



Community Health Assessment

Wayne County

Calendar Year 2008

Wayne County Health Department

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Health Director

Acknowledgments

Many thanks go out to all the individuals who shared data or assisted with the compiling of data for this years' Community Health Assessment.

Community Health Assessment Community Members:

Wayne County Health Department

Wayne County Public Schools

Wayne County Partnership for Children

Wayne Initiative for School Health (WISH)

Wayne Action Teams for Community Health (WATCH)

Wayne Action Group for Economic Solvency (WAGES)

NC Oral Health Section

Communities in Schools

North Carolina Cooperative Extension

Wayne County Department of Social Services

Wayne Memorial Hospital

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Introduction

Introduction

A Community Health Assessment is a process involving many agencies to determine where public health needs exist. The assessment determines the health status of the community, identifies resources needed to address health and social problems, and provides a plan to improve the health status of the community. The Community Health Assessment examines data from many sources and involves stakeholders in the community to identify and offer solutions concerning issues that affect health. Community Health Assessments are mandated by the state, and is a joint project supported by the State Center for Health Statistics and the Office of the Healthy Carolinians. Most of the information in this report is provided through the State Center for Health Statistics, and can be accessed at the following website: <http://www.schs.state.nc.us/SCHS>. Other data sources that were used in this report can be found in the Reference Section, located towards the end of the document.

2008 Community Assessment Key Features

1. The Community Health Assessment (CHA) is available to anyone with Internet access at: <http://www.waynegov.com>. Click on Departments to access the Wayne County Health Department.
2. Internet access saves the county money in printing costs.
3. This document can be used by anyone wishing to understand key trends affecting the health of Wayne County residents.
4. Comparisons are made in most cases to state-wide and national averages.
5. The CHA has active links that allows the reader to go directly to our data sources. This is convenient for people doing research and writing grants. Please note that these links will direct the user to the website where the data can be found. We do not use links to the data web page because these links change frequently.
6. The CHA tracks changes in health status over long periods of time. This allows a more accurate picture of how our community's health is changing.
7. The CHA does not just focus on mortality and morbidity data but also on factors that affect health such as demographics, socioeconomic status, social indicators of well being, health insurance statistics both public and private and the Wayne County health care environment.

A Note on Portraying Health Data by Race

Throughout the Community Assessment, Minorities are compared to Whites on a variety of health measures. For most measures, Minorities have lower health status than Whites, on average. This statistical pattern will, of course, not be true for many individual persons. The advantages of showing the data by race are obvious for targeting resources and interventions toward populations most in need; but hazards exist in interpreting the data. Race in and of itself does not cause poor health status. We do not have a complete understanding of why race is associated with health problems, but it is very likely that factors such as socioeconomic status, stress, and racism are among the underlying causes of the lower health status of minorities (on average) compared to Whites. These differences in health status have been termed "health disparities". One example of a health disparity is: African Americans die from heart disease at a rate 30% higher on average than whites. There is no doubt that health care resources are not allocated equally among individuals in our nation but by ones ability to pay. Addressing the striking differences in health status between whites and minorities must be a priority public health issue. A detailed discussion of this issue can be found at: <http://www.schs.state.nc.us/SCHS/pdf/RaceEthnicRpt.pdf>

Many factors that contribute to a person's health status, such as socio-economic condition and education, are difficult to measure. However, demographic information is readily available. Thus, race (in addition to age and sex) often serves as a surrogate measure for a variety of other related factors.

A Note on Interpreting Data

When interpreting rates of mortality and morbidity, many factors must be taken in to consideration. Rates based on fewer than 10 to 20 events in the numerator, or number of occurrences, may be subject to serious error, and as such, should be interpreted with extreme caution and reservation. A difference in only a few events, especially in a small population, can make a large difference in the rate. This is a problem with measures, such as infant mortality, in which there are usually only a few events per year. A single event, such as a traffic accident, in which two infants are killed could double or triple the infant mortality rate. Thus, caution should be used in interpreting rates based on small numbers of events.

One way to address this problem is to use five-year rates in which all events over the five-year period are used and averaged over the population, or denominator, during that time period. However, even over a period of five years, there may only be a few events and therefore the reported rates may still be unreliable. In this report, where practical, the actual numbers of people affected for mortality and morbidity statistics are given to assist with determining the actual effect of events.

Death rates may be presented as "crude" death rates, which indicate the number of deaths divided by the population at risk or age adjusted death rates. Age adjusted death rates adjust the comparison of populations so that age of a population does not skew the results. This helps when comparing death rates of county "a" that may have a younger population than county "b".

Births and deaths are based on place of residence. College and military personnel are considered residents of the county in which they reside.

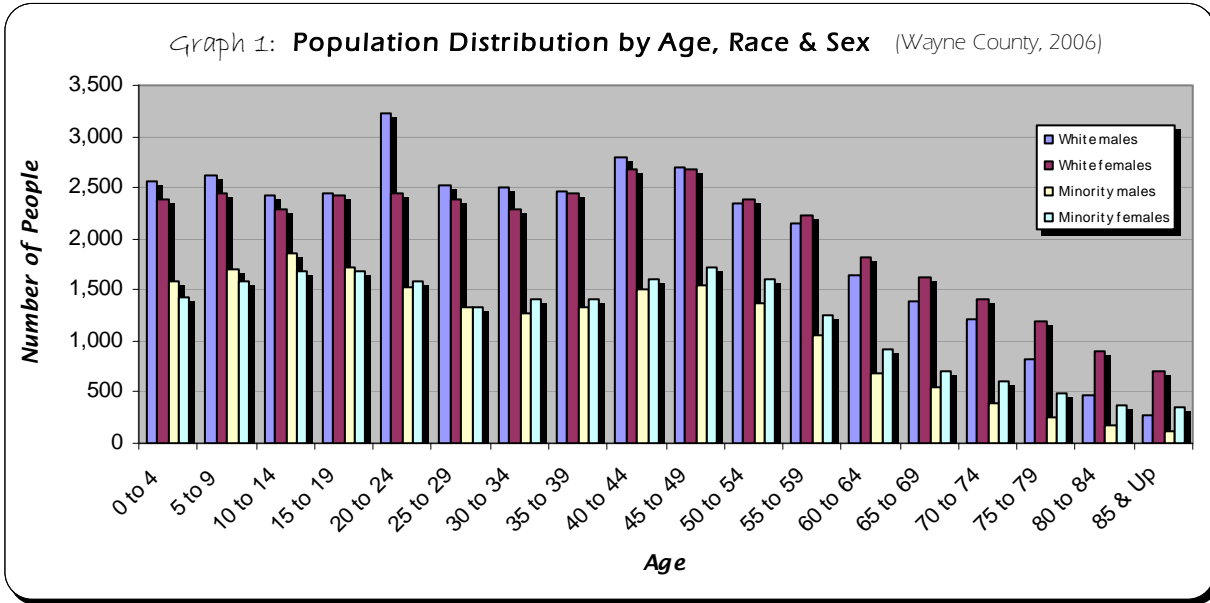
In this report, two broad categories of race are used; white and minority. Minority is predominately African-American. For births and fetal deaths, the child is considered to be the same race as the mother.



Demographics

Wayne County Demographics

The graph and table below represents projected population data for Wayne County as of 2006. This information, in addition to providing a snapshot of the population, can be used to make predictions concerning public demand for services. Examples would be: estimating the number of children that could be expected to enroll in kindergarten, or estimating the number of Medicare recipients ten years from now in the county.



<i>Age</i>	White		Minority		Total
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	
0 to 4	2,568	2,388	1,576	1,420	7,952
5 to 9	2,620	2,441	1,699	1,593	8,353
10 to 14	2,432	2,293	1,849	1,679	8,253
15 to 19	2,449	2,429	1,724	1,689	8,291
20 to 24	3,220	2,437	1,517	1,578	8,752
25 to 29	2,515	2,380	1,328	1,330	7,553
30 to 34	2,496	2,284	1,280	1,403	7,463
35 to 39	2,473	2,446	1,324	1,401	7,644
40 to 44	2,789	2,675	1,510	1,609	8,583
45 to 49	2,703	2,683	1,538	1,720	8,644
50 to 54	2,342	2,378	1,373	1,613	7,706
55 to 59	2,144	2,220	1,061	1,242	6,667
60 to 64	1,641	1,820	694	927	5,082
65 to 69	1,395	1,615	543	697	4,250
70 to 74	1,204	1,409	385	615	3,613
75 to 79	825	1,190	262	485	2,762
80 to 84	478	892	176	167	1,913
85 & up	265	713	119	352	1,449
Total	36,559	36,693	19,958	21,720	114,930

Table 1:
Population (projected)
Distribution by Age, Race
and Sex
(Wayne County 2006)

Observations:

- The 2006 total projected population of Wayne County is 114,930, down from the 115,714 projected population for 2005.
- Of the total population in Wayne County, 64% are White and 36% are minority. Seven point four percent (7.4%) of the total population are of Hispanic ethnicity (around 7, 991 people).
- **Seymour Johnson Air Force Base** is located in Wayne County in the city of Goldsboro. It is home to the 4th Fighter Wing and the 916th Refueling Wing. As of 2007 there are 3,984 active duty military personnel and 5,280 total dependents. There are 956 Reservists/National Guard with Seymour Johnson Air Force Base. Seymour Johnson Air Force Base has been a positive force in Wayne County for more than 65 years and presently has an economic impact of \$468,000,000.
- School age (ages 5-19) population for Wayne County is approximately 24,897 (for pop year 2006). Although the total population has decreased, this population has increased by 100 since 2005.
- White males, in the age range 20-24, outnumber white females, most likely due to the location of the Air Force base in Wayne County.
- In the age range 0-19, whites comprise 60% of the population and minorities 40%. At the other end of the age spectrum, ages 55 and up, whites account for approximately 70% of the population and minorities 30%.
- White females over the age of 65 outnumber all other race/gender populations over the age of 65.
- There are 13,987 people age 65 or older.

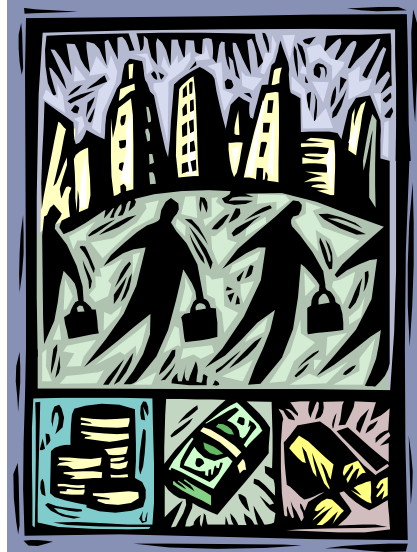
Table 2: Wayne County Births and Deaths 2001-2006

Year	Births			Deaths		
	White	Minority	Total	White	Minority	Total
2001	1,119	619	1,738	651	378	1,029
2002	1,048	612	1,660	641	391	1,032
2003	1,102	605	1,707	724	322	1,046
2004	1,154	606	1,760	721	382	1,103
2005	1,182	633	1,815	668	390	1,058
2006	1,130	642	1,772	687	374	1,061

Source: <http://www.schs.state.nc.us/SCHS/data/pregnancies/2005/>

Observations:

- The number of births has remained relatively consistent over the six-year period, as shown in table 2, with the exception of a decrease of 78 total births between 2001 and 2002 largely due to 71 fewer white births.
- The average number of births over the six-year period has been 1,742 per year, from 2001-2006.
- White births outnumber minority births in the ratio of almost 2:1.
- **Resident deaths have averaged 1,055 per year from 2001-2006.**



Socioeconomic Information

Table 3: Socioeconomic Information for Wayne County: Selected Indicators, Health Insurance and Medicaid

Indicator		2001	2002	2003	2004	2005	2006
Unemployment Rate (%)	Wayne	5.7	6.5	6.3	5.4	5.2	4.8
	NC	5.6	6.7	6.5	5.5	5.2	4.8
Per Capita Income (\$)	Wayne	22,564	23,139	23,584	24,901	26,141	27,417
	NC	27,493	27,640	28,071	29,322	31,041	32,247
Average Annual Wage (\$) (per worker)	Wayne	25,364	25,792	26,312	27,456	28,288	29,276
	NC	32,026	32,708	33,540	34,788	35,932	37,440
Divorce Rate (per 1,000 population)	Wayne	4.7	5.3	4.8	4.7	4.2	No data
	NC	4.6	4.4	4.2	4.2	4.1	No data
Persons Receiving Food Stamps	Wayne	7,960	8,719	9,578	No data	No data	13,275
	NC	483,015	555,591	624,167	No data	No data	842,363
Rate of Substantiated Child Abuse / Neglect (per 1,000 population)	Wayne	18.9	17.2	20.4	19.9	19	*
	NC	16.6	16.1	14.5	11.7	10	*
Violent Crime Rate (per 100,000 population)	Wayne	443.4	460.8	516.5	497.4	457.8	514
	NC	503.8	475.3	454.7	446.9	478.6	476

* See observation notes regarding 2006 child abuse and neglect.

Sources: The Employment Security Commission of NC (Labor Market Information)

North Carolina State Center for Health Statistics

Log Into North Carolina (LINC)

NC SBI Division of Criminal Information (NC Crime Statistics)

CLICKS: Community-Level Information on Kids (The Annie E. Casey Foundation)

<http://linc.state.nc.us/>

<http://www.kidscount.org/cgi-bin/cliks.cgi>

<http://www.ncesc.com/lmi/default.asp?init=true>

<http://www.ncesc.com/lmi/laborStats/laborStatMain.asp>

Table 4: Poverty Rates Wayne County

		1990	2000	2004	2005
Poverty Rate	Wayne	15.20%	13.80%	15.40%	17.30%
	NC	13.00%	12.30%	13.80%	14.90%
Poverty Rate of Children (≤ 18 yrs.)	Wayne	20.40%	18.60%	18.90%	18.90%
	NC	16.90%	15.70%	16.10%	16.10%

<http://linc.state.nc.us/>

Observations:

- During the years 2002 through 2006, the average annual wage in NC and in Wayne County has grown by 12%. The average annual wage in Wayne County is 15% lower than the state average.
- The number of people receiving food stamps in Wayne County increased by 52% from 2002 to 2006. The number of people receiving food stamps in N.C. increased by 52% from 2002 to 2006.
- The unemployment rate In Wayne County, over the 2002 – 2006 year period, has remained consistent, and is the same as the state average, in the same time period.
- The unemployment rate for Wayne County as of June 2007 is 5.1% and as of April 2008 is 5.0 as compared to NC at 5.1%.
- The percent of people living at or below the poverty rate in Wayne County has remained relatively stable and is slightly above the state average.
- The number of substantiated abuse and neglect cases in Wayne County has remained about the same between 2001 and 2005. For 2005 Wayne County's rate is 47% higher than the state average. In 2005 Wayne County ranked 16th in the state for child abuse and neglect. This might be explained by the fact that local DSS authorities in Wayne County prefer to err in favor of the child and therefore any potential for abuse is documented and thus may cause numbers to be higher as compared to the state.
- *In 2005-06 Wayne County had a child population of 29, 756 children under the age of 18 and 749 were found to be abused or neglected. North Carolina had a child population in 2005-06 of 2,133,982 children under 18 and 35,035 were found to be abused or neglected. Wayne County's rate of substantiated child abuse and neglect is higher than the state rate and continues to be a major concern for Wayne County. Based on a community assessment conducted by the United Way of Wayne County, child abuse & neglect was considered one of the top ten critical issues for Wayne County (ranked 7 out of 10).
- DSS reports (2004) that substance abuse is increasing as a factor for abuse and neglect cases, and approximately 75% of cases involve substance abuse.
- The number of work first recipients in Wayne County has decreased as reflected by the fact that in 1996 there were 5,440 monthly recipients as compared to 3,053 in 1999 and 1,408 in 2003. This data is not shown in chart form but is included here. The state number of work first recipients also decreased for the state with there being 285,524 in 1996 as compared to 152,589 in 1999 and 96,042 in 2003. According to DSS officials work first has impacted people in Wayne County in that you now have more working class poor. Work first recipients still get food stamps, Medicaid, and daycare assistance – they are not self-sufficient due to low paying wages. However, there is less dollars going to these individuals. Socially, DSS officials consider it a concept that is good for their children and may change the future for their children in that children now see Mom and Dad employed versus no job and receiving public assistance. In terms of whether Work First has increased the poverty rate, DSS officials state they do not know that it increased the poverty rate but instead we now have more working poor. DSS officials feel there should be an education component to work first in order to prepare recipients with the skills they need in order to get higher paying jobs.

