

2010 Mecklenburg County Community Health Assessment



*A Profile of Health
Indicators and
Prevention Priorities
for Our Community*

MECKLENBURG
Healthy 
Carolinians
Creating a Healthy Mecklenburg Together.



2010 MECKLENBURG COUNTY COMMUNITY HEALTH ASSESSMENT

Mecklenburg County Health Department
Epidemiology Program
December 2010

10



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A photograph of a woman with dark hair tied back, wearing a white tank top and light blue athletic pants, running on a paved path in a park. The background is filled with lush green trees and foliage, creating a bright and healthy atmosphere.

EXECUTIVE SUMMARY

INTRODUCTION

In the practice of public health, the community is the patient and the health of the community is monitored and evaluated on a regular basis by examining key indicators such as infant mortality, communicable disease rates, and STD infections. Every four years, Mecklenburg Healthy Carolinians and the Mecklenburg County Health Department conduct a more extensive examination of the community through a state developed process known as community health assessment (CHA). In addition to providing a picture of the community's health, CHA meets requirements for state accreditation of local health departments, the state consolidated contract with local health departments, and certification by the Governor's Task Force on Healthy Carolinians. Findings from the CHA are used by the Health Department for strategic planning and by Healthy Carolinians to develop or endorse collaborative community action addressing identified priority issues.

MECKLENBURG HIGHLIGHTS FROM THE COMMUNITY DATA OVERVIEW

- Cancer and cardiovascular disease are the leading causes of death, but mortality rates from heart disease, cancer, and stroke have been declining over the past five years.
- Disparate outcomes in mortality for racial/ethnic groups persist. For example, from 2004-2008, people of Other Races died from diabetes at 2.6 times the rate for Whites.
- Alzheimer's disease is the 4th leading cause of death; White women, the group with the longest life expectancy, make up the majority of Alzheimer's disease deaths.
- Unintentional injury is the 6th leading cause of death for the total population, the leading cause of death for those 1-44 years of age, and one of the leading causes of death for Hispanics.
- Mecklenburg County was one of six counties reporting the highest rate of syphilis increase in North Carolina. Between 2008 and 2009 the Primary/Secondary Syphilis case rate in the county increased by 138%, from 5.5 cases per 100,000 to a rate of 13.1.
- In 2009, approximately 35% of adults reported elevated cholesterol; 29% high blood pressure; 64% overweight or obesity; 21% no physical exercise in the past month; 17% current smoking; and 78% eating less than five servings of fruits and vegetables per day.
- In 2009, 16.5% of Mecklenburg Residents are uninsured for a total of approximately 150,180 individuals without health insurance. 21.2% of the non-elderly adult population in our county is uninsured, while 9.8% of children are uninsured.
- In 2009, nearly 33% of teens reported having had at least one drink of alcohol in the past thirty days, 38% of Mecklenburg teens reported using marijuana one or more times during their life and more than 14% of teens have taken prescription drugs such as OxyContin, Percocet, Demerol, Adoral, Ritalin, or Zanax without a doctor's prescription.
- From 1995-2008, the pregnancy rate for teens ages 15-19 decreased by 27%.
- In 2008, one out of every five babies born was to a Hispanic mother.
- The 2008 Infant Mortality rate for Mecklenburg is 6.6 infant deaths per 1,000 live births. However, infants of Other Races are 2.3 times more likely to die than are White infants.
- In 2009, 28% of teens surveyed reported feeling sad or hopeless almost every day for two weeks or more in a row to the extent they stopped doing some usual activities; 14% of teens reported actually attempting suicide one or more times.

RANKING PRIORITY FOCUS AREAS

In 2010, the Steering Committee reviewed the eight priority focus areas from the 2006 CHA. Examination of the community data overview suggested that these focus areas remained of current concern and interest. However, the decision was made to divide the injury category into two separate categories: Injury Prevention and Violence Prevention. In addition, the environmental health category was renamed Healthy Environment so as to be more inclusive of aspects beyond air and water quality like active transportation opportunities.

On October 27, 2010, ninety-one individuals representing a variety of community agencies and groups attended the CHA Priority Setting meeting. Participants were asked to review data specific to the nine priority areas and rank them using the following five criteria: magnitude; severity; intervention effectiveness; public concern; and urgency. Health disparities were to be considered a part of every topic rather than a separate focus area. In addition, Mecklenburg County residents were encouraged to participate in an online/paper survey to gauge community beliefs and attitudes towards health as well as prioritize the nine focus areas. Combined rankings from these two groups were as follows:

1. Chronic Disease Prevention through Healthy Choices
2. Access to Care
3. Healthy Environment – Healthy Places Supporting Healthy Choices
4. Substance Abuse Prevention
5. Violence Prevention
6. Injury Prevention
7. Mental Health
8. Responsible Sexual Behavior, and
9. Maternal Child Health.

RECOMMENDATIONS

Participants of the October 27th Priority Setting meeting made recommendations for the top four health issues, Chronic Disease Prevention, Access to Care, Substance Abuse Prevention, and Healthy Environment. Example recommendations are included below. For a complete list of recommendations, see the Priority Setting Exercise chapter.

Chronic Disease Prevention through Healthy Choices

- Create and encourage partnerships among community organizations to strengthen stake holders commitment and to share resources
- Increase education programs focusing on prevention of chronic disease

Access to Care

- Increase number of Federally Qualified Health Centers (FQHC)
- Foster partnerships with health department
- Create medical homes for people with no insurance
- Educate people about types of services available
- Increase number of free clinics to reduce ER use and locate them across the county

Environmental Health – Healthy Places Supporting Healthy Choices

- Increase access to community gardens particularly in food deserts or use vacant lots with a focus on “living green”
- Host a community-wide awareness day to promote active transportation (biking, taking the bus, carpooling etc.)
- Synchronize CHA efforts with other strategic efforts in the city and county like sustainable community initiatives, park & recreation, land use and development, education, historic sites, bus services and environment focus area

Substance Abuse Prevention

- Increase/maintain current funding for treatment
- Increase funding for treatment during incarceration
- Create a public awareness/educational campaign to stress that substance abuse is an equal-opportunity disease and is a gateway to many risk-taking behaviors and chronic health problems



INTRODUCTION AND OVERVIEW

CHARGE

Community Health Assessment (CHA) involves the use of quantitative and qualitative health data in identifying and prioritizing public health issues. Findings and recommendations are used in the development or endorsement of collaborative community action plans. The North Carolina Division of Public Health requires each local health department to conduct a comprehensive CHA every four years to fulfill the terms of the state consolidated contract. Certification by the North Carolina Office of Healthy Carolinians also calls for CHA on a four-year cycle, as does the state accreditation process for local health departments

PROCESS SUMMARY

In Mecklenburg County, Community Health Assessment is led by a Steering Committee from Mecklenburg Healthy Carolinians (MHC) and implemented by the Healthy Carolinians Coordinator and the Mecklenburg County Health Department Epidemiology Program (MCHD EP). The Epidemiology Program collects primary and secondary data from a variety of sources including formal reporting systems, vital records, NC-CATCH, NC DETECT, the State Center for Health Statistics, surveys, community reports and focus groups to assemble a picture of health issues and concerns for the county. With guidance from the steering committee and based on the data, priority concerns are identified. These concerns are then presented to a community group which ranks them and makes recommendations. Prioritized areas and recommendations are used to develop, affirm or modify community action plans.

STEERING COMMITTEE

The Steering Committee for the 2010 CHA consisted of the following members:

- Gary Black, Mecklenburg County Public Service and Information
- Janine Boudreau, United Way of Central Carolinas
- Domonique Brown, Multicultural Affairs Coordinator, MCHD
- Kerry Burch, Healthy Carolinians Coordinator, MCHD
- Laura Clark, Council for Children's Rights
- Wendy Hartley, Student, UNC Charlotte
- Rebecca Kehrer, Care Ring NC (formerly Community Health Services)
- Helen Lipman, Mecklenburg County Community Support Services
- Susan Long-Marin, Epidemiology Manager, Mecklenburg County Health Department
- Beth Lopez, Community Care Partners of Greater Mecklenburg
- Mark Martin, Novant Health
- Kristin Wade, Carolinas HealthCare System
- Dick Winters, Safe Routes to School Coordinator, MCHD
- MCHD Epidemiology staff: Charisse Jenkins, Sara Lovett and Donna Smith,

COMMUNITY DATA COMPILATION

Development of a community data report allows the identification of community health assets as well as areas requiring attention. This section of the CHA includes statistics on specific community health indicators as well as information on geographic, socioeconomic and demographic features. Data review began with collecting Mecklenburg specific information from known primary and secondary data sources including formal reporting systems, vital records, the State Center for Health Statistics, surveys, community reports and focus groups. See the section on Data & Information Sources for a more complete overview of data sources used. Qualitative data from a community survey provided additional detail. Data were compiled and organized by specific public health issues (e.g. communicable disease, substance abuse) and presented as chapters. Mecklenburg quantitative data were compared with state and national figures. Quick facts, positive trends and areas for improvement were used to summarize each chapter

PRIMARY DATA RESEARCH: 2010 HEALTH OPINION SURVEY

With the steering Committee's guidance, the MCHD Epidemiology Program developed a health opinion survey for Mecklenburg County residents. Rather than asking people about specific diseases or conditions for which we already had secondary data, we asked about beliefs and barriers to certain health behaviors. Our central questions included 1) do you believe changing your behavior can improve your health, 2) are you currently trying to change a behavior and 3) what makes behavior change difficult. The latter portion of the 25-question survey asked participants their opinions on the nine health focus areas determined by the steering committee, health concerns related to the social determinants of health and finally demographic information.

The survey was offered in English and Spanish and made available online through Survey Monkey from mid-August through the end of September. In addition, paper copies of the English and Spanish versions were also available. Links to the online survey were sent out via email to employees of the top 5 employers in Mecklenburg County; elected officials of the county, city and towns; heads of neighborhood associations; and through various contact lists. All recipients were encouraged to share the link among their own contacts. Paper copies were delivered to eleven local libraries representing all geographic areas of the county along with tent cards directing computer users to the Survey Monkey website. Finally, there was also targeted distribution of paper copies to reach specific populations. For example, surveys were delivered to two senior centers, a safety-net clinic, a homeless shelter, a health education class for Latinas, an African American male youth group and an organization that works with incarcerated individuals.

A total of 2,071 individuals completed the health opinion survey. Results will inform us on health beliefs, barriers to changing behavior and priority health concerns. For complete information on survey results and participant demographics, see the Primary Data Research chapter.

IDENTIFICATION OF PRIORITY CONCERNS

In the 2006 CHA, eight priority focus areas were identified through 1) a review of the 2002 priority focus areas; 2) a review of NC Healthy Carolinians and Healthy People 2010 goals and objectives; and 3) an examination of the community data overview. Those eight focus areas were:

Access to Care, Chronic Disease Prevention, Environmental Health, Injury Prevention, Maternal and Child Health, Mental Health, Responsible Sexual Behavior, and Substance Abuse.

Health Disparities was not listed as a separate issue because it was considered an overarching concern, a part of every focus area.

In 2010, the Steering Committee reviewed the eight priority focus areas from the 2006 CHA to ascertain if they remained current concerns and to determine whether other concerns should be added to the list. Examination of the community data overview suggested that these focus areas remained of current concern and interest. However, the decision was made to divide the injury category into two separate categories: Injury Prevention

and Violence Prevention. In addition, the environmental health category was renamed Healthy Environment so as to be more inclusive of aspects beyond air and water quality like active transportation opportunities.

1. Access to Care
2. Chronic Disease and Disability Prevention Through Healthy Choices
3. Healthy Environment
4. Injury Prevention
5. Maternal, Child and Infant Health
6. Mental Health
7. Responsible Sexual Behavior
8. Substance Abuse Prevention
9. Violence Prevention

Health Disparities was again considered an overarching issue. Emergency Preparedness was again discussed and decided against because it continues to receive high attention, funding and is currently being addressed by a variety of community workgroups. Infectious Disease was also determined not to be a priority concern because when compared to state and national numbers, the county, with the exception of TB (which is trending positively), ranks very well.

RANKING PRIORITY CONCERNS

The nine priority focus areas, accompanied by data summaries, were presented to a community meeting of 91 individuals representing a variety of community agencies and groups. See Priority Ranking Exercise Section for a list of the attendees and the groups they represented as well as additional detail on the process and findings. Attendees were assigned to tables and after a short presentation and discussion, asked to rank each of the nine focus areas with a one to ten score for each of the following five criteria: 1) magnitude, 2) severity, 3) intervention effectiveness, 4) public concern and 5) urgency. Scores were calculated and the rankings presented.

CHA Community Survey participants were also asked to rank the nine focus areas and this information was combined with that from the Priority Ranking Exercise. Because those taking the survey decided without the education, discussion and criteria scoring provided during the Priority Ranking Exercise, their responses were weighted less heavily. For additional information on this process see the Priority Ranking Exercise chapter. The final results from the combined CHA Community Survey and the Priority Ranking Exercise are as follows:

1. Chronic Disease & Disability Prevention
2. Access to Care
3. Healthy Environment
4. Substance Abuse Prevention
5. Violence Prevention
6. Injury Prevention
7. Mental Health
8. Responsible Sexual Behavior
9. Maternal, Child and Infant Health

APPLICATION/COMMUNICATING FINDINGS/COMMUNITY ACTION PLANS

The Health Department uses the identified priorities and recommendations from the community meeting in strategic planning. Healthy Carolinians works to develop or endorse collaborative community action addressing identified priority issues. A review of assets in Mecklenburg County shows numerous agencies, non-profits and existing collaborations already taking on projects to address priority focus areas. In cases where there are no existing groups addressing priority areas, Healthy Carolinians will explore opportunities for development.

The final CHA report will be posted on the Health Department and the Healthy Carolinians websites www.meckhealth.org and www.mecklenburghealthycarolinians.org . This document serves as a reference for many organizations developing grant proposals and programming. A brochure summarizing findings and recommendations will be developed and mailed to area funders, community leaders, elected officials and other groups with missions that include healthcare and prevention. The Health Director will present the findings to the Board of County Commissioners. See the Communications Plan section for additional detail on how the findings and recommendations from the CHA will be disseminated. Finally, the 2011 Mecklenburg Healthy Carolinians Public Health Forum, scheduled for April 2011, will focus on the results of the CHA report and offer opportunities for action planning around the top 4 priorities.

PRIORITY SETTING EXERCISE

List of Attendees

Priority Ranking Results

Combined Priority Ranking Results

Priority Setting Exercise

2010 CHA Survey

Recommendations

OVERVIEW

The Priority Setting exercise took place on October 27, 2010 at Trinity Presbyterian Church on Providence Road in Charlotte. Invitations to participate in the priority setting process went out to nearly 400 individuals representing a variety of community agencies, neighborhood associations, faith community leaders, colleges and universities and local elected officials from the county as well as from the seven municipalities within Mecklenburg County. A total of 91 people participated in the exercise; a detailed list of participants as well as demographic information can be found below.

The process of the priority setting exercise was as follows: a brief presentation was given on the first of the nine health focus areas selected by the CHA steering committee, this was followed by table discussions and finally, each individual scored the topic with regard to various criteria. This process was repeated for each of the nine health topics. Scoring sheets (see sample below) were collected throughout the exercise and scores were entered into Epi Info. By the end of the session, participants were presented with the prioritized list of the nine health topics based on their combined scores.

The final step in the priority setting process was to make recommendations for the top four health issues, Chronic Disease Prevention, Access to Care, Substance Abuse Prevention and Healthy Environment. Participants assigned themselves to one of those topic areas and generated a list of recommended actions which are to be used in the action planning process. Before adjourning each participant was asked to fill out a demographic form and an evaluation form.

To watch a short video clip of the Priority Ranking Exercise, click on the following link
<http://www.youtube.com/profile?user=meckgov#p/u/4/BLtnUQz6kvs>

LIST OF ATTENDEES

Last	First	Agency
Allison	Carolyn	Youfirst Healthcare Solutions
Barkley	Roxie	Community Health Ambassador, Faith CME
Beatty	Ashley	Florence Crittenton Services
Beatty	Tony	Area Mental Health (Substance Abuse)
Beggs	Jennifer	CW Williams
Black	Gary	Mecklenburg County Public Service and Information
Boudreau	Janine	United Way
Clark	Laura	Council for Children's Rights
Cody	Bill	Queens University School of Nursing
Cook	April	Lake Norman Free Clinic
Crook	Janet	Hospice & Palliative Care Charlotte Region
Cruz	Luis	Mecklenburg County Health Department (HIV)
Cullen	Kate	Student, Winthrop University
Darden	Chloe	BCY HealthCare
Desliva	Barb	Carolinas HealthCare System
Fair	Andy	Mecklenburg County Public Service and Information
Flanagan	Linda	Mecklenburg County Health Department (STDs)
Furtney	Susan	Care Ring

LIST OF ATTENDEES, cont.

Last	First	Agency
Gardner	Jennifer	Carolinas HealthCare System
Garvey	Suzy	Community Member
Glenn	Jacqueline	Mecklenburg County Health Department (Clinical Services)
Gonzalez	Karina	Mecklenburg County Health Department (Hispanic Health)
Grindstaff	Beverly	Care Ring
Hartley	Wendy	Community Member
Hawkins	Gardner	CW Williams, Mélangé
Henderson	Lee	Smart Start
Hernandez	Brisa	Elizabeth Family Practice
Houser	Lorraine	Mecklenburg County Health Department (Communicable Disease)
Hudson	Nancy	Charlotte Community Health Clinic
Huynh, MD	Toan	Carolinas HealthCare System
Jacobs, MD	David	Carolinas HealthCare System
Jackman	Julie	Mecklenburg County Health Department (Worksite Wellness)
Kaclik	Deb	Charlotte Mecklenburg Schools
Kehrer	Rebecca	Care Ring
Langenfeld	Nancy	Charlotte Mecklenburg Schools
Leon	Emma	Mecklenburg County Health Department (Hispanic Health)
Levin	Jon	Mecklenburg County Health Department (Health Promotion)
Lewis	Judy	Metrolina Provider Network
Lipman	Helen	Mecklenburg County Community Support Services
MacDonald	JoAnn	Mecklenburg Medical Alliance & Endowment
Marks	Marilyn	Society of St. Andrews
Martin	Mark	Novant Health/Presbyterian
Masakadza	Lovemore	Mecklenburg County Health Department (Tobacco)
Massad	Lola	Mecklenburg County Parks and Recreation
Mateo	Wendy	Bethesda Health Center
Matthews	Christopher	Anuvia
McGovern	Mary	Women's Impact Fund
McGruder	Mona	Mecklenburg County Health Department (School Health)
McNinch	Barbara	Mecklenburg County Health Department (Health Promotion)
Mead	Antonia	Johnson C. Smith University
Mele	Connie	Area Mental Health
Mignery	Allison	Mecklenburg County Health Department (Nutrition)
Mobley	Wanda	Community Health Ambassador, Greater Meyers Chapel Penecostal
Myer	Jane	Smart Start
Newsom	Kay	Ada Jenkins
Nguyen	Van Nhi	Boat People SOS
Owens	Clayton	Carolinas HealthCare System

LIST OF ATTENDEES, cont.

First	Last	Agency
Palmer	Trena	Charlotte Mecklenburg Senior Centers
Perry	Emily	Office of Healthy Carolinians
Peterson-Vita	Elizabeth	Area Mental Health
Powers-Jones	Shannon	Student, University of Alabama
Pruess	Heidi	Mecklenburg County Land Use & Environmental Services Agency
Readous	Sherena	Student, Walden University
Reese	Maria	Mecklenburg County Health Department (Community Services)
Reeves	Kelly	Mecklenburg County Health Department (School Health)
Ross	Malisha	Another Level Services
Royster	Susan	NC MedAssist
Safrit	Libby	Teen Health Connection
Sailer	Kaaren	Care Ring
Schafermeyer, MD	Bob	Carolinas Center for Injury Prevention
Schambach	Anita	Community Care Partners of Greater Mecklenburg
Scharf	Joan	Mecklenburg Medical Alliance & Endowment
Scruggs	Carolyn	Mecklenburg Medical Society
Seekings	Michelle	Community Alternatives of North Carolina
Simon	Karen	Mecklenburg County Sheriff's Office
Singleton	Cheri	Mecklenburg County Health Department (Maternity Care)
Singleton	Reggie	Mecklenburg County Health Department (The Males' Place)
Sowyak	Michael	Shelter Health
Starr	Teresa	Matthews Free Medical Clinic
Sullivan	Linda	Mecklenburg County Health Department (School Health)
Tapp	Hazel	Elizabeth Family Practice
Terrell	Deborah	Johnson C. Smith University
Thompson	Michael	UNC Charlotte (Public Health)
Vaca	Patrick	CMC Randolph (Behavioral Health)
Vandiver	Shannon	Junior League of Charlotte
Wall	John	Community Member
Ward	Ashley	Student, UNC Charlotte
Warren	Deborah	Carolina RAIN
Williams	Janice	Carolinas Center for Injury Prevention
Winters	Dick	Mecklenburg County Health Department (Built Environment)
Withers-Thompson	Tamara	Charlotte Community Health Clinic
Wolfe	Nicole	Hospice & Palliative Care Charlotte Region
Woody	Gayla	Centralina Area Agency on Aging

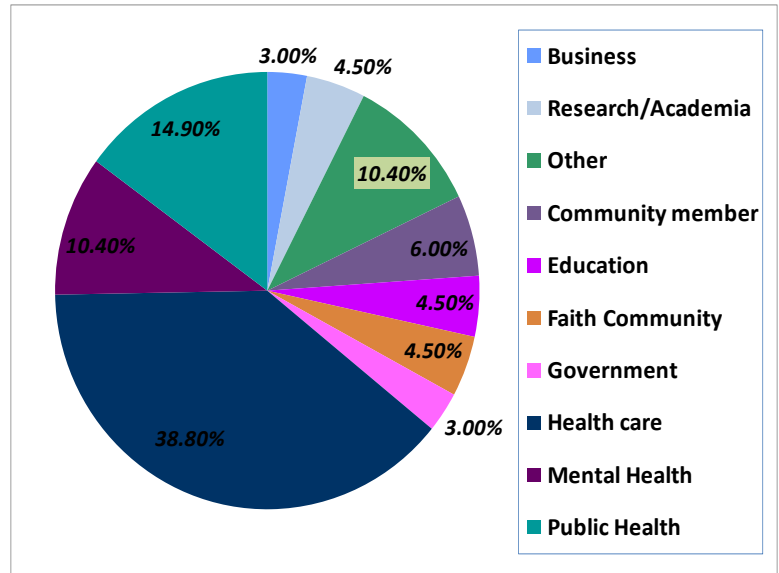
PRIORITY RANKING RESULTS

DEMOGRAPHIC PROFILE OF ATTENDEES

A total of 91 residents attended the Oct 27th Priority Setting Meeting. Of those attendees, 68 participants completed demographic and evaluation forms. The following data describes the demographic profile of participants.

- The majority of the population was female (82%).
- 31% were between the ages of 25 – 44 yrs, 63% were 45 – 64 years. Persons less than 24 years and persons 65 years and older each accounted for 3% of the population.
- 72% were White, 22% were Black, 4% were Asian and 1% were of Other Races.
- 12% were Hispanic/Latino.
- The majority of attendees reported living in Mecklenburg County for more than 10 years (56%). 7% of attendees reported living in the county for less than 3 years.
- Participants were from various backgrounds, including Health Care, Mental Health, Public Health, Community Members/Leaders, Education and Faith Communities.

Priority Setting Exercise Participant Background/Role
(N= 68, Percentages)



PRIORITY RANKING PROCESS

Participants of the Oct 27th Priority Setting meeting were randomly assigned into 16 groups to prioritize the nine focus areas. Random assignments allowed members to share their diverse knowledge, experience and challenges in addressing each priority area. Prior to the ranking process, the Epidemiology Program Manager provided a PowerPoint presentation to briefly summarize data from each focus area. Participants were also provided with copies of the 2009 State of the County Health Report as well as data summary sheets for each priority area to facilitate group discussion. After discussion, each group member ranked priority areas with a score of one to ten for the following five criteria:

1. **Magnitude:** Proportion of the population affected or vulnerable.
2. **Severity:** Impact on mortality, morbidity, disability and quality of life
3. **Intervention Effectiveness:** Proven interventions exist that are feasible from a practical, economic and political viewpoint
4. **Public Concern:** Degree of public concern and/or awareness
5. **Urgency:** Need for action based on degree and rate of growth (decline); Potential for affecting and amplifying other health or socioeconomic issues; Timing for public awareness, collaboration, and funding is present.

SAMPLE SCORING SHEET

Topic Area 1: Access to Care

Please rank the above health topic by scoring the following criteria from 1 to 10.

CRITERIA FOR RANKING

SCORE

Magnitude: Proportion of the population affected or vulnerable?

1= Affects very few, 10= Affects very many

Severity: Impact on mortality, morbidity, disability, and quality of life?

1= Not very severe, 10= Extremely severe

Public Concern: Degree of public concern and awareness?

1= Public is not concerned/aware, 10= Public is very concerned/aware

Intervention Effectiveness: Proven interventions exist that are feasible from a practical, economic, and political viewpoint?

1= No effective interventions, 10= Several effective interventions

Urgency: Need for action based on degree and rate of growth (or decline); potential for affecting and amplifying other health or socioeconomic issues; or timing for public awareness, collaboration, and funding is present?

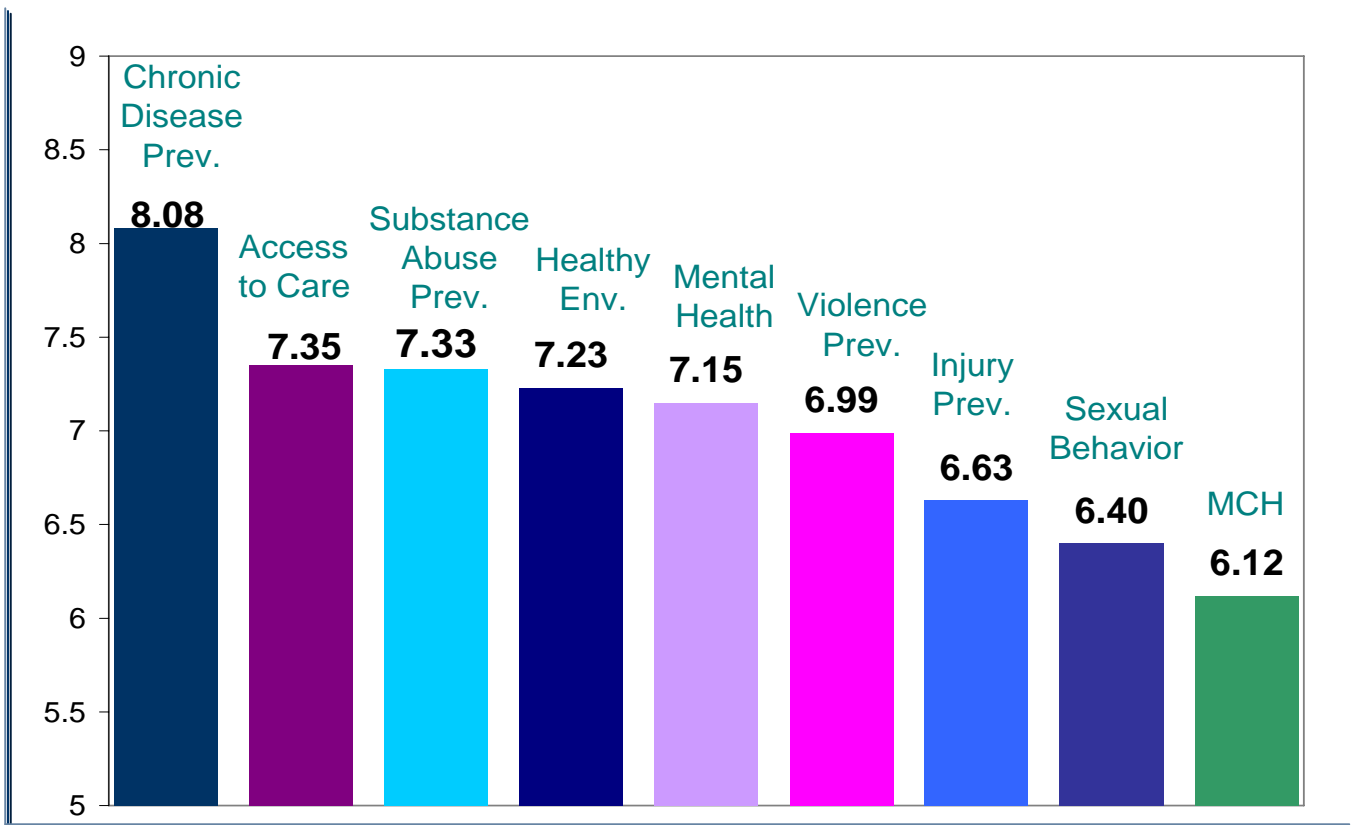
1= While issue is important there is no need to address it immediately, 10= Issue requires immediate attention

Ranking results from participants were entered into an Epi-Info database by Mecklenburg Epidemiology staff members during priority setting exercise and final scorings were presented to attendees at the close of the prioritization exercise. Several attendees arrived after the start of the priority setting exercise. While priority rankings were included for all participants, due to time constraints, data from this group was entered and analyzed after the Priority Setting Meeting. Inclusion of these scores provided one slight shift in priority rankings, Access to Care dropped from the first priority to the second.

The rankings for the nine focus areas, based upon the priority setting exercise (including data from late attendees) were:

1. Chronic Disease Prevention
2. Access to Care
3. Substance Abuse Prevention
4. Healthy Environment
5. Mental Health
6. Violence Prevention
7. Injury Prevention
8. Responsible Sexual Behavior
9. Maternal and Child Health

2010 CHA Priority Setting Exercise: Average Score Ranking of Priority Focus Areas
Based upon Oct 27th Priority Setting Meeting and including data from late attendees



COMBINED RANKINGS: CHA Survey and Priority Setting Exercise

During the month of September 2010, Mecklenburg County residents were encouraged to participate in a survey to gauge community beliefs and attitudes towards health and the challenges in maintaining healthy lifestyles. Survey participants were also asked to prioritize issues affecting the public health of the community, utilizing the nine priority focus areas. **Additional data on the 2010 CHA Survey can be found in the Primary Data and Research section.**

With the exception of the top two priority areas, Survey Rankings were different from Priority Setting Rankings. Survey participants provided higher rankings for Violence Prevention and Injury Prevention in comparison to participants from the Priority Setting Exercise. Conversely, Substance Abuse Prevention and Mental Health were given lower rankings among survey participants.

	2010 Priority Setting Exercise Rankings	2010 CHA Online/Paper Survey Rankings
<i>Chronic Disease Prevention</i>	1	1
<i>Access to Care</i>	2	2
<i>Substance Abuse Prevention</i>	3	6
<i>Environmental Health</i>	4	3
<i>Mental Health</i>	5	9
<i>Violence Prevention</i>	6	4
<i>Injury Prevention</i>	7	5
<i>Responsible Sexual Behavior</i>	8	7
<i>Maternal and Child Health</i>	9	8

METHODOLOGY: COMBINING THE RANKINGS

Survey participants were asked to rank the nine priority areas in comparison with each other without scoring for the five criteria utilized in the Priority Setting Exercise. Due to this fact, overall scores among survey participants were lower for each focus area in comparison to scores generated during the Priority Setting Exercise. As the Survey Rankings were made without the education and discussion provided by the Priority Setting Exercise, the decision was made to weight the data giving higher weight to Priority Setting Rankings. Ranking results for both groups were converted into percentages and Priority Setting Rankings were given a weight 3 times that of Survey Rankings.

Applying the appropriate weights for each group yielded the following results:

1. Chronic Disease & Disability Prevention
2. Access to Care
3. Environmental Health
4. Substance Abuse Prevention
5. Violence Prevention
6. Injury Prevention
7. Mental Health
8. Responsible Sexual Behavior
9. Maternal and Child Health

Mecklenburg Healthy Carolinians will develop action plans for at least the top four priority areas. Plans will be completed by June 2011.

COMBINED RANKINGS: CHA Survey and Priority Setting Exercise (With Weighted Data)

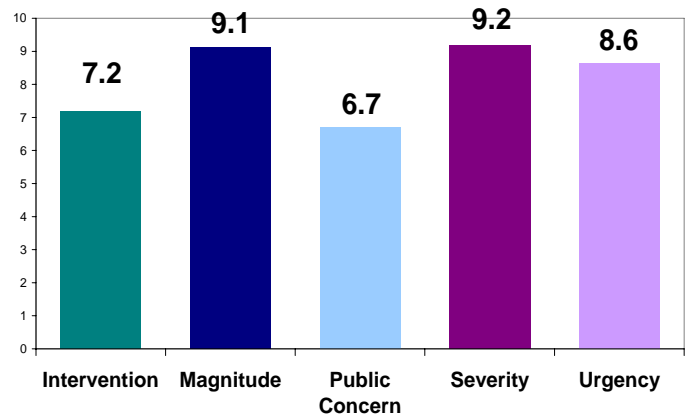
	Weighted Rankings (Priority Setting Ranking X3)						FINAL RANK (with weighted data)
	Priority Setting Average Score	Online/Paper Survey Average Score	Priority Setting Weight (75%)	Online/Paper Survey Weight (25%)	Final Score	Priority Setting Exercise Ranking ALONE	
Chronic Disease Prevention	81.7%	57%	61.3%	14.3%	75.5%	1	1
Access to Care	73.5%	57%	55.2%	14.3%	69.4%	2	2
Environmental Health	72.1%	48%	54.0%	12.0%	66.0%	4	3
Substance Abuse Prevention	73.4%	42%	55.0%	10.5%	65.5%	3	4
Violence Prevention	70.0%	47%	52.5%	11.8%	64.2%	6	5
Injury Prevention	66.4%	44%	49.8%	11.0%	60.8%	7	6
Mental Health	71.5%	13%	53.6%	3.3%	56.9%	5	7
Responsible Sexual Behavior	64.0%	34%	48.0%	8.5%	56.5%	8	8
Maternal and Child Health	61.2%	27%	45.9%	6.8%	52.7%	9	9

RECOMMENDATIONS

1. CHRONIC DISEASE PREVENTION- THROUGH HEALTHY CHOICES

- Create and encourage partnerships among community organizations to strengthen stake holders commitment and to share resources
- Increase tobacco tax
- Increase education programs focusing on prevention of chronic disease
- Focus efforts based on demographics and tailor to specific populations and cultures
- Educate lay people in community to help their neighborhood
- Help people see the connection between change in behavior and better health outcomes
- Increase focus on small groups, neighborhoods
- Identify and focus on barriers to changing behavior
- Reorganize SNAP (food stamp program) to reward healthier choices (fruits, vegetables) and discourage less healthy choices
- Provide financial incentives for those who give up tobacco or who are in process of withdrawal from tobacco products
- Recruit and use those indigenous to communities to educate and provide outreach to “lay health” persons identified to carry banners within their communities such as local faith community groups

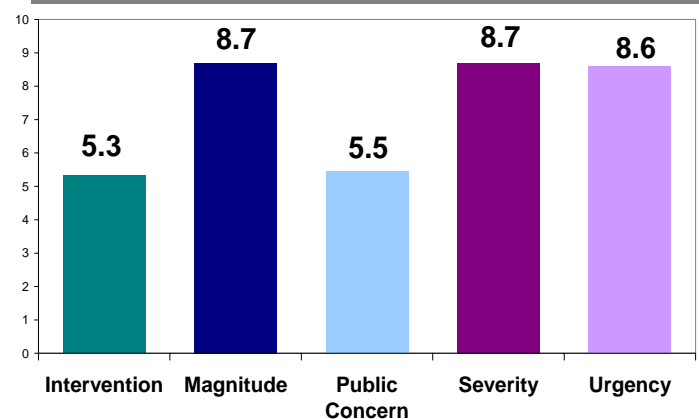
Average Scoring for Chronic Disease Prevention
(By Criteria)



2. ACCESS TO CARE

- Increase number of Federally Qualified Health Centers (FQHC)
- Foster partnerships with health department
- Create medical homes for people with no insurance
- Educate people about types of services available
- Increase number of free clinics to reduce ER use and locate them across the county
- Satellite hospitals increase referrals to sliding scale clinics
- Improve communication between specialty services and primary care physicians or FQHCs
- Improve medication access and coverage
- Facilitate access for populations in need by working with existing and making referrals
- Involve health department in identifying areas of need for future clinics

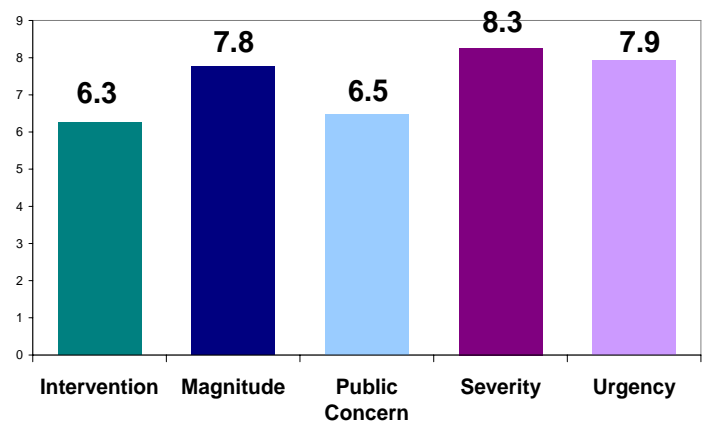
Average Scoring for Access to Care
(By Criteria)



3. SUBSTANCE ABUSE PREVENTION

- Increase/maintain current funding for treatment
- Increase funding for treatment during incarceration
- Create a public awareness/educational campaign to stress that substance abuse is an equal-opportunity disease and is a gateway to many risk-taking behaviors and chronic health problems
- Increase prevention services
- Increase and promote more self-help groups within local communities (using resources already there i.e. churches, community police efforts etc) to reach out to those in identified substance abuse programs using a “weight watcher” type format to support, provide counseling training, job help, etc and maintain abstinence

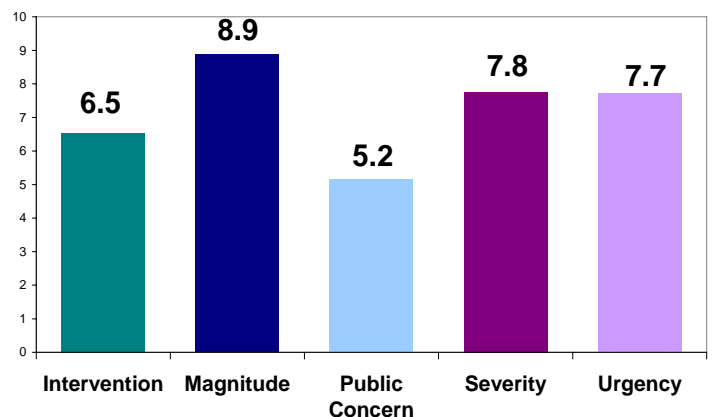
Average Scoring for Substance Abuse Prevention
(By Criteria)



4. ENVIRONMENTAL HEALTH – HEALTHY PLACES SUPPORTING HEALTHY CHOICES

- Increase community gardens particularly in food deserts or use vacant lots with a focus on “living green”
- Host a community-wide awareness day to promote active transportation like biking, taking the bus, carpooling or walking to work and school
- Synchronize CHA efforts with other strategic efforts in the city and county like sustainable community initiatives, park & recreation, land use and development, education, historic sites, bus services and environment focus area
- Advertise existing environmental focused programs through PSAs, billboards and other educational efforts using recognizable logos, etc to promote healthy lifestyle changes and to make the community aware of available federal, state, local programs that already exist within the community

Average Scoring for Healthy Environment
(By Criteria)





ASSETS AND CHALLENGES

Community Assets

Positive Trends and Indicators

Challenges

Selected Indicators with Peer County Comparisons

Selected Indicators from the 2009 SOTCH Report

Fiscal Year 2010 Community Health Index

COMMUNITY ASSETS FOR INFLUENCING HEALTH

While Mecklenburg County encounters numerous health challenges from a diverse and rapidly growing population, it also possesses a wealth of assets that offer assistance in addressing them.

A survey of community assets includes but is not limited to the following:

- Two hospital systems: Carolinas HealthCare System and Novant Health/Presbyterian Healthcare
- Safety Net System of Care
 - One federally qualified community health center: CW Williams
 - Seven free clinics
 - Charlotte Community Health Clinic
 - Charlotte Volunteers in Medicine Clinic
 - Care Ring
 - Free Clinics of Our Town (Davidson)
 - Matthews Volunteers in Medicine Clinic
 - Lake Norman Free Clinic
 - Shelter Health Services
 - Bethesda Health Center
 - Carolinas Medical Center Ambulatory/Community Care Clinics
 - CMC Biddle Point
 - CMC Elizabeth Family Practice
 - CMC Meyers Park
 - CMC North Park
 - Volunteer physician care for the low-income uninsured program: Physicians Reach Out (administered by Care Ring)
 - A Community Pharmacy: MedAssist
 - Mecklenburg County Health Department
- Board of County Commissioners that strongly supports the Health Department
- Strong and numerous Health and Human Services Agencies and Organizations
- Flourishing greenway system
- Poverty rate lower and median income higher than the state
- Consolidated School Health Committee within Charlotte Mecklenburg Schools
- Numerous community collaborations affecting health
 - Children's Alliance
 - Charlotte Mecklenburg Drug Free Coalition
 - Community Child Fatality Prevention and Protection Team
 - Fit City for Fit Families and Worksite Wellness programs
 - HIV Community Task Force
 - Homeless Services Network
 - Mecklenburg Food Policy Council
 - Mecklenburg Fruit & Vegetable Coalition
 - Mecklenburg Safe Kids Coalition
 - Mecklenburg Safe Routes to School
 - MedLink of Mecklenburg
 - Partnership for Children's Dental Health
 - Syphilis Elimination Project
- A strong and diverse faith community with over 1000 places of worship
- Multiple Institutions of Higher Education
 - Central Piedmont Community College
 - Johnson C. Smith University
 - Pfeiffer University
 - Queens University
 - University of North Carolina at Charlotte

POSITIVE HEALTH TRENDS AND INDICATORS

When comparing community health indicators with North Carolina and the United States, for the most part Mecklenburg County fairs as well as if not better. Exceptions are conditions associated with urban areas such as HIV disease, tuberculosis and homicide. However, some health indicators like overweight and obesity are negative across the county so a similar or better comparison does not necessarily indicate a favorable status. In addition, when examining Mecklenburg health indicators by race and ethnicity, it is obvious that not all populations are equally enjoying good health.

Listed below are examples of indicators that are strongly positive for the county. However, it is important to remember that positive progress has been achieved through attention and resources. To no longer address these issues because they are trending well would be to risk a reversal of positive direction.

- Falling total mortality rates for all race and gender groups.
- Decreasing mortality rates for cardiovascular disease, cancer, diabetes and influenza and pneumonia.
- Falling adolescent pregnancy rates, a 22.5% decrease between 2000 and 2009 for girls 15 -19. The 2009 rate for 15 -17 old girls of 30.6 pregnancies per 1000 girls 15 -17 meets and exceeds the Healthy People 2010 goal of 43.0.
- Low rates of vaccine preventable communicable disease.
- Declining smoking rates, although at 17% in 2009 unlikely to meet the Healthy People 2010 adult goal of 12%.
- Declining reports of smoking and alcohol use during pregnancy.
- Smoke free school system and hospital systems as well as restaurants and bars.
- High level of seatbelt use with 88.9% in 2008 approaching the Healthy People 2010 goal of 92%.
- Almost 75% of women over 40 reported a mammogram within the past two years in 2008 exceeding the Healthy People 2010 goal of 70%.
- Carbon monoxide detector ordinance.

CHALLENGES: AREAS REQUIRING ADDITIONAL ATTENTION

The information presented below reflects a quick summary of the priority health concerns and information from throughout this report including community recommendations. Some concerns or areas for attention may be reflected in several categories. For a more extensive presentation of data and recommendations by priority health concern, see the Priority Ranking Exercise Section.

HEALTH DISPARITIES

- Are evident in all priority concerns
- Special attention is needed to diabetes, infant mortality, STDs and HIV disease

PREVENTING CHRONIC DISEASE & DISABILITY THROUGH HEALTHY CHOICES

- Promoting healthy behavior choices in physical activity, nutrition and tobacco use
- Overweight and obesity
- Appropriate nutrition and physical activity for children and teens for building healthy bones to prevent osteoporosis in the future as well as preventing overweight and obesity
- Promoting preventive screenings for skin, breast, prostate and colon cancer

ACCESS TO CARE

- Lack of dental care for low-income adults
- Medical care for the low-income who do not qualify for assistance programs and the underinsured who earn too much to be considered low income but work for employers who do not offer health insurance or who cannot afford premiums; low-income males and the undocumented are at particular risk for not receiving care; healthcare reform may address many of these issues but the problems of the undocumented will not be affected.
- Need for culturally appropriate health and mental health information and education as well as providers who can provide culturally appropriate services.
- Health literacy

ENVIRONMENTAL HEALTH – HEALTHY PLACES SUPPORTING HEALTHY CHOICES

- Air quality
- Built environment
- Worksite wellness
- Food availability and security

SUBSTANCE ABUSE PREVENTION

- Underage drinking
- Binge drinking
- DUI
- Perception that some alcohol use among minors is acceptable and that drinking at home is safer than away from home; lack of understanding of the affect of alcohol on the still developing adolescent brain
- Hispanic alcohol use
- Prescription drug abuse
- Illegal drug use

MENTAL HEALTH

- Child/Teen mental health issues and providers to address them
- Stigma attached to treatment for mental illness
- Services for the uninsured and LEP populations
- As population ages, adequate resources to care for growing numbers of Alzheimer's disease cases,

VIOLENCE PREVENTION

- Homicide is the 2nd leading cause of death for adolescents and young adults (some years, the first) and one of the leading causes of deaths for Hispanics
- Domestic violence
- Child abuse

INJURY PREVENTION

- Unintentional Injury is the 5th leading cause of death for the total population and the leading cause of death for those one to 44 years of age as well as Hispanics. National data suggest that trauma and associated costs resulting from injury exceed those for heart disease. However, public interest in injury prevention as indicated by survey and prioritization is very low as is funding. Changing the perception that injuries are accidents that are unavoidable to injuries are preventable is a challenge that will require considerable creativity and effort.
- Falls in the elderly
- Safe sleeping arrangements affect infant mortality by decreasing the likelihood of SIDS and suffocation
- Driving under the influence

RESPONSIBLE SEXUAL BEHAVIOR

- Rising rates of HIV disease and syphilis
- Disproportionate burden of HIV disease and syphilis in the African American community
- 12% of births occur with an interpregnancy interval of less than or equal to six months
- Even though meeting the HP2010 goal, the number of pregnancies in girls 15-17 is still of concern as is the number in girls 10-14; certain areas of the community are not seeing the drop in adolescent pregnancy experienced by the county as a whole

MATERNAL CHILD HEALTH

- Large gap between white and African American rates of infant mortality
- Safe sleeping arrangements affect infant mortality by decreasing the likelihood of SIDS and suffocation
- Declining rates of entry into prenatal care during the first trimester
- 12% of births occurs with an interpregnancy interval of less than or equal to six months
- Even though meeting the HP2010 goal, the number of pregnancies in girls 15-17 is still of concern as is the number in girls 10-14.

OVERVIEW OF SELECTED COMMUNITY HEALTH INDICATORS

The following three documents provide a quick overview of the positives and negatives by comparing selected health indicators with peer counties, North Carolina, the US and Healthy People 2010 goals.

- 2010 Community Health Assessment Summary of Selected Health Indicators
- 2009 SOTCH Summary of Selected Health Indicators
- FY10 Mecklenburg County Health Index (a part of the Mecklenburg County Balanced Scorecard)



Mecklenburg Average



Best Rate State Avg. Worst Rate

Peer County comparisons provide a useful step for quantifying a typical level of disease burden in a community. *Guilford, Forsyth and Wake counties are peers of Mecklenburg.* While they do not border the county, they are more similar to the demographic makeup of Mecklenburg and may provide a more useful comparison than State data alone.

Mecklenburg Indicator Ranks **BETTER** Than Peer County Average

HEALTH INDICATOR	Year of Report	Mecklenburg County	Peer County Average	North Carolina	Comparison with NC Case Rates* (Mecklenburg Data)
Total Cancer Cases (All Sites) per 100,000 Population	2005	475.2	537.7	515.4	283.5 515.4 747.3
Heart Disease Discharge per 10,000 population	2006	78.6	98.6	129.8	45.0 129.8 290.3
Infant Deaths (<1 yr) per 1,000 Live Births	2007	6.5	8.7	8.5	0 8.5 33.3
Suicide Deaths per 100,000 population	2007	7.0	9.8	11.9	0 11.9 37.4

Mecklenburg Indicator Ranks **SIMILAR** to Peer County Average

HEALTH INDICATOR	Year of Report	Mecklenburg County	Peer County Average	North Carolina	Comparison with NC Case Rates*
Breast Cancer Deaths per 100,000 population	2007	24.9	23.8	25.3	0 25.3 55.8
Unintentional Deaths due to Motor Vehicle Accidents per 100,000 population	2007	12.2	12.5	19.9	0 19.9 64.8
% Estimate of Uninsured (0 - 64 yrs) percentages	2005	15.1	15.1	18.6	10.2 18.6 27.5



2010 Mecklenburg County Community Health Assessment

Summary of Selected Health Indicators, cont.

Mecklenburg Indicator Ranks **WORSE Than** Peer County Average

HEALTH INDICATOR	Year of Report	Mecklenburg County	Peer County Average	North Carolina	Comparison with NC Case Rates* (Mecklenburg Data)
Alzheimer Disease Deaths per 100,000 Population	2007	46.5	29.3	28.3	 0 28.3 62.4
Assault (Homicide) Deaths per 100,000 Population	2007	9.1	7	7.4	 0 7.4 31.4
HIV Disease Deaths per 100,000 Population	2007	8.7	4.3	4.2	 0 4.2 21.8
Primary/Secondary Syphilis case rate per 100,000 population	2007	11.2	4	3.7	 0 3.7 12.6
Teen Pregnancies: Girls Ages 15-19, per 1,000 girls 15- 19 yrs	2007	68.4	56.5	65.9	 18.8 65.9 118.4
% Adults Unable to See Doctor in Past 12 months (percentages)	2008	15.6	13.6	16.5	 9.1 16.5 31.6

Data Source: The North Carolina CATCH (Comprehensive Assessment for Tracking Community Health) system, Mecklenburg County Profile <http://www.ncpublichealthcatch.com>

*NC CATCH was developed by faculty of the University of North Carolina at Charlotte (UNCC), under a contract funded by the North Carolina Division of Public Health. Funds for the development of NC-CATCH were also provided by the Kate B. Reynolds Charitable Trust. NC-CATCH is a collaborative effort between UNCC and state and local public health agencies in the state.

Prepared by: Mecklenburg County Health Department, Epidemiology Program 11/2010

2009

MECKLENBURG COUNTY
State of the County Health Report
Summary Report

↑ Increased reports; Moving in wrong direction
↓ Decreased reports; Moving in the right direction
↔ No discernible change in data. (Less than one percentage point change)



HEALTH INDICATOR		Year of Report	Mecklenburg County	Previous Year Comparison* (Mecklenburg Data)	North Carolina	Healthy People 2010 Objective
Maternal, Infant and Child Health	Infant Mortality (<1yr.) (Rate per 1,000 Live Births)	2008	6.6	↔ No change ↔	8.2	4.5
	Low Birth Weight (<=2500g) (% of All Live Births)	2008	9.4%	↔ No change ↔	9.1%	5.0%
	Premature Births (<37 weeks) (% of All Live Births)	2008	12.2%	Decrease ↓	12.9%	7.6%
	No First Trimester Prenatal Care (PNC) (% Not Entering PNC in the 1st Trimester of All Live Births)	2008	16.8%	Decrease ↓	17.1%	10.0%
	Teen Pregnancy Rate (< 20 yrs.) (per 1,000 females 10-19) Live Births+ Induced Abortions+ Fetal Deaths	2008	31.5	Decrease ↓	31.6	DNA
	10-14 (per 1,000 females 10-14)	2008	1.2	↔ No change ↔	1.3	DNA
	15-17 (per 1,000 females 15-17)	2008	32.9	Decrease ↓	32.5	43.0
	18-19 (per 1,000 females 18-19)	2008	101.9	Decrease ↓	93.1	DNA
	Teen Birth Rate (< 20 yrs.) (per 1,000 females 10-19) Live Births	2008	22.4	Decrease ↓	24.6	DNA
	10-14 (per 1,000 females 10-14)	2008	0.8	Increase ↑	0.8	DNA
	15-17 (per 1,000 females 15-17)	2008	24.9	Increase ↑	25.1	DNA
	18-19 (per 1,000 females 18-19)	2008	69.9	Decrease ↓	73.0	DNA
Chronic Conditions (Mortality)	All Cancers (Rates per 100,000 population)	2008	130.7	Decrease ↓	188.6	159.9
	Lung Cancer	2008	35.2	Decrease ↓	DNA	44.9
	Breast Cancer (Rate per 100,000 females)	2008	22.4	↔ No change ↔	DNA	22.3
	Prostate Cancer (Rate per 100,000 males)	2008	10.1	Decrease ↓	DNA	28.8
	Colon Cancer	2008	13.1	↔ No change ↔	DNA	13.9
	Heart Disease (Rate per 100,000 population)	2008	108.8	Decrease ↓	188.8	166.0
	Stroke (Rate per 100,000 population)	2008	32.5	Decrease ↓	48.5	48.0
	Diabetes (Rate per 100,000 population)	2008	15.4	Increase ↑	23.5	45.0
Injury (Mortality)	Motor Vehicle Injuries (Rate per 100,000 population)	2008	9.2	Decrease ↓	16.7	9.2
	All Other Unintentional Injuries (Rate per 100,000 population)	2008	18.0	Increase ↑	29.4	17.5
	Intentional Injury - Homicide (Rate per 100,000 population)	2008	9.6	Increase ↑	7.2	3.0
	Intentional Injury - Suicide (Rate per 100,000 population)	2008	8.1	Increase ↑	12.6	5.0

HEALTH INDICATOR		Year of Report	Mecklenburg County	Previous Year Comparison* (Mecklenburg Data)	North Carolina	Healthy People 2010 Objective
Communicable Diseases <i>(includes Sexually Transmitted Infections)</i>	E. Coli <i>(Rate per 100,000 population)</i>	2008	1.1	No change	1.5	1.0
	Chlamydia <i>(Rate per 100,000 population)</i>	2008	481.3	Increase ↑	414.5	DNA
	Gonorrhea <i>(Rate per 100,000 population)</i>	2008	212.7	Increase ↑	164.1	19.0
	Pertussis <i>(Rate per 100,000 population)</i>	2008	4.0	Decrease ↓	1.0	DNA
	Primary/Secondary Syphilis <i>(Rate per 100,000 population)</i>	2008	5.5	Decrease ↓	3.2	0.2
	HIV Disease <i>(Rate per 100,000 population)</i>	2008	56.8	Increase ↑	28.7	DNA
	AIDS <i>(Rate per 100,000 population)</i>	2008	17.0	Decrease ↓	14.9	1.0
	HIV-Related Deaths <i>(Rate per 100,000 population)</i>	2007	8.7	Decrease ↓	4.2	0.7
	Tuberculosis <i>(Rate per 100,000 population)</i>	2008	5.0	Increase ↑	3.6	1.0
	Salmonella <i>(Rate per 100,000 population)</i>	2008	17.1	Increase ↑	17.0	13.7
	Shigella <i>(Rate Per 100,000 population)</i>	2008	2.5	Increase ↑	3.0	DNA
Environmental Health	Total Days Ozone Level Exceeded Federal Compliance Levels	2007	19	Decrease ↓	DNA	DNA
	Lead Screenings Total Children 6 yrs and under screened					
	Number of Confirmed Cases >= 10 ug/dL	2007	5	Decrease ↓	232	DNA
	Number of Confirmed Cases >= 20 ug/dL	2007	1	Increase ↑	38	DNA
Behavioral Risk Factors for Premature Deaths	Smoking <i>(% of Adults 18 years and over)</i>	2008	13%	Decrease ↓	21%	DNA
	Overweight/Obesity (BMI>25.0) <i>(% of Adults 18 years and over)</i>	2008	61%	Increase ↑	66%	DNA
	No Physical Activity <i>(% of Adults 18 years and over)</i>	2008	19%	Increase ↑	25%	DNA
	Fruit & Veg (5 or more servings/day) <i>(% of Adults 18 years and over)</i>	2007	23%	No change	22%	DNA
	High Blood Pressure <i>(% of Adults 18 years and over)</i>	2007	24%	Decrease ↓	29%	DNA
	High Cholesterol <i>(% of Adults 18 years and over)</i>	2007	39%	No change	40%	DNA
	Firearms Present in Household <i>(% of Adults 18 years and over)</i>	2007	25%	Increase ↑	41%	DNA
	No Seat Belt Use <i>(% of Adults 18 years and over)</i>	2008	0.5%	No change	1.0%	DNA

*DNA= Data not available

Data Sources NC DHHS: State Center for Health Statistics, HIV/STD Prevention and Care Branch

Mecklenburg County Health Department: Communicable Disease Program, Tuberculosis Program and Environmental Health Program

Prepared by: Mecklenburg County Health Department, Epidemiology Program

12/1/2009

Mecklenburg County Community & Corporate Scorecard - Health Index FY2009-2010

Focus Area: **Community Health & Safety**

Desired Outcome: Reduced Preventable/Communicable Diseases & Other Health Problems

Performance Measure: Health Index (Goal = Achieving 2008-09 annual targets for at least 75% of measures)

ANNUAL REPORT FY2009-2010

Measure	2015 Target	Baseline 2000 ¹	Current Meck * 2008-09	Annual Target 2009-10	Threshold	BSC Rating ²	Disparity Ratio ³	US 2008-2009	NC* 2008-09	Meck US Comp ⁴
Nativity										
Adolescent Pregnancy Rate (births per 1000 females of specified age group)										
10-14 yrs	1.7	2.2	1.2	1.9	3.1		2.8		1.3	
15-17 yrs	32.1	42.8	32.9	35.7	59.4		2.2		32.5	
15-19 yrs	52.4	72.8	60.1	60.7	82.5		1.8		58.6	
Infant Mortality Rate (per 1000 births)	6.8	8.5	6.6	7.4	9.1		2.3	6.8	8.2	P
% Births w/ No Prenatal Care in 1st Trim.	10.0	11.8	16.8	10.6	13.3		1.4	n/a	17.9	n/a
Mortality (per 100,000 population)										
Breast Cancer Mortality Rate	16.8	19.8	22.4	17.8	28.0		1.2	13.6	26.9	N
Cerebrovascular Disease Mortality Rate	41.0	51.2	32.5	44.4	58.5		1.6	45.1	48.5	P
Colon Cancer Mortality Rate	13.1	15.4	13.1	13.9	16.4		1.4	17.8	16.3	P
Diabetes Mortality Rate	13.9	16.3	15.4	14.7	20.9		2.6	23.7	23.5	P
Lung Cancer Mortality Rate	37.4	41.5	35.2	38.7	42.7		1.3	52.6	58.0	P
Heart Disease Mortality Rate	134.0	157.7	108.8	141.9	191.6		1.4	204.3	188.8	P
Motor Vehicle Mortality Rate	9.8	13.1	9.2	10.9	13.6		1.4	14.3	16.7	P
Communicable Disease Morbidity (per 100,000 population)										
Childhood Vaccine Preventable Dz Cases	27	34	18.0*	29.5	41					
Gonorrhea Incidence Rate	219.5	274.4	227.5*	237.8	332.6		24.6*	111.6	160.61*	N
AIDS Incidence Rate	7.6	10.6	22.5*	8.8	22.5		6.0*	12.3	11.9*	N
Syphilis (1' & 2') Incidence Rate	2.1	6.9	13.1*	3.7	24.5		7.7*	4.5	6.3*	N
Tuberculosis Incidence Rate	3.1	10.3	3.7*	5.5	15.6		8.1*	4.2	2.7*	P

Mecklenburg County Community & Corporate Scorecard - Health Index FY2009-2010, cont.

