
☐$_3$ AMERICAN INDIAN OR ALASKA NATIVE
☐$_4$ SOUTH ASIAN INCLUDING ASIAN INDIAN, SRI LANKAN, PAKISTANI, NEPALESE, ETC.
☐$_5$ OTHER ASIAN INCLUDING JAPANESE, CHINESE, KOREAN, VIETNAMESE, AND FILIPINO/A: *WRITE IN RACE* SPECIFY: _____
☐$_6$ PACIFIC ISLANDER INCLUDING NATIVE HAWAIIAN, SAMOAN, GUAMANIAN/CHAMORRO: *WRITE IN RACE* SPECIFY: _____
☐$_7$ SOME OTHER RACE NOT LISTED HERE *WRITE IN RACE* SPECIFY: _____
☐$_{99}$ REFUSED TO ANSWER

110. Are you of Hispanic, Latino, or Spanish origin?
☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

111. Were you born in the United States?
☐1 YES *SKIP TO Q114*
☐0 NO
☐99 REFUSED TO ANSWER

112. What country are you from?
_____ *WRITE IN NAME OF COUNTRY OF ORIGIN*
☐99 REFUSED TO ANSWER

113. How many years ago did you or your family come to the United States?
_____ years *WRITE IN YEARS*
☐99 REFUSED TO ANSWER

114. Do you speak a language other than English at home?
☐1 YES
☐0 NO *SKIP TO Q116*
☐99 REFUSED TO ANSWER

115. If Yes, what language do you speak at home?
_____ *WRITE IN LANGUAGE SPOKEN*
☐99 REFUSED TO ANSWER

116. What is your marital status? *READ ONLY IF NECESSARY. MARK ONLY ONE. NO EXPLANATION NEEDED FOR "OTHER".*
☐1 NEVER MARRIED/SINGLE
☐2 MARRIED
☐3 UNMARRIED PARTNER
☐4 DIVORCED
☐5 SEPARATED
☐6 WIDOWED
☐7 OTHER
☐99 REFUSED TO ANSWER

117. What is the highest level of school, college or vocational training that you have finished? *READ ONLY IF NECESSARY. MARK ONLY ONE.*
☐1 LESS THAN 9TH GRADE
☐2 9-12TH GRADE, NO DIPLOMA
☐3 HIGH SCHOOL GRADUATE (OR GED/ EQUIVALENT)
☐4 ASSOCIATE'S DEGREE OR VOCATIONAL TRAINING
☐5 SOME COLLEGE (NO DEGREE)
☐6 BACHELOR'S DEGREE
☐7 GRADUATE OR PROFESSIONAL DEGREE
☐8 OTHER: _____
☐99 REFUSED TO ANSWER

118. What was your total household income last year, before taxes? Let me know which category you fall into. Would you say... *READ CHOICES. MARK ONLY ONE.*

☐1 Less than $10,000
☐2 $10,000 to $14,999
☐3 $15,000 to $24,999
☐4 $25,000 to $34,999
☐5 $35,000 to $49,999
☐6 $50,000 to $74,999
☐7 $75,000 to $99,999
☐8 $100,000 or more
☐99 REFUSED TO ANSWER

119. How many people does this income support?

_____ people *WRITE IN NUMBER*
☐99 REFUSED TO ANSWER

IF YOU ARE ASKED ABOUT CHILD SUPPORT: If you are paying child support but your child is not living with you, this still counts as someone living on your income.

120. What is your employment status? Are you…*READ CHOICES. CHECK ALL THAT APPLY.*

☐1 Employed full-time
☐1 Employed part-time
☐1 Student
☐1 Retired
☐1 Armed forces/Military
☐1 Self-employed
☐1 Stay at home parent
☐1 Unable to work due to illness or disability
☐1 Unemployed for more than 1 year
☐1 Unemployed for 1 year or less
☐99 REFUSED TO ANSWER

121. Do you have access to the Internet?

☐1 YES
☐0 NO
☐88 DO NOT KNOW
☐99 REFUSED TO ANSWER

122. What is your zip code? *WRITE ONLY THE FIRST 5 DIGITS.* _____

CONTINUE TO NEXT PAGE

123. Is there anything else that was not asked previously that you feel affects your health and well-being?

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

124. What would you change to make Orange County or your neighborhood a healthier place to live?

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

These are all the questions that we have. Thank you so much for taking the time to complete this survey!

GIVE RESPONDENT BAG WITH GOODIES AND RESOURCE INFORMATION. SAY THANK YOU, AGAIN!

Appendix G. Orange County Community Health Assessment Survey, 2011 – Spanish

ID Number _____

2011 Orange County Community Health Opinion Survey
SPANISH VERSION / VERSIÓN EN ESPAÑOL

Date	*COMMENTS*	*Response Code*

Code	Description
PH1	No One Home
PH2	Language Barrier ☐ Spanish ☐ Other: _____ (Call back to complete? Provide phone number)
PH3	Break Off Before Survey Completed (Call back to complete? Provide phone number)
FH1	No one in HH eligible ▪ Under 18 years of age ▪ Non-resident of Orange County
FH2	Household Refusal
FH3	Unoccupied/Vacant/Demolished House
FH4	Selected Address Not a Household
FH5	Other Nonresponse (Describe)
FH6	Completed Questionnaire

(P indicates pending and F final disposition)

ADMIN ONLY

Follow Up?

Phone Number _____

Survey Complete?

☐ **YES**

Date _____

Initials _____

ID Number _____

Encuesta de opinión sobre la salud de la comunidad en el condado de Orange - 2011

LEA LA SECCIÓN SIGUIENTE A CADA POSIBLE PARTICIPANTE:

Buenos días/tardes, me llamo _____ y me acompaña _____. Representamos al Departamento de Salud del Condado de Orange. ***MUESTREN SUS IDENTIFICACIONES*** **Estamos haciendo una encuesta en nuestra comunidad para conseguir más información sobre la salud y la calidad de vida en el condado de Orange. El Departamento de Salud del Condado de Orange y Healthy Carolinians del Condado de Orange utilizarán estos resultados para crear planes que sirvan para solucionar algunos de los problemas de salud y comunitarios que tiene este condado. Quizás usted recuerde haber recibido recientemente en el correo, una carta que habla sobre esta encuesta.** ***MUESTRE LA CARTA***

El suyo es uno de los domicilios que se eligieron al azar en el condado. La encuesta es totalmente voluntaria y tardaremos unos 40 minutos en completarla. No hay respuestas correctas o incorrectas. Usted puede rehusarse o negarse a contestar cualquier pregunta. Sus respuestas serán totalmente confidenciales. La información que nos dé nunca será relacionada con usted por ningún motivo.

IF RESPONDENT IS SPANISH-SPEAKING ONLY AND INTERVIEWER IS NOT FULLY FLUENT IN SPANISH

SI LA PERSONA SOLO HABLA ESPAÑOL Y EL ENTREVISTADOR NO HABLA ESPAÑOL CON FLUIDEZ.

GIVE RESPONDENT A COPY OF THE LETTER IN SPANISH. SHOW RESPONDENT THE MESSAGE BELOW AND OFFER A PEN TO WRITE DOWN THEIR PHONE NUMBER.

DELE UNA COPIA DE LA CARTA EN ESPAÑOL. MUÉSTRELE EL MENSAJE ESCRITO AQUÍ ABAJO Y OFRÉZCALE UN BOLÍGRAFO PARA APUNTAR SU NÚMERO DE TELÉFONO.

We are conducting a community health survey. You may have received a letter about this in the mail. Unfortunately, we do not have a Spanish-speaking Interviewer available at this time, but if you would like to participate in the survey, please write your telephone number below and we can have a Spanish-speaking Interviewer call you later. Thank you for understanding.

Estamos realizando una encuesta de la salud de la comunidad. Usted puede haber recibido una carta al respecto en el correo. Desafortunadamente en este momento no tenemos disponible a un entrevistador que hable español, pero si usted desea participar de la encuesta, por favor, escriba su número de teléfono aquí abajo y un entrevistador que hable español puede llamarle más tarde. Gracias por su comprensión.

Phone Number / Número de teléfono: _____

¿Desea participar? ☐$_1$SÍ ☐$_0$NO

SI NO DESEA PARTICIPAR, INTERRUMPA LA ENCUESTA Y DELE LAS GRACIAS A LA PERSONA POR SU TIEMPO.

ELEGIBILIDAD

¿Vive usted en el condado de Orange? ☐$_1$ SÍ ☐$_0$NO

SI NO RESIDE EN EL CONDADO, INTERRUMPA LA ENCUESTA Y DELE LAS GRACIAS A LA PERSONA POR SU TIEMPO.

Ahora voy a empezar a hacer las preguntas. Si usted se da cuenta que ya ha participado en esta encuesta este año, dígamelo, y puedo detenerme.

BEGIN SURVEY – EMPIECE LA ENCUESTA

SECCIÓN 1: Preguntas sobre la calidad de vida

La primera sección son preguntas generales sobre la calidad de vida en el Condado de Orange. Para estas preguntas, al igual que para todas las preguntas a continuación, no hay respuestas correctas o incorrectas. Solo estamos interesados en recibir su honesta opinión, en base a sus experiencias.

Voy a leer varias afirmaciones sobre como es la vida en el Condado de Orange. En base a lo que usted a visto y vivido, por favor dígame que tanto está usted de acuerdo o en desacuerdo con cada afirmación diciendo: "Totalmente de acuerdo", "De acuerdo", "En desacuerdo", o "Totalmente en desacuerdo" para cada uno de estas afirmaciones. *LEA LAS POSIBLES RESPUESTAS HASTA QUE LA PERSONA QUE RESPONDE PUEDA RECORDAR CUALES SON LAS OPCIONES.*

Afirmaciones	Totalmente de acuerdo	De acuerdo	En desacuerdo	Totalmente en desacuerdo
1. Hay buenos trabajos disponibles para las personas que viven en el Condado de Orange.	4	3	2	1
2. En el Condado de Orange las personas pueden obtener los servicios de salud que necesitan.	4	3	2	1
3. Se puede encontrar vivienda o alojamiento a precio razonable en el Condado de Orange.	4	3	2	1
4. El Condado de Orange tiene buenos recursos para los padres de niños pequeños, incluyendo buenas guarderías a precio razonable.	4	3	2	1
5. El Condado de Orange es un buen lugar para personas de edad avanzada.	4	3	2	1

Afirmaciones	Totalmente de acuerdo	De acuerdo	En desacuerdo	Totalmente en desacuerdo
6. Los que viven el en Condado de Orange son tratados de una manera justa o imparcial sin importar sus características físicas, posición económica, antecedentes o creencias.	4	3	2	1
7. El Condado de Orange es un lugar seguro para vivir.	4	3	2	1
8. Las personas que viven en el Condado de Orange tienen acceso a comida saludable.	4	3	2	1
9. Los niños tienen igual acceso a una buena educación en las escuelas del Condado de Orange.	4	3	2	1
10. En el Condado de Orange, hay buenos servicios disponibles para las personas que necesitan ayuda.	4	3	2	1
11. En el Condado de Orange, hay transporte público disponible para las personas que lo necesitan.	4	3	2	1
12. Las personas que viven en el Condado de Orange tienen igual acceso al aire limpio, el agua, y los lugares públicos bien mantenidos.	4	3	2	1

13. ¿Qué es lo que <u>más</u> le gusta de vivir en el Condado de Orange? *BUSQUE RESPUESTA(S) CLARAS Y CORTAS. ESCRIBA DE 1 A 3 RESPUESTAS Y CONTINÚE A LA PREGUNTA SIGUIENTE.*

a. _____

_____

b. _____

_____

c. _____

_____

14. ¿Qué es lo que menos le gusta sobre vivir en el Condado de Orange? *BUSQUE RESPUESTA(S) CLARAS Y CORTAS. ESCRIBA DE 1 A 3 RESPUESTAS Y CONTINÚE A LA PREGUNTA SIGUIENTE.*

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

SECCIÓN 2: Mejoras en la comunidad

Las siguientes afirmaciones están relacionadas con cosas que usted podría ver, o podría no ver, como problemas en nuestro condado. Específicamente considere si usted piensa que este es un problema en nuestra comunidad. Igual que hizo antes, dígame por favor que tanto está usted de acuerdo o en desacuerdo con cada afirmación diciendo: "Totalmente de acuerdo", "De acuerdo", "En desacuerdo", o "Totalmente en desacuerdo" para cada uno de estas afirmaciones. *LEA LAS POSIBLES RESPUESTAS HASTA QUE LA PERSONA QUE RESPONDE PUEDA RECORDAR CUALES SON LAS OPCIONES.*

Afirmaciones	Totalmente de acuerdo	De acuerdo	En desacuerdo	Totalmente en desacuerdo
15. Falta de acceso a los parques y las recreaciones es un problema en el Condado de Orange.	1	2	3	4
16. La contaminación ambiental es un problema en el Condado de Orange.	1	2	3	4
17. La violencia (crímenes violentos) es un problema en el Condado de Orange.	1	2	3	4
18. Los crímenes contra la propiedad como robos y hurtos dentro de las viviendas son un problema en el Condado de Orange.	1	2	3	4

Afirmaciones	Totalmente de acuerdo	De acuerdo	En desacuerdo	Totalmente en desacuerdo
19. Homelessness (personas sin hogar) es un problema en el Condado de Orange.	1	2	3	4
20. La mendicidad es un problema en el Condado de Orange.	1	2	3	4
21. La inmigración es un problema en el Condado de Orange.	1	2	3	4
22. La discriminación contra los inmigrantes es un problema en el Condado de Orange.	1	2	3	4
23. El racismo es un problema en el Condado de Orange.	1	2	3	4
24. La discriminación contra las personas con discapacidades es un problema en el Condado de Orange.	1	2	3	4
25. La discriminación contra personas homosexuales (gay o lesbiana), personas bisexuales o transgéneros es un problema en el Condado de Orange.	1	2	3	4
26. El descuido o abandono de niños es un problema en el Condado de Orange.	1	2	3	4
27. La violencia contra las mujeres (o violencia doméstica) es un problema en el Condado de Orange.	1	2	3	4
28. La violación o asalto sexual es un problema en el Condado de Orange.	1	2	3	4
29. Jóvenes dejando la escuela antes de completarla es un problema en el Condado de Orange.	1	2	3	4
30. El abuso de substancias (drogas y alcohol) es un problema en el Condado de Orange.	1	2	3	4
31. La falta de recursos de salud mental y de abuso de substancias es un problema en el Condado de Orange.	1	2	3	4

Afirmaciones	Totalmente de acuerdo	De acuerdo	En desacuerdo	Totalmente en desacuerdo
32. La pobreza es un problema en el Condado de Orange.	1	2	3	4
33. La falta de recursos para personas de edad avanzada es un problema en el Condado de Orange.	1	2	3	4

SECCIÓN 3: Información sobre la salud

34. ¿Dónde obtiene usted la mayoría de la información sobre la salud? La mayoría de las veces usted obtiene su información de salud de… *LEA LAS OPCIONES Y PIDA QUE ELIJAN SOLO UNA*

☐1 Amigos y familia
☐2 Médico/enfermera
☐3 Farmacéutico
☐4 Hospital
☐5 Departamento de Salud
☐6 Iglesia
☐7 La escuela de mis hijos
☐8 Internet
☐9 Televisión
☐10 Radio
☐11 Líneas telefónicas de ayuda
☐12 Libros/revistas
☐13 Periódico
☐14 ó de alguna otra persona o lugar? Por favor especifique:
_____

35. Muchas personas encuentran algunas palabras y consejos médicos difíciles de entender. Usted alguna vez pide ayuda a otras personas cuando tiene que llenar un formulario, leer las etiquetas de las medicinas recetadas, formularios de seguro y/o panfletos de educación de salud?

☐1 SÍ
☐0 NO
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

36. ¿Cuál es su nivel de comodidad al hablar con su proveedor de servicios médicos y hacerle preguntas sobre su salud? Usted diría que usted está... *LEA LAS OPCIONES Y PIDA QUE ELIJAN SOLO UNA*

☐1 Muy incómodo(a)
☐2 Incómodo(a)
☐3 Neutral
☐4 Cómodo(a)
☐5 ó Muy cómodo(a) hablando con su proveedor de servicios de salud y preguntando sobre su salud
☐77 NO TENGO UN PROVEEDOR DE SERVICIOS DE SALUD
☐99 NO QUIZO CONTESTAR

CONTINÚE A LA SIGUIENTE PÁGINA

37. ¿Qué tan bien entendió usted las últimas instrucciones recibidas de su proveedor de servicios de salud o farmacéutico sobre las medicinas recetadas? Diría usted que las instrucciones sobre la medicina recetada fueron… *LEA LAS OPCIONES Y PIDA QUE ELIJAN SOLO UNA*

☐1 Muy fáciles de entender
☐2 Se podían entender
☐3 Neutral
☐4 Difíciles de entender
☐5 ó Muy difíciles de entender
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

38. ¿Cómo y dónde se deshace usted normalmente de, o bota o tira las medicinas vencidas y viejas? *BUSQUE RESPUESTA(S) CLARAS Y CORTAS. ESCRIBA DE 1 A 3 RESPUESTAS Y CONTINÚE A LA PREGUNTA SIGUIENTE.*

a. _____

b. _____

c. _____

SECCIÓN 4: Salud Personal

Las siguientes preguntas tratan de su propia salud personal. Recuerde que las respuestas no serán relacionadas con usted en ningún momento.

39. Diría usted que en general su salud es… *LEA LAS OPCIONES Y PIDA QUE ELIJA SOLO UNA*

☐5 Excelente
☐4 Muy buena
☐3 Buena
☐2 Regular
☐1 ó Deficiente
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

SI LA PERSONA ENTREVISTADA EMPIEZA A HABLAR SOBRE LOS PROBLEMAS DE SALUD DE ALGUNO DE LOS MIEMBROS DE LA FAMILIA, DIGA: Cuanto lo lamento. Quizás algunas de sus respuestas que nos dé hoy nos ayuden a nosotros y a nuestros líderes de la comunidad a resolver algunos de estos problemas. Por ahora vamos a concentrarnos solo en la salud suya.

CONTINÚE A LA SIGUIENTE PÁGINA

40. Las siguientes preguntas son sobre las pruebas para detectar diferentes tipos de cáncer. *HAGA ESTA PREGUNTA SOLO SI LA PERSONA QUE RESPONDE ES MUJER. SI ES HOMBRE, VAYA A LA PREGUNTA 42.* **¿Le han realizado alguna vez una mamografía?** *SI PREGUNTA*: Una mamografía es un rayos-x que se toma sólo de los senos usando una máquina que presiona los senos.

☐$_1$ SÍ *VAYA A LA PREGUNTA 43*
☐$_0$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

41. ¿Cuáles son los motivos por los que no se ha realizado una mamografía? Es porque… *LEA LAS RESPUESTAS Y MARQUE TODAS LAS QUE APLIQUEN.*

☐$_1$ No lo necesita/no sabía que necesitara este tipo de prueba
☐$_1$ El médico o doctor no lo ordenó/no dijo que usted necesitara
☐$_1$ Usted no ha tenido ningún problema
☐$_1$ Usted lo dejó para después/aún no lo ha hecho
☐$_1$ Cuesta mucho o usted no tiene seguro médico
☐$_1$ Hacerse una mamografía duele mucho/es desagradable o embarazoso
☐$_1$ Es demasiado joven
☐$_1$ No tiene un médico o doctor
☐$_1$ No hay ningún motivo o nunca lo había pensado
☐$_1$ ó por algún otro motivo _____
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

42. *PREGUNTE SOLO A HOMBRES. SI LA PARTICIPANTE ES MUJER VAYA A LA PREGUNTA 43* **La prueba del antígeno prostático específico (PSA) y el examen de tacto rectal (DRE) son pruebas usadas para ver si los hombres tienen cáncer de la próstata. ¿Le han realizado alguna vez una prueba de PSA o de DRE?**

☐$_1$ SÍ
☐$_0$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

43. La prueba de sangre en la heces es una prueba en que puede usar un equipo especial en casa para determinar si hay sangre en las heces. ¿Se ha realizado alguna vez esta prueba usando un equipo para la prueba en casa?

☐$_1$ SÍ
☐$_0$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

44. Las siguientes preguntas son sobre ejercicio y nutrición. ¿Cuántos días a la semana realiza actividad física moderada, por al menos 30 minutos, que lo haga sudar?

☐$_0$ Cero días *VAYA A LA PREGUNTA 46*
☐$_1$ De uno a dos (1-2) días a la semana
☐$_2$ Tres (3) días a la semana
☐$_3$ Cinco (5) o más días a la semana

45. ¿A dónde va usted a hacer ejercicio o realizar una actividad física? Va usted a un…
LEA LAS POSIBLES RESPUESTAS. MARQUE TODAS LAS QUE APLIQUEN.

