The CDC has reported West Nile Virus (WNV) in 48 states, for a total of 3,142 cases and 134 deaths as of September 12, 2012. North Carolina has confirmed 6 human cases of (WNV) in 6 counties, including one confirmed case in Mecklenburg County.

Approximately 1 in 5 people will develop symptoms from WNV which may include; fever, headache, fatigue, skin rash, swollen lymph glands, and sometimes eye pain. Less than one percent of those infected will develop serious neurologic illness. Symptoms of more severe disease may include; fever, ataxia, seizures, weakness, changes in mental status, myelitis, polyradiculitis, maculopapular rash (neck, trunk, arms, legs), possible flaccid paralysis. Incubation is between 2 and 14 days.

Leukocyte counts in peripheral blood may be normal or even elevated with lymphocytopenia and anemia. Hyponatremia may be present, particularly among patients with encephalitis. CSF will show increased lymphocytes with elevated protein, normal glucose. CT and MRI are not useful in diagnosis however MRI may reveal leptomeningeal enhancement or parenchymal signal changes.

- **Laboratory testing is required for a confirmed diagnosis.** The most efficient diagnostic method is detection of IgM antibody to WNV in serum collected within 8 to 14 days of illness onset or CSF collected within 8 days of illness onset using the IgM antibody-capture, enzyme-linked immunosorbent assay (MAC-ELISA).
- PCR is used in the diagnosis of WNV infections in humans, although it has limited usefulness because of transient and low viremias. With PCR, WNV genetic material can be detected in CSF in up to 50% of patients who present with acute West Nile meningoencephalitis. Because this is not a very good sensitivity, a negative test does not rule out a WNV infection. Serology should be used in these patients.
- WNV is reportable to the local Health Department within 7 days of diagnosis. A Communicable Disease Reporting Form can be found on page 6.

Prevention of mosquito borne illness is essential in patient education. Insect repellent and elimination of breeding sites, including standing water, are useful during this active mosquito season.

- Insect repellents that contain DEET are most protective; however there are special considerations for the use of DEET containing products with children. Please visit the [Healthy Children website](http://www.healthychildren.org) for additional information and recommendations.
- For environmental prevention suggestions go to the MeckHealth.org

For additional information on WNV please contact Beth Young at 704.336.5076 or Elizabeth.Young@MecklenburgCountyNC.gov.
Hepatitis C in Baby Boomers – New Screening Guidelines

On August 17, 2012, the CDC released recommendations for the identification of chronic Hepatitis C virus (HCV) infection among persons born during 1945-1965.

Baby boomers account for 3/4 of all HCV infections in the United States, 73% of the HCV-associated mortality, and are at the greatest risk for liver cancer and HCV-related liver disease. The new recommendations augment the 1998 and 1999 HCV testing guidelines by adding a new target population. The 1998 and 1999 recommendations have had limited success since a substantial number of HCV-infected persons in the United States remain unaware of their infection.

The 1998 CDC guidelines recommended HCV testing for high risk persons who: 1) had ever injected drugs; 2) were ever on chronic hemodialysis; 3) received blood transfusions or organ transplants before July 1992; 4) received clotting factors concentrates produced before 1987; 5) had a recognized exposure; or 6) had persistently elevated alanine aminotransferase levels (ALT). In 1999, HCV testing was recommended for persons infected with HIV.

2012 Recommendations:

Adults born during 1945-1965 should receive one-time testing for HCV without prior ascertainment of risk.

All persons identified with HCV infection should receive a brief alcohol screening and intervention as clinically indicated, followed by referral to appropriate care and treatment services for HCV infection and related conditions.

Persons with a negative Hepatitis C antibody test (anti-HCV) should be reassured that they are not infected unless they were recently at risk for infection. Persons who are anti-HCV positive but have an HCV RNA-negative test should be informed that they do not have HCV infection. Persons who test positive for both anti-HCV and HCV RNA should be informed that they have HCV infection and need further medical evaluation for liver disease and possible treatment.

The full 2012 recommendations can be viewed at www.cdc.gov/mmwr (Recommendations and Reports, August 17, 2012). For further questions, contact Jane Hoffman at 704.336.5490 or Jane.Hoffman@MecklenburgCountyNC.gov.

Food Service Health Policy

On September 1, 2012, North Carolina adopted new “Rules Governing the Sanitation of Food Service Establishments”. One of the significant changes pertains to a section on Employee Health Policy. Food service employees are now to report to their supervisors if they are experiencing vomiting, diarrhea, jaundice, sore throat with fever and/or an infected lesion or infection on their hands, wrists, or exposed areas of the arm. They must also report if they were recently at risk for infection such as vomiting, diarrhea, jaundice, sores, or an infected lesion or infection on their hands, wrists, or exposed areas of the arm, within 3 days.