- The violent crime rate for Wayne County has increased and was listed as the number one concern through a needs assessment conducted by United Way. Gang activity in Wayne County is a concern and is being addressed by local law enforcement officials.

Discussion:

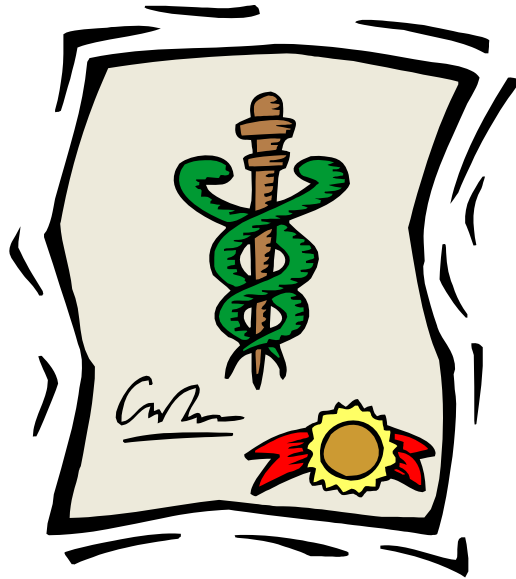
There is a strong association between socioeconomic status and health status. Poverty accounts for many of the health disparities observed in this assessment. Adults living at or below the poverty level most likely will be uninsured and not have access to a regular source of medical care. The threshold for measuring poverty level for a family of four during 2007 is a yearly income of \$20,650. A positive influence on the economy of Wayne County is WAGES (Wayne Action Group for Economic Solvency). This agency assists the community with a variety of programs designed to promote self-sufficiency. WAGES programs span administration of the Head Start program to offering a pharmacy assistance program for senior citizens.

Seymour Johnson Air Force Base has a strong economic impact on Wayne County. Seymour Johnson Air Force Base occupies over 3,300 acres in the southeast section of Goldsboro and for more than 65 years has played host to the world's premiere operational fighter units. Seymour Johnson is a major Air Combat Command base and is the current home of the 4th Fighter Wing. The 4th Fighter Wing has a long and distinguished history supporting numerous aircraft platforms and conflicts and was the first operational F-15E Strike Eagle Wing in the Air Force. The wing consists of four groups and is assigned over 4,900 military members, about 560 civilians and 96 F-15E Strike Eagles. The economic impact of Seymour Johnson Air Force Base in this community is \$468 million annually.

The following comments are from Joanna Thompson, Economic Development Director for Wayne County: "Our efforts at the Development Alliance are very focused on recruiting industries that will pay at or above the average manufacturing wage (about \$12.50/hour). The last several years we have done that. We want to get real living wages...not just jobs. As far as future employment opportunities, the best chances lay with existing industry that will grow and expand...that's where 80% of new jobs come from. So far in 2007, we have had one announced industry expansion that will create 50 new jobs and we anticipate at least one other announced expansion. At this time I am not aware of any potential plant closings for 2007. Wayne County industries produced over 400 new jobs for Wayne County citizens in 2006. Also in 2006, one new industry was announced in Wayne County that will create 140 new jobs. Prospects for 2007 look strong, as well."

Wayne County ranks third in the state in regards to agriculture cash receipts. Agriculture alone has a significant impact on our local economy, totaling over \$373 million annually from direct farm income. When you combine agriculture and agribusiness together they bring in over \$667 million of income into the county which represents 21.8% of the county's income and 20.4 of the county's employment. Wayne County ranks 3rd in the state in turkeys, 4th in swine and 5th in flue-cured tobacco, wheat and corn.

In 2005, *Farm Futures* Magazine indentified Wayne County as the 5th best place in the country to farm. This ranking was based on the Census of Agriculture data from 1987 through 2002 and measured return on assets, net profits per farm, sales growth, asset growth and profit growth.



Health Insurance

Public & Private

Table 5: Number and Percent of Population (ages 0-64) Without Health Insurance
(Wayne County and North Carolina)

YEAR	BELOW AGE 18		AGES 18-64		TOTAL (<65 YRS)		STATE (TOTAL <65 YRS)
	Number	%	Number	%	Number	%	%
1999	3,339	11.8	16,768	22.71	20,107	19.7	17.3
2000	n/a	n/a	n/a	n/a	n/a	n/a	14.6
2001	3,160	10.7	16,183	23.0	19,344	19.4	16.3
2002	4,057	13.1	16,518	24.0	20,575	20.6	19.0
2003	3,519	11.9	16,358	23.7	19,877	20.1	19.4
2004	3,605	12.1	14,922	21.1	18,527	18.4	17.5
2005	3,819	12.8	14,759	20.9	18,578	18.5	17.2

Source: <http://www.shepscenter.unc.edu/publications.html>

Table 5 shows the estimated number and percent of the total of uninsured people in Wayne County for the years 1999-2005. Out of 100 counties in North Carolina, Wayne County currently ranks 47th in the state for percent population without health insurance in the age group 18-64. In looking at our rank statewide for children below age 18 Wayne County ranks 73rd which means that Wayne County is almost in the bottom 25th percentile.

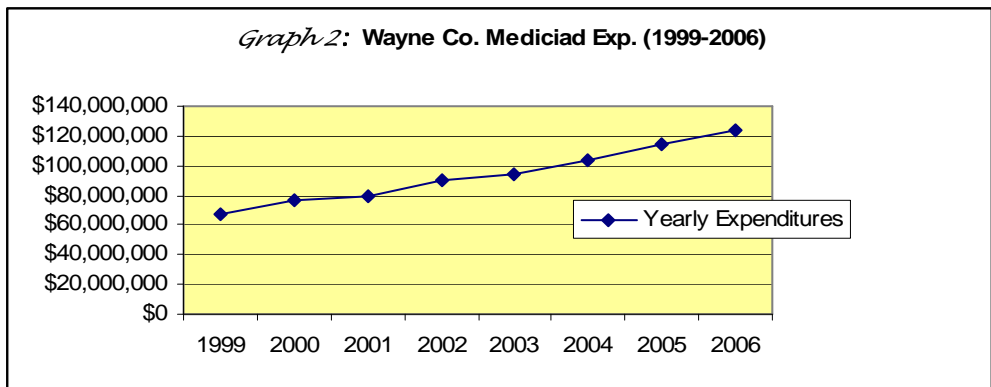
In most cases access to health insurance is either a privilege through employment, or a right as a result of qualifying for public insurance such as Medicaid, Health Choice or Medicare. Unless indigent adults are over age 64, they most likely will not have health insurance. The lack of health insurance further contributes to health disparities, and certainly is a factor in an individual's health.

Table 6: Medicaid Stats for Wayne Co.

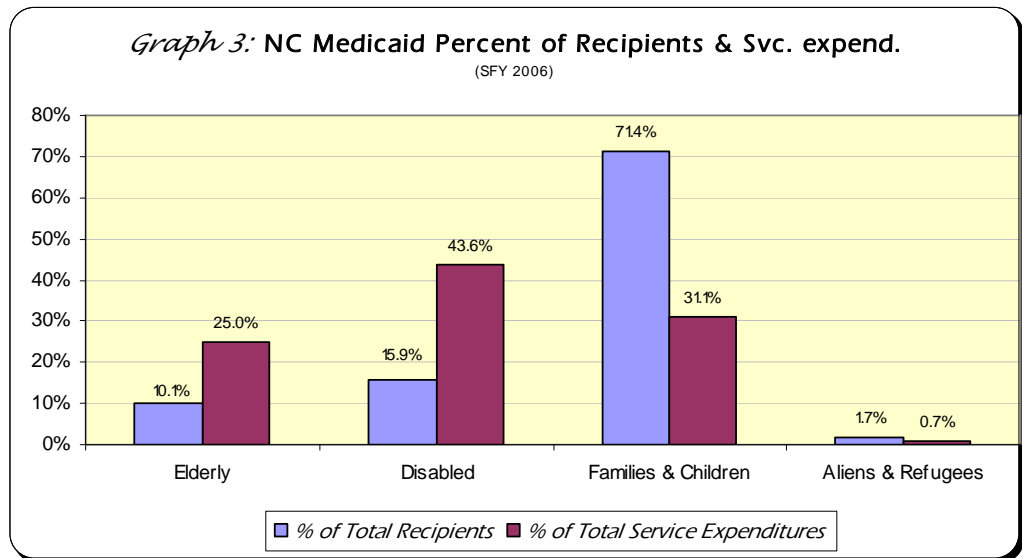
Year	Number of Eligibles	Eligibles 0-19 yrs	Total Expend.	Expend per Eligible	% Mcaid Eligibles	Number of Mcaid Births	Hlth Choice Enrollment
1998	21,561	n/a	\$68,586,223	\$3,181	18.87%	808	62
1999	21,528	n/a	\$67,526,223	\$3,137	19.00%	904	669
2000	22,142	12,649	\$77,046,045	\$3,480	19.60%	1,073	902
2001	23,849	13,285	\$79,995,632	\$3,354	21.04%	1,116	765
2002	23,839	13,399	\$89,885,496	\$3,771	21.06%	1,071	1,067
2003	24,544	13,916	\$94,369,663	\$3,845	21.56%	1,038	1,181
2004	24,986	14,162	\$104,202,946	\$4,170	21.92%	1,126	1,333
2005	25,358	15,583	\$114,468,551	\$4,514	22.03%	993	1,471
2006	26,573	N/A	\$124,387,615	\$4,681	22.96%	N/A	1,211

Source: NC Division of Medical Assistance

Source: <http://www.ncdhhs.gov/dma/publications.htm>



Graph 3: Medicaid Stats for NC



Observations:

- Medicaid spending in Wayne County has increased by 81% over the period 1998-2006 and at the same time the number eligible for Medicaid has increased by 23%.
- The Elderly and Disabled population account for 29% of the Medicaid recipients and 69% of the expenditures. Families and Children make up 69% of the Medicaid population, but only 30% of the expenditures.
- Wayne County Government has \$8.4 million budgeted for Medicaid expenditures for Fiscal Year (FY) 2007-2008.
- Medicaid births account for at least 64% of births during the year 2004.
- Most children enrolled in Health Choice ages 0-5 were transferred to Medicaid, January of 2006.
- Without Medicaid and Health Choice many residents of Wayne County would be uninsured.

Discussion:

Medicaid provides public medical insurance primarily to children, pregnant women, the disabled and the elderly. Medicaid expense is a major financial commitment for counties. Medicaid reform enacted October of 2007 is expected to take most of the financial burden of Medicaid off local government. Reform will be accomplished by the counties in NC relinquishing part of the local sales tax to the state. The sales tax give back to the state will be phased in over a four year period.

Medically, Medicaid is vitally important in reducing infant mortality, reducing out of wedlock births, reducing hospitalizations and ensuring a high standard of health among children. Economically, Medicaid brings in two federal dollars for every state dollar spent. Businesses and individuals who earn Medicaid dollars impact local economies by spending these dollars locally. A pregnant woman, in a family of four, qualifies for Medicaid if the monthly household income is \$2,984 or less.

In North Carolina, elderly and disabled individuals account for 69% of expenditures (fiscal year 2003), with women and children accounting for the remaining expenditures. Stated another way, pregnant women and children comprise two-thirds of recipients, but less than 27% of total costs. Statewide, approximately \$7 billion was spent for more than 1.3 million people.

Medicaid Expenditures

In Table 8, seen below, statewide Medicaid expenditures for each type of service are shown. Inpatient hospitalization and other non-long term services are the biggest Medicaid expenses, but has had small increases in spending for the time period shown. Prescription drug usage is also considered one of the biggest Medicaid expenses, and has had an increase in spending of 22% during the 2004 fiscal year.

Table 8: Comparison of Statewide (North Carolina) Medicaid Expenditures and Category of Expenditures

(State Fiscal Year – 2005 vs. 2006)

Type of service	2005 Expenditures	2006 Expenditures	% Change
<i>Prescription Drugs</i>	\$1,648,039,897.00	\$1,385,039,301.00	-16.00%
<i>Inpatient Hospital</i>	\$961,904,185.00	\$1,024,293,989.00	6.50%
<i>Physician</i>	\$751,474,742.00	\$817,055,723.00	8.70%
<i>Mental Health Clinics</i>	\$502,837,438.00	\$472,785,462.00	-5.80%
<i>Outpatient Hospital – general</i>	\$533,837,438.00	\$599,306,708.00	12.30%
<i>Medicare Part B Premiums</i>	\$219,553,075.00	\$228,234,475.00	4.00%
<i>Dental</i>	\$194,367,043.00	\$217,965,881.00	12.10%

Note: all expenses are not shown

Source: <http://www.ncdhhs.gov/dma/publications.htm>

Observations:

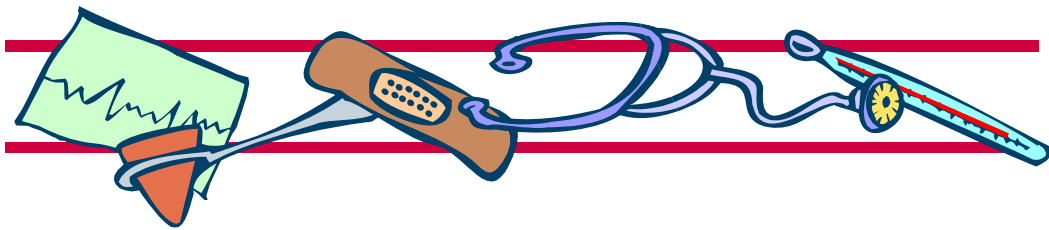
- Prescription drugs represent the largest category of Medicaid costs.
- The total statewide Medicaid expense for 2006 was \$8.583 billion compared to \$8.170 billion for 2005, an increase of 5%.

Table 9: Annual Change in National Health Care Spending, 1995-2006

Year	Increase (%)
1995	2.2
1996	2
1997	3.3
1998	5.3
1999	7.1
2000	7.8
2001	10
2002	9.6
2003	7.4
2004	8.2
2005	7.4
2006	7.4

Health care spending per privately insured American increased 8.2% in 2004; growing nearly four times faster than the overall economy. The rate of growth has slowed slightly from 2001 when spending increased by 10%. Strategies such as higher co-pays and using generic drugs may slow the rate of growth, but Americans demand the best health care and the best technology; both of which drive the price of health care upwards.

Source: <http://www.hschange.org/>



Health Care Environment

Wayne County Health Care Environment

Table 10: Health Professionals in Wayne County, (2006)

Source: UNC Sheps Center, 2008

The table to the right shows the number of persons credentialed in several health professions residing in Wayne County. There are a total of 79 primary care physicians reported in 2006. This is the same as reported in 2005. There are 6.9 primary care physicians per 10,000 population, compared to the state average of 9.0 primary care physicians per 10,000. Wayne County has approximately 3.8 dentists per 10,000 population, compared to the state average of 4.4 dentists per 10,000 population. The Health Department has a dental program targeted at providing care to Medicaid & Health Choice patients and to a limited number of uninsured as a means of meeting dental care needs in Wayne County.