☐1 A un gimnasio o centro de recreación
☐1 En su lugar de trabajo
☐1 Iglesia
☐1 Su casa
☐1 ó hace ejercicio como parte de su desplazamiento diario/ir de un lugar a otro *SI PREGUNTA: Por ejemplo, ¿va a su trabajo, escuela u otros lugares caminando o en bicicleta?*
☐1 Su barrio o vecindario
☐1 ó en otro lugar: _____
☐99 NO QUIZO CONTESTAR

46. ¿Cuáles son los motivos por los que no hace ejercicio? Es porque…
LEA LAS OPCIONES. MARQUE TODAS LAS QUE APLIQUEN
☐1 No tiene tiempo
☐1 Cuesta demasiado dinero hacer ejercicio
☐1 No tiene ningún centro o instalación conveniente para hacer ejercicio
☐1 No tiene quien le cuide a los niños
☐1 Hay mucho tráfico en su barrio o vecindario
☐1 No hay suficientes aceras en su barrio o vecindario
☐1 No suficientes vías para bicicletas en su barrio o vecindario
☐1 No tiene a nadie con quien hacer ejercicio
☐1 Hay crimen en su barrio o vecindario
☐1 No está motivado(a) a hacer ejercicio
☐1 No le gusta hacer ejercicio
☐1 No sabe cómo
☐1 No le gusta que otras personas lo(a) vean cuando hace ejercicio
☐1 Está demasiado cansado(a)
☐1 No sabe dónde hacer ejercicio
☐1 Tiene un impedimento/discapacidad física que evita que pueda hacer ejercicio
☐1 El ejercicio le hace sentir peor
☐1 Porque su trabajo es físico/implica mucha labor física
☐1 ó hay algún otro motivo: _____ *ESCRIBA LA RESPUESTA*
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

47. En los últimos 12 meses, usted o alguien en su casa alguna vez disminuyó el tamaño de sus comidas o dejó de comer (se saltó comidas) porque no había suficiente dinero para la comida?
☐1 SÍ
☐0 NO *VAYA A LA PREGUNTA 49*
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

48. ¿Con qué frecuencia sucedió esto? Redujo el tamaño o se saltó comidas…
☐1 Casi todos los meses
☐2 Algunos meses, pero no todos los meses
☐3 ó Solo en uno o dos meses
☐99 NO QUIZO CONTESTAR

49. ¿Como cuántas veces por semanas come (fast food) comidas de restaurantes rápidos como su comida o merienda? Fue…

☐$_1$ Menos de una vez
☐$_2$ de una a tres (1-3) veces
☐$_3$ ó cuatro (4) o más veces
☐$_{99}$ NO QUIZO CONTESTAR

50. ¿Como cuántas servidas de frutas y/o vegetales como al día? Usted como de…

☐$_1$ Cinco o más
☐$_2$ Tres o cuatro
☐$_3$ ó Dos o menos de dos servidas
☐$_{99}$ NO QUIZO CONTESTAR

51. ¿Como cuántas sodas/refrescos regulares o vasos de bebidas dulces como aguas frescas toma al día?

☐$_1$ Cero
☐$_2$ de uno a dos (1-2)
☐$_3$ Tres (3) o más
☐$_{99}$ NO QUIZO CONTESTAR

Cálculo del BMI (Índice de Masa Corporal)

52. ¿Como cuánto pesa usted sin zapatos?

Peso: _____ libras **ó** _____ kilos *ESCRIBA EN NÚMEROS*
☐$_{99}$ NO QUIZO CONTESTAR

53. ¿Como cuánto mide usted sin zapatos?

Altura: _____ pies _____ pulgadas **ó** _____ metros
ESCRIBA EN NÚMEROS
☐$_{99}$ NO QUIZO CONTESTAR

54. Ahora voy a hacerle preguntas sobre la vacuna contra la gripe o flu. ¿Ha recibido una vacuna contra la gripe estacional en los últimos 12 meses? *SI DICE QUE SÍ, PREGUNTE SI FUE INYECTABLE O EN FORMA DE ROCÍO NASAL. SI PREGUNTA:* **La vacuna contra la gripe puede estar en forma de "inyección contra la gripe" inyectada en su brazo o en forma de atomizador o spray "Rocío Nasal" el cual es rociado dentro de la nariz.)**

☐$_1$ SÍ, LA INYECCIÓN CONTRA LA GRIPE O FLU *VAYA A LA PREGUNTA 56*
☐$_2$ SÍ, EL ATOMIZADOR O ROCÍO NASAL *VAYA A LA PREGUNTA 56*
☐$_0$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

55. ¿Qué impidió que usted recibiera una vacuna contra la gripe?

☐$_1$ Cuesta demasiado
☐$_2$ Está saludable y no la necesita
☐$_3$ Las vacunas le hacen sentirse enfermo(a) o le duelen
☐$_4$ Le da miedo recibir vacunas
☐$_5$ ó ¿Hay algún otro motivo? _____
☐$_{99}$ NO QUIZO CONTESTAR

56. ¿A dónde va normalmente a que le pongan la vacuna contra la gripe? *NO LEA ESTAS OPCIONES. MARQUE SOLO LAS QUE MENCIONEN. SI NO PUEDEN PENSAR EN ALGUNA, LEA:* **Diría usted que fue en....** *LEA LAS RESPUESTAS.*

☐$_1$ el Consultorio Médico de un Doctor Particular o Privado
☐$_2$ un Centro de Salud Comunitario/Clínica de Salud
☐$_3$ el Departamento de Salud
☐$_4$ una Farmacia Local
☐$_5$ otro lugar de ventas como una tienda, supermercado o minute clinic (clínica de un minuto)
☐$_6$ su lugar de trabajo
☐$_7$ ó ¿En algún otro lugar? Otro: _____
☐$_{99}$ NO QUIZO CONTESTAR

SECCIÓN 5: Acceso a Atención/Salud Familiar

57. ¿A dónde acude con <u>más frecuencia</u> cuando se enferma? *NO LEA ESTAS OPCIONES. MARQUE SOLAMENTE LAS QUE EL ENCUESTADO LE DIGA. SI NO SE LE OCURRE NINGUNA RESPUESTA, LEA:* **Va usted a...** *LEA LAS POSIBLES RESPUESTAS*

☐$_1$ un Consultorio Médico Particular o Privado
☐$_2$ la Sala o Cuarto de Emergencia del Hospital
☐$_3$ una Clínica del Hospital
☐$_4$ una Clínica de Cuidados de Urgencia (Urgent Care Clinic)
☐$_5$ el Departamento de Salud del Condado de Orange
☐$_6$ el Centro de Salud Comunitario de Carrboro/Clínica de Carrboro
☐$_7$ ó algún otro lugar_____
☐$_{99}$ NO QUIZO CONTESTAR

58. ¿Tiene seguro médico u otro tipo de plan de salud que ayude a pagar los gastos médicos?

☐$_1$ SÍ
☐$_0$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

59. ¿Cuáles son las diferentes maneras en que paga por los servicios de salud, por ejemplo, cuando va al médico o a la sala de emergencia? *SI PREGUNTA **QUÉ TIPO DE MÉDICO**, CONTESTE CUALQUIER TIPO EXCEPTO DENTAL O DE LA VISTA.* **Diría que...** *MARQUE TODAS LAS QUE APLIQUEN*

☐$_1$ paga todo en efectivo, con cheque o con tarjeta de crédito
☐$_1$ hace pagos periódicos en efectivo, con cheque, o con tarjeta de crédito
☐$_1$ usa un seguro médico privado que usted compró de una compañía de seguros privada
☐$_1$ usa un seguro médico privado que su empleador o el empleador de su cónyuge le provee
☐$_1$ usa un seguro médico privado que compró de su empleador o en su lugar de trabajo
☐$_1$ usa Medicare
☐$_1$ usa Medicaid o Health Choice
☐$_1$ usa el seguro militar, Tricare, CHAMPUS
☐$_1$ usa beneficio de la Administración de Veteranos (Veterans' Administration)
☐$_1$ usa el Programa de Salud para Indígenas Americanos (Indian Health Service)
☐$_1$ ¿Hay otro recurso que a veces utilice? Otro: _____
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

60. En los últimos 12 meses, ¿Alguna vez tuvo problemas para obtener la atención médica que necesitó de cualquier tipo de proveedor o establecimiento médico?

☐$_{1}$ SÍ
☐$_{0}$ NO *VAYA A LA PREGUNTA 63*
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

61. ¿Cuáles son algunos de los problemas que tuvo para obtener la atención médica que necesitó de cualquier tipo de proveedor o establecimiento médico?... *LEA LAS OPCIONES. MARQUE TODAS LAS QUE APLIQUEN.*

☐$_{1}$ no tenía seguro médico
☐$_{1}$ No podía cubrir el costo o su deducible/la parte de la cuenta que tenía que pagar, era muy alta
☐$_{1}$ no tenía forma de llegar (al médico)
☐$_{1}$ su seguro no cubría lo que usted necesitaba
☐$_{1}$ no pudo conseguir una cita
☐$_{1}$ no sabía dónde ir
☐$_{1}$ Nadie en el lugar hablaba su idioma (especifique el idioma_____)
☐$_{1}$ No había un intérprete disponible (especifique el idioma _____)
☐$_{1}$ ¿Puede pensar en algún otro motivo? _____
☐$_{99}$ NO QUIZO CONTESTAR

62. ¿ Como cuánto tiempo ha pasado desde su última visita al médico para un examen físico de rutina o chequeo de salud? No incluya las veces que fue al médico porque estaba enfermo(a) o embarazada. Fue...

☐$_{1}$ en el último año (cualquier momento dentro de los últimos 12 meses)
☐$_{2}$ Hace de uno a dos (1-2) años
☐$_{3}$ Hace de tres a cuatro (3-5) años
☐$_{4}$ Hace más de 5 años
☐$_{5}$ ó nunca se ha hecho un examen físico de rutina o chequeo de salud
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

63. En los últimos 12 meses, ¿Tuvo problemas para obtener una prescripción/receta médica que necesitaba para usted?

☐$_{1}$ SÍ
☐$_{0}$ NO *VAYA A LA PREGUNTA 66*
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

CONTINÚE A LA SIGUIENTE PÁGINA

64. ¿Cuáles son algunos de los problemas que tuvo para obtener una prescripción/receta médica medicamente necesaria para usted? Fue porque… *LEA LAS OPCIONES. MARQUE TODAS LAS QUE APLIQUEN.*

☐$_1$ No podía cubrir el costo o su deducible/la parte de la cuenta que tenía que pagar, era muy alta
☐$_1$ no tenía seguro médico
☐$_1$ Su seguro no cubría lo que usted necesitaba
☐$_1$ Tuvo un problema con Medicare Parte D
☐$_1$ La farmacia no aceptaba su seguro médico o Medicaid
☐$_1$ No tenía forma de llegar (a la farmacia)
☐$_1$ No sabía dónde ir
☐$_1$ Nadie en el lugar hablaba su idioma (especifique el idioma_____)
☐$_1$ No había un intérprete disponible (especifique el idioma _____)
☐$_1$ ¿Puede pensar en algún otro motivo? _____
☐$_{99}$ NO QUIZO CONTESTAR

65. ¿A dónde acude con <u>más frecuencia</u> para su cuidado dental? *NO lea las opciones. Marque sólo las que el encuestado diga. Si no se le ocurre ninguna, lea:* **Va usted a...** *Lea las posibles respuestas.*

☐$_1$ el consultorio de un Dentista Particular o Privado
☐$_2$ la Escuela Dental (de Odontología) de UNC (UNC Dental School)
☐$_3$ la Clínica Dental del Departamento de Salud del Condado de Orange
☐$_4$ el Centro de Salud Comunitario de Carrboro/Clínica de Carrboro
☐$_5$ ó algún otro lugar_____
☐$_6$ No acude a ningún lugar para cuidado dental
☐$_{99}$ NO QUIZO CONTESTAR

66. En los últimos 12 meses, ¿Alguna vez tuvo problemas para obtener el cuidado dental que necesitó de cualquier tipo de proveedor o establecimiento de cuidado dental?

☐$_1$ SÍ
☐$_0$ NO *VAYA A AL PREGUNTA 68*
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

67. ¿Cuáles son algunos de los problemas que tuvo para obtener el cuidado dental que necesitó de cualquier tipo de proveedor o establecimiento de cuidado dental?... *LEA LAS OPCIONES. MARQUE TODAS LAS QUE APLIQUEN.*

☐$_1$ no tenía seguro dental
☐$_1$ no podía cubrir el costo o su deducible/la parte de la cuenta que tenía que pagar, era muy alta
☐$_1$ no sabía dónde ir
☐$_1$ su seguro no cubría lo que usted necesitaba
☐$_1$ no tenía forma de llegar (al médico)
☐$_1$ El dentista no aceptaba su seguro o Medicaid
☐$_1$ no pudo conseguir una cita
☐$_1$ Nadie en el lugar hablaba su idioma (especifique el idioma_____)
☐$_1$ No había un intérprete disponible (especifique el idioma _____)
☐$_1$ ¿Puede pensar en algún otro motivo? _____
☐$_{99}$ NO QUIZO CONTESTAR

68. En los últimos 12 meses, ¿Alguna vez tuvo problemas para obtener los servicios de salud mental o de abuso de sustancias que necesitó de cualquier tipo de proveedor o establecimiento de cuidado médico?

☐$_1$ SÍ
☐$_0$ NO *VAYA A LA PREGUNTA 70*
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

69. ¿Cuáles son algunos de los problemas que tuvo para obtener servicios de salud mental o de abuso de sustancias que necesitó? Fue porque... *LEA LAS OPCIONES. MARQUE TODAS LAS QUE APLIQUEN.*

☐$_1$ no tenía seguro médico
☐$_1$ no podía cubrir el costo o su deducible/la parte de la cuenta que tenía que pagar, era muy alta
☐$_1$ no tenía forma de llegar (al lugar)
☐$_1$ su seguro no cubría lo que usted necesitaba
☐$_1$ no pudo conseguir una cita
☐$_1$ no sabía dónde ir
☐$_1$ Nadie en el lugar hablaba su idioma (especifique el idioma_____)
☐$_1$ No había un intérprete disponible (especifique el idioma _____)
☐$_1$ ¿Puede pensar en algún otro motivo? _____
☐$_{99}$ NO QUIZO CONTESTAR

70. ¿Con qué frecuencia obtiene el apoyo social y emocional que necesita? Diría usted que...

☐$_4$ Siempre
☐$_3$ Usualmente
☐$_2$ Algunas Veces
☐$_1$ Casi Nunca
☐$_0$ ó Nunca
☐$_{99}$ NO QUIZO CONTESTAR

71. ¿Cómo describiría usted su nivel diario de estrés? Es...

☐$_3$ Alto
☐$_2$ Moderado
☐$_1$ ó Bajo
☐$_{99}$ NO QUIZO CONTESTAR

72. ¿Qué medio de transporte utiliza normalmente para ir a obtener atención de salud (clínica médica, Departamento de Salud, etc.)? *LEA LAS OPCIONES. POR FAVOR SELECCIONE SOLO LA OPCION QUE USA CON MAS FRECUENCIA* **Usted...**

☐$_1$ va manejando en su vehículo personal
☐$_2$ alguien que maneja lo lleva
☐$_3$ usa el transporte público o el camión/autobús
☐$_4$ paga un taxi u otro servicio de transporte
☐$_5$ usa un Transporte proveído por el Centro para Personas de Edad Avanzada (Senior Center), Orange Bus, Servicios Sociales, etc.
☐$_6$ camina o va en bicicleta
☐$_7$ ó no tiene transporte
☐$_8$ o llega allí de alguna otra manera. Especifique: _____
☐$_{99}$ NO QUIZO CONTESTAR

73. ¿Es usted uno de los padres o la persona encargada de un niño(a) menor de 6 años? Esto incluye hijastros, nietos, u otros familiares.

☐$_1$ SÍ
☐$_0$ NO *VAYA A LA PREGUNTA 76*
☐$_{99}$ NO QUIZO CONTESTAR

74. Piense en su niño(a) más pequeño(a). En los últimos 12 meses ¿Usted u otro adulto ha llevado al niño a su examen físico regular de Niño Sano (Well Child Check)?

☐$_1$ SÍ *VAYA A LA PREGUNTA 76*
☐$_0$ NO
☐$_{99}$ NO QUIZO CONTESTAR

75. Si contestó No ¿Por qué no? ¿Cuál fue el motivo…*MARQUE TODAS LAS QUE APLIQUEN*

☐$_1$ No puede encontrar un doctor.
☐$_1$ No puede pagar los cargos médicos.
☐$_1$ Hay una lista de espera para obtener cita con un médico.
☐$_1$ No tiene transporte para ir a la clínica del médico.
☐$_1$ Es difícil para usted tomar tiempo libre en su trabajo para ir al médico.
☐$_1$ No sabe cuando le toca a su niño(a) el examen físico regular de Niño Sano (Well Child check).
☐$_1$ No tiene quien le cuide a sus otros niños.
☐$_1$ Tiene dificultad hablando con el médico sobre las necesidades de su niño(a).
☐$_1$ Es difícil entender y darse a entender por el médico sobre las necesidades de su niño(a).
☐$_1$ ¿Hay algo más que le dificulte su participación en estas actividades? (Por favor especifique) ***ESCRIBA UNA RESPUESTA CORTA***

_____

☐$_{99}$ NO QUIZO CONTESTAR

76. ¿Es usted uno de los padres o la persona encargada de niños de entre los 10 a 19 años de edad? Esto incluye hijastros, nietos, u otros familiares.

☐$_1$ SÍ
☐$_0$ NO
☐$_{99}$ NO QUIZO CONTESTAR

¿Qué tan malo piensa que es que los adolescentes tengan los comportamientos siguientes? Por favor dígame si es "Muy malo", "Malo", "Un poco malo" o "No es malo"
SI PREGUNTA: Para esta encuesta, "adolescente" está definido como una persona joven de 13 a 19 años de edad

Comportamiento	Muy Malo	Malo	Un poco Malo	No es Malo
77. Fumen cigarrillos	4	3	2	1
78. Usen tabaco sin humo o mastiquen tabaco	4	3	2	1
79. Beban alcohol	4	3	2	1
80. Se emborrachen	4	3	2	1
81. Usen marihuana	4	3	2	1

82. Tomen medicinas que necesitan receta médica que no les fueron recetas a ellos por un doctor	4	3	2	1

Si los tiene en su casa, usted guarda bajo llave su:

83. Tabaco?	NO	SÍ	NO HAY EN CASA
84. Alcohol/	NO	SÍ	NO HAY EN CASA
85. Medicinas Recetas?	NO	SÍ	NO HAY EN CASA
86. Armas de fuego y pistolas?	NO	SÍ	NO HAY EN CASA

SECCIÓN 6: Salud del Medio Ambiente

Todos los restaurantes y bares en Carolina del Norte son lugares libres de humo de tabaco, lo cual significa, que no se puede fumar adentro del local. Muchos, pero no todos los edificios del gobierno son lugares libres de humo de tabaco adentro y a 50 pies del edificio.

87. ¿Cree usted que todos los edificios y terrenos propiedad del gobierno deben tener esta misma restricción prohibiendo todo uso de tabaco?

☐$_{1}$ SÍ
☐$_{0}$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

88. ¿Cree que las personas que usen instalaciones al aire libre propiedad del gobierno, tales como parques, también debe prohibírseles usar tabaco en cualquier lugar de la propiedad?

☐$_{1}$ SÍ
☐$_{0}$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

89. ¿Cree que hay mucha publicidad sobre tabaco en su comunidad?

☐$_{1}$ SÍ
☐$_{0}$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

90. ¿Usted fuma actualmente o usa productos de tabaco? (Incluso si fuma socialmente con regularidad.)

☐$_{1}$ SÍ
☐$_{0}$ NO *VAYA A LA PREGUNTA 92*
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

91. ¿A dónde iría usted <u>primero</u> si quisiera dejar de fumar? *NO DIGA: LEA LA LISTA DE OPCIONES. MARQUE SOLO UNA ELECCIÓN*

☐$_{1}$ Quit Line NC (La línea para dejar de usar tabaco)
☐$_{2}$ Médico
☐$_{3}$ Iglesia
☐$_{4}$ Consejero o Terapeuta Privado
☐$_{5}$ Farmacia
☐$_{6}$ Departamento de Salud
☐$_{7}$ No lo sé
☐$_{8}$ Otro: _____
☐$_{9}$ No aplica; No quiero dejar de fumar
☐$_{99}$ NO QUIZO CONTESTAR

92. Por favor mire esta lista de problemas del medio ambiente. *ENTREGE AL ENTREVISTADO LA PÁGINA LAMINADA.* **¿Cuáles de estas cosas se destacan para usted como problemas ambientales importantes en el Condado de Orange? Escoja <u>tres</u>. Esta pregunta no es sobre usted y su familia, pero cuáles tres de estos son problemas en <u>su comunidad</u> en general. Voy a leer la lista en voz alta mientras usted sigue la lectura en su hoja.** *LEA LA LISTA EN VOZ ALTA MIENTRAS EL ENTREVISTADO SIGUE LA LECTURA. MARQUE TRES, NO LES DÉ NINGÚN RANGO/VALOR.*

☐$_{1}$ La contaminación del aire (la calidad del aire en interiores o la contaminación del aire libre)
☐$_{1}$ El sobre-desarrollo (ejemplo:. expansión de la ciudad, administración del agua y sistema séptico, ruido excesivo, iluminación excesiva, pérdida de los espacios abiertos)
☐$_{1}$ Problemas con la basura / los desechos sólidos (acceso a reciclaje, tirar basura ilegalmente)
☐$_{1}$ La seguridad de los alimentos (limpieza en restaurantes, seguridad de los productos del campo y de otros alimentos)
☐$_{1}$ La eliminación de residuos peligrosos (baterías, aceite de motor, pesticidas, pintura)
☐$_{1}$ Los peligros del plomo para los niños (pintura con plomo en las casas, tierra contaminada)
☐$_{1}$ Problemas con el sistema séptico o de alcantarillado
☐$_{1}$ La contaminación del agua (riachuelos, arroyos, ríos)
☐$_{1}$ La contaminación de las aguas subterráneas (escapes o fugas en tanques subterráneos, fugas industriales)
☐$_{1}$ La seguridad y calidad del agua potable
☐$_{1}$ La exposición al humo de segunda mano
☐$_{1}$ El calentamiento global
☐$_{1}$ Otro _____
☐$_{0}$ Sin preocupaciones en este momento
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

SECCIÓN 7: Preparación para Casos de Emergencia

93. ¿Tiene en su casa detectores de humo que funcionen?