Focus Area: **Community Health & Safety**

Desired Outcome: Reduced Preventable/Communicable Diseases & Other Health Problems

Performance Measure: Health Index (Goal = Achieving 2008-09 annual targets for at least 75% of measures)

ANNUAL REPORT FY2009-2010

Health Lifestyle Risk Behaviors										
% Current Smokers (CMS, grades 6-12)	9.4	18.8	9.9	13.8	22.6		1.4			
% Current Smokers (> 17yrs)	15.9	19.9	16.8*	17.9	23.9		0.9*	17.9*	20.3*	P
% Overweight & Obese (>17 yrs)	45.7	57.1	64.3*	51.4	63.0		1.2*	64.1*	65.4*	N
% No Daily 5 or More Fruits & Veg.	55.4	69.2	78.3*	58.8	83.0		1.0*	76.6*	79.4*	N
% No Exercise Activity in Past Mo. (>17yrs)	15.8	21.1	21.0*	18.5	25.3		1.5*	23.6*	26.4*	P
Access										
# of CMS Students to 1 School Nurse	750	2333	1234*	1278	1125					
Environmental Health										
% Required Food Inspections Completed	100.0	62.0*	100.0*	91.2	90.0					

¹ Some baselines other than 2000; technical notes available on request

* = CY2009 data; no * = CY2008 data

No new data since previous year = brown

³ DISPARITY RATIO

Compares measures for Other Races to White measures: a ratio of 1:1 suggests no disparity; a ratio of 3:1 indicates the Other Races measure is three times the White measure; a ratio of 0.5:1.0 indicates the Other Races measure is half the White measure. Mortality comparisons calculated with age-adjusted 5-yr rates, 2004-2008; all other comparisons use 1yr 08 or 09 data.

NOTE: Complete definitions and calculations available on request; the data in this table are the most recent available and supersede those in earlier publications; data are subject to change as additional information becomes available.

² BSC RATING based on achievement of 2009-10 annual targets

Green	achieves annual target
Yellow	does not achieve annual target
Red	exceeds threshold value

⁴ MECKLENBURG US COMPARISON

N = worse than US rate
P = same as or better than US rate



DEMOGRAPHICS

OVERVIEW

Mecklenburg County is the center of the country's fifth largest urban area with over seven million people living within a 100-mile radius. The county consists of a large urban center surrounded by smaller, more rural communities. Charlotte, with an estimated 2008 population of 890,515, is the largest city in the state and occupies 280 of the county's 527 square miles. Other municipalities include Cornelius, Davidson, Huntersville, Pineville, Matthews and Mint Hill.

POPULATION TRENDS

The total estimated population for Mecklenburg County for 2009 is 913,639. This was an increase of 31% since the 2000 Census. Mecklenburg county population is expected to reach over a million people by 2017.

Live Birth Rate vs. Death Rate

- In 2008, 14,902 resident births and 5,013 deaths were recorded in Mecklenburg County.
- The total live birth rate of 17.0 births per 1,000 population is almost 3 times the total crude death rate of 5.7 deaths per 1,000 population.

2009 MECKLENBURG QUICK FACTS: DEMOGRAPHICS

- The total estimated population for Mecklenburg County for 2009 is 913,639, an increase of 31% since the 2000 Census.
- The total live birth rate of 17.0 births per 1,000 population is almost 3 times the total crude death rate of 5.7 deaths per 1,000 population.
- The 2009 estimated Mecklenburg County population is 64% white and 36% Other Races compared to the estimated 2009 North Carolina population of 9,382,610 which is 74% white and 26% Other Races.
- The 2009 Mecklenburg population is fairly young with a median age of 35.3.
- Charlotte-Mecklenburg Schools (CMS) is the 22nd largest school system in the country and the largest in the Carolinas.
- Almost 40% of Mecklenburg county residents age 25 years and older have at least a bachelor's degree compared to 26% of North Carolina residents.
- Charlotte is the 2nd largest financial center in the nation with more than \$2.3 trillion in assets.

Mecklenburg County Population By Race and Ethnicity

2000			2009		
Total Population		695,454	Total Population		913,639
Race	Number	%	Race	Number	%
White	445,250	64.0%	White	585,265	64.1%
African-American	193,838	27.9%	African-American	271,848	29.8%
Asian/Pacific Islander	22,228	3.2%	Asian/Pacific Islander	38,255	4.2%
American Indian/Alaskan Native	2,439	0.4%	American Indian/Alaskan Native	5,070	0.6%
Other Race	20,954	3.0%	Other Race	N/A	N/A
More than One Race	10,745	1.5%	More than One Race	13,201	1.4%
Ethnicity			Ethnicity		
Hispanic (of any race)	44,871	6.5%	Hispanic (of any race)	96,214	10.8%

RACE/ETHNICITY

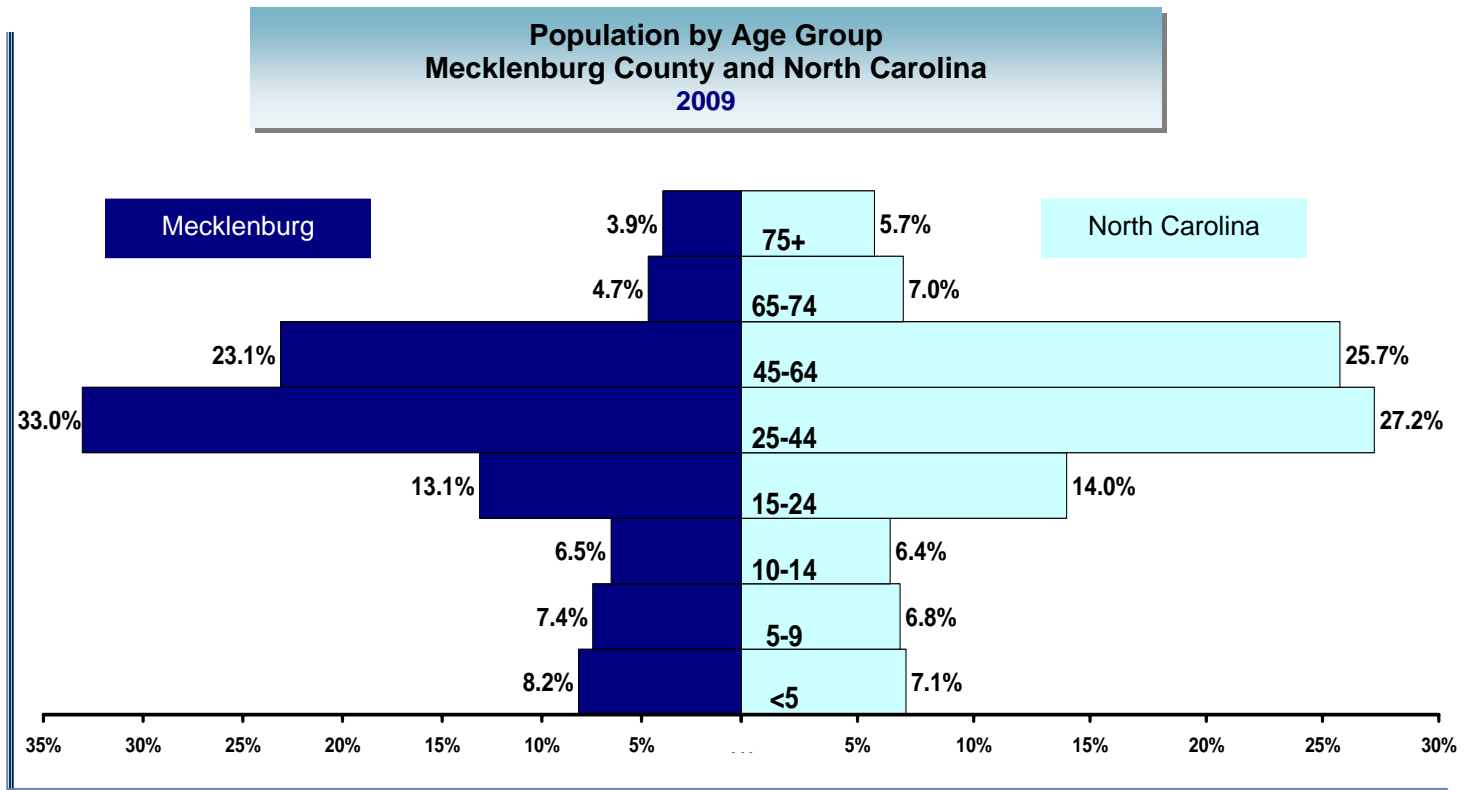
- The 2008 estimated Mecklenburg County population is 60% white and 40% Other Races compared to the estimated 2005 North Carolina population of 9,036,449 which is 70.3% white and 29.7% Other Races.
- Since 2000, the percentage of white residents has declined while African-Americans, Asian/Pacific Islanders, and Hispanics have increased.
- Since 1990, Mecklenburg has experienced a large increase in Hispanic populations due to immigration. The percentage of Hispanics has increased from 6.5% of the total population in 2000 to an estimated 10.8% of Mecklenburg residents in 2008.

AGE

- Mecklenburg's population is fairly young with a median age of 35.3.
- About 36% of residents are under the age of 25 similar to 34% of state residents.
- Over 8% of the population is over the age of 65 compared to 12.2% of North Carolina.

EDUCATION

- With a 2009-2010 enrollment of more than 133,000 students in grades K-12 attending 161 schools, Charlotte-Mecklenburg Schools (CMS) is the 22nd largest school system in the country and the largest in the Carolinas.
- In the Charlotte Mecklenburg School District the per pupil expenditure is \$8,483.
- The 2009 CMS cohort graduation rate was 66% compared to 71.7% for North Carolina.
- More than 150,000 students are enrolled in degree or college-transfer programs at the 35 colleges, universities, community colleges and technical institutes located within the 13 county Charlotte Metro Region. Institutions located within the county are listed in the table below.
- Over 40% of Mecklenburg county residents age 25 years and older have at least a bachelor's degree compared to 26% of North Carolina residents.



Mecklenburg County Demographics

Education Data

Educational Attainment¹	%	Primary and Secondary Schools³	# of schools
<i>Less than 9th grade</i>	4.3%	<i>Elementary Schools</i>	103
<i>9th to 12th grade, no diploma</i>	6.6%	<i>Middle Schools</i>	33
<i>High school graduate (includes equivalency)</i>	19.3%	<i>High Schools</i>	31
<i>Some college, no degree</i>	21.5%	<i>Alternative/Special</i>	4
<i>Associate's degree</i>	8.4%	<i>Private</i>	64
<i>Bachelor's degree or higher</i>	39.9%		
Institutions of Higher Education²		2009 CMS Graduation Rate³	66.0%
<i>University of North Carolina-Charlotte</i>		Per Pupil Expenditure³	\$8,483
<i>Queens University</i>			
<i>Johnson & Wales University</i>			
<i>Johnson C. Smith University</i>			
<i>King's College</i>			
<i>Montreat College</i>			
<i>Pfeiffer University</i>			
<i>Central Piedmont Community College</i>			

ECONOMIC

The recent economic downturn has resulted in increased unemployment and poverty rates. Despite the recession, Charlotte is still the number two banking center in the US with \$2.3 trillion in assets and is sixth in number of Fortune 500 headquarters.

Unemployment Rate

- The unemployment rate in Mecklenburg County increased from 4.6% in 2000 to 10.8% in 2009.

Income and Poverty Status

- The 2009 median family income for Mecklenburg County was \$64,752 compared to \$54,288 for North Carolina.
- In 2009, 14% of all persons in Mecklenburg lived in poverty compared to 16.3% across the state (see Determinants of Health for more information).

Mecklenburg Demographics

Economic Data 2009

Unemployment Rate¹	10.8%
Median Family Income¹	\$64,752
% of All Persons Living In Poverty¹	14.0%
<i>persons 18 years or older</i>	12.0%
<i>persons 65 years and older</i>	7.8%
Five Largest Employers in Mecklenburg County²	
<i>Wachovia</i>	
<i>Carolinas HealthCare System</i>	
<i>Charlotte Mecklenburg Schools</i>	
<i>Bank of America</i>	
<i>State of North Carolina</i>	

Sources

¹United States Census Bureau, American Community Survey: www.census.gov

²Charlotte Chamber of Commerce: www.charlottechamber.com

³Charlotte Mecklenburg School District: www.cms.k12.nc.us



DETERMINANTS OF HEALTH

OVERVIEW

Determinants of health are defined as the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics (*World Health Organization*). Together, these factors contribute to inequities in health, explaining why people living in poverty die sooner and get sick more often than those living in more privileged conditions.

The World Health Organization (WHO) Commission on Social Determinants of Health concluded in 2008 that the social conditions in which people are born, live, and work are the single most important determinant of one's health status. In other words, a person's zip code may be more important to health than their genetic code. Low-income neighborhoods may offer inadequate healthcare services, lower quality educational opportunities, fewer job opportunities, and higher crime rates when compared to more mixed-income or high-income communities, all factors which may contribute to continued poverty and the development of poor health outcomes.

Good health involves reducing levels of educational failure, unemployment and improving housing standards for all residents.

2009 MECKLENBURG QUICK FACTS: DETERMINANTS OF HEALTH

- The recent economic downturn has led to increased unemployment rates, foreclosures and overall poverty within the county.
- Unemployment in the county has increased from 7.4% in 2005 to 10.7% in 2009.
- Nearly 20% of related children under 18 and 8% of people 65 years old and over who reside in the county live in poverty.
- While poverty levels have increased for the county, Mecklenburg poverty rates are generally lower than that of North Carolina and the Nation. However, disparities persist across race/ethnicity and education.
- High rates of linguistic isolation exist among Hispanic and Asian American residents which in turn may impact overall health status.
- Individuals and families with access to affordable housing have a greater sense of privacy, security, stability, and control which in turn make important contributions to health.
- Renters, more than homeowners, are more likely to experience housing cost burdens, spending 30% or more of their annual income towards housing.
- Single-family households, in particular single mother-headed households, have higher rates of poverty in comparison to other family types.
- In 2009, 27% of families with a female householder and no husband present had incomes below the poverty level.

LIMITED ENGLISH PROFICIENCY

Fluency in English is a key factor in one’s ability to navigate the healthcare system. Individuals with limited English proficiency face significant challenges in attaining employment and receiving quality care.

The Census Bureau defines linguistic isolation as a household in which NO member 14 years old and over:

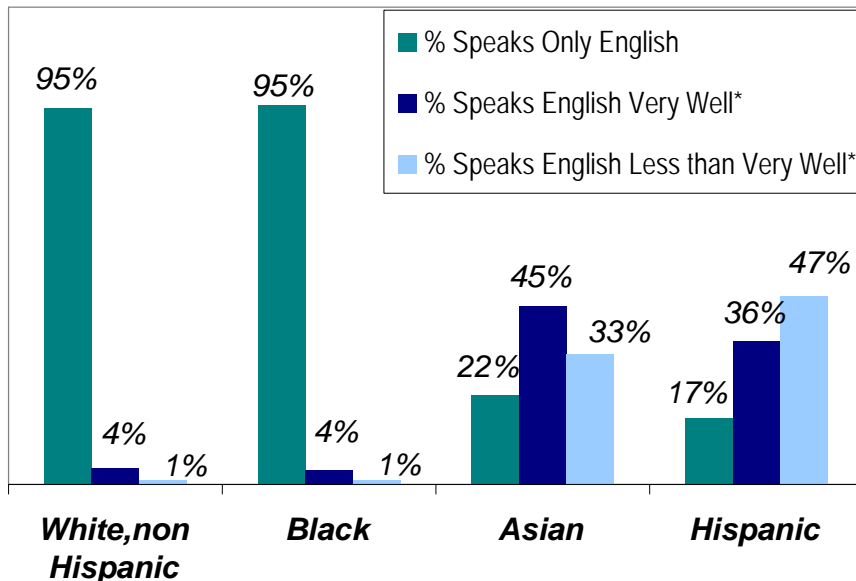
- Speaks only English or
- Speaks a non-English language and speaks English "very well."

In other words, all members 14 years old and over have at least some difficulty with English.

Based upon 2009 US Census estimates:

- Of the various racial and ethnic groups in Mecklenburg, Hispanics and Asian Americans represent the highest number of persons who speak a non-English language at home.
- Asian Americans and Hispanics are also more likely to report limited English proficiency. An estimated 33% of Asians and 47% of Hispanics in the county speak English “Less than Very Well”.
- These high rates of linguistic isolation among Hispanic and Asian American residents speak to the strong need for interpreter and translator services within healthcare systems.

**Language Spoken at Home by Ability to Speak English
Mecklenburg Residents, 2009
(Populations 5yrs. and Over)**



Notes:
The following data are based on a sample and are subject to sampling variability.

Estimates for Blacks and Asians include some persons of Hispanic origin.

Estimates for American Indians, Native Hawaiians and Other Pacific Islanders are not available due to small population sizes.

*Estimate based upon Mecklenburg residents who speak English (“very well” or “less than very well”) but speak a language other than English at home.

Data Source: US Census Bureau, 2009 American Community Survey

EMPLOYMENT AND INCOME

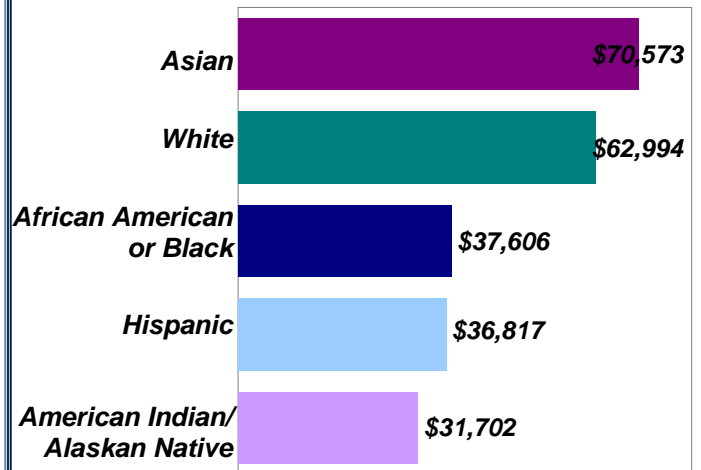
Employment and living wages can provide financial security and access to resources, such as housing and healthcare. Current research shows that life expectancy increases with levels of income. One study demonstrated that men and women in the highest income level can expect to live at least 6 years or more than poor men and women (*National Heart, Lung and Blood Institute*).

The recent economic downturn has led to increased unemployment rates, foreclosures and overall poverty within the county. Neighborhoods with high levels of unemployment and poverty are at increased risk for excess disease and death.

- In 2005, the unemployment rate for the county was 7.4%. By 2009 the percent of residents who were unemployed increased to 10.8% (*2009 US Census Bureau unemployment estimates*).
- Based upon the most recent Census data, unemployment rates were higher among African American (14%) and Hispanic (13%) residents than for White (9%) and Asian (6%) residents.
- With the exception of Asians, the median household income for racial and ethnic minority populations remains much lower than that of Whites in the county.
- Perceived health status varies by income. According to the 2009 Behavior Risk Factor Surveillance System, Mecklenburg residents with lower income (\$50,000 a year or less) are eight times more likely to report their health status as “poor” or “fair” in comparison to persons with higher levels of income (\$50,000 a year or more).

Additional information on income and its relation to health status can be found in the Health Disparities Section.

Median Household Income in Past 12 months
 2009 Census data for Mecklenburg Residents
 (By Race/Ethnicity*)



*Estimates for Asians, American Indian/Alaskan Native, Blacks and Whites include some persons of Hispanic origin.

Household Income: is the sum of money income received in the calendar year by all household members 15 years old and over, including household members not related to the householder, people living alone, and other nonfamily household members

Data is for 2009 inflation-adjusted dollars. Data is based upon sample and subject to sampling variability.

Source: US Census Bureau, 2009 American Community Survey, Mecklenburg County

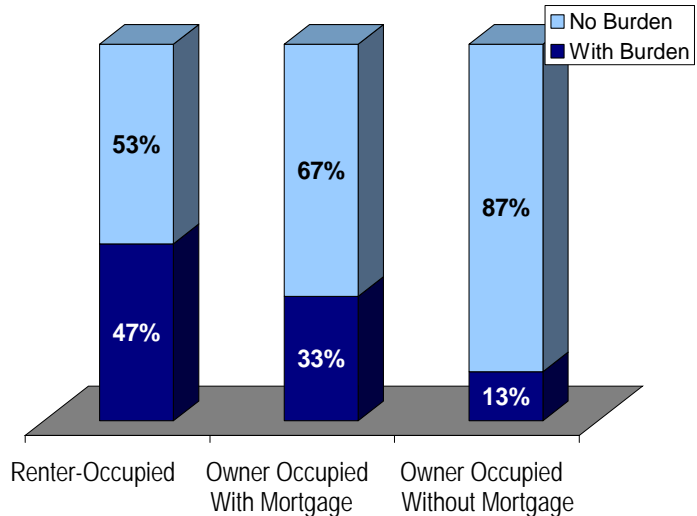
AFFORDABLE HOUSING

Housing is commonly considered to be “affordable” when a household pays no more than 30 percent of its annual income on housing (either renting or buying). Individuals and families with access to affordable housing have a greater sense of privacy, security, stability, and control which in turn make important contributions to health. Conversely, a shortage of affordable housing often relegates lower-income families to substandard housing in unsafe, overcrowded neighborhoods with higher rates of poverty and fewer resources for health improvements.

Individuals and families living in unaffordable housing tend to have fewer funds left over in their budgets to pay for food and health care expenditures, setting the stage for increased illness and premature deaths.

- In 2009, Mecklenburg County had 358,000 occupied housing units - 222,000 (62%) owner occupied and 136,000 (38%) renter occupied.
- 2% of the households did not have telephone service and 7% of the households did not have access to a car, truck, or van for private use.
- The median monthly housing costs for mortgaged owners was \$1,429, non-mortgaged owners \$442, and renters \$828.
- In Mecklenburg, renters spend a greater proportion of their annual income towards housing than do homeowners. Based upon 2009 estimates, 33% of owners with mortgages, 13 % of owners without mortgages, and 47% percent of renters in the county spent 30 percent or more of household income on housing.

Housing Cost Burden for Mecklenburg Residents, 2009
(Owner Occupied and Renter Occupied Housing)



Notes:

Housing Cost Burden: Individuals or families who spend *more than 30%* of their income on housing are categorized as having a housing-cost burden.

No Housing Cost Burden: Individuals or families who spend *less than 30%* of their income on housing are categorized as having no housing-cost burden.

Source: US Census Bureau, 2009 American Community Survey, Mecklenburg County

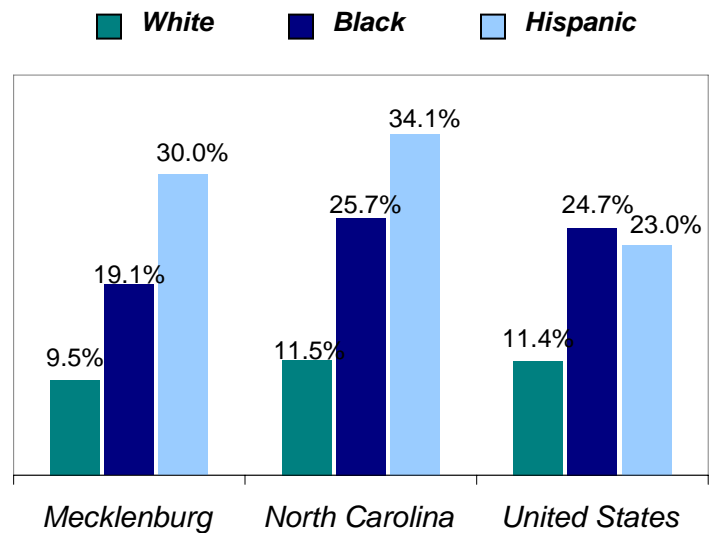
POVERTY IN MECKLENBURG COUNTY

The relationship between poverty and health is complex and influenced by multiple, interrelated factors including: poor environmental conditions, low education attainment, financial barriers in accessing health services, and a lack of resources necessary to maintain good health status.

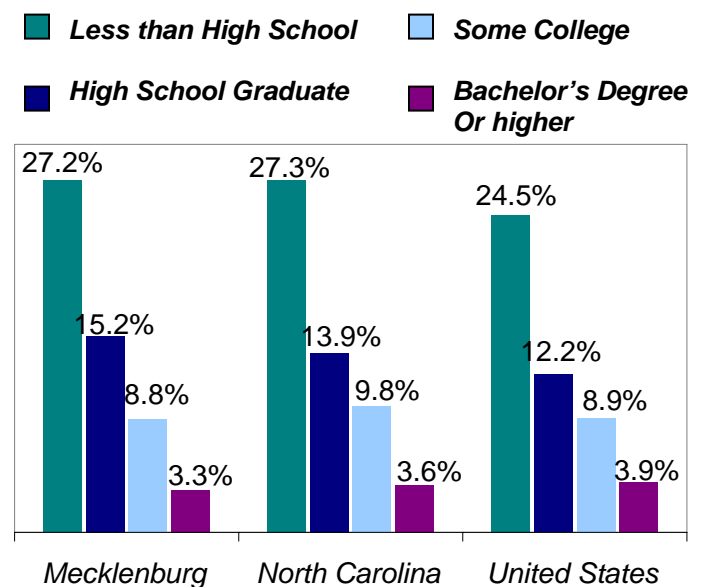
Researchers have found that African American and Hispanic families, more frequently than White families, live in areas of concentrated poverty resulting in racial as well as economic segregation. Low-income neighborhoods may offer inadequate healthcare services, lower quality educational opportunities, fewer job opportunities, and higher crime rates when compared to more mixed-income or high-income communities, all factors which may contribute to continued poverty and the development of poor health outcomes.

- In 2001, there were 63,104 Mecklenburg residents living below the poverty level, about 9% of the population. By 2009, the number of persons living below poverty increased to 14% of the population.
- The 2009 poverty level for Mecklenburg is less than State or National estimates. However, disparities persist across race/ethnicity and education. Blacks or African Americans (19.1%) and Hispanic residents (30%) are more than twice as likely to live in poverty as Whites (9.5%).
- Higher levels of education are most often associated with financial security, increased life expectancy and improved health status. Approximately 27% of Mecklenburg residents with less than a high-school diploma live in poverty compared to only 3% of residents with a bachelor’s degree or higher.
- Poverty greatly impacts vulnerable populations, such as children and the elderly. In Mecklenburg, nearly 20% of related children under 18 and 8% of people 65 years old and over live in poverty.

Poverty Status by Race/Ethnicity, 2009
Mecklenburg, North Carolina, United States
 (Percent of Population in Poverty)



Poverty Status by Education, 2009
Mecklenburg, North Carolina, United States
 (Percent of Population in Poverty)



Source: US Census Bureau, 2009 American Community Survey, Mecklenburg County

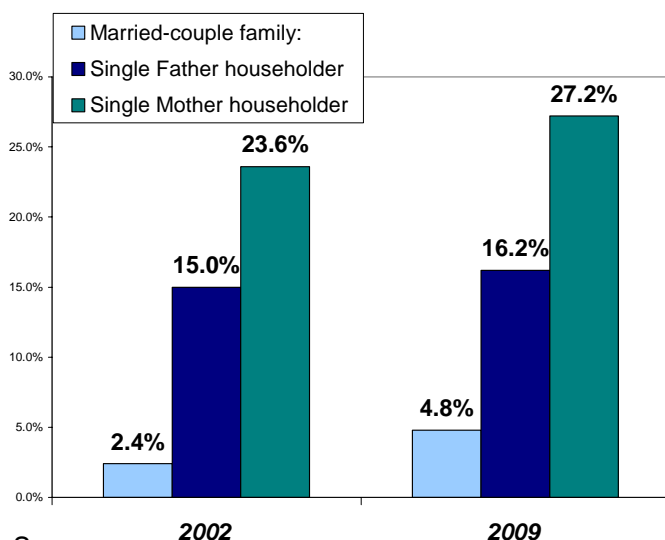
Mecklenburg Families and Poverty

Poverty, or the threat of poverty, remains one of the most stressful challenges facing families today. Families that live in poverty are often unable to afford basic necessities, such as food, housing, and stable child care.

Single-family households, in particular single mother-headed households, tend to have higher rates of poverty. Increased poverty rates among single-mothers can be attributed to multiple factors, including: higher earning power of men compared with women, lack of affordable child care and lack of child support payments.

- The proportion of Mecklenburg families with incomes below poverty has increased from 7.3% in 2002 to 10% in 2009. Of the total number of families living in poverty during 2009, 18% included children under the age of 5 years.
- In 2009, 27% of families with a female householder and no husband present had incomes below the poverty level in comparison to 16% of families with a male householder and no wife present.

**Poverty Status by Family Type, 2002/2009
Mecklenburg County Residents
(Percent of Families in Poverty)**



Source: US Census Bureau 2002/2009 American Community Survey

Sources

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University of North Carolina at Chapel Hill, Jordan Institute for Families. Family Trends: Single Parents. January 2004, Volume1, No.1.

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Wilson, Elisabeth et al., Effects of Limited English Proficiency and Physician Language on Health Care Compensation. Journal of General Internal Medicine. 2005.

MECKLENBURG COUNTY MAPS



Geographic Indicators

- Mecklenburg Zip Codes
- Mecklenburg Municipalities

Demographic Indicators

- Distribution of Children Less than 5 years
- Distribution of Persons 65 years and Older
- Distribution of African American Population
- Distribution of Hispanic Population

Social Determinants of Health Indicators

- Median Household Income
- Families Experiencing Poverty
- Medicaid Recipients
- Work First Recipients
- Food and Nutrition Recipients

MECKLENBURG COUNTY MAPS



Birth Outcomes

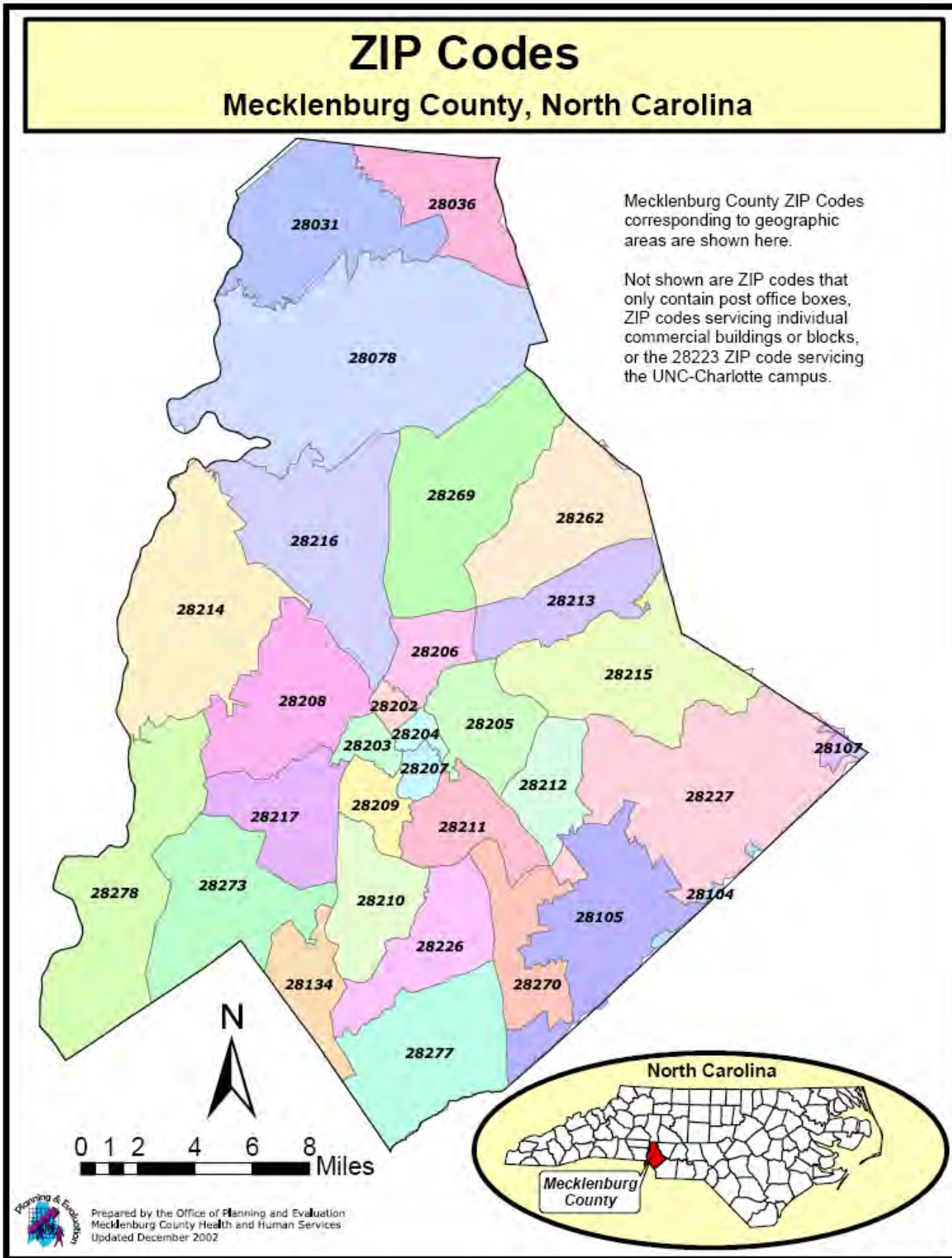
Distribution of First Time Moms

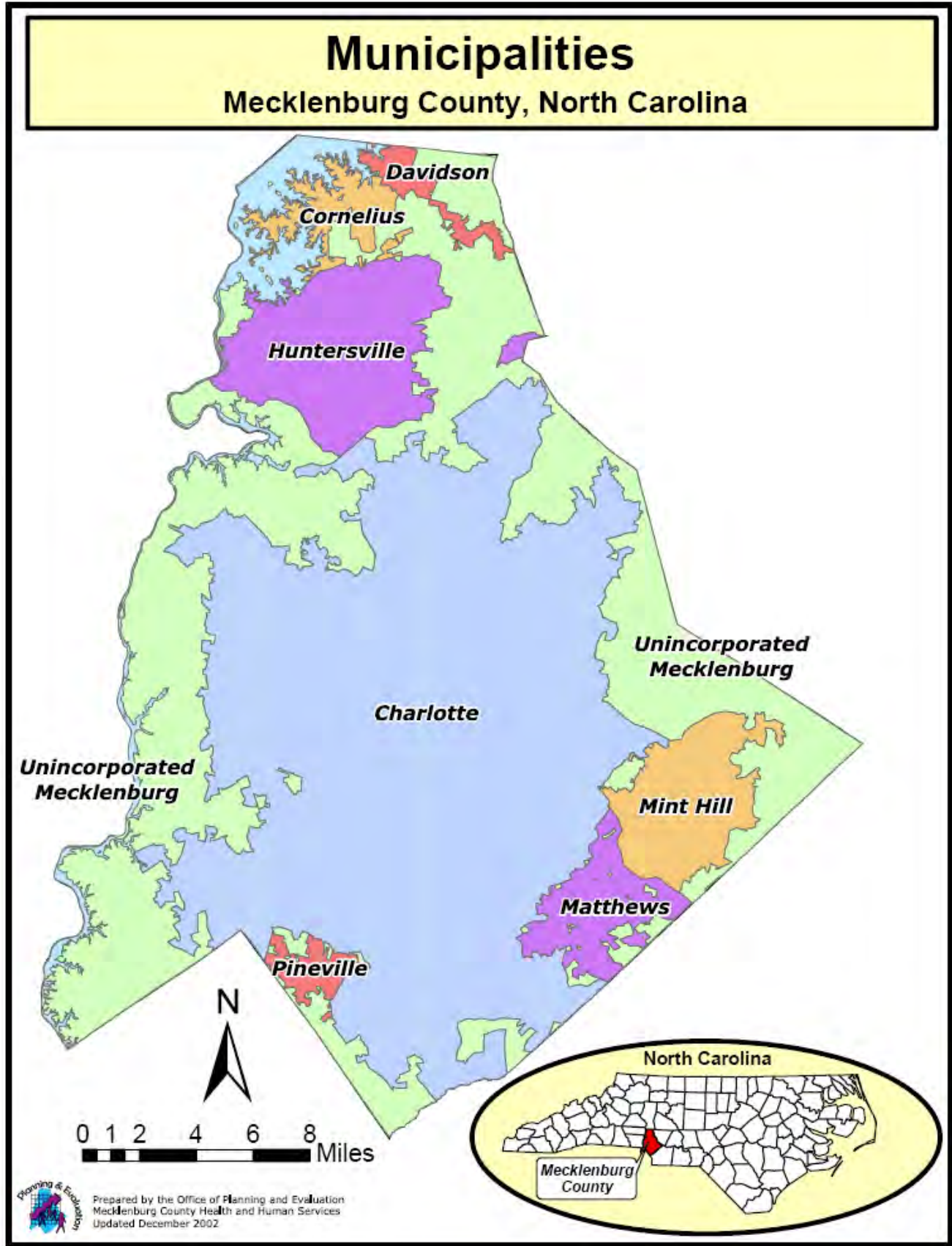
Births by Educational Attainment of Moms

Premature Births

Low Birth Weight

Teen Pregnancy Rates (Girls 10 – 19 yrs)

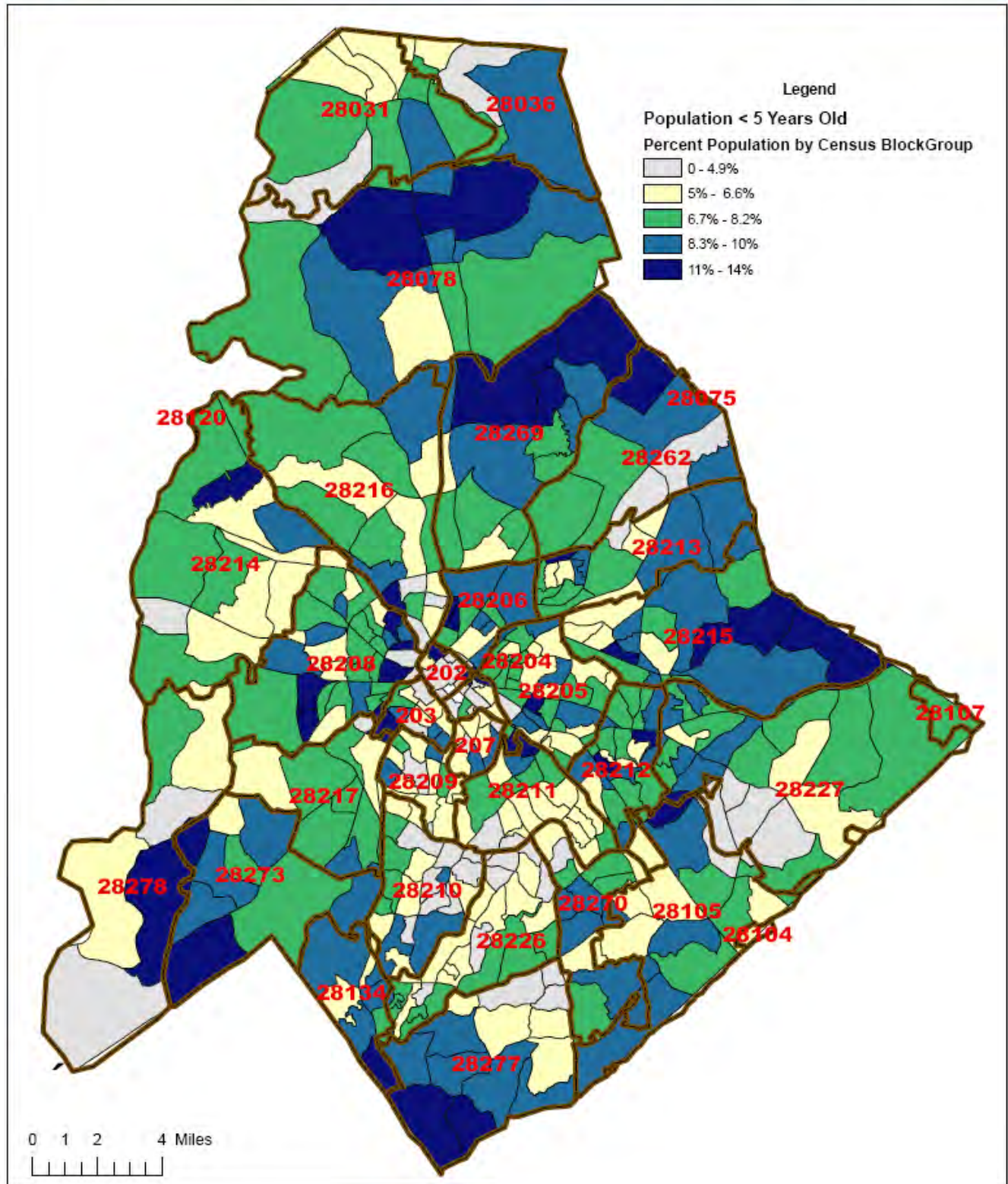




Percent Population < 5 Years Old: Mecklenburg County

Source:
1. Demographic data provided by Mecklenburg County GIS (2009 Applied Geographic Solutions, Inc.)

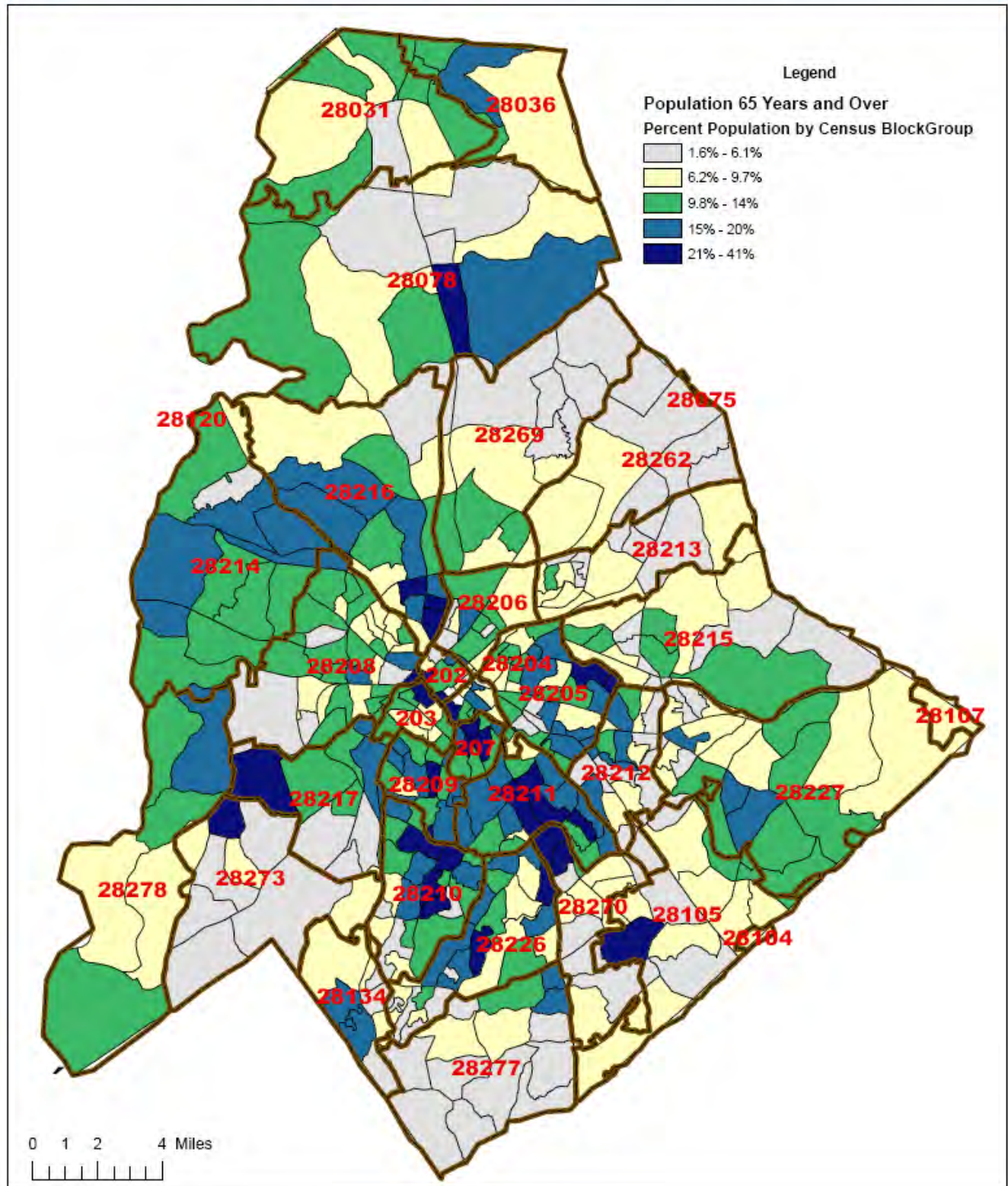
Prepared by Mecklenburg County GIS



Percent Population 65 Years and Over: Mecklenburg County

Source:
1. Demographic data provided by Mecklenburg County GIS (2009 Applied Geographic Solutions, Inc.)

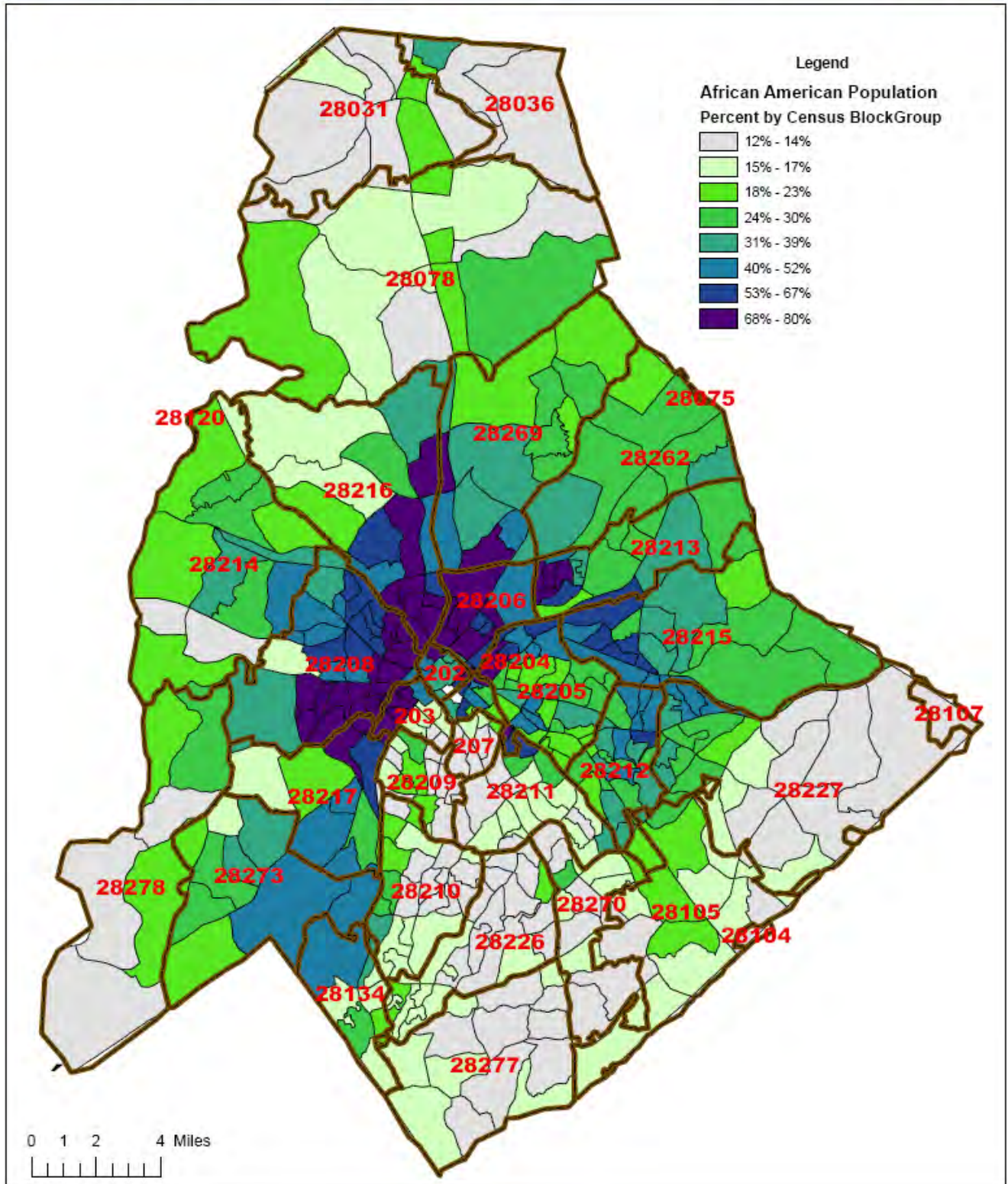
Prepared by Mecklenburg County GIS



Percent Population African-American: Mecklenburg County

Source:
1. Demographic data provided by Mecklenburg County GIS (2009 Applied Geographic Solutions, Inc.)

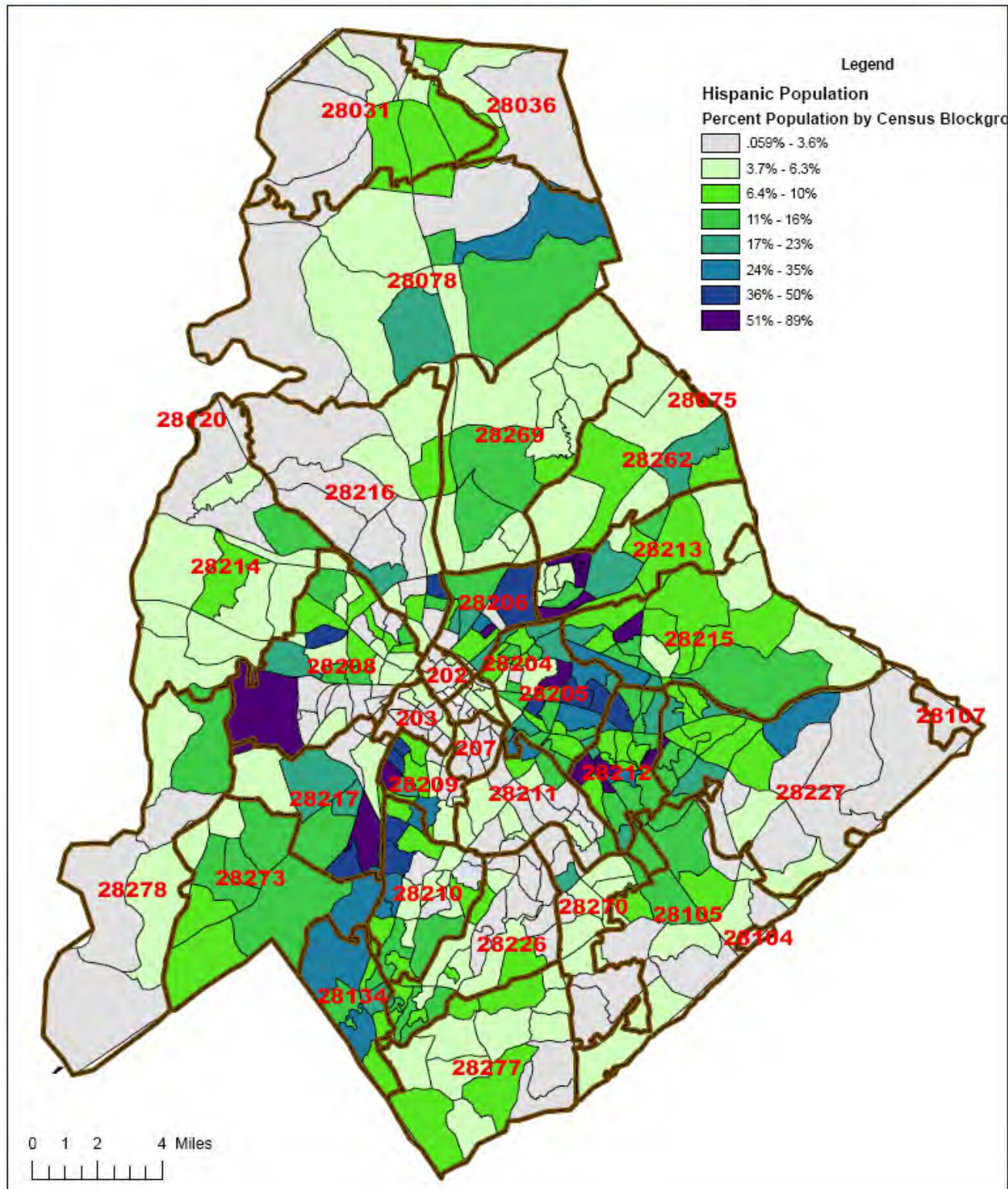
Prepared by Mecklenburg County GIS



Percent Population Hispanic: Mecklenburg County

Source:
1. Demographic data provided by Mecklenburg County GIS (2009 Applied Geographic Solutions, Inc.)

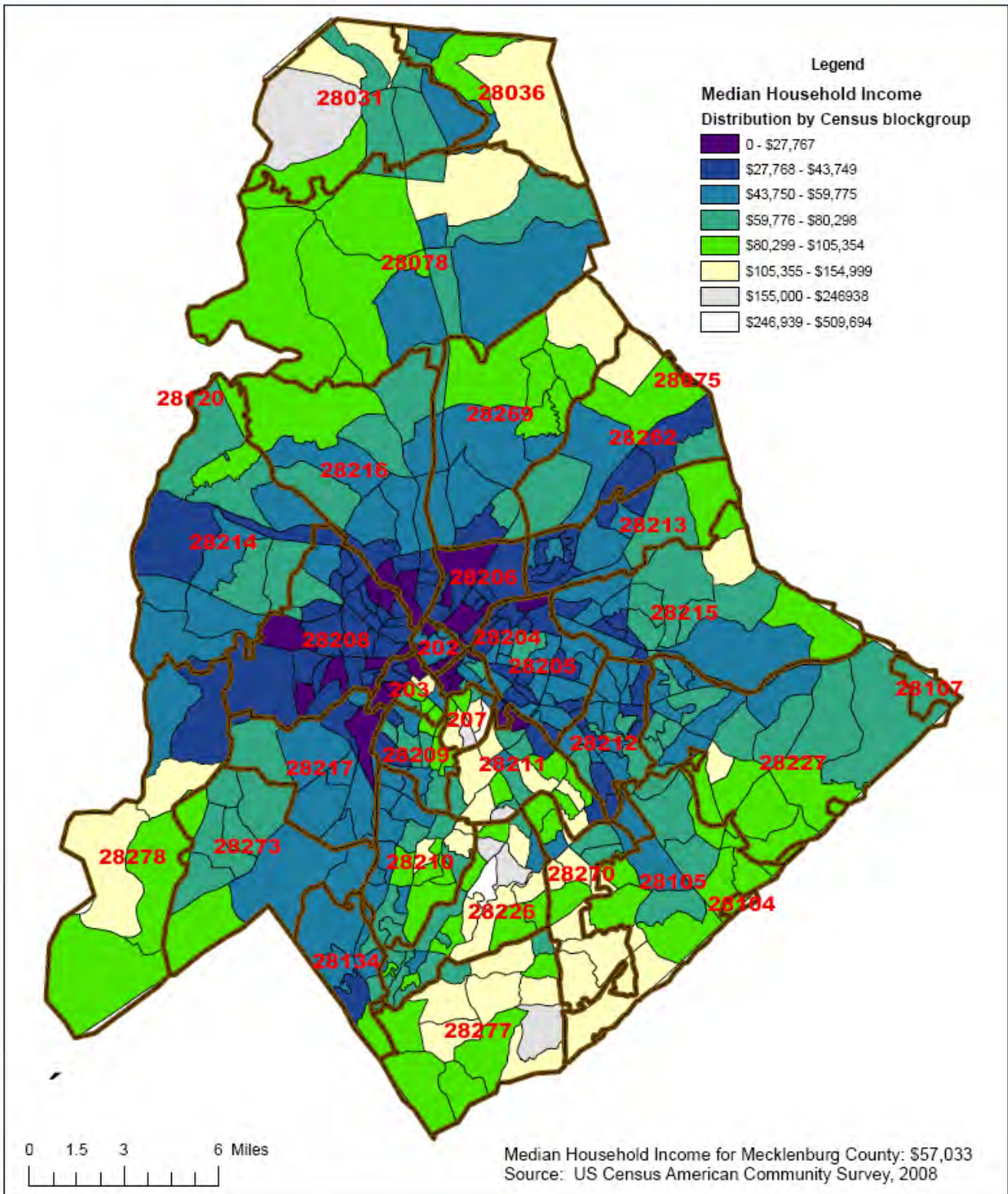
Prepared by Mecklenburg County GIS

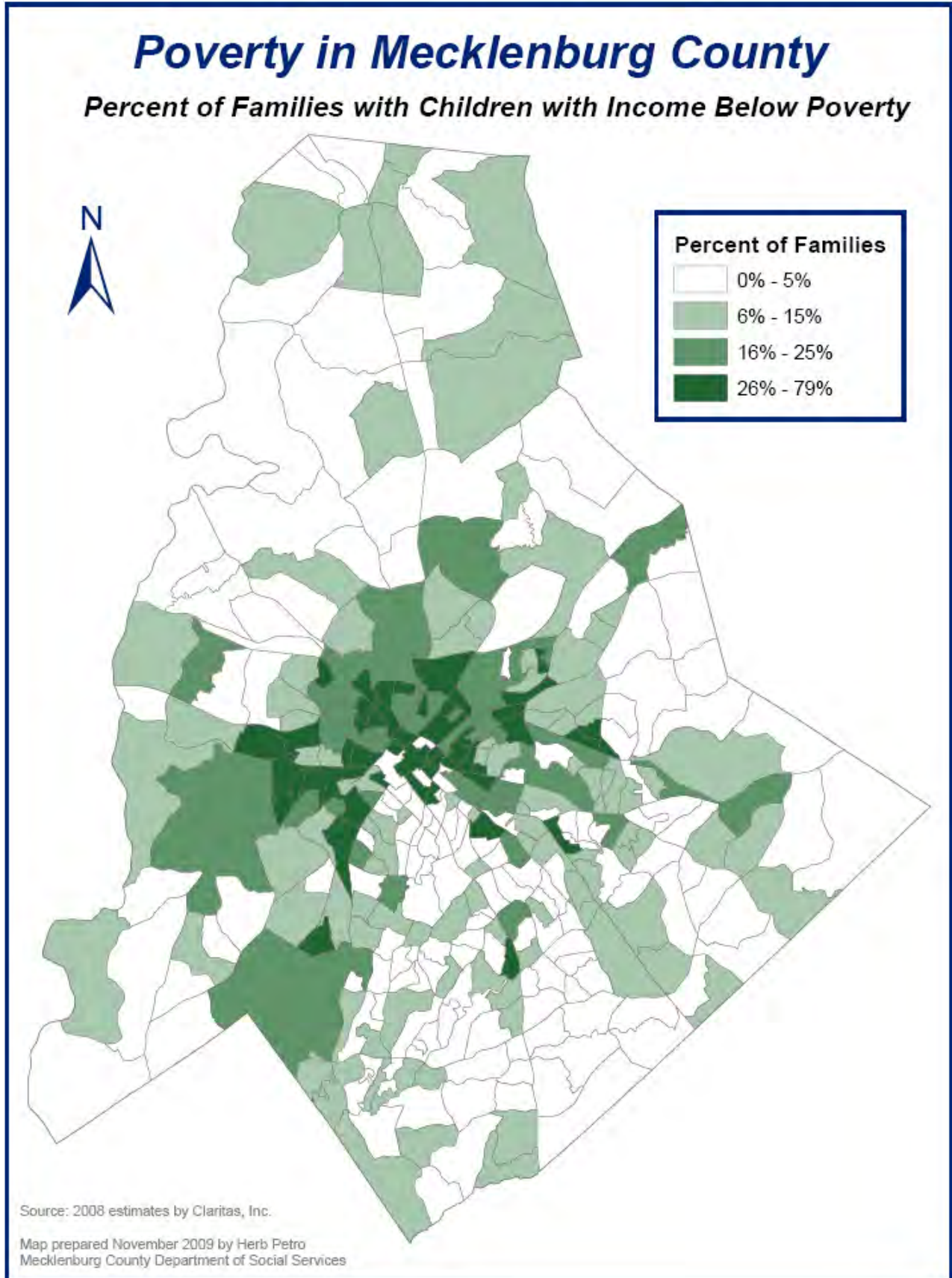


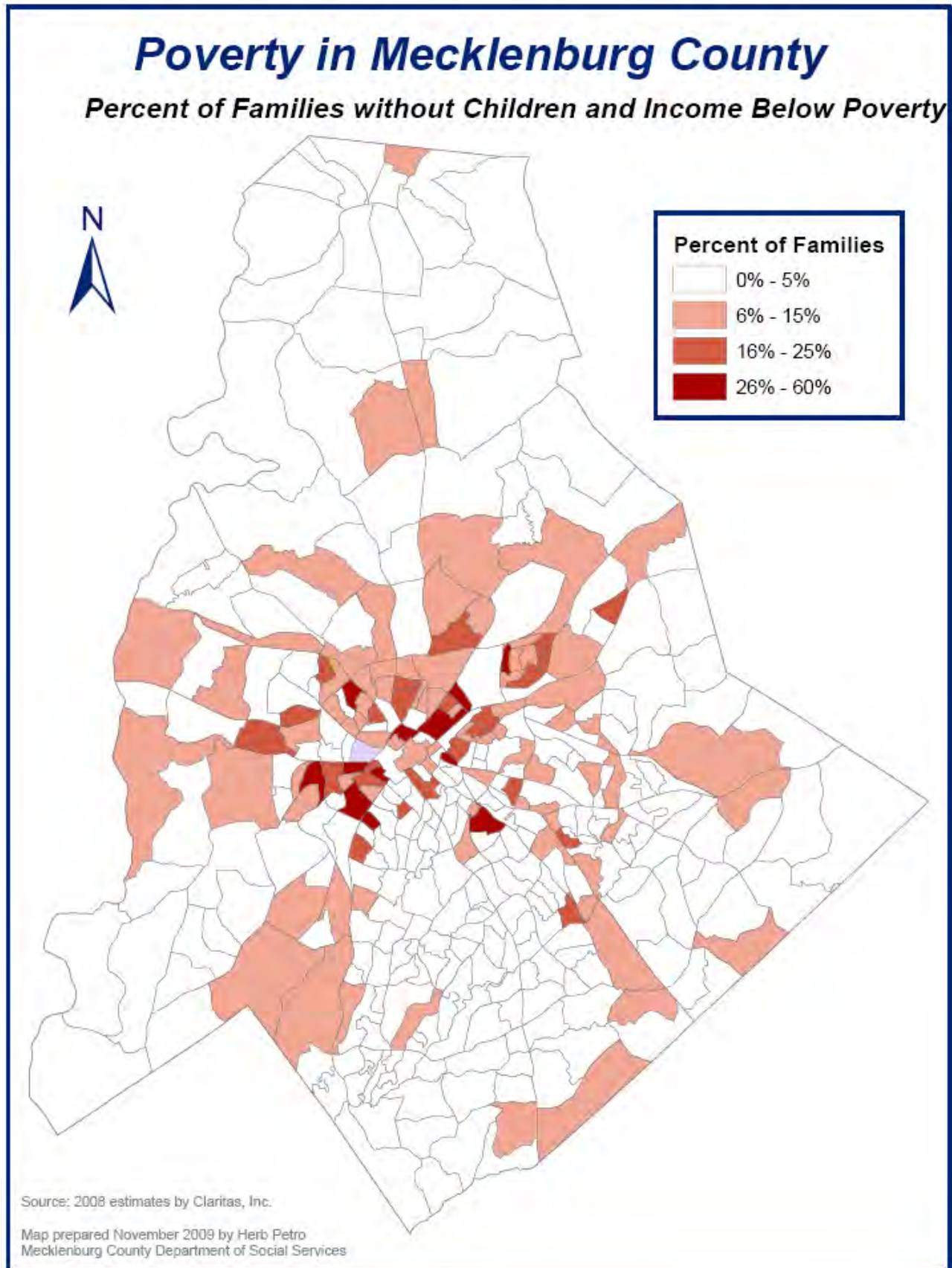
Median Household Income: Mecklenburg County

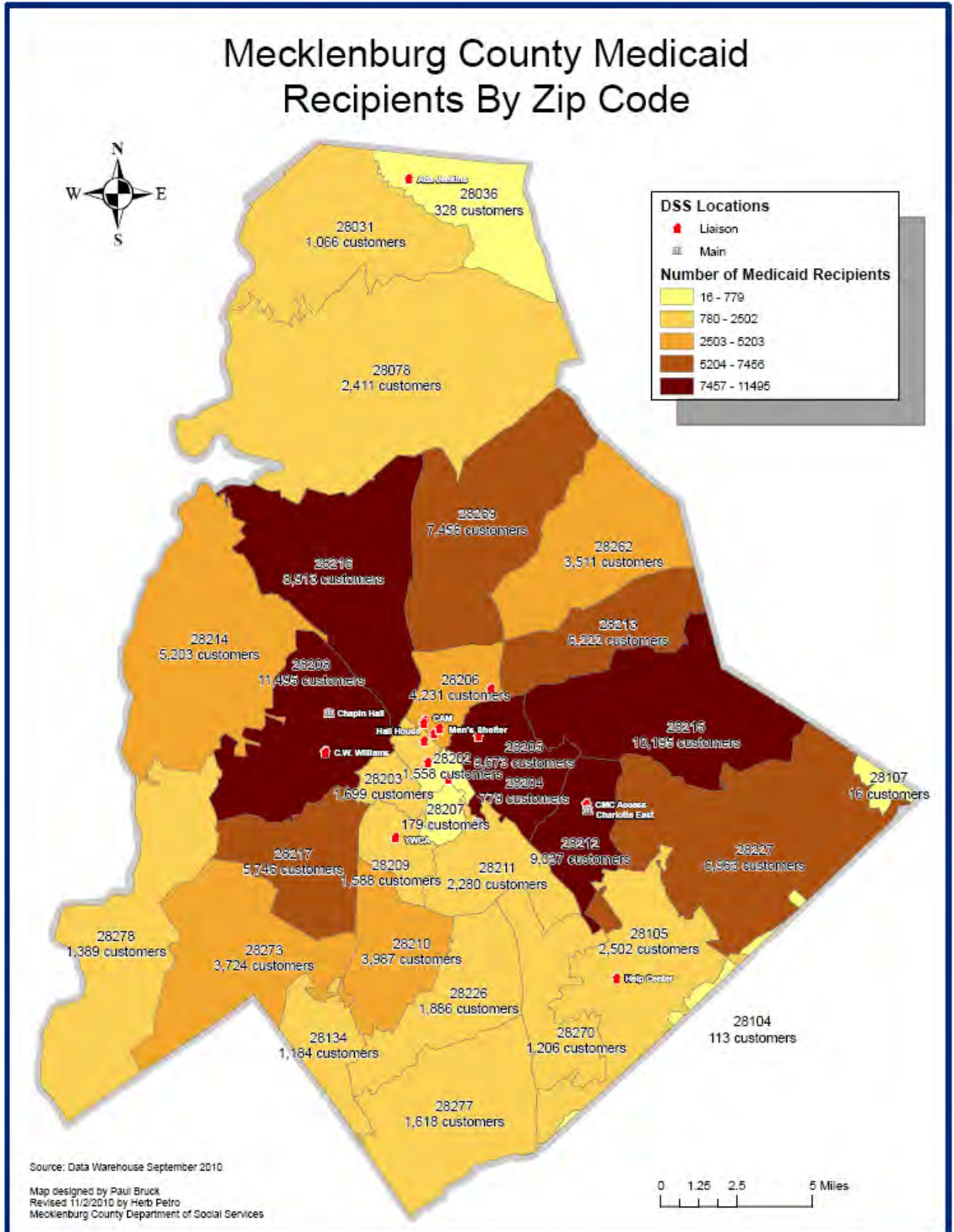
Source:
1. Income data provided by Mecklenburg County GIS (2008 Applied Geographic Solutions, Inc.)