Provider Type	No.
Primary Care MDs	79
FP	27
GP	4
Internal Med	25
OBGYN	8
Pediatrics	15
Other Specialties	101
Dentists	44
Dental Hygienists	84
Registered Nurses	989
Nurse Practitioners	25
Certified Nurse Midwives	0
Licensed Practical Nurses	276
Chiropractors	10
Optometrists	11
Pharmacists	84
Physical Therapists	27
Physician Assistants	29
Podiatrists	2
Practicing Psychologists	14
Respiratory Therapists	37

Wayne Initiative for School Health (WISH) program:

Encounter Description	Number	Encounter Description	Number
Vaccinations	297	Mental Health	977
Audio Screen	218	Spirometry	35
Health Education	821	Vision Screening	449
Visit to RN or FNP	10,121	Diet/Nutrition	670

Table 11: WISH Encounter Information

August 2004 to May 2005

Table 11 shows encounter information for the WISH program. (Information presented in the above table is based on information from the four middle school WISH centers.) WISH is a school based health clinic started in 1997 to address five specific health problems; asthma, mental health, lack of well care/ dental care, teen pregnancy and attention deficit disorders. WISH is beneficial in terms of providing easy access for children to a medical provider. WISH centers are based in four middle schools: Goldsboro Intermediate, Mt. Olive Middle, Brogden Middle, Dillard Middle, and two high schools: Goldsboro High School and Southern Wayne High School. The rate of emergency room visits and the number of school suspensions have declined in the schools housing WISH centers. Each center has a part time mid-level provider (PA or FNP) and a full time RN. The Health Department contributes registered dietitians and health educators. Mental health services are provided in kind by Wellsprings, P.A., and Linda Newsome & Associates. The goal of the WISH Health Centers is to help students succeed in school by promoting healthy lifestyles and providing comprehensive health care services.

Wayne County School Health Program:

Table 12: School Health Program

YEAR	# of WCPS Students w/ Chronic Health Problems	# of WCPS Students Requiring Invasive Procedures at School	# of WCPS Students Requiring Medications at School
2005-2006	4,856 (26%) * NC 15%	254	1,350 (7%) NC (6%)
2006-2007	4,322 (26%) * NC: 17%	378	2047 (11%) NC (2%) Daily Meds
2007-2008	5,575 (29%) NC: 17%	454	2,008 (10%) NC (5%)

Sources: School Health End of Year Report for Wayne County
North Carolina Annual School Health Services Report for Public Schools 2007-2008
NCDHHS Division of Public Health (Women's & Children's Health Section).

Wayne County Public Schools employs school nurses through Wayne Memorial Hospital. There are a total of 17 full time school nurses. One of these school nurses serves Edgewood Developmental School full time. Nine school nurses are funded by the State of North Carolina, three of which are through the School Nurse Funding Initiative. Six are Child and Family Support Team (CFST) Nurses. The CFST Nurses are teamed with Social Workers to identify students at risk of academic failure and out of home placement. Each team serves one school. The remaining schools have a school nurse available to provide services to students up to three days per week. All school nurses must become nationally certified within three years of employment. The school nurses will assess any student for any reason free of charge and without an appointment. The program's main purpose is to ensure that students with health problems are able to attend school, and that staff members are able to safely manage their care. School nurses provide a variety of trainings for employees including medication, blood borne pathogen, CPR/First Aid and diabetes trainings. Asthma is the most frequent health problem of students; however, the number of students with diabetes and other chronic health conditions requiring invasive procedures (ex. EpiPens, tube feedings, catheterizations, injections) increases each school year.

- The percentage of students with chronic health conditions has increased across the state. This was also true during previous years 2003 – 2004 and 2004 – 2005.
- The percentage of students with chronic health conditions is higher in Wayne County in comparison with the state of NC. This was also true for 2003-2004 and 2004-2005.

Wayne Action Teams for Community Health Program:

Table 13: WATCH (*Wayne Action Teams for Community Health*) Mobile Unit Stats:

Yearly Totals	# of sites visited	# hours seeing patients	# volunteer hours	# of new patients	Cumulative registered patients	Patient visits
2000-2001 (Year 1)	183	1,057.50	647.75	1,127	1,127	2,051
2001-2002 (Year 2)	217	1,261	1,239	1,550	2,677	4,788
2002-2003 (Year 3)	241	1,511	1,917.50	1,660	4,337	6,633
2003-2004 (Year 4)	246	1,501	1,791	1,161	5,498	7,026
2004-2005 (Year 5)	254	1,540	1,168	1,070	6,568	7,677
2005-2006 (Year 6)	254	1500	1,458.25	723	7,291	7,529
2006-2007 (Year 7)	235	1,559.50	1,629.25	309	7,600	5,745
2007-2008 (Year 8)	225	1,549.25	1,108.25	495	8,095	5,372
TOTALS	1,855	11,479.25	10,959.00	8,095	8,095	46,821

Table 13 documents services provided by the free Mobile Medical Unit operated by W.A.T.C.H.. The forty-foot mobile medical unit travels the county on a monthly basis to 20 predetermined sites and provides free basic and acute healthcare to the uninsured population of Wayne County. Care is provided for patients who do **not** have Medicaid, Medicare or private insurance coverage.

Free laboratory services are also provided. The WATCH Mobile Unit employs a full-time nurse practitioner and utilizes volunteer physicians from the community. An experienced health educator works with this patient population and affected family members. There are 2 pharmaceutical agents who seek free pharmaceuticals. Over 4.2 million worth of medications have been ordered in the past eight years. Table 13 on the previous page documents the ever increasing need of those who lack health insurance in Wayne County.

W.A.T.C.H. (Wayne Action Teams for Community Health) was organized as the first step in a venture for a healthier Wayne County. WATCH has used the Wayne Memorial Hospital Foundation as it's 501C (3) vehicle (Wayne Health Foundation doing business as WATCH). WATCH also serves as the *Healthy Carolinians Task Force* for Wayne County. Four priorities were established to target the identified priorities as noted through a prior community health survey. Priorities are as follows (1) **Access to Care** (WATCH Mobile Unit) (2) **Teen Pregnancy Prevention**(3) **Substance Abuse** and (4) **Healthy Behaviors**. The Teen Pregnancy Prevention Program began in 2000. One health educator works in a local inner city high school and provides group and one –on –one education to students. According to WATCH data the number of pregnancies at this high school have been reduced by 50% when compared to the initial year's data. The Substance Abuse Take Force published the first ever Substance Abuse Resource Guide on treatment options within a 50-mile radius of Wayne County. The guide is given to lawyers, clergy, physicians, business and industry HR departments, and community leaders. The Healthy Behaviors Task Force is committed to teaching and assisting people to develop healthy behaviors. This group has been instrumental in the expansion of the Meals on Wheels Program, lower fat milk options in Wayne County Public Schools and several members of this task force presently serve on the Stoney Creek Park Alliance. The Stoney Creek Park Alliance is involved in developing a 32 acre park in Goldsboro. The Healthy Behaviors Task Force is also working with the Wayne County Partnership for Children to reduce the incidence of obesity of children in Wayne County.

Corporate Health Nursing Services - Wayne Memorial Hospital

TABLE 14 Corporate Health Nursing Services 2004-2005

<u>TYPE</u>	<u># SERVED</u>
<i>Corporate Clients Served:</i>	164
<i>Employee Contacts:</i>	22,153
<i>Employee Referrals:</i>	588
<i>Bloodborne Pathogens/ First Aid/ CPR Training:</i>	578
<i>OSHA Cases:</i>	117
<i>Worker's Compensation Cases:</i>	191
<i>Benefits/ EAP/ Return to Work:</i>	256

Occupational Health Nurses (OHNs) coordinate and deliver quality occupational health environmental and safety services. OHNs strive to balance the best interests for both the employee and the employer. Serving as the health care manager onsite (*Donna Edmundson, RN, BS*,

COHNSJ, the OHNs role includes case management, wellness programs, and establishing collaborative efforts with community resources.

OHNs work in very diverse settings. For some customers, a medical clinic is present onsite. For others, a conference room is the setting for education, and for screenings only.

Corporate Health services in Wayne County are provided by seven (7) registered nurses employed by Wayne Memorial Hospital. The scope of this outreach is negotiated in a contractual agreement with each individual business/ industry client. Comprehensive services that impact cost savings such as increased productivity, reduced insurance claims, lowered absenteeism, and decreased injuries are primary goals.

The employer's primary asset is its employee population. The onsite nurse strives to maintain a healthier and safer workforce to protect this population. In addition, understanding state and federal regulations, such as OSHA, DOT, and FMLA allows the OHN to play an integral role in the management team. Other areas that involve the nurses are:

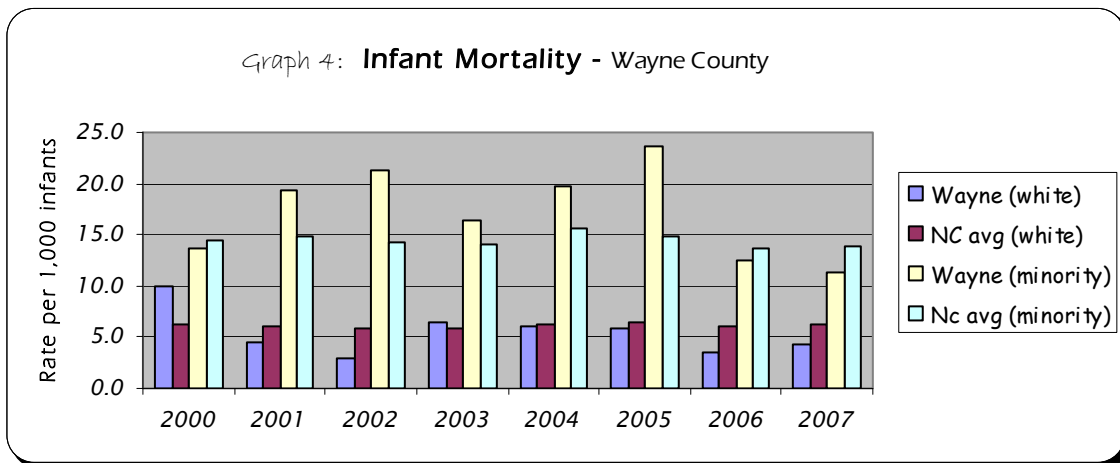
- Ergonomics
- Hazard reduction
- Health promotion
- Injury & illness management
- Health and safety
- Community referrals & follow-up
- Return to work strategies
- Case management
- Disability management
- Medical & health surveillance

In Wayne County, occupational health services have been offered for over 21 years. The Occupational Health Nurses serve in many leadership roles, in business and the community. For the fiscal year October 1, 2004 to September 30, 2005, *Table 14* serves as quick summary of the number of occupational services provided in Wayne County.



Infant Mortality
&
Maternal Health

Infant Mortality and Maternal Health Indicators (Wayne County)



★ **Note:** Infant death is defined as the death of a live-born child less than one year of age.

Table 15: Infant Mortality 2000-2007, Wayne County

YEAR	WHITE			MINORITY			TOTAL # OF DEATHS
	Number	Rate	NC Avg. Rate	Number	Rate	NC Avg. Rate	
2000	11	10.0	6.3	9	13.7	14.4	20
2001	5	4.5	6.1	12	19.4	14.8	17
2002	3	2.9	5.9	13	21.2	14.2	16
2003	7	6.4	5.9	10	16.5	14.0	17
2004	7	6.1	6.2	12	19.8	15.6	19
2005	7	5.9	6.4	15	23.7	14.9	22
2006	4	3.5	6.0	8	12.5	13.6	12
2007	5	4.2	6.3	7	11.4	13.9	12

Note: Rates are per 1,000 births

Source: <http://www.schs.state.nc.us/SCHS/deaths/ims/2005/>

Observations:

- As stated earlier, any results based on less than 10-20 events must be interpreted with caution.
- In reviewing the above data for 2000 to 2007, Wayne County has seen an overall decrease in infant mortality. In 2000 there were 20 deaths as compared to 12 in 2007.
- Since 2000, in Wayne County, 49 white babies died compared to 86 minority babies. It is noted that minorities account for 36% of births, but 64% of infant mortalities. Infant mortality continues to be a major concern for Wayne County. Entrance into early and consistent prenatal care is crucial to the health and well-being of mother and baby.
- Reviewing the causes of death for infants during 2006 shows that the majority died from causes related to premature birth.
- In 2006 & 2007 the infant mortality rate for whites and minorities in Wayne County was lower than the state rate.

Discussion:

Infant death rates are prone to fluctuation because of the small number of events as mentioned earlier. (Rates based on small numbers (fewer than 20 cases) are unstable and should be interpreted

with caution). It appears that minorities are affected by a higher rate of infant mortality than whites; also the number of minority infant deaths has remained relatively the same from 2000 to 2007. Overall infant mortality in Wayne County for 2000 to 2007 has seen a slight decrease.

Table 16: Maternal Health Indicators: Wayne County and State Averages

Indicator	Wayne Co. (Rate)			State (Rate)			Wayne Rate	State Rate
	<i>yr. 2004</i>	<i>yr. 2005</i>	<i>Yr. 2006</i>	<i>yr. 2004</i>	<i>yr. 2005</i>	<i>yr. 2006</i>	<i>2002-2006</i>	<i>2002-2006</i>
Percent of High Parity Births (4 or more) Age of Mother < 30 yrs.	9.6	n/a	n/a	8.3	n/a	n/a	20.7	18.1
Percent of High Parity Births (4 or more) Age of Mother > 30 yrs.	8.5	n/a	n/a	9.3	n/a	n/a	19.5	19.1
Percent Receiving Care - 1 st Trimester (Total)	12.6	68.9	70.3	83.3	82.7	81.9	71.6	83.0
Percent Receiving Care - 1 st Trimester (Minority)	65.2	66.3	63.2	76.8	76.6	76.1	64.5	75.4
Percent Low Birth Weight Births (Total)	7.7	10.0	8.7	7.1	9.2	9.1	9.4	9.1
Percent Low Birth Weight Births (Minority)	10.1	12.9	12.6	10.0	13.7	13.4	13.7	13.5
Percent of Very Low Birth Weight Births (Total)	2.1	1.9	1.9	1.9	1.9	1.8	2.0	1.9
Percent of Very Low Birth Weight Births (Minority)	3.3	3.2	3.6	3.4	3.4	3.1	3.4	3.6
Weight Gain of Mother < 20 lbs. (Total)	20.1	20.1	22.0	17.9	17.5	17.6		
Weight Gain of Mother < 20 lbs. (Minority)	23.6	24.1	27.1	23.0	22.3	22.0		

★ **Note:** The above rates are reported as percentages (%). **Source:** NC State Center for Health Statistics

Observation:

- Women in Wayne County enter into pre-natal care at a later stage than the state average.

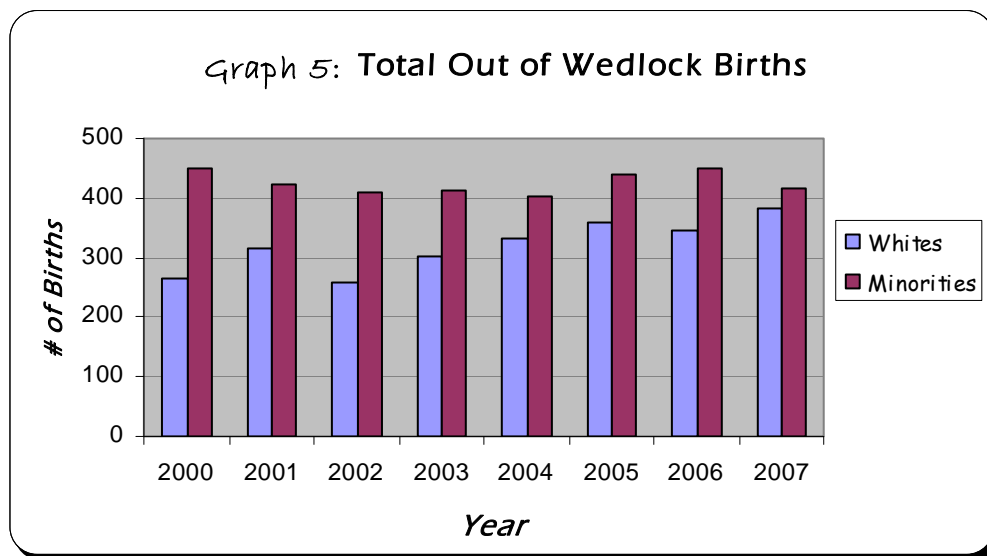
Discussion:

Table 16 compares maternal health indicators for Wayne County with the state average. This data can help identify factors leading to poor birth outcomes. Wayne County appears to have a low percentage of pregnant women receiving adequate prenatal care during the first trimester. Most of

the indicators shown for Wayne County seem to mirror the state average. Overall, the maternal health indicators listed have remained consistent across the time period listed. Outreach efforts to minorities may ensure that women are receiving support services such as Medicaid, prenatal care, and WIC to reduce infant mortality among minorities.

