



## **2009 State of the County Health Report**

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### **Overview**

The intent of this document is to provide an overview of both the health status of Union County and the health issues impacting county residents, both personal and environmental. The document will provide information on areas that were identified in the 2008 Community Health Assessment as priority areas. This report will indicate any actions that have been taken by the Health Department and or the community toward resolving health related issues and improving health outcomes.

In addition to Community Assessment data updates, the report contains statistical health indicators such as the county's leading causes of death, pregnancy and abortion rates hospital discharge data, air quality data, water quality data, food and lodging inspection data.

#### **Overview**

**Union County 2009  
Community Health Assessment Results  
Union County Health Department  
Citizen Health  
Dental Health  
Mental Health  
Safety Matters  
Environmental Health  
Environmentally Friendly Practices  
Conclusions & Goals  
Data Sources**

#### **Union County Statistics**

- **643 square miles, 14 municipalities**
- **201,245 Estimated 2009 Population**
- **56.1% growth since 2000 Census**
- **7<sup>th</sup> Fastest growing county nationally**
- **Median Age 35**
- **Median Household Income \$66,561**
- **Civilian Labor Force 91,849 (2009)**
- **Unemployment Rate 10.3% (Aug '09)**
- **\$19.5 billion dollar total tax base (FY 08 -09)**

## **Union County 2009**

Union County's continues to deal with the unprecedented growth that occurred over the last decade. In 2009 it became the 7<sup>th</sup> fastest growing county nationally, with an estimated population of 201,245.

The county has a diverse industrial tax base that includes; aerospace, poultry processing, plastic injection molding and automobile component part manufacturing. The County has a labor force of 91,849 with a un-employment rate that reached 10.8% in the second quarter of 2009.

The county struggles to meet infrastructure demands as a result of unprecedented residential growth. The tax base is lopsided, comprised of substantially more residential than commercial / industrial. With an insufficient tax base to cover infrastructure, county dollars are tight.

In FY '09-'10 Public Health's share of county tax dollars was 2.1%.The declining economy and the reality of the tax shortfall caused financial struggles that included local government employee lay offs and increased numbers of uninsured, under-insured and unemployed.

Even before the economic downturn, the residential influx created many issues. One was expanding public school enrollments, leading to the majority of County tax dollars (68% or \$128,387,019) being allocated to the local school system. This left just 32% to be further divided between remaining departments that include Public Health, Social Services, and Union County Sheriff's Department.

The Health Department has to support the demand for services generated by the higher numbers of uninsured residents.

In 2008 a Community Health Assessment (CHA) was completed, highlighting strengths and weaknesses in the local health and wellness arena. The ability to access care was the number one issue. Three separate sources (CHA, United Way Survey, UNC Sheps Center) identified 20,000 plus County residents as uninsured.

Assessment participants expressed concerns over cost of care and access to care. The Health Department, along with other county agencies, has been working on a solution to provide care for uninsured adults. The Health Department is also working toward an open access method of seeing patients which would improve clinic flow and allow for a greater number of patients to be seen.

Another issue for county residents is access to county water and the quality of well water in the County. The County sits on the Carolina Slate Belt which can elevate arsenic levels in groundwater. This has become an increasing concern for residents that do not have access to county water. The Environmental Health Department is working with Duke University on a research project involving well water testing in areas of the County in which higher arsenic levels are more prevalent.

From a statistical perspective union County has several alarming trends. The county Alzheimer's rate is considerably higher than the state rate, (50.8 per 100,000 vs. NC

rate 27.7 for '02 – '06.) The number of uninsured children in Union County has reached 8,000 or 14.4% of children 0 to 18 years old; exceeding North Carolina's 11.3% of children uninsured.

Union County appears young and wealthy on paper, with an average age of 35 and median household income of \$66,792. However, the statistics present a skewed view. Most of the people represented by these statistics reside in western Union County, which has become a bedroom community to Charlotte. Historically, Health Department clients come from the eastern side of Union County. This includes a large percentage of Hispanic families with no insurance, and working poor that cannot afford insurance or prescription medicine. Given current economic conditions, the Health Department client base will continue to not only grow, but will likely expand demographically and geographically.

**2008 Community Health Assessment Results Summary**

The Community Health Assessment (CHA) was an opportunity to study the health of the county, both from an individual perspective and from a community perspective. The CHA had two mandated components; internal data and external data. Each community must collect internal data directly from residents. This is done to develop a framework of understanding regarding health concerns, disparities, behaviors and environmental factors impacting the health of residents. The external data collected from agencies such as State Center for Health Statistics, included in the CHA, are the key health indicators of a community; infant mortality, communicable disease, STDs and leading causes of death, along with secondary data collected by entities outside the Health Department. To gain accurate results, both internal and external data were used in priority setting. The results categorized below were determined to be problematic for County residents in achieving positive health outcomes. The results came from survey responses, focus groups and service provider interviews. A community meeting was held to prioritize results. The priorities were discussed and finalized by the Board of Health.

<p><b><u>Adult</u></b>          Lack of Exercise          Poor Eating          Alcohol Abuse          Obesity</p>	<p><b><u>Senior</u></b>          Concerns over Long Term Care          Prescription Drug Costs          Medical Problems / Indigent Issues          Lack of Adult Daycare</p>	<p><b><u>Teen</u></b>          Teen Pregnancy          Sex Education          Peer Pressure / Self Image          Soft Drink Consumption</p>
<p><b><u>Chronic Diseases</u></b>          Cancer          Heart Disease          Alzheimer's          Diabetes</p>	<p><b><u>Environmental Health</u></b>          Restaurant Safe Food Handling          Drinking Water Access, Quality          Outdoor Air Quality          Smoke Free Restaurants</p>	<p><b><u>General Concerns</u></b>          Affordable Healthcare          Stress Related to Money          Mental Health Services</p>

The CHA illustrated the common threads exist across gender, race, ethnicity and generation regarding impacts on health. The commonalities include **cost of medical services, local access to services, behavior modification and education**, as well as **emphasis on prevention, both personal and environmental. The environmental concerns were water access and quality and outdoor air quality.** The chronic diseases that participants were concerned about are among the leading causes of death in Union County.