Prepared by Mecklenburg County GIS

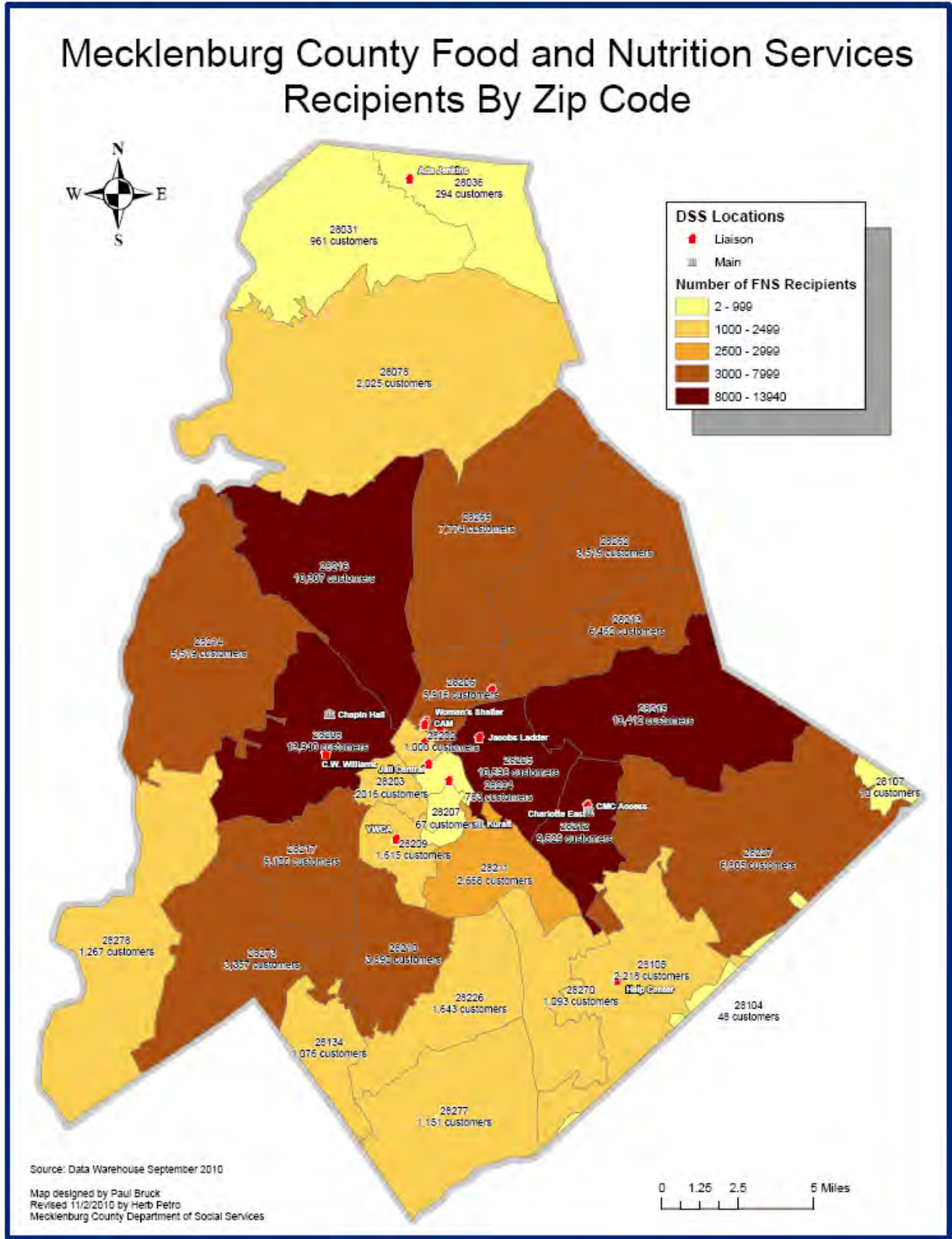








Mecklenburg County Food and Nutrition Services Recipients By Zip Code



Mecklenburg County Work First Recipients By Zip Code

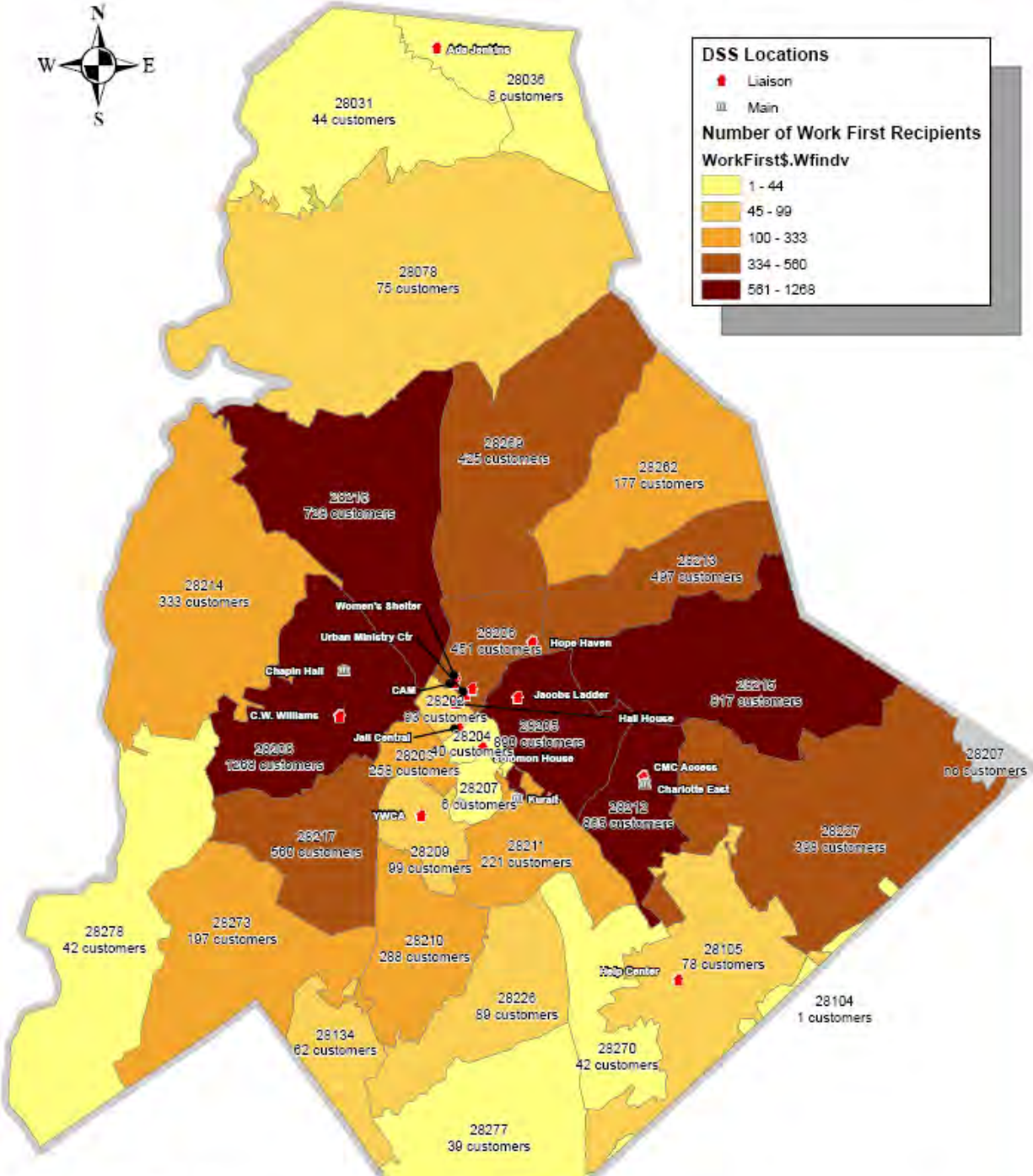


DSS Locations

- Liaison
- Main

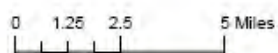
Number of Work First Recipients
WorkFirst\$.Wfindv

- 1 - 44
- 45 - 99
- 100 - 333
- 334 - 560
- 561 - 1268



Source: Data Warehouse September 2010

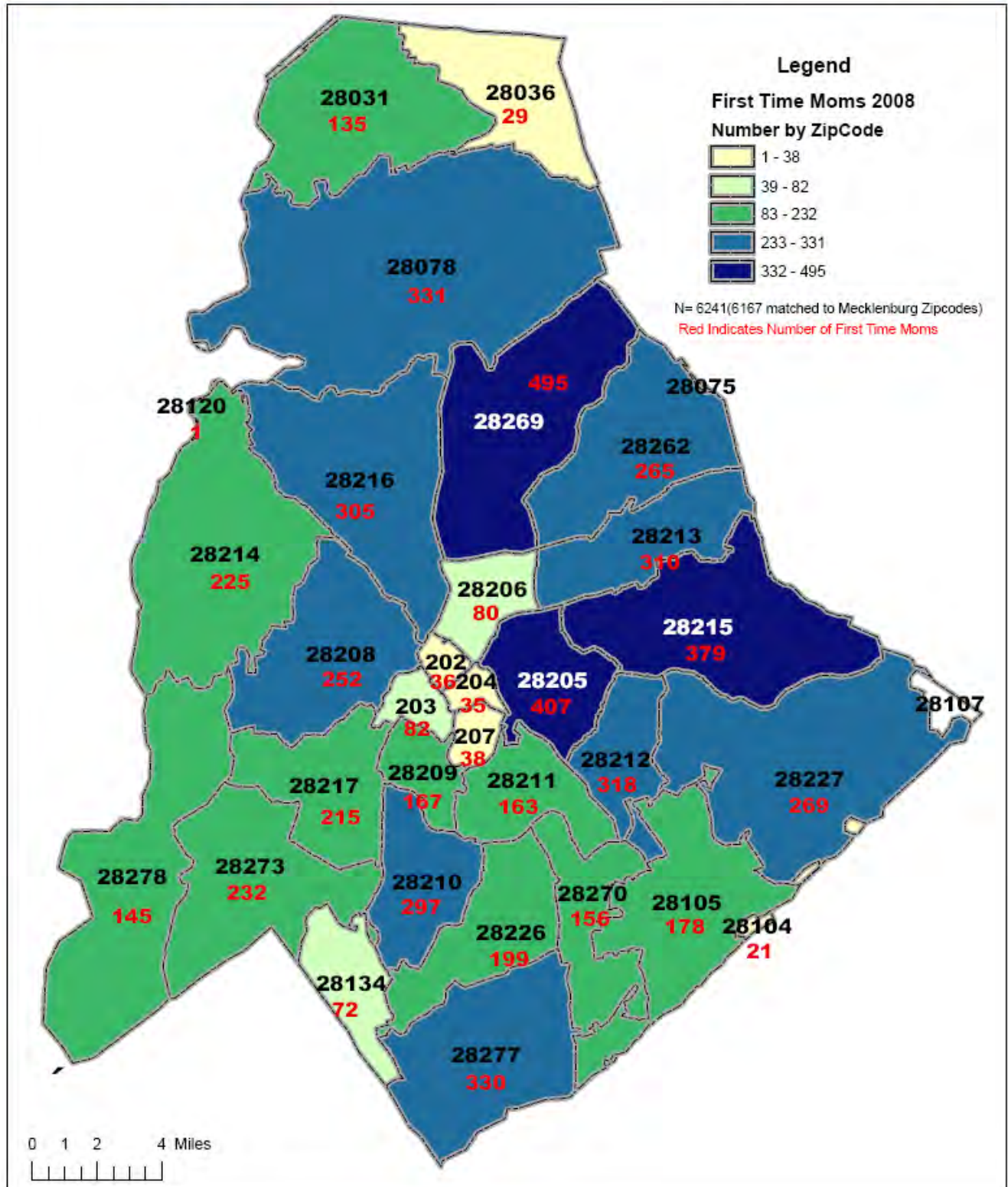
Map designed by Paul Bruck
Revised 11/2/2010 by Herb Petro
Mecklenburg County Department of Social Services



1st Time Moms 2008: Mecklenburg County

Source:
1. Mecklenburg County Health Department, 2008

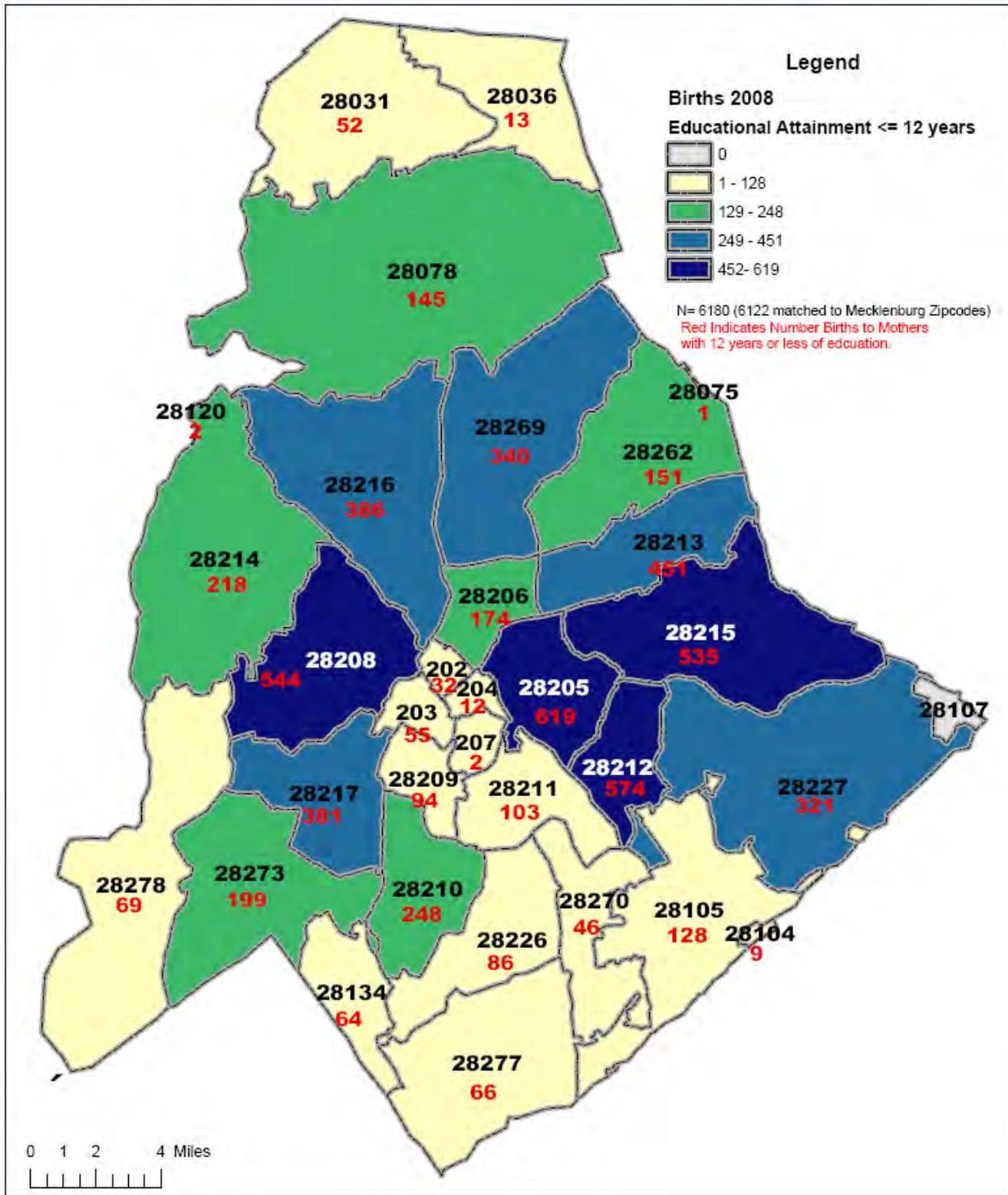
Prepared by Mecklenburg County GIS



Births by Educational Attainment of Moms: Mecklenburg County

Source:
1. Mecklenburg County Health Department, 2008

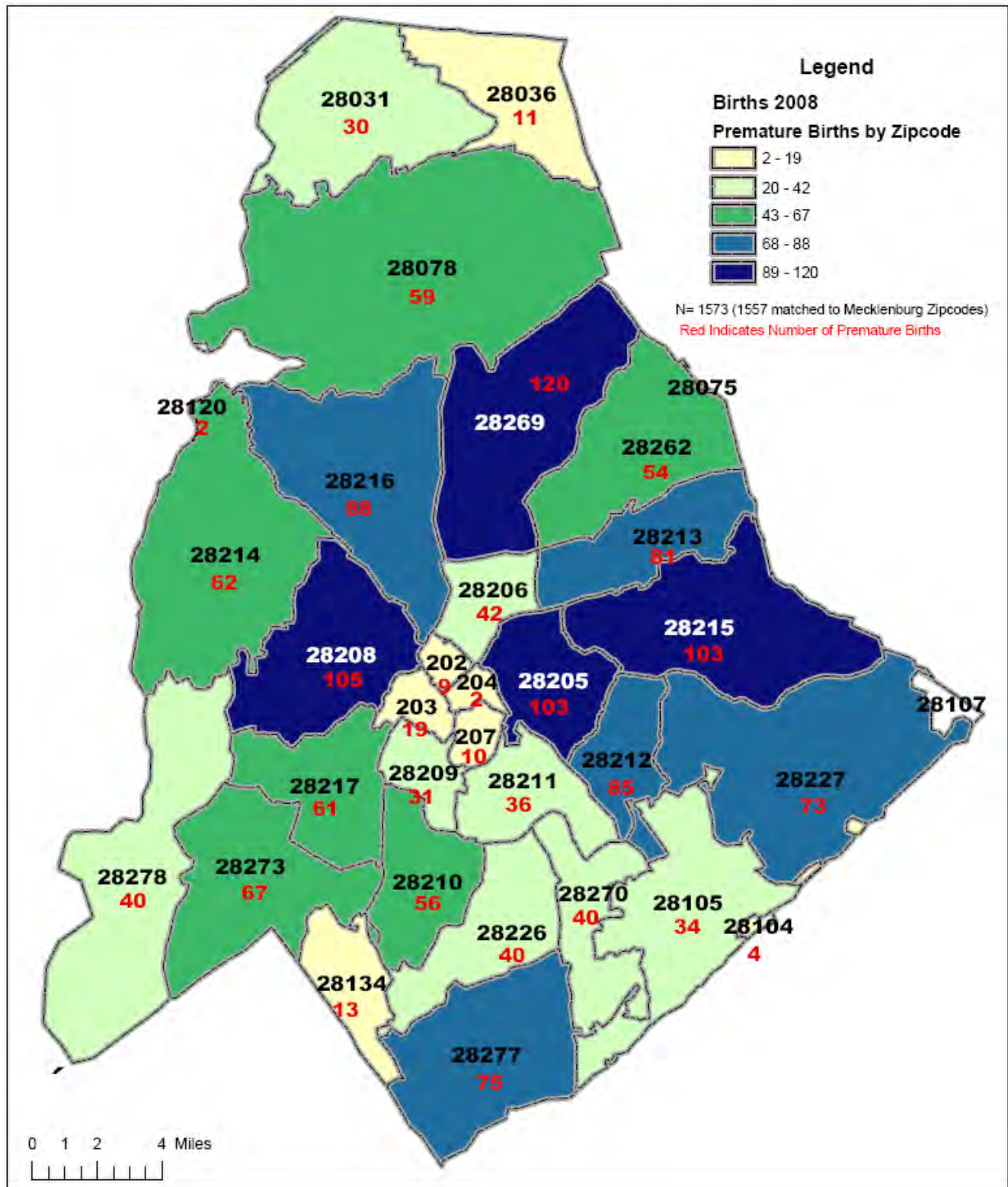
Prepared by Mecklenburg County GIS



Premature Births 2008: Mecklenburg County

Source:
1. Mecklenburg County Health Department, 2008

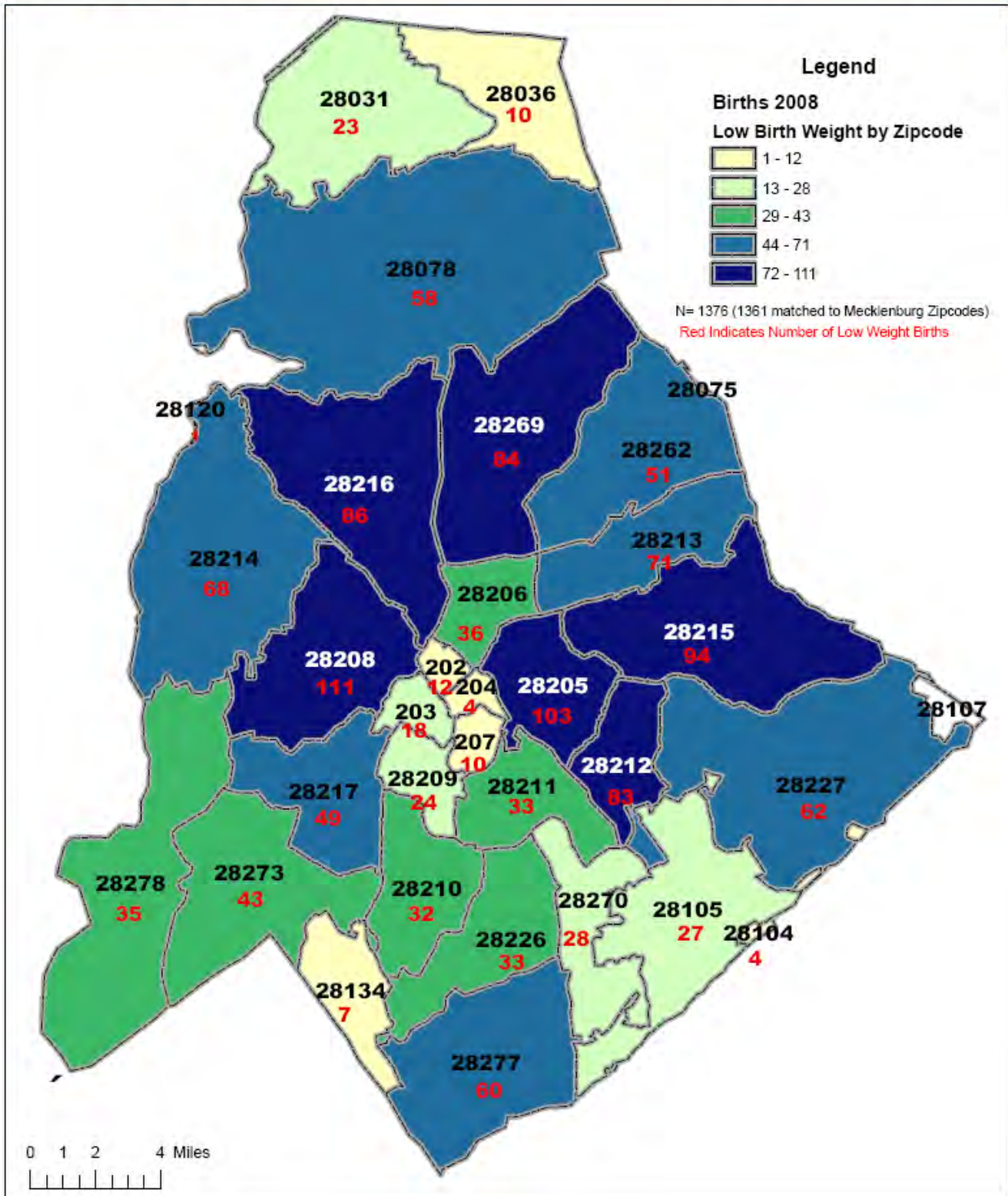
Prepared by Mecklenburg County GIS



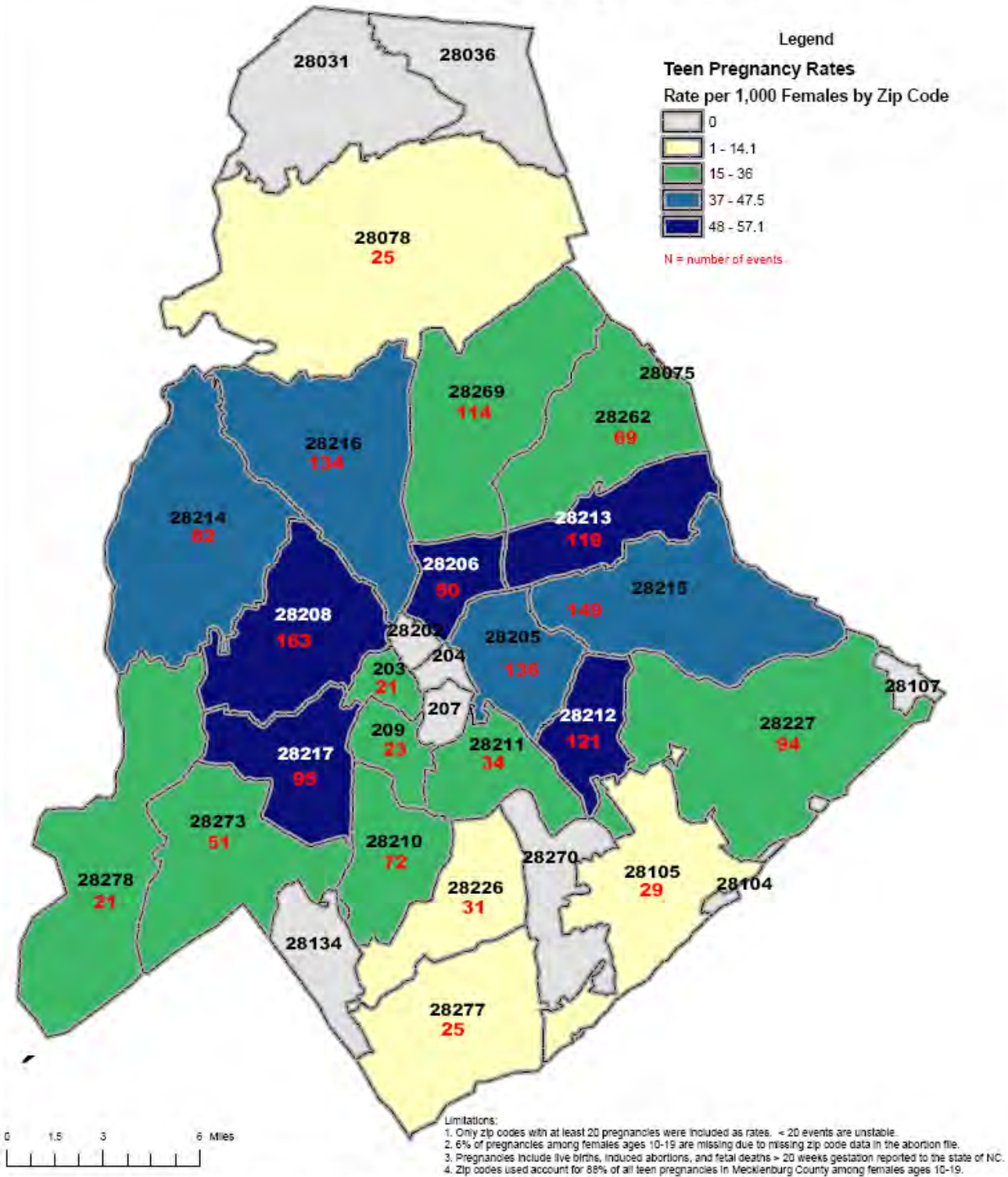
Low Birth Weight 2008: Mecklenburg County

Source:
1. Mecklenburg County Health Department, 2008

Prepared by Mecklenburg County GIS



2008 Teen Pregnancy Rates per 1,000 Females Ages 10-19 Mecklenburg County Zip Codes



Source: NC DHHS/State Center for Health Statistics

Prepared by the Mecklenburg County Health Dept, Epidemiology Program, February 2010. Mecklenburg County GIS, February 2010



MORTALITY

OVERVIEW

In 2008, the ten leading causes of death in Mecklenburg County remained the same as in 2007 with the exception of two causes. Unintentional Injury dropped from the fifth leading cause to the sixth. Influenza and Pneumonia dropped down from the ninth leading cause of death to the tenth leading cause.

Cancer remains the leading cause of death after surpassing Heart Disease as the leading cause for the first time in Mecklenburg County in 2004. In 2008, Septicemia moved up to the ninth leading cause. HIV Disease dropped out of the top ten leading causes of death in 2006 and has not returned as a leading cause since.

Mecklenburg County ranks comparably to the state of North Carolina and the United States with the following exceptions: for Alzheimer's disease, Mecklenburg County ranks higher than NC and the US. Mecklenburg ranks lower than NC and the US for Diabetes and COPD which refers to chronic diseases of the lower airway such as chronic bronchitis and emphysema.

**Top Ten Leading Causes of Death
Mecklenburg, North Carolina, 2008 and the
United States, 2007**

	Meck	NC	USA
Cancer	1	2	2
Heart Disease	2	1	1
Stroke	3	4	3
Alzheimer's Disease	4	6	6
Chronic Obstructive Pulmonary Disease (COPD)	5	3	4
Unintentional Injury	6	5	5
Diabetes	7	7	7
Kidney Disease	8	9	9
Septicemia	9	10	10
Influenza and Pneumonia	10	8	8

2008 MECKLENBURG QUICK FACTS: MORTALITY

- Unintentional Injury is leading cause of death for children ages 1-14 and adults ages 25-44.
- Since 2004, Alzheimer's disease has been the 4th leading cause of death.
- Men are more likely to die from Unintentional Injuries than women. Women are more likely to die of Alzheimer's than men.
- Homicide is the leading cause of death for youth and young adults ages 15-24.
- Whites die at higher rates of Alzheimer's and COPD than Minorities. Minorities die at higher rates of Unintentional Injury, Homicides, and Diabetes than Whites.

SUMMARY OF MORTALITY TRENDS IN MECKLENBURG COUNTY

Positive Trends

- Deaths from Influenza and Pneumonia have been on the decline in Mecklenburg County.
- Unintentional Injury dropped from the 5th leading cause of death to the 6th leading cause.

Areas for Improvement

- Homicide, Unintentional Injury, and Suicide remain in the top three leading causes of death among adults age 15-24.
- Cancer and Heart Disease remain leading causes of death for adults age 25 years and older.
- Males die of higher rates of Homicide and Suicide than females.

TREND DATA

- In 2008, Cancer was the leading cause of death and Heart Disease was the second leading cause of death.
- The number of cancer deaths decreased 2.4% from 2007 to 2008. Cancer deaths decreased 5.2% for men and increased <1% for women.
- Deaths among males rank comparably to females with the exception of Unintentional Injury, Alzheimer's disease, Homicide, and Suicide. Females rank comparably to males with the exception of Infection and High Blood Pressure (Hypertension).
- Women tend to live longer and die of higher rates of Alzheimer's and other chronic diseases than men.
- Men die from Unintentional Injuries, Homicides, and Suicides at higher rates than females.
- People of other races often die at higher rates of Diabetes, Kidney Disease, Unintentional Injury, Homicide, and HIV than whites. They also die at younger ages than whites.
- Whites die at higher rates of Alzheimer's disease, COPD, and Infection than people of Other Races.
- Homicide and Motor Vehicle Crashes are the leading killers of adolescents and young adults ages 15-24.
- Congenital Birth Defects, Maternal Complications, and Prematurity/Low Birth Weight remain the leading causes of infant death.
- Unintentional Injury remains the leading cause of death for children ages 1 to 14 and the fourth leading cause of death among infants <1 year of age.
- In 2008, there were 142 infant and child deaths ages 0-17. Of the 142 deaths, 24% were *preventable* and a majority occurred among children ages 1-17.

Leading Causes of Death by Age Group 2008 Mecklenburg County

Infants (< 1yr.)	Ages 25 - 44
* Congenital Defects	* Unintentional Injury
* Maternal Complications	* Cancer
* Prematurity & Immaturity	* Heart Disease
Ages 1 -14	Ages 45 - 64
* Unintentional Injury	* Cancer
* Cancer	* Heart Disease
* Homicide	* Unintentional Injury
Ages 15 - 24	Ages 65+
* Homicide	* Cancer
* Unintentional Injury	* Heart Disease
* Suicide	* Alzheimer's Disease

Leading Causes of Death by Race 2008 Mecklenburg County

Whites	Minorities
1) Cancer	1) Cancer
2) Heart Disease	2) Heart Disease
3) Alzheimer's Disease	3) Stroke
4) Stroke	4) Unintentional Injury
5) COPD	5) Diabetes
6) Unintentional Injury	6) Kidney Disease
7) Septicemia	7) Homicide
8) Diabetes	8) Alzheimer's Disease
9) Influenza & Pneumonia	9) COPD
10) Kidney Disease	10) HIV

Leading Causes of Death by Gender 2008 Mecklenburg County

Males	Females
1) Cancer	1) Cancer
2) Heart Disease	2) Heart Disease
3) Unintentional Injury	3) Alzheimer's Disease
4) Stroke	4) Stroke
5) COPD	5) COPD
6) Alzheimer's Disease	6) Unintentional Injury
7) Diabetes	7) Diabetes
8) Homicide	8) Septicemia
9) Kidney Disease	9) Kidney Disease
10) Suicide	10) Hypertension

DEATHS AND DEATH RATES

- In 2008, there were 5,013 deaths in Mecklenburg County.
- Of the 5,013 deaths, 48.7% were male and 51.3% were female.
- A majority of deaths occurred among White Non-Hispanics at 64.3% followed by 31.5% African American Non-Hispanic, 2.8% Hispanic, 1.2% Other Non-White, Non-Hispanic, and <1% American Indian Non-Hispanic.
- Deaths among residents 65 years and older were the highest at 66.8% followed by 22.8% among residents 45-64 years of age, 6.1% 25-44 years of age, 2.0% among infants <1 year of age, 1.7% 15-24 years of age, and <1% 1-14 years of age .

Death Rates

- In 2008, the death rate was 571.6 deaths per 100,000 population. This was a 1% decrease from 577.5 in 2007.
- The death rate for Mecklenburg County is lower than the state rate of 835.1 deaths per 100,000 population and the national rate of 803.6 (2007).
- The five year death rate for 2004-2008 is 587.4 deaths per 100,000 population and is lower than the state rate of 842.4 for the same time period.
- The death rate for Whites was 582.8 deaths per 100,000 population compared to 550.1 per 100,000 for people of Other Races.
- The death rate for White males was 537.1 deaths per 100,000 population compared to 630.3 per 100,000 population for White females.
- The death rate for Minority males was 608.5 deaths per 100,000 population compared to 498.0 per 100,000 population for Minority females.

Age-Adjusted Death Rates

- Age-adjusted death rates show what the level of mortality would be if no changes occurred in the age composition of the population from year to year.
- As a result, age-adjusted death rates are better indicators than unadjusted death rates for examining changes in the risk of death over a period of time when the age distribution of a population is changing.
- Age-adjusted death rates are also better indicators of the relative risk of death when comparing across geographic areas or between sex or race subgroups of the population that have different age distributions.
- The age-adjusted death rate for 2004-2008 was 777.9 deaths per 100,000 population, and lower than the state rate of 861.4 per 100,000.
- For 2004-2008 the age-adjusted death rate for Whites was 704.2 deaths per 100,000 population compared to 966.7 per 100,000 population for people of Other Races.
- In the same time period, the age-adjusted death rate for White males was 846.2 deaths per 100,000 compared to Minority males with 1187.6 per 100,000 and 602.2 per 100,000 for White females compared to 815.4 per 100,000 for Minority females.
- Stark differences in the age-adjusted death rates for the leading causes of death were seen for people of Other Races compared to Whites.
- For 2004-2008 Minorities had higher age-adjusted death rates compared to Whites for most of the leading causes. For Diabetes Mellitus and Kidney Disease the rate for Minorities was almost 3 times higher than the rate for Whites. The rate for Homicide was 3.8 times higher and the rate for HIV Disease was 9.7 times higher than the rate for Whites.

Sources

NC DHHS/State Center for Health Statistics: 2008 data for Mecklenburg County.

National Vital Statistics Reports, CDC, Deaths: Final Data for 2007; Vol. 58 (19), May 20, 2010.



MATERNAL AND CHILD HEALTH

Pregnancies and Births

Infant Mortality

Preconception Health

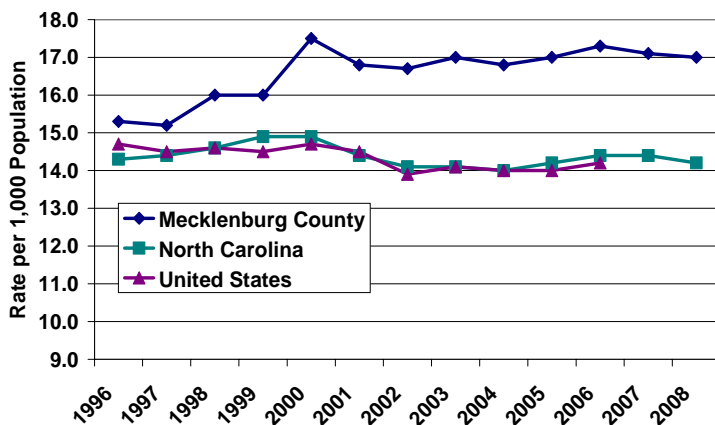
Pregnancies and Births

OVERVIEW

In 2008, the Live Birth Rate for Mecklenburg County was 17.0 per 1,000 population, higher than North Carolina and the nation. This rate has been trending upward since 1995 peaking at 17.5 in 2000 and has remained stable around 17.0 since 2001. Since 2004, births to Non-Hispanic Whites have decreased and Asians remain relatively stable. However, births to Non-Hispanic African Americans and Hispanics have been increasing. Hispanic births have been increasing an average of two percentage points per year until 2005. Since 2005 approximately 1 in 5 babies is born is Hispanic/Latino.

Overall in 2008, 62.3% of births were White, 31.2% African American, 5.8% Asian, 0.2% American Indian, and 0.5% Other Non-White. Hispanic births accounted for 21% of all births.

Live Birth Rate per 1,000 Population Mecklenburg Residents, 1996 - 2008
(based on Smooth Population Estimates)



2008 MECKLENBURG QUICK FACTS: PREGNANCIES AND BIRTHS

- In 2008, there were 14,902 resident live births: 9.4% were of low birthweight, 12.2% were preterm, 82.3% of mothers received parental care in the first trimester, and 19.9% were delivered by Caesarean section; 8.9% were born to mothers under 20 and 2.8% to mothers over 40 years of age.
- The birth rate for women in their twenties and thirties increased while the birth rate for women age 40+ decreased.
- The birth rate for teens ages 10-19 continued to decline.
- One in five births is to a Hispanic mother.

SUMMARY OF TRENDS IN MECKLENBURG COUNTY

Positive Trends

- Teen pregnancy continues to decline in Mecklenburg County and North Carolina.
- From 2004-2008, the rate of women reporting smoking during pregnancy at the time of birth decreased by 23%.

Areas for Improvement

- Declining number of women entering prenatal care in the first trimester.
- While teen birth rates are declining, there were still 463 births to girls ages 15-17 and 24 to girls 10-14 in 2008.
- Eight percent of teens reported having sexual intercourse for the first time before the age of 13.
- The percent of primary cesarean deliveries is increasing.
- From 2004 to 2008, 12.3% of births had an inter-pregnancy interval of six or fewer months, suggesting that these births were unplanned, highlighting the need for family planning, and increasing the risk for adverse birth outcomes.

Birth Highlights Mecklenburg County Residents, 2004-2008

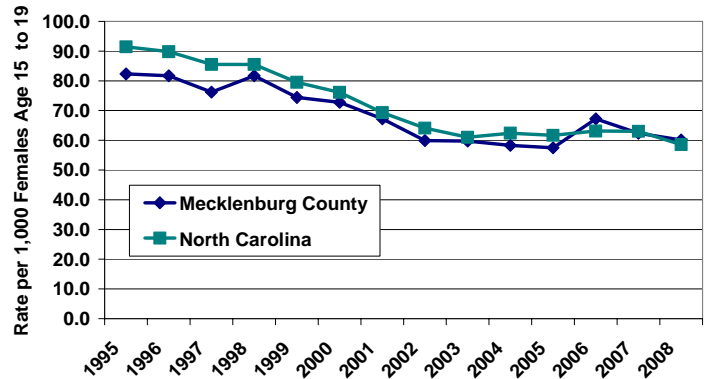
2004			2008		
Total Births = 12,952			Total Births = 14,902		
Live Birth Rate = 16.8 per 1,000 population			Live Birth Rate = 17.0 per 1,000		
Racial Categories			Racial Categories		
Whites	8,519	65.8%	White	9,285	62.3%
Other Races	4,433	34.2%	Other Races	5,617	37.7%
▶ <i>Black or African American</i>	3,760	84.8%	▶ <i>Black or African American</i>	4,660	82.9%
▶ <i>Asian or Pacific Islander</i>	617	13.9%	▶ <i>Asian and/or Pacific Islander</i>	859	15.3%
▶ <i>American Indian</i>	32	0.7%	▶ <i>American Indian</i>	30	0.5%
▶ <i>Other Non-White</i>	24	0.5%	▶ <i>Other Non-White</i>	68	1.2%
Hispanic/Latino and Country of Origin			Hispanic/Latino and Country of Origin		
Non-Hispanic	10,616	82.0%	Non-Hispanic	11,782	79.1%
Hispanic	2,321	17.9%	Hispanic	3,089	20.7%
▶ <i>Mexican</i>	1,422	61.3%	▶ <i>Mexican</i>	1,564	50.6%
▶ <i>Central or South American</i>	789	34.0%	▶ <i>Central or South American</i>	1,329	43.0%
▶ <i>Puerto Rican</i>	68	2.9%	▶ <i>Puerto Rican</i>	132	4.3%
▶ <i>Cuban</i>	26	1.1%	▶ <i>Cuban</i>	44	1.4%
▶ <i>Other Hispanic</i>	16	0.7%	▶ <i>Other Hispanic</i>	20	0.7%
Unknown	15	0.1%	Unknown	31	0.2%
Age of Mother			Age of Mother		
40 plus	336	2.6%	40 plus	418	2.8%
30 - 39 years	5,595	43.2%	30 - 39 years	6,216	41.7%
20 - 29 years	5,926	45.8%	20 - 29 years	6,936	46.5%
Teens Under the Age of 20	1,095	8.5%	Teens Under the Age of 20	1,332	8.9%
▶ <i>Teens 10-14</i>	30	2.7%	▶ <i>Teens 10-14</i>	24	1.8%
▶ <i>Teens 15-17</i>	372	34.0%	▶ <i>Teens 15-17</i>	463	34.8%
▶ <i>Teens 18-19</i>	693	63.3%	▶ <i>Teens 18-19</i>	845	63.4%
Birth Outcomes & Prenatal Care			Birth Outcomes & Prenatal Care		
Premature (<37 weeks)	1,502	11.6%	Premature (<37 weeks)	1,820	12.2%
Very Premature (<32 weeks)	248	1.9%	Very Premature (<32 weeks)	293	2.0%
Low Birth Weight (<=2500g)	1,079	8.3%	Low Birth Weight (<=2500g)	1,394	9.4%
Very Low Birth Weight (<=1500g)	232	1.8%	Very Low Birth Weight (<=1500g)	265	1.8%
First Trimester Prenatal Care	10,642	82.2%	First Trimester Prenatal Care	12,270	82.3%
Primary C-section	2,397	18.5%	Primary C-section	2,960	19.9%

ADOLESCENTS (AGES 10-19)

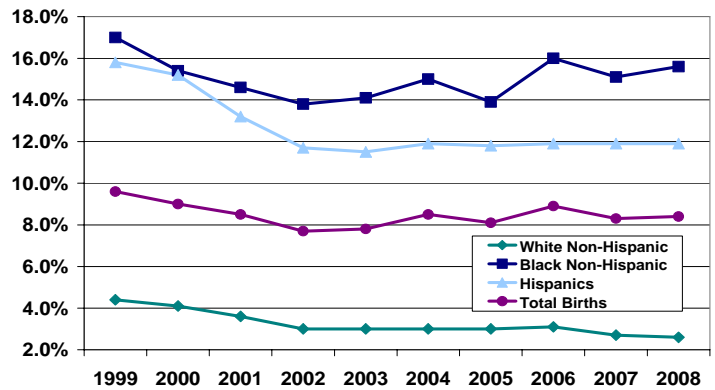
Similar to North Carolina and the nation, adolescent pregnancy rates in Mecklenburg County have been trending downward since the early 1990's. Teens 18-19 years of age account for the largest percentage of births/pregnancies among females under the age of 20.

- In 2008, the pregnancy rate for the youngest teens was 1.2 per 1,000 females ages 10-14. The rate for teens ages 15-17 was 32.9 per 1,000 females ages 15-17, and the rate for teens ages 18-19 was 101.9 per 1,000 females ages 18-19.
- From 1995-2008, the pregnancy rate for teens ages 15-19 decreased by 27%. While the decline in teen pregnancy is strongly positive, in 2008 there were still 1,844 teen pregnancies, resulting in 1,308 births, 522 abortions, and 14 fetal deaths.
- In 2008, the birth rate for teens was 1.1 per 1,000 females ages 10-14 (24 births), 23.5 for females ages 15-17 (463 births), and 64.9 for females ages 18-19 (845 births).
- Pregnancy rates for females ages 10-14 have fluctuated with a general downward trend. Because the numbers are small, the rates may not be reliable but any pregnancies in this age group are disturbing. In 2008, there were 35 pregnancies (24 births and 11 abortions) among 10-14 year old females. The youngest mother was 13 and all 24 young teens who gave birth were first time moms. In the 2009 YRBS, 70% of middle school students reported ever having been taught about abstaining from sexual activity.
- In the 2009 YRBS, 50% of teens reported ever having sex; 35% reported having sexual intercourse with one or more people in the past three months; and among those who had sexual intercourse 66% reported using condoms.
- Teen pregnancy rates are highest among minority females. In 2008, the rate for minority females was more than double the rate for whites for females ages 10-14 and females ages 15-19.

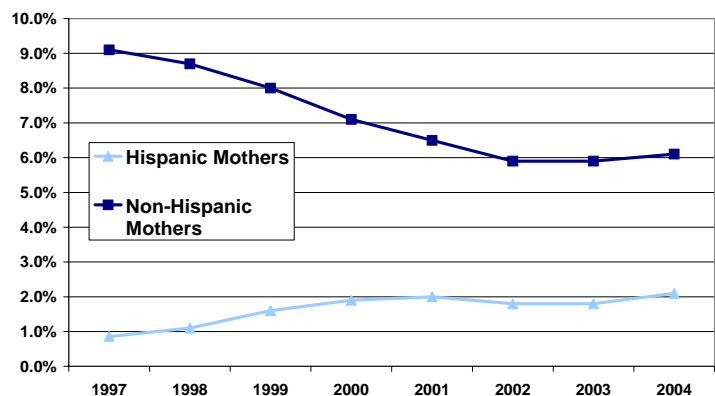
1995 – 2008 Pregnancy Rates for Females Age (15-19)
Mecklenburg County and North Carolina
(per 1,000 Females age 15 – 19yrs)



1999 – 2008 Mecklenburg Teen Births (15-19 yrs) as % of Total Births
By Race and Ethnicity



1997 – 2008 Mecklenburg Teen Births (15-19 yrs) as % of Total Births
By Hispanic Origin



*Hispanics can be of any race. Individuals whose Hispanic Ethnicity was unknown were not included.

Infant Mortality

OVERVIEW

Infant mortality refers to the death of an infant <1 year of age. The infant mortality rate is an indicator of the risk of dying during the first year of life.

In 2008, the top five leading causes of infant death in Mecklenburg County were:

- Congenital Malformations (birth defects)
- Maternal Complications
- Disorders related to prematurity and low birth weight
- Unintentional Injury (preventable deaths)
- Respiratory Distress

Birth defects are the leading cause of infant death locally and nationally, affecting about 1 in 33 babies born in the US each year and accounting for more than 20% of all infant deaths. In 2008, 17% of Mecklenburg infant deaths resulted from birth defects. From 2004-2008, 21% of infant deaths were due to birth defects.

The weight and gestational age of a newborn infant are important predictors for future morbidity and mortality. Infants born preterm (<37 weeks) and at low weight (<5lbs. 8oz.) have a greater risk of dying before the age of one year than full term infants. In 2006, 1.5% of all infant deaths in the US occurred among infants whose birth weight was less than 1,500 grams (<3lbs 4oz.) Infants born preterm (<37 weeks gestation) accounted for 68% of all infant deaths and very preterm infants (<32 weeks gestation) accounted for 54% of all infant deaths.

Pregnancies with multiple births (i.e. twins, triplets) have a higher risk of being low birth weight and/or preterm than single births. Assisted reproduction technology is increasing the incidence of multiple births.

Low birth weight and preterm births are strong indicators of an infant's future survival and health. Other risk factors associated with infant mortality are entry into prenatal care and maternal characteristics such as age, education, and lifestyle behaviors (proper nutrition, smoking, drinking, and physical activity).

2008 MECKLENBURG QUICK FACTS: INFANT MORTALITY

- In 2008, 98 infants died resulting in an infant mortality rate of 6.6 deaths per 1,000 live births.
- Birth defects accounted for 17% of all infant deaths. From 2004-2008, 21% of infant deaths were due to birth defects.
- Low birth weight and premature births are leading risk factors for infant death.
- African American infants have the highest infant mortality rate of all race/ethnic groups.
- Safe sleep practices can reduce an infant's risk of SIDS and prevent deaths due to Accidental Suffocation.

SUMMARY OF INFANT MORTALITY TRENDS IN MECKLENBURG COUNTY

Positive Trends

- Since 2004, the infant mortality rate has decreased 28% and continues to decline.
- The infant mortality rate in Mecklenburg County is lower than the state and the nation.
- SIDS deaths have remained low since 2005.

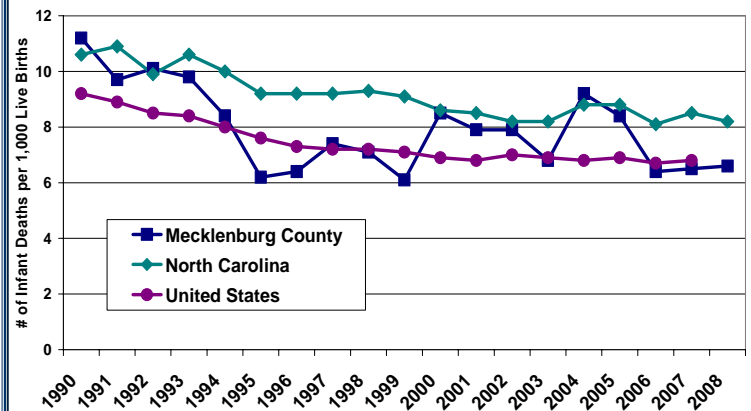
Areas for Improvement

- The percent of low birth weight and premature births continues to increase.
- African American preterm and low birth weight rates remain the highest of all race/ethnic groups.
- In 2008, the infant mortality rate for minority infants was 10.2 per 1,000 live births and double the rate for white infants which is 4.4 per 1,000 live births.
- From 2004-2008, the infant mortality rate for African American non-Hispanic infants was almost three times that of White Non-Hispanic infants.
- Hispanic women have the lowest rates of entry into first trimester prenatal care.

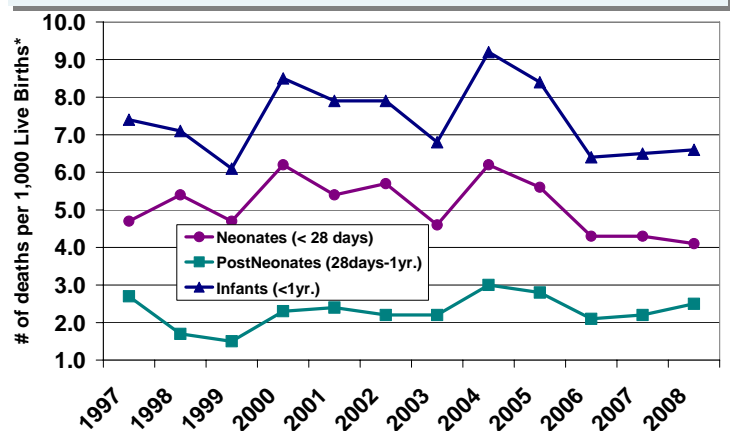
MECKLENBURG COUNTY

- In 2008, there were 98 infant deaths; up slightly from 96 deaths in 2007. The infant mortality rate was 6.6 infant deaths per 1,000 live births and is lower than the state and the nation.
- Since 2000, the rate has been declining. However, in 2004 it jumped 35% from 6.8 to 9.2 the highest rate since 1992. In 2005 the infant mortality rate dropped 9% to 8.4 and has continued to decline.
- Of the 98 infant deaths 62% (61) were neonates (< 28 days) and 38% (37) were post neonatal (> 28 days). The risk of death is highest in the first four months of life.
- Of the 61 neonatal deaths, 74% were due to conditions originating in the prenatal period (i.e. prematurity and low birth weight), 11% from birth defects, 13% from other causes, and 2% due to unintentional injury.
- Of the 37 post neonatal deaths, 27% were due to diseases of the major body systems, 19% due to unintentional injury, 16% due to infection, 14% were undetermined, 11% were due to birth defects, 8% due to SIDS, and 5% due to conditions originating in the prenatal period.
- The five year infant mortality rate for 2004-2008 was 7.3 deaths per 1,000 live births compared to the state rate of 8.4 for the same time period.
- Of concern is the considerable gap between the mortality rates for White infants and infants of Other Races. The infant mortality rate for infants of Other Races from 2004-2008 was 2.3 times greater than the rate for White infants.
- Another area for concern is the increasing number of infant deaths caused by Accidental Suffocation. These deaths are due to unsafe sleep practices and are *preventable*. Since the risk factors for SIDS and Accidental Suffocation overlap, the removal of risk factors for Accidental Suffocation will automatically reduce the risk of SIDS.