Total Out-of-Wedlock Births: Wayne County

Year	White		Minority	
	Number	Rate	Number	Rate
2000	264	23.9	450	68.3
2001	317	28.3	424	68.5
2002	260	24.8	411	67.2
2003	303	27.5	412	68.1
2004	333	28.9	404	66.7
2005	359	30.4	438	69.2
2006	346	30.6	448	69.8
2007	383	32.0	416	68.0



Observations:

- In 2007 the total number of out of wedlock births in Wayne accounted for 44% of the total births (1,802) as compared to the state average of 41%.
- The number and rate of total white out of wedlock births has increased, while the number of and rate of total minority out-of-wedlock total births have decreased. However the rate for out-of-wedlock births for minorities is twice that of whites.
- The total number of out-of-wedlock births in Wayne County in 2007 was 799. This is an indicator of need for family planning services in Wayne County and easier access to those services (satellite clinics).

Discussion:

The high number of out-of-wedlock births may indicate the need for enhanced marketing and promotion of family planning services to sexually active women. It would be interesting to know the number of out of wedlock births that were the result of an unintended pregnancy.

SELECTED HEALTH INDICATORS:

Table 18: Selected Health Indicators for Women; Whites & Minorities; in North Carolina, (year 2006)

Selected Health Indicators for Women		
	White	Minority
% Low Birth Weight	7.4%	13.4%
% Smoked During Pregnancy	12.0%	10.2%
Prenatal Care Began After 1 st Trimester	23.0%	33.7%
Infant Deaths (per 1,000 births)	6.00	13.60
Number of Live Births	1130	642

Source: NC State Center for Health Statistics
(Vital Statistics, Volume I)

Table 19: 2006 Reported Pregnancies (per 1,000 NC Females)

North Carolina Reported Pregnancies			
AGE	Latina Rate	White Rate	African American Rate
15-17	98.5	22.5	53.1
18-19	300.9	80.3	138.5
20+yrs.	140.4	32.0	47.9

Source: NC State Center for Health Statistics

Observations:

- Table 18 above, breaks down maternal health indicators between whites and minority women.
- The differences in teen pregnancy rates for Hispanic girls are remarkable; four times that of whites and twice that of African American girls.
- Outreach opportunities to the Latina population may improve entry into family planning, especially for teens.

Discussion:

Maternal health indicators show that minority women could benefit from outreach that would encourage early entry into prenatal care and also family planning. Currently, 26% of family patients at the health department are Latina and 43% are African American. Postpartum outreach to these women may assist with reducing the high pregnancy rates. Hispanics account for about 16 % of births in Wayne County, and the number of Hispanics in Wayne County has increased by 313% since 1990.

Over the past decade, the North Carolina Latino population has grown by almost 400% (from the 2000 Census). Latinos are more likely to live in poverty (estimated at 27% in North Carolina, by the US Census) and have difficulty gaining access to health care. It is interesting to note that even though several indicators would predict poor postpartum outcomes, Latinas have the best birth outcomes as a racial group in North Carolina. Approximately 70% of the Hispanics living in North Carolina are from Mexico.



Child and Adolescent Health

Dental:

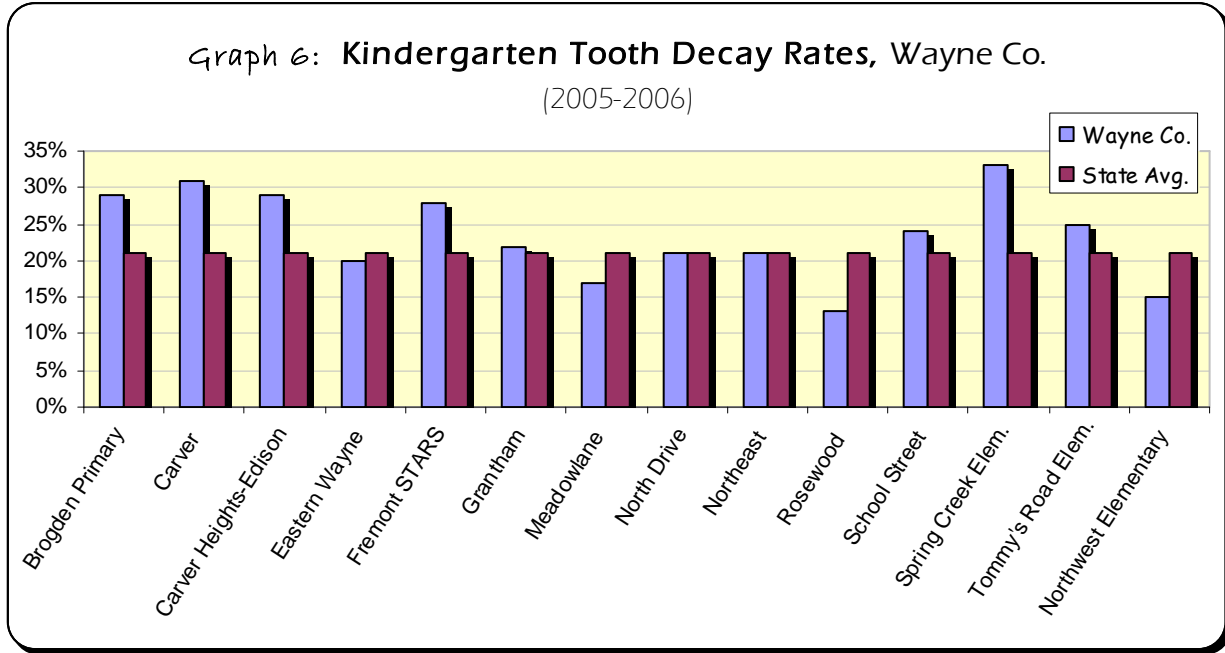


Table 20: Kindergarten/Fifth Grade Tooth Decay Rates, Wayne County

School	Children With Untreated Decay				Fifth Graders with Sealants (%)	State Average
	Kindergarten	State Avg.	Fifth Grade	State Avg.		
<i>Brogden Primary</i>	29%	21%	N/A	5%	N/A	44%
<i>Carver</i>	31%	21%	5%	5%	53%	44%
<i>Carver Heights</i>	29%	21%	9%	5%	40%	44%
<i>Eastern Wayne</i>	20%	21%	2%	5%	41%	44%
<i>Fremont STARS</i>	28%	21%	2%	5%	39%	44%
<i>Grantham</i>	22%	21%	7%	5%	45%	44%
<i>Meadow Lane</i>	17%	21%	N/A	5%	N/A	44%
<i>North Drive</i>	21%	21%	4%	5%	50%	44%
<i>Northeast</i>	21%	21%	1%	5%	57%	44%
<i>Rosewood</i>	13%	21%	3%	5%	55%	44%
<i>School Street</i>	24%	21%	3%	5%	32%	44%
<i>Spring Creek Elem.</i>	33%	21%	6%	5%	46%	44%
<i>Tommy's Road Elem.</i>	25%	21%	1%	5%	60%	44%
<i>Northwest Elementary</i>	15%	21%	4%	5%	60%	44%
<i>Brogden Middle</i>	N/A	21%	3%	5%	45%	44%
<i>Greenwood</i>	N/A	21%	4%	5%	62%	44%

Source: NC Oral Health Section

Observations:

- Brogden Primary, Fremont STARS, Carver Heights, Tommy's Road Elementary, and Spring Creek Elementary appear to be schools with kindergarten populations where pediatric dental education and treatment may be of value.
- The average rate of dental decay among kindergarten children in Wayne County is slightly higher than the state average of 21%.
- Spring Creek has a high rate of decay most likely due to the number of Latino children enrolled in this school.
- Rates of decay for fifth graders are much less because these rates are for permanent teeth only, which mean baby teeth that are decayed, are not counted.
- The number of Wayne County children with sealants in the 5th grade is approximately 51.7%, significantly higher than the state average (44%).

Discussion:

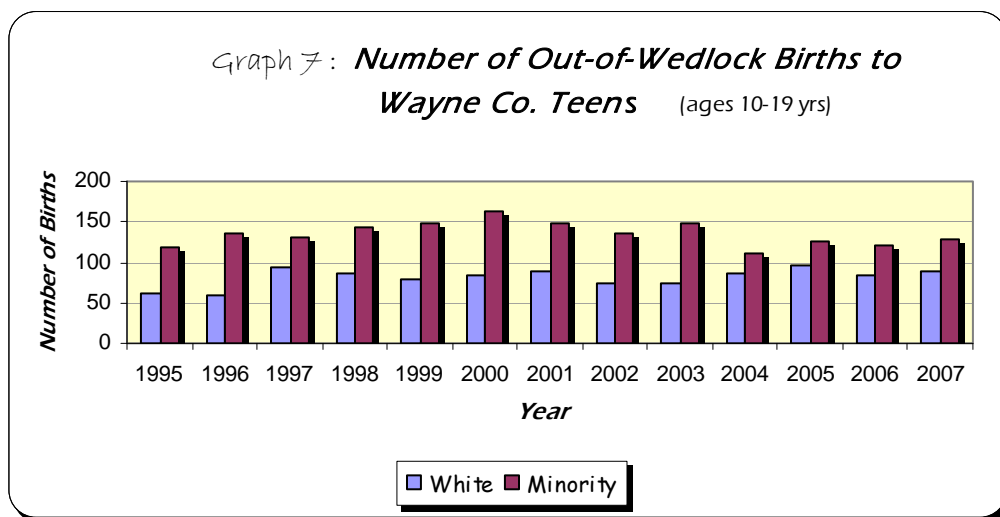
The data for dental assessments is collected every year throughout schools in North Carolina by the state dental hygienists. This data is the result of examining each child in kindergarten and the fifth grade and counting the number of decayed, missing and filled teeth. Decay rates are expected to come down since fluoride varnish is now routinely applied to Medicaid children with erupted teeth up to 36 months of age. Dental sealants prevent decay by forming an impervious surface on teeth resistant to decay. The decision to seal a child's teeth is a financial issue with parents as sealants cost approximately \$35.00 per tooth. The rate of children with sealants may be higher than stated as clear sealants are not readily detected during the assessment.

Follow-up with high risk children and children in high risk schools is done through education, referral and parent contact.

Teen Births and Pregnancies for Wayne Co.

Table 21: Number of Births to Unwed Teenage Mothers (ages 10-19)

Year	White		Minority	
	Number	% Out of Wed	Number	% Out of Wed
1995	61	54%	118	94%
1996	59	47%	135	92%
1997	93	67%	131	96%
1998	87	66%	144	97%
1999	78	64%	148	97%
2000	85	65%	162	95%
2001	90	63%	148	93%
2002	74	73%	135	94%
2003	74	60%	147	94%
2004	87	66%	112	93%
2005	96	74%	125	96%
2006	83	72%	121	96%
2007	90	73%	128	99%



Observations:

- Table 21 on the previous page shows minority teens with a higher number and percentage of out-of-wedlock births as compared to white teens. Graph 7 above also depicts this in the form of a bar graph.
- The percentages of out-of-wedlock births to white teens reflect a gradual increase whereas the percentages of out-of-wedlock births to African American teens have remained the same for most years.
- In reviewing 5 year trend data from 2003-2007 there has been a 14% decrease in the number of out-of-wedlock births to African Americans as compared to an increase of 18% of out-of-wedlock births to white teens for the same 5 year time frame.

Discussion:

Many studies have shown negative social, health and economic consequences to communities as a result of births to teenage women. Teen parents are more likely to drop out of school, thus decreasing their chances of gainful employment as well as earning adequate wages. Many will live

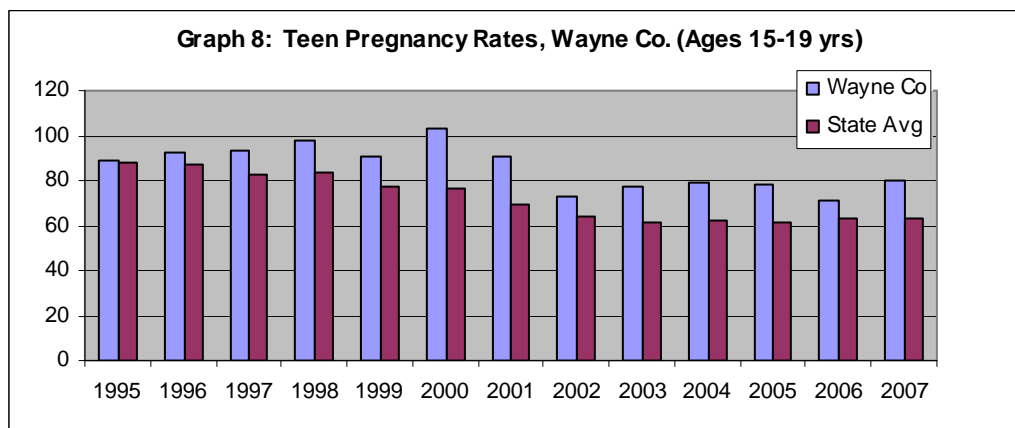
in poverty. Children born to teen parents are more at risk for abuse due to the immaturity of most teens and the lack of adequate parenting skills. Abusive parents often produce children who become abusive parents. Teens and their children are more likely to become dependents of the state welfare system. Unfortunately this cycle seems to continuously repeat itself, as children of teen parents are more at risk for becoming teen parents themselves. Economically, this becomes very expensive for the community and the taxpayer. Single parent teen Moms without adequate support from family members and friends often struggle to meet the needs of their children thus placing their children and themselves in a much more difficult situation.

Table 22: Teen Pregnancy Rates, Wayne County, (Ages 15-19 yrs.)

<u>Year</u>	Rates/1,000 females				NUMBER OF PREGNANCIES		
	<i>Total</i>	<i>White</i>	<i>Non-White</i>	<i>State Rate (Total)</i>	<i>Total</i>	<i>White</i>	<i>Non-White</i>
1995	88.7	74.8	105.2	88.4	319	153	163
1996	92.7	73.8	117.8	87.2	340	156	183
1997	93.7	82	106.1	82.9	346	176	164
1998	97.6	79.3	122.3	83.2	370	175	194
1999	90.8	66.6	123.3	77.4	355	153	199
2000	102.8	75.1	140	76.1	375	158	216
2001	90.5	72.3	114.5	69.3	366	170	194
2002	72.7	52.8	99.3	64.1	295	125	168
2003	77.1	59.9	101.0	61.0	312	143	168
2004	79.1	65.2	92.1	62.4	325	158	155
2005	78.2	58.4	105.1	61.7	326	145	177
2006	71.2	53.1	93.5	63.1	293	129	158
2007	79.9	63.0	110.7	63.0	330	161	169

Note: Rates are per 1,000 females

Source: NC State Center for Health Statistics



Observations:

- Since the year 2000, teen pregnancy rates have fluctuated somewhat but overall a downward trend has been observed. However, from 2006 to 2007 there was an increase in the number of teen pregnancies. In 2007, Wayne County ranked number 21 out of 100

counties for teen pregnancies to teens 15 to 19 years of age (with number 1 representing the highest rate in North Carolina). (Source: Adolescent Pregnancy Prevention Campaign of NC)

- When comparing teen pregnancy rates for the year 2007 for ages 15 – 19 for Wayne County as compared to North Carolina the following data is revealed: Wayne White Teens: 63.0, NC White Teens: 52.3, Wayne African American Teens: 110.7, NC African American Teens: 87.1, Wayne Hispanic Teens: 242.4, NC Hispanic Teens: 167.4 (Source: Adolescent Pregnancy Prevention Campaign of NC)
- In terms of the Hispanic teen population in 2007 Wayne County ranked 4th in the state for pregnancies to Hispanic teens and 11th in the state for teen pregnancies to African Americans. (Source: Adolescent Pregnancy Prevention Campaign of NC)
- As noted from the above data from the Adolescent Pregnancy Prevention Campaign of N.C. Wayne County's teen pregnancy rates continue to be higher as compared to the state.
- **Note:** Teen pregnancy rates for the 10-14 year age range for Wayne County are no longer being calculated by the State Center for Health Statistics, due to the low numbers being reported. This is considered an accomplishment for our county as numbers in years past reflected otherwise.
- Historically, Wayne County has experienced teen pregnancy rates above the state average. Overall, the teen pregnancy rate in Wayne County has decreased by 15% while the State's rate has decreased by 24% based on observation of rates from 1997 to 2007.