☐$_{1}$ SÍ
☐$_{0}$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

94. ¿Tiene en su casa detectores de monóxido de carbono que funcionen?
☐1 SÍ
☐0 NO
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

95. ¿Tiene su familia un paquete de suministros de emergencia? (Estos paquetes incluyen agua, alimentos no perecederos, cualquier receta médica necesaria, suministros de primeros auxilios, linterna y baterías/pilas, abrelatas que no sea eléctrico, manta/colcha, etc.)
☐1 SÍ
☐0 NO *VAYA A LA PREGUNTA 97*
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

96. Si contestó Sí, ¿Para cuántos días tiene suministros?
_____ *ANOTE EL NÚMERO DE DÍAS*
☐99 NO QUIZO CONTESTAR

97. Si contestó No, ¿Por qué su familia no tiene un paquete de suministros de emergencia?

a. _____

b. _____

c. _____

98. ¿Cuál sería el medio principal por el que obtendría información de las autoridades en caso de una emergencia o catástrofe de gran escala? Diría usted que sería por...
MARQUE SOLO UNA.
☐1 La televisión
☐2 La radio
☐3 El Internet
☐4 La prensa escrita (ejemplo: periódico)
☐5 Mensaje de texto (sistema de alerta de emergencias)
☐6 Vecinos/de una persona a otra
☐7 Sitio de Internet (redes) Sociales
☐8 ó ¿de alguna otra manera? (Describa) _____
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

99. Si las autoridades anuncian una evacuación obligatoria de su barrio o comunidad debido a una catástrofe de gran magnitud u otra emergencia, ¿seguiría usted la orden de evacuación?
☐3 Definitivamente *VAYA A LA PREGUNTA 101*
☐2 Probablemente
☐1 Quizás
☐0 ó definitivamente no evacuaría o me iría
☐99 NO QUIZO CONTESTAR

100. ¿Cuál sería el motivo principal para no seguir la orden de evacuación, si se le pide hacerlo? *MARQUE SOLO UNA.* **Sería porque…**

☐1 No tiene transporte
☐2 No confía en las autoridades oficiales
☐3 Le preocupa dejar sus posesiones/propiedad
☐4 Le preocupa la seguridad personal
☐5 Le preocupa la seguridad de la familia
☐6 Le preocupa dejar sus mascotas
☐7 Le preocupan los tranques/atascos de tráfico y el no poder salir
☐8 Tiene problemas de salud y no se le podría trasladar
☐9 ó ¿algún otro motivo? Describa _____
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

SECCIÓN 8: Servicios del Departamento de Salud

101. En los últimos dos años ¿Ha utilizado los servicios médicos del Departamento de Salud del Condado de Orange?

☐1 SÍ
☐0 NO
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

102. En los últimos dos años ¿Ha utilizado los servicios dentales del Departamento de Salud?

☐1 SÍ
☐0 NO
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

103. El actual horario de la clínica médica del Departamento de Salud es de lunes a viernes, de 8:00 AM a 5:00 PM con horario extendido los martes y jueves hasta las 6:30 PM. Si usted o su familia necesitaran servicios, ¿Sería este horario conveniente para usted?

☐1 SÍ
☐0 NO
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

104. El actual horario de la clínica dental del Departamento de Salud es de lunes a viernes de 8:00AM a 5:00PM. Si usted o su familia necesitaran servicios, ¿Sería este horario conveniente para usted?

☐1 SÍ
☐0 NO
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

105. El Departamento de Salud del Condado de Orange tiene ubicaciones en Hillsborough y en Chapel Hill. El Departamento de Salud en Hillsborough está ubicado en 300 West Tryon Street. ¿Cuáles son algunos de los motivos que pueden impedir que usted o su familia reciban los servicios del Departamento de Salud ubicado de Hillsborough ¿Es porque…

☐$_1$ Usted recibe cuidados de atención médica en otro lugar
☐$_1$ la ubicación no es conveniente
☐$_1$ no puede asumir los costos
☐$_1$ no tiene manera de llegar allí
☐$_1$ no puede obtener una cita
☐$_1$ no sabe a donde ir
☐$_1$ Nadie en el lugar habla su idioma (especifique el idioma_____)
☐$_1$ No hay intérprete disponible (especifique el idioma _____)
☐$_{99}$ NO QUIZO CONTESTAR

106. El Departamento de Salud en Chapel Hill está ubicado en 2501 Homestead Road. ¿Cuáles son algunos de los motivos que pueden impedir que usted o su familia reciban los servicios del Departamento de Salud ubicado de Chapel Hill ¿Es porque…

☐$_1$ Usted recibe cuidados de atención médica en otro lugar
☐$_1$ la ubicación no es conveniente
☐$_1$ no puede asumir los costos
☐$_1$ no tiene manera de llegar allí
☐$_1$ no puede obtener una cita
☐$_1$ no sabe a donde ir
☐$_1$ Nadie en el lugar habla su idioma (especifique el idioma_____)
☐$_1$ No hay intérprete disponible (especifique el idioma _____)
☐$_{99}$ NO QUIZO CONTESTAR

SECCIÓN 9: Preguntas Demográficas

El próximo grupo de preguntas, son preguntas generales sobre usted, que solo serán reportadas como un resumen de todas la respuestas dadas por los participantes en la encuesta. Sus respuestas permanecerán anónimas.

107. ¿Cuántos años tiene? _____ *ESCRIBA LA EDAD EN NÚMEROS*
☐ NO QUIZO CONTESTAR

108. ¿Es usted Hombre o Mujer? *EN LA MAYORÍA DE LOS CASOS, ESTA PREGUNTA PUEDE SER CONTESTADA POR EL ENTREVISTADOR SIN NECESIDAD DE PREGUNTAR.*
☐$_1$ HOMBRE ☐$_2$ MUJER ☐$_{99}$ NO QUIZO CONTESTAR

CONTINÚE A LA SIGUIENTE PÁGINA

109. ¿De qué raza es usted? *POR FAVOR MARQUE TODAS LAS QUE APLIQUEN. SI RESPONDE OTRO, ESCRIBA LA RAZA DE LA PERSONA.*

☐1 BLANCO
☐2 NEGRO O AFRO-AMERICANO
☐3 NATIVO AMERICANO O NATIVO DE ALASKA
☐4 ASIÁTICO DEL SUR INCLUYENDO INDIO-ASIÁTICO, SRILANQUÉS, PAKISTANÍ, ETC.
☐5 OTRO PAÍS ASIÁTICO INCLUYENDO JAPONÉS, CHINO, COREANO, VIETNAMITA Y FILIPINO: *ESCRIBA LA RAZA ESPECIFIQUE*: _____
☐6 DE LA ISLAS DEL PACÍFICO INCLUYENDO HAWAIANO NATIVO, SAMOANO, GUAMÉS/CHAMORRO: *ESCRIBA LA RAZA ESPECIFIQUE*: _____
☐7 OTRA RAZA QUE NO HAYA SIDO MENCIONADA
ESCRIBA LA RAZA ESPECIFIQUE: _____
☐99 NO QUIZO CONTESTAR

110. ¿Es usted Hispano, Latino, o de origen español?

☐1 SÍ
☐0 NO
☐88 NO LO SÉ
☐99 NO QUIZO CONTESTAR

111. ¿Nació en los Estados Unidos?

☐1 SÍ *VAYA A LA PREGUNTA 114*
☐0 NO
☐99 NO QUIZO CONTESTAR

112. ¿De qué país es usted?

_____ *ESCRIBA EL NOMBRE DEL PAÍS DE ORIGEN*
☐99 NO QUIZO CONTESTAR

113. ¿Hace cuántos años usted o su familia vino a los Estados Unidos?

_____ años *ESCRIBA EN AÑOS* ☐99 NO QUIZO CONTESTAR

114. ¿Habla en casa algún otro idioma además de Inglés?

☐1 SÍ
☐0 NO *VAYA A LA PREGUNTA 116*
☐99 NO QUIZO CONTESTAR

115. Si respondió Sí, ¿Qué otro idioma habla en casa?

_____ *ESCRIBA EL IDIOMA*
☐99 NO QUIZO CONTESTAR

116. ¿Cuál es su estado civil? *LEA SOLO SI ES NECESARIO. MARQUE SOLO UNO. NO SE NECESITA EXPLICACIÓN PARA "OTRO".*

☐1 Nunca se ha casado/Soltero
☐2 Casado
☐3 Convive con su pareja (Vive con su pareja pero no están casados)
☐4 Divorciado
☐5 Separado
☐6 Viudo
☐7 Otro
☐99 NO QUIZO CONTESTAR

117. ¿Cuál es el más alto nivel de educación escolar, universitario o de entrenamiento vocacional que usted completó? *LEA SOLO SI ES NECESARIO. MARQUE SOLO UNA.*

☐$_{1}$ Menos de noveno (9th) grado
☐$_{2}$ Grados 9 a 12, sin haber obtenido un diploma
☐$_{3}$ Terminó 12 años de educación y obtuvo un diploma (o GED/ equivalente)
☐$_{4}$ Diploma universitario de dos años (Associate's degree) o de capacitación vocacional
☐$_{5}$ Estudios universitarios (sin haber obtenido un diploma)
☐$_{6}$ Título universitario (Bachelor's degree)
☐$_{7}$ Título de postgrado o profesional
☐$_{8}$ Otro: _____
☐$_{99}$ NO QUIZO CONTESTAR

118. ¿Cuál fue el ingreso total de su familia el año pasado, antes de sacar los impuestos? Dígame en cuál categoría estaría. Diría usted... *LEA LAS OPCIONES. MARQUE SOLO UNA.*

☐$_{1}$ Menos de $10,000
☐$_{2}$ $10,000 a $14,999
☐$_{3}$ $15,000 a $24,999
☐$_{4}$ $25,000 a $34,999
☐$_{5}$ $35,000 a $49,999
☐$_{6}$ $50,000 a $74,999
☐$_{7}$ $75,000 a $99,999
☐$_{8}$ $100,000 o más
☐$_{99}$ NO QUIZO CONTESTAR

119. ¿Cuántas personas dependen de este ingreso?

_____ personas *ESCRIBA EL NÚMERO* ☐$_{99}$ NO QUIZO CONTESTAR

SI LE PREGUNTAN SOBRE MANUTENCIÓN PARA NIÑOS (CHILD SUPPORT): Si usted está pagando manutención pero su niño no está viviendo con usted, esto aún cuenta como alguien viviendo de su ingreso.)

120. ¿Cuál es su situación laboral? Está usted…*LEA LAS OPCIONES. MARQUE TODAS LAS QUE APLIQUEN.*

☐$_{1}$ Empleado a tiempo completo
☐$_{1}$ Empleado a tiempo parcial
☐$_{1}$ Estudiando
☐$_{1}$ Retirado/Jubilado
☐$_{1}$ En las Fuerzas Armadas/Militar
☐$_{1}$ Trabajando por su cuenta
☐$_{1}$ Se queda en casa (con sus niños)
☐$_{1}$ No puede trabajar debido a una enfermedad o incapacidad
☐$_{1}$ Desempleado por más de 1 año
☐$_{1}$ Desempleado por 1 año o menos
☐$_{99}$ NO QUIZO CONTESTAR

121. ¿Tiene acceso a Internet?

☐$_{1}$ SÍ
☐$_{0}$ NO
☐$_{88}$ NO LO SÉ
☐$_{99}$ NO QUIZO CONTESTAR

122. ¿Cuál es su código postal? (Escriba solo los primeros 5 dígitos.)

_____

123. ¿Hay algo más que no hayamos preguntado que usted piensa que afecta su salud y bienestar?

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

124. ¿Qué cambiaría usted para hacer al Condado de Orange o a su vecindario un lugar más saludable para vivir?

a. _____

_____

_____

b. _____

_____

_____

c. _____

_____

_____

Estas son todas las preguntas que queríamos hacerle. ¡Muchas gracias por tomarse el tiempo para completar esta encuesta!

ENTREGUE AL ENTREVISTADO UNA BOLSA CON REGALOS E INFORMACIÓN SOBRE RECURSOS. ¡DÉ LAS GRACIS, NUEVAMENTE!

Appendix H. Focus Group Facilitation and Note-Taker Training Materials

Conducting Focus Groups
Moderator Do's and Don'ts

Effective moderators…

- Have a good memory
- Communicate clearly in speech and in writing
- Listen attentively to all session participants
- Demonstrate respect for participants
- Make participants feel comfortable and supported
- Effectively explain the purpose of the listening sessions
- Demonstrate enthusiasm about the project
- Clearly explain how the data will be used and who will have access to it
- Clarify each question for participants
- Facilitate and guide discussion by being able to:
  – Prevent domination of discussion by an individual or subset of the group
  – Model good listening
  – Maintain a neutral, impartial role
  – Avoid answering or addressing issues raised
  – Provide positive reinforcement for participant input
  – Include participant(s) who are being left out of discussion
- Keep the discussion focused without dominating it
- Respect and use silences, hesitations, contrary positions and other unexpected occurrences, for the benefit of deepening and diversifying the discussion
- Dress and behave appropriately for the group they are interviewing
- Introduce themselves in ways that define common ground with those being interviewed

Blocks to good sharing/Moderators need to avoid:

- Talking too much (remember: a good moderator "disappears" most of the time)
- Not allowing silence to work
- Leading participants
- Advocating a particular position or solution
- Appearing judgmental
- Appearing to approve or support one position (e.g., head nodding)

Key Facilitative Behaviors

- Prompt for specifics and details
- Keep everyone participating
- Respect and use periods of silence
- Remain neutral at all times
- Relax and have fun

Conducting Focus Groups
Note Taking Tips for Assistant Moderators

Note taking is a primary responsibility of the assistant moderator. (The moderator is not expected to take detailed written notes during the discussion in order to maintain maximum eye contact with participants during the session. They may make brief notes to themselves in order to keep track of probes or issues to return to). Note taking is important even if the session is also being taped in order to highlight strong quotes and themes, record observed non-verbal activity, or any discussion missed in the event of the audio tape failure. Here are some tips:

- Have plenty of legal pad paper available for note taking and 2 pens, in case one runs out of ink.
- To help keep track of participants' names and who is saying what, make a sketch in your note pad of the seating arrangement with initials or first name of each participant. While participants' names will not appear in the final written summary of the listening session, it is helpful to indicate participants' initials by their specific comments in your handwritten notes.
- When capturing notable quotes, listen for well-said quotes. Capture word for word as much of the statement as possible. Listen for sentences or phrases that are particularly enlightening or eloquently express a particular point of view. Place name or initial of speaker after the quotations. Usually, it is impossible to capture the entire quote.
- In your notes, write phrases or key words that best capture or express the key ideas that are being discussed. (This will help in identifying key themes later when you write the summary.)
- Note the non-verbal activity. Watch for the obvious, such as head nods, physical excitement, eye contact between certain participants, or other clues (e.g. body language) that would
- Indicate level of agreement or disagreement, support or interest.
- Indicate areas of strong consensus in your notes. Place an asterisk by key points or ideas where there was agreement by several people. You can also record in brackets other observed signs of consensus (for example, "lots of yes's here" or "lots of head-nodding here").

Conducting Focus Groups
Recruiting Participants

The ideal group…

- is characterized by *homogeneity*. Participants should have something in common that relates to the topics and groups identified during CHA brainstorming sessions. Homogeneity is important for successful analysis and the group's comfort (remember: an "expert" or an "authority" destroys the group's participation).
- include enough variety so that contrasting opinions will be heard.
- is made up of six to twelve people. Do not conduct a focus group with less than four people.

Selecting participants

These general guidelines for selecting participants will help ensure that our methodology is sound.

- Set exact specifications: As much as possible, describe the demographic and observable characteristics of the people you want in your group.
- Beware of selection bias: Do not select a list of participants from memory or because they have approached you with specific concerns, or because they are more readily accessible.
- Remember that service-users and non-users may be different from each other in some ways. If you are working with only one or the other, be sure to note that in the description of your group that you provide on your cover sheet.

Finding Participants

There are many good ways to find focus group participants. Here are some suggested strategies:

- Use an existing list of people who fit the group characteristics you have chosen. This includes any list of clients, members, or service providers that you have access to.
- Piggy-back a focus group after another meeting or event. For example, recruit parents who usually come to PTA meetings to participate before or after a scheduled meeting.
- Use a location (people's workplace, recreational site, or a service provider) to recruit people. It is important to further narrow recruitment to select a group of people who share some common characteristics related to the health assessment. (See the list of potential focus groups for suggestions.)
- Ask a community member or community leader to nominate people who fit the characteristics of the group you are going to conduct. Try to contact a few people to make nominations for you.

Getting Participants to Attend

- Have a clear understanding of the study's importance. Practice explaining its purpose to people to see if they understand.
- Personalize invitations (if used) by using letterhead and signing each one.
- Remind participants the day before (e.g. a phone call)
- Provide incentives (e.g. tell them there will be refreshments served)

Conducting Focus Groups
Setting up for the Listening Session

Location/Site
- Accessible to community people in that community
- Familiar
- Comfortable with adequate heating, ventilation, lighting
- Neutral
- Non-threatening location for that community

Room
- Comfortable
- Enough seating for number of participants expected
- Capacity to move seats around, if possible
- Ability to close door to room if other activities going on
- Quiet
- Electrical outlet for tape-recorder
- Space for child care, if needed. Otherwise, be considerate of participants who may need to bring infants.
- Good lighting

Seating Arrangements
- In a circle of chairs or circle around a table.
- Moderator seated in circle, as one more participant.
- Assistant moderator seated directly opposite moderator
- Seat so that all participants can see moderator and vice-versa
- Seat so that assistant moderator can hear all participants clearly
- Avoid *unequal* seating arrangements as much as possible (i.e., where some participants are quite close to moderator and some far away from moderator)

Appendix I. Focus Group Guide and Demographics – English

Orange County Community Health Assessment

Focus Group Discussion Guide

INTRODUCTION

- Thank you for taking the time to join us today.

- INTRODUCE YOURSELF, NOTETAKER(S)

THE FOLLOWING SCRIPT IS FOR YOU TO SUMMARIZE. YOU DO NOT NEED TO READ IT WORD FOR WORD. YOU DO NEED TO COVER CONFIDENTIALITY AND THE RIGHT TO WITHDRAW WITHOUT PENALTY.

I am working with the Orange County Health Department and Healthy Carolinians of Orange County – a group of agency and community members who are interested in learning about the health of Orange County residents. Today we would like to hear what you think about the physical, mental, and environmental health of your community. The information that you share, along with information gathered from a community survey, other discussions and existing statistics, will help us plan future programs that better meet the needs of residents of Orange County.

No names will be attached to any of the information we collect. We will share what we learn with community and agency members during open forums in the fall. In the winter we will write a report about our county's health, to submit to the state. If you would like to be invited to a community forum, please write your name and contact information on the sign-up sheet. (INCLUDED WITH DEMOGRAPHICS SHEET)

While we talk today, I want you to feel free to share your opinions even if they are different from others and to react to each other's thoughts. There are no right or wrong answers. I am here to help facilitate the discussion and listen to what you have to say. (NOTETAKER'S NAME) _____ will be taking notes. If there are no objections, we will be recording this discussion to make sure we do not miss any comments. Try and speak up so the recorder can pick up your answer. After this discussion, we will listen to the recording and write down all of the responses, then we will erase/destroy the recording. Since this is a group discussion, you do not have to wait for me to call on you to speak. Anything we say here is confidential. I ask that when you all leave today that you remember to respect others' privacy and not share any information outside of this discussion. We will talk for about 1 and ½ hours.

You are here because you voluntarily agree to participate in this group discussion. However, if for any reason you feel uncomfortable and do not want to continue in the discussion, you are free to withdraw at any time. This will not affect in any way your the services you receive in the future from Orange County or this agency. Again, no names will be attached to the information that we collect. Is this OK with everyone? (DO NOT CONTINUE UNTIL EVERYONE AGREES OR DISMISSES THEMSELVES. ONCE YOU ARE READY TO BEGIN, TURN ON THE RECORDER).

OPENING QUESTIONS

1. **Let us start with introductions. One at a time, please introduce yourself and tell us how long you have lived in Orange County, NC.**

INTRODUCTORY QUESTIONS

2. **Since we will be talking about health, what does being healthy mean to you, personally?**

- *PROBE: What about physical health? Mental health? Environmental health?*

3. **Another way to think about health is looking at the health of a community, not just individuals. To you, what would a healthy community look like?**

4. **Today we will be talking about people's health here in Orange County where you live or work. What is it like living or working in this community?**

- *PROBE: What are some of the best things about living in your community? What do you like or enjoy the most?*
  - *Housing*
  - *Employment*
  - *Schools*
  - *Transportation/travel time*
  - *Recreation activities*
  - *Religion*
  - *Healthcare*

TRANSITION QUESTIONS

5. **What do you think are the most healthy things about your physical community/Orange County?**

6. **Now, thinking about less healthy things, which things concern you the most about the health of your physical community/Orange County?**

KEY QUESTIONS

THE MOST TIME PROBING SHOULD BE SPENT ON THESE QUESTIONS. FOLLOW ANSWERS WITH PHRASES LIKE, "TELL ME MORE ABOUT…" OR "COULD YOU GIVE ME AN EXAMPLE…" OR "IN WHAT WAYS…"

7. **Thinking about the people in your community, what are your main health concerns?**

- *PROBE: physical, mental, environmental*

8. **Tell us about the strengths of the people in your community.**

- *PROBE: Historical evidence of collaboration, support networks, cultural foods*

9. **Where do you go for health care services?**

- *PROBE: The hospital, clinic, health department, other (cultural healers)*

10. **Tell us about your own experience getting the help you need in Orange County.**

- *PROBE: Positive experiences, challenges/barriers*

11. **Are there groups of people within your community whose healthcare needs seem to be overlooked, or not met?**

- *PROBE: Who? Older adults, men, women, people who live in rural areas, etc. In what ways? Why do you think that might be?*

12. **Where do you and others in your community get most of your health information?**

- *PROBE: TV, radio, internet? Experience or comfort level with technology?*

13. **Think back over all the topics we've discussed. If you were in charge, what specific things would you do to improve the health status of community members?**

- *PROBE: What specific things do you wish that agencies were doing to help you and your community? Are there things you would do to improve people's access to care, health information, quality of care, subsidies/cost, types of services available?*

ENDING QUESTIONS

14. **We want to make sure that the health programs in this community will help *you and your community*. With that in mind, is there anything that we have not asked or that you would like to add?**

CLOSING

15. **Questions from the notetaker(s)?**

- Thank you!!
- INCENTIVE FOR PARTICIPATION

Demographic Information

Questions will only be reported as a summary of all answers given by focus group participants. Your answers will remain anonymous.