1990 - 2008 Infant Mortality Rates per 1,000 Live Births
United States, North Carolina and Mecklenburg

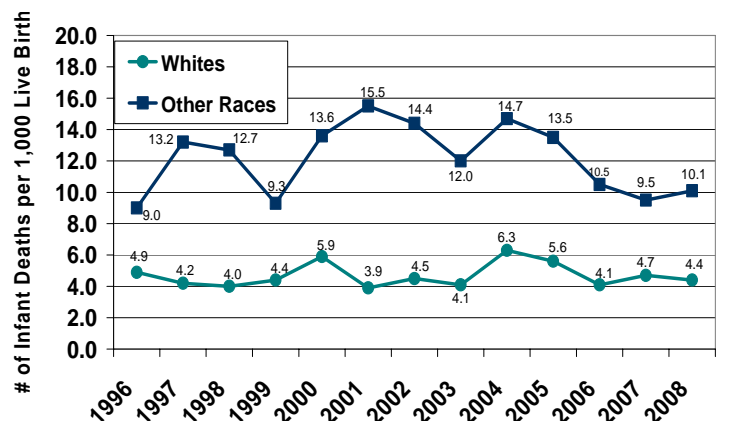


1997 - 2008 Infant Mortality Rates by Age Group
(Under 1 Year), Mecklenburg Residents



*The neonatal rate is the number of infant deaths < 28 days and the post neonatal rate is the number of infant deaths 28 days – 1 year deaths per 1,000 live births.

1996 - 2008 Infant Mortality Rates per 1,000 Live Births
By Race (Mecklenburg Residents)



RISK FACTORS FOR INFANT MORTALITY

Prematurity and Low Birth Weight

Definitions

Very Low Birth Weight (VLBW) is defined as an infant born weighing less than 1,500g or 3lb 4oz.

Low birth weight (LBW) is defined as an infant born weighing less than 2,500g or 5lb 8oz.

Very Preterm is defined as an infant born less than 32 weeks gestation.

Preterm is defined as an infant less than 37 weeks gestation.

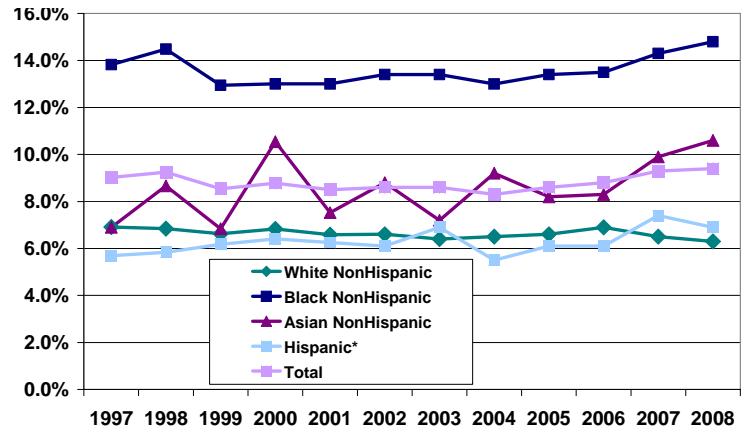
Mecklenburg

- From 2004-2008, the overall percentage of infants born with low birth weight has increased 13%. The percent of infants born preterm has increased 5%.
- In 2008 there were 14,902 births and 9.4% of infants were born with low birth weight and 12.2% were born preterm.
- From 2004-2008 the percentage of infants born both preterm and with low birth weight increased 3.4%.

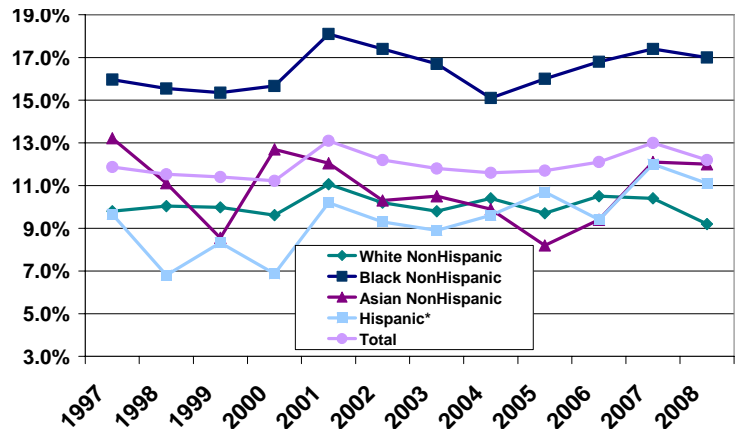
By Race/Ethnicity

- African American Non-Hispanic women have the highest rates of LBW and preterm infants of all other race and ethnic groups. The rate of LBW and preterm infants for African American women is double the rate for White women.
- Asian Non-Hispanic women have the second highest rate of LBW infants while White Non-Hispanic and Hispanic women have the lowest rates.
- African American Non-Hispanic, Asian Non-Hispanic, and Hispanic women have the highest rates of preterm births.
- From 2004-2008, the rate for preterm births increased for all race and ethnic groups except for White Non-Hispanic women.

1997 – 2008: % of Low Weight Births of the Total Births By Race and Ethnicity (Mecklenburg Residents)



1997 – 2008: % of Preterm Births of the Total Births By Race and Ethnicity (Mecklenburg Residents)



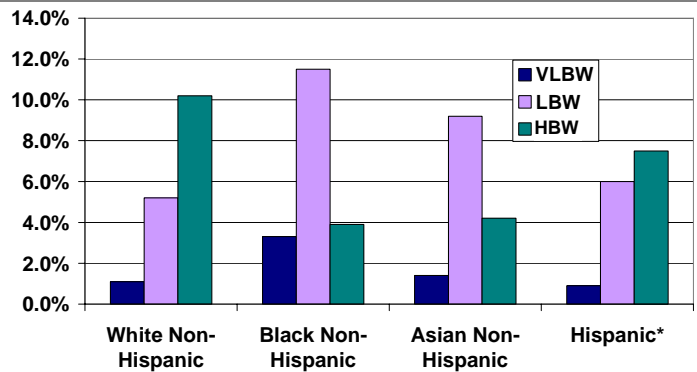
Prematurity and Low Birth Weight, cont.

- From 1997-2008 the rate of premature births in Mecklenburg County has remained between 11% and 13%. However, differences among racial groups are evident with African American Non-Hispanic women having the highest rates and Hispanic women having the lowest rates.
- In the US, the rate of preterm births has been increasing since the mid-1980s. In 2006, infants born <32 weeks accounted for only 2% of all births but 54% of infant deaths. Conversely, infants born at 37 weeks or more accounted for 87% of all births but only 32% of infant deaths.
- Full-term, low birth weight babies can be associated with factors such as smoking, maternal weight gain, and maternal weight at birth. However, the causes of premature deliveries are not well understood, making prevention frustrating. Higher plurality births due to reproductive technology, maternal age, and changes in the medical management of pregnancy (i.e. increases in cesarean section and induction of labor for preterm infants) have also had an impact on the rates of preterm births.

Smoking

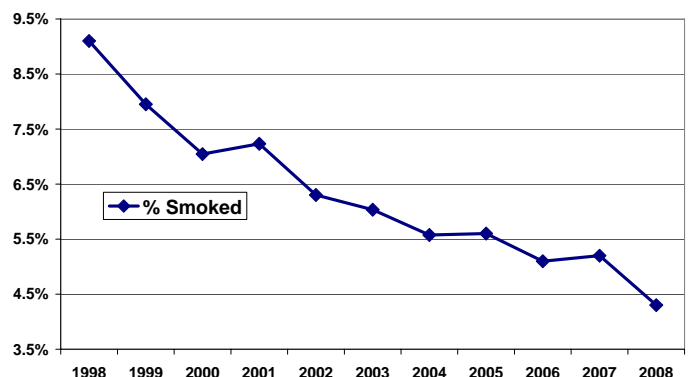
- Tobacco use during pregnancy causes the passage of toxic substances from the placenta to the fetal blood supply. These substances restrict an infant's access to oxygen leading to adverse birth outcomes such as low birth weight (LBW), preterm delivery, intrauterine growth retardation, infant mortality, and long-term morbidity for future child health development.
- Data on maternal smoking during pregnancy is identified from birth certificate data. Since it is self-reported, it cannot be readily determined whether or not the growing stigma attached to smoking outside of or during pregnancy affects this data. Increased legislation efforts and work place policy changes to reduce cigarette smoke exposure may contribute to declining reports of smoking during pregnancy and are accompanied by declining smoking rates in the general population.

2008: % of VLBW, LBW and HBW Infants By Race and Ethnicity (Mecklenburg Residents)

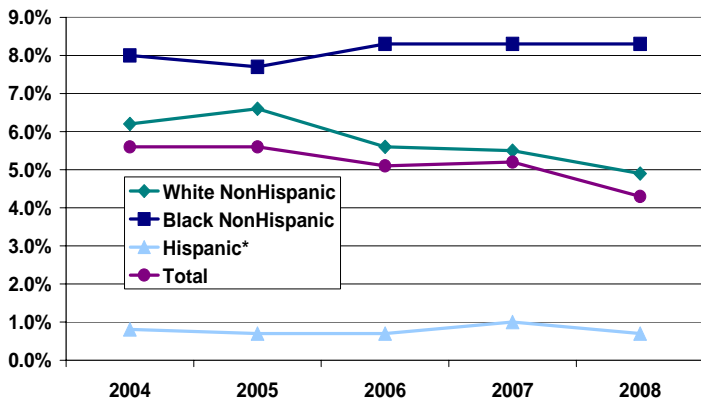


- In 2007, the overall smoking rate during pregnancy in the US was 10.4%. The rate for Non-Hispanic White women (16.3%) was 1.6 times higher than African American Non-Hispanic women (10.1) and 7.8 times higher than Hispanic women.
- From 1998 to 2008, the rate of women who reported smoking during pregnancy in Mecklenburg County decreased 53%. The maternal smoking rate for NC in 2004 was 12.5%.
- The highest smoking rates were reported by African American Non-Hispanic mothers and Hispanic women had the lowest rate of reporting smoking during pregnancy.

1998 - 2008: % Women Smoking During Pregnancy (Mecklenburg Residents) Based upon Self-Reports



2004 - 2008: % Women Smoking During Pregnancy By Race and Ethnicity (Mecklenburg Residents)
Based upon Self-Reports

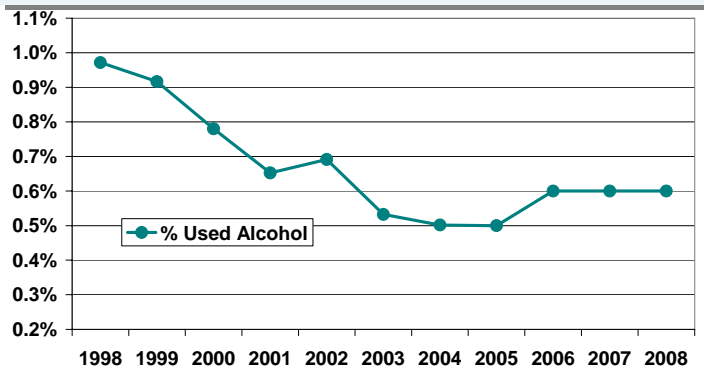


- White Non-Hispanic women were more likely to report using alcohol during pregnancy than African American and Asian non-Hispanic women. Hispanic women had the lowest rate of reporting the use of alcohol during pregnancy.
- Entry into prenatal care is highest among White Non-Hispanic women and lowest among Hispanic and African American Non-Hispanic women.
- Overall the number of women who self-report smoking or using alcohol during pregnancy appears to be on the decline in Mecklenburg County.

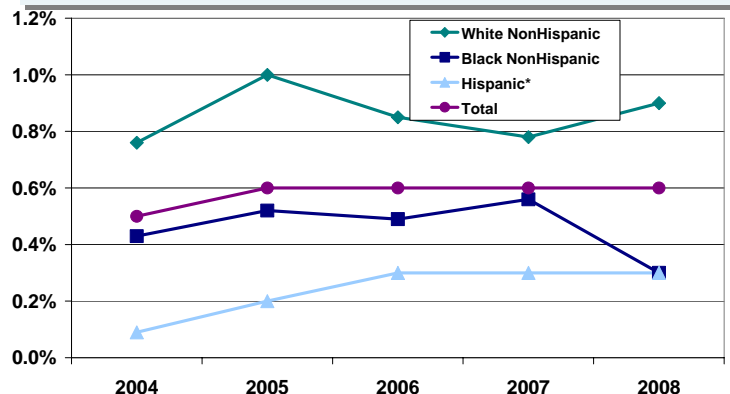
Alcohol Use

- As with smoking, the use of alcohol during pregnancy is associated with adverse birth outcomes, most notably Fetal Alcohol Syndrome or FAS. FAS is characterized by impaired mental development as well as some physical features (i.e. eyes close together) and has different levels of severity. FAS is associated with long-term morbidity for child development.
- Alcohol use during pregnancy is self-reported on the birth certificate, and, as such, is subject to the limitations of self-reporting negatively perceived information.
- The percent of women who report using alcohol during pregnancy is very small, less than 1%, but increased in 2005.
- From 2000 to 2008 there were 9 cases of Fetal Alcohol Syndrome (FAS) reported at the time of birth. However, FAS is frequently not diagnosed until indicated by behaviors and developmental delays at a later age. Of the 119,694 births during this time period 728 (61%) of women reported using alcohol during their pregnancy.
- The majority of women who reported using alcohol during pregnancy from 2000 to 2008 received adequate prenatal care, were White Non-Hispanic, between the ages of 30 and 39, and had less than or equal to 12 years of primary/secondary education.

1998 - 2008: % Women Using Alcohol During Pregnancy (Mecklenburg Residents)
Based upon Self-Reports



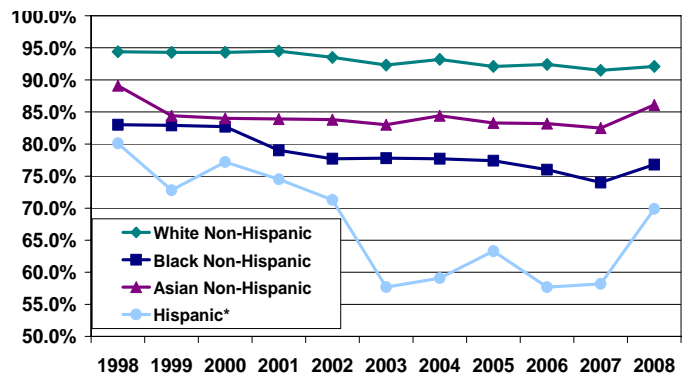
2004 - 2008: % Women Using Alcohol During Pregnancy By Race and Ethnicity (Mecklenburg Residents)
Based upon Self-Reports



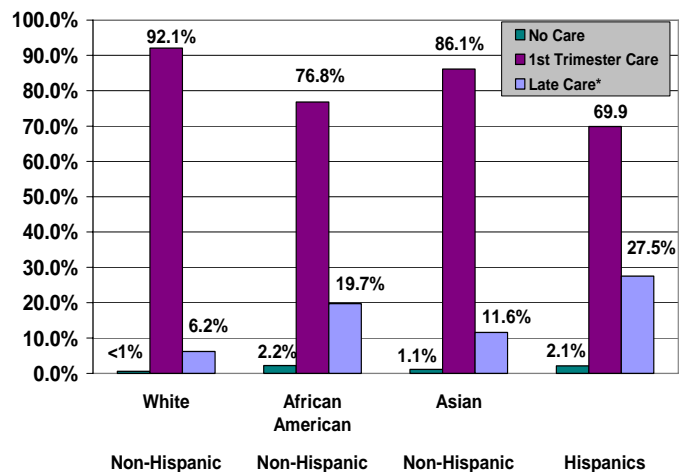
PRENATAL CARE

- Entry into prenatal care in the first trimester (first 3 months of pregnancy) and the completion of the recommended number of visits based on the gestational age of the fetus may help reduce adverse birth outcomes (i.e. prematurity and low birth weight) through risk assessment, providing healthcare advice, and managing chronic and pregnancy-related health conditions.
- The rate of women entering prenatal care in the first trimester decreased by 11.2% from 2000 to 2007. In 2008, there was a 5% increase to 82.3%. The state rate in 2008 was 83.0%.
- The disparity in the rate of women receiving prenatal care becomes more apparent when looking at entry into prenatal care by race and ethnicity. Furthermore, when looking at corresponding birth outcomes by race and ethnicity the disparity becomes even more obvious.
- Rates of entry into prenatal care are highest among White and Asian Non-Hispanic women and lowest among Hispanic and African American Non-Hispanic women.
- Although Hispanic women have the lowest rate of women entering prenatal care in the first trimester, they have one of the lowest rates of preterm and low birth weight infants.
- Asian Non-Hispanic women have the second highest rate of women entering prenatal care in the first trimester but have second highest rates of preterm and low birth weight infants.
- African American Non-Hispanic women have one of the lowest rates of entry into prenatal care, second to Hispanic women, and have the highest rates of preterm and low birth weight infants.
- A more startling discovery is that regardless of whether African American women enter prenatal care in the first trimester, late care (2nd and 3rd trimester), or receive no care, they still have the highest rates of preterm and low birth weight infants.

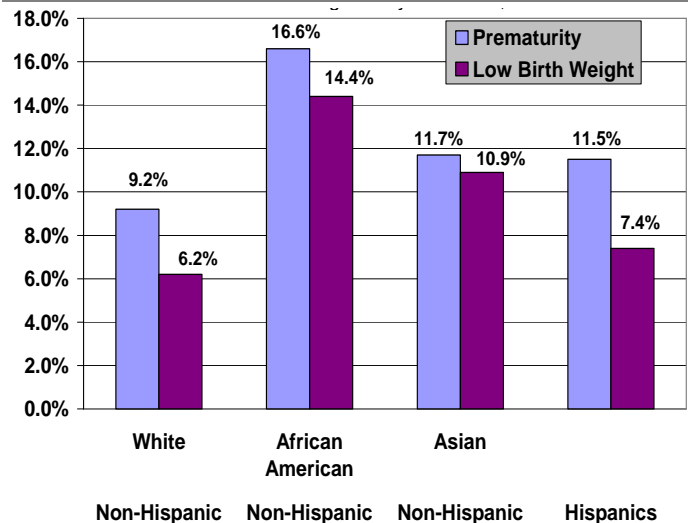
1998 - 2008: % Women Entering PNC in 1st Trimester By Race and Ethnicity (Mecklenburg Residents)



2008: Women Receiving 1st Trimester, Late Care and No PNC, By Race and Ethnicity (Mecklenburg Residents)



2008 Birth Outcomes By Race and Ethnicity of Mother Receiving PNC in 1st Trimester (Mecklenburg Residents)



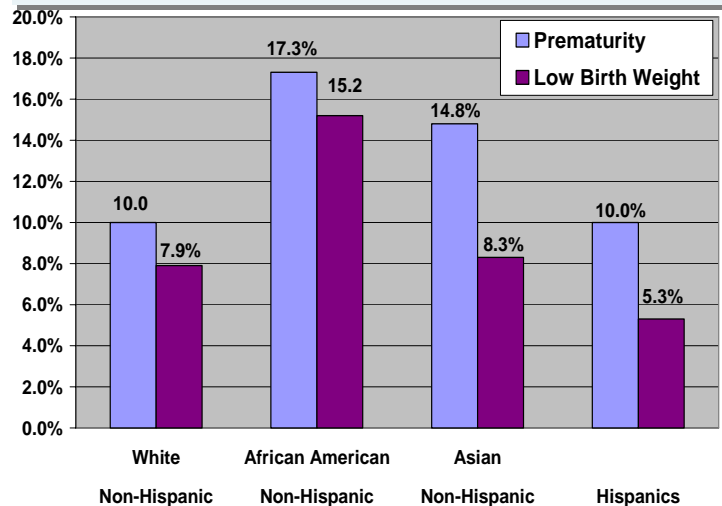
PRENATAL CARE cont.

- When looking at birth outcomes by race and ethnicity for women who received first trimester prenatal care and women who did not, you can see there is not a large difference in the percentage of adverse outcomes.
- This suggests that the timeliness of prenatal care alone does not impact prematurity and low birth weight births and that these adverse outcomes are multi-factorial in nature.

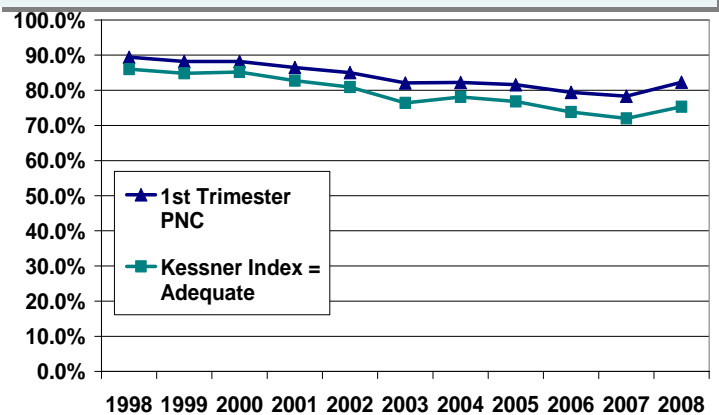
KESSNER INDEX

- The Kessner Index-provides a measure of the adequacy of prenatal care received during pregnancy by assessing the timeliness (month PNC began), and the frequency (number of prenatal visits) of PNC based on the gestational of the baby at different times throughout the pregnancy. "Adequate care" means PNC began in the first trimester and the minimum number of visits for each gestational age period of the baby's growth at different points during the pregnancy was met or exceeded.
- The number of women receiving adequate care as measured by the Kessner Index has been trending downward. From 1998 to 2003, entry into 1st trimester prenatal care has declined. First trimester prenatal care has decreased by 7.9% and the rate of women receiving adequate care decreased by 12.4%, suggesting women are not only entering care late but may be entering care in the first trimester without completing the recommended number of visits. The decline continues from 2004 to 2007 with improvement in 2008.
- The reasons for the steady decline into 1st trimester prenatal care are unknown. In some cases, there may be access issues and reasons influenced by cultural practices, beliefs, attitudes, and priorities around receiving prenatal care. Rising unemployment rates and loss of health insurance may also have contributed to the decline.

2008 Birth Outcomes of Mothers Receiving Late and No PNC , by Race and Ethnicity (Mecklenburg Residents)



1998- 2008: % Women Entering PNC in 1st Trimester and Receiving Adequate PNC (Mecklenburg Residents)



Notes and Sources

* Hispanics can be of any race.

- NC DHHS/State Center for Health Statistics 2008 data
- Mecklenburg County Behavior Risk Factor Surveillance System 2008
- NC Pregnancy Risk Assessment Monitoring System Survey (PRAMS) 2007 Data
- National Vital Statistics Reports:
 - Volume(7), January 7, 2009
 - Volume 57(12), March 18, 2009
 - Volume 58(4), October 14, 2009
 - Volume 58(17), April 30, 2010

Preconception Health

OVERVIEW

Adverse birth outcomes are usually not attributable to late or lack of prenatal care alone as much as health behaviors and higher rates of infection and chronic disease prior to conception and during pregnancy, lending support to the need for preconception health. Preconception health focuses on the health status of women of child bearing age (15-44) by looking at individual risk factors and pathways by which these risk factors affect a woman's overall health. This requires a shift in thinking of health prior to, during, and after pregnancy. In addition to prenatal care, health behaviors contribute greatly to a woman's health status.

Despite efforts to improve prenatal care delivery and utilization, there has not been a concurrent decline in adverse birth outcomes locally or nationally. The absence of this decline suggests entry into prenatal care alone cannot impact infant mortality, the problem is multi-factorial in nature, and must take into account health behaviors as they relate to a female's physical health status before and after pregnancy. The preconception health model addresses the need for improving a woman's physical and mental health status regardless of whether she intends to become pregnant or not.

Key factors affecting health outcomes include socioeconomic status, healthcare access and availability, stress, race and ethnicity, birth weight and prematurity, unplanned pregnancy, nutrition and weight, physical activity, smoking, chronic disease, sexual health, social support, education, domestic violence, and substance abuse. Pathways by which these risk factors affect women's health should be addressed with a comprehensive and coordinated effort by the medical and public health community. Teen pregnancy, while on the decline, only addresses early sexual activity. Delayed child bearing by older females (>35) presents a different set of biological and social issues than younger women. Efforts to improve birth outcomes should address multiple determinants that integrate social, behavioral, environmental, and biological factors that shape or affect pregnancy.

2008 MECKLENBURG QUICK FACTS: HEALTH BEHAVIORS FOR WOMEN

- In 2008, 32.8% of women reported never taking a multivitamin.
- 8.8% of women reported being smokers compared to 91.2% who reported not smoking.
- 10.1% of women reported engaging in binge drinking.
- 78.6% percent of women reported engaging in physical activity.
- 21.5% of females reported being obese based on their BMI.
- Women who had a history of 1 or more chronic diseases were more likely to deliver a low birth weight infant.

PRECONCEPTIONAL PERIOD

- The preconception period refers to a woman's health status prior to pregnancy. Health behaviors such as daily vitamin use, drinking, smoking, diet and physical activity, along with obesity and chronic disease can impact a woman's health status.
- **Folic Acid Consumption** – 32.8% of women reported never taking a multivitamin. Daily multivitamin use was higher for White women than minority women and higher for women age 45+ than for women 18-44 years of age. No multivitamin use was higher for minority women than White women and higher for women ages 18-44 than women 45+.
- **Smoking** – 8.8% of women reported being smokers compared to 91.2% who reported not smoking. Smoking status was greater for White women than minority women.
- **Binge Drinking** – 10.1% of women reported engaging in binge drinking. Rates among White females were disproportionately higher at 19.8% compared to minority women at 8.3%. The same was true for women age 18-44 who reported 20.2% compared to women 45+ who reported 10.2%.
- **Physical Activity** – 78.6% percent of women reported engaging in physical activity. White women reported higher rates of physical activity than minority women.
- **Obesity** – 21.5% of females reported being obese based on their BMI. The prevalence was higher for minority women than White women and higher for women age 45+ than women age 18-44.
- **Chronic Disease** – women who had a history of one or more chronic diseases (such as Hypertension, Diabetes, Anemia etc.) were more likely to deliver a low birth weight infant than women with no medical history at delivery. However women with no medical history at the time of delivery, who delivered a low birth weight infant, accounted for 5% of all live births.

INTERCONCEPTIONAL PERIOD

- The risk for adverse birth outcomes is lowest when the inter-pregnancy interval (time between pregnancies) is at least 18-23mos and increases when the interval is less than 18-23mos. Thus short interval birth rates can be representative of the lack of contraceptive use and a need for family planning services and counseling prior to pregnancy.
- From 2004-2008 in North Carolina, 12.7% of all live births were short interval births where the time of from last delivery to conception was six months or less. In Mecklenburg County, 12.3% of all live births were short interval births.

By Age and Race/Ethnicity

- According to the 2007 North Carolina Pregnancy Risk Assessment Monitoring System Survey (PRAMS), approximately 41.4% of all NC women reported using contraception.
- The use of birth control after delivery was reported by 85.5% by all NC women and was higher for Non-Hispanic women than Hispanic women and highest among females 20-34 years of age.
- Approximately 21.2% reported no birth control use after delivery because they wanted to get pregnant again. This rate was greater for women <25 years of age than women >25 years of age.
- No birth control use after delivery was higher for White woman at 27% compared to African American woman at 7.2% and Other Non-White women at 15.1%.
- In addition, 10% of all women reported having problems obtaining birth control. Having trouble getting birth control was highest for females ages 20-24years and for Hispanic women in which undocumented status most likely contributes to the problem. Not being able to afford birth control was reported higher rates by young females < 20 years of age, and White and Hispanic females.

HEALTH STATUS INDICATORS FOR WOMEN OF REPRODUCTIVE AGE IN MECKLENBURG

The health status of women of child bearing age should include a focus on individual risk factors and pathways by which these risk factors affect women's health overall. Data from the 2008 Behavioral Risk Factor Surveillance System Survey of females 18 and older in Mecklenburg County provides an estimate of the prevalence of key health behaviors affecting women's health and pregnancy outcomes.

Indicator	Mecklenburg Women Age 18 -44 yrs	Confidence Interval
Binge Drinking	13.6%	9.9 – 17.3
Tobacco Use	13.7%	10.5 – 16.9
Meets Physical Activity Recommendations	46.5%	40.4 – 52.6
Obesity	22.2%	18.4 – 26.0
Overweight	26.2%	21.9 – 30.4
Hypertension	9.1%	5.9 – 12.4
Diabetes	2.1%	0.9 – 3.3
Uninsured	19.4%	15.4 – 23.4
Has Not Visited a Dental Clinic in Past Year	19.2%	14.4 – 24.0

Source: 2008 Behavior Risk Factor Surveillance System

In 2007, according to the NC PRAMS survey, approximately 39% of all NC females reported experiencing barriers to obtaining prenatal care services in North Carolina. When examining the data by sub groups, the following groups of women reported the highest rate of experiencing barriers to obtaining prenatal care:

- Females < 25 years of age
- Minority and Hispanic females
- Females with < high school degree
- Unmarried females
- Females making < \$15,000 per year
- Females who were Medicaid recipients
- Females who delivered low birth weight infants weighing < 2500g

A previous history of a low birth weight or premature infant is a significant risk factor for having another infant born with an adverse birth outcome. NC 2007 PRAMS data shows 13.5% of all NC women reported their previous delivery resulted in infant being born < 2500g (5lbs 8oz). A history of a low birth weight infant was higher for women < 25 years of age and minority or Hispanic women. In addition, 3.5 % of all NC women reported their previous delivery resulted in an infant being born < 37 weeks. A history of a premature birth was higher for woman < 25 years of age and minority and Hispanic women.



HEALTH BEHAVIORS

Tobacco Use

Overweight/Obesity

Physical Activity

Fruits and Vegetables Consumption

Seat Belt Use

High Blood Pressure and High Cholesterol

OVERVIEW

Health behavior choices play a part in disease, injury, and premature mortality. Behaviors and risk factors affecting disease and injury include but are not limited to smoking, obesity, nutrition, physical activity, seat belt use and unsafe firearm storage. The Behavioral Risk Factor Surveillance System is instrumental in collecting information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. Data are weighted and projected to 676,000 Mecklenburg County residents 18 years of age or older. The Youth Risk Behavior Survey also collects information on health behaviors but in middle and high school aged students. Data for the YRBS are also weighted to reflect the demographic composition of Charlotte Mecklenburg High Schools.

TOBACCO USE

According to the Office on Smoking and Health within the CDC, tobacco use is the leading preventable cause of death in the United States, causing nearly 443,000 deaths each year and resulting in an annual cost of more than \$96 billion in direct medical costs. In 2005, it is estimated that over 113,000 adults in Mecklenburg County are current smokers.

By Geographic Area

- In 2009 the prevalence of current smoking is lower in Mecklenburg (16%) than in North Carolina (20%) and the US (18%).

By Race/Ethnicity and Gender (2005-2009)

- The 2005-2009 five year prevalence for smoking was similar for whites and African-Americans (16.0% and 18.3% respectively).
- The five year prevalence for Hispanic current smokers was 12.3%.

MECKLENBURG QUICK FACTS: HEALTH BEHAVIORS

- Healthy behavior choices play a part in disease, injury, and premature mortality.
- The Behavioral Risk Factor Surveillance System and Youth Risk Behavior Survey are instrumental in collecting information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury.

SUMMARY OF HEALTH BEHAVIOR TRENDS IN MECKLENBURG COUNTY

Positive Trends

- The percent of Mecklenburg adults reporting smoking has fallen from almost 20% in 2003 to 16% in 2009.
- In 2009 more than three fourths of adults reported some physical activity in the past month.
- In 2005, almost 90% of Mecklenburg adults reported always using a seat belt, and over 90% of Mecklenburg teens reported frequently or always using a seatbelt.

Areas for Improvement

- Over 60% of Mecklenburg County adults are overweight or obese.
- Only one fifth of Mecklenburg County adults reported consuming 5 or more servings of fruits & vegetables a day.
- About 42% of teens reported watching three or more hours of television on an average school day.

**2009 Behavioral Risk Factor Prevalence (%) Among Adults
Mecklenburg, North Carolina and United States**

	Mecklenburg	North Carolina	United States
Smoking	16.8%	20.3%	17.9%
Overweight/Obesity (BMI>25.0) ¹	64.3%	65.3%	63.1%
No Physical Activity ²	21.0%	26.4%	23.6%
Fruit & Veg (More than 5 servings/day)	21.7%	20.6%	23.3%
High Blood Pressure	29.1%	31.5%	28.6%
High Cholesterol	35.5%	39.9%	37.5%
Have Visited Dentist in Past Year ³	73%	69%	71%

¹Body Mass Index (BMI) is a ratio of weight to height (weight in kg/height in m²).

²In the past 30 days

³2008 Data

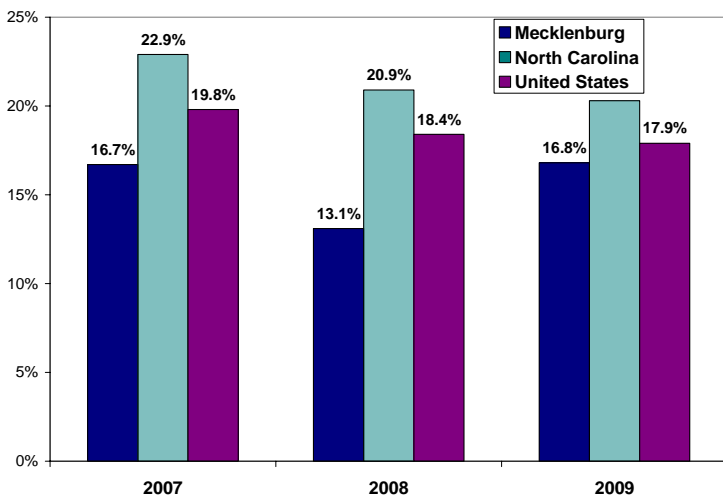
TOBACCO USE, cont.

- Males (19%) are more likely to report smoking than females (14%).

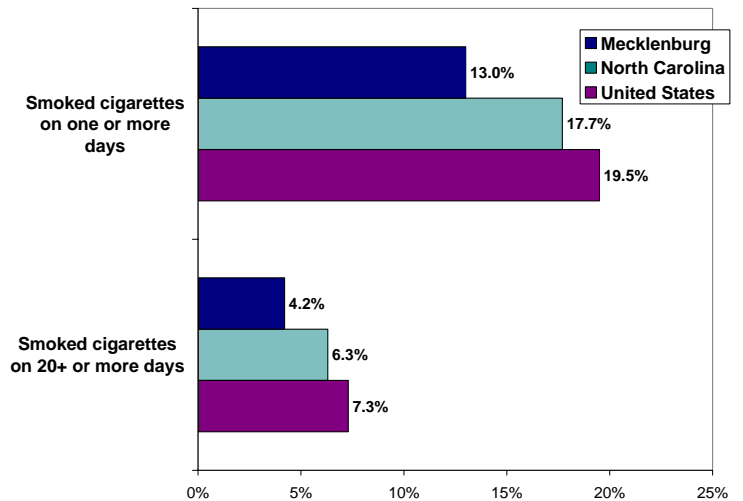
By Education and Income Level

- College graduates (13%) were less likely to report smoking than those residents who were not college graduates (24%).
- Mecklenburg county residents who made less than \$50,000 a year were more likely to report currently smoking than those who made \$50,000 or more (20% vs. 13% respectively).

**2007 - 2009 Trends in Current Smoking
Mecklenburg, North Carolina, United States**



**2009 Youth Risk Behavior Survey
Reported Tobacco Use Among High School Students**



Tobacco Use among Youth

In 2009, approximately 13% of Mecklenburg teens surveyed reported having smoked cigarettes on one or more days in the past 30 days, lower than the state prevalence (18%). Over 9% of Mecklenburg teens reported smoking a whole cigarette before age 13.

- White teens and Hispanic teens were two times more likely to report having recently smoked cigarettes than Black teens.
- Over 4% of teens reported smoking cigarettes on 20 or more days in the previous month.

TOBACCO USE, cont.

- Among the teens who reported smoking, over half had tried to quit smoking in the last 12 months.

OVERWEIGHT/OBESITY

National Center for Health Statistics show that 60 million U.S. adults 20 years of age and older are obese. The percentage of young people who are overweight has more than tripled since 1980. Among children and teens aged 6–19 years, over 9 million young people are considered overweight. An estimated 317,000 adults in Mecklenburg County are overweight or obese.

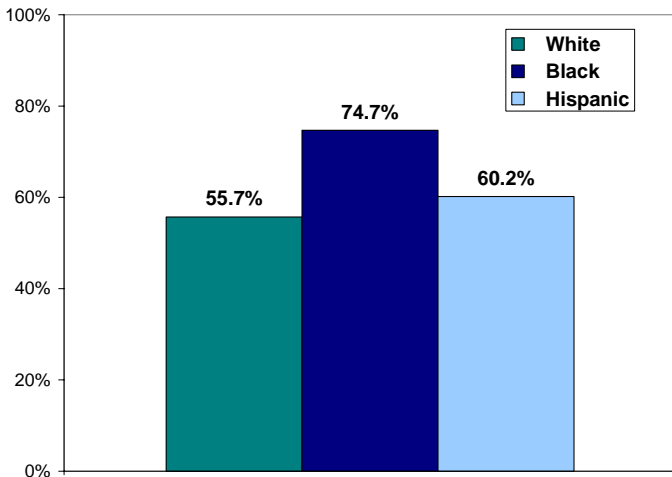
By Geographic Area (2009)

- Over 64% of Mecklenburg adult residents are overweight or obese compared to over 65% of North Carolina and 63% of US adults.

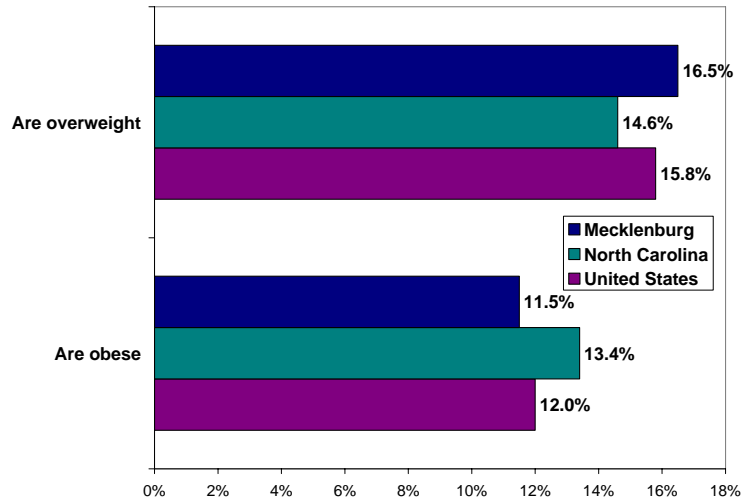
By Race/Ethnicity and Gender (2005-2009)

- In 2005-2009, African-American adults were more likely to be overweight than White and Hispanic adults.
- Adult male Mecklenburg residents (67%) were more likely than females (53%) to be overweight.

**2005 – 2009 Prevalence of Overweight and Obesity among Mecklenburg Adults
By Race/Ethnicity**



**2009 Youth Risk Behavior Survey
Overweight and Obesity Among High School Students**



Overweight/Obesity among Youth

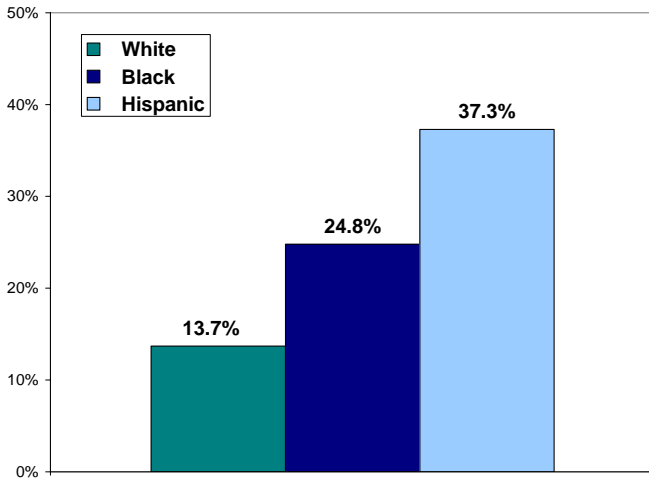
About 17% of Mecklenburg teens surveyed are overweight (at or above the 85th percentile but below the 95th percentile for body mass index, by age and sex) and over 12% are obese (at or above the 95th percentile for body mass index, by age and sex).

- Black teens are 1.5 times more likely to be overweight and almost three times more likely to be obese than White teens.
- Over 27% of teens describe themselves as overweight while only about 17% actually are.

PHYSICAL ACTIVITY

Despite the proven benefits of physical activity, more than 50% of American adults do not get enough physical activity to provide health benefits. Twenty-five percent of adults are not active at all in their leisure time. Activity decreases with age and is less common among women than men and among those with lower income and less education.

2005 – 2009 Prevalence of Physical Inactivity in Mecklenburg Adults By Race/Ethnicity



PHYSICAL ACTIVITY, cont.

By Geographic Area (2009)

- In 2009, one fifth of Mecklenburg County adults reported not exercising in the past 30 days.

By Level of Physical Activity (2005-2009)

- More than 46% of Mecklenburg adults reported moderate physical activity (brisk walking, bicycling, vacuuming, gardening, or anything else that causes small increases in breathing or heart rate for 30 or more minutes per day, five or more days per week).
- Twenty-eight percent of Mecklenburg adults reported vigorous physical activity (running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate for 20 or more minutes per day, three or more days per week).

By Race/Ethnicity (2005-2009)

- From 2005-2009, minorities in Mecklenburg are more likely to report not exercising in the past 30 days outside of normal work activity than Whites.
- About one fourth of African Americans reported not exercising in the past 30 days compared to about 14% of Whites.

- Whites (50.3%) were more likely than African-Americans and Hispanics to report moderate physical activity (43.7% and 26.5%, respectively).

By Gender (2005-2009)

- Female adults are more likely to report not exercising than male adults.
- Females are more likely than males to report not exercising in the past 30 days outside of normal work activity (22.3% vs. 15.7%, respectively).

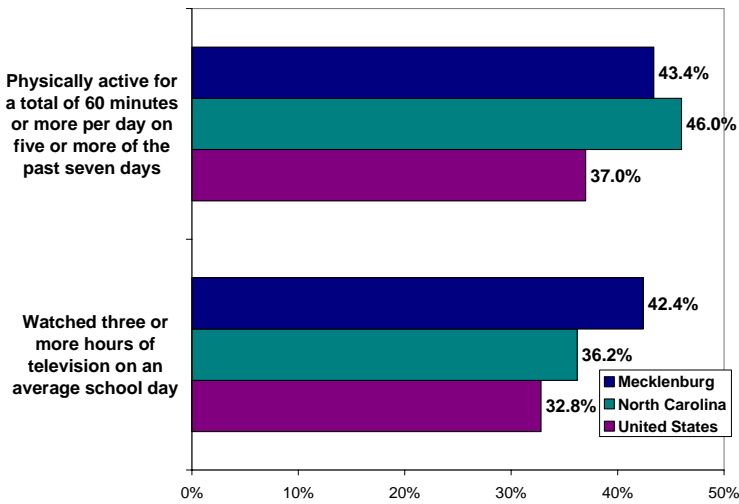
By Education and Income (2005-2009)

- Over 30% of Mecklenburg County adults with less than a high school education reported not exercising in the past 30 days, higher than those adults with a college degree (14%).
- Mecklenburg adults with an income of less than \$50,000 were more likely to report not exercising in the past 30 days than those adult residents who earn more than \$50,000 per year (28% vs. 11%, respectively).

Physical Activity among Youth (2009)

- National guidelines call for being physically active at least 60 minutes a day on five or more days a week. Over 43% of Mecklenburg teens reported being physically active for a total of 60 minutes or more per day on five or more of the past seven days, lower than the percentage of North Carolina teens (46%).
- Forty-two percent of teens watch three or more hours of TV on an average school day. More than a quarter of teens attend physical education classes daily in an average week when they are in school.

**2009 Youth Risk Behavior Survey
Physical Activity and Inactivity Among
High School Students**



FRUITS AND VEGETABLES

Diets that include a variety of fruits and vegetables may help to reduce the risk of cancer, heart disease, stroke, diabetes, and osteoporosis. In 2009, almost 22% Mecklenburg County adults consumed five or more servings of fruits and vegetables a day.

By Geographic Area (2009)

- The percentage of adults who reported consuming five or more servings of fruits and vegetables a day was similar for Mecklenburg, North Carolina and the US.

By Race/Ethnicity and Gender (2005-2009)

- More than one fourth of White adults in Mecklenburg County reported consuming five or more servings of fruits and vegetables a day, compared to 18% of African American adults and 21% of Hispanic adults.
- Female adults (28%) were more likely to report consuming five or more servings of fruits and vegetables a day than male adults (21%).

By Education and Income (2005-2009)

- Twenty-four percent of adults who have an education level of some college and above reported consuming five or more servings of

fruits and vegetables a day, more than those residents who have a high school diploma or less.

- Approximately 90% of Mecklenburg teens reported eating fruits and vegetables one or more times on a typical day.

HIGH BLOOD PRESSURE

High blood pressure (hypertension) is called the silent killer because it usually has no symptoms. High blood pressure increases the risk for developing heart disease, stroke, and other serious conditions. It is estimated that 1 out of 3 American adults has high blood pressure and of those with high blood pressure, almost one third are undiagnosed.

By Geographic Area (2009)

- In 2005, over 195,000 Mecklenburg County adults (29%) reported to a doctor, nurse, or other health professional that they have high blood pressure.

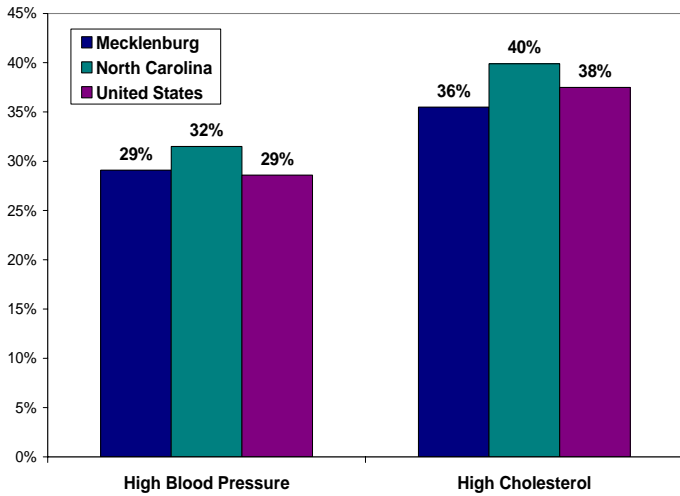
By Race/Ethnicity and Gender (2005-2009)

- Over one third of African American adults (34%) in Mecklenburg County reported being diagnosed with high blood pressure, compared to 26% of Whites.
- Percentage of reported high blood pressure were similar for males and females (28% and 26% respectively).

By Education and Income (2005-2009)

- Thirty-three percent of adults with a high school education or less reported being diagnosed with high blood pressure, compared to 24% of adults with an education level of some college and above.
- Adults with an income level less than \$50,000 were more likely to report being diagnosed with high blood pressure than those adults with a higher income level (33% and 22%, respectively).

**2005 – 2009 Prevalence of Adult High Blood Pressure and High Cholesterol
Mecklenburg, North Carolina, United States**



HIGH CHOLESTEROL

High cholesterol is a major risk factor for heart disease, one of the leading causes of death in the United States. Cholesterol levels are affected by age, sex, heredity, and diet. High cholesterol, like hypertension, produces no symptoms and can go undiagnosed.

By Geographic Area (2009)

- In 2009, over one third of Mecklenburg county adults reported being told by a doctor, nurse, or other health professional that they have high cholesterol (240 mg/dL or more total cholesterol).

By Race/Ethnicity and Gender (2005-2009)

- About 40% of Hispanic adults reported being diagnosed with high cholesterol compared to 37% of White adults and 33% of African American adults.
- Males (39%) were more likely to report high cholesterol than females (34%).

By Income (2005-2009)

- Mecklenburg adults with an income level less than \$50,000 (38%) were more likely to report being diagnosed with high blood cholesterol than those adults at a higher income level (33%).

SEAT BELT USE

Seat belt use in motor vehicles has been proven to save lives in accidents. The National Highway Traffic Safety Administration (NHTSA) reports that in 2001 of the 31,910 vehicle occupants killed in crashes in 2001, 60% were not wearing a safety belt.

By Geographic Area (2006 & 2008)

- Almost 90% of Mecklenburg adults report always wearing a seat belt when either driving or riding in a car, compared to 88% of North Carolina adults.

By Race and Gender (2006 & 2008)

- Over 90% of White adults reported always using seat belts compared to 80% of African-Americans.
- Females (92%) were more likely to report always wearing a seat belt than males (81%).

By Education and Income Level (2006 & 2008)

- The prevalence of seat belt use for adults with a high school education or less (84%) was similar to those adults with some college or greater (87%).
- Eighty-eight percent of Mecklenburg adults with a higher income level were more likely to report using seat belts than those adults at a lower income level (86%).

SEAT BELT USE, *cont.*

Seat Belt Use Among Youth (2009)

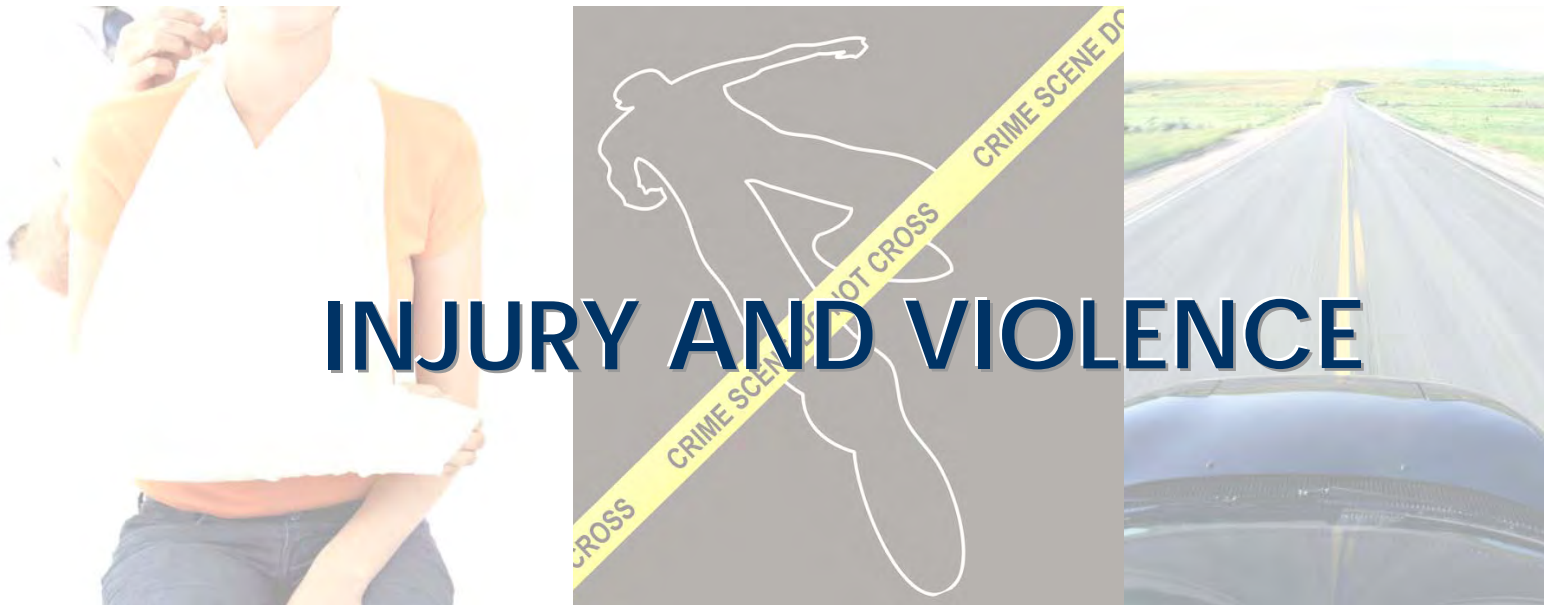
- Almost 8% of Mecklenburg teens surveyed never or rarely wore a seat belt when riding in a car driven by someone else.
- Black teens were more than twice as likely than White teens likely to report never or rarely wearing a seat belt when riding in a car driven by someone else.

Sources

Centers for Disease Control and Prevention

- Behavioral Risk Factor Surveillance System (BRFSS)
- Youth Risk Behavior Survey (YRBS)
- Office on Smoking and Health
- National Center for Health Statistics (NCHS)
- Division of Nutrition and Physical Activity
- Division for Heart Disease and Stroke Prevention
- National Center for Injury and Prevention Control

National Highway Safety and Traffic Administration



INJURY AND VIOLENCE

Unintentional Injuries

Motor Vehicle Injuries

Deaths in Children and Teens

SIDS and Unsafe Sleep

Firearm Homicide

Violence among Children and Teens

Suicides

Injuries

OVERVIEW

Injuries are **preventable**. According to the Centers for Disease Control, Unintentional Injury is the 5th leading cause of death in the nation. In 2007, 123,706 US residents lost their lives to unintentional injuries. While deaths due to injuries cover a multitude of causes, the top three leading causes of injury death in the United States are: motor-vehicle crashes, poisonings (including drug overdoses), and firearms.

Death data only reveals a portion of injury's impact on the health of our nation and community. Each year millions of Americans survive their injuries, but are left with chronic and sometimes severe health problems and disabilities. The economic costs of injuries can be felt, not only in dollars, but in loss of productivity, increased hospital stays, and emergency department (ED) visits. According to the National Center for Health Statistics, injuries accounted for:

- 81.4 million ambulatory care visits (2006)
- 39.4 million (33.7%) of emergency department (ED) visits (2007)
- Nearly 2.9 million hospital discharges with an average length of stay of 5.3 days (2007)
- 66.1% of all injury visits were due to unintentional injuries (2007)

In 2008, Unintentional Injury was the 6th leading cause of death in Mecklenburg County accounting for 5% of all deaths. The death rate for injury was 27.3 per 100,000 residents, lower than the state rate of 46.1 per 100,000 and the national rate of 41.0 per 100,000 population.

Injury strikes heaviest among the younger population resulting in the most potential years of life lost due to death or disability. Yet, locally, statewide, and nationwide, there is very little funding and staff dedicated to injury prevention. Seatbelts, helmets, child safety seats, not driving while or with someone who is impaired, securing firearms, non-slip surfaces, strong anti-bullying policies, and safe sleep practices for infants can help prevent injuries.

2008 MECKLENBURG QUICK FACTS: INJURY

- Motor vehicle crashes, poisonings, and firearms are the top three leading causes of injury-related deaths.
- Unintentional Injury is the leading cause of death among children ages 1-14 and adults 25-44 years of age.
- Motor vehicle crashes are leading cause of death among children ages 1-17 years.
- Homicide is the leading cause of death and Suicide is the third leading cause of death for adolescents and young adults ages 15-24.

SUMMARY OF INJURY TRENDS IN MECKLENBURG COUNTY

Positive Trends

- Data from the CDC Youth Risk Behavior Survey (YRBS) has led to strong anti-bullying policies and increased awareness on the impact of bullying in the school system and the community.
- In 2008, there were no unintentional injury deaths due to firearms among children less than 12 years of age.
- From 2003-2008 Suicide deaths among adolescents has declined.

Areas for Improvement

- In 2008, there were 7 homicides among children ages 12 – 17 and **all** involved firearms.
- In 2008, 2 homicides occurred among children <5 yrs of age due to child abuse by a caregiver.
- Unintentional injury is the leading cause of death among children ages 1-17 and the 4th leading cause of death among infants due to Unintentional Suffocation.

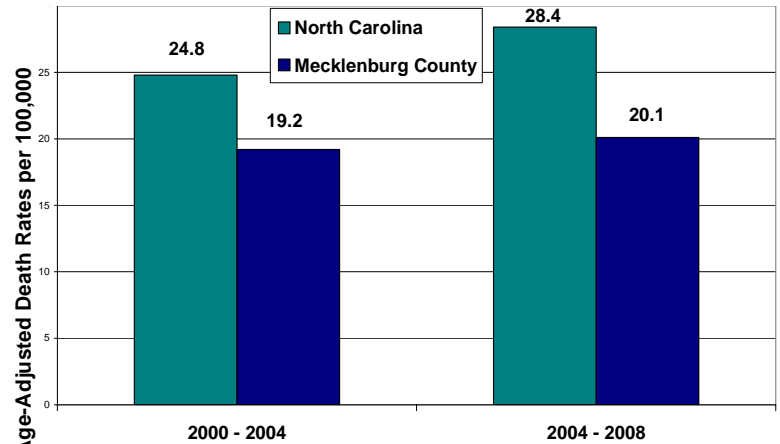
UNINTENTIONAL INJURIES

- Unintentional Injury is comprised of two categories: 1) Motor Vehicle Injuries, and 2) Other Unintentional Injuries.
- During 2008, 239 residents died from unintentional injuries at a rate of 27.3 deaths per 100,000 population, making it the 6th leading cause of death for all ages in the county.
- In 2008, unintentional injury deaths were the result of Motor Vehicle Crashes (MVCs) (34%), Unintentional Poisonings (23%), Falls (18%), Suffocation/Airway Obstruction (6%), and All Other Injuries (19%).
- Over the past eight years, all other unintentional deaths increased slightly for the county. From 2004 - 2008, the age-adjusted death rate was 19.2 deaths per 100,000 residents compared to an age-adjusted rate of 20.1 deaths per 100,000 during 2000-2004.

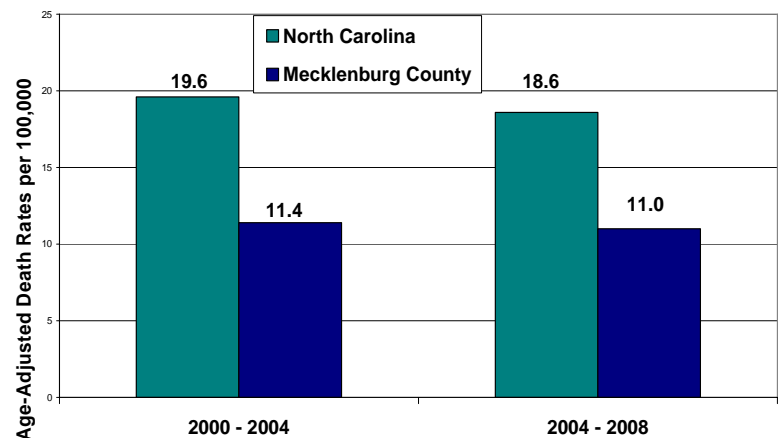
MOTOR VEHICLE INJURIES

- In 2008, the death rate from MVCs was 9.2 per 100,000 residents and 18.0 per 100,000 residents for All Other Unintentional Injuries.
- From 2000-2008 there were 449 deaths due to motor vehicle injuries resulting in an age-adjusted rate of 10.9 deaths per 100,000 residents.
- In recent years the number of deaths due to MVCs has gradually declined. In 2008, there were 81 deaths due to MVCs, 12% lower than 92 deaths in the year 2000.
- Based on 2008 death data:
 - Males are 2.4 times more likely to die from motor vehicle injuries than females.
 - Males die at higher rates of unintentional injuries than females.
 - Unintentional Injury was the 4th leading cause of death among minorities.