## **Union County Health Department 2009 in Review**

As the Health Department moves forward the mission remains the same, to serve the citizens of Union County in the prevention of disease, promotion of health, and the protection of our community's health.

Phillip Tarte is the Health Director. The Health Department has a staff of 118 operating Environmental Health and Personal Health, and Jail Health services. The annual budget for FY 2009 – 2010 was \$ 8,065,994.

The health service programs offered at the department in personal health are: Maternal Health Clinic, High-risk Maternal Health, Family Planning Clinic, Dental Health Clinic, Breast and Cervical Cancer Control, Immunization Clinic, Communicable Disease, Child Health Clinic, Diabetes Self Management, Health Promotions and Parenting. The Women Infants and Children Program (WIC) is also housed at the Health Department. Several programs that are offered are through Smart Start; Breast Feeding, Health Check and Smart Start Smiles.

The health service programs offered in Environmental Health are; On-site Waste Water, Wells, Food Lodging and Institutions, Tattoo Artist Inspection, Children's Environmental Health, and Methamphetamine Labs.

### **Health Department FY 2008 –2009**

- **Staff of 118**
- **Departmental Budget \$8,065,994**
- **12,344 Patients Seen (non-duplicated)**
- **31,726 Patient Visits**
- **Jeff Knight named Environmental Health Director**
- **Community Health Assessment Completed**
- **Community Action Plans Written**
- **Accreditation Documentation completed**
- **Strategic Plan Implemented**
- **Diabetes Self-management program implemented**
- **Health Department participates in Regional Call Down Exercise**
- **Collaboration for H1N1 Prevention**

### **Health Department Programs Clients Served Annually**

- **1949 Family Planning**
- **2169 Maternal Health**
- **2544 Child Health**
- **2959 Child Immunizations**
- **373 Child Service Coordination**
- **180 Breast & Cervical Cancer Control**
- **Communicable Disease**
- **1190 Dental Clinic**
- **700 Oral Health Section**
- **20,220 Laboratory Tests**
- **4130 WIC avg monthly caseload**
- **1146 Breast Feeding Program**
- **15 Diabetes Education**
- **41 Parenting Education**
- **20,220 Lab Tests Processed**

## **Citizen Health / Child Health**

### **Child Population / Health Indicators**

- **24% of the county population are children 14 and under (2009)**
- **2,550 Children enrolled in Health Choice (2007)**
- **12,420 Children enrolled in Medicaid (2007)**
- **10.4% children (under 18) living below poverty level (2007)**
- **14.4% Union County children uninsured (0 - 18 years old) (8,000 children) vs. NC 11.3%**
- **32% school age children on free or reduced lunch (2008 – 2009)**
- **97 children received forensic interviews & medical exams at Tree House for sexual abuse**
- **7% of all Union County births are low birth weight babies (under 2500 grams) 2007**
- **16.1% Low-income children who are overweight**
- **2003 – 2007 Infant Mortality Rate, 7.1 / 8.5 NC Rate (per 1,000 live births)**
- **2003 – 2007 Post Neonatal Death Rate, 2.6 / 2.8 NC Rate (per 1,000 live births)**
- **2003 – 2007 Neonatal Death Rate, 4.6 / 5.7 NC Rate (per 1,000 live births)**
- **2003 – 2007 Fetal Death Rate, 5.2 / 6.2 NC Rate (per 1,000 live births)**
- **2003 – 2007 Perinatal Death Rate 9.8 / 11.9 NC Rate (per 1,000 live births)**
- **2007 Pediatric Asthma Hospital Admission Rate 277.8 / 229.4 NC Rate (per 100,000)**
- **203 Childcare Facility Inspections**

Children today are faced with many choices that can have a lasting impact on the habits they develop and take with them into adult life. More and more children are overweight and obese, as a result of less physical activity, more hours spent in front of a television, or playing video games and poor eating habits. The state of North Carolina issued a report in 2005 – 2006 on Child Health Behaviors and Weight Status. According to the report 16% of children in NC (ages 10 to 17) are overweight and 15% are obese. These unhealthy weights can often be connected to specific behaviors and eating patterns.

- **45% 10 to 17 year olds who are Overweight or Obese get less than 20 minutes each day of daily activity**
- **41% 10 to 17 year olds who are Overweight or Obese watch 3+ hours a day of television**
- **38% 10 to 17 year olds who are Overweight or Obese consume 2 or more servings of chips and fries daily**
- **38% 10 to 17 year olds who are Overweight or Obese consume 3 or more sugar-sweetened beverages daily**
- **46% 10 to 17 year olds who are Overweight or Obese consume no fruits and vegetables**

In 2007, the statistics in Union County show 16.1 of low income children as overweight. During the Community Health Assessment, the teens that were surveyed, as well as the teens that participated in the focus group, felt that there were not enough opportunities for recreation and sports for students that did not make the school athletic teams. Parents expressed concern over the costs associated with municipal leagues.

**Citizen Health / Child Health,  
Kate B. Reynolds Food, Fitness and Fun Grant**

The Union County Health Department secured a grant from the Kate B. Reynolds Charitable Trust to combat obesity and increase physical activity. The three-year Food, Fitness, and Fun (FFF) program targets elementary school communities with large numbers of students from low socioeconomic backgrounds and high percentages of ethnic and racial minorities. Studies show weight issues to be more prevalent in African-American, Hispanic and low socio-economic groups. Due to the demographic populations of the target schools, they were determined to be the highest risk for obesity, and would have the fewest resources for solutions.