Discussion:

In looking at data provided by the Adolescent Pregnancy Prevention Campaign of N.C. the Hispanic teen population presents a challenge due to culture differences in child bearing. The Wayne County Health Department and others working in the field of teenage pregnancy will need to search and prepare for a better way to reach these youth. It will require a community effort to meet this challenge.

Teen Abortions:

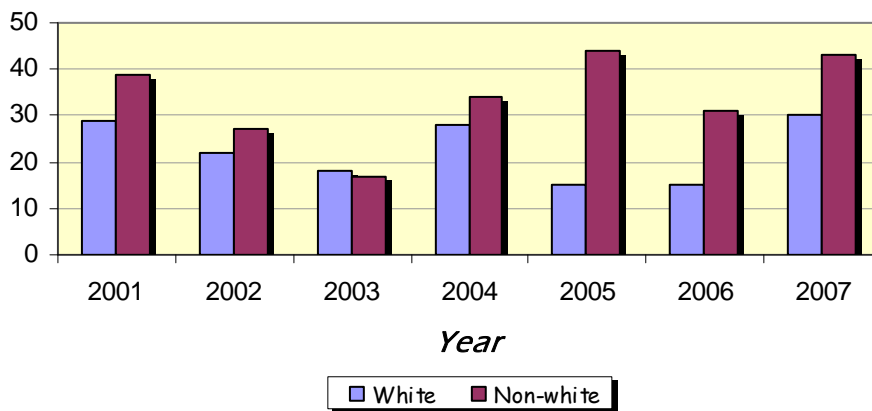
Table 23: Teen Abortion Rates & Numbers, Wayne County, (Ages 15-19 yrs.)

<i>Year</i>	Rates				Number of Abortions		
	<i>Total</i>	<i>White</i>	<i>Non-White</i>	<i>State Rate (Total)</i>	<i>Total</i>	<i>White</i>	<i>Non-White</i>
2000	20.5	12.2	31.3	17.0	85	29	56
2001	17.1	12.3	22.6	16.4	68	29	39
2002	12.6	9.3	16.0	14.6	49	22	27
2003	8.9	7.5	10.2	14.4	36	18	17
2004	18.0	11.6	20.2	15.4	74	28	34
2005	15.1	6	26.1	14.3	63	15	44
2006	12.6	6.2	18.4	14.5	52	15	31
2007	18.6	12.3	25.5	14.3	77	30	43

★ **Note:** Rates are per 1,000 females

Source: NC State Center for Health Statistics

Graph 9: *Number of Abortions to Wayne Co. Teens*
(Ages 15-19 yrs.)



Observations:

- From 2003 to 2007, the number of teens receiving abortions in Wayne County has increased by 47% for ages 15-19 years. This indicates a need for family planning services.
- Historically, Wayne County has experienced higher teen pregnancy rates than the state; therefore the number of pregnant teens receiving abortions in Wayne County also tends to be higher than the state. However, in 2006 the abortion rate for 15-19 yr olds in Wayne County is lower (12.6) as compared to the state abortion rate (14.5).
- For the year 2007, there were 154 pregnancies to white teens 15 -19 yrs. of age with 30 (19.1%) of those ending in abortion and 172 pregnancies to non-white teens 15 – 19 yrs. of age with 43 (25.1%) of those ending in abortion. In 2007 the abortion rate for Wayne County was higher as compared to the state rate.

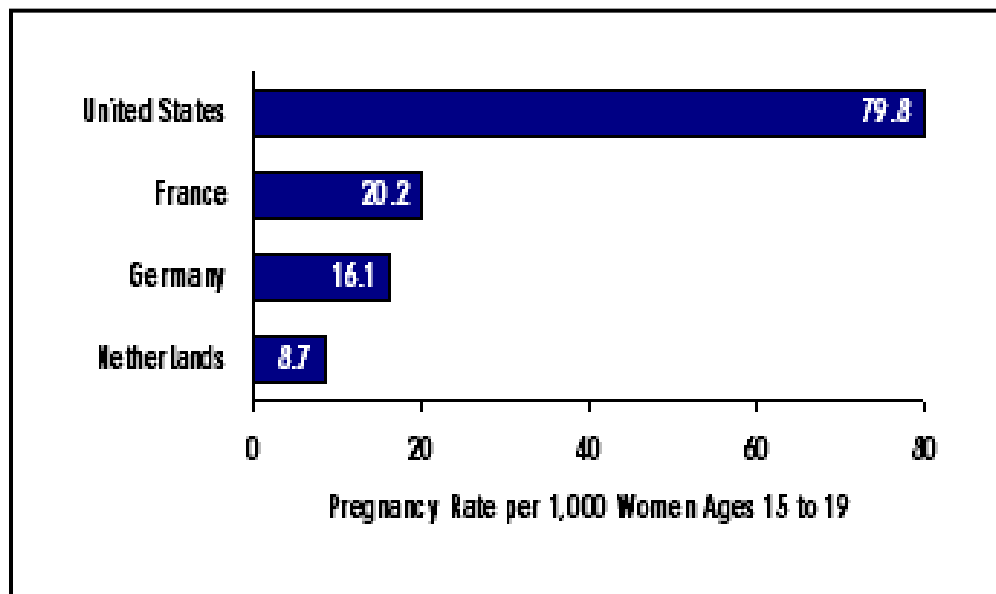
Discussion:

Pregnancy rates for 10-14 yr. olds (not shown) in Wayne County have decreased 80% between 1990 and 2006. In 1990, 20 teen girls ages 10-14 became pregnant, compared to four in 2006. Teen pregnancy prevention in most areas of the United States is a vexing and politically charged issue. It is interesting to note that in 1972 the nationwide rate was 9.5 pregnancies per 100 teens, which increased to a high of 11.7 per 100 teens in 1990 and in 2000 decreased to 8.4 pregnancies per 100 teens. Obviously the problem is being addressed with positive results.

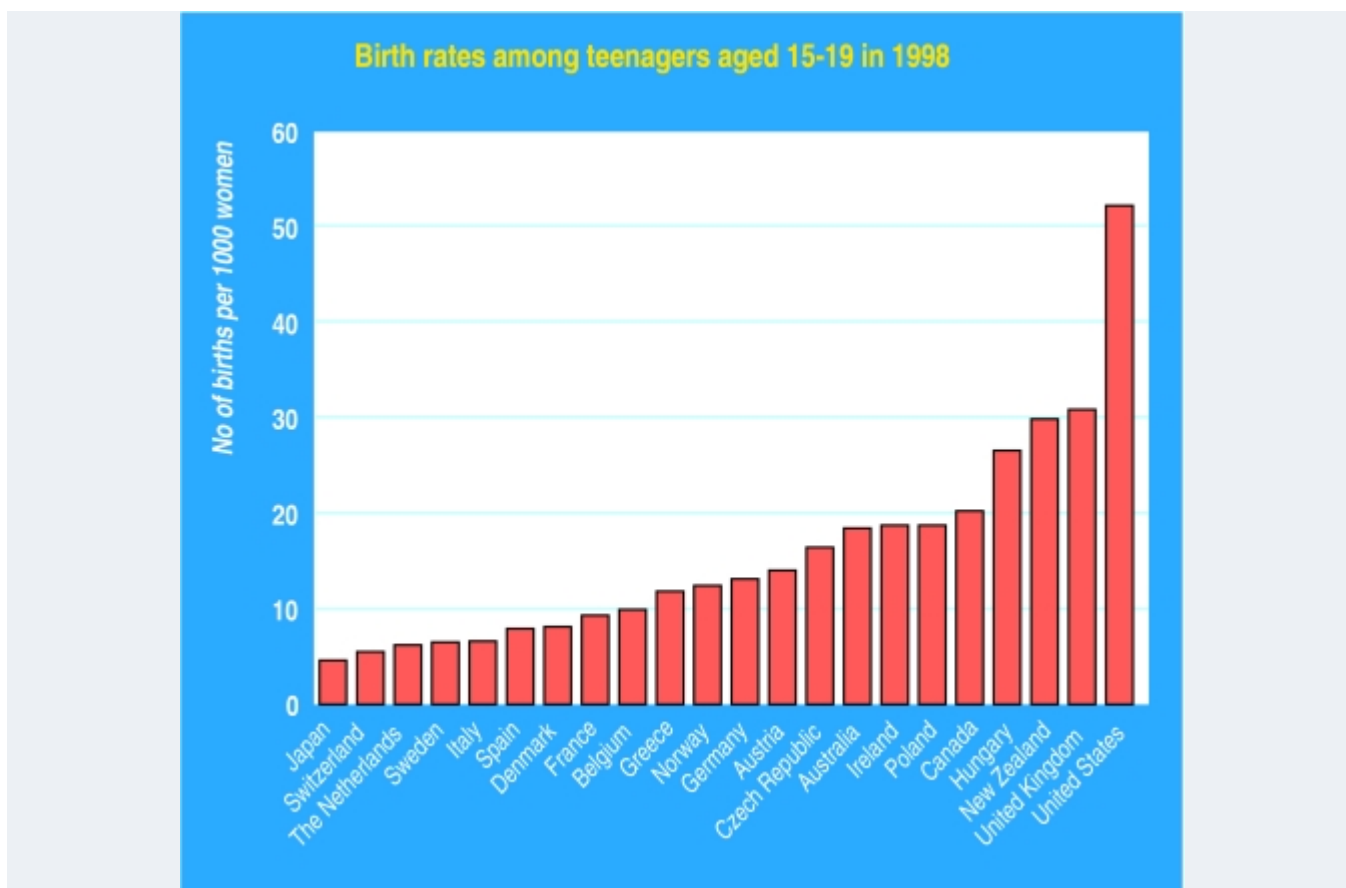
(Source: <http://www.teenpregnancy.org/resources/data/prates.asp>)

Several initiatives have been developed in Wayne County to prevent teen pregnancy. The Wayne County Health Department and WATCH each contribute health educators who provide outreach in the schools for pregnancy prevention based on abstinence and access to health care. The Wayne Initiative for School Health (WISH) Program operates six school based health centers that provide education and clinical services for teens in four Middle Schools and two High Schools. None of the school based health centers provide family planning services. Communities in Schools, an initiative started in 1994, receives funding from the United Way and the Juvenile Crime Prevention Council for teen pregnancy prevention and to keep kids in school. Smart Choices for Youth, and the ADLA, Inc program provide programs focused on at-risk youth in an effort to encourage positive decision making skills along with positive role modeling.

Table 24 Teen Pregnancy Rates Worldwide, 1997 and 1998



★ **Note:** Country rates are per 1,000 females
 Source: http://www.guttmacher.org/pubs/fb_teens.html



Source: www.unicef-icdc.org

Pregnancy

In the United States, the **teen pregnancy rate** is more than nine times higher than that in the Netherlands, nearly four times higher than the rate in France, and nearly five times higher than that in Germany.

<http://www.advocatesforyouth.org/european.htm> discusses policies that have helped address the issue of adolescent health in Europe.

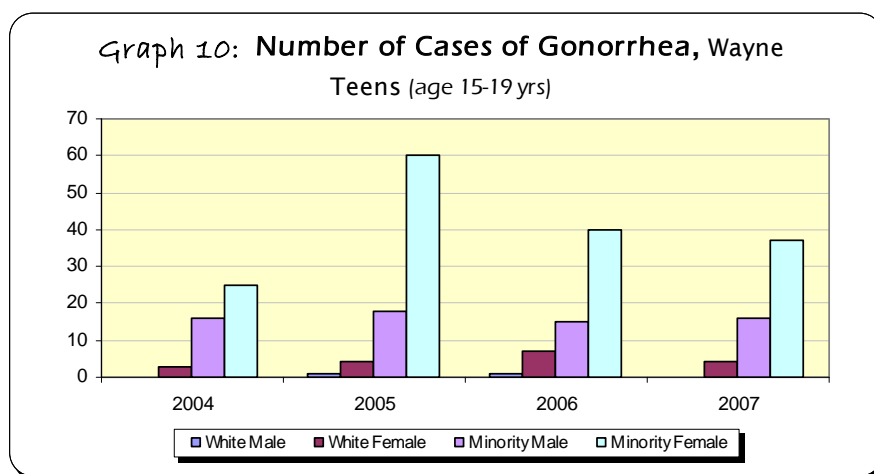
Sexually Transmitted Diseases in Teens:

Gonorrhea Cases and Rates, Wayne County Teens

Table 25 No. & Rates
of Gonorrhea Infection, Wayne Co.

Year	Age	White				Minority			
		Male		Female		Male		Female	
		# Cases	Rate	# Cases	Rate	# Cases	Rate	# Cases	Rate
2004	<14yrs	0	0.0	1	14.2	0	0.0	9	190.6
	15-19yrs	0	0.0	3	123.8	16	949.6	25	1485.4
2005	<14yrs	0	0.0	0	0.0	1	19.6	2	42.7
	15-19yrs	1	39.9	4	161.0	18	1096.2	60	3562.9
2006	<14yrs	0	0.0	0	0.0	0	0.0	0	0.0
	15-19yrs	1	40.8	7	288.2	15	870.1	40	2368.3
2007	<14yrs	0	0.0	0	0.0	1	19.6	1	21.4
	15-19yrs	0	0.0	4	163.5	16	902.9	37	2197.1

Source: Provided by State Center for Health Statistics



Observations:

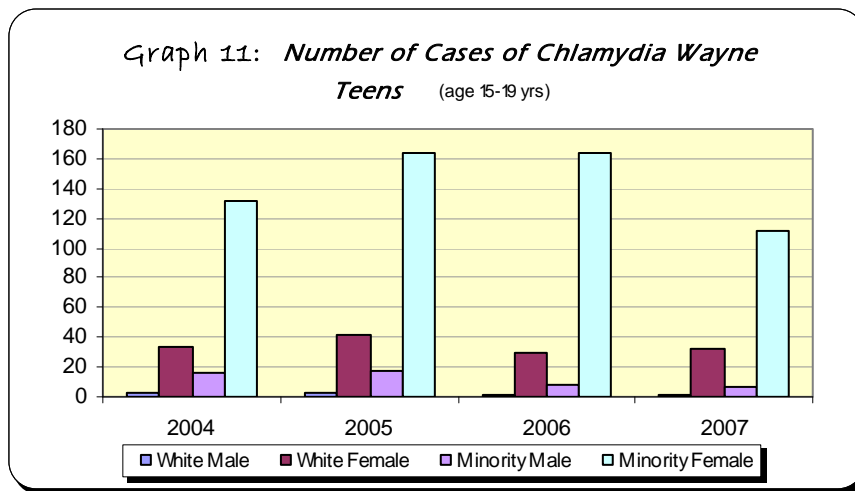
- Minority teen females and minority teen males are affected disproportionately by Gonorrhea infection, when compared to white teens.
- Minority teens accounted for 92% of the total Gonorrheal infections among teens, for the years shown (2004-2007).

- Minority teen females account for 73% of all Gonorrhea infections, for the 4-year trend shown.
- White teens (male and female) account for 12% of the total Gonorrheal infections, during the years 2004 – 2007.

Table 26 Number & Rates of Chlamydia Infection in Wayne County Teens

Table 26
No. & Rates
of
Chlamydia
Infection,
Wayne Co.
(ages 15-19
yrs.)