1. How old are you? _____ years old

2. Are you Male or Female? ☐1 MALE ☐2 FEMALE

3. What is your race? Please check all that apply. If other, write in race.
☐1 White
☐2 Black or African American
☐3 American Indian or Alaska Native
☐4 South Asian including Asian Indian, Sri Lankan, Pakistani, Nepalese, etc.
☐5 Other Asian including Japanese, Chinese, Korean, Vietnamese, and Filipino/a

Specify: _____
☐6 Pacific Islander Including Native Hawaiian, Samoan, Guamanian/Chamorro

Specify: _____
☐7 Some Other Race Not Listed Here. Specify: _____

4. Are you of Hispanic, Latino, or Spanish origin?
☐1 YES
☐0 NO *If No, SKIP to Question 8*

5. If so, were you born in the United States? ☐1 YES ☐0 NO

6. What country are you from? _____

7. How many years ago did you or your family come to the United States? _____ years

8. Do you speak a language other than English at home? ☐1 YES ☐0 NO

9. If Yes, what language do you speak at home? _____

10. What is your marital status?
☐1 Never Married/Single
☐2 Married
☐3 Unmarried Partner
☐4 Divorced
☐5 Separated
☐6 Widowed
☐7 Other

11. What is the highest level of school, college or vocational training that you have finished?

☐$_1$ Less than 9th Grade
☐$_2$ 9-12th Grade, No Diploma
☐$_3$ High School Graduate (or GED/ Equivalent)
☐$_4$ Associate's Degree or Vocational Training
☐$_5$ Some College (No Degree)
☐$_6$ Bachelor's Degree
☐$_7$ Graduate or Professional Degree
☐$_8$ Other: _____

12. What was your total household income last year, before taxes?

☐$_1$ Less than $10,000
☐$_2$ $10,000 to $14,999
☐$_3$ $15,000 to $24,999
☐$_4$ $25,000 to $34,999
☐$_5$ $35,000 to $49,999
☐$_6$ $50,000 to $74,999
☐$_7$ $75,000 to $99,999
☐$_8$ $100,000 or more
☐$_{99}$ Prefer not to say

13. How many people does this income support? _____ people

14. What is your employment status? Please, check all that apply.

☐$_1$ Employed full-time
☐$_1$ Employed part-time
☐$_1$ Student
☐$_1$ Retired
☐$_1$ Armed forces/Military
☐$_1$ Self-employed
☐$_1$ Stay at home parent
☐$_1$ Unable to work due to illness or disability
☐$_1$ Unemployed for more than 1 year
☐$_1$ Unemployed for 1 year or less

15. Do you have access to the Internet? ☐$_1$ Yes ☐$_0$ No

16. What is your zip code? _____

Community Forum/Presentations

If you would like to be sent an invitation to the Community Forums/presentations in the Fall where we will present the data collected and begin prioritizing issues, please provide your name and contact information.

This information will be kept separate from the above questions/answers.

Name			
Email Address			
Mailing Address	Street Address:		
	City:	State:	Zip Code

Appendix J. Focus Group Guide and Demographics – Spanish

Evaluación de Salud de la Comunidad del Condado de Orange

Guía de Discusión del Grupo de Enfoque

INTRODUCCIÓN

- Gracias por tomarse el tiempo para reunirse con nosotros hoy.

- PRESÉNTESE USTED Y A LAS PERSONAS QUE ESTÉN TOMADO NOTAS Y GRABANDO

EL SIGUIENTE ESCRITO ES PARA QUE LO RESUMA. NO ES NECESARIO LEERLO PALABRA POR PALABRA. NECESITA HABLAR SOBRE LA CONFIDENCIALIDAD Y EL DERECHO A RETIRARSE SIN SUFRIR CONSECUENCIAS.

Estoy trabajando con el Departamento de Salud del Condado de Orange y Healthy Carolinians del Condado de Orange - un grupo de miembros de la agencia y de la comunidad que están interesados en aprender sobre la salud de los residentes del Condado Orange. Hoy nos gustaría saber qué piensan acerca de la salud física, mental y ambiental de su comunidad. La información que ustedes compartan, junto con información obtenida de una encuesta comunitaria, otros diálogos y las estadísticas existentes, nos ayudará a planear futuros programas que satisfagan mejor las necesidades de los residentes del Condado de Orange.

Los invitamos a participar porque ustedes son líderes de la comunidad Latina Inmigrante, que puede hablar de su experiencia personal y de sus experiencias como líderes. Ningún nombre será conectado con ninguna de la información que obtengamos. Compartiremos lo que aprendamos con miembros de comunidad y de la agencia durante foros abiertos en el otoño. En el invierno escribiremos un informe acerca de la salud de nuestro condado, para enviarlo al estado. Si desea ser invitado a un foro comunitario, por favor escriba su dirección en la hoja de asistencia. (PASE LA HOJA)

Mientras hablamos, quiero que se sienta libre para compartir sus opiniones, incluso si son diferentes de las de los demás, y a responder a los pensamientos de otros. No hay respuestas correctas o incorrectas. Estoy aquí para ayudar a facilitar la discusión y escuchar lo que tienen que decir. (NOMBRE DE QUIEN ESTÁ TOMANDO NOTAS) _____ va a tomar notas. Si no hay objeciones, vamos a grabar esta discusión para asegurarnos de no perder ningún comentario. Trate de hablar de forma que la grabadora pueda recoger su respuesta. Después de esta discusión, vamos a escuchar la grabación y escribir todas las respuestas, luego vamos a borrar o destruir la grabación. Como se trata de una discusión de grupo, no tiene que esperar que yo se lo indique para hablar. Todo lo que digamos aquí es confidencial. Les pido que cuando se retiren, recuerden respetar la privacidad de los demás y no compartir ninguna de la información fuera de esta discusión. Vamos a hablar por cerca de una hora y media.

Ustedes están aquí, porque voluntariamente aceptaron participar en esta discusión en grupo. Sin embargo, si por alguna razón se siente incómodo y no desea continuar en la discusión, usted es libre de retirarse en cualquier momento. Esto no afectará de ningún modo los servicios que reciba en el futuro del Condado de Orange, o de esta agencia. Una vez más, ningún nombre será conectado a la información que obtengamos. ¿Están todos de acuerdo?

PREGUNTAS PRELIMINARES

1. **Comencemos con las presentaciones. Uno a la vez, por favor, preséntese y díganos cuánto tiempo ha vivido en el condado de Orange, Carolina del Norte.**

PREGUNTAS DE INTRODUCCIÓN

2. **Como vamos a hablar acerca de la salud, para usted, personalmente ¿qué significa, ser saludable?**

- *EXPLORACIÓN:* ¿Qué hay de la salud física? ¿La salud mental? ¿La salud ambiental?

3. **Otra manera de pensar acerca de la salud es mirando la salud de la comunidad, no solo a los individuos. Para usted, ¿Cómo se vería una comunidad saludable?**

4. **Hoy vamos a hablar de la salud de las personas aquí en el Condado de Orange, donde usted vive o trabaja. ¿Cómo es el vivir o trabajar en esta comunidad?**

- *EXPLORACIÓN: ¿Cuáles son algunas de las mejores cosas acerca de vivir en su comunidad? ¿Qué es lo que más le gusta o disfruta?*
  - *La vivienda*
  - *El empleo*
  - *Las escuelas*
  - *El transporte/el tiempo del viaje*
  - *Las actividades recreativas*
  - *La religión*
  - *Los cuidados de salud*

PREGUNTAS DE TRANSICIÓN

5. **Para usted, ¿cuáles son las cosas más saludables acerca de su comunidad física/el Condado de Orange?**

6. **Ahora, pensando en cosas menos saludables, ¿Cuáles cosas le preocupan más acerca de la salud de su comunidad física/del Condado de Orange?**

PREGUNTAS CLAVES

LA MAYORÍA DEL TIEMPO DE LA DISCUSIÓN DEBE SER USADO EN ESTAS PREGUNTAS. SIGA LAS RESPUESTAS CON FRASES COMO: "DÍGAME MÁS ACERCA DE…" O "PODRÍA DARME UN EJEMPLO…" O "DE QUE MANERAS…"

7. **Pensando en las personas en su comunidad, ¿cuáles son sus principales preocupaciones acerca de la salud?**

- *EXPLORACIÓN: física, mental, ambiental*

8. **Háblenos sobre las fortalezas de las personas en su comunidad.**

- *EXPLORACIÓN: Evidencia histórica de colaboración, redes de apoyo, comidas o alimentos típicos de su cultura.*

9. **¿A dónde va para sus servicios de salud?**

- *EXPLORACIÓN: El hospital, una clínica, el departamento de salud, otro (curanderos o otros sanadores típicos de su cultura)*

10. **Díganos sobre su propia experiencia para conseguir la ayuda que necesita en el Condado de Orange.**

- *EXPLORACIÓN: Las experiencias positivas, los desafíos/obstáculos*

11. **¿Hay grupos de personas en su comunidad cuyas necesidades de salud parecen haber sido pasados por alto, o no haber sido satisfechas?**

- *EXPLORACIÓN: ¿Quienes? Adultos de avanzada edad, hombres, mujeres, personas que viven en áreas rurales, etc. ¿De qué maneras? ¿Por qué cree que sucede eso?*

12. **¿Dónde obtiene usted y otros en su comunidad la mayoría de su información de salud?**

- *EXPLORACIÓN: ¿La televisión, la radio, el Internet? ¿Experiencia o nivel de comodidad con la tecnología?*

13. **Piense sobre todos los temas que hemos discutido. Si estuviera a cargo, ¿Qué cosas específicas haría para mejorar el estado de salud de los miembros de la comunidad?**

- *EXPLORACIÓN: ¿Qué cosas concretas desea que las agencias hagan para ayudarle a usted y a su comunidad? ¿Hay cosas que usted haría para mejorar el acceso a la atención de salud, la información de salud, la calidad de la atención, las subvenciones/costo, tipos de servicios disponibles?*

PREGUNTAS FINALES

14. **Queremos estar seguros de que los programas de salud en esta comunidad le ayudarán a usted y a su comunidad. Con eso en mente, ¿Hay algo que no hemos preguntado o que le gustaría añadir?**

CONCLUSIÓN

15. **¿Hay preguntas de la(s) persona(s) que están tomando nota?**

- ¡¡Gracias!!
- INCENTIVOS POR PARTICIPAR

Información Demográfica

Las preguntas solo serán reportadas como un resumen de todas las respuestas recibidas de los participantes del grupo de enfoque. Sus respuestas permanecerán anónimas.

1. ¿Cuántos años tiene? _____ años

2. ¿Es usted Hombre o Mujer? ☐$_1$ HOMBRE ☐$_2$ MUJER

3. ¿De qué raza es usted? Por favor marque todas las que apliquen. Si responde otro, escriba la raza de la persona.

☐$_1$ Blanco
☐$_2$ Negro o Afro-Americano
☐$_3$ Nativo Americano o Nativo de Alaska
☐$_4$ Asiático del Sur incluyendo Indio-Asiático, srilanqués, pakistaní, etc.
☐$_5$ Otro país asiático incluyendo japonés, chino, coreano, vietnamita y filipino/a:

Especifique: _____
☐$_6$ De las Islas del Pacífico Incluyendo hawaiano nativo, samoano, guamés/chamorro:

Especifique: _____

☐$_7$ Otra Raza Que No Haya Sido Mencionada. *Especifique*: _____

4. ¿Es usted Hispano, Latino, o de origen español?

☐$_1$ SÍ
☐$_0$ NO (Vaya a la pregunta 8)

5. ¿Nació en los Estados Unidos? ☐$_1$ SÍ ☐$_0$ NO

6. ¿De qué país es usted? _____

7. ¿Hace cuántos años usted o su familia vinieron a los Estados Unidos? _____ años

8. ¿Habla en casa algún otro idioma además de inglés? ☐$_1$ SÍ ☐$_0$ NO

9. Si respondió Sí, ¿Qué otro idioma habla en casa? _____

10. ¿Cuál es su estado civil?

☐$_1$ Nunca se ha casado/Soltero
☐$_2$ Casado
☐$_3$ Convive con su pareja (Vive con su pareja pero no están casados)
☐$_4$ Divorciado
☐$_5$ Separado
☐$_6$ Viudo
☐$_7$ Otro

11. ¿Cuál es el más alto nivel de educación escolar, universitario o de entrenamiento vocacional que usted completó?

☐$_1$ Menos de noveno (9no) grado
☐$_2$ Grados 9 a 12^{avo}, sin haber obtenido un diploma
☐$_3$ Terminó 12 años de educación y obtuvo un diploma (o GED/ Equivalente)
☐$_4$ Diploma universitario de dos años (Associate's degree) o de capacitación vocacional
☐$_5$ Estudios universitarios (Sin haber obtenido un diploma)
☐$_6$ Título universitario (Bachelor's degree)
☐$_7$ Título de postgrado o Profesional

☐$_8$ Otro: _____

12. ¿Cuál fue el ingreso total de su familia el año pasado, antes de sacar los impuestos?

☐$_1$ Menos de $10,000
☐$_2$ $10,000 a $14,999
☐$_3$ $15,000 a $24,999
☐$_4$ $25,000 a $34,999
☐$_5$ $35,000 a $49,999
☐$_6$ $50,000 a $74,999
☐$_7$ $75,000 a $99,999
☐$_8$ $100,000 o más
☐$_{99}$ Prefiero no decir

13. ¿Cuántas personas dependen de este ingreso? _____ personas

14. ¿Cuál es su situación laboral? Marque todas las que apliquen.

☐$_1$ Empleado a tiempo completo
☐$_1$ Empleado a tiempo parcial
☐$_1$ Estudiando
☐$_1$ Retirado/Jubilado
☐$_1$ En las Fuerzas Armadas/Militar
☐$_1$ Trabajando por su cuenta
☐$_1$ Se queda en casa (con sus niños)
☐$_1$ No puede trabajar debido a una enfermedad o incapacidad
☐$_1$ Desempleado por más de 1 año
☐$_1$ Desempleado por 1 año o menos

15. ¿Tiene acceso a Internet? ☐$_1$ SÍ ☐$_0$ NO

16. ¿Cuál es su código postal? _____

Foro de la Comunidad/Presentaciones

Si desea que le envíen una invitación para el Foro Comunitario/ La presentació en el otoño donde vamos a presentar los resultados y a empezar a dar un orden de prioridad a los asuntos, por favor dénos su nombre y la información para contactarle.

Esta información se mantendrá separada de las preguntas y respuestas anteriores.

Nombre			
Dirección de Correo Electrónico			
Dirección Postal	Dirección:		
	Ciudad:	Estado:	Código Postal

Appendix K. Focus Group Guide, Survey, Demographics – Youth

ORANGE COUNTY HEALTH DEPARTMENT

Rosemary L. Summers, MPH, DrPH
Health Director

Richard E. Whitted
Human Services Center
300 West Tryon Street
Post Office Box 8181
Hillsborough, NC 27278

Phone: (919) 245-2411
Fax: (919) 644-3007

www.co.orange.nc.us/health

Central Administrative Services

Dental Health Services

Environmental Health Services

Health Promotion and
Education Services

Personal Health Services

Whitted Human Services Center
300 West Tryon Street
Post Office Box 8181
Hillsborough, NC 27278

Phone: (919) 245-2449
FAX: (919) 644-3007

Southern Human Services Center
2501 Homestead Road
Chapel Hill, NC 27516

Phone: (919) 968-2022
Fax: (919) 969-4777

Healthy Carolinians of Orange County

April 18, 2011

Dear Parent/Guardian:

Your child is invited to participate in a focus group discussion about underage alcohol and drug use among youth in Orange County, NC. This focus group will be facilitated by Healthy Carolinians of Orange County and the Orange County Health Department as part of the required Community Health Assessment conducted every four years. You are receiving this letter because your child has agreed to participate in a focus group at school. The information we receive will help us plan projects to prevent underage drinking and drug use in our community.

Your child will be one of about 30 students across the district participating in this conversation among high school students in Chapel Hill-Carrboro City Schools. Each focus group will have 7-10 student participants and will last approximately one hour during lunch. In the first part of the session, students will answer multiple choice questions about their personal use of and their feelings about drugs and alcohol. During the second part, students will then join together to discuss questions exploring the students' thoughts about alcohol and drug use.

If your child chooses to participate in the focus group, please understand that the student's participation is **voluntary** (no one *has* to do it). Your child may stop participating for any reason, at any time before or during the discussion. If you **do not** wish for your child to participate, please return the attached form to or email Stephanie Willis by Tuesday, April 19, 2011. We realize that this is last minute notice, but we want to avoid asking students later in the semester when they begin preparing for End of Course and other tests.

Talking about issues associated with underage drug and alcohol use could make young people uncomfortable—especially if they are worried they could get in trouble. If your child participates, all information that they provide will remain **confidential**. No information gathered during the discussion will be shared by us with anyone—including parents, teachers, principals, or law enforcement. Your child's name will not be linked to any of their answers. In order to capture all that is said, the discussion will be tape recorded. If the results of the focus group are published, no names will be included.

If you have any questions, please contact Ms. Nidhi Sachdeva, Healthy Carolinians Coordinator, at 919.245.2440 or nsachdeva@co.orange.nc.us any time.

Thank you for your support as we work together to prevent underage drinking and drug use among our young people in our community.

Respectfully,

Stephanie Willis
Health Coordinator
Chapel Hill-Carrboro City Schools
919.967.8211 x 28245
swillis@chccs.k12.nc.us

Healthy Carolinians of Orange County

Parental Refusal Form: Student Focus Group

I DO NOT give permission for my child, _____, a CHCCS high school student, to participate in a focus group discussion about underage drinking and drug use among youth in Orange County.

_____

PRINT NAME

_____

Parental/Legal Guardian Signature Date

Please complete this form and **return** to Stephanie Willis, CHCCS Health Coordinator, via email swillis@chccs.k12.nc.us by Tuesday, April 19, 2011.

Thank you!

Healthy Carolinians of Orange County

Student Focus Group - Assent

You are being asked to participate in a student focus group discussion about your thoughts about underage alcohol and drug use among your peers in Chapel Hill and Carborro, NC. You have been asked to participate because you are a high school student in the Chapel Hill-Carrboro City School system. The information we receive will help us plan projects to prevent underage drinking and drug use in our community. Your thoughts and opinions are *very* important.

If you agree to participate in this study, please understand that your participation is **voluntary** (you do not have to do it). You may refuse to join, or may stop participating for any reason, at any time, without penalty.

You will be one of about 30 students across the district participating in this conversation. This focus group discussion will last approximately one hour. In the first part of the session, you will answer multiple choice questions about personal use of and your feelings about drugs and alcohol. During the second part, you will then join together to discuss questions exploring your thoughts about alcohol and drug use. There are no wrong answers or bad ideas, just different opinions based on different experiences.

If you do not feel comfortable sharing your opinion or do not have an opinion, it is ok not to participate. However, your point of view as a young person in Orange County is *very* important. Talking about issues associated with underage drug and alcohol use could make young people uncomfortable—especially if they are worried they could get in trouble. All information that you provide will remain **confidential**. No information gathered during the discussion will be shared by us with anyone—including parents, teachers, principals, or law enforcement. Your name will not be linked to any of your answers. We also ask that you not share what is discussed during the session with anyone either.

In order to capture all that is said, this discussion will be tape recorded. We will not record your name or any other personal things about you. If the results of the research are published, your name will not be included.

You will not be paid to participate in this discussion session; but, there will be food and refreshments for you.

If you have any questions about this project and/or you wish to stop participating at any time, you may contact either project coordinator below:

Nidhi Sachdeva, MPH, CHES
Healthy Carolinians Coordinator
Orange County Health Department
300 West Tryon Street
Hillsborough, NC 27278
919.245.2440 / nsachdeva@co.orange.nc.us

Stephanie Willis
Health Coordinator
Chapel Hill-Carrboro City Schools
750 S. Merritt Mill Road
Chapel Hill, NC 27516
919.967.8211 x 28245 / swillis@chccs.k12.nc.us

Participant's Agreement

By signing this assent form, I agree that I have read and understand the information presented here, and I freely give my assent to participate in this student focus group discussion. I also agree to keep everything that is discussed during the session and the identity of other participants confidential. I have asked all the questions I have at this time. I voluntarily agree to participate in this student focus group discussion.