The intent of the grant is to educate the children, while simultaneously educating the parents on healthy sustainable diets, the importance of physical activity and how to put this knowledge into attitudes and practices that would develop into long term healthy behaviors.

After year one of the grant, the University of North Carolina at Charlotte School of Public Health did an evaluation report that indicated 96% of school staff and 95% of parents reported making one or more positive health behavior changes after participating in the program. Among the teachers that participated, 100% reported having one or more additional exercise breaks in their classrooms and 86% of teachers reported having implemented healthy food policies in their classrooms.

Efforts with the parents were also successful in year one. Parent Programs addressing adult and child health in relation to nutrition and physical activity, and how the family unit can work together to achieve healthier lifestyles were done at all participating schools.

## **Citizen Health / Adolescents**

### **Union County Adolescent Population 2009**

- **8,954 Middle School Students**
- **10,819 High School Students**
- **2,170 High School Graduates**
- **88% of graduates plan to attend college**
- **\$51.1 million Scholarship monies awarded in 2008**
- **2.32% drop out rate 9 (grades 7 – 12) (2007 – 2008 rate)**
- **79% of victims served at United Family Services are under 18**
- **862 Teen Motor Vehicle Crashes (2008)**
- **3 Teen Driver Crashes resulting in fatalities (2008)**
- **31 Teen Driver Crashes Involving Alcohol (2008)**
- **2008 Teen Pregnancy Rate 24.4 / 32.5 NC Rate**
- **2008 Minority Teen Pregnancy Rate 45.0 / 43.9 NC Rate**
- **2008 Teen Abortion Rate 3.9 / 7.2 NC Rate**
- **2008 Minority Teen Abortion Rate 6.6 / 11.1 NC Rate**  
**(ALL Pregnancy & Abortion Rates are for girls 15 to 17, per 1,000)**

The adolescent timeframe is critical in making good decisions and establishing healthy habits that impact an individual's health for a lifetime. The 2009 Portrait of Adolescent Health in North Carolina discusses the fact that adolescents as a group face many barriers to healthy development, which can lead to an unhealthy adulthood. It is during adolescent years that a healthy foundation should be established. Research has shown that life experiences within a family, a community and at school are typically determining factors influencing choices made by adolescents. In order to maximize potential for behavior choices, adolescents need positive relationships with adults, access to healthcare services, and information and education on their health. Self-esteem building opportunities are also crucial. With these factors in place, adolescents are provided a foundation that encourages positive, healthy decisions.

During the 2008 Community Health Assessment in the county, a teen focus group was held and 510 teens were surveyed. In both the focus group and the survey responses, the greatest teen health concerns centered around sexual behaviors; teen pregnancy, sexually transmitted diseases, HIV /Aids, and sexual assault. Teen participants in the focus group openly discussed high levels of sexual activity and a lack of sex education regarding birth control and sexually transmitted diseases.

The county STD rates have not fluctuated greatly, however the teen pregnancy rate can be viewed as a cause for concern. If you look at the county's overall teen pregnancy rate, the county appears to be alright, but when we isolate the minority teen pregnancy rate, the increase is dramatic. The Union County teen pregnancy rate for minorities exceeds the state rate.

## **Citizen Health / Adolescents Teen Pregnancy**

A community action plan to begin to address the rising minority teen pregnancy rates was completed, with the goal being a reduction in the rate by 10% within 2 years. The fact that many people in the community are unaware that Union County has any teen pregnancy issue at all is a major hurdle to overcome. Awareness of this issue is being raised by including the rates and statistics in community reports and presentations, which are also available on the Health Department web page. In FY '08 –'09 the Health Department asked for a new Health Education position to focus on Adolescent Pregnancy. That same year the position was deleted from the organizational chart due to financial constraints. However, the Health Department has started to research potential grant opportunities and to benchmark with other NC counties that have a proven record of successfully reducing teen pregnancy rates.

The 2009 Portrait of Adolescent Health reported that state rates for STDs have been on the rise since 2003, and provided survey data from the North Carolina 9<sup>th</sup> through 12<sup>th</sup> grade Youth Risk Behavior Survey, which indicated that in 2003 47.5% of teens answered that they had sexual intercourse, in 2007 that response jumped up to 52.1%. On the 2007 survey they asked how many teens had used a condom, 38.5% answered that they had not used a condom during sex.

An interesting finding in Union County within the teen focus group and in survey responses was loneliness and self image as sources of stress. This response was consistent with what was stated in the Portrait of Adolescent Health in North Carolina, which reported that 1 in every 5 NC adolescents claimed that they had felt alone in his or her life, which the report goes on to suggest is an indication of a lack of a strong connection with family or other supportive adults.

Teens in Union County are statistically similar to teens across the state. They are in need of time, support, and guidance from the adults in their community. It is crucial that they are able to establish a strong healthy foundation during this time of transition from child to adult. It is during this time that they need to be educated, informed and supported regarding their personal health.

As a key agency in providing programs and services to the community, the Health Department will continue to raise awareness of the issues facing teens, collaborate with outside agencies and pursue funding opportunities to work toward creating an environment in which teens can make educated, informed decisions that will lead to healthy, productive lifestyles.