Year	Age	White				Minority			
		Male		Female		Male		Female	
		# Cases	Rate	# Cases	Rate	# Cases	Rate	# Cases	Rate
2004	<14yrs	1	0.00	1	14.20	0	0.0	9	191.00
	15-19yrs	3	120.00	33	1361.00	16	950.0	132	7843.00
2005	<14yrs	0	0.00	0	0.00	1	19.6	8	170.60
	15-19yrs	3	119.70	41	1650.60	17	1035.3	164	9738.7
2006	<14yrs	0	0.00	0	0.00	1	19.5	6	127.90
	15-19yrs	2	81.70	30	1235.10	8	464.0	164	9709.90
2007	<14yrs	0	0.00	0	0.00	2	39.2	4	85.60
	15-19yrs	2	81.20	32	1308.30	7	395.0	112	6650.80



Observations:

- The data presented here shows that minority teen females are affected disproportionately by Chlamydia infection, when compared to white teen females.
- Overall, females tend to account for the majority of the Chlamydia infections, when compared to teen male Chlamydia infections.
- Minority females account for 75% of all Chlamydia infections.

Discussion:

It may be that Sexually Transmitted Diseases (STDs) go un-reported if seen by private physicians. Many STDs are disproportionately represented among African Americans, American Indians, Hispanics and Women. One reason for this disparity is the fact that minorities are more likely to seek care in public clinics that report STDs more completely than private physicians. In addition, women are tested for STDs much more frequently because of Family Planning services, prenatal care, and regular OB-GYN visits.

Current research literature states minority male and females tend to have an increased risk for early sexual involvement; based on this information, teens who engage in early sexual relationships, have an increased risk to have an overall higher number of sexual partners. This in turn, increases their risk of contracting sexually transmitted diseases. (Source: *National Youth Risk Behavior Surveillance Survey (YRBSS)*).

Due to the trend of youth engaging in early sexual involvement, there is a pressing need to understand and explore the protective and risk factors leading to early and risky sexual behavior and contraceptive use among youth (not only in Wayne County, or North Carolina, but nationwide).

Selected Child Health Indicators:

Table 27: Child Fatalities, Wayne County

Cause	1995-1999	2001-2005	2002-2006	2006
<i>Birth Defects</i>	29	16	15	2
<i>Perinatal Cond.</i>	37	53	49	7
<i>SIDS</i>	9	8	7	1
<i>Illnesses</i>	30	25	29	6
<i>Motor vehicle</i>	16	15	15	2
<i>Bicycle</i>	2	0	0	0
<i>Fire</i>	3	2	2	0
<i>Drowning</i>	4	2	2	0
<i>Other Injuries</i>	4	2	2	0
<i>Homicide</i>	10	7	8	1
<i>Suicide</i>	1	1	0	0
<i>All Other</i>	3	5	4	0
Total	148	136	133	19
Age Group Breakdown				
<i>Under 1</i>	79	91	86	12
<i>Ages 1-4</i>	20	9	9	1
<i>Ages 5-9</i>	13	7	9	2
<i>Ages 10-14</i>	15	11	11	1
<i>Ages 15-17</i>	21	18	18	3

Table 27 shows the number of deaths and causes of death among children in Wayne County, comparing three five-year periods. Table 27 also includes a breakdown of the number of deaths in children in certain age groups. Children are defined as between 0-17 years,

Observations:

- Death from perinatal conditions has increased by 12 deaths or 25% based on trend data from 1995-1999 as compared to 2002-2006.
- Total number of deaths has decreased by 15 or about 10%.
- Deaths from motor vehicle accidents, fire, drowning and homicide have decreased by a total of 10 over the periods shown.
- 8% less children under 1 year of age died during 2002 – 2006 as compared to 2001-2005
- For 2002-2006, 133 children died in Wayne County

Source: <http://www.schs.state.nc.us/SCHS/data/county.cfm>

- Deaths in the 15-17 age group remained the same for 2002-06 as compared to 2001-05.
- The 8% decrease in the number of deaths among children under age 1, positively affects infant mortality rates.

Trends in Child Well Being:

Table 28: Selected Trends in Child Well-Being, Wayne County

Trend	Wayne County	State Average	Year
Economic			
TANF Children	695	42120	2007
Children on Food Stamps	23.10%	19.50%	2006
Children in Subsidized Child Care	35%	36%	2005
Education			
Children in Regulated Child Care	22.00%	17.00%	2005
EOG 3rd Grade Proficiency	75.30%	n/a	2006-2007
EOG 8 th Grade Proficiency	74.90%	n/a	2006-2007
Four Year High School Completion Rate	61.50%	68.10%	2006
Social			
Abuse/Neglect reports Substantiated	29%	22%	2005-2006
Children in Foster Care	4.00%	4.7%	2005
Youth (10-17 yrs) in Juvenile Justice	14	473	2004
Children in Single Parent Households	40.30%	35.50%	2000

★ **Note:** Rates are per 1,000 children, unless followed by a % sign.

Source: <http://www.ncchild.org/data.htm#1>

Observations:

- The percentage of children in Wayne County on food stamps (23.1%) in 2006 is slightly higher than the state percentage of children on food stamps (19.5%).
- The percentage of children in subsidized child care in Wayne County (35%) is just below the state percentage of 36%. (2005).
- The four-year high school completion rate has been on the decline. The four year high school completion rate for Wayne (61.5%) for 2006 is lower than the state rate. (68.1%). These numbers are of great concern when compared to the late 1980's with a completion rate of around 72%. This negatively impacts the future of these students as well as providing a prepared work force for business and industry in Wayne County.
- The percentage of substantiated abuse and neglect reports for Wayne (29%) are higher as compared to the substantiated state percentage of 22%.
- The percentage of children living in single parent households is higher (40.3%) than the state average.

INDICATOR	WAYNE	STATE	YEAR
Medicaid Participation Ratio (Health Check)	87.4%	75.8	2007
% Children Ages 1-2 yrs. Screened For Lead	77.0%	44.9%	2007
% Children With Elevated Blood Lead	0.5%	0.6%	2007
Diagnosed Asthma ~ ages 0-14 yrs (per 100,000 population)	183.7	180.2	2004
Children Ages 0-17 Fatality Rate (per 100,000 population)	63.3	73.9	2006
Total Infant Mortality Rate (per 1,000 births)	6.7	8.5	2007

Sources: NC State Center for Health Statistics,
NC Child Fatality Task Force

Table 29:

Health Indicators for Children, Wayne Co.

Observations:

Medicaid participation ratios (Health Check utilization) measure the rate of age appropriate health screenings that Medicaid children receive during the year. Wayne County is doing well in that almost 90% of Medicaid children received an age appropriate screening for the year and 74.2% of children were screened for lead. Elevated blood lead can impair the mental development of children.

The child fatality rate in Wayne County decreased from 97.9 in 2005 to 63.3 in 2006 putting Wayne lower than the state rate of 73.9 (2006). The total infant mortality rate in 2006 for Wayne (6.7) was lower than the state rate (8.5).

Table 30:

SAT Scores for
Wayne County and
State

Year	% of students who took SAT		Math SAT score		Verbal SAT score		Total SAT score	
	<i>Wayne</i>	<i>N.C.</i>	<i>Wayne</i>	<i>N.C.</i>	<i>Wayne</i>	<i>N.C.</i>	<i>Wayne</i>	<i>N.C.</i>
2001	49.4	65	477	499	473	493	950	992
2002	52.6	67	480	505	471	493	951	998
2003	49.9	68	479	506	472	495	951	1001
2004	49.4	70	494	507	477	499	971	1006
2005	50.5	74	494	511	474	499	968	1010
2006	47.6	71	489	513	472	495	961	1008
2007	52.7	71	489	509	472	495	961	1004

Source: Public Schools of North Carolina

Observations:

- Average SAT scores for the State and for Wayne County have remained relatively constant through the years of 2001-2007.
- The Wayne County average for SAT scores is slightly below the average for the state.
- In 2006, a writing component was added to the SAT. Scores for Wayne were as follows: Math score 489, Verbal 472, and Writing 459 as compared to the State scores of Math: 513, Verbal 495, and Writing 485. Including the Writing score, the total score for 2006 for Wayne was 1420 as compared to the state score of 1493. (The writing score data was omitted in the above chart as it is a newly added component to the SAT.) (www.dpi.state.nc.us)



Mortality & Other Health Indicators

Mortality Worldwide Compared to USA:

Table 31: Life Expectancies around the World (yrs. 1999 & 2008)

Country	Life Expectancy Rank		Life Expectancy		Infant Mortality Rate		GDP/ Capita	
	-1999	-2008	-1999	-2008	-1999	-2008	-1999	-2008
Andorra	1	1	83.55	83.52	4.1	4.03	\$18,000	\$38,800
Macau	2	2	81.96	82.27	4.2	4.33	\$16,000	\$24,300
Singapore	13	4	78.97	81.8	3.8	2.3	\$26,300	\$48,900
San Marino	3	4	81.47	81.8	5.4	5.53	\$20,000	\$34,100
Hong Kong	11	5	79	81.68	5.2	2.94	\$25,100	\$42,000
Japan	5	3	80.19	82.02	4.1	2.8	\$23,100	\$33,800
Sweden	7	6	79.36	80.63	3.9	2.76	\$19,700	\$36,900
Australia	4	7	80.23	80.62	5.1	4.57	\$21,200	\$37,500
Switzerland	9	7	79.08	80.62	4.9	4.28	\$26,400	\$39,800
Guernsey	14	9	78.78	80.53	8.4	4.59	N/A	\$44,600
Iceland	10	10	79.02	80.43	5.2	3.27	\$22,400	\$39,400
Canada	6	11	79.46	80.34	5.5	4.63	\$22,400	\$38,200
France	15	8	78.74	80.59	5.6	3.41	\$22,600	\$33,800
Spain	31	17	77.84	79.78	6.4	4.31	\$16,500	\$33,700
Germany	41	30	77.26	78.95	5.1	4.08	\$22,100	\$34,400
United Kingdom	38	33	77.44	78.7	5.8	5.01	\$21,200	\$35,300
USA	52	41	76.31	78	6.3	6.37	\$31,500	\$46,000
Mexico	98	68	72.08	75.63	24.6	19.63	\$8,300	\$12,500
China	105	96	70.03	72.88	43.3	22.12	\$3,600	\$5,300

Note: Infant Mortality rates are per 1,000 population

★ Source: www.geographic.org

Life Expectancy rates are calculated ages from birth.

Observations:

- The United States continues to rank first in Gross Domestic Product per capita, but has a lower ranking for life expectancy than forty-one other countries.
- The majority of the countries in Table 31 have had decreases in 2005 infant mortality rates. Mexico and China have extremely high infant mortality rates (approximately 3½ times higher than infant mortality rates in the United States).
- For the year 2005, infant mortality in the United States is twice that of Japan. Sweden has the lowest reported infant mortality rates (based on table 31 above).

- All the countries shown above had increases in life expectancy years, from previous year shown.
- The difference between the country with the highest life expectancy in 2005 (Andorra) and the lowest (China) is a little over 11 years.

Discussion:

Life expectancies vary around the world according to socioeconomic conditions, absence or presence of war, absence or presence of communicable diseases, and the availability of food. Life expectancy in the United States at the turn of the century was around 46 years of age. The same factors which contributed to a short life in the United States in 1900, affect most third world countries today; lack of clean water, malnutrition, communicable disease and death from injury.

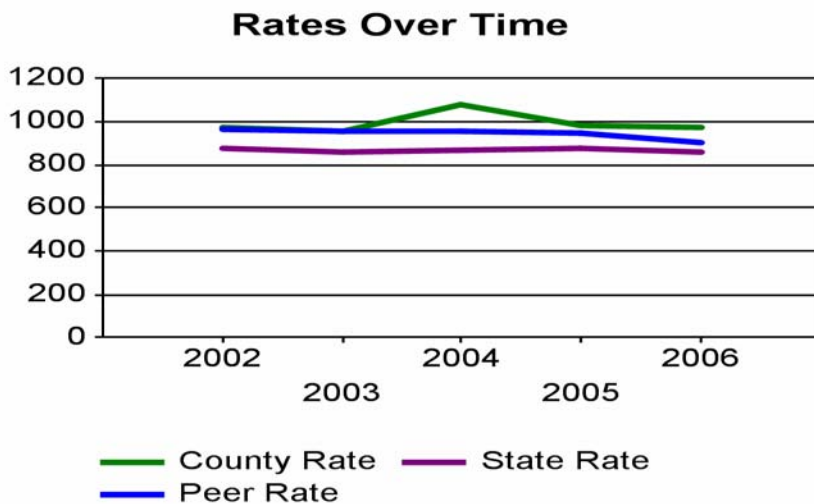
In the United States today, some groups, such as Native Americans, rural African Americans and the inner city poor, have extremely poor health, more characteristic of a poor developing country rather than a rich industrialized one. The HIV epidemic causes a higher proportion of death and disability to U.S. young and middle-aged than in most other advanced countries.

According to the World Health Organization:

- The U.S. is one of the leading countries for cancers relating to tobacco, especially lung cancer.
- The death rate from heart disease in the U.S has dropped in recent years, but remains high relative to other countries.
- Death rates from violence, especially of homicides, remain high in the U.S. when compared to other industrialized countries.
- Contributing factors to Americans' high mortality rate include: consumption of food high in fat and sedentary lifestyles.

Graph 12:

Comparison of Death Rates: Wayne County & N.C. 2002-2006



Note: Death rates are per 100,000 population
Source: N.C. Public Health Catch

Observations:

- Graph 12 shows that total deaths per 100,000 are higher for Wayne as compared to the state for 2002 – 2006.
- Graph 12 also demonstrates that death rates for Wayne are also higher than peer counties (Duplin, Nash, Pitt, and Sampson) for 2002 – 2006.
- Age-adjusted death rates (not shown in graph 12) reveal that the age-adjusted death rate for 2002-2006 is 885.2 per 100,000 for North Carolina as compared to 996.0 per 100,000 for Wayne County.

Discussion:

Death rates statewide are declining for two significant reasons: advances in medical science, and a better understanding by our population of lifestyle changes that lead to good health. An individual's decision to exercise, eat a reasonable diet, not smoke, avoid drug use and moderate to no alcohol consumption, are lifestyle decisions that dramatically affect health. In 2007 cancer surpassed heart disease as the number one killer.

Among the leading causes of preventable death of North Carolinians were tobacco use, unhealthy diet/physical inactivity, alcohol misuse, firearms, risky sexual behavior, motor vehicles, and illicit drug use. The two most pervasive factors that contribute to mortality in North Carolina are cigarette smoking and high blood pressure. *(Source: North Carolina Leading Causes of Death, SCHS).*

Approximately 30% of all cancer deaths are attributable to cigarettes. High blood pressure is associated with death from all cardiovascular diseases, diabetes, renal failure and stroke. Both of these factors are controllable either through abstinence from tobacco or controlling hypertension with lifestyle changes or drugs.