Name of Participant (Print)	Name of Facilitator (Print)
Signature of Participant	Signature of Facilitator
Date	Date

Healthy Carolinians of Orange County

Youth Survey and Focus Group Questions

Youth Focus Group Survey Questions		
Number	**Track Point Questions**	**Responses**
1	School	Carrboro High; Chapel Hill High; East Chapel Hill High
2	Grade	Ninth, Tenth; Eleventh; Twelfth
3	Age	11; 12; 13; 14; 15; 16; 17; 18; 19
4	Gender	Male; Female
5	Race	American Indian or Alaska Native; Asian; Black or African American; Hispanic or Latino Asian; Native Hawaiian or other Pacific Islander; White
6	My parents talk to me about staying away from alcohol:	Always; Frequently; Sometimes; Seldom; Never
7	My parents talk to me about not getting drunk:	Always; Frequently; Sometimes; Seldom; Never
8	My parents talk to me about staying away from prescription drugs that are not prescribed to me:	Always; Frequently; Sometimes; Seldom; Never
9	How much trouble would a student get into if they were caught with alcohol at school or a school event?	A Lot; Some; Not Much; Not at All
10	How likely do you think it is that a student would get caught if they had alcohol at school or a school event?	Very likely; Likely; Unlikely; Very Unlikely
11	How much trouble would a student get into if they were caught with a prescription drug not prescribed to them at school or a school event?	A Lot; Some; Not Much; Not at All
12	How likely do you think it is that a student would get caught with a prescription drug not prescribed to them at school or a school event?	Very likely; Likely; Unlikely; Very Unlikely
13	In the past year, I drank alcohol (beer, wine, liquor, etc.):	Not at all; Very few times (1-2); A few times (3-9); Many times (10-19); Very Many Times (20+)
14	In the past year, I have gotten drunk:	Not at all; Very few times (1-2); A few times (3-9); Many times (10-19); Very Many Times (20+)
15	In the past year, I have taken prescription drugs that were not prescribed by my doctor:	Not at all; Very few times (1-2); A few times (3-9); Many times (10-19); Very Many Times (20+)

Youth Focus Group Discussion Questions		
Number	**Discussion Questions**	**Prompts**
D1	Where do people your age get alcohol?	• Parents give it them • Take it from parents without them knowing • Buy it at store that does not check IDs • Use a fake ID to buy it • A friend who is over 21 years old gets it • A sibling who is over 21 years old gets it • Ask strangers to buy it for them • At a party • Any where else?
D2	How easy do you think it is for people your age to get alcohol from those sources?	• Reflect back to sources mentioned in previous question
D3	Where do people your age go to drink?	• House parties with parents present and supervising • House parties with parents present, but not supervising • House parties without parents present • At a school event, like a dance or sporting event • In a car • At a park, in a field, or in another public place with no adult supervision • Any place else?
D4	What makes kids your age want to drink?	• Peer pressure • Boredom • Because it is cool • Because they think it will make them popular • Problems at home/school, low self esteem
D5	What are some of the things that can happen to people your age if they drink?	• Car crash • Injury to yourself or someone else • Affect school work • Fight with other teens/parents • Hang over • Make decision they regret • Increase in popularity • Forget problems • Have fun • Others?
D6	How do other teens in the community feel about people your age drinking alcohol?	• Opposed • Stupid • Okay if they do not drink • It is a rite of passage • Everyone's doing it
D7	How do parents in the community feel about people your age drinking alcohol?	• Opposed • Okay if they do not drink • Okay if at home • Okay if they are with parents • It is a rite of passage
D8	If people your age drink, how do they keep parents from finding out (if they try to), and how successful are they?	• They say they are staying with a friend • They go out when parents are away • They sneak out • They say they are doing something else • Are they successful or unsuccessful?

Healthy Carolinians of Orange County

Youth Survey and Focus Group Questions

We want to know a few things about you, your thoughts and opinions. All responses are completely confidential, so please be honest when answering.

1. I go to…

- Carrboro High School ☐1
- Chapel Hill High School ☐2
- East Chapel Hill High School ☐3

2. I am a…

- Freshman ☐1
- Sophomore ☐2
- Junior ☐3
- Senior ☐4

3. I am…

- Male ☐1
- Female ☐2

4. I am…

- 12 ☐1
- 13 ☐2
- 14 ☐3
- 15 ☐4
- 16 ☐5
- 17 ☐6
- 18 ☐7
- 19 ☐8

5. I am… *(Select all that apply.)*

- American Indian or Alaska Native ☐1
- Asian ☐1
- Black or African American ☐1
- Hispanic or Latino ☐1
- Native Hawaiian or other Pacific Islander ☐1
- White ☐1

6. My parent(s) talk to me about…

	Never	Seldom	Sometimes	Frequently	Always
a. Staying away from alcohol	☐1	☐2	☐3	☐4	☐5
b. Not getting drunk	☐1	☐2	☐3	☐4	☐5
c. Staying away from prescription drugs that are not prescribed to me	☐1	☐2	☐3	☐4	☐5

C#_____

7. How much trouble would a student get into if they were caught with…

	Not at All	Not Much	Some	A lot
a. Alcohol at school or a school event?	☐1	☐2	☐3	☐4
b. A prescription drug not prescribed to them at school or a school event?	☐1	☐2	☐3	☐4

8. How likely do you think it is that a student would get caught …

	Not at All	Not Much	Some	A lot
a. If the had alcohol at school or a school event?	☐1	☐2	☐3	☐4
b. With a prescription drug not prescribed to them at school or a school event?	☐1	☐2	☐3	☐4

9. In the past year I…

	Very Many Times (20+)	Many Times (10-19)	A Few Times (3-9)	Very Few Times (1-2)	Not at All
a. Drank alcohol (beer, wine, liquor, etc.)	☐1	☐2	☐3	☐4	☐5
b. Have gotten drunk	☐1	☐2	☐3	☐4	☐5
c. Have taken prescription drugs that were not prescribed by my doctor	☐1	☐2	☐3	☐4	☐5

Thank you for completing this survey.
We really appreciate your help.

Appendix L. Community Forum Flyers – English and Spanish

2011 Orange County Community Health Assessment

COMMUNITY FORUMS

Together we will:

- Present and discuss findings from the 2011 Community Health Assessment
- Speak with local policy makers and Orange County Board of Health members
- Select priority health issues for the Healthy Carolinians of Orange County Partnership
- Plan next steps to develop a community wide plan for improved health

*Habrá servicios de interpretación al español en estas dos reuniones, para hablar sobre la salud en el condado de Orange. Si desea asistir a una de las OTRAS reuniones y necesita ayuda con el idioma o tiene preguntas, por favor llame al 919-644-3350 para que podamos hacer arreglos para proveer interpretación.

If you need interpretation services or other accommodations, call (919) 968-2022 ext. 294

Forum Dates

1 Faith Tabernacle Oasis of Love
Date: Tuesday, August 16, 2011
Time: 6:00 p.m. - 8:00 p.m.
Address: 8005 Rogers Rd. • Chapel Hill, NC 27516

2 Schley Grange Hall
Date: Tuesday, August 23, 2011
Time: 6:00 p.m.- 8:00 p.m.
Address: 3416 Schley Rd. • Hillsborough, NC 27278

3 Efland-Cheeks Community Center
Date: Tuesday, August 30, 2011
Time: 7:00 p.m. - 9:00 p.m.
Address: 117 Richmond Rd. • Efland, NC 27302

4 Orange County Central Senior Center*
Date: Thursday, September 1, 2011
Time: 6:30 p.m. - 8:30 p.m.
Address: 103 Meadowland Dr. • Hillsborough, NC 27278

5 Hargraves Community Center*
Date: Tuesday, September 13, 2011
Time: 7:00 - 9:00 p.m.
Address: 216 N. Roberson St. • Chapel Hill, NC 27516

FREE DINNER SERVED!

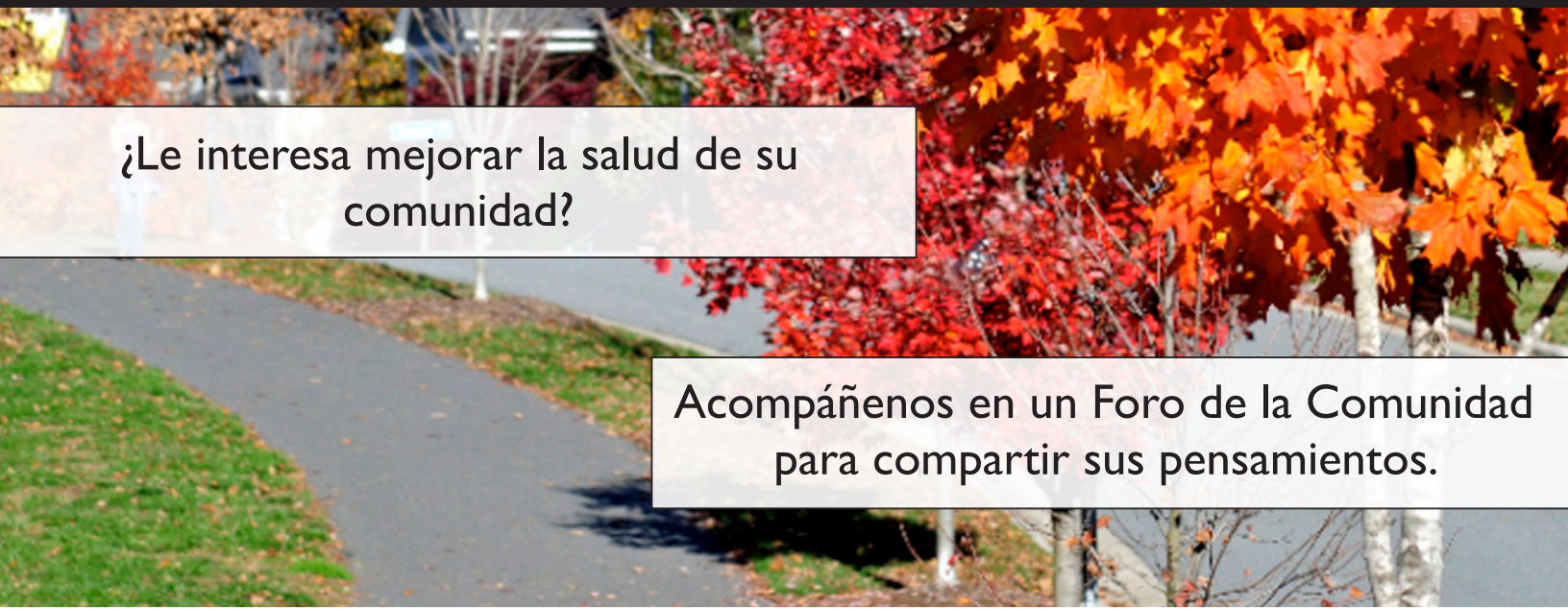
Healthy Carolinians of Orange County

Orange County Health Department NCPH North Carolina Public Health

To learn more, e-mail hcoc@co.orange.nc.us or call 919-245-2440

Evaluación de Salud de la Comunidad del Condado de Orange del 2011

FOROS DE LA COMUNIDAD



¿Le interesa mejorar la salud de su comunidad?

Acompáñenos en un Foro de la Comunidad para compartir sus pensamientos.

Juntos vamos a:

- Presentar y discutir los resultados de la Evaluación de la Salud de la Comunidad del 2011
- Hablar con los encargados de crear las políticas locales y con los miembros de la Junta Directiva de Salud del Condado de Orange
- Seleccionar los asuntos de salud prioritarios para la Asociación Healthy Carolinians del Condado de Orange
- Planificar los próximos pasos para desarrollar un plan a escala comunitaria para mejorar la salud

*Habrá servicios de interpretación al español en dos reuniones: la #4 Orange County Central Senior Center y la #5 Hargraves Community Center, para hablar sobre la salud en el Condado de Orange. Si desea asistir a una de las OTRAS reuniones y necesita ayuda con el idioma o tiene preguntas, por favor llame al 919-644-3350 para que podamos hacer arreglos para proveer interpretación.

Fechas de los Foros

1 Faith Tabernacle Oasis of Love

Fecha: Martes, 16 de Agosto del 2011
Hora: 6:00 p.m. - 8:00 p.m.
Dirección: 8005 Rogers Rd. • Chapel Hill, NC 27516

2 Schley Grange Hall

Fecha: Martes, 23 de Agosto del 2011
Hora: 6:00 p.m.- 8:00 p.m.
Dirección: 3416 Schley Rd. • Hillsborough, NC 27278

3 Efland-Cheeks Community Center

Fecha: Martes, 30 de Agosto del 2011
Hora: 7:00 p.m. - 9:00 p.m.
Dirección: 117 Richmond Rd. • Efland, NC 27302

4 Orange County Central Senior Center*

Fecha: Jueves, 1ro de Septiembre del 2011
Hora: 6:30 p.m. - 8:30 p.m.
Dirección: 103 Meadowland Dr. • Hillsborough, NC 27278

5 Hargraves Community Center*

Fecha: Martes, 13 de Septiembre del 2011
Hora: 7:00 - 9:00 p.m.
Dirección: 216 N. Roberson St. • Chapel Hill, NC 27516

¡HABRÁ CENA GRATIS!

Healthy Carolinians of Orange County

Orange County Health Department NCPH North Carolina Public Health

Para más información, envie correo electrónico a hcoc@co.orange.nc.us o llame al 919-968-2022 extensión 294

Appendix M. Top 10 Forum Discussion Topics and Definitions – English and Spanish

Top 10 Issues in Orange County

Access to Health Care/Insurance includes the **availability** of health care services; **affordability** of services and **health insurance**; ability to navigate and **understand the health system**; **physical access** to services (including transportation and disability access); and **information** about health care.

Cancer continued to be the **leading cause of death** in Orange County in 2010 and has been ranked as #1 in 9 of the past 10 years. It is estimated that nearly 80% of cancers are due to factors that can be **prevented**: **tobacco** use, poor **nutrition**, lack of **physical activity**, exposure to **radiation,** and other **environmental factors**. Many cancers are highly treatable with **advanced screening**.

Built Environment includes human-made structures such as housing, recreational facilities, **sidewalks**, **streets**, businesses, schools, **parks**, playgrounds and, more broadly, **land use** patterns. The built environment is important because it **impacts both physical** and **mental health.**

Chronic Disease, Exercise and Nutrition Chronic disease refers to diseases that are **long-lasting** in nature. Now that communicable diseases are well controlled, chronic disease is one of the biggest causes of poor health. Physical **activity** and **nutrition** significantly contribute to good **physical** and **mental health**. Regular physical activity and good nutrition can help prevent **cancer**, Type II **diabetes**, **heart disease, stroke**, and **respiratory ailments**, and can help one maintain a **healthy body weight**.

Environmental Health includes **air quality**; drinking, and ground **water quality**; food safety and protection; sewer systems; solid waste management, and **lead hazards**.

Top 10 Issues in Orange County

Injury is the chief cause of death and disability for people under age 44 and may be **unintentional** like those resulting from motor vehicle **crashes**, **falls**, burns, **poisonings**, drowning, etc.; or violent and **intentional** including **sexual assault**, child **abuse**, **partner violence**, homicide, and **suicide**. Like chronic disease, injuries are preventable. A community may be concerned about one kind of injury, for example, suicide or falls among the elderly, and less concerned about others.

Mental Health refers to a wide range of conditions that affect one's mood, thinking and behavior. Broad classes of mental illness include **mood** disorders (depression, bipolar disorder), **anxiety** disorders, **psychotic** disorders (schizophrenia), **eating** disorders, **personality** disorders, and **addictive** behaviors/**substance abuse** disorders. Many factors contribute to its onset, including genetics, biological factors, life experiences, and brain chemistry, though everyday **stress** (including especially the stress of **poverty** and **violence**) is also a significant and preventable factor.

Oral Health not only includes **tooth** and **gum** health, but other health conditions that may result from poor oral health (gum disease contributes to **heart disease**; **tobacco use** contributes to tooth decay). Issues in oral health include availability of affordable dental **insurance**, access to regular and **preventive care**, and population-specific issues like **children**'s dental health, increasing **refugee population** needs, and **linguistic** barriers.

Substance Abuse refers to the harmful or hazardous use of **alcohol**, **tobacco**, and other **illegal drugs** (**including the misuse and illegal use of prescription drugs**). It is related to underage **drinking**, **impaired driving, mental health** and **addiction** and injury related to alcohol and drugs.

Transportation systems impact **quality of life** and **health**. Expanding active transportation (**walking** and **biking**) options and safety can help **prevent disease**, reduce **motor vehicle-related injury** and deaths, improve **environmental health**, and improve equal **access to resources**. Accessible and affordable transportation is particularly an issue for those with limited incomes, physical or mental **disabilities**, or **living in rural areas**.

Los 10 Temas Prioritarios en el Condado de Orange

El Acceso a la Atención de Salud/Los Seguros incluye la disponibilidad de **seguro de salud** a precio accesible, la **salud** general del individuo, la capacidad de navegar y **entender el sistema de salud**, el acceso y el **transporte a los servicios**, e **información** sobre el cuidado de la salud. El acceso a estos factores puede ser diferente a través de las demografías o las poblaciones específicas.

El Cáncer continuó siendo la **principal causa de muerte** en el condado de Orange en el 2010 y ha sido clasificado como número uno en 9 de los pasados 10 años. Se estima que casi el 80% de los cánceres son debido a factores que pueden prevenirse: uso de **tabaco**, mala **nutrición**, falta de **actividad física** y exposición a la **radiación**. Muchos cánceres son altamente tratables si con **detección temprana**.

El Entorno Construido incluye las estructuras hechas por el hombre como **aceras**, **calles**, **viviendas**, **comercios**, **escuelas**, **parques**, y, más ampliamente, los patrones de uso del suelo (la tierra). Estos patrones determinan tanto las opciones de **transporte** como también impactan aspectos tan variados como el **medio ambiente natural**, la **salud** física y mental (por la disponibilidad de ejercicio y recreación), y las opciones de **trabajo**.

Enfermedad Crónica, Ejercicio y Nutrición: La **actividad** física y la **nutrición** contribuyen significativamente a la **salud física** y **mental**. Hacer actividad física regularmente puede ayudar a prevenir la **diabetes** tipo 2, las **enfermedades del corazón**, los **problemas respiratorios**, la alta **presión sanguínea**, los **derrames cerebrales**, la **ateroesclerosis**, y la **osteoporosis** y puede ayudar a que uno alcance un **peso corporal saludable**. El ejercicio y la nutrición son tanto cuestiones de igual de **acceso** (a parques, etc.) como cuestiones de **hábito** y **educación**.

La Salud Ambiental en el Condado de Orange incluye inquietudes sobre la **calidad del aire**, la **calidad del agua** potable y subterránea, y los **peligros del plomo**. Además de estos factores claves, pueden existir problemas de salud ambiental **locales en su barrio o vecindario**.

Los 10 Temas Prioritarios en el Condado de Orange

La Prevención de Lesiones incluye lesiones **no intencionales** como los **accidentes** automovilísticos, las **caídas**, las **intoxicaciones**, los **ahogamientos**, etc., y las lesiones **intencionales** como la **agresión sexual**, el **maltrato** infantil, la **violencia,** específicamente la **violencia doméstica**, y el **suicidio**.

La Salud Mental se refiere a una amplia gama de condiciones que afectan el estado de ánimo, los pensamientos y el comportamiento. En general las clases de enfermedades mentales incluyen trastornos del **estado de ánimo** (la depresión, el trastorno bipolar), trastornos de **ansiedad**, trastornos **psicóticos** (la esquizofrenia), trastornos de la **alimentación**, trastornos o adaptaciones de la **personalidad**, y conductas **adictivas**/ trastornos de **abuso de sustancia**. Muchos factores contribuyen a su aparición, incluyendo la genética, factores biológicos, las experiencias vividas, y la química del cerebro, aunque el **estrés** cotidiano (incluyendo especialmente el estrés por **pobreza** y **violencia**) es también un factor significativo y prevenible.

La Salud Bucal no sólo incluye la salud de **dientes** y **encías**, pero también se conecta con impactos en la salud general (la enfermedad de la encia contribuye a la **enfermedad del corazón**; el **consumo de tabaco** contribuye a la caries dental). Los problemas de salud bucal incluyen la disponibilidad de **seguro** dental asequible, acceso a **atención** regular y **preventiva, reducción de la financiación** (los fondos) para programas del condado y asuntos específicos de la población como la salud dental de los **niños**, aumento de las necesidades de la **población de refugiados** y las barreras de **lenguaje**.

El Abuso de Substancia incluye **abuso de alcohol** y uso **ilegal de drogas**, pero también incluye **consumo de alcohol por menores de edad**, **accidentes de tránsito** y lesiones relacionadas con el alcohol y las drogas, y las conexiones a las necesidades de **salud mental**.

El Sistema de Transporte impacta la **calidad de vida** y la **salud**. Ampliar las opciones y la seguridad del transporte activo (**caminar** y **andar en bicicleta**) puede **prevenir enfermedades**, reducir y prevenir muertes y **lesiones relacionadas-con-vehículos-a-motor**, mejorar la **salud ambiental**, estimular la **economía** y mejorar la igualdad de **acceso a los recursos**. Transporte accesible y asequible es especialmente un problema en las zonas **rurales**, para las personas con **discapacidad**, las **personas de edad avanzada** y de menores ingresos, las **personas de la clase trabajadora**.

Appendix N. Community Forum Guiding Questions – English and Spanish

2011 Orange County Community Health Assessment

Community Forums: Small Group Discussions

DISCUSSION

Consider the following questions as prompts:

- What does the data tell us? What new insights do you have?
- What doesn't the data tell us and what else might we need to know?
- What areas of need seem to arise?
- How does what you heard match up with your personal experience?
- What in your personal experience was not reflected in the data?

VOTING

1. Everyone should have 5 colored dot stickers

2. Pass the voting chart around to each person in your small group

3. Please represent your personal choices, but also think of choices your friends, family or neighbors may advocate for.

4. You may place **up to 2** stickers in each category; and you **do not have to use all** of your stickers.

5. When you get the chart, please use your stickers to mark your top issues

6. After everyone in your group has placed their stickers, please **count** the number of stickers in each category and **write** the total in the far right column.

7. When your group has finished, please hold your chart to refer to during the short presentations.

8. After you have presented, turn your form into the facilitator, so we can tally the votes for the big group.

Foros de la Comunidad: Debates en Grupo Pequeño

DISCUSIÓN

Considere las preguntas siguientes como una guía:

- ¿Qué nos dicen los datos? ¿Qué nuevas percepciones tiene?
- ¿Qué no nos dicen los datos y qué más necesitaríamos saber?
- ¿Qué áreas de necesidades parecen surgir?
- ¿Cómo se compara lo que usted oyó con su experiencia personal?
- ¿En su experiencia personal, qué no fue reflejado en los datos?