## Citizen Health / Adults

### Adult Health Indicators

#### Agency for Healthcare Research (2007)

Prevention Quality Indicators (represent hospital admission rates)	County Rate (per 100,000)	NC Rate (per 100,000)
Diabetes short-term complication	170.7	222.3
Diabetes long-term complication	310.4	294.4
Congestive heart failure	419.1	567.6
Adult Asthma	310.4	258.5

- 16,285 General Hospital Discharges (2008)
- 157 General Hospital Beds (2008)
- 437 Nursing Facility Beds (2008)

Pregnancy, Fertility, Abortion Rates (Rates per 1,000)	Union County	NC
2008 Pregnancy Rates (ages 35- 44)	33.4	28.7
2008 Fertility Rates (ages 35 – 44)	30.6	24.2
2008 Abortion Rates (ages 35 – 44)	3.1	4.4
<b>Uninsured Adults (2008)</b>	<b>Union County</b>	<b>NC</b>
Adults 19 to 64	20% (23,000)	19.5% (1,232,000)
Total Uninsured (0 to age 64)	18.2% (31,000)	19.5% (1,578,000)

Access to care and cost of care are key components in the health of a community. Statistics show that foregoing doctor and dental appointments reduces the chances for early diagnosis of health issues and chronic diseases. During the Community Health Assessment all residents expressed concerns about the cost of healthcare and the ability to access care locally. Cost as it relates to accessing care was illustrated in survey answers; 65% of adult respondents, 47% of senior respondents and 35% of teen respondents listing cost as the main reason they did not access care when they needed to. Cost was also the main reason people gave for not getting a prescription filled.

According to the assessment survey responses 21% of Union County adults are uninsured, 20% of teens are uninsured and 54% of seniors reported having Medicare / Medicaid. A 2008 needs assessment conducted by the United Way had similar outcomes, showing 661 Union County households or 30% of survey participants stating that a healthcare need went unmet due to cost, 20% went without preventative care and 12% opted out of any kind of care.

Union County presently has only one hospital although the county has seen an increase in emergency service facilities, with the opening of several new urgent care offices. Union County is not an exception, but more part of a common issue facing many communities, the number of practicing medical professionals has not kept pace with the population growth.

The latest statistics from the UNC Sheps Center illustrate the following medical professional availability.

<b>Health Professionals in Union County vs. NC, per 10,000 population</b>			
	<b>Union County 2007</b>	<b>Union County 2008</b>	<b>NC 2008</b>
<b>Dentists</b>	<b>2.2</b>	<b>2.2</b>	<b>4.3</b>
<b>Physicians</b>	<b>7.6</b>	<b>7.1</b>	<b>21.2</b>
<b>Primary Care Physicians</b>	<b>4.9</b>	<b>4.4</b>	<b>9.0</b>
<b>Pharmacists</b>	<b>6.6</b>	<b>7.6</b>	<b>9.3</b>
<b>Registered Nurses</b>	<b>43.5</b>	<b>45.1</b>	<b>95.1</b>
<b>Nurse Practitioners</b>	<b>1.2</b>	<b>0.8</b>	<b>3.4</b>
<b>Certified Nurse Midwives</b>	<b>0.5</b>	<b>0.5</b>	<b>1.2</b>
<b>Physician Assistants</b>	<b>1.0</b>	<b>1.0</b>	<b>3.5</b>
<b>Psychologists</b>	<b>0.3</b>	<b>0.4</b>	<b>2.0</b>
<b>Chiropractors</b>	<b>1.3</b>	<b>1.3</b>	<b>1.4</b>
<b>Occupational Therapist</b>	<b>1.6</b>	<b>1.7</b>	<b>2.5</b>
<b>Optometrist</b>	<b>0.6</b>	<b>0.6</b>	<b>1.1</b>
<b>Podiatrist</b>	<b>0.1</b>	<b>0.1</b>	<b>0.3</b>
<b>Physical Therapist</b>	<b>2.0</b>	<b>2.0</b>	<b>5.0</b>
<b>Respiratory Therapist</b>	<b>1.81</b>	<b>1.78</b>	<b>4.2</b>

## Mortality / Morbidity

During the 2008 Community Health Assessment, residents were asked which chronic diseases they were most concerned about, the responses to this question included the diseases that are among the most deadly in the county; Cancer, Heart Disease, Alzheimer's, and Diabetes.

The Health Department has taken measures to work toward improving health outcomes for residents with diabetes. The Diabetes Self Management Education Program is a new program within the Union County Health Department. The goal of this program is to help people better manage their diabetes in order to prevent complications from developing later in life. This program currently provides 10 hours of diabetes instruction/education to patients diagnosed with Type 2 Diabetes or Pre-Diabetes. The agency targets anyone in the community who has been diagnosed with either of these conditions (Type 2 Diabetes or Pre-Diabetes). The only other requirement is that they must be physician referred, meaning they cannot attend the program without a written referral from their doctor. Before attending any of the classes, the patient receives a 1 hour initial assessment visit which is one-on-one with a Registered Dietitian. After this visit they are scheduled to attend 8 hours of group education classes, usually broken down into 4 weekly classes (2 hours each). Three months after completing the classes they will return for a 1 hour group follow up. The topics that are covered throughout the program include living with diabetes, nutritional management, physical activity, medication, monitoring blood sugar and preventing complications. This program will be billing most insurance companies and there is currently no charge for those patients who are uninsured.