N.C. and Wayne County Leading Causes of Death (2002-2006) Table 32

Cause	White Males		Minority Males		White Females		Minority Female		NC Rate	Wayne Co. Rate
	Wayne	NC	Wayne	NC	Wayne	NC	Wayne	NC		
Total Heart Disease	323.8	266	338.2	314	191.2	166.7	212.6	205.0	217.9	250
Total Cancer	269.3	238.5	319	304.6	162.5	157.7	207.3	172.6	196.4	217
Cerebrovascular Disease	75.1	57	87.9	85.8	67.7	55.3	80.6	75.5	61.1	74.8
Diabetes	33.4	25.2	62.6	54.4	23.1	18.3	63	50.7	27.1	39
Motor Vehicle Accidents	35.8	26.6	19.8	29.7	17.7	12.0	13.6	10.3	19.1	23
Homicide	5.8	6	28.1	26	2.8	2.5	12.2	5.4	7.2	10
Unintentional Injury	25.8	37.2	20.9	32.4	15.4	20.4	8.4	13.8	27	18.3
Pneumonia/Flu	22.9	26.3	23.8	27.5	17.2	20.6	10.5	17.2	22.5	18.1
Cancer By Site										
Trachea/Lung Cancer	104.3	82.5	109.7	91.7	42.1	44.2	34.6	33.7	59.8	65.5
Prostate Cancer	24.7	23.2	77.9	60.3	0	0	0	0	29.1	39.9
Breast Cancer	0	0	0	0	30	23.5	36	32.1	25.7	32.2

Note: Death rates are per 100,000. Source: <http://www.schs.state.nc.us/SCHS/data/databook/>

Graph 13: *Wayne County Leading Causes of Mortality* (2002-2006)

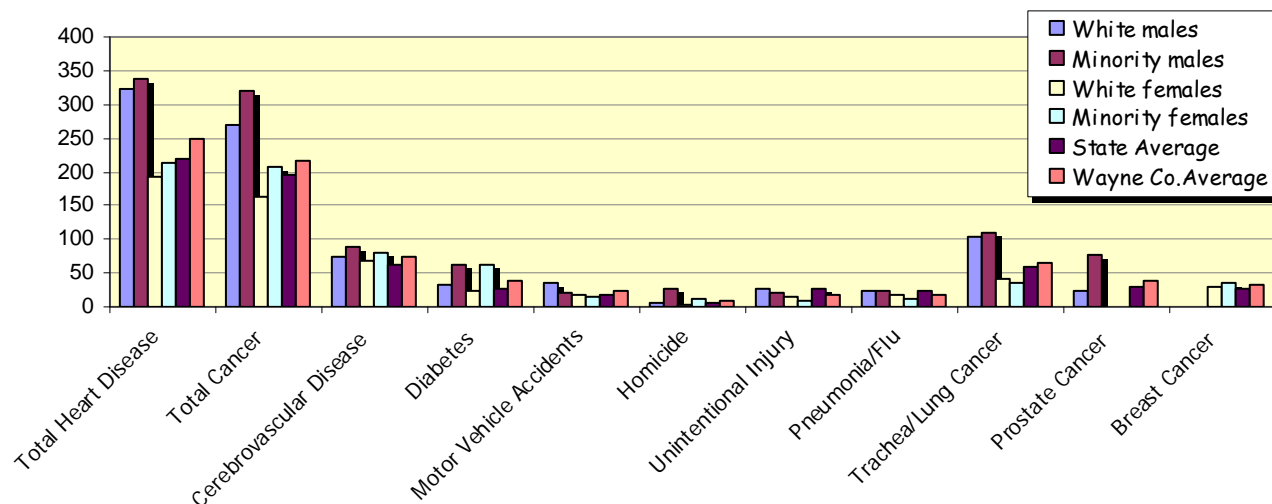


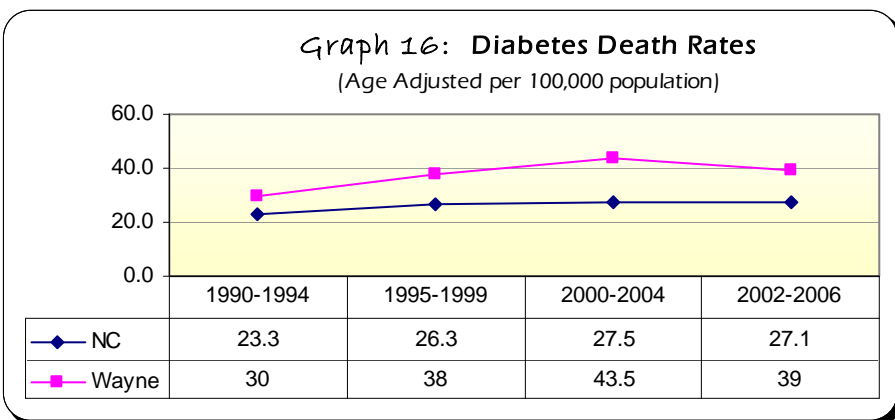
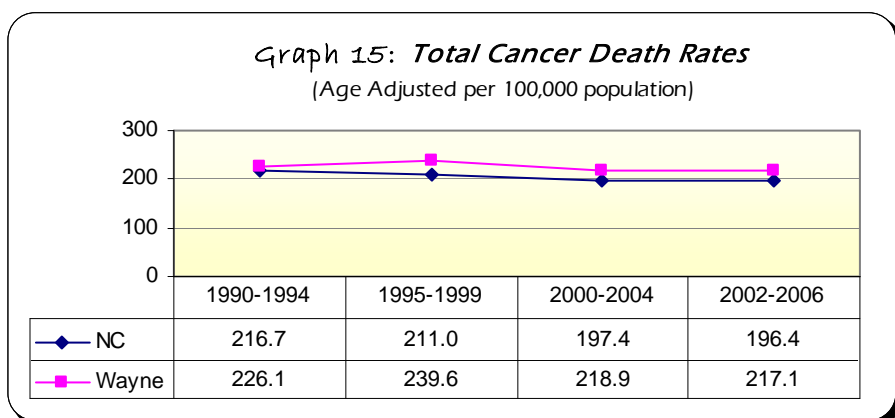
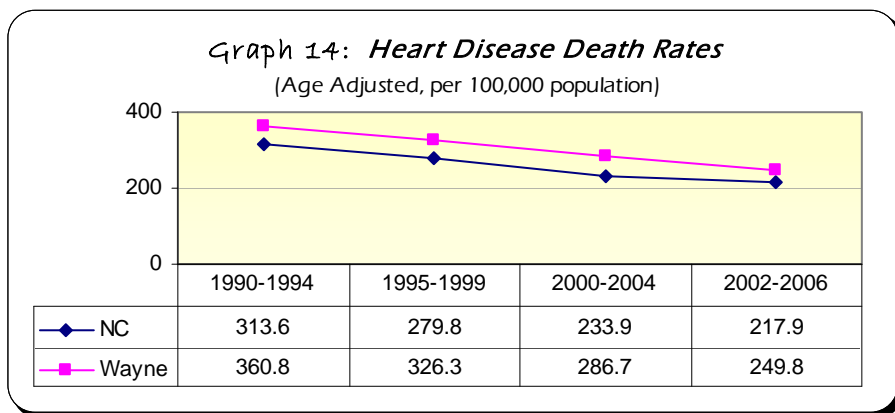
Table 33: *2002-2006 Death Rates comparing Wayne Co. & NC*

Cause	<i>Wayne</i>	<i>NC</i>
<i>Total Heart Disease</i>	249.8	217.9
<i>Total Cancer</i>	217.1	196.4
<i>Cerebrovascular Disease</i>	74.8	61.1
<i>Diabetes</i>	39	27.1
<i>Motor Vehicle Accidents</i>	23	19.1
<i>Homicide</i>	10.0	7.2
<i>Unintentional Injury</i>	18.3	27
<i>Pneumonia/Flu</i>	18.1	22.5
Cancer By Site		
<i>Trachea/Lung Cancer</i>	65.5	59.8
<i>Prostate Cancer</i>	39.9	29.1
<i>Breast Cancer</i>	32.2	25.7

Observations:

- Heart disease is the most common cause of death in Wayne County and North Carolina. Wayne County death rates significantly exceed the state average.
- Wayne County flu and pneumonia death rates are lower than the state.
- The number of white females who died from heart disease in Wayne County is greater than the state average.
- The death rate for diabetes among Wayne County minority males is almost 2 times higher than for Wayne County White males. The death rate for Wayne County minority females is over 2 times higher than for White females.
- In Table 33, the death rate for trachea/lung cancer in Wayne County is higher than for the rest of the state.
- The three leading causes of death in Wayne County are: Heart Disease (total heart disease), Cancer (total cancer deaths) and Cerebrovascular Disease, respectively. They have been Wayne County's leading causes for some time.

- Heart Disease Death rates are on a downward trend for N.C. and Wayne County (see graph 14 below).
- The death rate for diabetes among Wayne County minorities is almost twice the rate for Whites and is an area where increased education and monitoring is needed for individuals with diabetes. Poor blood sugar control contributes to increased risk for heart disease, cerebrovascular disease, kidney failure, amputations and blindness.



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

Discussion:

Historically, death rates from heart disease, diabetes, and cancer in Wayne County have been higher than the state average, as shown in the tables above. The fact that death rates in Wayne County exceed the state average, and that the gap between the state average and Wayne County is increasing, is a public health concern. Based on graph 14 it does appear that heart disease death rates are on a downward trend; Graph 15 & 16 however show that we continue to still have much work to do where Cancer and Diabetes are concerned. Heart disease, diabetes, and cancer are to a large extent, controllable through lifestyle modifications (healthier diet, physical activity and avoiding smoking). Other factors that may contribute to these diseases are heredity, and delays in diagnoses and treatment. It appears that educational interventions could have a significant impact on death rates from these three causes in Wayne County.

Blood Alcohol Levels & Causes of Death:

Table 34: shows the percentages of individual blood alcohol levels (BAL) at time of death, for non-natural causes.

Blood Alcohol Levels at Time of Death, North Carolina, (1997 – 2001)				
Motor Vehicle/ Unintentional Injuries	% BAL 0.0	% BAL .01-.07	% BAL .08-.15	% BAL > .16
Latino	57.3	6.5	12.6	23.6
White	79.7	4.1	5.9	10.4
African-American	72.0	6.1	7.3	14.6

Homicide				
Latino	47.3	13.8	16.4	22.5
White	65.3	9.1	12.3	13.3
African American	65.1	12.4	12.4	10.1

Suicide				
Latino	54.9	11.0*	15.4*	18.7*
White	75.0	6.2	8.4	10.4
African American	77.4	9.8	6.1	6.7

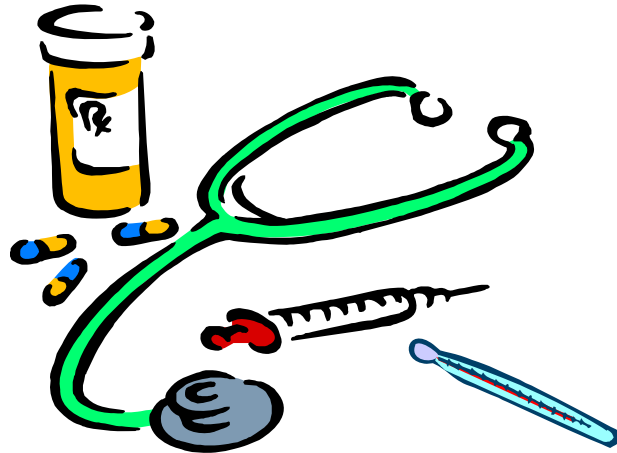
★ **Note:** Percentage is based on less than 20 events in the numerator.
 Source: <http://www.ncmedicaljournal.com/may-jun-03/toc0503.shtml>

Observations:

- At the time of death for the three causes shown in Table 34, a greater percentage of Hispanics had elevated blood alcohol levels than Whites and African American.
- More than 36% of Hispanics killed in motor vehicle or from unintentional injuries had a blood alcohol level of .08% or higher.
- 39% of Hispanics who died from homicide and 34% who committed suicide during 1997-2001 had a blood alcohol level of .08% or higher.
- Alcohol abuse prevention may be an important public health intervention among Hispanics.

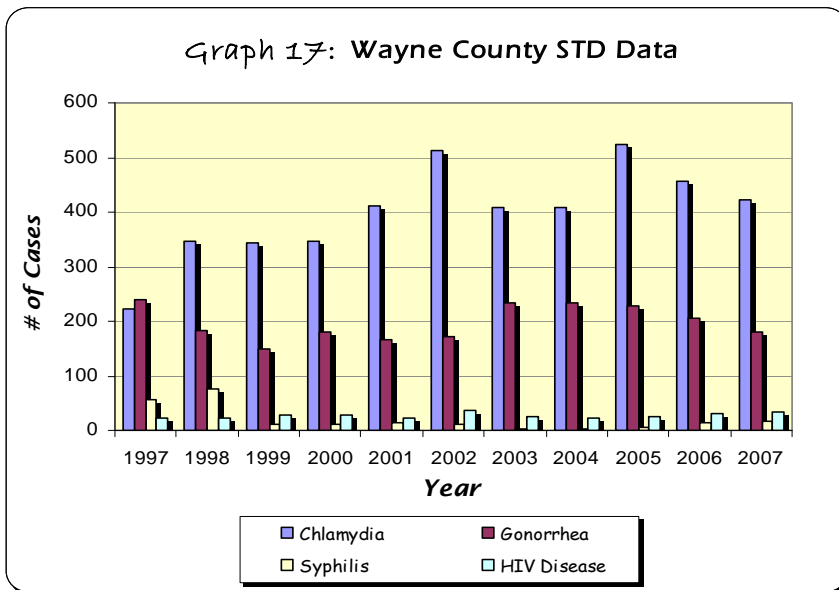
Discussion:

Table 34 shows the percentage of decedents with various levels of blood alcohol and causes of death. It is obvious that alcohol is an important contributing factor in the accidental and intentional death of Hispanics in North Carolina. It is important to note that the leading cause of death among Hispanics in North Carolina is motor vehicle accidents. The age adjusted death rates for Hispanics in North Carolina are much lower than that for whites and blacks in North Carolina (*NC Medical J., May-June 2003*). This finding is consistent with a population that is relatively young and has recently immigrated into the country.



Sexually Transmitted Diseases & Other Communicable Diseases

Graph 17:
Number of
STD Cases in
Wayne County
for selected
infection years
1997-2007



Source: <http://www.epi.state.nc.us/epi/hiv/surveillance.html>

Wayne County STD Cases (by # of cases)				
Year	Chlamydia	Gonorrhea	Syphilis	HIV Disease
1997	222	240	55	22
1998	346	184	75	22
1999	345	150	10	27
2000	346	180	12	27
2001	411	166	13	22
2002	513	173	11	36
2003	409	234	3	25
2004	409	234	3	22
2005	524	228	5	24
2006	455	207	15	32
2007	423	181	17	34

Observations:

- The number of Chlamydia cases has increased by 48% over the ten-year period of 1997-2007.
- The number of Gonorrhea cases has decreased over the last ten years.
- The number of Syphilis cases has dramatically decreased from 1997 to 2007 but seems to be increasing since 2004.
- The number of people infected with the HIV virus remained about the same from 1997 to 2005. However in 2006 and 2007 we saw a substantial jump in the number of people infected with HIV disease. A concern here in Wayne County is making sure people with HIV disease are being case managed in order to receive early and consistent care.

Discussion:

Chlamydia (*Chlamydia trachomatis*) infections are the most prevalent of all sexually transmitted diseases. In women, these infections often result in pelvic inflammatory disease (PID), which can cause infertility, an ectopic pregnancy, and chronic pelvic pain. The vast majority of Chlamydia cases (over 80%) are among females due to screening bias. The rate of positive tests increased after May of 2004 because the State Lab changed to a more sensitive test. The State's Chlamydia

rate (per 100,000 population), for the year 2005 is approximately 7-8 times higher in African Americans versus the White population.

Gonorrhea (*Nisseria gonorrhoea*) may cause Pelvic Inflammatory Disease (PID), and increases the risk of infertility and ectopic (tubal) pregnancy. Infection with Gonorrhea facilitates HIV transmission. In 2000, the rate of infection for Gonorrhea in North Carolina ranked the state 6th in the nation; in 2002 North Carolina was ranked 9th, and in the year 2004, North Carolina increased it's ranking back to 6th in the nation. Statewide, over all reports for gonorrhea were up for 2006 compared to 2005 after several years of decline. In 2007 that decline has continued.

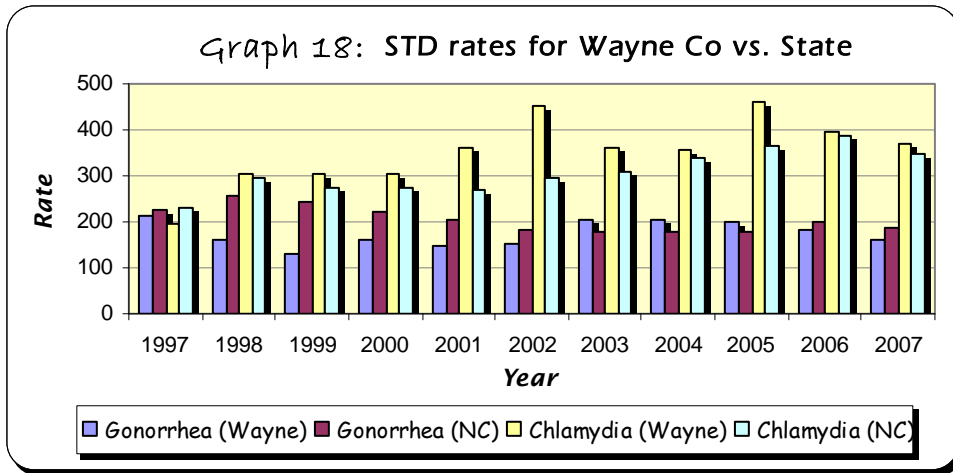
Syphilis (*Treponema pallidum*) is an acute and chronic disease that can facilitate HIV transmission 2 to 5 fold. Syphilis can cause many complications ranging from stillborn births to nerve damage and death in adults. In 2000, North Carolina ranked 2nd in the nation for primary and secondary syphilis infection, in 2002 was ranked 7th, and in the year 2004, North Carolina continued to decrease and ranked 15th in the nation, however for 2005 North Carolina is ranked 12th.