VOTACIÓN

1. Todos deben tener 5 calcomanías (stickers) de círculos de colores

2. Pase la gráfica de votación a cada persona en su pequeño grupo

3. Por favor represente sus elecciones personales, pero también piense en las elecciones que escogerían sus amigos, su familia o sus vecinos.

4. Puede colocar **hasta 2** calcomanías **(stickers)** en cada categoría; y **no tiene que utilizar todas** sus calcomanías.

5. Cuando le pasen la gráfica, por favor use sus calcomanías (stickers) para marcar los asuntos primordiales para usted.

6. Cuando todos en su grupo hayan colocado sus calcomanías (stickers), por favor **cuente** el número de calcomanías (stickers) en cada categoría y **escriba** el total en la columna al extremo derecho.

7. Cuando su grupo haya terminado, por favor use su gráfica como referencia durante las presentaciones cortas.

8. Después de su presentación, déle la gráfica al facilitador, para que podamos recopilar los votos para el grupo grande.

Appendix O. Inventory of Community Resources (Alphabetical)

Preliminary List of Resources in Orange County

(Alphabetical Inventory; NOT exhaustive)

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z

A

Adolescent Parenting Program (APP). Case management services for pregnant and parenting teens who are under 18 years of age and attending school. Supporting adolescent parents to get a better education, acquire job skills, improve parenting abilities, and prevent future pregnancies. Website: www.co.orange.nc.us/socsvcs/adolescent_parenting_program.asp Telephone: 919-245-2850; Address: Orange County Department of Social Services, 113 Mayo Street Hillsborough, NC 27278.

Adolescent Pregnancy Prevention Campaign of North Carolina (APPCNC). Their mission is to support North Carolina communities in preventing adolescent pregnancies through advocacy, collaboration and education. Provides free confidential texting service answering questions about teen sexuality. Website: www.appcnc.org; Telephone: 919-226-1880; Address: 3708 Mayfair St Suite 310 Durham, NC 27707.

American Heart Association/American Stroke Association- Local Branch: American Heart Association of Eastern North Carolina. Their mission is "To build healthier lives, free of cardiovascular diseases and stroke. That single purpose drives all we do. The need for our work is beyond question." The AHA and ASA provide health information, education, and support to survivors of cardiac and stroke events, and their families. Information and training for health professionals is also available through the organizations. Volunteer opportunities and fundraising events are accessible through the website as well. The Stroke Association has a family "warmline" staffed by stoke survivors or family members to provide information and support to callers. The ASA website can also provide information on local support groups. Website: www.heart.org/HEARTORG/ or www.strokeassociation.org; Telephone: AHA (919) 463-8300 (ASA stroke warmline: 1-888-4-STROKE); Address: 3131 RDU Center Drive, Suite 100, Morrisville, NC 27560.

ASPIRE (A Smoking Prevention Interactive Experience). ASPIRE is a web-based multimedia program developed by The University of Texas M. D. Anderson Cancer Center for adolescents. ASPIRE uses animations, videos, and interactive activities to communicate the facts about smoking and tobacco use, as well as, offers skills to adopt a tobacco-free lifestyle. With

broadband internet access, ASPIRE can be used at home, in the classroom, the computer lab, the library or at any public computer. ASPIRE is evidence-based, and is available free of charge. Chapel Hill-Carrboro City Schools and Orange County Schools use ASPIRE for Alternative to Suspension (ATS) when tobacco violations occur on school campuses. For more information on the ATS program contact your school nurse or counselor's office. Website: www.mdanderson.org/aspire; Phone Number: 713-745-3817

B

Be Smart - Family Planning Program. Free reproductive health services for women ages 19-55 and men ages 19-60 who meet certain criteria. Note: Proposed changes for 2011; go to website or contact Orange County Department of Social Services for the most current information. Website: www.ncdhhs.gov/dma/medicaid/familyplanning.htm; Telephone: 245-2445 or 968-2000; Address: Orange County Department of Social Services, Hillsborough and Chapel Hill locations.

BecomAnEx.org. BecomeAnEX.org is a project of National Alliance for Tobacco Cessation to help people quit smoking. The EX Plan is a free, web-based quit smoking program, one that can show smokers a whole new way to think about quitting. It's based on personal experiences from ex-smokers as well as the latest scientific research from the experts at Mayo Clinic. The EX Plan has three main steps: 1) How to Quit Smoking, 2) Quit Smoking, and 3) Staying Quit. Information is available in English and Spanish and mainly targets adults. Once registered, individuals can join the EX online community to get support from others trying to quit and download the EX plan iPhone App. Website: www.becomeanex.org.

C

Care Coordination for Children (CC4C). Care management services for children birth to age five who meet certain risk criteria. Website: www.co.orange.nc.us/health; Telephone: 245-2445; Address: Orange County Health Department, 300 W. Tryon Street, Hillsborough, NC 27278. Email: kgoodhand@co.orange.nc.us.

Carolina Health Net (CHN). A partnership between Piedmont Health Services and the UNC HealthCare System to provide medical homes and care coordination to the uninsured in Alamance, Lee, Chatham, Caswell, and Orange counties. Carolina Health Net Case Manager - Orange County Phone: (919) 428-3250; Spanish Speaking Patients any county: (919) 357-8216; Address: 301 Lloyd St, Carrboro, NC 27510.

Carolina Well. The mission of Carolina Well is to empower cancer survivors and their families to have the highest possible quality of life. Carolina Well offers local educational programming, support services and other resources to assist survivors and their families. Website: www.carolinawell.org; Telephone: (919) 966-9519; Address: 1700 Martin Luther King Jr. Blvd, CB # 7294, Chapel Hill, NC 27599.

Carrboro Community Health Center--Dental. Telephone: 919-933-9087; Address: 301 Lloyd St, Carrboro, NC 27510. The UNC SHAC Dental Clinic is located in the UNC School of Dentistry Tarrson Hall – Ground Floor, 101 Manning Drive, Chapel Hill, NC**.** Email dental.SHAC@gmail.com or call (646) 580-SHAC - (646)580-7422. You can also visit the SHAC web site at http://www.med.unc.edu/shac. The NC Division of Medical Assistance maintains listings of dental practices that accept Medicaid and health choice: For Medicaid list, visit www.ncdhhs.gov/dma/dental/dentalprovlist.pdf . For Health Choice list, visit www.ncdhhs.gov/dma/dental/hcdentalprovlist.pdf

Center for Environmental Health and Susceptibility. The goal of this Center is to bring together a broad group of environmental health researchers to understand the mechanistic basis of chemical toxicity and integrate this knowledge with epidemiology in order to reduce the burden of environmentally related disease. Website: http://cehs.sph.unc.edu/outreach/Lead.html/; Telephone: 919-966-6139; Address: UNC Gillings School of Global Public Health, Chapel Hill, NC.

Centers for Disease Control and Prevention (CDC). Provides funding for state and local health departments and community-based organizations to support HIV prevention services for MSM in a variety of settings, including MSM of color and young transgender persons of color. Website: http://www.cdc.gov/hiv/default.htm; Telephone: 1-800-CDC-INFO or 1-800-232-4636; Address: 1600 Clifton Rd. Atlanta, GA 30333.

Centers for Disease Control and Prevention. CDC 24/7: Saving lives, protecting people, reducing health costs. Website: http://www.cdc.gov/nceh/lead/; Telephone: 800-CDC-INFO (800-232-4636); Address: Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA.

Chapel Hill Eyecare. They offer comprehensive dilated exams and folow-up, diabetic monitoring and assessment, one-on-one education, and lectures to the community; Telephone: (919) 968-4774; Address: (919) 968-4774.

Chapel Hill Foot and Ankle. The office offers foot exams, foot and ankle care (ulcers, palliative care, pain, etc.). Website: www.chapelhillfootandankle.com; Telephone: (919) 960-8858; Address: Address: 1506 E. Franklin St., Suite 104, Chapel Hill, NC 27514.

Chapel Hill Tubal Reversal Center. Exclusively offers tubal ligation reversal services. Website: http://www.tubal-reversal.net/; Telephone: 919 968-4656; Address: 109 Conner Drive Suite 2200, Chapel Hill, NC 27514.

Chapel Hill/Carrboro City Schools. They provide screening services for students including fitness testing and BMI measurement. For employees, they hope to provide screening. They refer students and employees to community providers and monitor individual students with diabetes. Telephone: (919) 967-8211 ext. 245; Address: Lincoln Center, 750 S. Merritt Mill Rd., Chapel Hill, NC 27516.

Chapel Hill-Carrboro YMCA is partnering with the Orange County Department of Environment, Agriculture, Parks and Recreation to offer programming in the Efland Cheeks community. The Y is offering a Efland Cheeks Y Day Camp located at the Efland Cheeks Community Center starting June 27th 2011 until August 19th 2011. Website: http://www.chcymca.org/. Telephone: 919-442-

9622; Address: 980 Martin Luther King Jr. Blvd. Chapel Hill, NC 27514 *Also located at Meadowmont, Chatham County.

Chapel-Hill Carrboro City Schools received a three year Carol M. White Physical Education Program (PEP) Grant to initiate, expand, and improve their physical education programs. This grant helps the school district make strides towards achieving the state-wide physical activity standards. Website: www.chccs.k12.nc.us/. Telephone: (919) 966-1288; Address: Chapel Hill-Carrboro School District- 750 S. Merritt Mill Rd.

Chatham Lactation Services. They are available for all patients of the health center, Carrboro, and Prospect Hill locations. Fees are charged on a sliding fee or may be covered by insurance. All services are provided by a registered and licensed dietitian. A provider referral is required. Website: http://www.chathamlactation.com; Telephone: (919) 423-8943; Address: Carrboro Community Health Center, 301 Lloyd St, Carrboro, NC 27510. Prospect Hill Community Health Center, 320 Main St., Prospect Hill, NC 27314.

Chatham Outreach Alliance (CORA). The organization provides emergency food to those in need throughout Chatham County. to provide emergency food, not permanent assistance, to individuals and families who are thrust into a crisis because of job loss, illness or other circumstance. Clients must be referred to us by a social service agency or local church pastor. Clients can receive a week's worth of groceries up to six times in a 12-month period. These weekly food allotments are selected to provide 21 nutritious meals for each family member. Website: www.corafoodpantry.org; Telephone: (919) 542-5020;
Address: 40 Camp Drive, Pittsboro, NC 27312.

Children's Developmental Services Agency (CDSA). Support and services for children birth to age three who have special needs. Website: www.ncei.org; Telephone: 919-560-5600, x 264; Address: Intake Coordinator in Durham office.

City of Mebane. It is the mission of the Mebane Recreation and Parks Department to provide the best recreation and park services and facilities for its residents in accordance with the existing statutory authority, to preserve open space, provide quality leisure services, maintain park facilities and programs that are available to all area residents and to provide wholesome recreation for the entire family of all races and creeds. Consistent with this purpose and objective, every opportunity shall be afforded, within financial limits, to plan, procure, develop and maintain recreation and park resources and to provide leadership for the wise and satisfactory use of leisure time. The Mebane Recreation and Parks Department exists to provide opportunities for the enjoyment of residents and visitors, particularly those opportunities that people cannot supply for themselves. Website: http://cityofmebane.com/parks.asp; Telephone: (919)563-3629; Address: 106 E. Washington St., Mebane NC 27302.

Cornucopia House Cancer Support Center. The mission of Cornucopia House is to be a place where anyone touched by cancer can find support and resources to live life to the fullest. Website: www.cancersupport4u.org; Telephone: (919) 401-9333; Address: 5517 Durham Chapel Hill Blvd., Suite 1000, Durham, NC 27707.

D

Drinking Water Watch – NC DENR – Division of Water Quality – Public Water Supply. It is the responsibility of the Public Water Supply Section to regulate public water systems within the state under the statutory authority of G.S. 130A Article 10. Public water systems are those which provide piped drinking water to at least 15 connections or 25 or more people 60 or more days per year. Website: http://www.deh.enr.state.nc.us/pws/. Telephone: 919-733-2321; Address: Public Water Supply Section, 1634 Mail Service Center, Raleigh, NC 27699-1634.

Duke Heart Center. The mission of Duke Heart Center is: to unite all individuals and departments involved in the science and delivery of cardiovascular medicine through a collaborative, integrated, and multidisciplinary approach in order to achieve the highest level of excellence in patient care, research, and education. Duke provides cardiac care to help thousands of heart patients lead longer, healthier lives. Their experience in caring for patients with heart disease have established Duke as one of the world's leading programs in cardiac care, research, and education. To find a care provider, get more information or to sign up for educational classes or events visit the Duke Heart Center website listed below. Website: www.dukehealth.org/heart_center; Telephone: 888-478-3853; Address: 30 centers located throughout North Carolina and Danville VA. See website for more information.

Duke Stroke Center. The Duke Stroke Center works to increase stroke awareness, develop faster diagnostic tests, serve stroke patients and people at risk for stroke. The Center's Stroke Support Group provides supportive and educational opportunities for patients, family, members and others who have been affected by a stroke. The Support meets regularly at Durham Regional Hospital. Visit the Duke Stroke Center website for more information on the meeting times and places. Website: www.dukehealth.org/services/stroke/programs/ ; Telephone: (919) 684-0052; Address: The stroke center has three locations in Durham including Duke University Hospital, 2301 Erwin Rd. Durham, NC 27701.

E

Eastowne OB/GYN. A private physician's office, which specializes in reproductive health care including emotionally supportive abortion care. Website: http://www.eastowneobgyn.com/; Telephone: 919-493-8466; Address: 180 Providence Road #3, Chapel Hill, NC.

Eat Smart Move More, North Carolina (ESMM). The mission of ESMM, NC is to reverse the rising tide of obesity and chronic disease among North Carolinians by helping them to eat smart, move more and achiever a healthy weight. Website: www.eatsmartmovemorenc.com; Telephone: 919-707-5224; Eat Smart Move More Coordinator; Address: Lori.Rhew@eatsmartmovemorenc.com.

El Centro Hispano. El Centro Hispano (ECH) is a 501(c)(3) grassroots community based organization dedicated to strengthening the Latino community and improving the quality of life of Latino residents in Durham, Carrboro, Chapel Hill and surrounding areas. Website:

http://www.elcentronc.org/; Carrboro Telephone: 919-945-0132 /Address: 104 Highway 54 Unit FFF, Carrboro, NC

El Futuro, Inc. Non-profit Latino mental health and substance abuse treatment center for underserved Spanish-speaking individuals and families. Website: http://www.elfuturo-nc.org; Carrboro Telephone: 919-338-1939; Address: 110 W. Main Street, Suite 2H, Carrboro, NC

Emergency Ride Home, GoTriangle. GoTriangle provides a voucher for a taxicab or rental car to commuters who live or work in Durham, Orange or Wake counties. Each participant can take up to six trips per year. When indivduals join Emergency Ride Home through ShareTheRideNC, free ride vouchers can be printed directly from the website! Website: http://www.gotriangle.org/go-info/erh; Telephone: (919) 485-RIDE (7433); Address: P.O. Box 13787, Research Triangle Park, NC 27709.

Eurosport Soccer Center. A new soccer complex opened up in Efland, western Orange County on August 28, 2009. They celebrated its opening of the Eurosport Soccer Center, located specifically at 4701 West Ten Road, Efland. The center contains five full size fields, a smaller youth field, a shade shelter and a ½ mile perimeter-walking track. In addition, there is a concession building with restrooms, office space, equipment storage, first aid room and team room. The US Soccer Foundation provided funding assistance for the project. Website: http://www.co.orange.nc.us/recpartks/West10SoccerCenter_000.asp. Telephone: (919) 245-2660; Address: 4701 W. Ten Rd, Efland NC, 27243.

EZ Transit, Chapel Hill Transit. CHT's paratransit (EZ Rider) service provides origin-to-destination transportation to paratransit certified (eligible) individuals who are unable to use the accessible fixed route system due to their disability in conjunction with the Americans with Disabilities Act (ADA) of 1990. This door-to-door service connects riders with the places they need to go to most within an area determined by ADA standards. Website: http://www.ci.chapel-hill.nc.us/index.aspx?page=1550; Telephone: (919) 969-5544; Address: 6900 Millhouse Road, Chapel Hill, NC. 27516.

F

Family Planning Service Providers, including but not limited to Website: UNC-Hospital www.uncobgyn.org or www.mombaby.org; Telephone: 843-4051 or 966-2131; Piedmont Health Services www.piedmonthealth.org; Telephone : 942-8741; Orange County Health Department www.co.orange.nc.us/health; Telephone: 732-8181 or 968-2022; Planned Parenthood www.plannedparenthood.org; Telephone: 942-7762.

Food Bank of Central & Eastern NC at Durham. The mission of the Food Bank of Central & Eastern North Carolina is to harness and supply resources so that no one goes hungry in central and eastern North Carolina. Website: http://www.foodbankcenc.org/; Telephone: (919) 956-2513; Address: 3808 Tarheel Drive, Raleigh, NC 27609.

Freedom House Recovery Center. Freedom House is a non-profit organization that provides residential crisis services, including substance abuse detoxification, and mental health crisis

services, outpatient substance abuse and mental health services, community support, transitional living, and extended care. Website: http://www.rtpnet.org/freedom/# ; Telephone: (919) 942-2803, Address: 104 New Stateside Drive, Chapel Hill, North Carolina 27516

G

GoTriangle. GoTriangle is a partnership of public transportation agencies, and organizations funded to promote commuter benefits in the Triangle region of North Carolina. They offer services that provide information on public transportation, ridesharing, bicycling, and teleworking services, incentives, and resources. GoTriangle partners work together to provide viable commuting options that enhance the quality of life in the region and improve accessibility to the communities' assets while reducing roadway congestion, air pollution, and oil consumption. Website: http://www.gotriangle.org; Telephone: (919) 485-RIDE (7433); Address: P.O. Box 13787, Research Triangle Park, NC 27709.

H

H2Orange. H2Orange is a multi-departmental initiative to provide, share, and discuss information on water resources in Orange County including reservoir levels, surface water data, drought information (historic/current), water conservation strategies, stormwater, erosion control, and climate information. H_2Orange takes a lead role in coordinating drought response among County departments, and in reviewing data and information for regional water resource programs and projects. Website: http://www.co.orange.nc.us/ercd/h2orange/index.asp/; Telephone: 919-245-2513; Address: 306-A Revere Rd, Hillsborough, NC 27278.

Health Literacy Universal Precautions Toolkit (NC Program on Health Literacy). In April 2010, the Program prepared the Health Literacy Universal Precautions Toolkit for the Agency for Healthcare Research and Quality. This comprehensive toolkit provides instructional guidelines to health care practices on forming an internal health literacy team to assess and evaluate needs and raise staff awareness of health literacy issues. The toolkit also provides instruction on how to improve written provider to patient communication through such measures as designing easy-to-read educational materials and using those educational materials to reinforce specific health behavior messages. In addition, the toolkit explains how to improve spoken communication using basic skills such as making eye contact, speaking slowly, and repetition of key points. More in-depth methods including the Teach-Back Method, Telephone Follow-up, and the Medication Review are also explained in detail. The toolkit offers links to various examples, assessments, and online health literacy resources (e.g. videos, presentations, and web sites). Website: http://nchealthliteracy.org/toolkit/; Telephone: 919-843-8873; Address: 725 Martin Luther King Jr. Blvd, CB#7590, Chapel Hill, NC 27515-7590.

Healthy Carolinians of Orange County received an Eat Smart Move More NC community grant for $ 15,420 to be used from 2010-2012 to fund the Pr**eparing Lifelong Active Youth Program (PLAY) to Move More** program. This program is targeted at middle-school children enrolled in Orange County after-school programs with the intent to increase physical activity among three Orange County middle-schools. Collegiate athletes support children enrolled in the program by

visiting twice a month and encouraging them to be more active and healthier. Website: http://www.co.orange.nc.us/healhtycarolinians/index.asp. Telephone: (919) 245-2400; Address: 300 West Tryon ST, PO Box 8181 Hillsborough, NC 27278.

Healthy Kids Campaign-Orange County Partnership for Young Children. The Orange County Partnership for Young Children initiated the Healthy Kids Campaign in 2007 to collaboratively and comprehensively address the issue of childhood obesity. The campaign goal was to establish innovative and research-based programs designed to increase healthy eating and physical activity in young children and families in Orange County. Resulting projects have included the Move It! program which provided $12,593 in scholarships to 62 children during fiscal year 2008-2009 to Carrboro and Orange County recreation and parks departments, the YMCA and Sportsplex to promote physical activity programs for children ages 5 and under. Website: www.orangesmartstart.org; Telephone: 919-967-9091; Address: 120 Providence Rd. Suite 101, Chapel Hill, NC 27514.

I

Inter-Faith Food Council. The Inter-Faith Council for Social Service meets basic needs and helps individuals and families achieve their goals. IFC provides shelter, food, direct services, advocacy and information to people in need. Website: http://www.ifcweb.org/mission.html; Telephone: (919) 920-6380; Address: Orange and Chatham Counties.

Intergovernmental Park Work Group (IGPWG) was established in 2000 to promote work on joint siting, design, and management of school and park sites across jurisdictions. The IGPWG helps to build a strong parks and recreation program within Orange County by forming partnerships inter-jurisdictionally and otherwise with groups such as OWASA and UNC. On February 10, 2010, the IGPWG proposed to link the NC Mountains-to-Sea trail (MST) with three pre-existing trails found within Orange County including, the Bolin and Morgan Creek greenways in Carrboro. The MST trail started in 1973 contains over 1,000 miles and traverses NC. Website: http://www.ncparks.gov/About/trails_mst.php; Telephone: (919) 733-4181; Address: NC Division of Parks and Recreation- 1615 MSC Raleigh NC

J

K

L

Loaves & Fishes Christian Food Ministry, Inc. Loaves & Fishes is a food ministry that provides groceries to food insecure families in Alamance and surrounding counties. Website:

www.loavesandfishes.us; Telephone: (336) 570-4668; Address: P.O. Box 1573, Burlington, NC 27216.