<b>Mortality Rates (Age Adjusted) (per 100,000)</b>	<b>Union County 2002 – 2006</b>	<b>Union County 2003 – 2007</b>	<b>NC 2003 -2007</b>
<b>Heart Disease</b>	<b>214.2</b>	<b>203.0</b>	<b>210.7</b>
<b>Cerebrovascular Disease</b>	<b>55.1</b>	<b>50.8</b>	<b>57.6</b>
<b>Diabetes</b>	<b>21.5</b>	<b>20.6</b>	<b>26.4</b>
<b>All Cancers</b>	<b>192.0</b>	<b>178.4</b>	<b>194.9</b>
<b>Trachea, Bronchus &amp; Lung Cancer</b>	<b>62.8</b>	<b>56.6</b>	<b>59.6</b>
<b>Colon rectum, Anus Cancer</b>	<b>17.8</b>	<b>18.4</b>	<b>17.8</b>
<b>Prostrate Cancer</b>	<b>21.4</b>	<b>23.7</b>	<b>28.3</b>
<b>Septicemia</b>	<b>12.8</b>	<b>12.8</b>	<b>14.2</b>
<b>Nephritis, Nephrotic Syndrome, Nephrosis</b>	<b>19.1</b>	<b>18.4</b>	<b>18.5</b>
<b>Pneumonia &amp; Influenza</b>	<b>15.4</b>	<b>15.1</b>	<b>21.4</b>
<b>Chronic Lower Respiratory Disease</b>	<b>41.3</b>	<b>41.0</b>	<b>47.5</b>
<b>Chronic Liver Disease</b>	<b>5.8</b>	<b>5.9</b>	<b>8.9</b>
<b>Alzheimer's Disease</b>	<b>50.8</b>	<b>54.2</b>	<b>28.3</b>
<b>Motor Vehicle Injuries</b>	<b>19.7</b>	<b>20.0</b>	<b>19.1</b>
<b>Suicide Rate</b>	<b>9.1</b>	<b>8.7</b>	<b>11.7</b>
<b>Homicide Rate</b>	<b>5.1</b>	<b>5.1</b>	<b>7.1</b>
<b>All Other Unintentional Injuries</b>	<b>19.7</b>	<b>20.0</b>	<b>27.8</b>

## **Communicable Disease / H1N1 Flu**

Union County has been impacted by the H1N1 Flu. The extent of the impact will not be known until the 2009 – 2010 Flu Season is past. The timeline of the illness in the US is illustrated below:

March 28, 2009 – 4 year old child contracts H1N1 in Mexico  
April 13, 2009 – first casualty of H1N1 in Mexico (adult female)  
April 17, 2009 – first US cases, 2 children in CA  
April 21, 2009 – US Health officials alert US doctors to a novel strain of influenza  
April 26, 2009 – Confirmed US cases rises to 20  
April 27, 2009 – World Health Organization raises Pandemic alert to Phase 4  
April 29, 2009 – First US Death (child in TX who had been ill after a trip to Mexico)  
May 3, 2009 – NC confirms case of H1N1 in Onslow County  
Sept 25, 2009 – First NC Death from H1N1  
Oct 1, 2009 – First shipments of H1N1 vaccine arrive in NC

At the local level, the Union County Health Department began participating in weekly webinars with the North Carolina Division of Public Health. The webinars provided information on the progression of H1N1 throughout the state, control measures being taken, and any updates to guidance from the National Center for Disease Control. Outside agencies were invited to participate in the webinars.

The Health Department has a Preparedness Coordinator that is actively training for various emergency scenarios, to include a pandemic. The Health Department has plans in place for response to disease related emergencies, as well as for the dissemination of vaccine.

To date, (November 1, 2009) the county has held several H1N1 vaccine clinics for targeted at-risk groups, as well as encouraging residents to get the seasonal vaccine and take the traditional preventive measures, proper and frequent hand washing, staying home from work and school when sick and maintaining healthy habits to build a strong immune system.

In the October 18th through the 24<sup>th</sup> NC Detect Surveillance Report for PHRST Region 7 indicated that Union County had a total of 1,168 visits to the Emergency Department (ED), of those visits 103 were due to influenza like illness, which equates to 8.8% of the visits, this was below the state which reported 11.7% of ED visits being due to influenza like illness.

**Adult Health Indicators / Communicable Disease  
Sexually Transmitted Diseases**

<b>Number of Cases</b>	<b>Union County 2006</b>	<b>Union County 2007</b>	<b>Union County 2003 – 2007</b>	<b>NC 2007</b>
<b>HIV Disease</b>	<b>9</b>	<b>18</b>	<b>52</b>	<b>1943</b>
<b>AIDS</b>	<b>9</b>	<b>9</b>	<b>36</b>	<b>953</b>
<b>Chlamydia</b>	<b>274</b>	<b>242</b>	<b>1227</b>	<b>30,612</b>
<b>Syphilis</b>	<b>3</b>	<b>0</b>	<b>11</b>	
<b>Gonorrhea</b>	<b>161</b>	<b>208</b>	<b>835</b>	<b>16,665</b>

**Adult Health Indicators / Communicable Disease**

<b>Number of Cases</b>	<b>Union County 2006</b>	<b>Union County 2007</b>	<b>NC 2007</b>	<b>Union County 2003 – 2007</b>
<b>Campylobacter</b>	<b>19</b>	<b>13</b>	<b>629</b>	<b>97</b>
<b>E. Coli</b>	<b>0</b>	<b>3</b>	<b>153</b>	<b>10</b>
<b>Hepatitis A</b>	<b>2</b>	<b>1</b>	<b>66</b>	<b>8</b>
<b>Hepatitis B</b>	<b>3</b>	<b>1</b>	<b>128</b>	<b>12</b>
<b>Hepatitis B Carrier</b>	<b>15</b>	<b>13</b>	<b>898</b>	<b>66</b>
<b>Hepatitis C</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>
<b>Lyme Disease</b>	<b>0</b>	<b>2</b>	<b>53</b>	<b>8</b>
<b>Meningococcal</b>	<b>1</b>	<b>1</b>	<b>22</b>	<b>6</b>
<b>Meningitis Pneumococcal</b>	<b>3</b>	<b>0</b>	<b>44</b>	<b>4</b>
<b>Rocky Mountain Spotted Fever</b>	<b>13</b>	<b>6</b>	<b>664</b>	<b>34</b>
<b>Salmonellosis</b>	<b>38</b>	<b>29</b>	<b>1845</b>	<b>181</b>
<b>Shigellosis</b>	<b>5</b>	<b>3</b>	<b>106</b>	<b>69</b>
<b>Whooping Cough</b>	<b>21</b>	<b>20</b>	<b>326</b>	<b>56</b>

## Dental Health

### **Union County Dental Clinic**

- **2,767 Patient Count**
- **4,542 Visit Count**
- **1,323 visits by children 10 to 14 years of age (largest age group seen)**
- **Clinic accepts Medicaid, NC Health Choice and Private Pay**

The Union County Health Department operates a dental clinic for both children and adults. The clinic is located inside the Health Department and offers a wide variety of comprehensive and preventative services, including cleanings, annual dental exams, x-rays and sealants. They also perform restorative fillings, extractions, crown and bridge, as well as full and partial dentures.