2000 – 2008 Other Unintentional Injury Death Rates
Mecklenburg County and North Carolina
(5 year Age-Adjusted Rates)



2000 – 2008 Motor Vehicle Injury Death Rates
Mecklenburg County and North Carolina
(5 year Age-Adjusted Rates)



**2008 Leading Causes of Death
UNINTENTIONAL Injury
Total Deaths: 239**

Leading Causes of Deaths due to Unintentional Injury

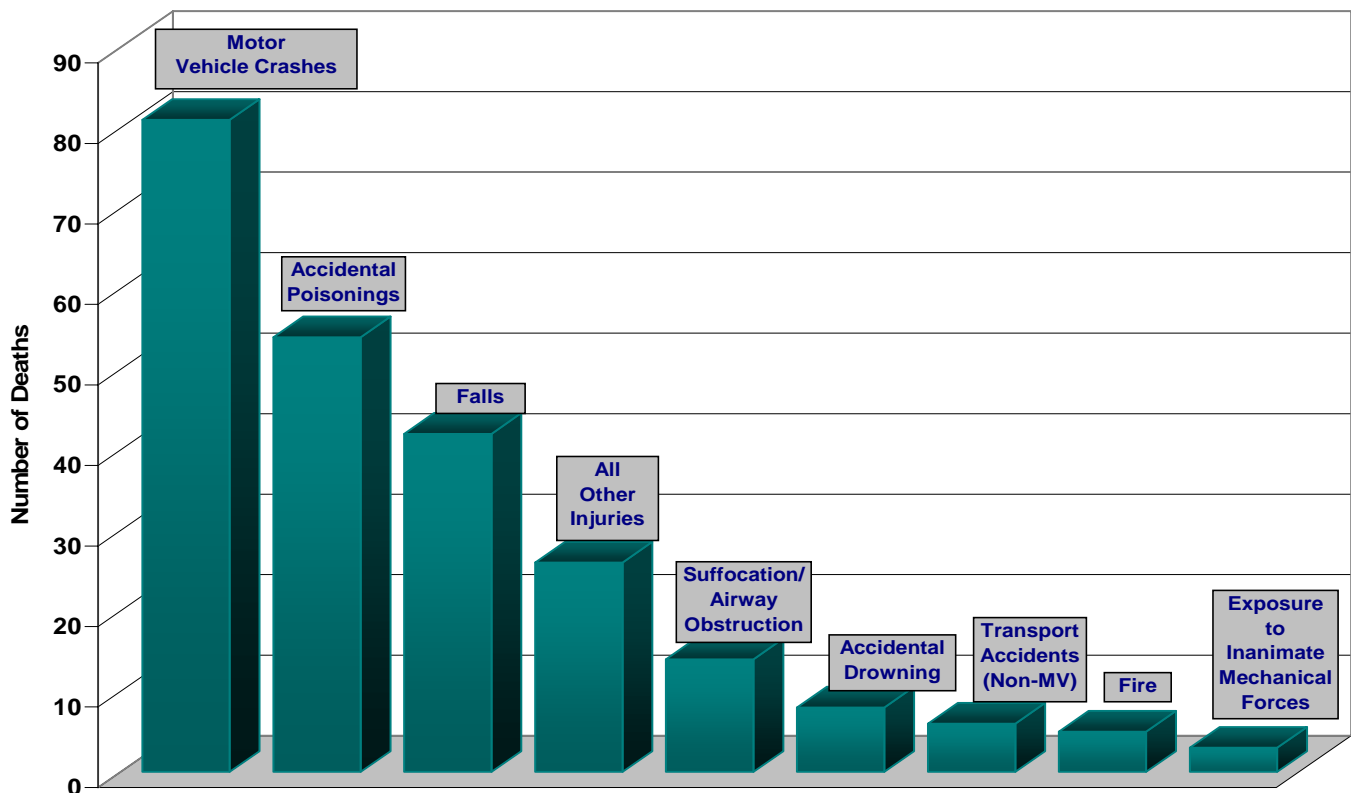
- **Motor Vehicle Injuries** (34%)
- **Unintentional Poisonings** (23%)
- **Falls** (18%)
- **Suffocation/
Airway Obstruction** (6%)
- **All Other Injuries** (19%)

**2008 Leading Causes of Death
INTENTIONAL Injury
Total Deaths: 155**

Leading Causes of Deaths due to Intentional Injury

- **Homicides** 84 deaths (54%)
 - Firearms (42%)
 - Sharp Object (4%)
 - Hang/Suffocation (3%)
 - All Other (5%)
- **Suicides** 71 deaths (46%)
 - Firearms (24%)
 - Hang/Suffocation (7%)
 - Ingestion (9%)
 - All Other (6%)

**2008 Mecklenburg County Unintentional Injury Deaths by Cause
(Number of Resident Deaths)**



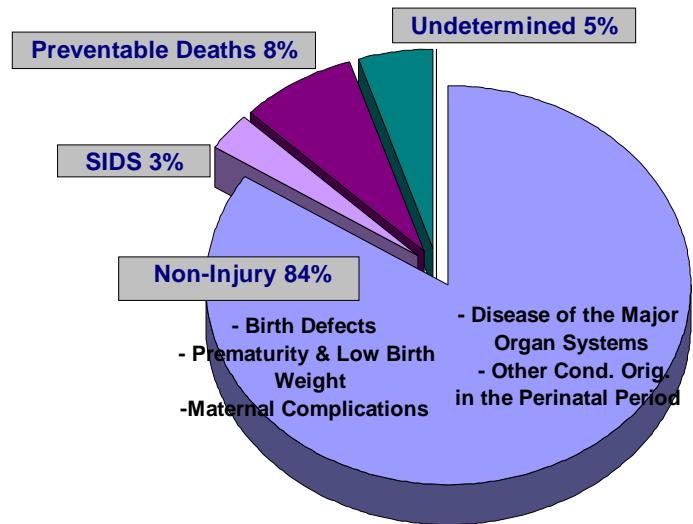
DEATHS IN INFANTS (<1 YEAR)

- A majority of infant deaths are the result of non-injury (natural) related causes such as birth defects, prematurity and low birth weight, and maternal complications.
- In 2008, there were 98 infant deaths. Unintentional Injury was the 4th leading cause of death among infants and 8.2% of all infant deaths were the result of **preventable** injuries.
- There were eight preventable deaths among infants in 2008: 5 Unintentional Suffocations, 1 Drowning, 1 Motor Vehicle Crash, and 1 House Fire Explosion.
- Unsafe sleep practices continue to contribute to preventable suffocation deaths among infants in Mecklenburg County each year.

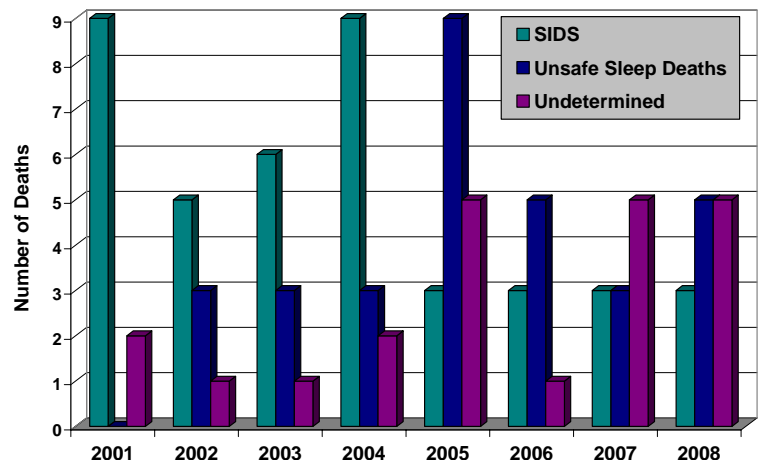
SIDS AND UNSAFE SLEEP DEATHS

- The Mecklenburg County Community Child Fatality Prevention and Protection Team (CFPPT) is a multidisciplinary group charged by North Carolina Statute 7B-1406-1414 to review all infant and child fatalities in Mecklenburg County from birth to age seventeen.
- Through monthly reviews of all infant and child deaths by the Prevention Team (a subcommittee of the CFPPT), the issue of infant deaths related to or caused by unsafe sleep practices has been identified as reoccurring problem in the community since 2005.
- While the incidence of SIDS has remained low, the incidence of Unsafe Sleep Deaths and Undetermined Deaths (with risk factors related to unsafe sleep practices) has been increasing.
- Community efforts to increase awareness and provide education on proper Safe Sleep Practices is one of the primary goals of the CFPPT.

2008 Mecklenburg County Infant Deaths by Cause (Percentages)



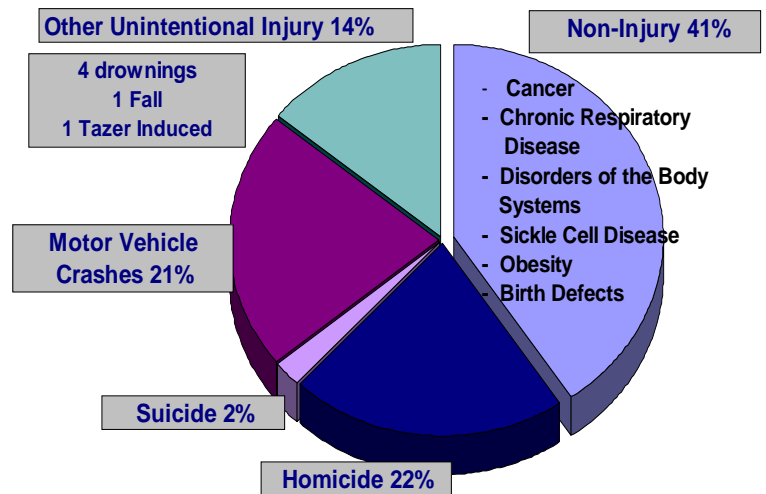
2008 Mecklenburg County Sudden Infant Death Syndrome (SIDS), Unsafe Sleep, and Undetermined Infant Deaths



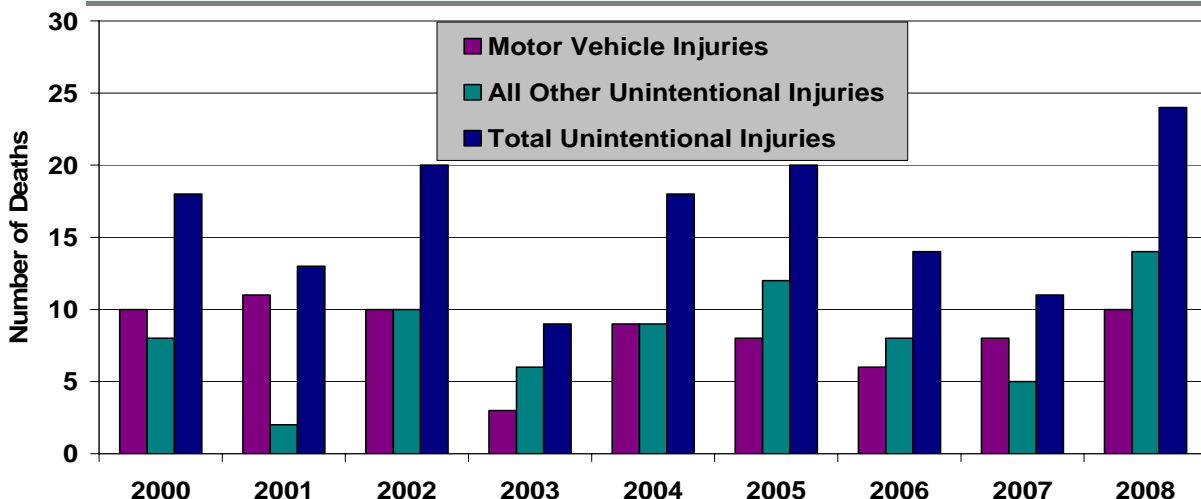
DEATHS AMONG CHILDREN (1 TO 17)

- Compared to infants, a majority of the deaths among children are the result of injury-related causes.
- In 2008, there were 44 childhood deaths and Unintentional Injury was the leading cause of death among children ages 1 to 14.
- There were 9 motor vehicle deaths and 7 other unintentional injury deaths in 2008. Deaths from other unintentional injuries included 4 were drownings, 1 fall, and 1 tazer-induced event.
- Injury gains attention for a few hours when an “incident” is covered and then loses its appeal until the next incident, yet nationwide, 2 out of 5 teen deaths are from motor vehicle crashes and 82% of adolescents dying in violent activities are killed by firearms.
- In addition, 5 deaths a day occur to children under the age of 14 in motor vehicle crashes, half of which are unrestrained.
- According to the 2009 local Youth Risk Behavior Survey, 74% of local middle school students reported not wearing a bike helmet in the past year and 23% of teens had ridden in a car with someone who had consumed alcohol in the past 30 days.

2008 Mecklenburg County Childhood Deaths by Cause (Percentages)



2000 - 2008 Unintentional Injury Deaths among Mecklenburg Children Ages 1 to 17 yrs (Number of Resident Deaths)



Violence

OVERVIEW

Violence is a serious problem in the US. It affects all age ranges and all types of people causing death, injury, and disability, increasing the risk of physical, reproductive, and emotional health problems and devastating our communities.

- Intentional Injury is comprised of Homicides and Suicides.
- In 2008, Homicide was the 11th leading cause of death in the county. There were 84 homicides with a rate of 9.6 per 100,000 residents which is higher than the state rate of 7.2 per 100,000 and the national rate of 6.1 per 100,000.
- Of the 84 homicide deaths, 73% were male and 27% were female. During 2008, homicide was the leading cause of death for young adults ages 15 to 24.
- Of all homicide deaths, 5% occurred among children <15 years of age, 75% among adolescents and adults ages 15 to 44, 17% among adults ages 45 to 64, and 4% among older residents 65 years and older.
- In addition, 15% occurred among White Non-Hispanics, 64% among African American Non-Hispanics, 18% among Hispanics, and 2% among Other Non-White, Non-Hispanics.

FIREARM HOMICIDES

- Firearms are the most common cause of homicides locally, statewide, and nationally. In 2008, the firearm homicide rate was 7.4 per 100,000 residents higher than the state rate of 5.0 per 100,000 and the national rate of 4.2 per 100,000.
- Locally, 77% of homicides were caused by firearms. Of the 63 (75%) homicides that occurred among the 15 to 44 age group, 78% were male, 22% were female, and 84% were caused by firearms.
- Of the firearm homicides 6% were White Non-Hispanic, 70% were African American Non-Hispanic, 23% were Hispanic, and 2% were Other Races.

FIREARM HOMICIDES *cont.*

- In 2008, the rate of firearm homicides for persons of Other Races was 4 times higher at 14.6 per 100,000 than the rate for Whites of 3.6 per 100,000.
- The firearm homicide rate for persons age 15 to 44 was 13.9 per 100,000 which was almost double the rate for the firearm homicide rate for persons of all ages.

OTHER TYPES OF VIOLENCE

- Deaths resulting from firearms, weapons, and child abuse represent the physical aspect of violence. However, exposure to violent behaviors such as bullying and domestic violence (DV) can cause emotional harm leading to injury or death.
- From 2005-2009, there were 45 domestic violence related homicides with an average of 9 per year.
- Domestic Violence is the largest risk factor associated with infant and child deaths. Child abuse by a caregiver was the cause of death for 2 children < 5 years of age in 2008.
- In 2008, 13% of all infant and child deaths ages 0 to 17 had a documented history of DV. Of the 34 **preventable** deaths, 21% had a history of DV.
- The local Youth Risk Behavior Survey (YRBS) data for 2005-2009 shows self-reported physical domestic violence increased 18% among teens.
- According to the 2009 local YRBS data, 39% of middle school students and 16% of high school students reported being bullied on school property one or more times during the past year.
- The Mecklenburg County Domestic Violence Fatality Review Team (MDVFRT) was established in 2009 to intensively review local DV related fatalities and identify systems gaps to help reduce the incidence of DV and prevent DV fatalities.

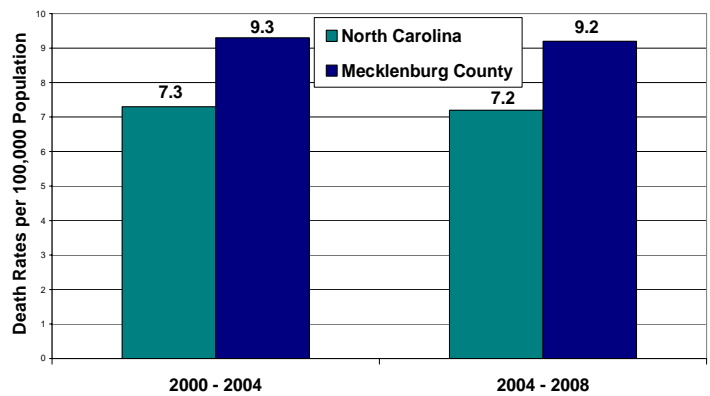
VIOLENCE AMONG CHILDREN AND TEENS

- In 2008, homicide was the second leading cause of death for children ages 1 to 17.
- There were 2 homicides among children < 5 year of age due to child abuse by a caregiver and 7 homicides among children ages 12 to 17 all involving firearms.
- Of the 9 homicides, 8 (89%) were African American Non-Hispanic and 1 was Hispanic.
- According to the 2009 Youth Risk Behavior Survey (YRBS), 14% of local teens reported carrying a weapon such as a gun, knife, or club within the past 30 days, 4% reported carrying a weapon on school property within the past 30 days, and 59% thought gang activity was present in the school system.

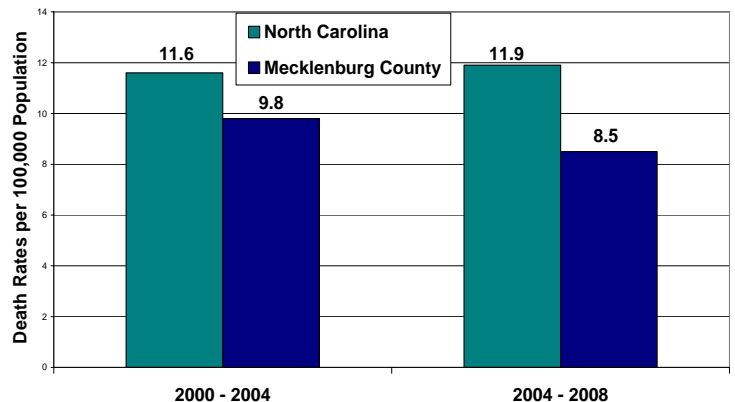
SUICIDES

- In 2008, there were 71 suicides and it was the 12th leading cause of death in the county.
- The suicide death rate was 8.1 per 100,000 population, lower than the state rate of 12.6 per 100,000.
- The 5 year age-adjusted rate for 2004-2008 was 8.4 per 100,000 population.
- The 5 year age-adjusted rate for whites for the same time period was 9.9 per 100,000 population and double the rate compared to 4.9 per 100,000 for people of other races.
- The 5 year age-adjusted rate for males was 3.5 times higher than the rate for females.
- From 2000-2008 there were 20 suicides among teens and 75% were male and 25% were female.
- The 20 teen suicides ranged in age from 11 to 17, 40% were 16 years of age, 55% were White, and the most common cause was hanging/strangulation/suffocation.
- According to the local 2009 YRBS data, 20% of teens reported having seriously contemplated suicide and 14% reported attempting suicide one or more times in the past year.

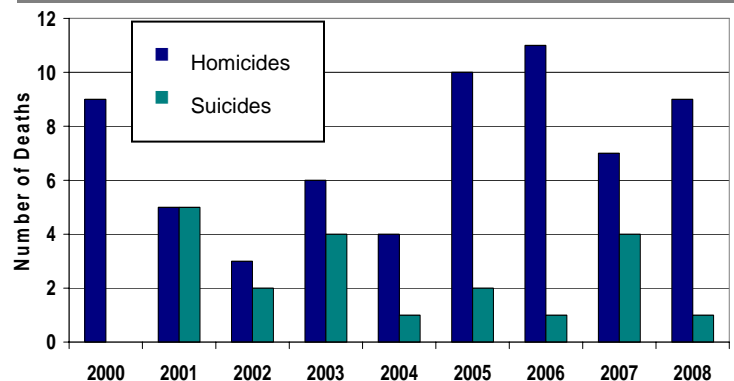
2000 - 2008 Homicide Death Rates
North Carolina and Mecklenburg County,
 (5 year Age-Adjusted Rates)



2000 - 2008 Suicide Death Rates
North Carolina and Mecklenburg County,
 (5 year Age-Adjusted Rates)



2000 - 2008 Number of Suicide Deaths among Mecklenburg Teens Ages 11 to 17





ENVIRONMENTAL HEALTH

Air Quality

Tobacco Initiatives

Physical Activity Initiatives

OVERVIEW

Environmental health comprises those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social, and psychosocial factors in the natural environment. Some important aspects of environmental health are air quality, safe drinking water, and the built environment.

AIR QUALITY

Affected by numerous factors such as vehicle traffic, industry, and geography, air quality is a regional issue as well as a county one. The quality of outdoor air is measured using the Air Quality Index (AQI). This index is based on concentrations of ozone, particulates, carbon monoxide, nitrogen dioxide and sulfur dioxide. While the region has been successful in curbing most of these pollutants, ozone concentrations and particulate matter remain major concerns. Ozone has been found to contribute to asthma, lung infections, cell inflammation, and shortness of breath. Rising population and the increase of vehicle miles traveled are key factors affecting the ozone level in the Charlotte Metro area. Because ozone levels have consistently remained at approximately 15% above federal compliance levels over the last 20 years, the EPA designated Mecklenburg County and surrounding areas an ozone “non-attainment” area in April 2004.

Number of Days that Ozone Levels have Exceeded Federal Compliance Levels

Mecklenburg County 2005-2009

Year	Number of Days
2005	10
2006	9
2007	19
2008	5
2009	0

2009 MECKLENBURG QUICK FACTS: ENVIRONMENTAL HEALTH

- Environmental health comprises those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social, and psychosocial factors in the natural environment.
- Then number of elevated ozone days has decreased from 10 days in 2005 to zero in 2009 in the Charlotte Metro Area.
- Several initiatives have been formed to address the air quality in Mecklenburg County. These include the Mecklenburg Air Quality Program, Clean Air Works!, and Clean Air Carolina.
- Ground water and surface water in Mecklenburg are both held to stringent requirements to ensure the safety of the county’s drinking water supply.
- In 2010 nearly all restaurants and bars in North Carolina were required to be smoke-free.
- Carolinas HealthCare Systems, Novant Health and the Charlotte Mecklenburg School Systems are both tobacco free.
- Prescription Pad Project, Fit City Challenge, and Fit Together are all programs to address physical activity for adults and youth.
- There are over 72,000 residents living in these food deserts, an area with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower income neighborhoods and communities.
- Greenways in Mecklenburg are an example a built environment element that encourages physical activity. There are 33 miles of greenway in Mecklenburg County and plans are for 185 miles over the next 20 years.

Air Quality Initiatives in Mecklenburg County

Mecklenburg County Air Quality (MCAQ)

- Responsible for assuring good air quality for the community through a combination of regulatory and non-regulatory programs.
- Grants to Replace Aging Diesel Engines (GRADE) – incentive funding to organizations that replace, repower and retrofit their heavy duty non-road construction equipment.

Clean Air Works!

- Launched in 2006, engages in employers in the effort to improve air quality by providing them with tools to help their employees take control of their commutes.
- Currently 116 employer partners participate in this endeavor.
- Over 280,000 lbs of nitrous oxide emissions have been reduced from our region's air.

Clean Air Carolina (CAC)

- Formerly known as Carolinas Clean Air Coalition
- Works to restore clean and safe air to the Charlotte region through coalition building, public policy advocacy and community outreach
- Recently in partnership with Charlotte-Mecklenburg Schools, CAC received a federal grant to reduce diesel emissions from school buses and fuel trucks.

Ground Water Quality

Groundwater quality in Mecklenburg County is high quality source water for both domestic and industrial purposes. Groundwater is a source of drinking water for approximately 20% of Mecklenburg County residents and is also used for commercial and industrial purposes including irrigation. Occasionally there made be a need for treatment of water for taste or odor and there are some areas of the county where groundwater has been impacted by manmade contamination and is not fit for human consumption.

Ground Water Quality, con't.

- There are more than 1,370 groundwater contamination sites in Mecklenburg County. Investigations of these sites have identified 250 contaminated private wells.

Surface Water Quality

An estimated 1.5 million people in the Charlotte area rely on the Catawba River and its lakes for their water needs. On an average day, 105 million gallons of clean, safe drinking water are pumped from Lake Norman and Mountain Island Lake to one of three water treatment plants in Charlotte and distributed throughout the county.

In 2005, over 150,000 analyses were conducted for approximately 150 substances, both before and after the treatment process, to ensure safe drinking water. Substances that are tested for include microbial and inorganic contaminants, pesticides and herbicides, organic chemicals and radioactive materials. The highest level of substances found were well below the limits that are required.

TOBACCO INITIATIVES IN MECKLENBURG COUNTY

Smoke Free Restaurants and Bars

As of January 2, 2010, nearly all restaurants and bars in North Carolina, and many lodging establishments, are required to be smoke-free, thanks to North Carolina's Smoke-Free Restaurants and Bars Law.

All enclosed areas of almost all restaurants and bars are to be smoke-free as well as enclosed areas of hotels, motels, and inns, if food and drink are prepared there.

Smoke Free Mecklenburg

Smoke-Free Mecklenburg is a local grassroots coalition of health care professionals, advocacy groups, and individuals committed to bringing smoke-free restaurants, bars and workplaces to Mecklenburg County. This initiative is not anti-smoking or against the tobacco industry; it was developed to promote health, to protect children and workers from second hand smoke, and to help businesses stay productive and competitive in the current economy.

Carolinas HealthCare System

As of November 16, 2006 Carolinas HealthCare Systems (CHS), the largest health care system in the Carolinas, prohibits the use of all tobacco products on its campuses and in its facilities. All patients, employees, volunteers, students, vendors, contractors, physicians, and any and all visitors may not smoke or use tobacco products on any CHS property. This includes CHS campuses, facilities, or worksites whether owned or leased property, including building stairways and outside areas adjacent to the grounds, building entrances, and exits. Tobacco use is also discouraged on properties neighboring CHS.

100% Tobacco Free Schools

Charlotte Mecklenburg School District went tobacco free in May 2003. Currently there are 350 signs stating the 100% Tobacco Free Schools policy on school grounds.

Project Assist

Project ASSIST stands for the American Stop Smoking Intervention Study. The purpose of Project ASSIST is to prevent deaths and health problems attributable to tobacco use. In North Carolina, Project ASSIST is focusing on helping those who want to quit. Mecklenburg County Project ASSIST is a partnership of the American Cancer Society, the Department of Environment, Health, and Natural Resources, the National Cancer Institute, Mecklenburg County Health Department, and voluntary organizations.

PHYSICAL ACTIVITY INITIATIVES IN MECKLENBURG COUNTY

Prescription Pad Project

In 2001, the Mecklenburg Council on Health and Fitness developed an educational program and accompanying materials for health care professionals on the importance of physical activity and health. Members of the Council modeled a prescription pad with the “get active – your health depends on it” message after the prescription pad Dr. David Satcher uses to “prescribe” healthy lifestyle. On the back of the prescription pad are simple suggestions on how to increase daily activity. In addition, a resource list with inexpensive, accessible places to exercise, a poster showing people of all shapes and sizes engaging in everyday physical activities and an educational packet were developed. Currently Carolinas Medical Center Ambulatory sites and a few medical practices participate in this project.

Fit City Challenge

A community level initiative to encourage and empower program participants to increase their level of physical activity and fruit and vegetable consumption. The interactive website, www.fitcitychallenge.org, provides a fitness log for recording physical activity and fruit and vegetable consumption so participants can record and track their progress. The website also provides resources and tools on how to live a healthier lifestyle and create a healthier environment at home, work or play.

Fit City Challenge collaborates with like-minded groups and individuals to increase awareness for policy and environmental changes that will make Mecklenburg County more conducive for physical activity and healthy eating.

In 2009, Fit City Challenge developed the Worksite Wellness Policy Council of Mecklenburg County. This team of business leaders will create healthier work environments within their own worksites to serve as a model and resource for the rest of the business community and to advocate for community-wide policy and environmental changes impacting Mecklenburg County.

Fit City for Fit Families

Fit City for Fit Families educates families on the importance of healthy eating and physical activity. The program works with child care centers to establish policies that create healthy, kid-friendly eating options. A childcare toolkit is available on the Fit City Challenge website. The program also works with community coalitions to improve access to healthy foods for all Mecklenburg County residents.

Fit City for Worksite Wellness

Fit City Worksite Wellness provides free onsite assessment for worksites to determine how conducive their work environment is for physical activity and healthy eating.

The program provides customized recommendations for change and connects worksites with resources that can assist with implementation. Changes focus primarily on policy and environmental changes that will increase opportunities for being physically active and eating healthy.

Resources and tools for worksites are available on the Fit City Challenge website (including sample policies, how to start a worksite wellness program, incentive based employee challenge ideas and more.

www.fitcitychallenge.org/worksite

OTHER ENVIRONMENTAL PROGRAMS IN MECKLENBURG COUNTY

Carbon Monoxide

Cold weather in Mecklenburg County increases the likelihood of some residents taking extraordinary measures to keep warm. Fuel-burning appliances such as furnaces, gas ranges/stoves, gas clothes dryers and water heaters are all sources of carbon monoxide (CO).

Fireplaces, charcoal grills, wood-burning stoves, kerosene heaters and vehicles, generators and other combustion engines running in an attached garage -- even when an outside door is open -- may also cause carbon monoxide poisoning.

Carbon Monoxide, con't

On January 1, 2004, an ordinance was passed requiring all dwelling units whether owned or leased, regardless of the source of energy used in the dwelling unit, and regardless of whether the dwelling unit has an attached garage to contain at least one operable Carbon Monoxide Alarm.

Lead Screening

The Childhood Lead Poisoning Prevention Program in the county is administered by both the Public Health Pest Management & Environmental Services (PHPM) and Community-Based Services program of the Health Department. The purpose of the program is to promote childhood lead poisoning prevention, provide medical case management to children under 6 years of age who have elevated lead levels, and apply State rules and regulations addressing childhood lead poisoning prevention.

Children, under the age of six years, who reside in target housing (pre-1978), should have their blood tested for lead at their pediatrician or other health care provider. The initial check is usually done with a simple finger-stick test. If there is an elevated blood lead level then a second test (venous) will be done. Confirmed blood lead levels of 10ug/dl or greater will trigger medical, nutritional, and environmental follow up from health professionals. Below are the lead testing results for Mecklenburg County for 2008.

Year	Screened < 6 years	Confirmed ≥10 ug/dL	Confirmed ≥20 ug/dL
2008	11,470	3	1

Food Inspections

The Mecklenburg County Food and Facilities Sanitation Program (F&FS) is a component of the Environmental Health Division of the Mecklenburg County Health Department. The F&FS Program is a mandated program administered by the local Health Department pursuant to Chapter 130A of the General Statutes of North Carolina.

Food Inspections, con't.

Program employees are responsible for enforcing state statutes and rules, and local ordinances governing a number of different types of facilities. In FY05 half of the required food inspections were completed. In FY07 almost all (99.7%) of the required food inspections were completed. Additional staff being added to F&FS helped to contribute to the increase in inspections. The goal for 2015 is to have 100% of required inspections completed.

MECKLENBURG COUNTY COMMUNITY FOOD ASSESSMENT

An assessment conducted by the Health Department and Charlotte Mecklenburg Food Policy Council examined food stores available within Mecklenburg County census block groups (CBGs) to determine the existence of food deserts. A food desert is defined as an area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower income neighborhoods and communities. Sixty CBGs in Mecklenburg were designated food deserts. There are 72,793 residents living in these food deserts, with a median income of approximately \$31,000; one third of the residents are SNAP (food stamps) participants and the majority live in the northwest section of Charlotte.

BUILT ENVIRONMENT

Built environment refers to the manmade surroundings that provide the setting for human activity, ranging from large-scale civic surroundings to personal places. According to the CDC, built environment is now being recognized as having an impact on our health although traditionally decisions about the built environment have been made without active inclusion of public health. A greater understanding of opportunities to improve health outcomes through altering the built environment will strengthen linkages between public health, city planners and others involved in community design. Healthy places assist individuals in making healthy choices.

Examples of Built Environment

- There are 33 miles of greenway in Mecklenburg County, up from 20 miles that were under construction in 2007. There are plans for 185 miles over the next 20 years.
- The Health Department has added a staff position to coordinate Safe Routes to School (SRTS), a program to help schools and parents design and sustain walking and biking programs. SRTS has worked with 13 schools in the county as well as leveraged federal grant funding for education and infrastructure programs.
- According to the Behavioral Risk Factor Surveillance System, over 10% of Mecklenburg residents walk or bicycle for transportation, such as to and from work or shopping, or walk to the bus stop for one hour or more per week.

Sources

Carolinas Health Care Systems

Charlotte Mecklenburg School District

Charlotte Mecklenburg Utilities

2010 Mecklenburg County State of the Environment Report

Mecklenburg County Land Use and Environmental Services Agency

Mecklenburg County Health Department

- Fit City Challenge
- Fit Together Obesity Initiative
- Health Promotion, Wellness and Lifestyle
- Project Assist

Mecklenburg County Park and Recreation Department

Smoke Free Mecklenburg



COMMUNICABLE DISEASES

Tuberculosis

Sexually Transmitted Diseases

Chlamydia

Gonorrhea

Syphilis

HIV Disease

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Tuberculosis

OVERVIEW

Tuberculosis (TB) is a disease caused by bacteria called *Mycobacterium tuberculosis*. TB usually affects the lungs, but it can also affect other parts of the body. TB is spread through the air from one person to another. The bacteria are put into the air when a person with active TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected.

If not treated properly, TB disease can be fatal. Worldwide, TB affects about 9 million people each year, killing about 2 million. In the United States 12,904 TB cases were reported in 2008 with 644 deaths related to TB disease occurring in 2006, the latest year for which complete data is available (*Centers for Disease Control, 2008 TB Surveillance Report*).

2009 MECKLENBURG QUICK FACTS: TUBERCULOSIS

Positive Trends

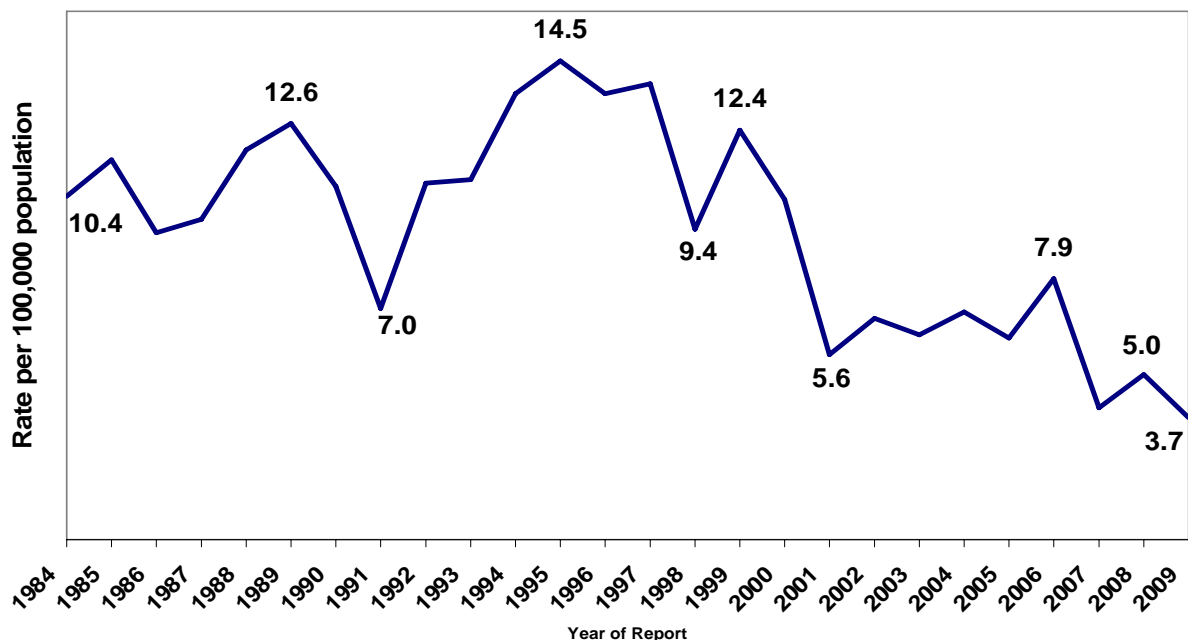
- Mecklenburg TB case rates declined from 14.5 cases per 100,000 in 1995 to 3.7 cases per 100,000 in 2009.
- There have been limited to no reports of TB disease in long-term care facilities, correctional facilities or among health-care workers in the county.

Areas for Improvement

- Foreign-born cases of TB continue to represent a substantial burden for the county.
- While overall reports and case rates of TB have declined for the county, racial and ethnic minorities remain disproportionately impacted by tuberculosis.

TUBERCULOSIS CASE RATES, Mecklenburg County: 1984 – 2009

Rate per 100,000 population



Data Source: Mecklenburg County Health Department, Tuberculosis Prevention and Control Program

TB CASE REPORTS DECLINE, HOWEVER CHALLENGES PERSIST

TB case rates for the nation have declined, following a resurgence of the disease between 1985 and 1992. The 2008 TB rate of 4.2 cases per 100,000 persons was the lowest recorded since national reporting began in 1953. In Mecklenburg County TB case rates declined from 14.5 cases per 100,000 persons in 1995 to 3.7 cases per 100,000 persons in 2009.

Despite this overall improvement, progress has slowed in recent years. In Mecklenburg, the average annual percentage decline in TB rates slowed from 11.2% per year during 1995--2001 to 6.1% during 2000--2009. Additionally, foreign-born cases of TB continue to represent a substantial burden for the county.

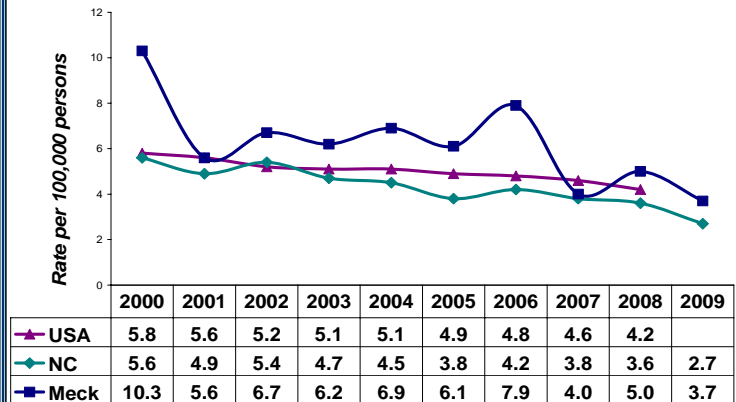
TUBERCULOSIS IN MECKLENBURG

- In 2009, 33 TB cases (a rate of 3.7 cases per 100,000 persons) were reported in Mecklenburg County.
- In comparison to 2006 (55 reported cases), TB reports for 2009 declined by 40% and the annual case rate declined by 53%.

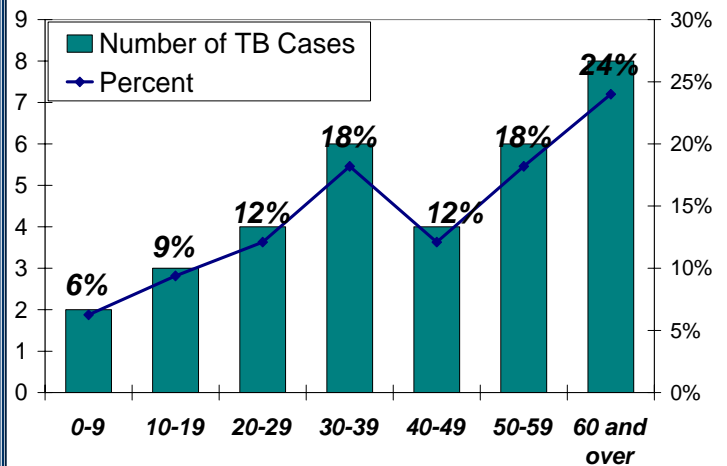
Age, Gender and Racial/Ethnic Differences

- The majority of the 2009 TB cases were reported among persons aged 50 and over (42%). Males (18 cases or 55%) were more likely than females (15 cases or 47%) to be reported with TB.
- While overall reports and case rates of TB have declined for the county, racial and ethnic minorities remain disproportionately impacted by tuberculosis.
- Whites accounted for 6% of new TB cases for the county. In comparison, African Americans represented 46% of reports while Hispanic/Latinos were 15% and Asian/Pacific Islanders were approximately 33% of new TB case reports for the county.
- Several factors contribute to these differences in reports, including increased reports among Foreign born persons, many of whom are racial/ethnic minorities.

2000 - 2009 TB Case Rates, US, NC, Mecklenburg (rate per 100,000 population)



2009 TB Case Reports and Percents BY Age Groups (Mecklenburg Residents)



Data Source: Mecklenburg County Health Department, Tuberculosis Prevention and Control Program

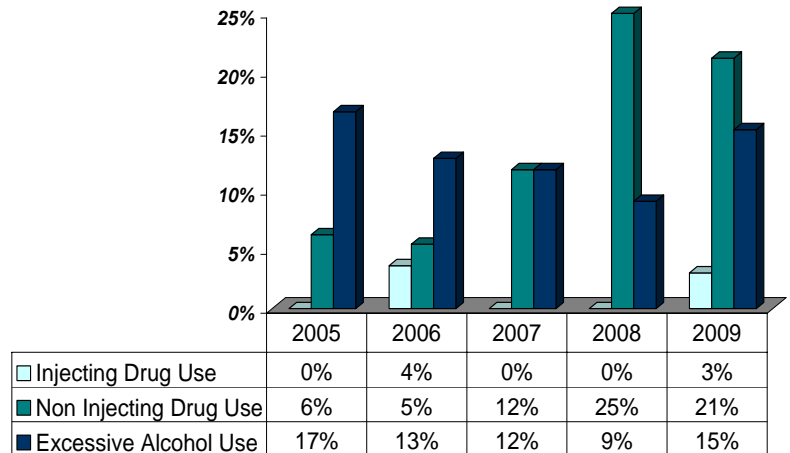
RISK FACTORS FOR TUBERCULOSIS

Increased TB case reports are associated with several risk factors, including:

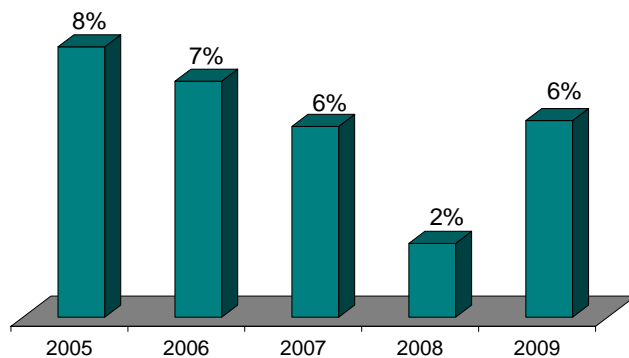
- being foreign-born
- having a history of substance abuse
- being homeless
- being a resident of a long-term care facility or a correctional facility
- co-infection with HIV, and
- being a health-care worker

Based upon the past five years of county-level data, there have been limited to no reports of TB disease in long-term care facilities, correctional facilities or among health-care workers.

**2005 - 2009 Mecklenburg TB Case Reports
% Reporting Substance Abuse
(within past year)**

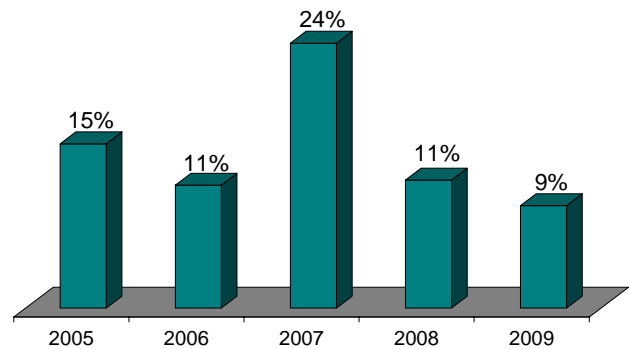


**2005- 2009 Mecklenburg TB Reports
% Reporting Homelessness
(within past year)**



- Reports of being homeless within the past year among TB cases have ranged from 6 – 8 %.

**2005 - 2009 Mecklenburg TB Reports
% HIV Co-Infection**



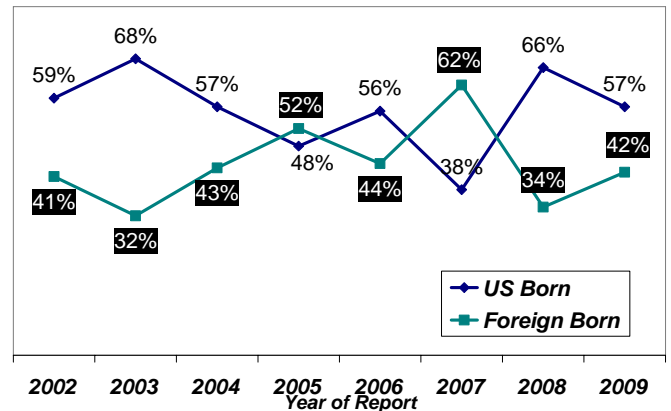
- Approximately 10 – 13% of TB cases reported each year in the county are co-infected with HIV (data based upon 2005 – 2009 Reported TB Cases).

Data Source: Mecklenburg County Health Department, Tuberculosis Prevention and Control Program

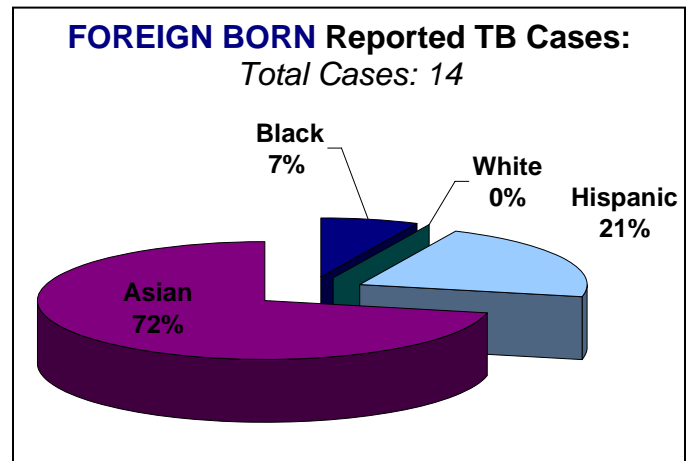
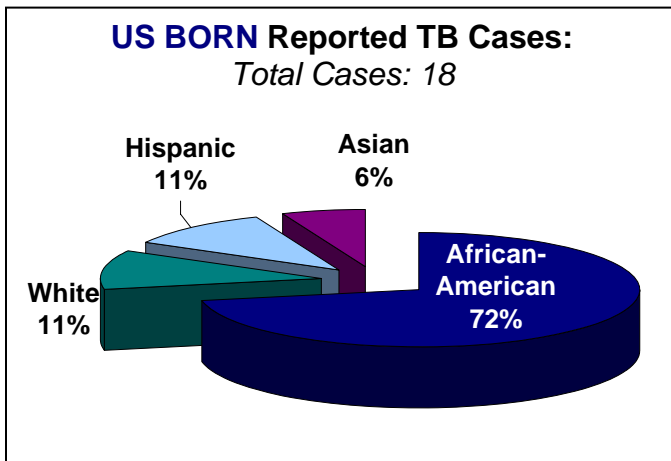
COUNTRY OF ORIGIN: U.S. AND FOREIGN BORN CASE REPORTS

- In general TB case reports among US born persons has declined over time, while the proportion of TB cases among foreign-born individuals has increased.
- Foreign-born TB cases increased from 41% of total case reports in 2002 to 62% of total case reports in 2007.
- In 2009 Foreign born persons accounted for 42% of new TB cases. Non-Hispanic Asians accounted for the majority of Foreign born reports (72%), while Non-Hispanic African Americans (72%) represented the majority of US born TB cases.
- The most frequently reported countries of origin among foreign-born persons with TB were Vietnam, Mexico and India.

2005 - 2009 Mecklenburg TB Case Reports US and Foreign-born Cases by Year of Report (percentages)



2009 Mecklenburg TB Reported Cases: US Born and Foreign Born Cases (% Distribution of Race/Ethnicity)



33 TB cases were reported in 2009, including one case with missing data for Country of Origin.

Data Source: Mecklenburg County Health Department, Tuberculosis Prevention and Control Program

2008 Mecklenburg County Verified Tuberculosis (TB) Case Reports

Total TB Cases = 44

Annual Case Rate = 5.0 per 100,000 population

Gender	Cases	%
Male	27	61.4%
Female	17	38.6%
Racial Categories (includes Hispanic Cases)		
White	18	40.9%
Black or African American	17	38.6%
Asian or Pacific Islander	7	15.9%
American Indian	0	0.0%
Other/Unknown Racial Group	2	4.6%
Ethnicity (Hispanic/Latino)		
Non-Hispanic	32	72.7%
Hispanic	12	27.3%
Unknown/Missing	0	0.0%
Country of Origin		
U.S. Native	29	65.9%
Foreign-Born	15	34.1%
Age Group		
0 - 19 yrs	3	6.8%
20 - 29 yrs	11	25.0%
30 - 39 yrs	10	22.7%
40 - 49 yrs	12	27.3%
50 - 59 yrs	6	13.6%
over 60 yrs	2	4.6%
Behavioral and Occupational Risk Categories (Within the Past Year)		
Injected Drugs	0	0.0%
Non-Injecting Drug Use	11	25.0%
Excessive Alcohol Use	4	9.1%
Homeless	1	2.3%
Resident of Long-Term Care Facility	0	0.0%
Clinical Data		
Site of Disease		
Pulmonary	32	72.7%
Extra Pulmonary	7	15.9%
Both	5	11.4%

2009 Mecklenburg County Verified Tuberculosis (TB) Case Reports

Total TB Cases = 33

Annual Case Rate = 3.7 per 100,000 population

Gender	Cases	%
Male	18	54.6%
Female	15	45.4%
Racial Categories (includes Hispanic Cases)		
White	6	18.2%
Black or African American	16	48.5%
Asian or Pacific Islander	11	33.3%
American Indian	0	0.0%
Other/Unknown Racial Group	0	0.0%
Ethnicity (Hispanic/Latino)		
Non-Hispanic	28	84.8%
Hispanic	5	15.2%
Unknown/Missing	0	0.0%
Country of Origin		
U.S. Native	19	57.6%
Foreign-Born	14	42.4%
Age Group		
0 - 19 yrs	5	15.1%
20 - 29 yrs	4	12.1%
30 - 39 yrs	6	18.2%
40 - 49 yrs	4	12.1%
50 - 59 yrs	6	18.2%
over 60 yrs	8	24.2%
Behavioral and Occupational Risk Categories (Within the Past Year)		
Injected Drugs	1	3.0%
Non-Injecting Drug Use	7	21.2%
Excessive Alcohol Use	5	15.1%
Homeless	2	6.1%
Resident of Long-Term Care Facility	0	0.0%
Clinical Data		
Site of Disease		
Pulmonary	19	57.6%
Extra Pulmonary	8	24.2%
Both	6	18.2%

Data Source: Mecklenburg County Health Department, Tuberculosis Prevention and Control Program

Sexually Transmitted Diseases

OVERVIEW

Sexually Transmitted Diseases (STDs) are diseases that are spread primarily through sexual contact. STDs are extremely widespread and, without treatment, can result in severe and sometimes deadly consequences.

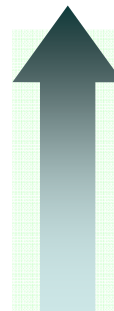
Nearly \$14.1 billion annually is spent in direct medical cost for the treatment of STDs. The Centers for Disease Control estimates that 19 million new infections occur each year, almost half of them among young people ages 15 to 24. However the true magnitude of the STD epidemic is unknown because many cases of reportable STDs are undiagnosed, and in some cases such as human papillomavirus and genital herpes, are not reported at all.

Estimated New STD Cases in the U.S. (for selected STDs per year)	
STD	INCIDENCE (Estimated number of new cases every year)
Chlamydia	3 million
Gonorrhea	650,000
Syphilis	70,000
Herpes	1 million
Human Papillomavirus (HPV)	5.5 million
Hepatitis B	120,000
Trichomoniasis	5 million
Source: Cates, 1999	

2009 MECKLENBURG QUICK FACTS: SEXUALLY TRANSMITTED DISEASES

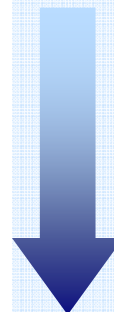
- 5,840 new chlamydia cases were reported in 2009 for a case rate of 651.2 per 100,000. While these reports are substantially higher than previous years, the increase is most likely a result of enhanced diagnostic tests.
- Mecklenburg reported 2,035 new cases of gonorrhea during 2009 for an annual case rate of 227.1 per 100,000. This rate was higher than the State (151.6) and the Nation (2008 annual case rate=111.6).
- Between 2008 and 2009, the Primary/Secondary Syphilis case rate in the county increased by 138%, from 5.5 cases per 100,000 to a rate of 13.1.

SUMMARY OF STDs TRENDS IN MECKLENBURG COUNTY



Positive Trends

- Expansion of screening and use of more sensitive tests have led to better diagnosis of Chlamydia infections in the county.
- Gonorrhea case rates within the county have declined and appear to be stabilizing.



Areas for Improvement

- Syphilis, a disease once on the verge of elimination, began re-emerging as a public health threat in 2001.
- Women, especially young and minority women are hardest hit by chlamydia.
- Racial and ethnic minorities remain disproportionately impacted by STIs.
- Adolescents and young adults account for the majority of chlamydia and gonorrhea reports in the county.

CHLAMYDIA

Chlamydia is a curable STD caused by the bacterium *Chlamydia trachomatis*. It is the most frequently reported bacterial sexually transmitted disease in the United States. There were more than 1.2 million cases of chlamydia (1,210,523) reported to Centers for Disease Control in 2008.

Because many infections occur with mild or no symptoms, chlamydia reports are substantially under-diagnosed and under-reported. Chlamydia is widespread among sexually active persons, regardless of race, age, or gender.

Changes in screening practices, use of diagnostic tests with differing test performance, and/or changes in reporting practices may mask true increases or decreases in disease reporting. In 2008, North Carolina underwent extensive changes to their electronic disease surveillance system. Reporting delays and changes in reporting processes may have substantially affected the data during this transition.

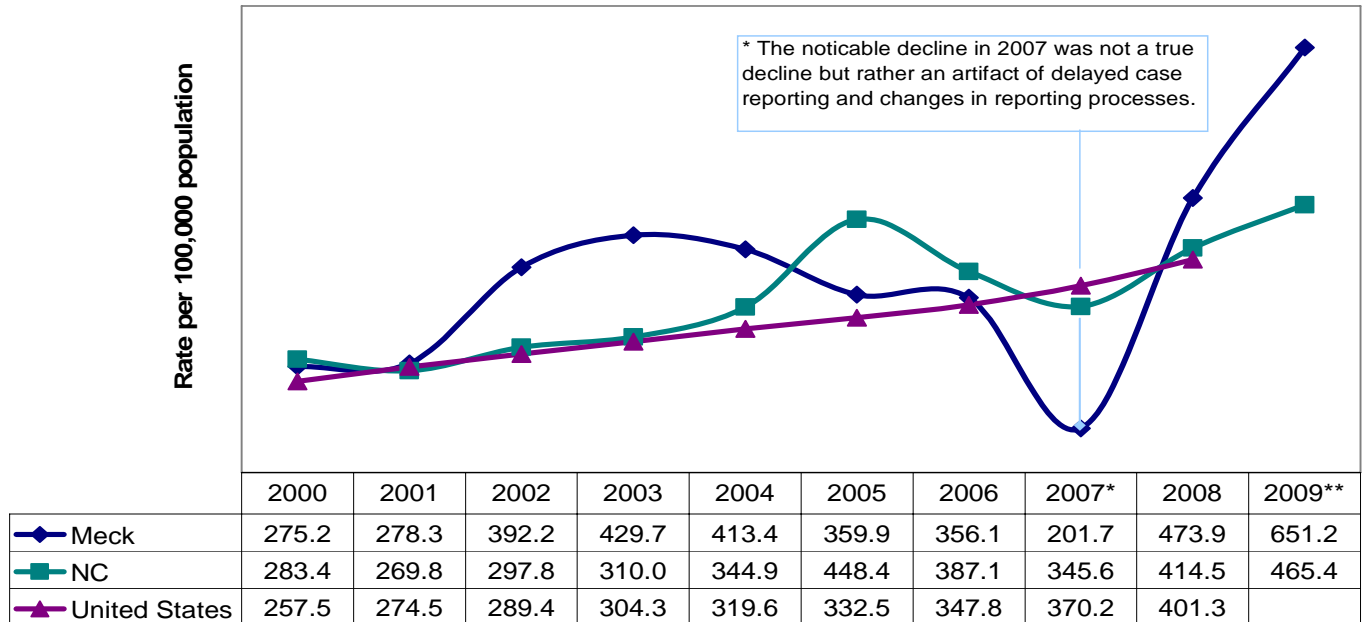
CASE REPORTING IN MECKLENBURG

- In 2009, 5,840 chlamydia cases (a rate of 651.2 cases per 100,000 persons) were reported in Mecklenburg County nearly 66% higher than reports from 2005 (3,527 reported cases).
- This increase is more likely the results of enhancements to related laboratory reporting. Conversely, the large decline in 2007 case reports was most likely an artifact of delayed case reporting, changes in personnel and/or reporting processes.

Trends in reporting by Age and Gender

- Women, especially young and minority women are hardest hit by chlamydia. Nearly 72% of chlamydia reports during 2009 were among women.
- Adolescents (15 – 19 yrs) and young adults (20 – 24 yrs) account for nearly 70% of chlamydia case reports in the county

**2000- 2009 Chlamydia Case Reports: Mecklenburg, NC, United States
(rate per 100,000 population)**



** 2009 United States data was unavailable at time of report.

Source: NC DHHS HIV/STD Prevention and Care Unit, Centers for Disease Control 2008 STD Surveillance Report

GONORRHEA

Gonorrhea is a curable sexually transmitted disease caused by the bacterium *Neisseria gonorrhoea*. Nationally, there were 336,742 reported cases of gonorrhea in 2008, a slight decline from 2007 (355,991 cases) — making gonorrhea the second most commonly reported infectious disease in the United States.

Gonorrhea infections can occur in the genital tract, the mouth and the rectum. Untreated gonorrhea can cause serious and permanent health problems including pelvic inflammatory disease and ectopic pregnancies in women and epididymitis (a painful condition of the testicles) in men. Without proper treatment, gonorrhea can lead to infertility in both men and women.

Like chlamydia, gonorrhea is substantially under-diagnosed and under-reported, and approximately twice as many new infections are estimated to occur each year as are reported (*Centers for Disease Control, 2008 STD Factsheets*).

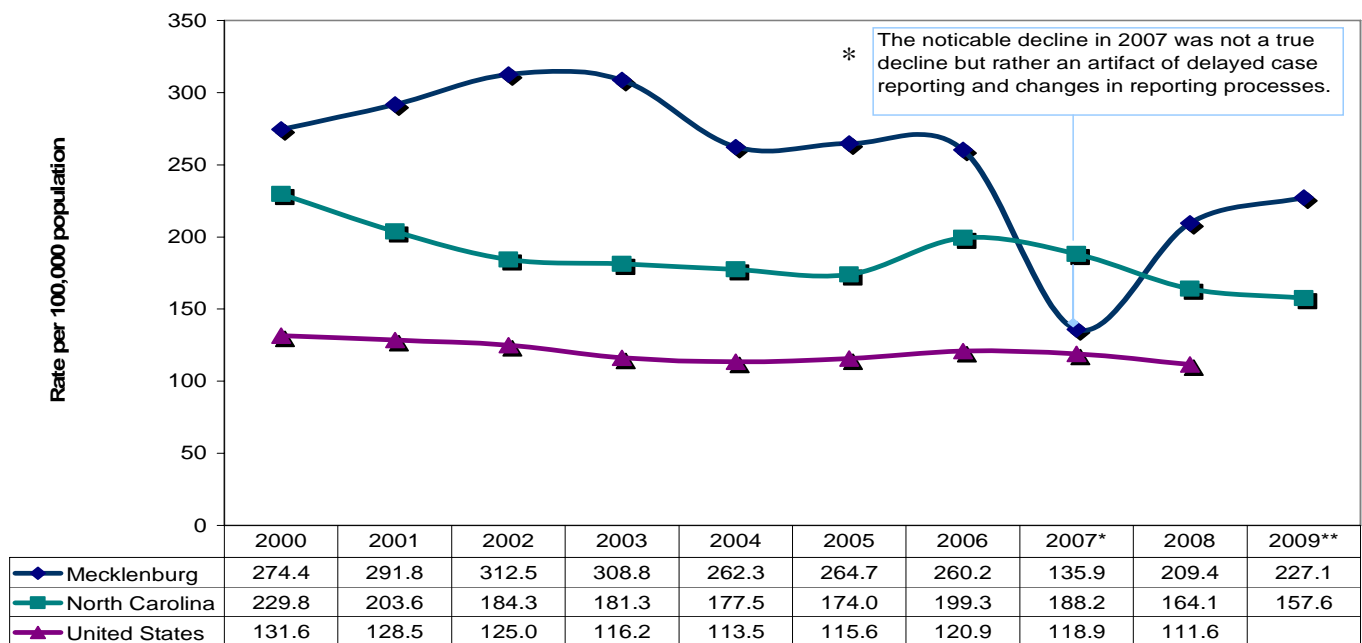
CASE REPORTING IN MECKLENBURG

- Mecklenburg reported 2,035 new cases of gonorrhea during 2009 for an annual case rate of 227.1 per 100,000. This rate was higher than the State (151.6) and the Nation (2008 annual case rate=111.6).
- A substantial decline in Gonorrhea case reports was noted in 2007 most likely due to delayed case reporting, changes in personnel and/or reporting processes.