Looking for Adoption in North Carolina. Online assistance and resource information for unplanned pregnancies. Website: http://www.birthmother.com/first-mother/unplanned-pregnancy.html

M

March of Dimes. Includes risks of smoking and benefits of quitting. Explains the effects of secondhand and thirdhand smoke exposure. Offers tips for quitting. Website: http://www.marchofdimes.com/Pregnancy/alcohol_smoking.html; Telephone: 919-781-2481 North Carolina Chapter.

Minute to Ask. The Minute to Ask website was developed HWTF and provides useful, easy and quick-to-follow strategies when asking and treating patients with tobacco dependence. This website targets health care providers (e.g. - doctors, nurses, dentists, etc.) who are instrumental in helping patients quit in a tailored way. Website: www.minutetoask.com .

Move It! Program, a part of the Healthy Kids Campaign, provided 50 families scholarships for their children to partake in physical activity programs. Prior, 76% of the children had never participated in local physical activity programs. Website: http://www.orangesmartstart.org. Telephone: (919) 967-9091; Address: The Orange County Partnership for Young Children 120 Providence Rd. Suite 101 Chapel Hill, NC 27514.

MyLastDip.com. MyLastDip offers a family of unique research-tested, self-help programs designed specifically to help chewing tobacco users quit for good. Developed by researchers with over 40 years' experience in helping chewers quit tobacco, these web-based programs have been funded by research grants from the National Cancer Institute (US National Institutes of Health). MyLastDip programs are free to use. Website: http://mylastdip.com/ ; Phone Number: 1-866-333-4061; Address: Oregon Research Institute, 1715 Franklin Blvd, Eugene, OR 97403.

N

NC Children's Environmental Health Branch: The North Carolina Childhood Lead Poisoning Prevention Program (CLPPP) coordinates clinical and environmental services aimed at eliminating childhood lead poisoning. NC CLPPP also provides technical assistance, training and oversight for local inspectors to assure healthy and safe conditions. Among the program's other activities are early identification, surveillance, abatement enforcement, monitoring inspections and risk assessments. Website: www.deh.enr.state.nc.us/ehs/Children_Health/Lead/lead.html/; Telephone: 1-888-774-0071; Address: 1632 Mail Service Center | Raleigh, NC 27699-1632.

NC Oral Health Section. They may identify children during dental screening that have obvious problems. They participate in health fairs and classroom education for school age children. Telephone: (919) 968-2033; Address: 200 N. Greensboro St., Carr Mill Mall, Suite D-15.

NC Prevention Partners. Prevention Rx provides science-based tools and trainings for healthcare professionals to ensure that nutrition, physical activity, and quitting tobacco are systematically addressed in patient care. Prevention Rx brings nutrition, physical activity, and quitting tobacco use into patient care by establishing healthcare prevention systems. NC Prevention Partners offers Prevention Rx workshops throughout North Carolina to healthcare professionals working in physicians' offices, hospitals, health departments, and community health centers. Participant resources featuring brief screening and counseling tools entitled the Starting the Conversation series and an on-line referral database. Additional guidance is provided for how to modify patient history forms, document prevention encounters, file for reimbursement, and report progress. Website: www.preventionpartners.org; Telephone: (919) 969-7022; Address: 88 VilCom Circle, Suite 110, Chapel Hill, NC 27514.

NAP SACC: Nutrition and Physical Activity Self-Assessment for Child Care. NAP SACC was developed at the UNC Center for Health Promotion and Disease Prevention. It consists of a self-rating scale measuring nutrition and physical activity practices in child care centers. Centers choose areas for focus and improvement to reduce childhood obesity by improving nutrition and increasing physical activity. The project has been implemented in Orange County since 2007 sponsored by the Orange County Partnership for Young Children and conducted by the Child Care Health Consultant employed by Orange County Health Department. Since 2007, 16 child care centers in Orange County have completed the self-assessment and received subsequent services that include training and education for center staff and parents, as well as working towards self-selected goals for improvement in both nutrition and physical activity at each participating center. Over 1,000 children in Orange County have been reached by this program. Website: www.napsacc.org; Telephone: 919 966 8648; Address: Center for Health Promotion and Disease Prevention, 1700 MLK BLVD CB#7426, Chapel Hill, NC 27514-7426.

National Campaign to Prevent Teen and Unplanned Pregnancies. Works with and produces material for a variety of audiences (see "Special Focus" on website). Website: http://www.thenationalcampaign.org

National Fatherhood Initiative (NFI). NFI works to improve the well-being of children by increasing the proportion of children growing up with involved, responsible, and committed fathers. They accomplish this by educating all Americans, equipping fathers with skill-building resources, and engaging all sectors of society. Website: http://www.fatherhood.org/; Telephone: (301) 948-0599; Address: 20410 Observation Drive, Suite 107, Germantown, Maryland 20876

National Partnership for Smoke Free Families. A national program to discover the best way to help pregnant smokers to quit. Their website includes links to resources for both patients and providers such as culturally diverse patient education materials, presentations, and publications. Website: http://smokefreefamilies.tobacco-cessation.org/.

National Preconception Curriculum and Resources Guide for Clinicians - Before, Between and Beyond Pregnancy. Descriptions of state plans and programs for preconception and inter-conception care. Website: www.beforeandbeyond.org.

National Women's Health Information Center. The National Women's Health Information Center (NWHIC) is a part of the Office on Women's Health. NWHIC creates and sponsors innovative programs that focus on the health of women and girls, including information on heart health. The NWHIC also educates physicians, dentists, researchers, therapists, nurses and other health professionals. Their publications, websites (womenshealth.gov and girlshealth.gov), and special programs and events are designed to educate and motivate people to live healthier lives through trustworthy, accurate health information. Website: www.womenshealth.gov/faq/heartdisease.cfm; Telephone: 800-994-9662; Address: US Department of Health and Human Services.

NC Art Therapy Institute. The Art Therapy Institute offers individual and group art therapy services to children, adolescents, adults, and families. Burma Art Therapy projects include: school-based mental health services, clinic-based counseling, and a refugee women's support group, all funded through grants. Website: http://www.ncati.org/burma.html; Telephone: 919-225-5124; Address: 762 Ninth St. #631, Durham

NC Department of Environment and Natural Resources – Division of Air Quality. The Division of Air Quality (DAQ) works with the state's citizens to protect and improve outdoor, or ambient, air quality in North Carolina for the health and benefit of all. To carry out this mission, the DAQ has programs for monitoring air quality, permitting and inspecting air emissions sources, developing plans for improving air quality, and educating and informing the public about air quality issues. Website: The Home Page of DENR – DAQ http://daq.state.nc.us/monitor/ An overview of the Ambient Air Quality Monitoring Program in NC http://daq.state.nc.us/monitor/monitoring_overview_05082007.pdf/. Air Quality Indicator cautionary health statements http://daq.state.nc.us/monitor/aqi/codeChart.shtml#orange_particulate_matter%282.5%29; Telephone: (919) 733-3340; Address: 1641 Mail Service Center - Raleigh, NC 27699-1641.

NC Division of Public Health - Healthy NC 2020. The Division of Public Health plays a vital role in community health, disease prevention, health services and health promotion programs collaborating with local health departments, hospitals, community health centers, practitioners, community agencies and organizations throughout the state and nation. Website: Healthy NC 2020 – A Better State of Health http://publichealth.nc.gov/hnc2020/docs/HNC2020-FINAL-March-revised.pdf/. Telephone: 919-733-4534; Address: 2001 Mail Service Center, Raleigh, NC 27699-2001

NC Healthy Start Foundation. Private, nonprofit organization dedicated to reducing infant death and illness and to improving the health of women and young children in NC. Site has information for professionals and for the public (English and Spanish). Website: www.nchhealthystart.org; Telephone: 919-828-1819.

NC Healthy Start. A nationally recognized private, nonprofit organization dedicated to reducing infant death and illness and to improving the health of women and young children in North Carolina. Their website presents information on HIV and AIDS including three videos of North Carolina women living with the disease. Website: http://www.nchealthystart.org/public/beforepreg/webisodes_hiv.htm; Telephone: (919) 828-1819 voice, Address: 1300 St. Mary's Street, Suite 204 Raleigh, NC 27605.

NC MedAssist. NC MedAssist's mission is to assist low-income, uninsured North Carolina residents by operating a licensed pharmacy that provides free medication, health care advocacy, and related educational services. Website: www.medassist.org; Telephone: (704) 536-1790; Fax (704) 536-9865; Address: 601 E. 5th St., Suite 350, Charlotte, NC 28202.

NC Tobacco Prevention and Control Branch. The North Carolina Tobacco Prevention and Control Branch works to improve the health of North Carolina residents by promoting smoke-free environments and tobacco-free lifestyles. Their goal is to build capacity of diverse organizations and communities to implement and carry out effective, culturally appropriate strategies to reduce deaths and health problems due to tobacco use and secondhand smoke. A comprehensive list of additional tobacco cessation resources and materials for health professionals not already listed above can be found on the TPCB's website.Website: www.tobaccopreventionandcontrol.ncdhhs.gov/about/resources.htm; Telephone: 919-707-5400; Address: NC Tobacco Prevention and Control Branch; 1932 Mail Service Center, Raleigh, North Carolina 27699-1932.

North Carolina Center for Reproductive Medicine. Established in 1992 to provide advanced reproductive techniques to couples who dream of having their own child. There are offices throughout the state including Cary, Raleigh, and Greensboro. Website: http://www.nccrm.com/Home.html; Telephone: 800-933-7202 - Toll Free 919-233-1680; Address: Various offices.

North Carolina Health Literacy Council. The North Carolina Health Literacy Council is a component of the Guilford County Health Literacy Forum, which is a coalition of community agencies who identify health literacy needs and develop plans to address those needs. The Council's objectives are in line with the proposed objectives of the NC Health Literacy Center of Excellence and include increasing the providers' ability to educate patients with low literacy levels, conducting research to identify best practices, and implementing a statewide campaign to increase awareness of health literacy. The University of North Carolina at Greensboro's Center for Youth, Family, and Community Partnerships program sponsors the Council. Website: http://nchealthliteracy.uncg.edu/; Telephone: 336-217-9737; Address: 330 S. Greene Street, Suite 200, PO Box 26170, Greensboro, NC 27402-6170.

North Carolina Institute of Medicine. The North Carolina Institute of Medicine (NCIOM) has spearheaded key initiatives to improve health literacy over the past five years beginning with the NCIOM Health Literacy Task Force. In 2006, NCIOM convened a task force to study the problem of health literacy in the state. The Task Force put forth recommendations for improving health literacy. One of the Task Force's recommendations was to create the North Carolina Health Literacy Center of Excellence to educate health professionals and identify best practices for developing and disseminating health communication messages within the state. According to the Task Force's 2010 report update, this recommendation was partially implemented due to funding restraints. The update recommends that public health professionals use the North Carolina Health Literacy Council and North Carolina Program on Health Literacy as alternatives. Website: www.nciom.org; Telephone: 919-401-6599; Address: Keystone Office Park 630 Davis Dr., Suite 100 Morrisville, NC 27560.

North Carolina Program on Health Literacy. The North Carolina Program on Health Literacy is housed within the University of North Carolina at Chapel Hill's Cecil G. Sheps Center for Health

Services Research. According to its web site, the program assists health organizations with improving health literacy through continuing medical education; material development and evaluation; grant writing assistance for research projects; and quality improvement. Website: http://www.nchealthliteracy.org/; Tele: 919-843-8873; Address: 725 Martin Luther King Jr. Blvd, CB#7590, Chapel Hill, NC 27515-7590.

O

Office of Disease Prevention and Health Promotion - Healthy People.gov. Healthy People provides science-based, 10-year national objectives for improving the health of all Americans. Website: http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=12/; Telephone: 800-336-4797; Address: Office of Disease Prevention and Health Promotion, P.O. Box 1133, Washington, DC 20013-1133.

Orange County Department of Environment, Agriculture, Parks and Recreation (DEAPR) provides online, interactive documents of up-to-date park maps free of charge for the public. The maps include amenities offered at the parks, such as swimming pools, disc golf facilities, camping sites and /or ice rinks. Website: http://www.co.orange.nc.us/RecParks/index.asp. Telephone: (919) 245-2660; Address: 300 W. Tryon St. Hillsborough, NC 27278.

Orange County Department of Social Services The Orange County Health Department provides protection to vulnerable children and adults, economic support to low-income individuals and families in crisis, and intervention services to at-risk persons residing in Orange County. The agency is the access point for most state and federal human services programs. Website: www.co.orange.nc.us/socsvcs/index.asp); Telephone: (919) 245-2800; Address: 113 Mayo Street, Hillsborough, NC 27278. Website: www.co.orange.nc.us/socsvcs/index.asp); Telephone: (919) 968-2000; Address: 2501 Homestead Road, Chapel Hill, NC 27516.

Orange County Department on Aging offers Diabetes Management Classes co-sponsored with the Orange County Health Department and bi-annual glucose screening. Website: www.co.orange.nc.us; Telephone: (919) 968-2070; Address: 2551 Homestead Rd., Chapel Hill, NC 27516.

Orange County Health Department – Dental Health Service is to "Prevent and Reduce the Incidence of Tooth Decay, Periodontal Disease, Loss of Teeth, Pain, Infection, and Oral Cancer through Dental Assessments/Screenings, Dental Health Education, Sealant Promotion, and Treatment for those Residents of Orange County with Low Income or Inadequate Access to Dental Care. Website:

Orange County Health Department – Diabetes Self-Management Education (DSME) Program is an Orange County Health Department service for adult residents with a diagnosis of type 2 diabetes. The Program is designed to serve those who have historically lacked access to such care including minority populations, the under/uninsured, those living in rural areas, and those lacking transportation to classes. Classes are offered at both Health Department locations in Hillsborough and Chapel Hill. Website: http://www.orangecountync.gov/health/dsme.asp;

Telephone: (919)-245-2381; Address: Hillsborough: 300 West Tryon Street., PO Box 8181, Hillsborough, NC 27279; 2501 Homestead Road, Chapel Hill, NC 27514.

Orange County Health Department - Home Visiting Service. Pregnancy Care Management (PCM) services are provided for pregnant Medicaid recipients who are determined to be at risk for poor birth outcomes. CC4C services are provided for all Medicaid children birth to five years of age who are determined to be high-risk and qualify for services. Website: www.co.orange.nc.us/health; Telephone: (919) 245-2442; Fax referrals (919) 644-3312; Address: 300 West Tryon St., Hillsborough, NC 27278.

Orange County Health Department—HIV Testing. Local health departments are responsible for the direct delivery of free STI and HIV prevention and control services. No cost HIV testing and counseling services are available. Hillsborough: Website: http://www.co.orange.nc.us/health/HIVAIDS.asp; Telephone: 919-245-2400; Address: 300 West Tryon St. Hillsborough NC 27278. Chapel Hill: Telephone: 919-968-2022; Address: 2501 Homestead Rd. Chapel Hill NC 27514.

Orange County Health Department—Medical Clinic The Orange County Health Department, which has clinic sites in Hillsborough and Chapel Hill, served over 4000 clients in clinic with over 10,000 encounters in 2009. The health department provides Family Planning, Maternal Health, Child and Adolescent Health, Adult Health, Primary Care (Sick Care), Sexually Transmitted Disease, Communicable Disease Investigation, Immunizations, Influenza Vaccinations, Refugee Health Services, Rabies Exposure Counseling and Vaccination and Nutrition Services. Some services are free, some are flat fee and some are sliding scale according to income and family size. www.orangecountync.gov/health; Telephone: (919) 245-2400; Address: Whitted Human Services Center, 300 W. Tryon St., Hillsborough, NC 27278. Website: www.orangecountync.gov/health; Telephone: (919) 968-2022, opt. 0; Address: Southern Human Services Center, 2501 Homestead Rd, Chapel Hill, NC.

Orange County Health Department- Medical Nutrition Therapy Program. Medical Nutrition Therapy (or MNT) is available to all Orange County residents and Orange County Government employees (and their immediate family members). Fees are charged on a sliding scale and may be covered by insurance. All services are provided by a registered and licensed dietitian. Services are provided in the Chapel Hill and Hillsborough clinics. Website: http://www.co.orange.nc.us/health/Nutrition.asp; Telephone: 919-968-2022, ext 309 (Chapel Hill); 919-245-2380 (Hillsborough); Address: 2501 Homestead Road, Chapel Hill, NC 27514. (919) 968-2022 (Clinic); 300 West Tryon Street., PO Box 8181, Hillsborough, NC 27278 (919) 245-2400 (Clinic).

Orange County Health Department - Pregnancy Care Management (PCM) / Pregnancy Medical Home (PMH). Care management services for women who qualify for Medicaid and meet certain risk criteria. Services available during pregnancy through two months postpartum. Website: www.co.orange.nc.us/health; Telephone: 245-2445; Address: Orange County Health Department, 300 W. Tryon Street, Hillsborough, NC 27278.

Orange County Literacy Council/UNC Student National Pharmaceutical Association. Members of the Student National Pharmaceutical Association (SNPhA) have provided 1-2 hour presentations to Orange County Literacy Council (OCLC) students around such topics as over the

county medications, cold/flu season, nutrition, and reading medication labels. Students conducted 5 workshops during the 2009-2010 and 5 workshops during the 2010-2011 school year. Most of the presentations were conducted at OCLC in their various locations. The program would be interested in expanding this opportunity if resources allow. Website: http://studentorgs.unc.edu/snpha/; Telephone: See Website for Leadership e-mail addresses; Address: Campus Organization.

Orange County Parks and Recreation. The Orange County Department of Environment, Agriculture, Parks & Recreation (DEAPR) works to conserve and manage the natural and cultural resources of Orange County. Included within this "green infrastructure" are natural areas and nature preserves, open spaces, parks and recreation facilities, water resources, and agricultural and cultural resource lands. Consistent with the strong environmental ethic of the community, DEAPR also strives to bring environmental education, recreation, athletics and other programs to residents of the County - with a goal of promoting cultural, physical and natural stewardship and well-being. Website: http://www.co.orange.nc.us/deapr/index.asp; Telephone: (919)245-2660; Address: 300 W. Tryon St., Hillsborough NC 27278.

Orange County Planning Department in conjunction with the **NC Department of Transportation Division of Bicycle and Pedestrian Transportation**, printed 20,000 copies of a colorful brochure at .60$ each, highlighting bike routes and bike tourism in Orange County. Towns within Orange County are being responsive to the needs of the very active Bike community within Orange County. Website: www.ncdot.org/transit/bicycle/; Telephone: (919)707-2600; Address: Division of Bicycle and Pedestrian Transportation-1 S. Wilmington St. Raleigh, NC 27601.

Orange County Public Transportation. Orange County Public Transportation, operating as the Orange Bus, provides a variety of public transportation services to the citizens of rural Orange County (excluding Chapel Hill-Carrboro city limits). Transit options include public bus routes, pick-up and drop-off for people with disabilities and older adults, and transportation to senior centers. The Orange Bus provides safe and efficient transportation to locations within and outside Orange County. Website: http://www.co.orange.nc.us/transportation/index.asp; Telephone: (919) 245-2008; Address: 131 West Margaret Lane, PO Box 8181, Hillsborough, NC 27278.

Orange County Recreation Map and Parks Locator. Orange County is actively promoting walking and biking, as well as the use of hiking trails, through the expansion of parks, more sidewalks and bike lanes, and free bus usage in Chapel Hill and Carrboro. The Orange County Government and the Healthy Carolinians of Orange County partnership created a comprehensive Recreation Map, which serves as a guide for all the public recreation areas in Orange County. The map is available at all Parks and Recreation Centers, the public libraries, Chamber of Commerce and the Health Department. A Parks and Recreation Facility locator map has also been developed for facilitate easy access by the public. This locator map includes Parks and Recreational facilities of Orange County, Carrboro, Chapel Hill, Hillsborough, and Mebane. It can be accessed at http://server2.co.orange.nc.us/ParkLocator; and information on parks and facilities can be searched by amenities available at each location.

Orange County Youth Tobacco Use Prevention Program. Tobacco. Reality. Unfiltered. (TRU) is a state-wide movement for teens and by teens to stay tobacco-free. TRU Teens are peer educators who are empowered to decide what strategies and activities they want to use to take

a stand against tobacco use. TRU Peer Educators are well trained on facts about tobacco, media literacy, advocacy, and merchant education. Since 2003, Orange County TRU Teens have been making a difference in their schools and community by leading many tobacco prevention activities and advocacy efforts. Orange County TRU recruits peer educators from the five local high schools. Since 2007 the Orange County TRU program has expanded from two community-based groups (Chapel Hill and Hillsborough) to five school-based clubs each with a TRU Club Advisor. However, due to state budget cuts 2011-2012 will be the last year of funding for teen tobacco prevention programs across the state. During this last year, Orange County will continue to build sustainability in the schools and work on tobacco control efforts in the community that will have positive impacts on Orange County youth beyond the next year. Website: www.co.orange.nc.us/health/TRUindex.asp (Orange County TRU webpage); www.realityunfiltered.com (Statewide TRU website); Telephone: 919-245-2424; Address: Orange County Health Department, 300 West Tryon Street, Hillsborough, NC 27278.