Infection with the human immunodeficiency virus (HIV) generally causes progressive damage to the immune and organ systems, including the central nervous system, and leads to a more severe, life-threatening clinical condition called AIDS. The State's HIV rate (per 100,000 population), for the year 2005 is almost 7 times higher in African Americans versus White population (*data not shown*). In 2006, there were 2,022 reports of HIV disease in North Carolina. Nationally, in 2003, NC reported the 2nd highest number of AIDS cases among non-metropolitan areas. Since 1983, there have been 496 cases of HIV infection in Wayne County. Currently (as of December 2007), there are 303 known individuals who are HIV+ in Wayne County.

The state of North Carolina had experienced an epidemic of HIV infection among college students. Between January of 2000 to December 2003, 84 college students in North Carolina were diagnosed with HIV infection. Of these 84, 73 (88%) were AA and 92% were either Men Having Sex with Men or Men Having Sex with Men & Women.. To this day, North Carolina college students continue to represent an at-risk, assessable population, which deserves further HIV prevention interventions.

Sexually Transmitted Disease Rates (per 100,000)								
Year	Syphilis		Gonorrhea		Chlamydia		HIV Disease	
	Wayne	State	Wayne	State	Wayne	State	Wayne	State
1997	48.6	21.8	212	227.3	196.1	230	19.4	22.4
1998	66.2	20.8	162.4	254.7	305.1	294	19.4	19.7
1999	8.8	15.1	132.5	244.4	304.8	274	23.9	19.3
2000	10.6	13.6	158.8	222.8	305.3	275	23.8	17.2
2001	11.5	11.5	146.6	204.1	363.0	271	19.4	18.6
2002	9.7	7.4	152.9	184.7	453.3	298	31.8	20.3
2003	2.6	4.7	206.4	179.1	360.7	310	20.3	24.6
2004	2.6	5.3	204.8	177.9	358.0	340	19.3	19.2
2005	4.4	5.7	199.6	176.5	458.7	365	20.1	21.1
2006	13.1	7	180.9	199.3	397.6	387	23.6	23.3
2007	14.9	6.4	159	188.2	371.6	346	29.9	21.9

Table 36: Rates of Sexually Transmitted Diseases (STDs). Wayne County. (1997-2007)



Observations:

- In Table 36 and Graph 18, on the previous page, Wayne County’s Gonorrhea rates are lower than the state average, for years 1997-2002, but climbed above the state average for years 2003-2005 and declined in 2006 as compared to the state. Chlamydia, in Wayne County, is on the rise, and trends show this rate is higher than the state average.

Table 37: Communicable Diseases in Wayne County, for the years 1998 - 2007, by the number of cases reported.

Wayne County Communicable Diseases										
1998 - 2007										
<u>Disease</u>	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<i>Campylobacter</i>	1	1	1	4	0	0	0	1	0	0
<i>Hepatitis A</i>	0	0	4	1	0	0	0	1	2	3
<i>Hepatitis B</i>	3	8	4	3	0	0	0	11	5	7
<i>R.M. Spotted Fever</i>	0	0	0	1	0	0	0	1	1	0
<i>Salmonella</i>	12	7	13	8	0	0	0	2	8	4
<i>Shigellosis</i>	16	2	1	1	0	0	0	0	0	0
<i>Tuberculosis</i>	4	13	7	9	8	5	9	16	8	9
<i>Whooping Cough (pertussis)</i>	n/a	n/a	0	4	0	0	0	0	0	1

Observations:

- The incidence of Campylobacter, Shigellosis and Salmonella has fluctuated in Wayne County, possibly due to outbreaks involving people from a common source.
- Hepatitis A has seen an increase from 2005 to 2007 while Hepatitis B has decreased from 2005 to 2007. However even one case of Hepatitis is a concern.
- Rocky Mountain Spotted Fever saw two cases in 2005 and 2006 - this can be fatal and again is a concern.
- Salmonella also saw numbers increase in 2005 and 2006 with a drop in 2007.
- Tuberculosis continues to be a concern for Wayne County with numbers being at their highest in 2005.

Discussion:

Campylobacter, Shigellosis, and Salmonella are bacteria that cause infection in humans and animals. Symptoms of infection may include diarrhea, abdominal pain, fever, nausea and vomiting. Transmission can be through eating the living bacteria in food; the most common route is ingestion of food or water that has been contaminated with human or animal feces. These diseases, along with Hepatitis A, are termed "fecal-oral" because transmission frequently is from the ingestion of minute amounts of feces through food, or from hand to mouth contact.

A Shigellosis outbreak occurred in a daycare center in 1998, in Wayne County.

Hepatitis A is a viral infection of the liver. Symptoms usually include an abrupt onset of fever, anorexia, nausea, diarrhea, yellowing of the skin and whites of the eyes and dark urine. Transmission is primarily fecal-oral. An outbreak of hepatitis A in Johnston County during the year 2000 affected Wayne County residents.

Hepatitis B is a viral infection of the liver, transmitted by direct contact with blood or body fluids from an infected person, while having sex or sharing needles.

Tuberculosis is a potentially life threatening disease, if untreated. Tuberculosis (TB) is spread through person-to-person contact. Tuberculosis can affect all organs of the body, but is most prevalent in the lungs. The influx of foreign-born individuals from TB endemic countries has contributed to the cases of TB disease in Wayne County and N.C. The 1999 increase was due to an entire family contracting the disease.



Primary & Secondary Data Collection & Reporting

Collection & Reporting of Data

I. Collection of Primary Data:

- **Youth Risk Behavior Survey (889 students polled)**
Conducted through all 6 Wayne County High Schools-
April 2008
- **Community Health Behavior Survey/ Opinion Survey**
Time Span for Collection of data: July 7 – October 23, 2008

Avenues for collection of feedback from the community

- American Red Cross (Blood Donors) (99)
- Wayne County Clerk of Court (Juror Pool) (193)
- Local Health Fairs (24)
- 1 received through mail
- Wal-Mart sites (Mt. Olive, Goldsboro-Spence
Avenue, Goldsboro – Hwy 70 West (89)
- Online at www.waynegov.com (Survey Monkey): 204
Advertised through radio, newspaper article, local library and
online to Wayne County Government Employees
Total Participation in Community survey: 610

II. Collection of Secondary Data: Sources

- See Resources Section for listing

III. Reporting Data Results to the Community:

December 17, 2008 – Wayne County Board of Health Meeting

January 21, 2009 – Strategic Planning/Community Partners Meeting

Media: January, 2009

- Goldsboro News Argus – (Interview with Health Director regarding
priorities set)
- WFMC Radio (Interview with Health Director regarding priorities set)

Significant Findings YRBS (Youth Risk Behavior Survey)

As of January, 2008 Wayne County was only one of five NC counties not participating in the YRBS. Reasons given by the school administration for not participating in the survey were:

1. Some questions on the YRBS were sexual in nature and would be offensive
2. The fact that the survey results are pooled into regions which means the results may not be an accurate picture for Wayne County.

School administrators requested and received permission from the board of education to conduct the survey of high school children. During the month of April, 2008 all Wayne County High Schools participated in the survey and 889 children were polled during the month of April, 2008.

The survey and the results can be viewed here:

<http://www.waynegov.com/165810410142431703/site/default.asp>

Findings are as follows:

Personal safety:

1. 40% of kids who rode a bicycle during the last year never wore a helmet.
2. 50% of kids said they always wore a seatbelt when riding in a car. 30% said most of the time and about 24% said either sometimes, rarely or never.
3. About 20% of kids said that they had ridden in a car during the last 30 days driven by someone who had consumed alcohol. About 7% reported that they had consumed alcohol and drove.

Violence related behavior:

1. 8.1% of students said they had missed one or more days of school during the past 30 days because they felt unsafe at school or on the way to school.
2. 22% of kids said they have had property stolen or damaged on school grounds during the last year.
3. 31% of kids said they had been involved in a physical fight during the past 12 months. 3% reported they were injured during the fight to the extent that medical care was needed. 10% reported the fight occurred on school property.
4. 7.2% of students reported being physically forced to have sex against their will.

Tobacco use:

1. 18% of kids reported they had smoked cigarettes within the last 20 days.

Alcohol use:

1. 35% of kids reported they had at least one or more drinks containing alcohol in the past 30 days.
2. 18% of kids stated they had drunk five or more drinks in a row within a couple of hours on one or more of the past 30 days.

Other drug use:

1. 32% of Wayne County HS kids said they had used marihuana one or more times in their lives and 17% said they had used it within the last 30 days.
2. 5% said they had tried cocaine.

Weight management:

1. 25% of kids reported they were overweight.

Physical Health

1. 60% of kids have seen a doctor in the last 12 months. 40% have not seen a dentist.

Sexual Behavior

1. 59.4% of kids said that they have had sexual intercourse. 8.6% reported they experienced intercourse before age 13.

Nutrition

1. 88% of kids said they ate at least one vegetable per day
2. 23% of kids reported they ate French fries five or more times during the last seven days
3. 92% drank a soft drink or sweetened beverage one or more times daily. 60% said they drink three or more per day.
4. 31% of kids said they ate breakfast on seven of the previous seven days.

Physical Activity

1. 24% of kids said they were not physically active on a typical school day (no activity or less than 20 minutes)
2. 42% said they were active at least 60 minutes on five of the previous seven days.
3. Only 29% of kids stated they attend a PE class one or more days in an average week. Note: the state average is 50%.
4. 37% report they watch TV three or more hours per day with 16% stating they watch five or more hours per day

Psychological Health

1. 28.7% of children said they felt sad or hopeless for everyday for two weeks or More to the point that they stopped doing usual activities during the last 12 months and about 13% of kids said they had seriously considered suicide..

School Environment

1. 32.6% of kids said that bullying and harassment by other students was a problem at their school.

General

1. 37.1% of kids said they were left alone after school unsupervised for three or more hours on an average school day.
2. 79.7% of kids said they agree or strongly agree that they feel good about themselves.

Executive Summary: Community Survey, Wayne County

The Wayne County Health Department chose to conduct a paper/online survey with citizens in Wayne County in order to gather feedback regarding **health behaviors** as well as **opinions regarding health needs and issues**. The following groups/sites participated in the survey:

- American Red Cross – Blood Donors (99)
- Juror Pool through the Wayne County Clerk of Court’s Office (193)
- Local Health Fairs (24)
- Wal-Mart Sites: Mt. Olive, Spence Avenue in Goldsboro and Highway 70 West located west of Goldsboro. (89)
- Online survey was posted at www.waynegov.com – advertised through radio, newspaper article, local library and online to Wayne County Government employees (204)
- 1 survey mailed to Health Department
- Total Surveyed: 610
- Tool used to tally survey: Survey Monkey

Demographics of those responding: 568 answered the question regarding age:

2.6%	18 years of age and under
5.9%	19 to 24 years of age
18.4%	25 to 34 years of age
19.5%	35 to 44 years of age
26.0%	45 to 54 years of age
19.7%	55 to 64 years of age
7.5%	65 and older

Gender: 29.2% Male
70.7% Female

Race/Ethnicity:

70%	Caucasian
23%	African American
4.7%	Hispanic
0.3%	Asian American
1.0	Other

Educational Status:

Never attended school or kindergarten only	0.2%
Grades 1 – 8	1.4%
Grades 9 – 11	4.1%
Grade 12 or GED	19.4%
Technical school or business college	12.1%
Some College	30.7%
College Graduate (Bachelor’s Degree)	22.8%
Postgraduate (Master’s, M.D., Ph.D)	9.5%

Overview of questions related to health and health behaviors:

76.2% described their health as either good or very good.
85.9% reported having a doctor or clinic for medical care
79.6% had visited a doctor in the last year for a routine check-up.
86.4% reported having a doctor in Wayne County.
62.2% reported trying to lose weight.
43% had obtained a mammogram within the last 12 months while 31.3% had never had a mammogram.
95.3% reported if they had a teenager who was sexually active they would encourage them to use a condom.
67.6% describe their diet as being medium in terms of low fat while 11.9% describe it as being high in fat.
33.4% reported they had experienced two or more years in their life feeling depressed.
59.9% described their stress level as being moderate while 15.0% described it as being high.
66.3% do not believe there are enough parks and recreational facilities in Wayne County.
60.9% of those with children reported their child had seen a dentist in the last 6 months while 9.6% had never been to a dentist.
55.8% of those with children reported their child had visited a doctor for a routine checkup in the last 6 months.
79.4% reported that they did not smoke – of those who did smoke, 71.6% wanted to quit.
Main reasons described as to why they or someone in their household could not receive medical care were as follows: (1) too expensive (2) they do not accept my insurance (3) have trouble knowing where to get medical care (4) not taking new patients

Opinion Portion of Survey:

(1) Health issues most concerned about in Wayne County:

Violence (68.9%)
Teen Pregnancy (52.5%)
Obesity (52.5%)
Cancer (52.3%)
Alcohol Abuse (50.6%)
Domestic Violence (48.4%)
Sexually Transmitted Diseases (46.5%)
Diabetes (41.8%)

(2) Top 3 behaviors keeping Wayne County unhealthy;

(1) Alcohol Abuse
(2) Lack of exercise
(3) poor eating habits

(3) What specific things do you think can be done to improve health in Wayne County:

(1) More affordable medicines (70.5%)
(2) More places to walk or exercise (59.7%)
(3) More education on how to be healthy (54.4%)
(4) Being able to see a doctor (43.4%)
(5) Increasing public transportation (28.8%)



Resources

- **Advocates for Youth**
<http://www.advocatesforyouth.org>
- **Cecil G. Sheps Center for Health Services Research** – University of North Carolina, Chapel Hill
<http://www.shepscenter.unc.edu/Data.html>
<http://www.shepscenter.unc.edu/hp/prof04.htm>
- **CLIKS: Community-Level Information on Kids**
<http://www.aecf.org/cgi-bin/cliks.cgi>
- **Employment Security Commission of North Carolina** – Labor & Wage Unit, Labor Market Information Division
<http://eslmi23.esc.state.nc.us/ew/>
- **Geographic.org**
<http://www.geographic.org>
- **Guttmacher Institute**
http://www.guttmacher.org/pubs/fb_teens.html
- **Log into North Carolina (LINC)**
http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show
- **North Carolina Child Advocacy Institute**
<http://www.ncchild.org>
- **North Carolina Child Fatality Task Force**
www.preventchildabusenc.org/publications/press_releases/cftf
- **North Carolina Communicable Disease Control**
<http://www.epi.state.nc.us/epi/gcdc.html>
- **North Carolina Crime Statistics**
<http://sbi2.jus.state.nc.us/crp/public/Default.htm>
- **North Carolina Department of Health & Human Services** – Division of Medical Assistance

- <http://www.dhhs.state.nc.us/dma/>
➤ **North Carolina Department of Health & Human Services – HIV/STD Prevention & Care Branch**
<http://www.epi.state.nc.us/epi/hiv/surveillance.html>

- **North Carolina Division of Public Health – Oral Health Section**
<http://www.communityhealth.dhhs.state.nc.us/dental/>

- **North Carolina Division of Public Health – Women’s & Children’s Health Section**
<http://wch.dhhs.state.nc.us/>

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

- **Public Schools of North Carolina**
<http://www.ncpublicschools.org/accountability/reporting/sat/2005>

- **Strunk, B.C., & Ginsburg, P.B. (2003 June 11). *MARKET WATCH- Tracking Health Care Costs: Trends Stabilize But Remain High in 2002.* Health Tracking.**
Available [on-line]: <http://www.healthaffairs.org/>