Trends in reporting by Age and Race

- Adolescents (15 – 19 yrs) and young adults (20 – 24 yrs) account for the majority of cases in the county. Adolescents accounted for 32% of new reports in 2009, while young adults represented an additional 37%.
- Racial and ethnic minorities, in particular African Americans are disproportionately impacted by STIs. Each year racial/ethnic minorities account for 75 – 80% of new gonorrhea cases in the county.

2000- 2009 Gonorrhea Case Reports: Mecklenburg, NC, United States
(rate per 100,000 population)



** 2009 United States data was unavailable at time of report.

Source: NC DHHS HIV/STD Prevention and Care Unit, Centers for Disease Control 2008 STD Surveillance Report

SYPHILIS

Syphilis is a genital ulcerative disease that is highly infectious but easily curable in its early (primary and secondary) stages. Left untreated, however, syphilis can lead to serious long-term complications, including brain, cardiovascular, and organ damage, and even death. Untreated syphilis in pregnant women can also result in congenital syphilis (syphilis among infants), which can cause stillbirth, death soon after birth, and physical deformity and neurological complications in children who survive.

Syphilis, a disease once on the verge of elimination, began re-emerging as a national public health threat in 2001. This is primarily because of a resurgence of the disease among men who have sex with men (MSM), though cases among women have also been increasing in recent years.

In 2008, there were 13,500 reported cases of primary and secondary (P&S) syphilis in the United States—the most infectious stages of the disease—the highest number of cases since 1995 and an increase over 2007 (11,466 cases).

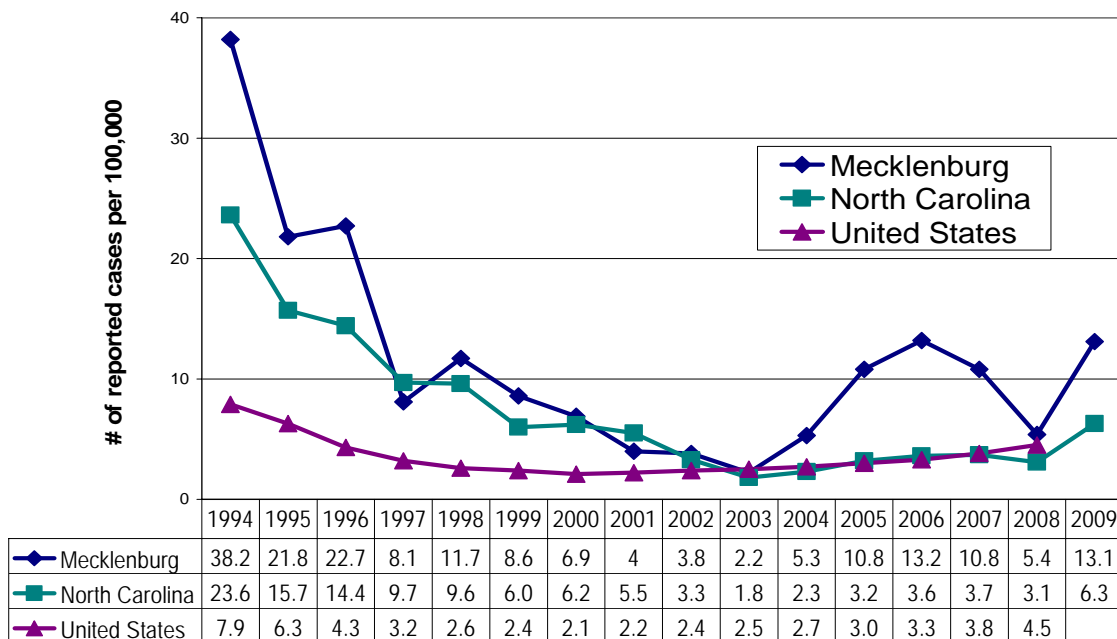
INCREASING SYPHILIS REPORTS FOR NORTH CAROLINA AND MECKLENBURG

In 2009, North Carolina experienced a significant outbreak of new syphilis cases. Statewide reports were 84% higher than the previous year's report. The 2009 increase in syphilis occurred throughout the state and included many North Carolina counties.

Mecklenburg County was one of six counties reporting the highest rate of syphilis increase for the state.

- Primary and secondary syphilis reports for Mecklenburg were nearly 2.5 times higher in 2009 (cases=117) versus those of 2008 (cases=48).
- Between 2008 and 2009, the Primary/Secondary Syphilis case rate increased by 138%, from 5.5 cases per 100,000 to a rate of 13.1 in 2009.

1994- 2009* Primary/Secondary Syphilis Case Rates: Mecklenburg, NC, United States (rate per 100,000 population)



* 2009 United States data was unavailable at time of report.

Source: NC DHHS HIV/STD Prevention and Care Unit, Centers for Disease Control 2008 STD Surveillance Report

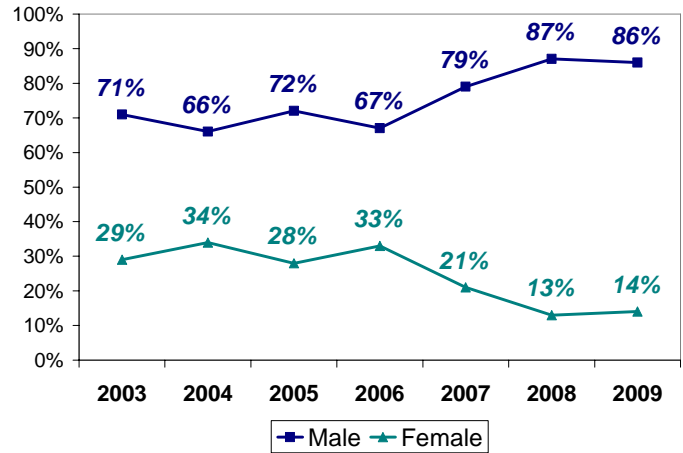
INCREASING SYPHILIS REPORTS FOR MECKLENBURG, cont.

Changing Demographics: Age, Gender and Race

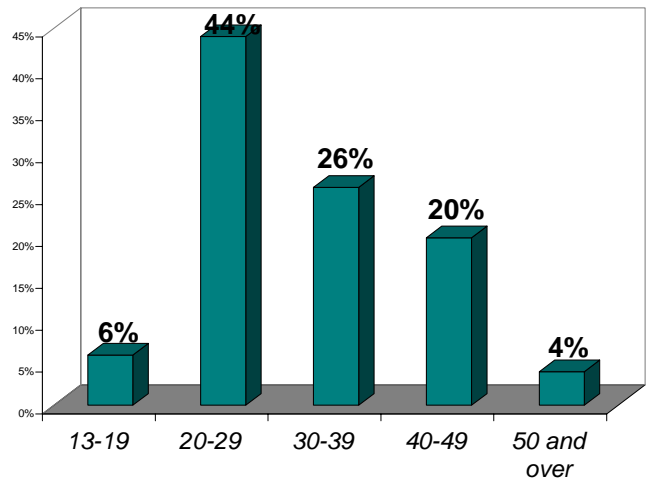
Recent trends point to increased disease transmission among younger populations, both for male and female reports. Current disease burden are indicative of increasing transmission among men who have sex with men (MSM), with notable increases among young African American males. Data presented below include primary, secondary and early latent syphilis reports, or Early Syphilis.

- While the majority of reports continue to be male, the proportion of males infected with syphilis each year has increased. In 2006, 67% of new syphilis reports were male compared to 86% of total reports during 2009.
- Increased reports have been noted for young adults age 20 – 29 yrs. In 2006, 22% or 41 cases of syphilis were reported among young adults. By 2009, the number of young adults infected with syphilis had increased to 44% of total syphilis reports, or 76 cases.
- As with other sexually transmitted diseases, racial and ethnic populations experience higher rates of disease in the county compared to whites.
- In general, Hispanics account for 5 – 8% of new syphilis reports in the county. Between 75 – 80% of new syphilis cases in the county are African American, the majority of which are young males.

2003 - 2009 Mecklenburg Syphilis Case Reports by Gender and Year of Report (percentages)



2003 - 2009 Mecklenburg Syphilis Case Reports by Age groups (percentages)



Syphilis cases include: primary, secondary and early latent reports.

Data Source:
NC DHHS HIV/STD Prevention and Care Unit

RESPONDING TO THE SYPHILIS EPIDEMIC

North Carolina

- The Communicable Disease Branch (CDB) has created an Epidemic Response Team (ERT) composed of field staff, prevention, surveillance and epidemiology staff, the syphilis and HIV outbreak response staff, and Branch leadership.
- A statewide clinician education campaign has been initiated to review the signs, symptoms and treatment for syphilis with frontline medical providers.
- The North Carolina MSM (men who have sex with men) Task Force, comprised of many leaders from around the state, is being established in order to foster dialogue and effective partnership with the MSM community, currently at highest risk for syphilis and/or new HIV infection.
- Increase STD testing in both traditional and non-traditional sites.

Mecklenburg County

- The Mecklenburg County Health Department Epidemiology Team has created a Syphilis Epidemic Response Team composed of field staff, prevention, surveillance and epidemiology staff to provide local leadership in addressing the rise in syphilis reports.
- A county-wide clinician education campaign has been initiated to review the signs, symptoms and treatment for syphilis with frontline medical providers.
- The Mecklenburg County Syphilis Task Force has been established in order to foster dialogue and effective partnership with the MSM community and other high risk communities.
- Mecklenburg County Health Department staff and community partners have increased STD testing in areas identified with high risk populations.

Sources

- Cates et al., Sexually Transmitted Diseases, 1999. Estimates of the Incidence and Prevalence of Sexually Transmitted Diseases in the United States.
- Centers for Disease Control, 2008 STD Surveillance Report and Special Population Factsheets.
- Centers for Disease Control and Prevention. Tracking the Hidden Epidemic: Trends in STDS in the United States, 2000. Available online at: http://www.cdc.gov/nchstp/dstd/Stats_Trends/Trends2000.pdf Accessed: December 17, 2006
- North Carolina Department of Health and Human Services, HIV/STD Prevention and Care Branch. 2009 STD Surveillance Report
- North Carolina Department of Health and Human Services, Epidemiology Branch. 2010-2011 Response to Syphilis Available online at: http://www.sph.unc.edu/images/stories/centers_institutes/nciph/documents/oce/comm_disease/06_2010syphilisplan.pdf Accessed: November 2010

2006/2009 MECKLENBURG REPORTED SEXUALLY TRANSMITTED DISEASE CASES

CHLAMYDIA, GONORRHEA AND SYPHILIS*

Reported Cases BY YEAR OF REPORT

	CHLAMYDIA				GONORRHEA				EARLY SYPHILIS			
	2006 (N=2,836)		2009 (N=5,840)		2006 (N=2,072)		2009 (N= 2,035)		2006 (N=194)		2009 (N= 174)	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Race/Ethnicity												
White	459	16%	606	10%	196	10%	123	6%	34	18%	32	18%
Black	2,010	71%	3,771	65%	1,792	87%	1,625	80%	151	78%	133	76%
American Indian/Alaskan	***	***	19	<1%	0	0%	***	***	0	0%	0	0%
Asian	46	2%	54	1%	13	1%	7	0%	0	0%	0	0%
Hispanic	275	10%	391	7%	49	2%	33	2%	9	6%	5	3%
Other	0	0%	402	7%	0	0%	32	2%	0	0%	4	2%
Missing/Unknown	44	2%	597	10%	22	1%	211	10%	0	0%	0	0%
Age												
0-12	7	>1%	***	***	***	***	***	***	0	0%	0	0%
13-19	1,093	39%	1,892	32%	584	28%	602	30%	14	7%	10	6%
20-29	1,426	50%	3,122	53%	1,009	49%	1,004	49%	41	21%	76	44%
30-39	260	9%	635	11%	326	16%	285	14%	71	37%	45	26%
40-49	40	1%	129	2%	115	6%	103	5%	49	25%	35	20%
50+	10	>1%	32	1%	37	2%	33	2%	19	10%	8	5%
Missing	0	0%	29	1%	0	0%	***	***	0	0%	0	0%
Gender												
Male	658	23%	1,663	28%	1,178	57%	949	47%	130	67%	150	86%
Female	2,178	77%	4,177	72%	894	43%	1,086	53%	64	33%	24	14%

Percentages are rounded and may not total to 100% as a result.

*NC EDSS data available as of 12/2009

**Early Syphilis includes primary, secondary and early latent diagnosis.

*** Small Cells/numbers are excluded due to confidentiality constraints.

Source: NC DHHS, North Carolina Electronic Disease Surveillance (NC EDSS) and MCHD Communicable Disease Program

HIV Disease

OVERVIEW

HIV disease refers to the entire spectrum of disease, from initial infection of the virus to the deterioration of the immune system and presentation of opportunistic infections (full-blown AIDS). This term includes:

- Persons with a diagnosis of HIV infection (not AIDS),
- Persons previously reported with an HIV infection who have progressed to AIDS, or
- Persons with concurrent diagnoses of HIV infection and AIDS.

THE HIV DISEASE EPIDEMIC

More than one million people are living with HIV in the United States. The Centers for Disease Control estimates that one in five (21%) of those people living with HIV is unaware of their infection.

Despite increases in the total number of people living with HIV in the US in recent years, the annual number of new HIV infections has remained relatively stable. However, new infections continue at far too high a level, with an estimated 56,300 Americans becoming infected with HIV each year.

More than 18,000 people with AIDS still die each year in the US. Gay, bisexual, and other men who have sex with men (MSM) are strongly affected and represent the majority of persons who have died. Through 2007, more than 576,000 people with AIDS in the US have died since the epidemic began.

Disparities in health are evident across racial and ethnic categories. By race/ethnicity, African Americans face the most severe burden of HIV in the United States. At the end of 2007, blacks accounted for almost half (46%) of people living with a diagnosis of HIV infection. Historically, the number of new infections among Latinos has been lower than that of whites and blacks, but Latinos continue to bear a disproportionate burden of the HIV epidemic (*Center for Disease HIV/AIDS in special populations Factsheets*).

HIV Disease QUICK FACTS

- In 2009, Mecklenburg reported 379 new HIV disease cases for a rate of 41.7 per 100,000 population. HIV disease rates for the county are higher than state and national data.
- As of December 31, 2009, the total number of persons living with HIV/AIDS (PLWH/A) in Mecklenburg is 4,211.
- The three most frequently reported risks among PLWH/A in Mecklenburg include: men who have sex with men (MSM), heterosexual contact and intravenous drug use (IDU).
- In 2008, there were 57 deaths due to HIV in Mecklenburg for a rate of 6.5 per 100,000.

SUMMARY OF HIV DISEASE TRENDS IN MECKLENBURG COUNTY

Positive Trends

- Recent data point to stabilizing HIV disease rates in the county.
- HIV death rates have declined dramatically in the county.
- Mecklenburg County is a grantee recipient of Part A Ryan White Treatment Modernization Act, federal grant funds which provides HIV-related health and support services.

Areas for Improvement

- The Centers for Disease Control estimates that as many as 21% of persons infected with HIV are unaware of their status.
- In comparison to females, males are more than twice as likely to be reported with HIV/AIDS in Mecklenburg representing a significant burden of disease.
- Racial and ethnic minorities remain disproportionately impacted by HIV.

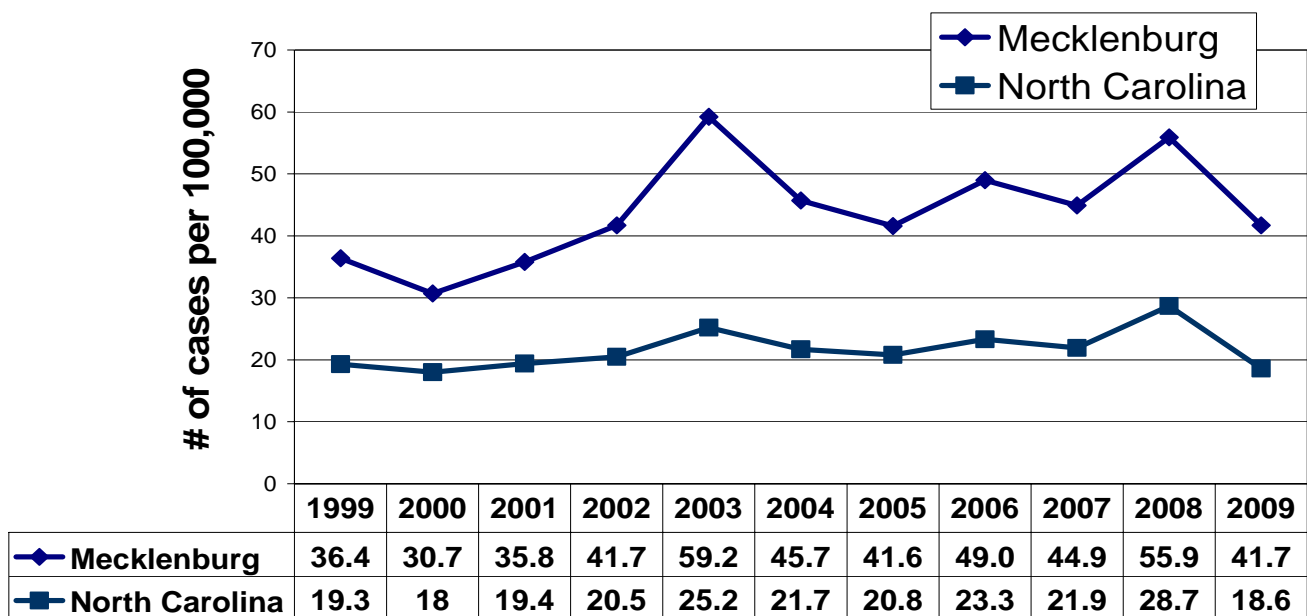
HIV DISEASE REPORTING IN MECKLENBURG COUNTY

Between 2001 and 2003, the rate of reported HIV disease in Mecklenburg increased by 83%, from 35.8 cases per 100,000 population in 2001 to 59.2 in 2003. It is important to note that during 2003 the state of North Carolina enhanced their surveillance activities resulting in the addition of older prevalent cases to the system. This addition partially contributed to the 2003 spike noted for the state and for the county.

Recent data point to stabilizing HIV disease rates for both the county and state. Annual case rates for HIV disease range between 41.7 to 44.9 cases per 100,000 population within the past three years. Annual case rates for North Carolina show similar trends of stabilizing and/or declining rates of disease.

- Within the past five years between 375 - 400 new HIV disease cases have been reported each year in the county. In 2009, Mecklenburg reported 379 new HIV disease cases for a rate of 41.7 per 100,000 population.
- Reports during this time period were approximately 13% lower than those during all of 2003 (437 cases reported during 2003).
- HIV disease reports for 2008 were unusually high due to a special project to identify prevalent cases of HIV and AIDS not reported to the local health departments and the state. These reports represented older cases. Without this effort, HIV disease case reports during 2008 would closely resemble reports between 2006 and 2007.

**1999- 2009 HIV Disease Case Rates: Mecklenburg and North Carolina
(rate per 100,000 population)**



Source: NC DHHS HIV/STD Prevention and Care Unit

PERSONS LIVING WITH HIV/AIDS IN MECKLENBURG

Based on 2009 cumulative reports, over 5,000 cases of HIV/AIDS have been reported in Mecklenburg. However, after accounting for deaths and persons with an unknown vital status, 4,211 persons are reported to be living with HIV/AIDS (PLWH/A).

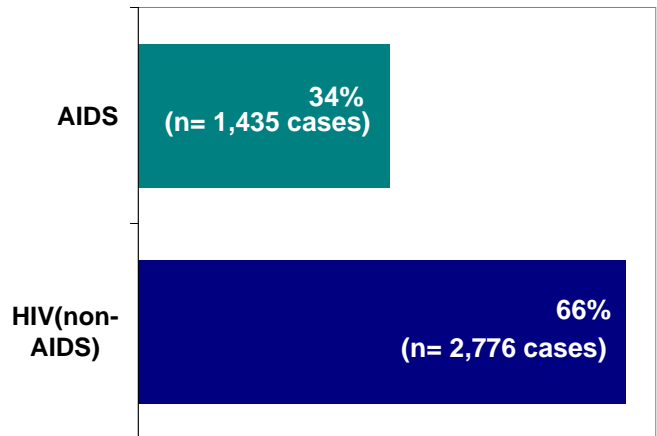
This estimate only reflects those individuals who have been diagnosed and reported with HIV disease and does not include individuals who are, as yet, unaware of their HIV status. The Centers for Disease Control estimates that as many as 21% of persons infected with HIV are unaware of their status. Applying this statistic to the current surveillance of HIV/AIDS would result in an additional 1,119 PLWH/A in the county and would increase the overall prevalence to approximately 5,330 PLWH/A.

- As of December 31, 2009, the total estimated number of individuals living with HIV Disease in Mecklenburg is 4,211. While the majority of PLWH/A in the county are HIV (non-AIDS), 34%, or 1,435 persons, are living with AIDS.
- Nationally, there has been a recent shift in the HIV epidemic with an increase among young adults, females, racial/ethnic minorities and heterosexuals.

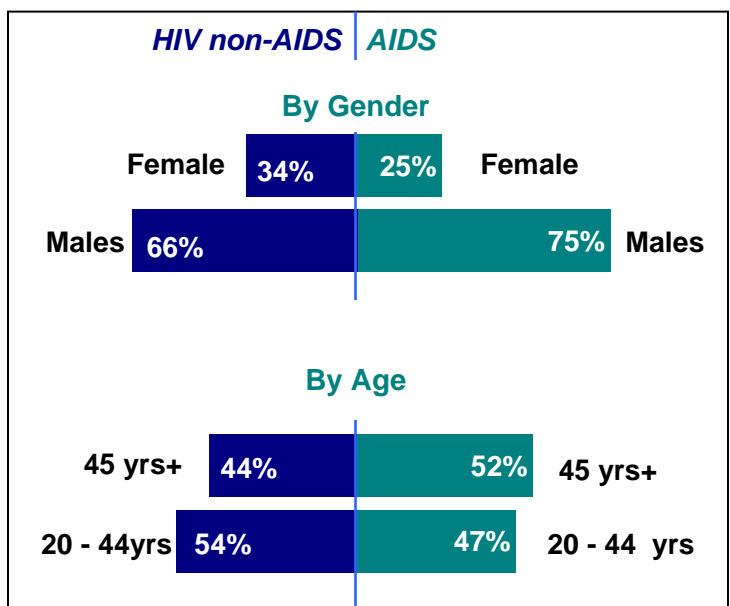
Persons Living with HIV/AIDS: Differences in Age and Gender

- In comparison to Persons living with AIDS (PLWA), Persons living with HIV, non-AIDS (PLWH) in the county are more likely to be:
 - Female, (34% of PLWH are female compared to 26% among PLWA)
 - A younger population, (54% of PLWH are 20 -44 yrs. compared to 47% among PLWA).
- While the total proportion of males and females in the general population are nearly equivalent, 69% of PLWH/A are males. In general males are more than twice as likely to be reported with HIV/AIDS in Mecklenburg as females, representing a significant burden of disease.

2009 Persons Living with HIV/AIDS, Mecklenburg By Disease Category
Total: 4,211 (percentages)



2009 Persons Living with HIV/AIDS, Mecklenburg By Disease Category, Gender and Age
Total: 4,211 (percentages)

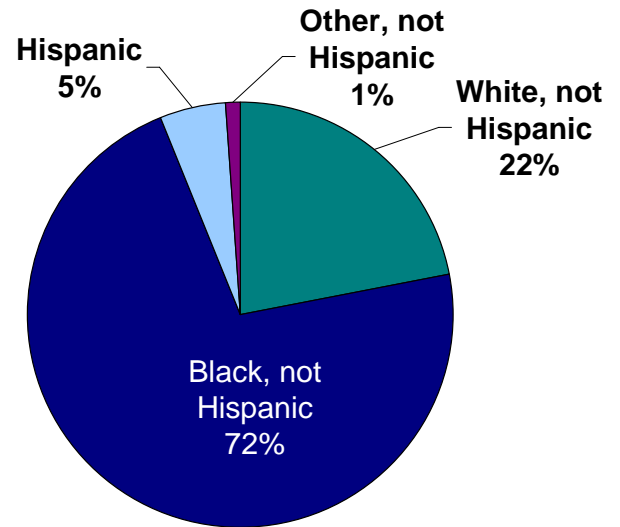


Source: NC DHHS, HIV/STD Prevention and Care Branch

Persons Living with HIV/AIDS: Racial and Ethnic Differences

- Racial and ethnic minorities continue to be disproportionately impacted by HIV/AIDS across the county. Despite representing only 38% of the county’s total population, racial and ethnic minorities account for 78% of persons living with HIV/AIDS.
- Non-Hispanic Blacks remain the racial/ethnic group hardest hit by the HIV epidemic and account for the majority of persons living with HIV/AIDS in Mecklenburg (3,028 PLWH/A).
- Much of the increase in HIV reporting among females can be attributed to increased reports among Black women, primarily as a result of heterosexual contact
- While the proportion of Hispanics reported to be living with HIV/AIDS is relatively small (5% of PLWH/A), recent increased case reports have been noted among this population.
- Between 2003 and 2009, the number of Hispanics living with HIV/AIDS increased by 300%, from 47 individuals in 2003 to 188 in 2009. Increased prevention efforts as well as expanded HIV testing in the Hispanic community may account for much of this increase in HIV/AIDS case reporting.
- The disparities in health witnessed by racial and ethnic minorities may have more to do with overcoming barriers such as poverty, negative stigma associated with HIV and co-infections with other sexually transmitted infections than with race itself.

2009 Persons Living with HIV/AIDS, Mecklenburg By Disease Category and Race/Ethnicity
Total: 4,211 (percentages)



Persons Living with HIV/AIDS in Mecklenburg, Calendar year, 2009	
Race/Ethnic Category	Number of PLWH/A
Black, Non-Hispanic	3028
Hispanic	188
Other Races, Non-Hispanic	27
White, Non-Hispanic	942
Unknown/Missing	26
TOTAL	4,211

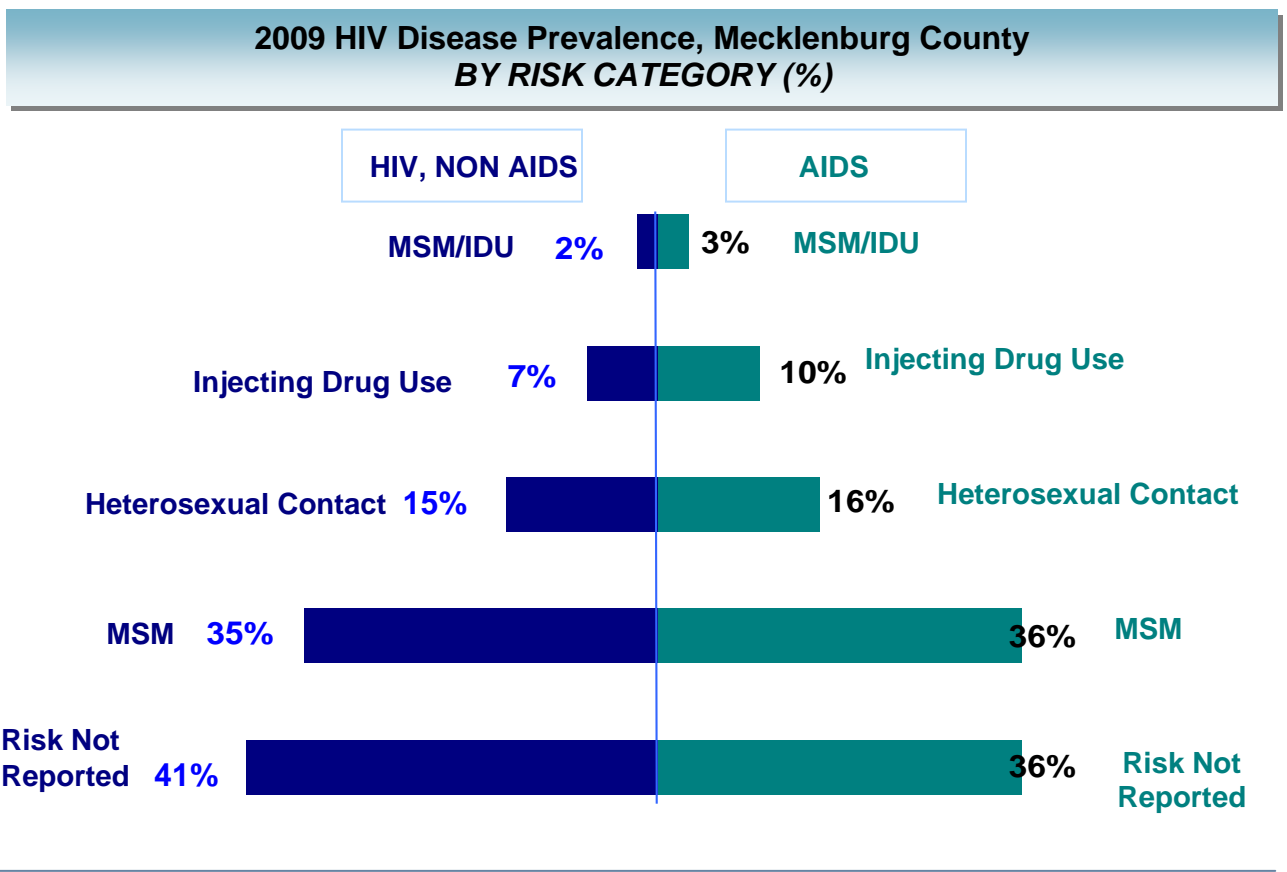
Source: NC DHHS, HIV/STD Prevention and Care Unit, 2009 HIV Mecklenburg Prevalence Data,

Persons Living with HIV/AIDS: Reported Risk Factors for Infection

Each year over one third of HIV/AIDS cases are classified as non-identified risk (NIR). These cases represent persons who are currently being followed by the health department, patients who are lost to follow-up and persons who have declined an interview. NIR cases also include individuals with reported risks that fail to meet one of the CDC-defined risk classifications. The majority of females reported without a CDC-defined risk classification were most likely infected through heterosexual contact. Male NIR cases were more likely to be attributed to MSM and heterosexual contact.

- The three most frequently reported risks among PLWH/A in Mecklenburg include: men who have sex with men (MSM), heterosexual contact and intravenous drug use (IDU).

- When comparing exposure categories between PLWH and PLWA, the following trends are observed:
 - A larger percentage of PLWA report intravenous drug use, and
 - A slightly larger percentage of heterosexual contact is reported among PLWA.
- It should be noted that PLWH have a greater proportion of persons with unidentified risks. Research within the TGA suggests the majority of these reports, particularly in females, is Heterosexual contact, but fail to meet the CDC-defined risk classification.



HIV DISEASE RELATED DEATHS

Nationally, a total of 11,295 persons died from HIV disease during 2007. HIV disease death rates have declined dramatically within the United States, from a high of 16.3 deaths per 100,000 in 1995 to 3.7 deaths per 100,000 in 2007. Despite these positive trends, racial and ethnic minorities experience higher rates of HIV-related deaths than do Whites.

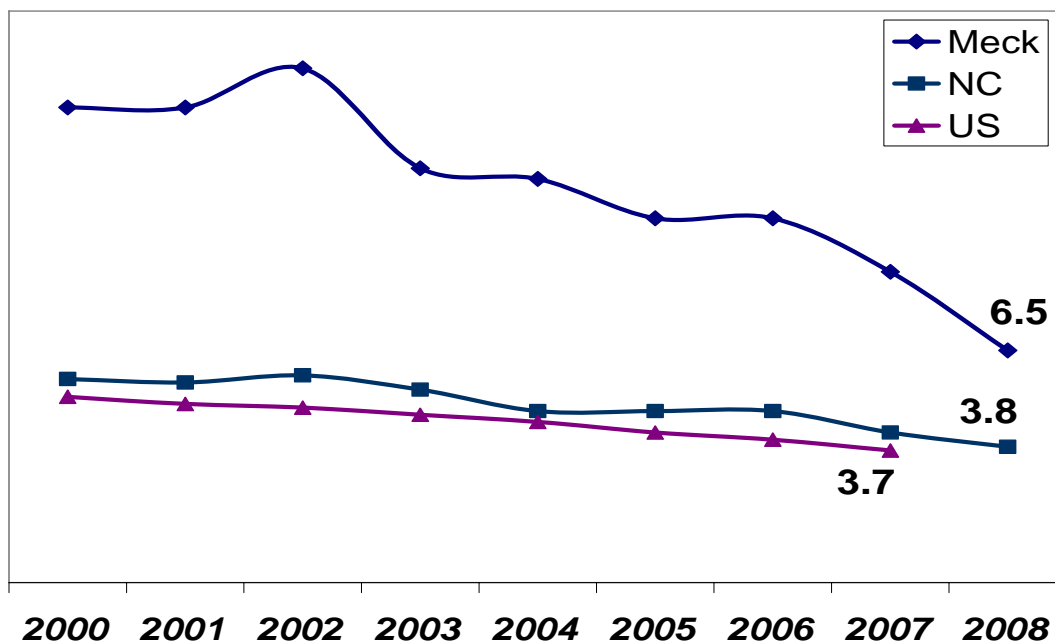
HIV Disease deaths in Mecklenburg County

- HIV death rates have declined dramatically in the county. As of December 2008, HIV disease is no longer among the ten leading causes of death for all residents in Mecklenburg. There were 57 deaths due to HIV disease in 2008 for an annual case rate of 6.5 per 100,000. This rate was 51% lower than that for year 2000 (13.3 per 100,000).

- Although mortality from HIV disease has declined in the county as a whole, HIV disease continues to be one of the leading causes of death for Persons of Other Races. In 2008, HIV disease was the tenth leading cause of death for Persons of Other Races.
- African Americans, in particular experience higher rates of death than other racial groups. HIV disease was the fifth leading cause of death for African Americans ages 25 – 44 years in the county during 2008.

Additional data on disparities can be found in the Health Disparities section.

**2000 - 2008 HIV Disease Death Rates: Mecklenburg, North Carolina, and US
(deaths per 100,000 population)**



Source: NC DHHS, State Center for Health Statistics: 2000 – 2009 Vital Statistics Report
National Center for Vital Statistics, 2007 Final Death Data

PART A RYAN WHITE TREATMENT MODERNIZATION ACT: THE CHARLOTTE-GASTONIA-CONCORD TRANSITIONAL GRANT AREA (TGA)

The Ryan White Program works with cities, states, and local community-based organization to provide HIV-related services to more than half a million people each year. The program is for those who do not have sufficient health care coverage or financial resources for coping with HIV disease. Ryan White fills gaps in care not covered by these other sources.

Part A of the Ryan White HIV/AIDS Treatment Modernization Act of 2006 provides emergency assistance to Eligible Metropolitan Areas (EMAs) and Transitional Grant Areas (TGAs) that are most severely affected by the HIV/AIDS epidemic.

During 2007 Part A Ryan White federal grant funds were allocated for the Charlotte-Gastonia-Concord TGA which includes six counties located in two states: Anson, Cabarrus, Gaston, Mecklenburg and Union counties of North Carolina and York County of South Carolina. Mecklenburg County is the grantee recipient for these federal funds.

- An estimated 1.7 million residents reside in the Charlotte-Gastonia-Concord TGA. As of December 31, 2009, a total number of 5,502 were reported to be living with HIV/AIDS in the region.
- The majority of the general population (52%) and the majority of the HIV/AIDS population (76%) reside in Mecklenburg County.
- During the 2009/2010 Fiscal Year, the Charlotte-Gastonia Ryan White Program provided medical care for over 2,100 PLWH/A in the region.

Sources

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North Carolina Department of Health and Human Services, State Center for Health Statistics: 2000 – 2009 Vital Statistics

US Department of Health and Human Services, Health Resources and Services Allocation(HRSA). The HIV/AIDS Program: Ryan White Parts A – F. Available online at: <http://hab.hrsa.gov/treatmentmodernization/parta.htm>

2005 THROUGH 2009 MECKLENBURG COUNTY REPORTED HIV DISEASE CASES*

Reported Cases BY YEAR OF REPORT

Year	2005 (N= 327)		2006 (N= 390)		2007 (N = 387)		2008 (N= 498)		2009 (N= 379)	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Age										
0- 12	***	***	3	1%	***	***	***	1%	***	0%
13-19	10	3%	16	4%	20	5%	20	4%	21	5%
20-29	63	19%	93	24%	93	24%	124	25%	104	27%
30-39	99	30%	133	34%	121	31%	132	27%	89	24%
40-49	104	32%	96	25%	104	27%	143	29%	105	28%
Over 49	50	15%	49	13%	47	12%	77	15%	59	16%
Missing/Unknown	0	0%	0	0%	***	***	***	***	***	0%
Race										
White**	77	24%	79	20%	91	24%	109	22%	79	21%
Black**	228	70%	270	69%	265	68%	361	72%	268	71%
Hispanic	20	6%	39	10%	30	8%	20	4%	27	7%
Asian/Pacific**	***	***	***	***	0	0%	***	***	***	0%
Am. Indian/Alaskan**	***	***	0	0%	***	***	***	***	***	0%
Missing/Unknown	0	0%	***	***	***	***	5	1%	4	1%
Gender										
Male	248	76%	271	70%	285	74%	372	75%	284	75%
Female	79	24%	119	30%	102	26%	126	25%	95	25%
Exposure Mode										
MSM	123	38%	141	36%	171	44%	208	42%	170	45%
IDU	10	3%	8	2%	10	3%	20	4%	17	4%
MSM and IDU	7	2%	6	2%	***	***	***	***	4	1%
Hemophilia	0	0%	0	0%	0	0%	0	0%	***	0%
Heterosexual	32	10%	25	6%	27	7%	41	8%	32	8%
Blood/Tissue	3	1%	***	***	0	0%	0	0%	***	0%
Pediatric	***	***	3	1%	***	***	***	***	***	0%
Unknown/Other	151	46%	205	53%	175	45%	225	45%	155	41%

Definitions: MSM=men who have sex with men IDU=injecting drug use
Percentages are rounded and may not total to 100% as a result.

*AIDS cases are included in HIV Disease counts (Available data as of 12/2009)

**Non-Hispanic

*** Cells/numbers less than three are excluded due to confidentiality constraints.

Source: NC DHHS, HIV/STD Prevention and Care and MCHD Communicable Disease Branch



OVERVIEW

Mental health and mental illness are points on a continuum, although much more is known through research about mental illness than about mental health.

A PUBLIC HEALTH PERSPECTIVE

In the United States, mental health programs are rooted in a population-based public health model. Broader in focus than medical models that concentrate on diagnosis and treatment, public health attends to the health of a population in its entirety: the community is the patient. A public health approach encompasses a focus on epidemiologic surveillance, health promotion, disease prevention, and access to services.

Public health practices seek to identify risk factors for mental health problems; to introduce preventive interventions that may block the emergence of severe illnesses; and to actively promote good mental health.

FROM THE SURGEON GENERAL'S REPORT ON MENTAL HEALTH

- **Mental Health**—the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity.
- **Mental Illness**—the term that refers collectively to all mental disorders. Mental disorders are health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning.
- “It is easy to overlook the value of mental health until problems surface. Yet from early childhood until death, mental health is the springboard of thinking and communication skills, learning, emotional growth, resilience, and self-esteem. These are the ingredients of each individual's successful contribution to community and society.”—Mental Health: A Report of the Surgeon General, Chapter 1, 1999

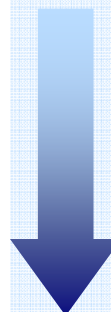
MECKLENBURG QUICK FACTS: MENTAL HEALTH

- Mind and body are inseparable. Mental health is fundamental to total health. The mind is a function of the brain and mental health conditions are real health problems.
- Mental disorders are the leading cause of disability in the U.S. for ages 15-44.
- A range of treatments exist for most mental disorders but nearly half of all Americans who have a severe mental illness do not seek treatment. Stigma and cost are two of the major barriers to care.
- More than 90% of people who kill themselves have a diagnosable mental disorder, most commonly a depressive disorder or a substance abuse disorder.
- Alzheimer's disease is the most common cause of dementia among people age 65 and older and the 4th leading cause of death in Mecklenburg County.



Positive Trends

- The rate of suicide in teens has not increased over the past five years.



Areas for Improvement

- In the 2009 YRBS, 28% of Mecklenburg teens surveyed reported feeling sad or hopeless.
- More than 5% of teens reported they vomited or took laxatives to lose weight or to keep from gaining weight.
- Aging of the population will result in a greater demand for resources for providing treatment and care for those with Alzheimer's Disease
- Stigma continues to keep people from seeking treatment.
- Access to treatment for those without insurance coverage.

SURGEON GENERAL'S REPORT, cont.

- Mind and body are inseparable. Mental health is fundamental to total health. The mind is a function of the brain and mental health conditions are real health problems.
- A range of treatments exists for most mental disorders.
- Recommended actions:
 - Continue to build the science base
 - Overcome stigma
 - Improve public awareness of effective treatment
 - Ensure the supply of mental health services and providers
 - Ensure delivery of state-of-the-art treatments:
 - Tailor treatment to age, gender, race, and culture
 - Facilitate entry into treatment
 - Reduce financial barriers to treatment

BARRIERS TO TREATMENT - STIGMA

Despite the efficacy of treatment options and the many possible ways of obtaining a treatment of choice, nearly half of all Americans who have a severe mental illness do not seek treatment. Financial barriers are one very real obstacle in seeking treatment, but often, reluctance to seek care may be in response to the stigma that many in our society attach to mental illness and to people who have a mental illness.

Survey data, licensed from Porter Novelli by SAMHSA and CDC, found that only 25% of young adults believe that a person with a mental illness can eventually recover, and slightly more than one-half (54%) who know someone with a mental illness believe that treatment can help people with mental illnesses lead normal lives.

MENTAL ILLNESS IS DISABLING: THE BURDEN OF DISEASE

The National Institute of Mental Health (NIMH) reports that mental disorders are common in the United States and internationally. An estimated 26.2% of Americans ages 18 and older, about one in four adults, suffer from a diagnosable mental disorder in a given year. When applied to the 2009 U.S. Census residential population estimate for ages 18 and older, this figure translates to 60.9 million people.

- Even though mental disorders are widespread in the population, the main burden of illness is concentrated in a much smaller proportion — about 6%, or 1 in 17, suffer from a serious mental illness.
- Mental disorders are the leading cause of disability in the U.S. and Canada.
- Many people suffer from more than one mental disorder at a given time. Nearly half (45%) of those with any mental disorder meet criteria for two or more disorders, with severity strongly related to comorbidity.

In the U.S., mental disorders are diagnosed based on the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV). The following are examples of disorders commonly seen. National statistics are from NIMH with percents applied to 2009 US census population, 18 years old or greater.

MOOD DISORDERS

- Includes major depressive disorder, dysthymic disorder and bipolar disorder.
- Approximately 22.1 million American adults, or about 9.5% of the U.S. population age 18 and older in a given year, have a mood disorder.
- The median age of onset for mood disorders is 30 years.
- Depressive disorders often co-occur with anxiety disorders and substance abuse.

Mecklenburg

- In the 2009 BRFSS, when asked about mental health—stress, depression, and problems with emotions—10% of adults said their mental health had not been good for 8-29 days.
- Over 7% of adults reported being dissatisfied with their lives, an increase from 5% in 2005.
- In the 2009 YRBS, 28% of high school and 23% of middle school students surveyed reported feeling sad or hopeless almost every day for two weeks or more in a row to the extent they stopped doing some usual activities.

SUICIDE

- In 2007, 34,598 people died by suicide in the U.S (approximately 11.5 deaths per 100,000); suicide ranked #11 in leading causes of death (CDC/NCHS).
- More than 90% of people who kill themselves have a diagnosable mental disorder, most commonly a depressive disorder or a substance abuse disorder.
- Four times as many men as women die by suicide; however, women attempt suicide two to three times as often as men (NIMH).

Mecklenburg

- Suicide is not among the leading ten causes of death for the total population.
- In 2009, there were 86 suicide deaths and from 2005-2009, 355 suicides or 8.3 deaths per 100,000 people (NC SCHS).
- From January through November 2010 NC DETECT reports 1,052 visits to county emergency departments associated with suicide; 85 or about 8% were for young people ages 10-18.
- Nationally and locally, suicide is the 3rd leading cause of death for teens.
- Between 2000 and 2008, 20 teens died from suicide. Of these deaths, young males accounted for 75%; the largest proportion was White and Non-Hispanic.

- In the 2009 YRBS, 14% of teens reported thinking about suicide one or more times. Approximately 10% of teens reported making a plan for how they would try to kill themselves and 14% reported trying.

ANXIETY DISORDERS

- Include panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, generalized anxiety disorder and phobias (social phobia, agoraphobia and specific phobia).
- Approximately 42.1 million American adults ages 18 and older, or about 18.1 percent of people in this age group in a given year, have an anxiety disorder.
- Anxiety disorders frequently co-occur with depressive disorders or substance abuse.
- Most people with one anxiety disorder also have another anxiety disorder. Nearly three fourths of those with an anxiety disorder will have their first episode by age 21.

SCHIZOPHRENIA

- Schizophrenia is a chronic, severe and disabling brain disorder that includes difficulty in distinguishing between real and unreal experiences, illogical thinking and inappropriate emotional response.
- Approximately 2.6 million American adults, or about 1.1% of the population age 18 and older in a given year, have schizophrenia.
- Schizophrenia affects men and women with equal frequency.
- Schizophrenia often first appears in men in their late teens or early twenties. In contrast, women are generally affected in their twenties or early thirties.

EATING DISORDERS

- The three main types of eating disorders are anorexia nervosa, bulimia nervosa, and binge-eating disorder.

EATING DISORDERS, cont.

- Females are much more likely than males to develop an eating disorder. Only an estimated 5% to 15% of people with anorexia or bulimia and an estimated 35% of those with binge-eating disorder are male.
- In their lifetime, an estimated 0.5% to 3.7% of females suffer from anorexia, and an estimated 1.1% to 4.2% suffer from bulimia.
- Community surveys have estimated that between 2% and 5% of Americans experience binge-eating disorder in a 6-month period (NIMH).
- The mortality rate among people with anorexia has been estimated at 0.56% per year, or approximately 5.6% per decade, which is about 12 times higher than the annual death rate due to all causes of death among females ages 15-24 in the general population (NIMH).

Mecklenburg

- In the 2009 YRBS, white females were over three times more likely to describe themselves as being overweight than to actually report being overweight.
- About 4.6% of teens reported taking diet pills, powders, or liquids without a doctor's advice to lose weight or to keep from gaining weight.
- More than 5% of teens reported they vomited or took laxatives to lose weight or to keep from gaining weight.

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

- ADHD is one of the most common mental disorders in children and adolescents, and also affects an estimated 4.1% of adults, ages 18-44, in a given year.
- ADHD usually becomes evident in preschool or early elementary years. The median age of onset of ADHD is seven years, although the disorder can persist into adolescence and occasionally into adulthood.

AUTISM

Autism is part of a group of disorders called autism spectrum disorders (ASDs), also known as pervasive developmental disorders.

- ASDs range in severity, with autism being the most debilitating form while other disorders, such as Asperger syndrome, produce milder symptoms.
- Estimating the prevalence of autism is difficult and controversial due to differences in study methods and changes in diagnostic criteria. A recent study reported the prevalence of autism in 3 to 10 year-olds to be about 3.4 cases per 1,000 children (NIMH).
- Autism and other ASDs develop in childhood and generally are diagnosed by age three.
- Autism is about four times more common in boys than girls. Girls with the disorder, however, tend to have more severe symptoms and greater cognitive impairment.

ALZHEIMER'S DISEASE (AD)

- AD affects an estimated 2.1 to 5.1 million Americans. The number of Americans with AD doubles every five years after the age of 65 (NIH Institute on Aging).
- AD is the most common cause of dementia among people age 65 and older.
- Increasing age is the greatest risk factor for Alzheimer's. In most people with AD, symptoms first appear after age 65. One in 10 individuals over 65 and nearly half of those over 85 are affected. Rare, inherited forms of Alzheimer's disease can strike individuals as early as their 30s and 40s.
- From the time of diagnosis, people with AD survive about half as long as those of similar age without dementia (NIMH).

Mecklenburg

- Alzheimer's disease is the 4th leading cause of death.
- White females who live longer than any other race-gender group are most likely to die from AD.

Sources

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[accessed November 29, 2010]

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NC DETECT North Carolina Disease Event Tracking and Epidemiologic Collection Tool

<http://www.ncdetect.org/>

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SUBSTANCE ABUSE

Alcohol Abuse

Illicit Drug Use

Marijuana Use

Cocaine Related Arrests

Prescription Drug Abuse

OVERVIEW

Substance abuse and its related problems continue to be a major public health concern for the nation. In 2008, an estimated 20.1 million Americans aged 12 or older were current (past month) illicit drug users, meaning they had used an illicit drug during the month prior to the survey interview. This estimate represents 8% of the population aged 12 years old or older.

There are approximately 79,000 deaths attributable to excessive alcohol use each year in the United States, making excessive alcohol use the 3rd leading lifestyle-related cause of death for the nation. Health-related consequences of excessive alcohol use include: unintentional injuries, violence, including intimate partner violence and child maltreatment, risky sexual behaviors, alcohol poisoning and depression.

Alcohol use among teenagers remains widespread. A 2008 study conducted by the National Institute on Drug Abuse found that:

- Nearly three quarters of students (72%) have consumed alcohol (more than just a few sips) by the end of high school.
- About two fifths (39%) have done so by 8th grade.
- More than half (55%) of 12th graders and nearly a fifth (18%) of 8th graders in 2008 report having been drunk at least once in their life.

Studies have linked adolescents' abuse of alcohol, drugs, and tobacco to many other problem behaviors and outcomes, including low academic performance, suicide and automobile accidents.

2009 MECKLENBURG QUICK FACTS: SUBSTANCE ABUSE

- The proportion of adults reporting heavy drinking and binge drinking have increased in recent years.
- Males are more likely to report drinking large quantities of alcohol in a single sitting than females in the county.
- In 2009, 38% of Mecklenburg teens reported using marijuana one or more times during their life.
- While reports of drug use among teens have declined in the nation, recent studies indicate that teens view abusing prescription drugs as safer than illegal drugs.
- More than 14% of Mecklenburg teens have taken prescription drugs such as OxyContin, Percocet, Demerol, Adoral, Ritalin, or Zanax without a doctor's prescription.
- Marijuana is the most commonly used illicit drug in the nation with more than 16 million residents reporting current marijuana use.

ALCOHOL USE IN MECKLENBURG

For the purposes of this section:

Heavy drinking is defined as having more than 2 drinks per day for men and having more than 1 drink per day for women.

Binge drinking is defined as having five or more drinks of alcohol on one occasion.

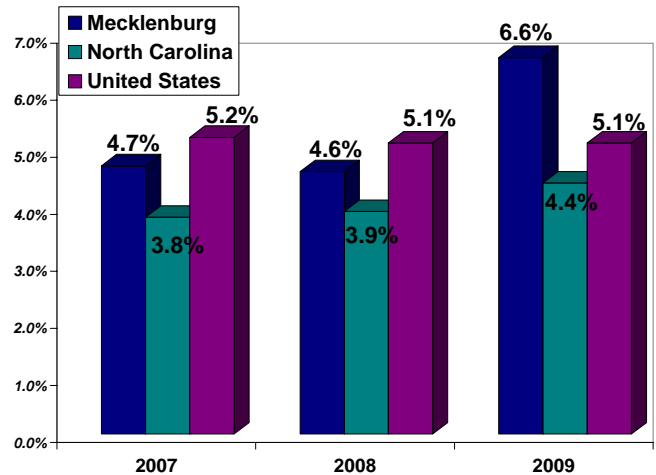
Excessive drinking includes heavy drinking, binge drinking or both.

- According to the Behavioral Risk Factor Surveillance System (BRFSS), the proportion of adults reporting heavy drinking in the county has increased from 3.5% in 2005 to 6.6% in 2009.
- Reports of binge drinking in adults also increased from 11.8% in 2005 to 15.7% in 2009.
- According to the 2009 Youth Risk Behavior Survey (YRBS), a third (33.4%) of Mecklenburg teens have had at least one drink of alcohol in the past thirty days, a decrease from 39% in 2005.
- In 2009 over 14% of Mecklenburg teens reported binge drinking in the past 30 days, down from 20% in 2005.

Drinking Patterns by Gender and Race

- In general, males are more likely to report drinking large quantities of alcohol in a single sitting than females. About 19% of men reported binge drinking compared to 13% of females (BRFSS).
- Heavy drinking, however, is reported slightly more by females than males (7% vs. 6%).
- Reports of binge drinking among teens in the past 30 days were approximately three times higher among White and Hispanic teens than those of Black teens.

2007 – 2009 Trends in Heavy Drinking:
US, NC and Mecklenburg



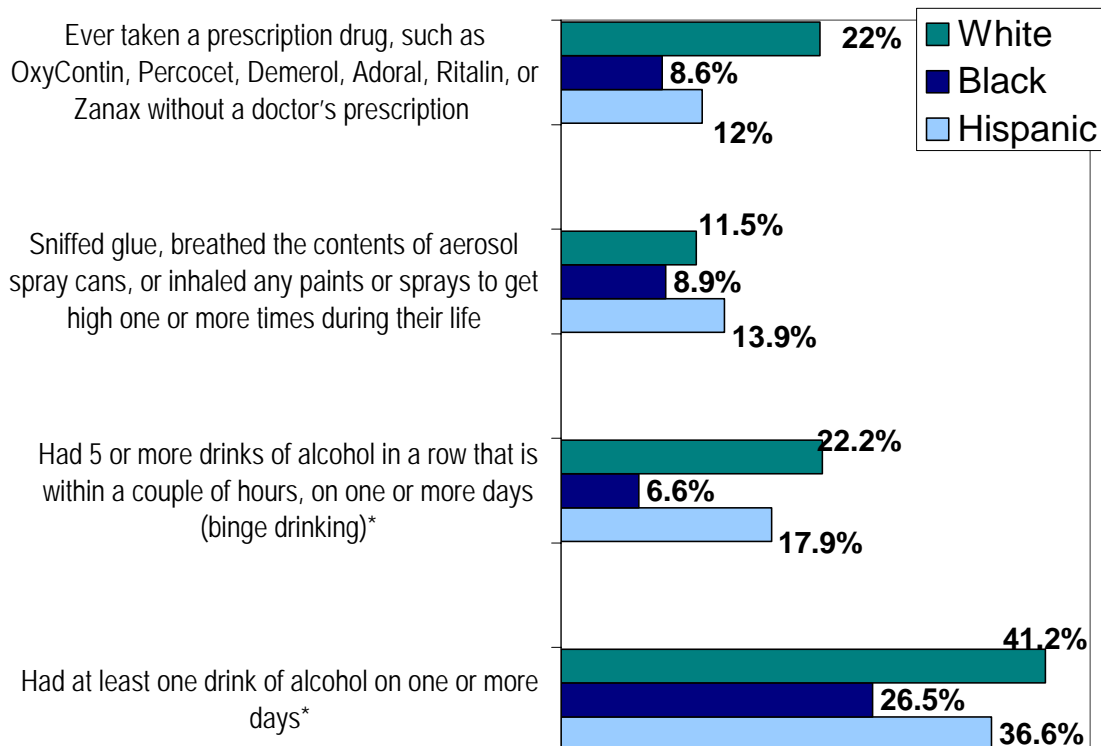
ILLCIT DRUG USE

Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.

Abuse of prescription drugs to get high has become increasingly prevalent among teens and young adults. While reports of drug use among teens have declined in the nation, recent studies indicate that teens view abusing prescription drugs as safer than illegal drugs. Pain relievers such as OxyContin and Vicodin are the most commonly abused prescription drugs by teens.

- Marijuana is the most commonly used illicit drug. According to the 2009 National Survey on Drug Use and Health (NSDUH), 16.7 million people age 12 or older were current marijuana users, meaning they used the drug during the month prior to taking the survey.
- In Mecklenburg, there were 4,297 marijuana-related arrests in 2006, an increase of 36% since 2003.
- Also in 2006 there were 2,971 cocaine related arrests, an increase of 28.7% since 2003. Crack cocaine arrests may be included in this data since it is not legally defined differently from cocaine.
- In 2009, 38% of Mecklenburg teens reported using marijuana one or more times during their life. Over 20% of teens reported using marijuana in the past month.
- More than 14% of teens have taken prescription drugs such as OxyContin, Percocet, Demerol, Adoral, Ritalin, or Zanax without a doctor's prescription one or more times during their life.

**2009 Mecklenburg County Youth Risk Behavior Survey (YRBS)
Reported Substance Abuse among Charlotte-Mecklenburg High-School Students
(BY RACE/ETHNICITY)**



* In the past 30 days

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ACCESS TO CARE

Health Insurance and Access to Care

Employer Based Health Coverage

Medicaid and NC Health Choice

Mecklenburg County Safety Net Sources

2010 Health Care Reform

OVERVIEW

Access to care refers to an individual's ability to access and respond appropriately to health care services. While health insurance coverage is not necessarily equivalent to access to care, coverage strongly affects ability to access care. People with health insurance are more likely to have a usual source of care, and those with usual sources of care experience fewer delays in receiving care and get more regular preventive care. Data also suggest that those with unstable health insurance coverage—such as episodic health coverage or having recently lacked insurance—are less likely to have a usual source of care than those with continuous coverage (Families USA 2009).

Nationally, survey data show that 53.2% of the uninsured have no usual source of health care, while 15.9% of those with public insurance (Medicaid, Medicare, veterans benefits) and 17.5% of those with private insurance have no usual source of care (MEPS 2007). Additionally, as underlying costs of medical care continue to rise, accessing health care services, both for the privately insured and the uninsured becomes increasingly expensive, and for some with lower income and/or poorer health, cost-prohibitive. Other factors that influence one's ability and willingness to access care are cultural differences regarding care, limited English proficiency, lack of knowledge of resources available and/or how to navigate the system and incompatible locations and hours of service.

The Underinsured

The underinsured refer to those individuals with insurance coverage that does not provide adequate financial protection. Being underinsured is most often defined as spending 10% or more (5% or more for low-income individuals) of income on out-of-pocket health costs (excluding monthly premium costs) or having a deductible that is 5% or more of income. For example, a person making \$25,000 a year with an annual deductible of more than \$1,250 would be considered underinsured.

QUICK FACTS ON ACCESS TO CARE

UNITED STATES

- 46 million people in the United States were uninsured for the full year in 2008.
- Nationally 1 in 10 people reported not being able to access or delaying medical care, dental care or necessary prescription medications at some point during the year.
- There is a stark contrast between the uninsured (53.2% with no usual source of care) and the insured (less than 18% with no usual source of care).
- In March 2010 President Obama signed into law the Patient Protection and Affordable Care Act. This health care law will dramatically shift the health care access landscape in Mecklenburg County and across the country.

NORTH CAROLINA

- In North Carolina, 45% of adults under 133% Federal Poverty Level were uninsured.
- North Carolina children represent 14% of the non-elderly uninsured, with 69% of these children in families under 200% of the Federal Poverty Level.
- Between 1999/2000 and 2006/2007 there was a 12.5% decline in employer-sponsored coverage in North Carolina.