This periodical is written and distributed quarterly by the Communicable Disease Control Program of the Mecklenburg County Health Department for the purpose of updating the medical community in the activities of Communicable Disease Control. Program members include: Health Director—E. Wynn Mabry, MD; Medical Director—Stephen R. Keener, MD; Deputy Health Director—Bobby Cobb; Director, CD Control—Carmel Clements; Sr. Health Manager—Lorraine Houser; CD Control nurses—Freda Grant, Jane Hoffman, Penny Moore, Beth Quinn, Belinda Worsham; –Elizabeth Young (Childcare nurse), Earlene Campbell; Coleman (TB Outreach/Adult Day Health); Rabies/Zoonosis Control—Al Piercy; Health Supervisor—Carlos McCoy; DIS—Mary Ann Curtis, John Little, Michael Rogers, Jose’ Pena; Preparedness Coordinator—Bobby Kennedy; Office Assistants—Pamela Blount, Vivian Brown, Janet Contreras.

Lorraine Houser Editor
Freda Grant, Beth Quinn, Beth Young Co-Editors

Did you know...

...that chronic Hepatitis C is not reportable to the Health Department? Report acute hepatitis C within seven days if clinical and laboratory criteria meet the CDC’s case definition for confirmed acute hepatitis C.
Meningococcal disease is a serious bacterial illness. It is caused by the bacterium Neisseria meningitidis. It is a leading cause of bacterial meningitis in children 2 through 18 years old in the United States. Meningococcal disease also causes blood infections. There are several strains or ‘groups’ of meningococcal bacteria; A, B, C, W-135, X and Y.

Anyone can get meningococcal disease, but it is most common in infants less than one year of age and people 16-21 years. Children with certain medical conditions, such as lack of a spleen, have an increased risk of getting meningococcal disease. College freshmen living in dorms are also at increased risk.

About 1,000 – 1,200 people get invasive meningococcal disease each year in the United States. The majority of victims will recover fully, although even when they are treated with antibiotics, 10-15% of these people die. Of those who live, another 11%-19% lose their arms or legs, have problems with their nervous systems, become deaf or mentally impaired, or suffer seizures or strokes.

North Carolina averaged 22 cases of meningococcal disease per year from 2006 to 2010. Fifteen cases were reported in 2011.

Mecklenburg County reported eight cases of meningococcal disease between January 1, 2007 and July 10, 2012. Five cases had meningitis, two had blood infections and one had infected synovial fluid. The ages ranged from 10 months to 88 years. One was serogroup B, two were serogroup C, three were serogroup Y, one was non groupable and one had a sterile culture.

There are two kinds of meningococcal vaccines in the United States:

- Meningococcal conjugate vaccine (MCV4) is the preferred vaccine for people 55 years of age and younger.
- Meningococcal polysaccharide vaccine (MPSV4) has been available since the 1970s. It is the only meningococcal vaccine licensed for people older than 55.

Both vaccines can prevent 4 types of meningococcal disease (A, C, Y, and W-135), including 2 of the 3 types most common in the United States (C and Y) and two types that cause epidemics in Africa (A and W-135). Because the meningococcal vaccine does not include type B, which accounts for about one-third of cases in adolescents, it does not prevent all cases of meningococcal disease.

For more information, contact Beth Quinn at 704.336.5398 or Elizabeth.Quinn@MecklenburgCountyNC.gov.

CDC – A Timeline

2002 CDC reported that U.S. newborn HIV infections were down 80 percent since 1981.
2003 SARS was reported in Asia. CDC provided guidance for surveillance, clinical and laboratory evaluation, and reporting.
2004 CDC provided support for laws restricting access to over-the-counter medications used in methamphetamine production in Georgia.
2005 Rubella was eliminated in the United States.
2006 CDC celebrates 60th anniversary.
2007 CDC issues rare federal order of isolation to detain a man with TB from traveling. The last such order was issued in 1963.
2008 Large multi-state foodborne outbreaks are detected and investigated, revealing gaps in food safety and the need to improve prevention efforts.
2009 CDC identifies the novel H1N1 influenza virus. The H1N1 pandemic dominated CDC activity for the year, and demonstrated CDC’s unique ability to assess and explain risk.
2010 In the aftermath of the 7.0 magnitude earthquake in Haiti, CDC response efforts help prevent 7,000 deaths from cholera.
2011 CDC marks the 65th anniversary of its founding on July 1, 1946.
Infection Related to Neti Pots

Neti pots are increasingly popular in the United States. They look like tea pots with long spouts. They are used to rinse the nasal passages with saline solution. The pots are a popular treatment for congested sinuses, colds, allergies, and dry nasal passages. The neti pot is generally safe if used and cleaned properly.

A few people in the United States have died from a rare brain infection that was linked to the use of tap water contaminated with an amoeba called *Naegleria fowleri*. *Naegleria fowleri* infects people when water containing the amoeba enters the body through the nose. The amoeba travels up the nose to the brain where it destroys the brain tissue. Improper use of neti pots may have caused two deaths in Louisiana in 2011.

A health care provider should determine if nasal rinsing is safe and recommended for each individual. The device should not be used if there is a fever, nosebleed or a headache present. Patients should be instructed to follow all directions accompanying the neti pot or to consult a health care provider if there are additional questions.