In 2008, the Dental Clinic brought two new dentists into the clinic, Dr. Anjali Seth and Dr. Heather Dowlin. Since the addition of the two dentists the number of patients being seen has increased, as well as the amount of restorative care provided and the availability to handle emergency appointments. Dr. Seth has further expanded the practice to include endodontic root canal therapy and fixed prosthodontics (dentures and partials).

The Union County Health Department also offers dental services through The Partnership for Children (Smart Start) in a grant called Smart Start Smiles. The Health Department received the grant for the second time in 2009. Through Smart Start Smiles, the Health Department is working to reduce dental disease among young children and pregnant women. The grant provides for screening, education, referrals, preventative and restorative care. Having Smart Start Smiles has allowed the clinic to work closely with pregnant women to reduce periodontal disease and improve overall oral hygiene for this population.

During a visit to the clinic, the dental hygienist will spend time with the patient at each cleaning to provide education on the importance of oral health, and to provide tips on how to properly keep teeth clean.

The clinic is reaching a population that otherwise may not have access to dental care, or dental education. The clinic accepts Medicaid, NC Health Choice and private pay.

## **Mental Health**

**Psychologists 0.4 per vs. NC Rate 2.0 (per 10,000 population) 2008**

**Daymark Recovery Mental Health Clients (July 2008 – June 2009)**

- **25,692 services provided**
- **2,141 clients served per month**
- **853 clients served Emergency & Mobile Crisis Services (youth and adult) (77.5 per month)**

**United Family Services (UFS) Clients (June 2008 – July 2009)**

- **8,966 clients served; counseling, education, crisis intervention, advocacy and economic independence**
- **3,373 counseling sessions to 1,101 clients in family and group sessions**
- **UFS runs 24 hour rape crisis hotline, responded to over 300 hotline calls**
- **Accompanied 35 rape victims to the hospital**
- **572 adult and child victims of sexual assault, and family members seen**
- **1,405 clients received court education, counseling and play therapy sessions for sexual assault**
- **UFS Advocacy Center “Tree House” provided 97 medical exams and forensic interviews to children as part of the sexual assault response team**
- **339 prevention education / awareness programs provided to 6,415 community members about child abuse and sexual assault**

Numerous agencies in Union County offer counseling services; two of the largest providers are Daymark Recovery Services and United Family Services.

The need for mental health services in the county continues to increase for all ages.

In 2008 – 2009 Daymark treated an average of 2,141 clients each month, which included mental health, substance abuse services for both children and adults. In addition to the in-house services, they added their mobile crisis services that are done in private residences. In the first year that mobile crisis services were available 853 requests were responded to, which averaged out to 77.5 per month.

In January 2010 a new Crisis Recovery Center is scheduled to open in the county. This facility will provide crisis stabilization beds for adults dealing with mental illness and substance addiction. The addition of this local facility will assist with the number of patients waiting at the local emergency room for a bed in a crisis stabilization facility. In the past patients were waiting for as many as three days for a bed to open up.

## Emergency Services & Safety

### 2008 – 2009 Emergency Statistics / Injury Indicators

- **332,291 calls received into 911**
- **159,900 dispatched 911 calls**
- **8.39 minutes, average response time for Union EMS**
- **10,858 Union EMS Transports**
- **56.8% Union EMS Transports went to CMC Union**
- **36.6% Union EMS Transports went out of County**
- **3,846 motor vehicle crashes (2008)**
- **20 crashes resulting in fatalities (2008)**
- **205 crashes involving alcohol (2008)**
- **4 crashes involving alcohol with fatalities (2008)**
- **9.2% of total reported crashes in NC in 2008 cited deer as a factor**

With the residential growth that Union County has been experiencing for the past few years, the demand for emergency services and care has also expanded. Many factors become critically relevant when seconds count in saving lives. In a truly life threatening emergency, residents want to know that an ambulance and skilled medical personnel are one 911 call away. Once the call is placed it is also crucial to know how long it will take that care to reach the patient. The increasing population and expanding call volume, along with naturally occurring emergencies such as H1N1, are forcing the county to examine their ability to respond to both daily individual emergencies and large scale countywide health threats.

The Union County Health Department has a Preparedness Coordinator that works on contract to draft strategic response plans for large scale emergencies. Plans include logistic models for dispensing medication, emergency operation procedures and notification, communication plans for the media and the public. The Coordinator is also responsible for participating in and conducting preparedness drills at both the local and regional level. In 2009, Union County established the Local Health Information Team, a collaboration of agency representation that will be used to get information out to key agencies and the public at large during an emergency.

## Environmental Health

### **Environmental Health Factors and Statistics**

- **Jeff Knight named Environmental Health Director**
- **1585 Inspections in Food and Lodging Establishments**
- **26 Inspections of Nursing Homes, Adult Day Cares**
- **303 Well Permits Issued**
- **4871 Site Visits for Septic Permits, Inspections of wastewater systems and complaints**
- **462 wastewater system improvements issued**
- **273 inorganic water samples taken**
- **124 water samples taken with coli form present**
- **11 water samples taken with E. Coli bacteria present**
- **7 vector complaints**
- **0 Methamphetamine Labs (Review of Abatement Plans)**
- **29 solid waste complaints**
- **384 loads of yard debris disposed of**
- **352 swimming pool, wading pool and spa inspections**
- **2 child lead investigations, 1 child lead poisoning case**
- **18 Tattoo Artist Inspections**
- **203 Childcare Facility Inspections**

In May 2009, new legislation was signed making changes to state laws governing smoking in public places. The law created a new statewide prohibition and expanded local authority to adopt local smoking laws. The law will go into effect on January 2, 2010. This law allows local governments to regulate smoking in public places, while retaining the authority to regulate smoking in local government buildings and local government vehicles. According to the UNC School of Government Health Law Bulletin, the definition of local government is, "a local political subdivision of this State, an airport authority, or an authority or body created by an ordinance, joint resolution or rules of any such entity." (Board of County Commissioners, Board of Health, City Council and Airport Authorities) all have the ability to take action to regulate smoking in their jurisdiction.