MECKLENBURG

- In Mecklenburg, 16.5% of the total civilian noninstitutionalized population is uninsured for a total of approximately 150,180 individuals without health insurance.
- Among the uninsured in Mecklenburg:
 - 33.4% are in households making at least \$50,000 a year,
 - 44.8% have at least some college, and
 - 79.1% worked at least part-time in the previous year.

The Underinsured, cont.

Most recent data from the Commonwealth Fund’s Biennial Health Insurance Survey (2007) found that nationally, 14% of the 19-64 population is underinsured, with over one quarter of low-income adults underinsured. The most rapid growth in the percent underinsured was seen in adults making \$40,000-\$60,000 a year. Those with plans purchased in the individual market are more likely to be underinsured than those with employer plans; they are generally faced with higher deductibles and spend larger portions of their income on out-of-pocket costs.

Even before the economic downturn, those covered by private insurance (employer-based and individual market plans) were experiencing an increase in their health-care related financial burden, with the greatest increased burden felt by middle- and higher-income individuals (Cunningham 2010). The recent recession has exacerbated this trend. The impact of being underinsured can be similar to that of being uninsured. The Commonwealth Fund reports that underinsured adults are almost as likely as the uninsured to not access needed care because of the cost or not fill prescriptions for their chronic conditions, and are more likely to inappropriately seek care in the emergency room for a chronic condition (Collins 2009).

Health Care Reform

In March 2010, within the context of rising health care costs and the most severe recession since the Great Depression, President Obama signed into law the Patient Protection and Affordable Care Act. This health care law will dramatically shift the health care access landscape in Mecklenburg County and across the country. Non-partisan Congressional Budget Office estimates conclude it will expand health care coverage to an additional 32 million Americans once fully implemented. Based on Census data, 46 million people in the United States were uninsured for the full year in 2008. This section will focus on health coverage and access in North Carolina (with Mecklenburg County-specific data where available) prior to implementation of health care reform, as well as provide projections for how health reform will impact coverage options, particularly for those who were previously uninsured or underinsured.

Federal Poverty Level Guidelines

Many of the new coverage options and public programs specifically target low-income and moderate-income individuals, with eligibility based on the Federal Poverty Level (FPL) guidelines. These guidelines are updated annually. In general, low-income refers to families or individuals with an annual income of less than 200% FPL—\$44,100 for a family of four in 2010. See below for more detailed 2010 FPL guidelines. This section will reference the FPL guidelines throughout.

**2010 Federal Poverty Level (FPL) Guidelines
By FAMILY SIZE and %FPL**

Family Size	100% FPL	133% FPL	185% FPL	200% FPL	300% FPL	400% FPL
1	\$10,830	\$14,404	\$20,036	\$21,660	\$32,490	\$43,320
2	\$14,570	\$19,378	\$26,955	\$29,140	\$43,710	\$58,280
3	\$18,310	\$24,352	\$33,874	\$36,620	\$54,930	\$73,240
4	\$22,050	\$29,327	\$40,793	\$44,100	\$66,150	\$88,200

COVERAGE DATA

Estimates of the number of people uninsured or without regular access to health care come from several national surveys, including the US Census Bureau's Current Population Survey's Annual Social and Economic Supplement and American Community Survey, as well as the Medical Expenditure Panel Survey (MEPS) conducted by the Agency for Healthcare Research and Quality. In addition to the fact that these surveys provide imprecise estimates, surveys that estimate insurance coverage are designed and conducted differently. For example, the Current Population Survey requires respondents to recall insurance status for the prior calendar year; a challenge with using these data to accurately report current health insurance trends is that they reflect the previous year's conditions.

In difficult economic times, in which job loss can impact insurance status and employers struggle to maintain employee benefits, these data lag behind the actual conditions in communities across the country. Nonetheless, they provide the most accurate picture we have of insurance status and access to care.

The Urban Institute and Kaiser Commission on Medicaid and the Uninsured have compiled state-level insurance coverage estimates based on the Census Bureau's Current Population Survey for March 2008 and 2009. The March 2009 survey asked if respondents had any insurance in 2008, yielding a best case estimate of coverage and access levels for the previous year. The uninsured in this survey reflect those uninsured for the full year. For estimates of health coverage in North Carolina broken down by source of insurance, see below. These data reflect the two-year average of 2007 and 2008 Census data.

- Of note, 45% of adults under 133% FPL were uninsured. Many of these individuals (excluding the undocumented and legal immigrants in the country for less than 5 years) will become eligible for Medicaid in 2014. See page ___ for a section on impacts of the new health care reform law for more details.
- Only 50% of children are covered under an employer-based plan, with Medicaid and NC Health Choice providing coverage for 30% of North Carolina's children.

2008/2009 North Carolina Insurance Coverage*, North Carolina Residents
(Based on US Census Bureau's Current Population Survey)

	Adults 19-64	Children	Adults (19-64) with incomes up to 133% FPL
Employer	60.4%	49.8%	19.2%
Individual	6.1%	5.2%	6.5%
Medicaid/NC Health Choice	8.0%	30.3%	22.9%
Other Public*	4.0%	3.4%	6.4%
Uninsured	21.1%	11.3%	45.0%

*Other public insurance includes veterans' benefits such as TRICARE and non-elderly recipients of Medicare.

COVERAGE DATA, *cont.*

A North Carolina Institute of Medicine (NCIOM) analysis of these data reports that nearly four-fifths of the non-elderly uninsured in North Carolina fit into one or more of three categories :

- **Children** represent 14% of the non-elderly uninsured, with 69% of these children in families under 200% of the Federal Poverty Level. Many of the low-income, uninsured children are actually eligible for Medicaid or NC Health Choice, public insurance programs that serve low-income children who are citizens or have been legal residents for 5 years or more.
- **Low-income adults** comprise approximately 50% of the non-elderly uninsured. Of these, most are childless, able-bodied, non-elderly adults who do not fit into any current Medicaid eligibility category.
- **Small business-associated** (less than 25 employees) individuals comprise 36% of the non-elderly uninsured in North Carolina.

Additionally, of the uninsured in North Carolina, 77% are in a family with at least one full-time worker (NCIOM Health Access Study Group).

Access Issues for Young Adults

- Nationally, young adults age 19-29 have the highest uninsured percentage of any age group, and represent 30% of the overall uninsured population.
- With only 17% of the population, young adults are disproportionately represented among the uninsured.
- In 2009, the Commonwealth Fund conducted a national telephone survey of young adults and found that 45% were uninsured at some point during 2008.
- Of these individuals experiencing gaps in coverage, 60% reported difficulty paying medical bills and 34% reported problems accessing care.

Critical transition points where we see young adults losing coverage include graduating from high school and college, in addition to the children in low-income families who age out of Medicaid at age 19. The NCIOM survey found that the majority of young adults with gaps in insurance coverage are from low-income families (55% of uninsured young adults had incomes less than \$20,000), and racial and ethnic minority young adults are more likely to be uninsured.

Mecklenburg County Specific Health Insurance Data

The Census Bureau's American Community Survey provides estimates of the number of uninsured in Mecklenburg County. According to the survey data:

- 16.5% of the total civilian noninstitutionalized population is uninsured in Mecklenburg County for a total of approximately 150,180 individuals without health insurance.
- However, the percentage is higher when looking specifically at non-elderly adults in Mecklenburg County.
- Survey data estimate that 21.2% of the non-elderly adult population in our county is uninsured, while 9.8% of children are uninsured.
- 33.4% of the uninsured are in households making at least \$50,000 a year, 44.8% of the uninsured have at least some college, and 79.1% of the uninsured worked at least part-time in the previous year.

An additional breakdown of the uninsured in Mecklenburg County is included on the following page.

2009 Mecklenburg County Insurance Coverage By Selected Characteristics
(Mecklenburg County Residents)

Household Income (2009 Inflation Adjusted Dollars)	% of Uninsured
Under \$25,000	29.9%
\$25,000 to \$49,999	36.7%
\$50,000 to \$74,999	18.5%
\$75,000 to \$99,999	8.5%
\$100,000 and over	6.4%
Total	100%
Education (ages 25 and up)	% of Uninsured
Less than high school graduate	26%
High school graduate or alternative	29.2%
Some college or associate's degree	29.5%
Bachelor's degree or higher	15.3%
Total	100%
Work Experience (ages 16-64)	% of Uninsured
Worked full-time, year round in past 12 months	34.5%
Worked less than full-time in past 12 months	44.6%
Did not work	20.9%
Total	100%

Source:

Census Bureau's American Community Survey, Mecklenburg County 1-year Estimates, 2009

Usual Source of Care

The latest data from the Medical Expenditure Panel Survey (2007) also provide national data on access to a usual source of care.

- Data from this survey show that nationally 1 in 10 people reported not being able to access or delaying medical care, dental care or necessary prescription medications at some point during the year (Chevarly et al. 2007). For the uninsured, this increases to almost 50%.
- General trends we can see from these data are that individuals in the 18-44 age range are the least likely to have a usual source of health care, and that males are more likely to lack a usual source of health care than females.
- The data also reflect racial disparities, with Hispanics the least likely to have a usual source of care.
- There is a stark contrast between the uninsured (53.2% with no usual source of care) and the insured (less than 18% with no usual source of care). Note that these are national data, and not necessarily reflective of local conditions such as the availability of providers and the effectiveness of local safety-net resources for the uninsured and underinsured.

The following charts provides information on the percentage of individuals reporting no usual source of care at the time of the MEPS survey.

% Individuals Reporting No Usual Source of Care (2007 Medical Expenditure Panel Survey)

Age (in years)	%
<65	22.6
<5	5.5
5 to 17	11.4
18 to 44	34.7
45 to 64	17.1
65+	6.5
Gender	
Male	24.6
Female	16.6
Insurance Status	
Private insurance (< age 65)	17.5
Public insurance (< age 65)	15.9
Uninsured (< age 65)	53.2
Race	
Hispanic	32.6
White, Non-Hispanic	16.9
Black, Non-Hispanic	23
Asian/Hawaiian/Pacific Islander	27.6
Poverty Level	
<100%	25.9
100-125%	24
126-200%	26
201-400%	21.5
>400%	15.7

EMPLOYER BASED HEALTH COVERAGE

Even before the most recent economic downturn, North Carolina was experiencing a decline in employer-sponsored coverage. Between 1999/2000 and 2006/2007 there was a 12.5% decline in employer-sponsored coverage in North Carolina (NCIOM Health Access Study Group). These data are reflected in national statistics as well, although our decrease is above average.

The reasons for this decrease are two-fold. As health care costs increase, providing this benefit becomes increasingly difficult for employers, most significantly impacting small employers. In addition, fewer individuals are able to afford premium costs to cover themselves and, more frequently their spouse and and/or dependents, when insurance is offered by the employer.

The Medical Expenditure Panel Survey also provides survey data from employers on health insurance benefits for the current calendar year. The most recently available data are for 2008, and will not completely reflect impacts of the recession on employer-sponsored health coverage.

- In 2008, 65.9% of employers offered health insurance in our metropolitan area (including Charlotte, Gastonia and Concord), representing 92.7% of the employees in our region.
- However, only 64.4 % of these employees enrolled in the insurance plan offered. For those enrolled, the average individual insurance premium per employee was \$4,460 per year, with the employee responsible for \$827.
- Family premiums were \$12,308 per year, with an employee contribution of \$4,115. See below for comparisons with statewide data

2008 Employer-Sponsored Insurance Access, Charlotte-Gastonia-Concord Metropolitan Statistical Area (MSA) and NC

	Charlotte, Gastonia, Concord NC-SC	NC
% establishments that offer health insurance	65.9%	52.3%
% employees in establishments that offer health insurance	92.7%	86.4%
% employees eligible for insurance in establishments that offer it	81.3%	78.8%
% employees enrolled in health insurance at establishments that offer health insurance	64.4%	57.9%
Avg. total single premium (in \$) per enrolled employee at establishments that offer health insurance	4,273	4,512
Avg. total employee contribution (in \$) per enrolled employee for single coverage at establishments that offer health insurance	824	827
Avg. total family premium (in \$) per enrolled employee at establishments that offer health insurance	12,674	12,177
Avg. total employee contribution (in \$) per enrolled employee for family coverage at establishments that offer health insurance	4,156	4,101

Source: Medical Expenditure Panel Survey, 2008 (Employer Component)

EMPLOYER BASED HEALTH COVERAGE, *cont.*

Health Insurance Premiums

Families USA, a leading non-partisan consumer health advocacy organization, analyzed health insurance premium trends in the past decade (2000-2009) using data from the Census Bureau and the MEPS surveys (Families USA 2009) and found that health insurance premiums for families rose 5.3 times more quickly than median earnings. The decade saw family health insurance premium costs increase by 96.8%, while median incomes for North Carolina workers rose only 18.4%.

As insurance premiums become more expensive, we see a decline in the percentage of employers able to offer insurance, with it being most difficult for small businesses to maintain coverage. Many more employers are forced to shift premium costs to employees and/or “thin” benefits, through increased cost-sharing, higher deductibles or limiting/eliminating coverage for dependents.

Challenges for Certain Private Sector Employees

Challenges of accessing insurance through an employer increase for part-time workers, low-wage workers and those in small businesses.

Part-time Workers

Part-time workers are much less likely to have health insurance than full-time workers. In North Carolina, 42.9% of part-time employees are eligible for coverage at companies that offer it, and many work for small businesses that do not offer insurance. Even fewer part-time workers actually enroll in employer sponsored insurance, with only 22.1% of part-time North Carolina workers that are eligible for insurance through their employer actually enrolled (MEPS 2008).

Low wage workers

Low wage workers earn wages that at full-time work would leave a family of four below the poverty line. In employment establishments where over 50% of the workforce is considered low-wage, 34.6% of employees are eligible for and enrolled in insurance plans. In employment establishments where less than 50% are low-wage workers, 69% of employees are eligible for and enrolled in insurance plans.

Small Businesses

State-level trends suggest that approximately 36% of all non-elderly uninsured are employed by or in the family of someone employed full-time by a small employer with <25 employees (NCIOM Health Access Study Group).

MEDICAID AND NC HEALTH CHOICE

Medicaid is our country’s health insurance program that provides coverage to low-income people who meet certain criteria. Medicaid is currently only available for specific categories of the low-income population; it is almost exclusively a program for children in low-income families, pregnant women and the elderly, blind and disabled.

Some parents of dependent children receive comprehensive Medicaid benefits, but only if they are very low income. Working parents are eligible for comprehensive Medicaid benefits if their income is below roughly \$10,804 a year (for a family of four in 2010, including income disregards). An able-bodied adult with no children will not qualify for comprehensive Medicaid coverage, regardless of his/her income.

North Carolina Health Choice

NC Health Choice is a public health insurance program that provides health coverage for a limited number of children ages 6-18 from families with incomes up to 200% FPL that are over-income for Medicaid and do not have other comprehensive health coverage. It is North Carolina’s version of the Children’s Health Insurance Program (CHIP), a state-federal partnership intended to serve children with incomes above Medicaid eligibility but too low to afford private coverage.

Because this is not an entitlement program like Medicaid, but rather a joint state-federal funded block grant program, limited funds are available and spending levels can be capped by the State legislature.

2010 North Carolina Medicaid Eligibility*

	Pre-2014 eligibility	Max Income** (family of four)
<i>Pregnant Women</i>	185%	\$40,792
<i>Children under age 6</i>	200%	\$44,100
<i>Children 6-18***</i>	100%	\$22,050
<i>Adults with dependent children</i>	36%	\$7,938
<i>Childless Adults</i>	0%	N/A
<i>Disabled</i>	100%	\$22,050
<i>Elderly</i>	100%	\$22,050

* This is the basic eligibility, not including income disregards that may increase allowable income for full Medicaid benefits.

** These incomes are based on the 2010 Federal Poverty Level guidelines, which are reevaluated on a yearly basis. Note that there are also additional resource limits for some Medicaid categories. For example, adults with dependent children cannot have more than \$3,000 in resources and still qualify for Medicaid.

*** Children age 6-18 whose family income is between 100-200% meet the financial eligibility requirements for NC Health Choice, another public health insurance program for children. See NC Health Choice section for more information. Children age 19 and 20 are eligible for full Medicaid benefits if they meet the income requirements for Medicaid for families with dependent children.

MECKLENBURG COUNTY'S SAFETY NET SERVICES

Mecklenburg County has a robust network of organizations that comprise our health care safety net and serve the uninsured and underserved in our community with free or low-cost health care services. Medlink is a collaborative effort bringing together representatives from all of the local health care safety net organizations that provide or support the delivery of health care services.

Medlink partners work jointly to better serve the community through improving access to health care for uninsured and underinsured residents in Mecklenburg County. For details on Medlink and the organizations that comprise our health care safety net, including a referral guide for free and low-cost health services in our community, visit the Medlink page on the Mecklenburg County's Health Department website. Safety net services include:

Carolinas Medical Center Ambulatory Care Clinics

CMC's four ambulatory care clinics—Myers Park, North Park, Elizabeth Family Medicine, and Biddle Point—offer primary care services, OB/GYN services and a variety of specialty services. Low-income, documented residents are treated on a sliding-scale fee.

CW Williams Community Health Center, Inc.

CW Williams is currently Mecklenburg County's only Federally Qualified Health Center. With two locations, CW Williams offers primary care and pediatrics, along with on-site podiatry clinics, homeless health care clinics, women's health services, as well as an on-site pharmacy. The center accepts commercial insurance, Medicaid, Medicare, and has sliding-scale fees for without ability to pay.

Physicians Reach Out (PRO)

PRO is a program of Care Ring, a local non-profit organization. In partnership with the Mecklenburg County Medical Society and the Charlotte Dental Society, volunteer physicians and dentists in the community provide free or low-cost health care for low-income individuals who do not qualify for Medicaid and do not have access to private insurance.

Free and Low-Cost Clinics

Mecklenburg County has seven free clinics located around the county (including Davidson, Huntersville and Matthews) that offer primary care services, with hours and services varying by site. Care Ring operates an additional low-cost clinic with modest office fees designed to provide basic care to those between 200-400% FPL that make too much money to qualify for free clinics or public programs.

NC MedAssist

NC MedAssist is a community pharmacy that provides free prescription medications to low-income, uninsured residents of the community. NC MedAssist provides pharmacy services to the free clinic and Physicians Reach Out patients.

Mecklenburg County Health Department

While MCDH does not provide primary care services, it does offer WIC, family planning, immunizations, STD and TB treatment, women's health, including mammography and Pap smears, and a variety of other services or on a sliding scale fee.

Dental Services

Access to dental care, in particular for adults, is a continuing challenge in our community. Very few resources are available for adults in need of dental care. Given the well-documented link between oral health and overall health, this is a significant concern.

The number of dentists accepting Medicaid and NC Health Choice for children has increased in recent years; as of June 2010 there were 84 practices accepting children's Medicaid, 54 of which were accepting new patients. The bulk of dental care for children with Medicaid is provided by Biddle Point Pediatric Dental Clinic.

Dental Services, cont.

Biddle Point Pediatric Dental Clinic

This pediatric dental clinic provides preventive and restorative care to children up to age 15. They see children with Medicaid, NC Health Choice and private insurance. They also offer sliding-scale fees for children without dental insurance. They have approximately 530 appointment slots per month, with approximately 90% of patients covered by Medicaid or NC Health Choice.

CMC Dental Clinic

CMC Dental Clinic provides care for acute dental needs such as extractions, abscesses and other associated urgent care needs. They have approximately 140 appointments per week, and offer the CMC sliding scale fee schedule for qualifying patients

CPCC Dental Clinic

The dental hygiene program at CPCC offers a dental clinic that provides screenings and basic preventive services only at a \$20.00 flat fee.

Ada Jenkins Dental Bus

The Ada Jenkins Center provides a dental clinic to serve residents of North Mecklenburg County, with approximately 340 patients per year. The dental bus also visits additional locations around the county once per month.

HEALTH CARE REFORM: IMPACT ON COVERAGE AND ACCESS TO CARE

On March 23, 2010, President Obama signed into law legislation that will change the health care landscape in many important ways. Most of the major reforms will begin in 2014, although there will be other important changes in advance of 2014. While the new law has many provisions that impact a wide range of health care-related issues, such as insurance reforms, increased funding for prevention and Medicare payment reform, this report will focus on the broadest reforms that will dramatically impact health insurance coverage options, particularly for low-income individuals.

For detailed information on the new law's provisions, as well as an implementation timeline, see resources from the Kaiser Family Foundation (<http://www.kff.org>).

A Sample of Pre-2014 Reforms

- After September 23, 2010 (as new health plan years begin), young adults under age 26 will be permitted to stay on their parents' coverage even if they are not students. This will impact many young adults who, particularly in the economic downturn, have taken jobs that do not offer benefits and/or lose their health insurance upon graduation.
- Beginning in summer 2010, North Carolina will establish a new high risk pool intended to provide immediate access to insurance for those with pre-existing conditions that have been uninsured for six months or more. The federal government has allocated \$5 billion in funding for this program. In May 2010, Families USA released a report that, using MEPS 2007 Medical Conditions data, extrapolated that 23.7% of the population in NC has a pre-existing condition that could make individual insurance cost prohibitive.
- After September 23, 2010 (as new plan years begin), children can no longer be denied coverage for pre-existing conditions and insurance plans cannot impose lifetime caps or rescind coverage when people become sick, except in cases of fraud. In 2014, adults will no longer be subject to pre-existing conditions exclusions either.

Major Coverage Changes: January 2014

Starting in 2014, most individuals will be required to purchase health insurance or face a tax penalty that will be phased in over several years. Exemptions from this requirement will be granted for financial hardship, religious objection, people without coverage for less than three months or for whom the lowest cost plan option exceeds 8% of income, undocumented immigrants, incarcerated individuals and American Indians.

Two of the most significant insurance coverage changes to begin in January 2014 are an expansion of Medicaid and the creation of state-based insurance exchanges in which certain individuals and families can purchase coverage. Sliding scale federal subsidies will be available to help those making up to 400% FPL with the cost of coverage purchased in the exchange.

Medicaid Eligibility Changes

Eligibility for Medicaid will change dramatically under health care reform, expanding coverage to many previously ineligible for Medicaid and reducing the number of low-income uninsured adults substantially. Eligibility for full Medicaid coverage will increase to 133% FPL, with children's Medicaid and NC Health Choice eligibility levels maintained. See below:

	Jan. 2014	Max Income** (family of four)
Pregnant Women	185%	\$40,792
Children 0-18*	200%	\$44,100
Working Parents	133%	\$29,326
Non-working Parents	133%	\$29,326
Childless Adults	133%	\$29,326
Disabled	133%	\$29,326
Elderly	100%	\$22,050

* Under health care reform, children ages 6-18 will be eligible for Medicaid up to 133% FPL and NC Health Choice between 133-200% FPL. Children under age six will continue to be eligible for full Medicaid coverage up to 200% FPL. NC is required to maintain current eligibility for NC Health Choice through 2019.

Medicaid Eligibility Changes, *cont.*

The Kaiser Family Foundation and Urban Institute conducted a state-by-state analysis of the Medicaid expansion's impact on coverage. Using a baseline estimate of 57% participation among newly eligible individuals, they projected 633,485 new Medicaid enrollees in the state of North Carolina, with 429,272 being previously uninsured (by full implementation in 2019).

Better enrollment efforts and grassroots outreach in local communities could increase participation beyond this baseline, leading to an even higher percentage of the currently uninsured gaining coverage (Urban Institute 2010).

Health Insurance Exchanges

As of this report's publication, the regulations have not been written for the implementation of state-based health insurance exchanges. However, the new law does outline who will be eligible for coverage, the basics of plan designs and who will be eligible for subsidies to make coverage more affordable. U.S. citizens and legal residents who are not offered affordable employer based coverage, as well as small businesses, will be eligible to purchase coverage in the Exchanges. Undocumented individuals will not be permitted to purchase coverage in the Exchange. There will be four basic benefit packages and a catastrophic plan that insurance companies can offer, all of which much meet minimum standards and cover all essential health benefits.

Benefit packages (specific coverage details to be determined):

- Bronze plan covers 60% of benefit costs (minimum credible coverage)
- Silver plan covers 70% of benefit costs
- Gold plan covers 80% of benefit costs
- Platinum plan covers 90% of benefit costs
- Catastrophic plan is available for those up to age 30 (or who are exempt from the coverage mandate due to affordability or other hardship), also covers prevention benefits and 3 primary care visits.

Subsidies and Cost Sharing

Sliding-scale premium assistance and cost-sharing subsidies will be available for those purchasing coverage in the Exchange with incomes up to 400% FPL. For example, a family of four making \$44,100 (based on 2010 FPL guidelines) would be eligible for refundable and advanceable premium credits that would lower the monthly premium cost to no more than \$231 (6.3% of income). Cost-sharing subsidies will help to lower out-of-pocket costs for those making up to 250% FPL and will also reduce annual out-of-pocket maximums for those making up to 400% FPL.

Additional information on subsidies are on the following page.

What About the Undocumented?

The undocumented are not included in any of the major health reform provisions. The undocumented will continue to be ineligible for full Medicaid benefits, and will not be eligible to purchase health coverage in the new health insurance Exchanges. This means that the problem of access to health care facing the undocumented in our community will not go away with health care reform and will continue to be a challenge facing our community.

Who May Still Fall Through the Cracks?

It is clear that the health care safety net will need to adapt to changes resulting from implementation of reform. But the implementation of reform will also not be perfect, and many who currently fall into gaps in our current system will continue to do so. Outreach and education will be critical—in particular to help individuals understand eligibility requirements for Medicaid and subsidies to make coverage in the exchange more affordable.

In thinking through who may still encounter difficulty obtaining health coverage and/or accessing health care services, it is useful to consider the experience of Massachusetts, which several years ago implemented reforms similar to the new federal reforms. While their population is, on average, more wealthy and healthier than North Carolina's, some of their experiences may portend challenges our state will face.

Who May Still Fall Through the Cracks, cont.

The Urban Institute released a report updating the impact of health reform in Massachusetts through fall 2009, and found that strong increases in insurance coverage among racial/ethnic minority adults eliminated the difference in coverage between minority and White, Non-Hispanic individuals largely due to strong gains in public coverage among minority adults.

While this is a significant achievement, the report noted that increased coverage has not been enough to eliminate barriers to care in the state; examples of disparities in access that still exist as of fall 2009 include more emergency department visits for non-emergency needs among minority adults as compared to White, Non-Hispanic adults (Long and Stockley 2010).

Based on research from the Kaiser Family Foundation on the Massachusetts experience, as well as other analysis of the current reform law, groups that may still have difficulty accessing coverage and/or care include:

- Those who choose tax penalty over coverage (penalty is generally minimal compared to cost of coverage)
- Low- to moderate-income individuals with chronic conditions (high utilizers of care) who may find annual out-of-pocket maximums unaffordable
- Low-income workers with access to employer-sponsored coverage
- Those with fluctuating income and/or instable employment status
- The undocumented (a group expressly excluded from any subsidized coverage or plans offered in the exchange)

Details on Premium Subsidies in the Exchange

(based on 40 year old policy holder and tied to the second lowest cost silver plan)

Poverty Level	133%	150%	200%	300%	400%
Maximum premium (% of income)	2%	4%	6.3%	9.5%	9.5%
Income, Individual ('10 guidelines)	\$14,404	\$16,245	\$21,660	\$32,490	\$43,320
Annual Max Premium, Subsidized	\$432	\$650	\$1365	\$3087	\$3500
Monthly Max Premium Cost	\$36	\$54	\$114	\$257	\$282
Income, Family of 4 ('10 guidelines)	\$29326	\$33075	\$44100	\$66150	\$88200
Annual Max Premium, Subsidized	\$880	\$1323	\$2778	\$6284	\$8379
Monthly Premium Cost	\$73	\$110	\$231	\$524	\$698

* For additional information, see the Kaiser Family Foundation's premium subsidy calculator at: <http://healthreform.kff.org/SubsidyCalculator.aspx>

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CHRONIC DISEASES

OVERVIEW

During the 20th Century, Americans gained almost 30 years in life expectancy. Much of this increase can be attributed to the development of antibiotics and advances in public health such as clean water and immunizations. With these changes came the end of large numbers of deaths due to tuberculosis, other respiratory and enteric illnesses, diphtheria, typhoid, polio, and measles. By the close of the 20th century, chronic diseases had replaced infectious diseases as the leading causes of death.

However, while Americans are living longer, they may not be living healthy longer. Chronic conditions may result in a diminished quality of life brought about by disability, dependence on medication, and high costs of medical care.

The positive news is that choosing healthy behaviors may help prevent, delay the onset of, or reduce the effect of many chronic conditions. Healthy behaviors include: maintaining healthy weight, blood pressure, and cholesterol levels as well as engaging in physical activity, eating nutritious foods, and avoiding tobacco use.

CHRONIC CONDITIONS ARE LEADING CAUSES OF DEATH & DISABILITY

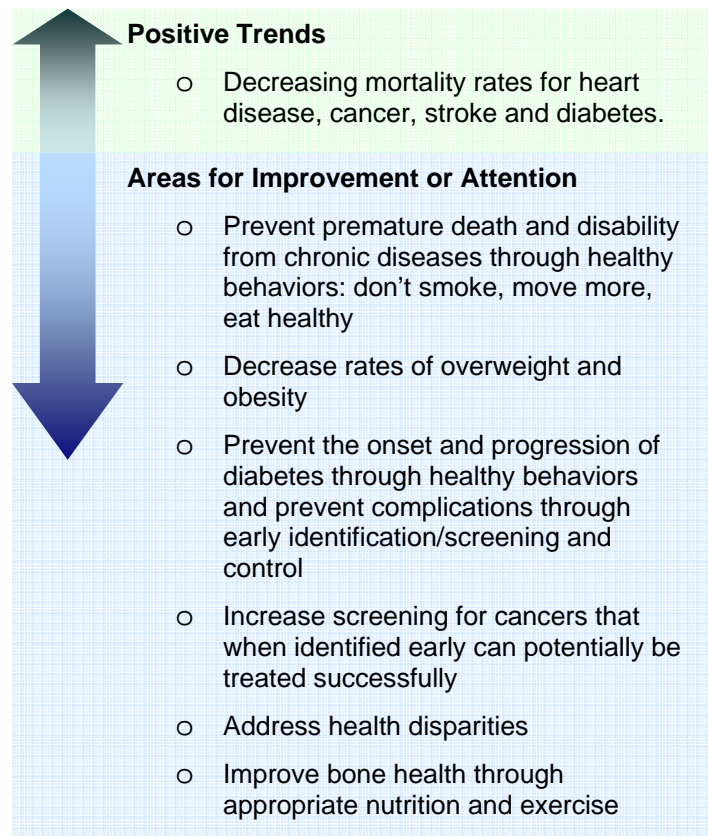
Locally and nationally, cancer and cardiovascular diseases (heart disease and stroke) are the leading causes of mortality, accounting for almost half of all deaths. The likelihood of acquiring cancer and cardiovascular disease increases with age and they are the leading causes of death for individuals 45 years of age or older.

In Mecklenburg, nine of the ten leading causes of death are chronic diseases or, as in the case of injury and HIV disease, have chronic components. Other leading causes of death and disability include Alzheimer's disease, Chronic Obstructive Pulmonary Disease (COPD), diabetes and kidney disease. Asthma, while not a leading cause of death, can kill and if not properly managed may result in disability. Osteoporosis and arthritis are examples of other chronic conditions that may cause disability.

MECKLENBURG QUICK FACTS : CHRONIC DISEASE

- Cancer, heart disease and stroke are the leading causes of mortality accounting for half of all deaths; they are the leading causes of death for people ages 45 years and above.
- Diabetes is a major contributor to cardiovascular disease as well as blindness, kidney disease and amputations.
- While Americans are living longer with chronic conditions, the associated disability, medical costs, and dependence on medication may decrease quality of life.
- The choice of healthy behaviors can prevent or reduce the impact of many chronic conditions. Such behaviors include: maintaining healthy weight, blood pressure, and cholesterol levels as well as engaging in physical activity, eating nutritious foods including a diet rich in fruits & vegetables, and avoiding tobacco use.

SUMMARY OF TRENDS IN MECKLENBURG COUNTY



**2008 Selected Chronic Conditions
Percent and Estimated Affected Population
(Mecklenburg Adult Residents)**

Condition	Percent Reporting	Population Estimate
Cancer	8	50,700
Heart Disease	3	19,000
Stroke	2	12,700
Diabetes	6	38,000
Asthma	12	76,100
Arthritis	21	133,000
Osteoporosis	7	44,400

Source: Behavioral Risk Factor Surveillance System 2008; US Census American Communities Survey 2008

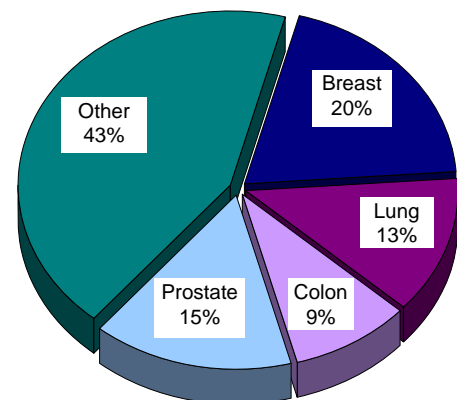
CANCER

Cancer is the leading cause of death in Mecklenburg County, as it is in North Carolina. However, nationally and locally cancer mortality rates are slowly declining, a drop largely attributed to reduced smoking and improved detection and treatment of colorectal, breast, and prostate cancers.

- In 2008, Cancer was the leading cause of mortality in Mecklenburg County with 1,146 deaths.
- The 2008 cancer mortality rate of 130.7 deaths per 100,000 population has declined from the 2005 rate of 132.1.
- The 2008 Mecklenburg cancer mortality rate of 130.7 is 31% lower than the state rate of 188.6.
- A comparison of age-adjusted rates from 2004-2008 shows a rate 8% lower than the state. Adjusted rates are used to better compare two groups when their demographics are different and when age over time increases the likelihood of disease. Many chronic diseases are associated with increasing age.
- Four cancers are responsible for nearly half of cancer deaths: lung, colon, breast and

- Four cancers are responsible for nearly half of cancer deaths: lung, colon, breast, and prostate. Together they accounted for 49% of the cancer deaths in Mecklenburg County in 2008 and 57% of new cancer diagnoses from 2003-2007.
- The 2009 inpatient hospitalization charges for cancer in Mecklenburg County amounted to \$105,793,079 with 2,558 cases, a 6.8 day average stay and an average charge of \$41,358 per case.
- The likelihood of developing cancer increases with age. National figures suggest that one out of three women and one out of two men will be diagnosed with some sort of cancer in their lifetimes. In the 2009 BRFSS, 8% of county residents report every having been diagnosed with cancer.
- Risk factors for some cancers are well established such as sun exposure and skin cancer, smoking and lung cancer and human papilloma virus (HPV) and cervical cancer. With other cancers where risk factors are less clear, early detection through screening tests can reduce deaths.

**2004 – 2008 Mecklenburg Cancer Cases
By Type
(percentages)**



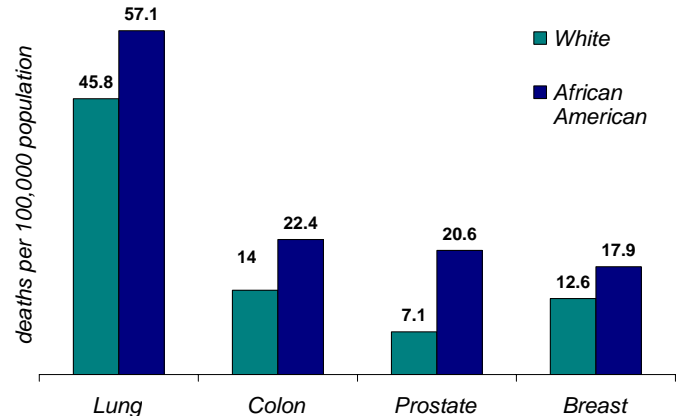
From 2003 through 2007, of all cancers diagnosed in Mecklenburg County, 57% were of four types: breast, lung, prostate and colon.

Source: NC Central Cancer Registry

Breast, prostate, and colon cancers, when detected early, may be successfully treated. Data from the 2008 BRFSS show:

- 52% of men 50 years old and older had ever taken a home blood stool kit, and 71% had ever had a sigmoidoscopy or colonoscopy,
 - 64% of males 40 years old and older had ever had a PSA (prostate specific antigen) test, and
 - 81% of women aged 50 and older had a mammogram in the past two years.
- African Americans have higher mortality rates than Whites from nearly every type of cancer. The reason why is not fully understand. Researchers say that while factors such as income, education and health care access may account for much of the difference they do not explain all of the difference.
 - Breast cancer **incidence** is higher in White women than in African American women; however, **mortality** is greater in African American women, suggesting that breast cancers in African American women may be detected at a later stage when the disease is less treatable.
 - In Mecklenburg, in 2006, the rate of breast cancer **incidence** was 1.8 times greater for White woman than women of Other Races. During 2005-2009, the **mortality** rate was 1.4 times greater for African American women than White women.
 - In the 2008 BRFSS, 76% of White women forty years or older reported a mammogram in the past two years compared to 71% of Non-White women. The difference, however, was not considered statistically significant.

2004-2008 Selected Cancer Mortality Rates Mecklenburg County (5 year Race-Specific, Age-Adjusted Rates)



Source: NC State Center for Health Statistics

HEART DISEASE

Heart Disease is an umbrella term for the many diseases that affect the heart. Formerly the leading cause of death in Mecklenburg County, it is now the 2nd leading cause, possibly because improved treatment allows individuals to live longer and actually die from other causes.

- In 2008, heart disease was the 2nd leading cause of death with 954 resident deaths.
- The heart disease mortality rate fell from 121.6 deaths per 100,000 in 2005 to 108.8 in 2008, a decrease of 10.5%.
- The 2008 Mecklenburg rate of 108.8 is 42% lower than the NC rate of 188.8; a comparison of age-adjusted rates from 2004-2008 shows a rate 20% lower than the state.
- The 2009 inpatient hospitalization charges for heart disease in Mecklenburg County amounted to \$208,746,576 with 5,630 cases, an average stay of 4.9 days and an average charge of \$37,097 per case.
- In 2009, 3% of residents reported ever being told by a medical professional that they had experienced a heart attack or myocardial infarction and 3% reported angina or coronary heart disease.

HEART DISEASE, cont.

Risk factors for heart disease include diabetes, smoking, overweight, inadequate physical activity, not eating a diet rich in fruits and vegetables, elevated cholesterol and high blood pressure. In the 2009 BRFSS, Mecklenburg residents reported:

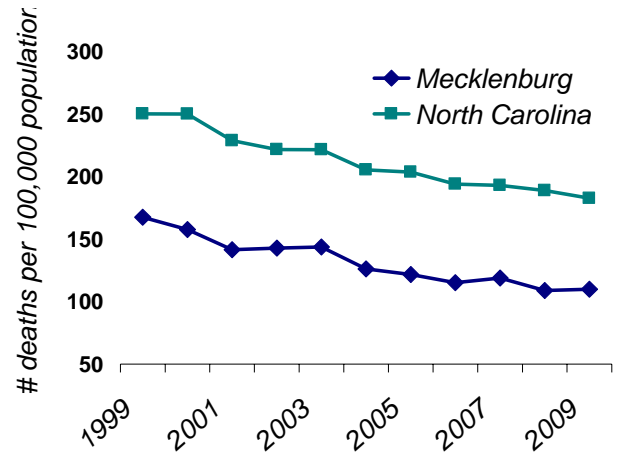
- elevated cholesterol – 36%
- high blood pressure – 29%
- overweight or obese – 64%
- diabetes – 6.2%
- no physical exercise – 21%
- less than five servings of fruits & vegetables per day – 78% and
- current smoking – 17%.

CEREBROVASCULAR DISEASE (STROKE)

Stroke occurs when blood flow to the brain is interrupted because of clot or hemorrhage.

- In 2008, stroke was the 3rd leading cause of mortality with 285 resident deaths.
- From 2005 to 2008, the stroke mortality rate fell from 36.3 deaths per 100,000 population to 32.5, a decrease of 10%.
- The 2008 rate of 32.5 is 33% lower than the state rate of 48.5; a comparison of age-adjusted rates from 2004-2008 shows a rate 10% lower than the state.
- The 2009 inpatient hospitalization charges for stroke in Mecklenburg County amounted to \$55,169,644 with 1,839 cases, an average days stay of 5.7 and an average charge of \$30,016 per case.
- In the 2009 BRFSS, 2% of residents reported ever being told by a medical professional that they had experienced a stroke.
- Risk factors for stroke are similar to those for heart disease.

1999-2009 Heart Disease Mortality Rates, Mecklenburg County & North Carolina



Source: NC State Center for Health Statistics

ALZHEIMER'S DISEASE

Alzheimer's disease causes changes in the brain resulting in symptoms that include progressive memory loss.

- In 2008 Alzheimer's disease was the 4th leading cause of mortality with 269 resident deaths.
- The age-adjusted mortality rate from Alzheimer's Disease rose slightly from 44.3 deaths per 100,000 in 2001-2005 to 45.2 in 2004-2008
- The mortality rate for Alzheimer's disease is higher in Mecklenburg County than the state and the nation.
- Alzheimer's disease is associated with older age. One partial explanation for the rising rates and high rate in Mecklenburg is that as people live longer and mortality rates from other diseases such as heart disease drop due to better prevention and improved treatments, Alzheimer's disease fills the gap.
- White women have the longest life expectancy and in Mecklenburg, accordingly, they have the highest rates of death from Alzheimer's disease.

ALZHEIMER'S DISEASE, cont.

- Alzheimer's disease is largely a diagnosis of exclusion with certainty only at autopsy although means for diagnosis are improving. Another explanation for rising rates in Mecklenburg is better recognition and diagnosis because of proximity to specialty medical care.
- Currently, there are no proven prevention measures for Alzheimer's disease.
- As the population ages, adequate facilities for care of people with Alzheimer's disease may be of concern.

INJURY

- While injury itself may not be a chronic disease, the associated trauma may result in a range of chronic neurological and musculoskeletal conditions. Please see the Injury section for additional information.
- Unintentional injury was the 6th leading cause of death in 2008 with 239 resident deaths.
- The 2009 inpatient hospitalization charges for injury and poisoning in Mecklenburg

County amounted to \$91,086,829 with 5,523 cases, an average stay of 5.5 days and an average charge or \$34,630 per case.

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

COPD, also known as chronic lower respiratory disease, includes conditions such as chronic bronchitis and emphysema.

- In 2008, COPD was the 5th leading cause of mortality with 241 resident deaths.
- From 2005 to 2008, the rate for COPD mortality in Mecklenburg remained virtually the same at 28 deaths per 100,000 population.
- The 2008 Mecklenburg mortality rate of 27.5 is 44% lower than the state rate of 49.1; a comparison of age-adjusted rates from 2004-2008 shows a rate 19% lower than the state.
- The 2009 inpatient hospitalization charges for COPD in Mecklenburg County amounted to \$32,863,532 with 2,188 cases, an average days stay of 4.1 days and an average charge or \$15,027 per case.

**2009 Mecklenburg County Inpatient Utilization and Charges
BY Principal Diagnosis for Selected Chronic Conditions**

Condition	Total Cases	Avg. Days Stay	Total Charges	Avg. Charge Per Case
Cancer	2,558	6.8	\$105,793,079	\$41,358
Heart Disease	5,630	4.9	\$208,746,576	\$37,097
Stroke	1,839	5.7	\$55,169,644	\$30,016
Injury	5,523	5.5	\$191,086,492	\$34,630
COPD	2,188	4.1	\$32,863,532	\$15,027
Diabetes	1,254	4.3	\$23,471,735	\$18,717
Total	18,992	na	\$617,131,058	\$32,494

Source: NC State Center for Health Statistics

DIABETES MELLITUS

Diabetes affects blood sugar or glucose metabolism. With Type I diabetes, the body cannot produce enough insulin to move glucose into cells. In Type II diabetes, cells do not respond normally to insulin.

- In 2008, diabetes was the 7th leading cause of mortality with 135 resident deaths.
 - From 2005 to 2008, the diabetes mortality rate rose from 13.9 deaths per 100,000 population to 15.4, and increase of 11%. However, the age-adjusted rate continued to decrease from 22.6 (2001-2005) to 19.3 (2004-2008), a decrease of 15%.
 - The 2008 Mecklenburg rate of 15.4 is 35% lower than the NC rate of 23.5; a comparison of age-adjusted rates from 2004-2008 shows a rate 24% lower than the state.
 - The age-adjusted African American mortality rate for diabetes for 2005-2009 in Mecklenburg is 3.0 times that for Whites.
 - The 2009 inpatient hospitalization charges for diabetes in Mecklenburg County amounted to \$23,471,735 with 1,254 cases, an average days stay of 4.3 days and an average charge of \$18,717 per case.
 - Not only is diabetes a leading cause of death, it is also a leading contributor to the development of heart disease, blindness, kidney disease and amputation.
 - In the 2009 Mecklenburg BRFSS, 6% of the population reported being told by a medical professional that they had diabetes. It is estimated that another 3% may have the disease and not realize it.
 - 5% of the White population compared to 9% of Other Races reported diabetes, although the difference did not reach statistical significance.
- It is estimated that 90% - 95% of diagnosed diabetes cases are Type II.
 - Prevention of Type II diabetes emphasizes healthy weight, appropriate diet and physical activity.
 - Nationally, there is an increase in the incidence of Type II diabetes with this disease being diagnosed at younger ages. This increase is largely attributed to a sedentary lifestyle and the accompanying dramatic rise in overweight children and overweight and obese adults over the past 20 years.
 - In the 2009 YRBS, 19% of teens were reported overweight and in the 2009 BRFSS, 64% of Mecklenburg adults were considered overweight or obese.

ASTHMA

- Asthma affects both children and adults. A leading chronic illness among children and youth, asthma is a major cause of school absenteeism.
- In the 2009 BRFSS, 12% or approximately 10,500 Mecklenburg adults reported ever being told by a health professional that they had asthma.
- In the 2009 Charlotte-Mecklenburg YRBS, 19% of students said they had ever been told by a medical professional that they had asthma, a finding which means that in a given group of 30 Mecklenburg Teens, almost 6 would have asthma.
- In the 2007-08 school year, CMS students with asthma were absent on average 8.8 days, though the absence may not necessarily have been asthma related.
- In 2009, 426 Mecklenburg children, 0-14 years of age, were hospitalized because of asthma at a rate of 220.8 per 100,000 children 0-14 years, 1.3 times the state rate of 175.0.

- Total individuals hospitalized numbered 1,164. The rate for asthma hospitalizations for all ages was 130.2, about 1.1 times the state rate of 128.5. Hospitalization numbers are for inpatient stays and do not count the much more frequent asthma-related visits to emergency departments.
- Low-income populations, minorities, and children living in inner cities experience more emergency department visits, hospitalizations and deaths due to asthma than the general population.
- Asthma attacks can be caused by tobacco smoke, dust mites, furred and feathered animals, certain molds, chemicals and strong odors in the school environment.
- Asthma can be controlled with proper diagnosis, appropriate asthma care and management activities.
- School health nurses provide case management for students with asthma.

ARTHRITIS

Arthritis refers to inflammation or swelling and pain in the joints and may result from infection, injury, degenerative changes and other causes.

- Arthritis is the leading cause of disability in the United States.
- One in five Americans reports being told by a medical professional that they have arthritis. Similarly, in the 2009 BRFS, 21% of Mecklenburg residents report medically diagnosed arthritis, rheumatoid arthritis, gout or fibromyalgia; 14.5% reported that joint pain had interfered with normal social activities during the past 30 days.
- Increasing physical activity, losing excess weight and participating in self-management education classes have been shown to reduce pain, improve functional limitations and mental health, and reduce disability among persons with arthritis.

OSTEOPOROSIS

Osteoporosis or "porous bone" is a disease of the skeletal system characterized by low bone mass and deterioration of bone tissue. Osteoporosis leads to an increase risk of bone fractures typically in the wrist, hip, and spine.

Per the 2004 Surgeon General's Report:

- An estimated 10 million Americans over age 50 have osteoporosis and another 34 million are at risk.
 - Each year an estimated 1.5 million people suffer an osteoporotic-related fracture, an event that can lead to a downward spiral in physical and mental health; 20% of senior citizens who suffer a hip fracture die within 1 year.
 - One out of every two women over 50 will have an osteoporosis-related fracture in their lifetime, with risk of fracture increasing with age.
 - Due primarily to the aging of the population and the previous lack of focus on bone health, the number of hip fractures in the United States could double or even triple by the year 2020.
 - In the 2005 BRFSS, 7% or an estimated 40,000 Mecklenburg adults report having been told by a medical professional that they have osteoporosis.
 - While everyone is at risk for developing osteoporosis, those at higher risk are female, White/Caucasian, post menopausal women, older adults, small in body size, eat a diet low in calcium, and physically inactive.
- Individuals develop most of their bone mass by their early twenties, women by about age twenty. Developing healthy bone mass, therefore, requires that children eat a diet rich in calcium. Young girls in particular may not be getting the calcium they need for peak bone development.
- Keeping healthy bones requires regular physical activity and appropriate nutrition throughout life.

Sources

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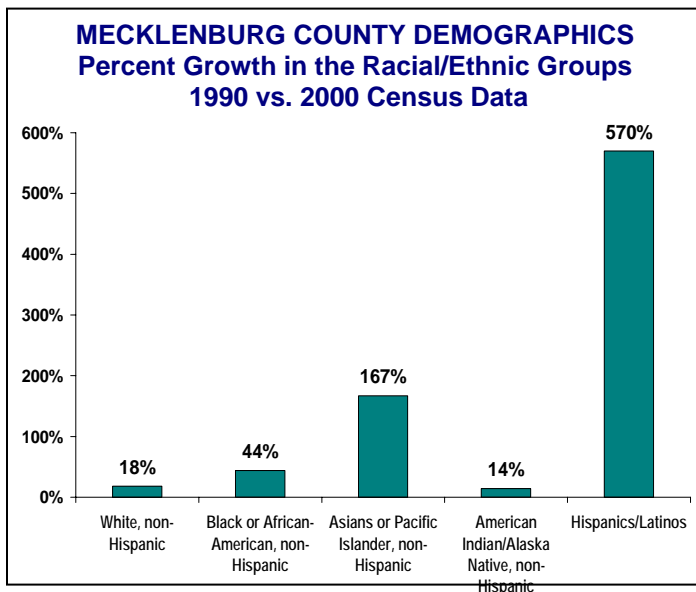


OVERVIEW

The National Institute of Health defines health disparities as differences in the incidence, prevalence, mortality and burden of disease and other adverse health conditions that exist among specific population groups in the United States. While the overall health of Americans has dramatically improved, African Americans, Hispanics, Native Americans, and Asian/Pacific Islanders continue to experience striking health disparities, including shorter life expectancy and higher rates of diabetes, cancer, heart disease, stroke and infant mortality. Addressing and eliminating these and other health disparities must remain a priority in order for the nation to maintain the continued improvements in overall health status.

CHANGING DEMOGRAPHICS SHAPE FUTURE PREVENTION EFFORTS

Increased growth among groups experiencing poor health outcomes also magnifies the importance of eliminating health disparities. According to the US Census Bureau, People of Other Races have the fastest rate of growth and are expected to surpass Non-Hispanic Whites after 2050. Future efforts to improve health and health care will be shaped by the needs of this increasingly diverse population.

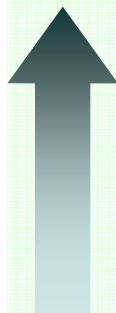


QUICK FACTS ON HEALTH DISPARITIES

- Health disparities are differences in the incidence, prevalence, mortality and burden of disease and other adverse health conditions that exist among specific population groups in the United States.
- There is no single reason why health disparities exist. The health of an individual or population is influenced by multiple, interrelated factors.
- The projected rate of growth among groups currently experiencing poorer health status magnifies the importance of addressing health disparities.

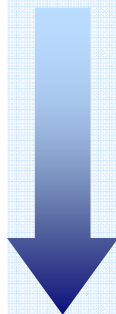
SUMMARY OF HEALTH DISPARITY TRENDS IN MECKLENBURG COUNTY

Positive Trends



- Eliminating disparities in health is a top priority for the nation and has resulted in the formation of several initiatives and research efforts.
- Since 1994, mortality rates for both Whites and People of Other Races have declined in Mecklenburg County.

Areas for Improvement



- Despite declines in overall death rates, Other Races are more likely to experience death from disease such as heart disease, cancer and stroke than Whites.
- Other Races as well as persons of lower socioeconomic status are more likely to report poor health behaviors in comparison to their respective counterparts.

HEALTH DISPARITIES AND SOCIOECONOMIC STATUS (SES)

A multitude of complex and often, interrelated factors contribute to the existence of health disparities. Research suggests issues of social inequality are involved and must be addressed before differences in health outcomes among racial and ethnic groups can be eliminated. The Centers for Disease Control and Prevention notes socioeconomic status, (SES) is “central to eliminating health disparities because it is closely tied to health and longevity. At all income levels, people with higher SES have better health than those at the level below them.” Additional information on SES and its link to health is included in the Social Determinants of Health section of this report.

HEALTH DISPARITIES IN MECKLENBURG

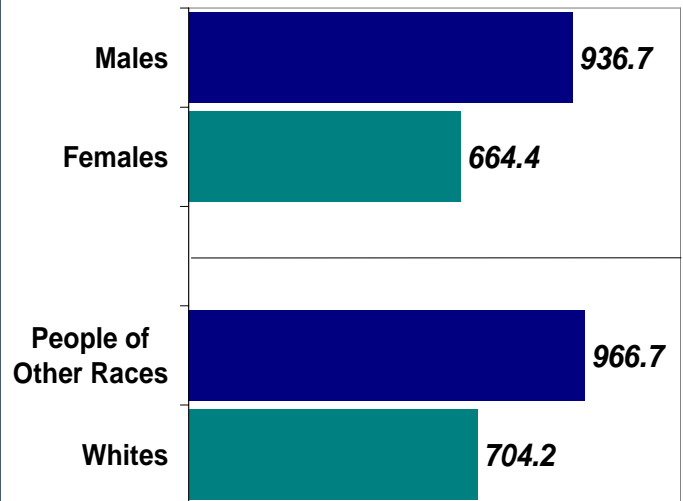
There is no single, best way to measure disparity that is appropriate in all situations. However, health disparities are often measured in terms of differences between rates, percentages, proportions or other quantifiable measures.

In terms of this report, a ratio is calculated by dividing the highest rate of disease or specific condition by the lower rate, providing a general measurement of disparity.

General Health Status and Infant Mortality

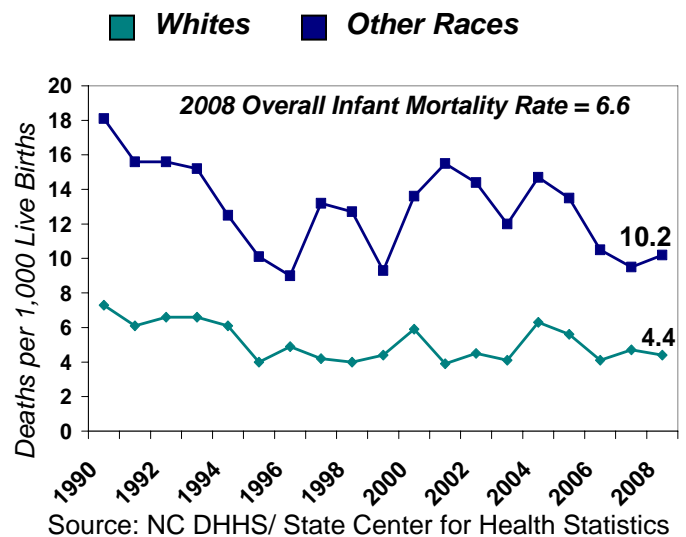
- When comparing Mecklenburg to North Carolina and the United States, most health indicators for the county appear favorable.
- In general, males tend to die at higher rates than females. The age-adjusted rate for All Causes of Death is 1.4 times higher for men than women.
- The overall mortality rate has fallen for both Whites and Other Races however the gap in mortality rates persists.
- The 2004-2008 age-adjusted rate for All Causes of Death is 1.4 times greater for People of Other races than Whites.
- While both Whites and Other Races saw a decline in infant mortality from 1990 until 1995, the gap between the two populations remains wide.

Health Disparities in All Causes Death Rates for Mecklenburg County
2004-2008 Gender/Race Age-Adjusted Rates*



*Death Rates for All Causes per 100,000 population. Source: NC DHHS/ State Center for Health Statistics

1990 - 2008 Annual Infant Mortality Rates per 1,000 Live Births by Race
(Mecklenburg Residents)



Source: NC DHHS/ State Center for Health Statistics

- The 2008 Infant Mortality rate for Mecklenburg is 6.6 infant deaths per 1,000 live births. However, infants of Other Races are 2.3 times more likely to die than are White infants.

Disparities in Leading Causes of Death: 2004 – 2008 Adjusted Death Rates

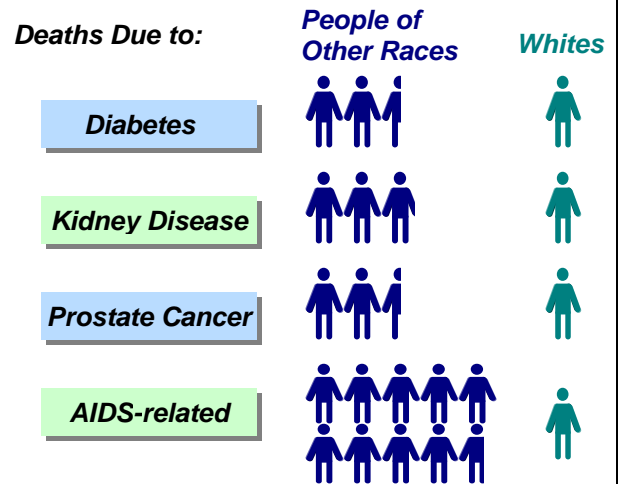
- Coronary health disease, cancer, and stroke are leading causes of death for both Whites and Other Races, including African Americans, Asians, and Native Americans. However, People of Other Races may die at higher rates and younger ages.
- Whites, in comparison to Other Races, are more likely to die of Chronic Obstructive Pulmonary Disease (COPD), Alzheimer’s Disease, Pneumonia/Influenza and suicide.
- In data from 2004-2008, death rates for People of Other Races were 1.4 times higher for heart disease and 1.6 times higher for stroke in comparison to Whites.
- Cancer death rates are also higher among People of Other Races. In comparison to Whites, death rates for Other Races are 1.2 times higher for breast cancer, 1.4 times higher for colon cancer and 2.2 times higher for prostate cancer.
- One of the largest gaps in health status between Whites and Other Races is for HIV disease related deaths. Other Races are nearly 10 times more likely to die of AIDS than are Whites.

Disparities in Health Risk Behaviors: Tobacco Use, Physical Activity and Dietary Behaviors

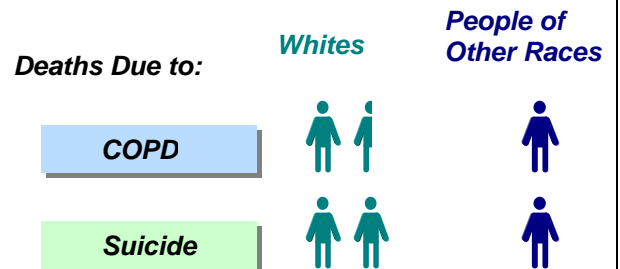
Research suggests that nearly half of all deaths are caused by avoidable behaviors and exposures, such as tobacco use, physical inactivity and poor nutrition. Differences in health behaviors exist across racial/ethnic groups, with People of Other Races often having higher risks for disease.

Disparities in Mecklenburg County: Selected Leading Causes of Death, (2004 – 2008 Adjusted Death Rates)

In comparison to Whites, People of Other Races experience deaths at a rate that is 2.6 times higher for diabetes and prostate cancer, 2.9 times higher for Kidney disease and 9.8 times higher for AIDS.



Whites experience higher death rates for COPD (1.4 times higher) and Suicide (2 times higher) than do People of Other Races.



For many health indicators, socioeconomic factors (such as income, education and neighborhood environment) may have a greater influence on overall health status than race. The following statements were compiled using the 2009 Behavior Risk Factor Surveillance Report (BRFSS).