Orange Water and Sewer Authority (OWASA) is a public, non-profit agency that provides water, sewer (wastewater) and reclaimed water services to the Carrboro-Chapel Hill community including the University of North Carolina at Chapel Hill located in southern Orange County, North Carolina. Website: OWASA Drinking Water Site http://www.owasa.org/whatwedo/drinking-water.aspx/; OWASA 2009 Water Quality Report Card http://www.owasa.org/client_resources/whatwedo/2009WaterReportCard.pdf/; Telephone: 919-537-4343; Address: 400 Jones Ferry Rd, Carrboro, NC 27510.

P

Period of Purple Crying® Program. Program to help parents understand the time in their baby's life when there is a period of increased crying, thus reducing parental frustration and potential harm to infants. In Orange County, parents may obtain information prenatally, at birth and/or in follow-up contacts with providers, care managers, day care staff, etc. Website: www.purplecrying.info or www.dontshake.org; Telephone: 801-447-9360; Address: Orange County Health Department, 300 W. Tryon Street, Hillsborough, NC 27278. Email: kgoodhand@co.orange.nc.us.

Piedmont Health Services, Medical Nutrition Therapy Program. Medical Nutrition Therapy is available for all patients of the health center, Carrboro, and Prospect Hill location. Fees are charged on a sliding fee or may be covered by insurance. All services are provided by a registered and licensed dietitian. A provider referral is required. Website: http://www.piedmonthealth.org/content/overview-services Telephone: 919-942-8741; 336-562-3311; Address: Carrboro Community Health Center, 301 Lloyd St., Carrboro, NC 27510. Prospect Hill Community Health Center, 320 Main St, Prospect Hill, NC 27314.

Piedmont Health Services. Piedmont Health Services, which is the corporate name for six community health centers located in Alamance, Chatham, Caswell and Orange counties, serves patients from 46 counties and has clinic and dental services located in Carrboro. Piedmont Health Services provides comprehensive Health Care: Medical Services; Dental Care; Pharmacy; Nutrition Counseling; Disease Management; and Health Support. Some services are free, some are flat fee and some are sliding scale according to income and family size. Website:

www.piedmonthealth.org; Telephone: (919) 933-8494; Address: 301 Lloyd St., Carrboro, NC 27510.

Planned Parenthood of Central North Carolina. Provides education programs, health care, and advocacy to help reduce unintended pregnancy and sexually transmitted infections, especially among teens, people with limited incomes, and the uninsured. Services include: birth control consultation and supplies, gynecological exams and PAP tests, in-clinic abortion and abortion pill, emergency contraception, pregnancy testing and options information, testing and treatment for sexually transmitted infections, permanent birth control- no-scalpel vasectomy and essure, and rapid HIV testing. Website: http://www.plannedparenthood.org/centralnc/; Telephone: 919-929-5402; Address: 1765 Dobbins Drive, Chapel Hill, NC 27514

Preventing Obesity by Design. POD is a project of the Natural Learning Initiative (NLI) in the NCSU School of Design, in collaboration with the NC Partnership for Children and BCBSNC. POD was established to develop outdoor learning environments on playgrounds in childcare centers in 10 counties across North Carolina. In 2009 Orange County Partnership for Young Children (OCPYC) was chosen as one of 10 partnerships to implement the program. The Children's Learning Center in Hillsborough was chosen as a model site in 2009 and Chapel Hill Day Care in Southern Village in 2010. Both centers have received a small grant from BCBSNC and design services from NLI as well as technical assistance from Child Care Services Association and OCPYC. The premise of POD is that by improving the outdoor environment children and care takers will be encouraged to spend more time outside, moving more and bringing the educational experience outside. Website: http://www.naturalearning.org/content/projects; Telephone: 919-515-8344/5; Address: College of Design, 200 Pullen Road , NC State University, Raleigh, NC 27695-7701, USA

Project CONNECT. Project CONNECT is part of the Carolina-Shaw Partnership. The purpose of the project is to encourage more involvement in research and help explain why certain groups of people are faced with diseases and other illnesses more than others. Having people of all backgrounds take part in research is one way to help improve health and quality of life. Interested individuals can enroll in a participant registry to be notified about specific, local health studies that meet their needs and interests. Website: www.connect.unc.edu; Telephone: (919) 966-7107; Address: 725 Airport Rd., CB # 7590, Chapel Hill, NC 27599.

Prostate Health Education Network. PHEN's primary mission is to increase prostate health education and awareness among the men at highest risk for prostate cancer in the United States, African Americans. Saving lives through early detection and eliminating the African American prostate cancer disparity is PHEN's education and awareness goal. PHEN's mission also includes efforts to increase the overall support and resources to wage a war on prostate cancer that will eventually lead to a cure for the disease. Local coordinator, Gerri Martin, coordinates support and educational programming for men in Orange and Chatham Counties. Website: www.prostatehealthed.org; Email: Thomas@prostatehealthed.org; Address: Not available.

Q

Quit Now NC! Quit Now NC! was developed by NC Prevention Partners (NCPP) in 2002 and serves as a communication hub and educational tool for healthcare professionals. The Tobacco Cessation Research Library allows you to search for the latest articles to keep informed and to help patients quit using tobacco. NCPP's Quitline Champion Challenge to the NC Tobacco Quitline, is a competition that is open to all NC hospitals to increase QuitlineNC fax referrals. Website: www.quitnownc.org; Telephone: 919-969-7022; Address: NC Prevention Partners, 88 Vilcom Circle, Suite 110, Chapel Hill, NC 27514

QuitlineNC. The NC Tobacco Use Quitline is a convenient, confidential and free phone service available to North Carolinians to help them quit using tobacco. Once callers phone in for quit assistance, a trained quit coach calls them back several times to offer support throughout the quit attempt. The Quitline is available to both youth and adults in many languages from 8 a.m. until 3 a.m., every day. If the tobacco user lets their health care provider know they are ready to quit within 30 days and would like to have a Quit Coach call them they may sign the Fax Referral Form. The provider would then fax the form to the Quitline. With fax referral, all of the Quitline services are available to the tobacco user, and they don't have to make the first call. Since 2007 with funding from the North Carolina Health and Wellness Trust Fund (HWTF), QuitlineNC services expanded to later hours and offered nicotine replacement therapy to college students who called. However, with the abolishment of HWTF in the state budget passed in June 2011, it is likely that these services will be scaled back significantly. Website: www.quitlinenc.com; Telephone: 1-800-QUIT-NOW.

R

S

SHAPE NC. SHAPE is an expansion of POD including the same program partners as POD with the addition of Be Active Kids and NAP SACC. The goal is to develop Model Early Learning Centers across North Carolina that will feature an Outdoor Learning Environment designed by NLI at NCSU, and implement both the NAP SACC and Be Active kids programs. OCPYC was again selected to be one of 8 counties to receive the SHAPE NC grant in 2011 and is currently working with Spanish For Fun Academy in Chapel Hill to redesign their play space to include a large circulating path for riding and pulling toys, walking and running which has been proven to increase physical activity. The design will also add plants and trees to provide shade, greenery and natural spaces, nutrition will be improved through NAP SACC and opportunities for physical activity will increase via the implementation of Be Active kids. Once completed, Spanish for Fun will serve as the model center for Orange County and host trainings and tours for other centers interested in improving their outdoor environments and implementing programs to improve the health of young children where they spend many hours each week. The long range goal of SHAPE is to develop 30 Model Early Learning Centers across the state by the end of 2013. Website: http://www.naturalearning.org/content/projects; Telephone: 919-515-8344/5; Address: College of Design, 200 Pullen Road, NC State University, Raleigh, NC 27695-7701, USA.

Smokefree Women: Pregnancy. Includes information about the risks of smoking during pregnancy and secondhand smoke exposure and the benefits of quitting as well as links to other resources. Individuals can talk to an expert by instant messaging or telephone and/or use their Quit Guide. There are also resources specifically for members of the military and their families. Website: http://women.smokefree.gov/topic-pregnancy.aspx; Telephone: 1-877-44U-QUIT (1-877-448-7848) English / Spanish 8:00am-8:00pm.

Smokefree.gov. The National Cancer Institute's Smokefree.gov is intended to help individuals and those they care about quit smoking. The information and professional assistance available on this website can help to support both immediate and long-term needs of those trying quit smoking and stay quit. Smokefree.gov allows smokers to choose the help that best fits their needs. Individuals can get immediate assistance in the form of: (i) A step-by-step quit smoking guide; (ii) Information about a wide range of topics related to smoking and quitting; (iii) An interactive US map highlighting smoking information in each state; (iv) LiveHelp, National Cancer Institute's instant messaging service; (v) National Cancer Institute's telephone quitline, 1-877-44U-QUIT ; (vi) Local and state telephone quitlines, 1-800-QUIT-NOW; and (vii) Publications to download, print, or order**.** Website: www.smokefree.gov.

Student Health Action Committee (SHAC). This UNC student-run, free clinic operates on some Wednesday nights at the Carrboro Community Health Center served approximately 1,500 clients, about 27 per clinic in 2010. Provides free, basic medical care to residents of Orange, Chatham, and Durham Counties. Website: http://www.med.unc.edu/shac/; Telephone: (919) 942-8741; Address: Carrboro Community Health Center, 301 Lloyd St., Carrboro, NC 27510.

Supplemental Nutrition Assistance Program (SNAP). SNAP is a federal program that provides a monthly allotment of benefits issued via Electronic Benefit Transfer cards (EBT cards) that can be used like debit cards. All eligible individuals and households can receive assistance. Website: http://www.co.orange.nc.us/socsvcs/food_stamps.asp; Telephone: 919-245-2800; 919-968-2000; Address: 113 Mayo Street, Hillsborough, NC 27278; 2501 Homestead Road, Chapel Hill, NC 27516.

T

Text4baby. Free health text messaging service to help pregnant women and new moms get information about caring for their health and the health of their babies during the first year of life (English and Spanish). Website: www.text4baby.org.

Town of Carrboro Recreation & Parks. The Town of Carrboro Recreation and Parks aims to serve the leisure needs of the Town through diverse recreation programs and a system of attractive and safe public parks. Website: http://www.townofcarrboro.org/rp/default.htm; Telephone: (919)918-7364; Address: 100 N. Greensboro St., Carrboro NC 27510.

Town of Chapel Hill Parks & Recreation. Chapel Hill Parks and Recreation aims to provide for every citizen the opportunity to enhance their quality of life. Parks and greenways provide space for families and friends to fellowship, play, walk, bike and relax. They provide sanctuary for animals and preserve plant life, improve water quality and help clean the air. They promote

quality neighborhoods and higher standards of living that lead to enhanced property values. Website: http://www.ci.chapel-hill.nc.us/index.aspx; Telephone: 919-968-2784; Address: 200 Plant Road, Chapel Hill NC 27514.

Triangle Transit. Triangle Transit operates regional bus and shuttle service, paratransit services, ridematching, vanpools, provides commuter resources, and an emergency ride home program for the Raleigh-Durham-Chapel Hill area including Apex, Cary, Chapel Hill, Durham, Garner, Hillsborough, Knightdale, RDU International Airport, Raleigh, the Research Triangle Park, Wendell, Wake Forest and Zebulon. Triangle Transit seeks to improve the region's quality of life by connecting people and places with reliable, safe, and easy-to-use travel choices that reduce congestion and energy use, save money, and promote sustainability, healthier lifestyles, and a more environmentally responsible community. Website: http://www.triangletransit.org; Telephone: (919) 485-RIDE (7433); Address: Triangle Transit, P.O. Box 13787, Research Triangle Park, NC 27709.

U

UNC Center for Latino Health. (CELAH) The Center for Latino Health is a "virtual" clinic that does not have a permanent location within the UNC Health Care system. The clinic uses available medical space to provide health care to Latinos completely in Spanish. Telephone: (919) 966-5800; Clinic Manager - Claudia Rojas Email: Claudia_rojas@med.unc.edu.

UNC Family Medicine Center. They are a full service primary care clinic in the Chapel Hill and surrounding counties. Family Physicians are trained to provide comprehensive health care for children and adults of all ages, including pregnant women. They especially emphasize wellness and prevention. Website: http://www.med.unc.edu/fammed/for-patients/fammed-1/fammed-center; Telephone: (919) 966-2010; Address: 110 Manning Dr., Aycock Bldg., Chapel Hill, NC 27599. (Other lactation service resources can be found at: http://nchealthinfo.org/local_services/search/index.cfm?info=103,0,0,0,&serviceTermCounty=Orange)

UNC Financial Assistance Care Pharmacy. It is the policy of UNC Health Care to provide medically necessary health care to the citizens of North Carolina, regardless of their ability to pay. According to UNC's Financial Assistance web site, "The UNC Pharmacy Assistance Program ensures that North Carolina residents who receive care at UNC Health Care, lack prescription benefits, and have income less than 200 percent of the Federal Poverty Guidelines are able to obtain necessary prescription medications." To qualify, patients pay co-payments of at least $4 per prescription and apply through a Pharmacy Assistance Counselor at the UNC Outpatient Pharmacies. Website: www.unchealthcare.org/site/patienthealthcare/patient/other/financial.htm; Charitable Care Coordinator (919) 966-3425; Service representatives are located in the admitting office in the lobby of NC Memorial Hospital.

UNC Health Care System. UNC Health Care System, which includes NC Memorial Hospital, NC Children's Hospital, NC Women's Hospital, NC Cancer Hospital and NC Neuroscience Hospital

serves the entire state of North Carolina, not just Orange county residents. (http://www.unchealthcare.org/site) The hospital complex is located in Chapel Hill, which is in the southern part of the county. The UNC Hospitals Emergency Department (ED) has a separate Pediatric ED and plans to open a Behavioral Health ED in June, 2011. The hospital's ED had 66,054 total patient visits from July 2009 through June 2010, of which 64% were from other counties. UNC ED visits increased yearly from 2007-2010 and their data shows that many people visit the ED for conditions that may not be true emergencies. In addition, many people use the ED for help with severe mental health conditions and to seek medication. Website: www.unchealthcare.org; Main UNC Hospital Phone: 919-966-4131; For assistance with physician referrals, appointments and health information, please call UNC HealthLink at (919) 966-7890. 8:30 a.m. to 5 p.m., Monday through Friday. Address: 101 Manning Drive, Chapel Hill, NC 27514.

UNC Hospitals – Abortion Clinic. All evaluations and counseling for abortion and post abortion care occur in this clinic. The clinic is primarily a referral clinic from other abortion clinics, or from practicing obstetricians at UNC and the surrounding community. The clinic has been operating for more than 25 years.

UNC Hospitals Cardiac Rehabilitation. They offer cardiac rehabilitation and a bridge to wellness programs. They also do assessment, education, medically supervised exercise, nutrition counseling, smoking cessation, and psychosocial support. Website: www.uncwellness.com; Telephone: (919) 843-2154 or 919-843-2158;
Address: UNC Wellness Center, 100 Sprunt St., Chapel Hill, NC 27517.

UNC Lineberger Comprehensive Cancer Center/NC Cancer Hospital. Provides multidisciplinary programs for most cancers, giving patients the benefit of many medical specialists in one place, often in one visit. Website: www.nccancerhospital.org; Telephone: (919) 966-0000; Address: 101 Manning Drive, Chapel Hill, NC 27514.

UNC Nicotine Dependence Program (NDP) provides leadership for implementing comprehensive tobacco use treatment services and disseminating resources for promoting tobacco free communities. NDP offers services to tobacco users who are UNC Hospital outpatients, inpatients or UNC employees. Located in the University of North Carolina School of Medicine's Department of Family Medicine, NDP carries out its mission through: (i) Treatment services for tobacco dependence; (ii) Training in tobacco use treatment for health care providers ; (iii) Technical assistance related to policy and system change; and (vi) Research to advance tobacco use treatment knowledge and practice. Website: www.ndp.unc.edu. Telephone: 919-843-1521; Address: UNC Nicotine Dependence Program Department of Family Medicine, William B. Aycock Building, 590 Manning Drive, CB#7595,Chapel Hill, NC 27599-7595

UNC Nicotine Dependence Program. The UNC Nicotine Dependence Program Clinic offers a comprehensive treatment plan for anyone interested in quitting smoking or other tobacco use. Cessation sessions are covered by Medicaid, Medicare, and most insurance plans. Those without health insurance can receive services at reduced costs. Website: www.nccancerhospital.org/patientcare; Telephone: Information: (919) 843-1521; Appointments: (919) 966-0211; Address: 590 Manning Drive, Chapel Hill, NC 27599.

UNC Podiatry. They provide acute care and wound management and prevention.
Telephone: (919) 484-1437; Address: 5316 Highgate Dr., Suite 125, Durham, NC 27713.

UNC Reproductive Endocrinology and Infertility. Website: http://www.UNCfertility.org; Telephone: 919-966-5283; Address: 4001 Old Clinic Building, CB 7570, Chapel Hill, NC 27599-7570

UNC School of Dentistry Urgent Care Clinic. Telephone: 919-966-2805; Address: Manning Dr. and Columbia St., Chapel Hill, NC 27599.

UNC School of Medicine - Faculty Development Program in Health Literacy and Aging. The Carolina Geriatric Education Center within the University of North Carolina at Chapel Hill's School of Medicine offers a health literacy continuing education program for select health care providers (clinicians and non-clinicians) through its Faculty Development Program in Health Literacy and Aging. According to the course syllabus, the program's goal is to educate health care professionals about health literacy principles and methods and ultimately improve patient outcomes. This program requires a five-month commitment from participants who are required to complete readings, carryout learning assignments in their practice, and complete Plan, Do, Study, Act (PDSA) quality improvement assessments. Key members of the North Carolina Program on Health Literacy are also planning and faculty members of this program. Website: http://www.med.unc.edu/aging/cgec/faculty/fdhla/welcome.htm; Tele: 919-843-6675; Address: Center for Aging and Health, 260 MacNider Bldg., CB #7550, Chapel Hill, NC 27599.

UNC School of Pharmacy – Med. Management for Older Adults. They work with physicians at UNC Div. of Geriatrics to help optimize diabetes therapy; provide meter training and free meters; and they provide community educational series with Orange County Department on Aging. Website:www.geriatrics.unc.edu; Telephone: (919) 843-2278
Address: CB# 7360, Kerr Hall, Chapel Hill, NC 27599.

UNC Student Health Action Coalition (SHAC). Free HIV Testing and Counseling . Website: http://www.med.unc.edu/shac/; Telephone: 919-843-6841; Address: 301 Lloyd St. Carrboro NC 27510.

UNC Wellness Center at Meadowmont. The center provides extensive resources along with personal and professional guidance designed to help members reach specific health and wellness goals. Offer nutrition education at a standard fee. They provide interactive technology resources to improve membership experience and support personal tracking and ongoing customization of each wellness plan. Health education classes, a demonstration kitchen, nutritional counseling, and massage therapy services all support members in achieving the wellness goals they have set for themselves and their families. They are owned and operated by UNC Hospitals. Website: www.uncwellness.com; Telephone: (919) 966-5500; Address: 100 Sprunt Street, Chapel Hill, NC 27517.

United States Environmental Protection Agency (US EPA). The mission of EPA is to protect human health and the environment. The USEPA recently made recommendations to strengthen the ground level ozone standard by establishing a primary 8-hour standard to a range of 0.060 to 0.070 ppm and a secondary cumulative standard to protect sensitive vegetation and ecosystems. Website: http://www.epa.gov/glo/ ; http://www.epa.gov/air/ozonepollution/reducing.html; Address: Mail Drop C404-03, US EPA, Research Triangle Park, NC 27711

V

Vasectomy Providers are Planned Parenthood of Central North Carolina; Orange County Health Department; and Private Urologists

W

Women, Infants and Children (WIC)/Farmer's Market Program. It is for children up to 5 years of age, infants, pregnant women, breastfeeding women who have had a baby in the past 12 months, and for women who have had a baby in the last 6 months. It provides heathy foods, health care referrals, and other services. Website: http://www.nutritionnc.com/wic/; Telephone: Chapel Hill: (919) 942-8741; Hillsborough: (919) 245-2422; Address: Piedmont Health Services: 301 Lloyd St, Carrboro, NC 27510; Orange County Health Department: 301 W.Tryon St, Hillsborough, NC 27278.

Women's Center - Teen's Climb High Program. Website: www.womenspace.org; Telephone: 968-4610. CHCC Schools - Blue Ribbon Mentor-Advocate Program, www.chccs.k12.nc.us/brma/ Telephone: 968-4610. El Centro Hispano http://www.elcentronc.org; Telephone: 945-0132.

Women's Center. A component of the center is Teens Climb High an empowerment program for middle school girls to help them make positive life choices and avoid teen pregnancy. Website: www.womenspace.org; Telephone: 919-968-4610; Address: 210 Henderson St. Chapel Hill, NC 27514.

X

Y

You Quit Two Quit. Funded by the North Carolina Health and Wellness Trust Fund and implemented by the UNC Center for Maternal and Infant Health. The goal of the You Quit Two Quit project is to ensure that there is a comprehensive system in place to screen and treat pregnant and postpartum women for tobacco use. This project is unique in its focus on new mothers and recidivism prevention. Website: http://www.youquittwoquit.com/; Address: 7090 Mail Services Center, Raleigh, NC 27699-7090. Email: youquittwoquit.nc@healthwellnc.com

Z

JOIN HEALTHY CAROLINIANS OF ORANGE COUNTY

Join more than 125 individuals and 80 organizations partnering with Healthy Carolinians of Orange County to advocate, guide and assist Orange County in planning and implementing health care strategies to promote healthy lifestyles, improve health status and prevent premature death and injury for all residents in the county regardless of age, race, income or educational level. To join, contact the Healthy Carolinians Coordinator at (919) 245-2440 or hcoc@co.orange.nc.us. Membership information is also available online at **www.orangecountync.gov/healthycarolinians**.

Healthy Carolinians of Orange County
300 West Tryon Street
Hillsborough, NC 27278
Phone: (919) 245-2440
E-mail: hcoc@co.orange.nc.us
www.orangecountync.gov/healthycarolinians