After January 2, 2010, the statewide prohibitions on smoking will include restaurants, bars and lodging establishments that prepare and serve food and drinks. The law will be administered and implemented by owners and managers of the establishments. In order to comply they must do the following; conspicuously post no smoking signs, remove all indoor ashtrays and direct any person who is smoking to stop. The enforcement of the law is dependent upon who is violating the law. If a smoker in an establishment refuses to comply the owner may call law enforcement to issue an infraction (may carry a fine of up to \$50). If the owner or manager of an establishment refuses to comply, the local Health Director has the authority to assess an administrative penalty (monetary fine of up to \$200 per day). The owner / manager must receive at least two written warnings before being fined. The fine can be appealed to the Board of Health and ultimately to the courts. No person can be charged with a misdemeanor for violations on the prohibition of smoking, but they may be charged with a civil injunction as an enforcement tool.

## **Water Quality and Access**

The 2008 Community Health Assessment asked residents what their environmental health concerns were. The ability to access healthy water was a resounding response. Specifically mentioned was the presence of arsenic in well water in Union County and the fact that county water was not available to all county residents. Although the Health Department does have a Well Program housed in the Environmental Health Division of the Department, it is strictly a regulatory program and does not influence where the county water lines are installed.

Taking into consideration the fact that arsenic is present in county well water, and that the Department is already taking water samples as part of the existing well program, the Health Department drafted a Community Action Plan dealing with the residents' concerns regarding the presence of arsenic in their well water. The objective of the Community Action Plan is to partner with a University that has a School of Health on a well water research project. The focus of the research collaboration will be to determine whether or not a correlation exists between high arsenic levels in county well water with the incidence of chronic disease in the county.

In August 2009 the Health Department began discussions with Duke University Nicholas School of the Environment and Earth Sciences regarding a study that was already underway in Union County. Duke University had begun their study in 2007 working on the occurrence of naturally occurring contaminants in private wells in NC and the distribution and occurrence of arsenic in groundwater in Union County. Duke's research has shown that Union County has the highest level of carcinogenic arsenic in NC. Exposure to arsenic levels in drinking water has been associated with increased risk of cancer and other non-cancer diseases.

Duke sent a letter to the Health Department in September 2009, after discussions between the University and the Health Department, the letter proposed a collaboration on research, the name of the proposed project would be: Environmental toxins and arsenic exposure: an integrated research for evaluating health disparities in the communities in Union County, NC.

In September 2009, the Board of County Commissioners approved the bid process for improvements to the county's water system. These improvements would allow the county's water system to accommodate more water from Anson County. Although a current agreement with Anson allows for up to 4 MGD of water, Union County's limited infrastructure has a capacity limit only allowing us to receive 1.9 MGD of the contracted capacity during peak times. With the proposed improvements, the contracted capacity could be accepted, with the potential to distribute up to 6 MGD.

The specific infrastructure improvements would include a new US 74 Water Booster Pumping Station and construction of a 24-inch water main from the pump station to the existing Marshville elevated water tank.

## Air Quality

### Health Indicators

- **0 Code Purple Ozone days in Charlotte Region (2008)**
- **0 Code Red days in Charlotte Region (2008)**
- **10 Code Orange Days Charlotte Region (2008)**
- **277.8 Pediatric Asthma Hospitalization Rate (per 100,000 population) 2007**
- **310.4 Adult Asthma Hospitalization Rate (per 100,000)**
- **277.8 Pediatric Asthma Hospitalization Rate (per 100,000)**
- **Union County remains in 8 hour ozone non-attainment status**

Air Quality in Union County has been negatively impacted due to the influx of people and vehicles. Vehicle exhaust is one of the main sources of air pollution in the Charlotte Region. In 2008, the eight-county Charlotte region exceeded the Environmental Protection Agency (EPA) health standard for ground-level ozone having 25 code orange days. Ozone pollution presents a threat to the health and quality of life of people living in the Charlotte area.

Union County did experience a decrease in the number of poor air quality days in 2008. with no documented code purple or red ozone days. There were 10 code orange ozone days, which means they are unhealthy for sensitive groups (people with lung disease, children, older adults, people who are active outdoors). The recommendation on orange days is that sensitive people reduce prolonged heavy outdoor exertion.

Children are the most at risk from exposure to ozone due to the fact that their respiratory systems are still developing. This makes the children more susceptible to respiratory conditions. Asthmatics are especially at risk, regardless of age. All asthmatics suffer from ozone exposure since ozone can aggravate asthma which can trigger attacks, it can be the source for increased use of asthma medications, the need for medical treatment and increase the number of visits to the hospital and emergency clinics.

The incidence of asthma in children has increased significantly in the past two decades, with that came increased hospitalization, death and restricted activity. Asthma was made a 2010 health objective by the state. The intent is to reduce the number of school days missed by children with asthma and to reduce Asthma Hospitalization rates.

The Union County Environmental Health Division (specifically Children's Environmental Health) is taking steps toward implementing an indoor air quality program that would include "The Healthy Homes Initiative". The Healthy Homes Initiative, developed through the U.S. Department of Housing and Urban Development takes a holistic approach to indoor air quality. The Environmental Health Specialist would educate a homeowner in ways of improving air quality in the home such as reducing dust, allergens and pests, addressing mold issues, reducing volatile organic chemicals and the use of pesticides and maintaining the indoor ventilation systems of the home.