By Race

- In comparison to Whites, People of Other Races were:
 - 1.5 times more likely to report no physical activity
 - 1.6 times more likely to report being obese
- A slightly higher percentage of Whites reported being a current smoker and consuming less than five or more fruits and veggies in comparison to People of Other Races. However, the disparity ratio for each of these indicators showed no true difference between the groups.

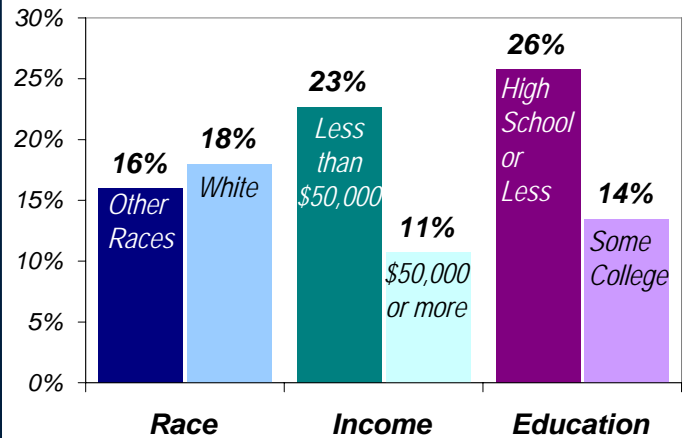
By Income and Education

- Individuals with a household income of less than \$50,000 were:
 - 2.1 times more likely to report smoking,
 - 1.7 times more likely to report obesity, and
 - 2.1 times more likely to report no physical activity in the past month.
- With the exception of smoking, disparity ratios for education levels were lower than those reported across racial groups.
- Being a smoker was nearly twice as likely to be reported among persons who have some high school or less in comparison with those who reported some college education.

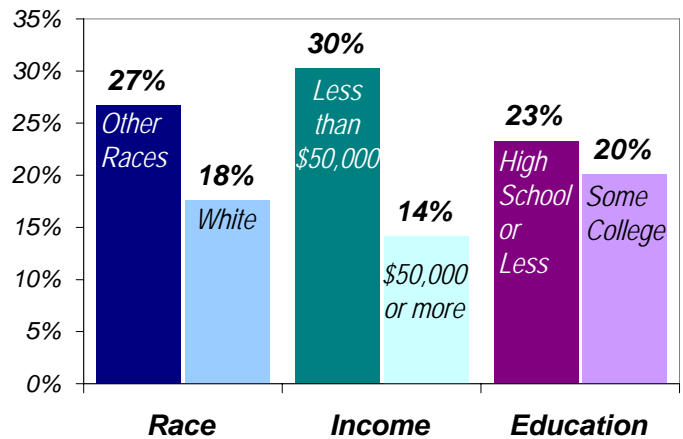
Additional information and trends for disease risk factors can be found in the Health Behaviors section of this report.

2009 Racial and Socioeconomic Disparities in Health Behaviors: Mecklenburg Residents

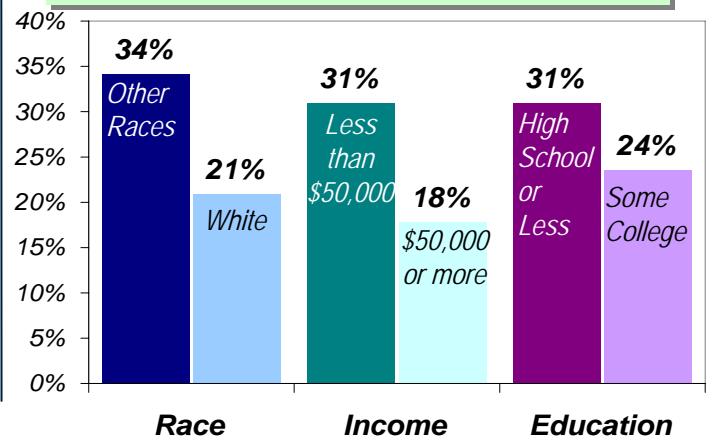
CURRENT SMOKERS



No PHYSICAL ACTIVITY in the Past Month



OBESITY (Body Mass Index of 30.0 or more)



Disparities in Health Care Access, Preventive Care and Routine Screenings

Health Care Access

Access to quality healthcare is an important step in improving overall health and reducing health disparities. Being able to afford quality health insurance remains one of the largest barriers in accessing care. Racial and ethnic minorities and low-income populations experience serious disparities in rates of insurance and access to health care.

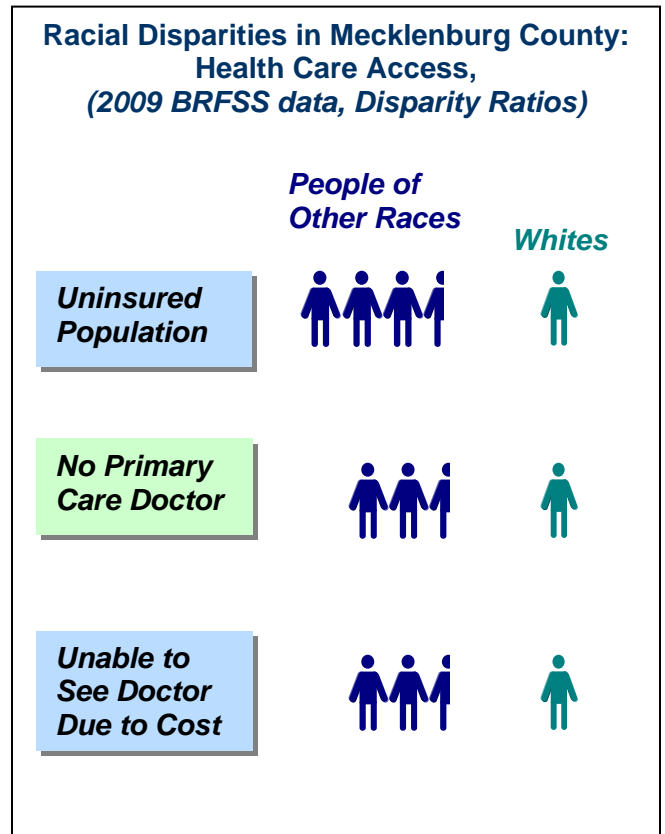
- In 2009, 28% of Persons of Other Races reported being uninsured compared to 8% of Whites in the county. Persons with a household income less than \$50,000 were 12 times more likely to report being uninsured than those with incomes over \$50,000.
- Having a primary care provider and a facility where a person receives regular care greatly improve health outcomes. However, People of Other Races and lower income populations were less likely to report having a personal doctor and more likely to report not being able to see a doctor due to cost.

Preventive Care and Routine Screenings

Preventative care is essential to addressing the causes of disease as well as detecting diseases in their early stages when treatment is most effective.

- People of Other Races were 2.3 times more likely to report never having their blood cholesterol checked than Whites. High Blood Pressure was slightly higher for Other Races but was not significantly different from White reports.
- Only 38% of all Mecklenburg residents reported having had a flu shot within the past 12 months. Other Races were 1.3 times more likely to report not having a flu shot in comparison to Whites.

Additional data on Health Care Access and Screening can be found in the Access to Care section of this report.



Racial Health Disparities for Selected Health Conditions Mecklenburg County Residents

MAJOR CAUSES OF DEATH

2004 – 2008 Age-Adjusted Death Rates (rate per 100,000 population)

	People of Other Races	Whites	Disparity Ratio	Healthy People 2010 Target
Other Races Deaths > White Deaths				
Heart Disease	199.6	147.6	1.4	+
Total Cancer	213.0	161.9	1.3	159.9
<i>Female Breast Cancer</i>	28.8	23.1	1.2	22.3
<i>Colorectal Cancer</i>	20.5	14.4	1.4	13.9
<i>Prostate Cancer</i>	28.8	23.1	1.6	28.8
Stroke	67.4	58.6	1.2	48.0
Diabetes	35.8	14.0	2.6	45.0
Influenza and Pneumonia	16.3	15.1	1.1	+
AIDS	23.5	2.4	9.8	0.7
Unintentional Injuries				17.5

White Deaths > Other Races Deaths

Chronic Lower Respiratory Disease	28.9	40.7	1.4	60.0
Suicide	4.9	9.9	2.0	5.0

2009 BRFSS*: HEALTH RISK FACTORS

(Percentages)

Other Races Risks > White Risks				
Diagnosed High Blood Pressure	31.0%	29.1%	1.1	16%
Obese (<i>Body Mass Index > 30.0</i>)	34.2%	20.9%	1.6	15%
No Physical Activity in Past Month	26.7%	17.6%	1.5	+
White Risks > Other Races Risks				
Current Smoking	16.0%	18.0%	1.1	12%
Not Having 5 or more Fruits and Veggies per day	77.4%	79.2%	1.0	+

2009 BRFSS*: ACCESS TO HEALTHCARE AND PREVENTIVE CARE

(Percentages)

No Health Insurance	27.5%	7.9%	3.5	100% coverage
No Primary Care Doctor	29.3%	11.2%	2.6	15% or less without Primary Care Doctor
Could not see a doctor due to cost (during the past 12 months)	33.7%	12.5%	2.7	+
Never had Blood Cholesterol Checked	27.2%	11.8%	2.3	80% with cholesterol check in past 5 yrs.
No Flu Shot within past 12 months	72.1%	56.9%	1.3	+

+ No Healthy People 2010 Target associated with this health indicator

* Data from the Behavior Risk Factor Survey (BRFSS) reflects self-reported data for Mecklenburg residents age 18 years and older

Data Source: NC DHHS State Center for Health Statistics, 2004 – 2008 County Level Data,
NC DHHS 2009 Behavior Risk Factor Surveillance (BRFSS) Program

ELIMINATING DISPARITIES IN HEALTH: A PRIORITY FOR THE NATION, STATE AND COUNTY

The commitment to understanding and eliminating racial and ethnic health disparities is a top priority for the nation and has resulted in the formation of several initiatives and research efforts to identify solutions to this problem. Examples of such efforts include:

- ***In the Nation:*** Including health disparities elimination as one of the overarching goals for Healthy People 2020, a comprehensive, nationwide health promotion and disease prevention agenda.
- ***In North Carolina:*** Health Disparities is included as one of four top priorities established for the NC Department of Health and Human Services.
- ***In Mecklenburg:*** The County Manager's charge and establishment of the Mecklenburg Health Disparities Taskforce, for the development of a county-wide strategic plan to eliminate health disparities.

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PRIMARY DATA AND RESEARCH

2010 CHA Health Opinion Survey

**Mecklenburg Area Partnership for Primary
Research**

**Mecklenburg County Community Food
Assessment 2010**

OVERVIEW

With guidance from the CHA Steering Committee, the MCHD Epidemiology Program developed a health opinion survey for Mecklenburg County residents. Rather than asking people about specific diseases or conditions for which we already had secondary data, we asked about beliefs and barriers to certain health behaviors. Our central questions included 1) do you believe changing your behavior can improve your health, 2) are you currently trying to change a behavior and 3) what makes behavior change difficult. The latter portion of the 25-question survey asked participants their opinions on the nine identified health focus areas, health concerns related to the social determinants of health and finally demographic information.

METHODOLOGY

The CHA Health Opinion Survey was available to Mecklenburg County residents only. The survey was open for responses from August 15, 2010 to September 30, 2010. Surveys were administered electronically through SurveyMonkey™ and in paper copy in both English and Spanish languages.

The sampling method used for this survey was convenience sampling which is an inexpensive and quick way to collect data. Links to the online survey were sent via email to employees of the top 5 employers in the county; elected officials of the county, city and towns; heads of city neighborhood associations; and through various contact lists. All recipients were encouraged to share the link among their own contacts. Paper copies were delivered to eleven local libraries representing all geographic areas of the county along with tent cards directing computer users to the SurveyMonkey™ website. There was also targeted distribution of paper copies to reach specific populations. For example, surveys were delivered to senior centers, a safety-net clinic, a homeless shelter, an African American male youth group, a health education class for Latinas and an organization that works with incarcerated individuals.

A total of 2,071 surveys were completed by Mecklenburg residents. Almost 92% (1,899 surveys) were completed through SurveyMonkey™ and the other eight percent (172) were on paper.

Characteristics of Residents Participating in the Mecklenburg Community Health Assessment Survey 2010

Total Number of Residents Surveyed 2,071

Gender	#	%
Male	452	24.1
Female	1421	75.9
Race/Ethnicity		
White	1165	62.0
Black	544	29.0
Native American	15	0.8
Asian/Pacific Islander	37	2.0
Multiracial	49	2.6
Other	69	3.7
Hispanic/Latino	94	5.1
Age Group		
Under 18	1	0.1
18-24	54	2.8
25-44	844	43.9
45-64	908	47.3
65-84	103	5.4
85+	11	0.6
Length of Residency in Mecklenburg		
Less than 1 year	75	3.9
1-2 years	89	4.6
3-4 years	195	10.2
5-10 years	369	19.3
11-15 years	238	12.4
More than 15 years	949	49.6
Level of Educational Attainment		
12th grade or less, no diploma or equivalent	54	2.8
High school graduate or equivalent	132	7.0
Some college, but no degree (includes vocational training)	352	18.5
Associate degree in college	203	10.7
Bachelors degree in college	587	30.9
Advanced college degree beyond Bachelors degree	572	30.1
Employment Status		
Employed for wages	1568	82.7
Self-employed	54	2.9
Out of work for more than 1 year	66	3.5
Out of work for less than 1 year	38	2.0
A Homemaker	24	1.3
A Student	26	1.4
Retired	83	4.4
Unable to Work	38	2.0
Annual Household Income		
\$0-\$19,999	112	6.1
\$20,000-\$29,999	123	6.7
\$30,000-\$44,999	249	13.5
\$45,000-\$64,999	361	19.5
\$65,000-\$90,000	357	19.3
More than \$90,000	513	27.8
Don't Know	133	7.2

BEHAVIOR CHANGE

Survey respondents were asked how much they agreed with the following statement, “By changing my behavior (for example: what I eat and drink, how much I exercise, if I smoke) I can improve my health”. Almost 90% of survey respondents agreed with the statement while only about one percent disagreed.

Over half of survey respondents stated that they think about ways to keep themselves healthy or improve their health several times a day.

Most respondents (92%) are currently trying to change their behavior in order to improve their health. Eating or drinking healthier foods and being more active were the behaviors residents most frequently reported trying to change.

	%
Eating or drinking healthier foods	90.1
Being more active	86.6
Managing stress	55.4
Reducing my chances for injury	41.2
Limiting my alcohol consumption	14.5
Trying to stop smoking	7.7

REASONS THAT MAKE IT HARD TO CHANGE BEHAVIORS

Over two thirds (67%) of survey respondents stated that there were reasons that make it hard to change their behaviors. Reasons that were stated most often were: being too tired, having long work hours and takes too much time.

	%
Too tired	26.9
I have long work hours	26.2
Takes too much time	22.7
Costs too much money	21.9
Not motivated	21.6
I have to take care of my family	17.3
Too hard	8.3

EXERCISING MORE

Survey respondents were asked “If you want to exercise more, what could help?” Most persons responded having someone to exercise with, free exercise classes near my home and going to a gym/having a gym membership.

	%
Having someone to exercise with/Buddy support	45.6
Free exercise classes near my home	41.6
Going to a gym/having a gym membership	34.4
Permission/encouragement for an exercise break during work hours from my boss	28.0
Sidewalks	26.9
Exercise equipment in my home	26.0

EATING/DRINKING HEALTHIER

Survey respondents were asked “If you want to drink or eat healthier foods, what could help you?” Most persons responded cheaper fresh fruits and vegetables, more farmer’s markets and smaller portion sizes in restaurants.

	%
Cheaper fresh fruits and vegetables	58.9
More farmer’s markets	45.1
Smaller portion sizes in restaurants	44.5
More healthy food and drink selections in school or at work	39.8
Less temptation—more healthy food and drink choices at work, faith and social gatherings	37.8
Information on what foods/drinks are healthy and recipes for preparing them	28.4
Clearer food labels	28.1

SMOKING CESSATION

Survey respondents were asked “If you want to stop smoking, what could help?” Most survey respondents (84%) stated that they do not smoke. For those that do smoke most stated that access to nicotine substitutes, medications and support group/cessation classes could help them stop smoking.

	%
Access to nicotine substitutes	5.2
Access to medications (chantix, bupropion)	3.8
Support group/cessation classes	3.6
Free 24-hr help line/Quitline	2.8
I do NOT want to quit smoking.	2.4
Tobacco Free policy at my workplace	2.2

HEALTH RELATED CONCERNS

Survey respondents were asked “What are the greatest health related concerns you have for your family right now?” Most respondents stated that getting regular dental care, not having adequate health insurance and not getting regular eye exams are their greatest health concerns right now for their family.

	%
Do not get regular dental care because it is too expensive	24.1
Some but not all family members has health insurance/coverage	20.1
Do not get regular eye exams/new glasses because it is too expensive	17.4
Have health coverage but skip doctor visits or necessary medical tests because of cost	17.0
Do not get some medicine prescriptions because they are too expensive	14.4

PRIORITY FOCUS AREAS

Survey respondents were asked “When thinking about our community please choose the four priority focus areas you think need the most attention from the list below.” The nine priority focus areas are:

- Access to Care (healthcare for those who do not have adequate insurance)
- Changing health behaviors to prevent or slow the onset of chronic disease (heart disease, stroke, arthritis, diabetes)
- Healthcare for mothers, children and babies (prenatal care and immunization to reduce the risk of low birth weight, premature birth, infant death)
- Healthy Environment (clean air, land, water and assuring that healthy places support healthy choices)
- Injury Prevention (car crashes, head injuries, falls, drowning, burns)
- Mental Health (anxiety, depression, suicide, bipolar disease, schizophrenia)
- Responsible sexual behavior (reducing sexually transmitted diseases, teen pregnancy)
- Substance Abuse Prevention (illegal drug use, prescription drug abuse, alcohol abuse)
- Violence Prevention (bullying, domestic violence, child abuse, assault, murder)

Access to Care, Chronic Disease Prevention, Healthy Environment, and Violence Prevention were voted the top 4 areas needing the most attention.

STRENGTHS AND LIMITATIONS

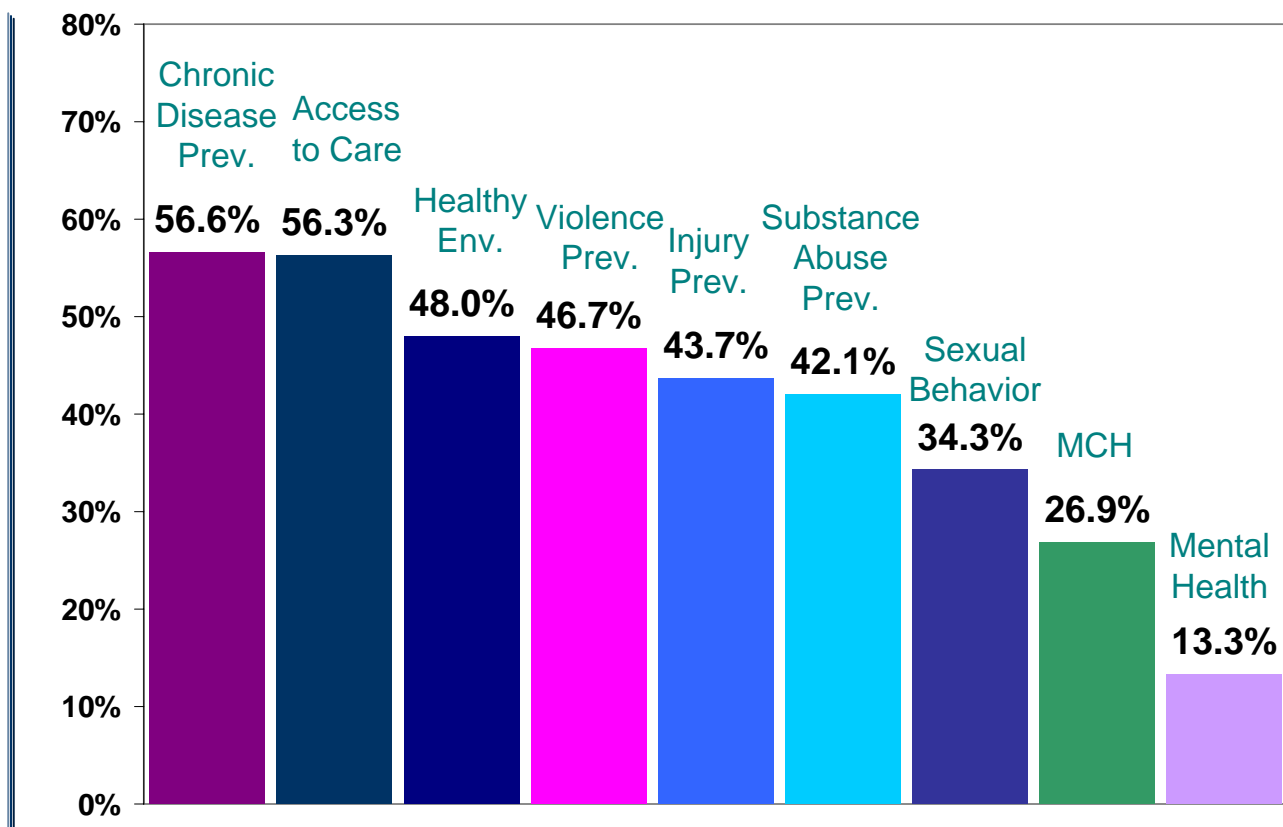
Electronic or online surveys have many advantages and disadvantages associated with them. Research has shown that online surveys yield response rates that are equal to or better than traditional mail-in surveys or telephone surveys. Although a response rate could not be calculated for this survey, it should be noted that the majority of responses completed (over 90%) were done online.

Electronic surveys are also cost efficient by eliminating the need for numerous paper copies and save research time since there is no need for data entry.

Limitations of this survey include selection bias with the sampling. Because most of the surveys were completed online it is likely that populations who do not have access to or feel comfortable using a computer may have been missed. This issue was addressed by distributing paper copies in libraries and other locations throughout Mecklenburg County targeting these populations.

Every attempt was made to gather a sample that resembled the demographic makeup of the county and we were largely successful with the exception of gender and to some extent Hispanic ethnicity. Caution must be exercised in attempting to weight a convenience sample as one cannot hope to bring it in line with a probability sample and, as such, we would be hesitant to perform such an adjustment and say this survey is totally representative of our county. It does, however, represent the opinion of a wide variety of county respondents as seen in the participant profile.

2010 Priority Focus Areas As Determined by Survey Respondents



Mecklenburg Area Partnership for Primary Research

The Mecklenburg County Health Department is a member of the Mecklenburg Area Partnership for Primary Care Research (MAPPR) founded by Dr Mike Dulin of CMC Elizabeth Family Practice and the Research Division of the Carolinas Healthcare System. The goal of the MAPPR which includes area providers, the Latin American Coalition, Charlotte Mecklenburg Schools and researchers from CHS and UNCC is to build a collaboration that will assess the healthcare needs of Charlotte's growing Latino population. "The MAPPR will mobilize healthcare professionals, community members and researchers to develop an understanding of the challenges and opportunities of providing healthcare services and access to Latino and other underserved communities in the Charlotte area."

The MAPPR has conducted a number of studies in the community. One used a combination of mapping and evaluation to identify geographic locations within Mecklenburg County lacking access to health care, particularly for the uninsured and other disadvantaged populations. Five community maps were developed representing socioeconomic data; population density; medical insurance status; utilization of emergency rooms for primary care; and patient utilization of the Carolinas Healthcare System primary care safety-net clinics. By weighting of these factors and combining individual maps, a composite map of overall health care access need was developed.

In another study, the Partnership sought to identify factors influencing visits to emergency rooms and to analyze costs associated with such visits in comparison with the same type of visits in a primary care setting. When compared to county population census data, it was found that African Americans, Hispanics, people without insurance, Medicaid, Medicare and those less than 2 or ages 19-40 are over-represented in the number of visits to emergency rooms. A comparison was made between costs for emergency room and clinic charges for the top 10 primary care type diagnoses that were made in emergency rooms. Charges were higher in the emergency room setting by 320–728%, allowing for potential savings of 69-86% if primary care visits were treated in clinics instead of the emergency rooms.

The Partnership also compared the effectiveness of five different systems that provide primary care services for the uninsured Hispanic population in Charlotte. All service providers were Partnership members and included hospital-based clinics, free clinics, low-overhead clinics and the EDs. The effectiveness of each system was determined based on travel distance, costs and patient satisfaction. Maps of patient populations were developed for each clinic and travel distance was measured using geo-spatial modeling. The cost of services at each location was determined using direct cost and patient charge data. Patient satisfaction was measured using a standardized, validated patient survey.

Two current MAPPR projects include Robert Wood Johnson funding to look at improving access to care and a new NIH grant to examine social determinants of health as they impact the Hispanic community in Mecklenburg County. Focus groups are an integral part of Community Participative Research and the RWJ grant has also used community forums to select health issues for intervention. The Health Department is involved with both grants as members of the Executive Committees and Community Advisory Boards. A Health Department Hispanic health educator coordinates the Hispanos Saludables Obesity Intervention Project, a part of the RWJ grant which allows Latinas to participate in three months of exercise classes as a means of improving fitness and weight. Findings from these studies will be published with the completion of the projects.

An article on the MAPPR and community participative research from *Mecklenburg Medicine*, the magazine of the Mecklenburg Medical Society follows as does a copy of the Fall 2010 MAPPR newsletter. Two articles describing the use of GIS to determine areas where Hispanics could most benefit from improved access to primary care services, published in the *Journal of the American Board of Family Medicine*, may be seen at <http://charmeck.org/mecklenburg/county/HealthDepartment/HealthStatistics/Pages/Home.aspx>.

MECKLENBURG MEDICINE

Evaluating and Improving Health Care Disparities in Mecklenburg County Using Community Based Participatory Research

Hazel Tapp PhD and Michael Dulin MD PhD

Located within the Department of Family Medicine at Carolinas HealthCare System, and founded by Dr Michael Dulin, The Mecklenburg Area Partnership for Primary Care Research (MAPPR) was created in 2004 to study healthcare delivery to underserved populations in Charlotte, NC. This Partnership is an example of a practice based research network, a group of primary care practices devoted principally to the primary care of patients, but also with a mission to investigate questions related to community-based practice and how to improve the quality of primary care.

Health disparities are a direct result of barriers present in the healthcare system that prevent access to medical services for specific subpopulations. The primary goal of the Partnership is to address disparities in health care access by developing and implementing interventions that increase the efficacy and efficiency of health care delivery for underserved populations.

Research carried out in practice-based networks has not traditionally included patients or community members. The methods we use involve an emerging model of research known as community-based participatory research, and involves using key stake holders, including medical professionals, community members and patients as research partners. Our partnership is invested in bringing together the ideals of community-based participatory research and practice-based research networks in order to tackle intractable problems such as disparities in health care access and outcomes and translate these results into practice. Practice based research with participatory methods can be used to: (1) identify the problems that arise in daily practice that result in the differences between recommended care and the actual care patients receive; (2) demonstrate the feasibility of implementing treatments derived from randomized controlled trials; and (3) provide a laboratory for developing process improvements in primary care to maximize the number of patients who benefit from medical discoveries. We have been gratified to find that physicians have a strong desire to be engaged in research that would improve care both in their own practice and in the community at large, and are especially invested in the process when they are recognized as research partners and key contributors.

In one study our partnership used a combination of mapping and evaluation to identify geographic locations within Mecklenburg County lacking access to health care, particularly for the uninsured and other disadvantaged populations. Gaining understanding of the patterns of health care access for a community is a key step in the process of improving primary care access and positively impacting community health. We brought together ambulatory providers, community members, and research team members as a community advisory board. Five community maps were developed representing socioeconomic data; population density; medical insurance status; utilization of emergency rooms for primary care; and patient utilization of the Carolinas Healthcare System primary care safety-net clinics. By weighting of these factors and combining individual maps, a composite map of overall health care access need was developed. These individual and composite maps identified areas in our community with the greatest need for increased access to primary care services. Armed with this information, we now are able to target underserved locations and the vulnerable populations residing within them, creating a rapid and measurable favorable impact on community health.

In further research, our partnership set out to identify factors that influence visits to emergency rooms and to analyze costs associated with such visits in comparison with the same type of visits in a primary care setting. When compared to county population census data, we found that African Americans, Hispanics, people without insurance, Medicaid, Medicare and those less than 2 or ages 19-40 are over-represented in the number of visits to emergency rooms. A comparison was made between costs for emergency room and clinic charges for

the top 10 primary care type diagnoses that were made in emergency rooms. Charges were higher in the emergency room setting by 320–728%, allowing for potential savings of 69-86% if primary care visits were treated in clinics instead of the emergency rooms. Our study in Mecklenburg County agrees with results of previous research that certain demographics factors are associated with over-utilization of emergency rooms for primary care treatable or preventable disorders. Findings that African Americans, Hispanics, and the uninsured are more likely to have primary care treatable emergency room visits may be explained by socioeconomic disparities and a lack of timely, affordable access to health care. We found that hospital margins were also much higher for the hospital system when providing true emergency care versus primary care in the emergency room, suggesting that hospitals benefit more when emergency rooms are focused on providing emergency care. The over-utilization of the emergency rooms by uninsured patients is also a large expense to the hospital system. Collaborative innovations and interventions will result in both significant savings and improved quality of primary care for the underserved population of Mecklenburg County.

We also compared the effectiveness of five different systems that provide primary care services for the uninsured Hispanic population in Charlotte. All service providers are members of our partnership, and include hospital-based clinics, free clinics, low-overhead clinics, and the emergency rooms. We determined the effectiveness of each system based on travel distance, costs, and patient satisfaction. Maps of patient population were developed for each clinic and travel distance was measured using geo-spatial modeling. The cost of services at each location was determined using direct cost and patient charge data. Patient satisfaction was measured using a standardized, validated patient survey. Participatory techniques such as focus groups allowed providers from each system to provide input about the research process. These provider focus groups gathered information about their experiences providing care for uninsured Hispanic patients and also involved the clinic representatives as research partners as we shared and analyzed the results obtained. This allowed us to work with the participating clinics to determine how best the results could be organized, disseminated and applied, ensuring that the research undertaken was directly applicable and useful for the clinics involved.

These research projects leverage unique partnerships among medical, social, and behavioral professionals to determine the best practices for delivering primary care services to our underserved populations, and the results of these studies are being translated back into practice to enhance primary care access and community health.

Mecklenburg County Community Food Assessment 2010

In the summer of 2010, the Mecklenburg County Health Department as a member of the Mecklenburg County Food Policy Council contracted with the UNC-Charlotte to examine Mecklenburg County for the presence of “food deserts,” neighborhoods, usually low-income, without easy access to full service grocery stores, those that sell fresh meat, milk and produce. The summary is found below. A copy of the entire report may be found at <http://charmeck.org/mecklenburg/county/HealthDepartment/HealthStatistics/Pages/Home.aspx>

MECKLENBURG COUNTY COMMUNITY FOOD ASSESSMENT 2010

SUMMARY OF FINDINGS

Elizabeth Racine, DrPH, RD, Qingfang Wang, PhD, and Christina Wilson, CHES
University of North Carolina at Charlotte

High rates of obesity and diabetes have spurred research to understand the causes and to identify prevention strategies. Evaluation of the neighborhood environment as it relates to food access is a growing area of research. Many studies have found that residents in low income and minority communities have poor access to grocery stores and healthy food products. Residents that live in “food deserts” have been found to be at higher risk of food insecurity and obesity. Food deserts are areas with no nutritious food stores, generally in low income neighborhoods. In addition, research suggests that areas with a high concentration of food stores may also be associated with poor health.

This study examined food store available within Mecklenburg County census block groups (CBG) to determine the existence of food deserts. We examined the types of foods in stores and classified those that offer fresh produce, fresh meat, fresh dairy, and processed foods as full service food stores. We also examined the relationship between physical access to food stores and community demographics; specifically population density, income, race/ethnicity, and premature deaths to heart disease and diabetes. Finally we examined whether the concentration of food stores was associated with these demographic and health characteristics. A number of data sources were used to gather information on food stores, population density, income, race/ethnicity, deaths to diabetes and heart disease, and Special Nutrition Assistance Program (SNAP) participation at the CBG level. Food stores were verified by phone or on-site inspection to determine that they were open for business and to obtain information about the types of food sold in each store. Food deserts were defined as low income CBG that did not contain a full service store. To measure the concentration of less healthy to healthier stores, a ratio between non full service stores and full service stores that accept SNAP benefits was created. Multivariate analysis was used to examine the relationship between the availability of food stores and population density, income, race/ethnicity, and premature deaths to heart disease and diabetes.

The 373 CBG in Mecklenburg County contain approximately 940,000 residents. We identified 721 food stores; of these 186 are full service stores. We found that half of the residents in Mecklenburg County do not have a full service food store in their CBG.

Are there food deserts in Mecklenburg County?

Yes, 60 CBG were designated as food deserts. There are 72,793 residents living in these food deserts, with a median income of approximately \$31,000; one third of the residents are SNAP

participants and the majority live in the northwest section of Charlotte. While the food desert census block groups do not have full service stores many do have non full service stores. There are 89 non full service stores in the food deserts; 1 of these sells fresh produce and it is a farmers' market that is open limited hours, days and times of the year. *Is there a relationship between the number of food stores in a CBG and population density?* Yes, the number of food stores increases in a CBG as the number of residents decreases.

Is there a relationship between the number of food stores in a CBG and income?

Yes, as the number of non full service food stores increases, the median income decreases. Also, having more non full service stores compared to full service stores is more common in lower income areas. We found that the number of full service stores in a CBG was not associated with income.

Is there a relationship between the number of food stores in a CBG and race/ethnicity?

Yes, we found that CBG with higher proportions of Asian and Hispanic residents are likely to have more full service and non full service food stores. We also found that the number of food stores increases as the proportion of Black, Hispanic and Asian residents increases. The food store ratio was greater in census blocks with more Black residents and lower in census blocks with more White residents.

Is there a relationship between the number of food stores in a CBG and health?

Yes, CBG with full service food stores had a lower rate of premature death to heart disease. Each full service food store in a CBG is associated with 23 fewer premature deaths to heart disease per 100,000 residents. We also found that the food store ratio was associated with premature deaths to heart disease. As the number of non full service stores increase in relation to full service food stores in a CBG there are 18 more premature deaths to heart disease per 100,000 residents. The availability of full service food stores and other types of food stores was not related to the premature death rate to diabetes. Over 72,000 residents in Mecklenburg County live in food deserts. They are more likely to participate in SNAP and may not have reliable transportation. While they do not have close access to a full service food store, many have access to non full service stores. The findings suggest that having greater access to non full service stores compared to full service stores is associated with greater rates of premature death to heart disease. Initiatives to improve the availability of full service stores in food deserts may benefit the health of citizens residing in these communities.



2010 COMMUNICATION PLAN

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COMMUNICATION PLAN – MECKLENBURG COMMUNITY HEALTH ASSESSMENT 2010		
FORMAT	MEANS OF DISTRIBUTION	TIME LINE
Final Report		Completed December 2010
	Internet – Post on Health Department Epidemiology and Healthy Carolinians websites in format that allows easy browsing	January 2011
	Use e-letter to notify interested parties, including community leaders, county commissioners, municipalities, county manager and other county agencies, health related non-profits and collaborations, hospitals, and universities that the information is available; include reminder for Community Health Forum, Healthy People 2020 and the action planning process.	January 2011
	Presentation Board of County Commissioners	January 2011
	Press release Issue with web posting	January 2011
	Social marketing County Twitter, Facebook and MeckTube	January 2011
Brochure	Bi-fold design similar to but more compact than the tri-fold created for 2006 (good feedback received) to summarizing findings	Design and print March 2011
	Internet Post on Health Department Epidemiology and Healthy Carolinians websites as pdf for easy download and printing	April 2011
	Mailing with specific recommendations from priority setting session to area funders such as Foundation for the Carolinas, Duke Endowment, CHS Foundation—include action plans	April 2011
	Mailing to those who participated in priority setting and county commissioners	April 2011
	Make copies available to all partner groups	Ongoing

COMMUNICATION PLAN (CONTINUED)		
	Provide copies to Health Department administration, health educators, and other appropriate staff to be distributed when making public presentations of any sort	April 2011 and on-going as needed
	Include in packet materials for Community Health Forum	April 2011
PowerPoint Presentation	Create presentation summarizing findings and recommendations	January 2011
	Internet Post on Health Department Epidemiology and Healthy Carolinians websites as pdf for easy download and printing	February 2011
	Presentation to Health Department Middle Management	February 2011
	Use for presentations as needed	On-going as scheduled
Written Articles	Identify opportunities for publicizing information and write articles summarizing findings and recommendations or selected areas of interest	On-going as identified
	<u>Mecklenburg Medicine</u> – Summary of findings and priority setting exercise with recommendations; follow up with an article every month featuring one of the eight focus areas	Begin April 2011 with Public Health Month issue



APPENDIX

2010 Mecklenburg CHA Health Opinion SurveyMonkey™ Questionnaire

Technical Notes

CHA 2010

Mecklenburg Healthy Carolinians wants your input about health behaviors in our county. The purpose of this survey is to give Mecklenburg residents a chance to voice their feelings about health issues in their community. Information gathered from the survey will be used to learn about health needs in the county and the challenges people face in becoming and staying healthy.

We would appreciate you taking time to fill out this survey. This survey is brief and should take about 5 to 10 minutes to complete. You will not be identified with the information you give because the survey is confidential. All responses will be combined and analyzed as a group.

Participation in this survey is completely voluntary. If you choose to participate, please click the NEXT button at the bottom of the screen. Any questions marked with an asterisk (*) require an answer in order to move through the survey.

If you do not wish to participate, or decide to stop at any time, you may exit the survey.

Thank you in advance for your time.

*** 1. Are you a Mecklenburg County Resident?**

Yes

No

*** 2. How much do you agree with the following statement?**

	Disagree	Somewhat disagree	No opinion	Somewhat agree	Agree
By changing my behavior (for example: what I eat and drink, how much I exercise, if I smoke) I can improve my health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CHA 2010

*** 3. How often do you think about ways to keep yourself healthy or improve your health?**

- Several times a day
- About once a day
- About once a week
- About once a month
- About once a year
- Never

*** 4. Are you currently trying to change your behavior to improve your health?**

- Yes
- No

*** 5. What behaviors are you currently trying to change? Check all that apply.**

- Being more active (walking, going to gym, taking the stairs, gardening, biking, swimming)
- Eating or drinking healthier foods (eating more fruits/vegetables, drinking less soda, drinking more water)
- Trying to stop smoking
- Limiting my alcohol consumption
- Managing stress
- Reducing my chances for injury (not texting while drive, wearing seatbelts, using bike helmets, not speeding)
- Other

Other (please specify)

*** 6. Are there reasons that make it hard for you to change your behaviors?**

- Yes
- No

CHA 2010

*** 7. What are the current reasons that make it hard for you to change your behaviors?**

Check all that apply.

- Takes too much time
- Costs too much money
- I have to take care of my family
- I have long work hours
- Too hard
- Too tired
- Not motivated
- My behaviors are healthy and I do not need to change them
- I don't think changing my behaviors will improve my health
- Other

Other (please specify)

CHA 2010

*** 8. If you want to exercise more, what could help? Check all that apply.**

- Childcare
- Going to a gym/having a gym membership
- Safer neighborhood in which to walk
- Sidewalks
- Permission/encouragement for an exercise break during work hours from my boss
- More parks
- Free exercise classes near my home
- Having someone to exercise with/ Buddy support
- Exercise equipment in my home
- I DO NOT believe that exercise will improve my health
- I DO NOT need to exercise more because I get enough exercise already
- Other

Other (please specify)

CHA 2010*** 9. If you want to eat or drink healthier foods, what could help you? Check all that apply**

- Clearer food labels
- Smaller portion sizes in restaurants
- A full service grocery store (has fresh meat, milk, fruits and vegetables) near my home
- Cheaper fresh fruits and vegetables
- Less advertising for fast/junk food
- More farmer's markets
- More water fountains
- More healthy food and drink selections in school or at work
- Buddy support /cooking or shopping with someone else
- Group support—friends and family also trying to cook and eat healthier foods
- Less temptation—more healthy food and drink choices at work, faith and social gatherings
- Classes on how to choose and cook healthy foods
- Information on what foods/drinks are healthy and recipes for preparing them
- I DO NOT believe that changing what I eat/drink will improve my health
- I DO NOT need to change what I eat or drink because I already make healthy choices
- Other

Other (please specify)

CHA 2010

*** 10. If you want to stop smoking, what could help? Check all that apply.**

- I do NOT smoke
- Free 24-hr help line/Quitline
- Tobacco Free policy at my workplace
- Support group/cessation classes
- Access to nicotine substitutes (nicotine gum/patch/lozenge, nicotine nasal spray or inhaler)
- Access to cessation medications (Chantix, bupropion)
- Online cessation services
- I do NOT want to quit smoking
- Other

Other (please specify)

CHA 2010

*** 11. What are the greatest health-related concerns you have for your family, right now?**

Check all that apply.

- NO one in the family has health insurance/coverage (private, Medicaid, Medicare)
- SOME but not all family members have health insurance/coverage
- Have health coverage but skip doctor visits or necessary medical tests because of cost
- Do not get some medicine prescriptions because they are too expensive
- Do not get regular dental care because it is too expensive
- Do not get regular eye exams/new glasses because it is too expensive
- Cannot afford enough food
- Homeless or worried about becoming homeless
- It is hard to see a doctor or get a test because the health care system is confusing
- My doctor does not understand or respect my culture or my family values
- None
- Other (Please say what)

Other (please specify)

CHA 2010

*** 12. When thinking about our COMMUNITY, please choose the four areas you think need the most attention.**

- Access to Care (healthcare for those who do not have adequate insurance, culturally appropriate care, health literacy)
- Choosing Healthy Behaviors to prevent or slow the onset of chronic disease and disability (heart disease, stroke, arthritis, diabetes)
- Healthcare for Mothers, Children and Babies (immunization, check-ups, prenatal care to reduce the risk of low birth weight, premature birth, birth defects and infant death)
- Healthy Environment (clean air, land, water and planning new community growth/ building/transportation to support a clean environment and healthy behaviors)
- Injury Prevention (car crashes, head injuries, falls, drowning, burns)
- Mental Health (Alzheimer's disease, anxiety, depression, suicide, bi-polar disease, schizophrenia)
- Responsible Sexual Behavior (reducing sexually transmitted diseases, teen pregnancy)
- Substance Abuse Prevention (illegal drug use, prescription drug abuse, alcohol abuse)
- Violence Prevention (bullying, domestic violence, child abuse, assault, murder)

13. What additional comments or concerns do you have about health or changing health behaviors in Mecklenburg County?

14. What is your age?

- Under 18
- 18-24
- 25-44
- 45-64
- 65-84
- 85+

15. What is your Gender?

- Male
- Female

CHA 2010

16. Which of these groups would you say best represents your race?

- White
- Black
- Native American
- Asian/Pacific Islander
- Multiracial
- Other Race

17. Are you of Hispanic/Latino origin?

- Yes
- No

*** 18. What is your home zip code?**

Zip Code

19. How long have you lived in Charlotte/Mecklenburg County?

- Less than 1 year
- 1-2 years
- 3-4 years
- 5-10 years
- 11-15 years
- More than 15 years

20. How many people live in your household?

Number of people

CHA 2010**21. What was your household income last year?**

- \$0-\$19,999
- \$20,000-\$29,999
- \$30,000-\$44,999
- \$45,000-\$64,999
- \$65,000-\$90,000
- More than \$90,000
- Don't know

22. What is the highest level of schooling you have completed?

- 12th grade or less, no diploma or equivalent
- High school graduate or equivalent
- Some college, but no degree (includes vocational training)
- Associate degree in college
- Bachelors degree in college
- Advanced college degree beyond Bachelors degree

23. Are you currently...?

- Employed for wages
- Self-employed
- Out of work for more than 1 year
- Out of work for less than 1 year
- A Homemaker
- A Student
- Retired
- Unable to work

CHA 2010

24. Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?

- Yes
- No
- Don't know / Not sure

25. Are you covered by any of the following types of health insurance or health coverage plans? Check all that apply.

- Insurance through an employer
- Insurance purchased directly from an insurance company
- Medicare, (for people 65 and older, or people with certain disabilities)
- Medicaid, or any kind of government-assistance plan (for those with low incomes or a disability)
- I am NOT currently covered by health insurance or a health care coverage plan
- Don't Know/Not Sure
- Other

Other (please specify)

Thank you for your time.

If you have questions about the survey or Mecklenburg Healthy Carolinians please contact Kerry Burch, Healthy Carolinians Coordinator, at kerry.burch@carolinashealthcare.org.

TECHNICAL NOTES: ICD 10 Codes for Chronic Diseases

The following technical notes are from the North Carolina Vital Statistics, Volume 2: Leading Causes of Death North – 2009. The NC Vital Statistics report describes North Carolina's total and cause-specific deaths at the state and county level. A detailed report can be found online at:

<http://www.schs.state.nc.us/SCHS/deaths/lcd/2009/>

Comparability Ratios for the Major Causes of Death in North Carolina Vital Statistics, Volume 2

The comparability ratio is an adjustment factor that is applied to the number of deaths coded to a cause-of-death category under the International Classification of Diseases, 9th Revision (ICD-9) to make the number more comparable to the number coded under the 10th Revision (ICD-10). In North Carolina, causes of death were coded using ICD-9 from 1979 through 1998, and using ICD-10 beginning in 1999. The comparability ratios indicate the extent of discontinuities in cause-of-death trends resulting from implementing ICD-10. A large sample of 1996 United States deaths were

classified by both ICD-9 and ICD-10 to develop the comparability ratios. The comparability ratio is the ratio of the number of deaths in the 1996 sample in an ICD-10 cause-of-death category to the number of deaths in the sample in the same category as coded under ICD-9. More detailed comparability ratios are available from the State Center for Health Statistics or in the publication of the National Center for Health Statistics titled *Comparability of Cause of Death Between ICD-9 and ICD-10: Preliminary Estimates* (National Vital Statistics Reports, Volume 49, Number 2; May 18, 2001).

Cause of Death	Comparability Ratio
Heart disease	0.99
Cerebrovascular disease	1.06
Cancer	1.01
Cancer of colon, rectum, and anus	1.00
Cancer of trachea, bronchus, and lung	0.98
Cancer of breast	1.01
Cancer of prostate	1.01
Human immunodeficiency virus (HIV) disease	1.14
Septicemia	1.19
Diabetes mellitus	1.01
Pneumonia and influenza	0.70
Chronic lower respiratory diseases	1.05
Chronic liver disease and cirrhosis	1.04
Nephritis, nephrotic syndrome, and nephrosis	1.23
Unintentional motor vehicle injuries	0.85
All other unintentional injuries	1.08
Suicide	1.00
Homicide	1.00
Alzheimer's disease	1.55
Deaths from all causes	1.00

List of Selected Causes of Death

Cause of Death	ICD-10 Codes*
Heart disease	I00-I09,I11,I13, I20-I51
Cerebrovascular disease	I60-I69
Atherosclerosis	I70
Cancer	C00-C97
Lip, oral cavity, and pharynx	C00-C14
Stomach	C16
Colon, rectum, and anus	C18-C21
Liver	C22
Pancreas	C25
Larynx	C32
Trachea, bronchus, and lung	C33-C34
Malignant melanoma of skin	C43
Breast	C50
Cervix uteri	C53
Ovary	C56
Prostate	C61
Bladder	C67
Brain	C71
Non-Hodgkins lymphoma	C82-C85
Leukemia	C91-C95
Human immunodeficiency virus (HIV) disease	B20-B24
Septicemia	A40-A41
Diabetes mellitus	E10-E14
Pneumonia and influenza	J10-J18
Chronic lower respiratory diseases	J40-J47
Chronic liver disease and cirrhosis	K70,K73-K74
Nephritis, nephrotic syndrome, and nephrosis	N00-N07,N17-N19,N25-N27
Motor vehicle injuries (unintentional)	V02-V04,V09.0,V09.2,V12-V14,V19.0-V19.2, V19.4-V19.6,V20-V79,V80.3-V80.5,V81.0-V81.1,V82.0-V82.1, V83-V86,V87.0-V87.8,V88.0-V88.8,V89.0,V89.2
All other unintentional injuries	V01,V05-V06,V09.1,V09.3-V09.9 V10-V11,V15-V18,V19.3,V19.8-V19.9,V80.0-V80.2,V80.6-V80.9, V81.2-V81.9,V82.2-V82.9,V87.9,V88.9,V89.1,V89.3,V89.9,V90-V99, W00-X59,Y85,Y86
Suicide	X60-X84,Y87.0
Homicide	X85-Y09,Y87.1
Alzheimer's disease	G30

* International Classification of Diseases, 10th Revision.

TECHNICAL NOTES: Infant Mortality

INFANT MORTALITY:

Infants are defined as all children within 365 days of date of birth or under 1 year of age. Infant mortality is defined as the number of resident infant deaths per 1,000 resident live births for a particular year.

RACE AND ETHNICITY CONSIDERATIONS:

The terms white, nonwhite, other races and minority designate racial status. The term Hispanic denotes ethnicity. Hispanics can be of any race and are therefore included in the denominator for both white and other races (minority/nonwhite) categories. However, in Mecklenburg County, the majority of Hispanics fall into the white racial category, therefore, if only 2 population categories, white and non-white (minority or other races), are available, it is erroneous to assume the non-white rates are heavily influenced by Hispanics.

In order to best compare Hispanics to other racial groups, it is necessary to sort out Non-Hispanic groups whether they are white, black, Asian, American Indian or other, and when these data are available such a comparison can be made (i.e. Hispanic rates are compared to Non-Hispanic white or Non-Hispanic black rates). Such comparisons can be made for infant deaths because the rates are based on the number of live births for which data is available for each Non-Hispanic racial category and Hispanics.

SMALL NUMBER OF EVENTS AND CAUTION WHEN INTERPRETING INFANT MORTALITY RATES

The term "rate" refers to the number of vital events (i.e. births, deaths, pregnancies etc.) in a given period of time (i.e. 2003 or 2001-2003) divided by the average number of people at risk during that period (i.e. July 1st average population estimate during that time period). For example, the infant mortality rate represents the number of infants less than 1 year of age at risk of dying before the age of 1 year (or years) of all the infants born in a given time period or specific year.

It is often the case when infant mortality rates are examined on a local level (i.e. city or county) by race and ethnicity that the rate is based on a small number of deaths (less than 20 events). Any death rate with less than 20 events in the numerator will have substantial random variation over time (a large standard error) and are subject to serious random error. Therefore, extreme caution should be taken when making comparisons or assessing trends with rates based on less than 20 events. When assessing trends in infant mortality rates that are race/ethnic specific and based on small numbers, the emphasis should be placed on the number of deaths or percentage of deaths out of the total number of deaths rather than the rates.

Annual infant mortality rates as a whole or by broad race categories such as White and Minority are more stable than rates by ethnicity because they are based on greater than 20 events and the amount of random error associated with the rate is significantly reduced. When examining infant mortality rates by race and ethnicity you are dividing up the events into smaller subgroups and for populations with a total number of deaths less than 20, the amount of random error increases making the rate unstable. Although the number of Hispanic births in Mecklenburg County has been increasing by an average of 2 percentage points per year since 1998, the number of Hispanic infant deaths is still less than 20 per year making the infant mortality rate for this population unstable and subject to random error. As a population grows it is normal to expect more deaths within that population over time.

Source: NC DHHS/State Center for Health Statistics

TECHNICAL NOTES: Teen Birth and Pregnancy Rates

PREGNANCIES:

Total Pregnancies represent the sum of all induced abortions, live births, and fetal deaths 20 or more weeks of gestation reported in the state of North Carolina. Not included are spontaneous fetal deaths (still births) occurring less than 20 weeks of gestation that are not reportable to the state.

Teen Pregnancy Rates are calculated per 1,000 females by using the sum of all induced abortions, live births, and fetal deaths divided by the July, 1st mid year population for females a particular age group (i.e. 10-14, 15-17, 18-19, 15-19) published by the NC State Demographer's Office x 1,000.

For example, if the total pregnancy rate for females ages 15-17 is 32.9 that means among girls ages 15-17 years of age in Mecklenburg County there are approximately 32.9 pregnancies for every 1,000 females in this age group.

LIVE BIRTH – the birth of a live born infant.

ABORTION – The premature termination of a pregnancy, resulting in or caused by death of the fetus or embryo. Two types are considered in the context of public health reporting:

1. Induced Abortion: The purposeful interruption of pregnancy with the intention other than to produce a live born infant or to remove a dead fetus and which does not result in a live birth. In 1967, abortion became available on demand in NC with the condition it be performed by a licensed physician in a hospital or licensed abortion clinic.
2. Spontaneous Abortion: An interruption of pregnancy for some reason other than human choice, i.e., a miscarriage or stillbirth. Spontaneous abortions less than 20 weeks gestation are not reportable in NC.

FETAL DEATH – Stillbirths of an infant born 20 or more weeks gestation that is reported to the state.

DATA LIMITATIONS AND CAUTION OF INTERPRETATION OF RATES:

Rates based on less than 20 events (i.e. number of pregnancies) are statistically unstable and should be interpreted with caution.

Given the Race and Ethnicity Considerations listed above, caution should be used in interpreting rates for White vs. Non-White race categories in Mecklenburg County due to Hispanics being included in both. In other words the pregnancy rates for Whites does not just represent pregnancies among White females but also Hispanic females whose race was designated as White.

10-14 year olds – This is the youngest age group for which pregnancy statistics are calculated for. However, because there numbers of pregnancies are small compared to 15-17 and 18-19 their rates must be interpreted with caution. It is more appropriate to compare numbers of pregnancies from year to year for this population due to the small numbers when broken down into the race categories of Whites and Non-Whites.

TECHNICAL NOTES: HIV Disease

HIV DISEASE CASES:

HIV Disease covers the entire spectrum of disease, from initial infection of the virus to the deterioration of the immune system and presentation of opportunistic infections (full-blown AIDS). The time that it takes for each person to go through these stages varies. However, the process of HIV disease is fairly slow and usually takes several years from infection to the development of AIDS. In surveillance and case reporting, the term HIV disease includes:

- persons with a diagnosis of HIV infection (not AIDS),
- persons previously reported with an HIV infection who have progressed to AIDS, or
- persons with a concurrent diagnoses of HIV infection and AIDS.

HIV disease cases are counted by the date on which HIV infection was first diagnosed and reported. In some cases the date of infection is based on the date of report for an AIDS diagnosis because the infected individual was never reported with an HIV infection prior to the AIDS diagnosis.

HIV DISEASE CASE RATES:

Rates are expressed as cases per 100,000 population. Each rate is calculated by dividing the number of cases reported in a geographic area during a specific time period by the area's population during that time period, multiplied by 100,000. Population denominators used to calculate rates for North Carolina and Mecklenburg County were based on county and state population projections calculated by the NC State Demographics Unit.

HIV DISEASE SURVEILLANCE:

Advances in treatment and technology, such as the introduction of highly active antiretroviral therapy (HAART), have increased life expectancy for persons infected with HIV and slowed the progression to acquired immunodeficiency syndrome (AIDS). Consequently, AIDS surveillance no longer provides an accurate picture of current changes in the HIV epidemic. Monitoring trends in the HIV epidemic today requires collecting information on HIV cases that have not progressed to AIDS. Areas with confidential name-based HIV infection reporting requirements use the same uniform system for data collection on HIV cases as for AIDS cases.

United States: While AIDS is a reportable condition in all 50 states, name-based HIV data are not reportable in all states. As of November 2005, a total of 33 states have conducted name-based HIV/AIDS reporting for at least 4 years. A complete listing of these states can be found on the Centers for Disease Control and Prevention (CDC) website (www.cdc.gov).

North Carolina: AIDS case reporting in North Carolina began in 1984 with name-based HIV reporting starting in 1990. By state law, morbidity reports of HIV and AIDS from health providers are submitted to local health departments on confidential case report forms and communicable disease report cards. These reports along with laboratory diagnostics of HIV-positive results are forwarded to the NC HIV/STD Prevention and Care Branch which maintains a database for all NC counties.

HIV DISEASE RISK CATEGORY (EXPOSURE MODE):

HIV disease risk category refers to an individual's most likely method of becoming infected with HIV. Although an HIV-infected person may report a number of behaviors that place them at risk for the disease, the CDC uses a hierarchical model to select the one risk factor most likely to have been responsible for HIV infection. This does not mean that the HIV infection is known to have been caused by the assigned risk category, but rather that the assigned risk category is the most likely mode of transmission.

HIV DISEASE CASES WITH NON-IDENTIFIED RISK (NIR):

HIV disease cases that are classified as non-identified risk include:

- cases that are under current investigation by local health departments,
- cases in persons whose exposure history is missing because they have died, declined to be interviewed, or were lost to follow-up, and
- cases in persons who were interviewed for risks but did not meet any of the CDC-defined risk classifications.

Many of the female NIR cases in North Carolina report heterosexual contact as their only mode of exposure. However, to be included in the CDC-defined criteria for heterosexual contact, a person must know their partners' HIV status or risk for HIV. Without this information, the case is categorized as NIR. The NC HIV/STD Prevention and Care Branch has reevaluated these cases and where appropriate have reassigned some cases into a "presumed heterosexual" risk category. For more information on HIV NIR case reports in North Carolina, read the annual ***HIV Prevention & Community Planning Epidemiologic Profile for North Carolina*** located on NC HIV/STD Prevention and Care Branch's website: www.epi.state.nc.us/epi/hiv/surveillance.html.

TECHNICAL NOTES: Sexually Transmitted Diseases (STDs)

NORTH CAROLINA SURVEILLANCE OF STDs

The North Carolina STD Surveillance data system underwent extensive changes in 2008 as North Carolina implemented NC EDSS (the North Carolina Electronic Disease Surveillance System). NC EDSS is a component of the Centers for Disease Control and Prevention (CDC) initiative to move states to web-based surveillance and reporting systems. Reporting delays and changes in reporting processes for chlamydia and gonorrhea may have substantially affected data.

In 2007 local changes in personnel as well as delayed reporting accounted for a lower than anticipated number of reported Gonorrhea cases. Data for this year should be interpreted with caution as the sharp decline was most likely due to this reporting artifact.

RACIAL AND ETHNIC DISPARITIES IN STD SURVEILLANCE

Research indicates that racial and ethnic minorities are over-represented among persons of lower socioeconomic status in the United States and may utilize public clinics more than whites. Since STI reporting from public clinics may provide more complete reporting than private providers, the difference in rates between whites and racial/ethnic minorities may be overestimated. However, this reporting bias does not fully explain the disparity between racial groups. Limited access to quality health care, poverty and higher disease prevalence also contribute to disparate rates for racial/ethnic minorities.

GONORRHEA SCREENING AND TESTING

It is important to note that the number of gonorrhea cases reported each year is influenced by multiple factors in addition to the occurrence of the infection within the population. For example changes in screening practices, use of diagnostic tests with differing test performance, and/or changes in reporting practices may mask true increases or decreases in disease reporting. Therefore caution should be exercised in interpreting short-term trends in gonorrhea case reporting.

CHLAMYDIA SCREENING AND TESTING

Chlamydia case reports are influenced by multiple factors in addition to the occurrence of the infection within the population. For example changes in screening practices, use of diagnostic tests with differing test performance, and/or changes in reporting practices may mask true increases or decreases in disease reporting. Therefore caution should be exercised in interpreting short-term trends in chlamydia case reporting.

Women, especially young women, are hit hardest by chlamydia. Studies have found that chlamydia is more common among adolescent females than adolescent males, and the long-term consequences of untreated disease are much more severe for females. Up to 40 percent of females with untreated chlamydia infections develop PID, and 20 percent of those may become infertile. The Centers for Disease Control and Prevention (CDC) recommends annual chlamydia screening for all sexually active women under age 26, as well as older women with risk factors such as new or multiple sex partners.

The recent advent of highly sensitive nucleic acid amplification tests that can be performed on urine will most likely lead to better diagnosis and increased case reporting for men. Nationally, chlamydia case reporting for men has increased by 36.4% between 2002 and 2006 in comparison to a 16% increase for women during the same time period.

CHLAMYDIA AND GONORRHEA ANNUAL CASE RATES

Crude incidence rates (new cases/population) were calculated on an annual basis per 100,000 population. Rates were calculated by dividing the number of cases reported from each year by the estimated county-specific population (the most current detailed population file available at time of publication).