## **Environmentally Friendly Practices in Union County**

At the local level Union County is taking steps toward reducing its carbon footprint. In April 2009 the county, along with the City of Monroe held their first annual Earth Day event. The event was dedicated to showcasing ways to live utilizing “green practices”, while providing residents the opportunity to drop off items to be recycled. At the one day event an impressive amount of items were presented for recycling; 12 tons of household hazardous waste, 684 pounds of electronics, 250 gallons of oil, 33 oil filters, 225 tires and 3,356 pounds of batteries. They hope to increase these numbers at the 2010 event, to be held April 17, 2010.

A new NC State Law went into effect October 1, 2009 banning several items from landfills; plastic bottles, motor oil filters and wooden pallets. Additional items will be added January 1, 2011; televisions and computer equipment. Union County intends to offer recycling on these items by the end of 2009.

Also in 2009, the Board of County Commissioners passed a “Purple Pipe” resolution requesting state legislative and administrative action to facilitate and encourage the use of reclaimed water for irrigation purposes. Utilizing the reclaimed water will help to alleviate the usage of the potable water supply for irrigation.

Purple has become the universal color for recycled water, the practice of installing purple pipes has become popular in cities and counties all over the country. These pipes carry the reclaimed water to irrigate places like parks, pastures, nurseries, golf courses, sport complexes, common areas in neighborhoods and medians in roads.

## **Conclusions**

In FY '08 –'09 Union County faced many challenges, especially the declining economy. Due to the economic situation at all levels, nationally, at the state level and locally, the county was forced to cut budgets to an extent that forced the county to lay off employees. Many local businesses and industries were impacted as well, forcing layoffs and lost revenues. In August the county's unemployment rate reached double digits.

Having so many county residents out of work equated to higher numbers of uninsured residents. The number of children between 0 and 18 uninsured in the county exceeded the state percentage rate for uninsured children. The UNC Sheps Center County Level Data for the Non-Elderly Report, Data Snapshot 2008 listed 14.4% or 8,000 children in the county as having no health insurance. Adults between the ages of 19 and 64 are another age bracket that exceeds the state for uninsured by percentage, Union County has 20% (23,000) uninsured adults in this age group, versus the state having 19.5% uninsured in this same age bracket. The total uninsured percents for uninsured age 0 to 64 were listed as below the state, but not by a significant amount, 18.2% (31,000 residents) are uninsured versus 19.5% of NC residents. These uninsured residents will still need to access healthcare. With numbers and percentages this high, the Health Department, Department of Social Services, United Way Agencies and many other support service agencies will be turned to and called upon more frequently and by a broader range of people.

With the increasing uninsured rates, the Health Department must continue to improve the logistics and technology that supports and drives the business aspects of the department. If the improvements are made; and conversion to open access scheduling and to the new HIS billing system are all implemented a more efficient department should emerge. Although the majority of these changes will be invisible to the clients, the care they receive should be more expedient and maintain the same level of service. These efforts, along with the collaboration in the community toward indigent care, should improve access to healthcare both within the Health Department and in the community.

The Health Department will focus on the goals in both the agency's strategic plan and in the community action plans. The issues identified and selected as priorities in the Community Health Assessment in 2008 have not gone away in the year since the report was completed. The issues are real and the impacts are reality based. The issues can be seen in the rising uninsured rates, the higher rates of obesity and diabetes, the increased asthma rates, higher Alzheimer's rate and concerns regarding accessing county water rather than having well water with known arsenic levels and unknown health ramifications.

Given the fiscally challenging economic times in which the agency is trying to uphold its mission to serve the citizens of Union County in the prevention of disease, promotion of health, and the protection of our community's health. Community collaboration is more important than ever to meet the needs and work on health related issues. The Department will seek out new partnerships and pursue grant funding to support and carry out existing missions while taking on new challenges that will emerge, such as the H1N1 flu.

## **2010 Goals**

- **Continue to provide quality healthcare at the Union County Health Department**
- **Increase public awareness of the Union County Health Department programs and services through community outreach.**
- **Work toward healthy lifestyles and improved quality of life for Union County residents**
- **Formal Accreditation of the Health Department**
- **Plan for Healthy Carolinian Certification**
- **Plan for new Health Department facility in 2015**
- **Access to Healthcare: Provide adequate access and improved clinical efficiencies to improve the quality of healthcare for patients at the Health Department. Continue to plan for and implement open access scheduling in the Health Department clinics. Work in the community collaboratively toward an indigent healthcare facility or function within the county.**
- **Provide adequate access to affordable, quality dental care.**
- **Decrease the county minority teen pregnancy rate (2006) by 10%  
Minority: Teen Pregnancy Rate for girls 15 to 19 is 101.5 (per 1,000),(exceeds the NC rate of 82.1) Develop a partnership with the Union County Public Schools (UCPS) to reduce Union County's STD and teen pregnancy rates.**
- **Water Quality and Access: identify whether or not a correlation exists between high arsenic levels in county well water and the incidences of chronic disease and the health impacts and resulting long term effects of high arsenic levels in Union County drinking water wells.**
- **Environmental Health 100% Compliance: Protection of human health through the practice of modern environmental health science, specifically Restaurant Safe Food Handling and protection of groundwater. On an annual basis the Environmental Health Division will achieve 100% compliance on Food, Lodging and Institutions inspections, On an annual basis the Environmental Health Dpt will obtain 100% compliance of all Type III, IV and V Systems on meeting the rotational inspection requirements.**
- **The Union County EPI Team will provide a plan and obtain the necessary infrastructure for a coordinated public health response to an outbreak or incidence**
- **Assist and educate Union County seniors on conditions impacting their health and quality of life.**

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