For health reasons, the water should be one of the following: distilled or sterile; boiled for 3-5 minutes, then cooled, stored in a clean, closed container for use within 24 hours; or water passed through a filter with an absolute pore size of 1 micron or smaller. The device should be washed with distilled, sterile, or boiled/cooled tap water. After cleaning, the device should be allowed to completely air dry or dry the inside and outside with a paper towel.

For more information, contact Jane.Hoffman@MecklenburgCountyNC.gov or 704.336.5490.

Typhoid Fever Update

Typhoid fever is a serious bacterial infection caused by the bacterium *Salmonella typhi*. Typhoid fever remains common in the developing world where handwashing is less frequent and water is contaminated with sewage. Worldwide, over 21 million persons each year are infected. Approximately 400 cases occur each year in the United States. The risk of infection is highest for international travelers visiting friends and relatives in countries where typhoid fever is endemic.

North Carolina reported thirty-six (36) cases of acute typhoid fever between 2007-2011. Twelve (12) cases of acute typhoid fever between the ages of 3 and 68 years were reported in residents of Mecklenburg County in 2007-2011. Eleven reported travel to India and one traveled to Indonesia. None reported receiving typhoid vaccine within the two years prior to their travel. Six were male and six were female. One was employed as a foodhandler. Two cases occurred in one household. As required by state law, all persons diagnosed with typhoid fever were required to submit stool samples until they had three consecutively negative stool cultures. No typhoid carriers were identified in this five year period.

This infection is spread by ingestion of food or water contaminated with feces or urine from infected persons. Symptoms of acute infection may include prolonged fever, marked headache, weakness, abdominal pain, and loss of appetite.

Two vaccines are available for persons traveling to endemic areas. The first vaccine is a single dose polysaccharide antigen vaccine approved for person’s age 2 years and up with a booster needed every 2 years. The second vaccine is a live, oral vaccine given in four doses approved for person’s age 6 years and up with a booster every 5 years.

Using precautions with food and water while traveling in developing countries can prevent many illnesses including typhoid fever. The CDC recommends the following actions to avoid exposure to *Salmonella typhi*: drink bottled carbonated water; avoid ice unless it is made from bottled or boiled water; eat foods that are thoroughly cooked and steaming hot; avoid raw fruits and vegetables unless you can peel them yourself; and avoid food and beverages from street vendors. Travel recommendations can be obtained at CDC.gov/travel.

For further information, contact Jane Hoffman at 704.336.5490 or Jane.Hoffman@MecklenburgCountyNC.gov.

Did you know...

...that a study released by the CDC in February, 2012 identified 48 U.S. outbreaks involving pasteurized dairy products during 1993-2006? Pasteurization does not protect against contamination that might occur after pasteurization. Outbreaks in pasteurized products were related to contamination by an infected food handler and/or failure of the consumer to store the product at an appropriate temperature.
Gonorrhea—Important Treatment Information

Effective treatment is a cornerstone of U.S. gonorrhea control efforts, but treatment of gonorrhea has been complicated by the ability of Neisseria gonorrhoeae to develop antimicrobial resistance. Data from CDC's Gonococcal Isolate Surveillance Project (GISP) describes laboratory evidence of declining cefixime susceptibility among urethral N. gonorrhoeae isolates collected in the United States during 2006–2011 and updates CDC's current recommendations for treatment of gonorrhea.

Infection with N. gonorrhoeae is a major cause of pelvic inflammatory disease, ectopic pregnancy, and infertility, and can facilitate HIV transmission. In the United States, gonorrhea is the second most commonly reported notifiable infection, with >300,000 cases reported during 2011. North Carolina's reported cases ranged from 16,666 in 2007 to 17,158 in 2011. Females accounted for 58% of the 2011 cases compared to 42% for males. The majority of cases were reported in the 15–19 age group at 27% and 20-24 age group at 39% for a total of 66% of the 2011 cases. The 2011 case rate for North Carolina was 179.9/100,000. Mecklenburg County's reported cases ranged from 1,181 in 2007 to 2,269 in 2011. The 2011 case rate for Mecklenburg County was 246.7/100,000.

In 2007, emergence of fluoroquinolone-resistant N. gonorrhoeae in the United States prompted CDC to no longer recommend fluoroquinolones for treatment of gonorrhea, leaving cephalosporins as the only remaining recommended antimicrobial class. To ensure treatment of co-occurring pathogens (e.g., Chlamydia trachomatis) and reflecting concern about emerging gonococcal resistance, CDC's 2010 STD Treatment Guidelines recommended combination therapy for gonorrhea with a cephalosporin (ceftriaxone 250 mg intramuscularly or cefixime 400 mg orally) plus either azithromycin orally or doxycycline orally, even if nucleic acid amplification testing (NAAT) for C. trachomatis was negative at the time of treatment.

CDC's current recommendations for treatment of uncomplicated urogenital, anorectal, and pharyngeal gonorrhea is combination therapy with ceftriaxone 250 mg intramuscularly and either azithromycin 1 g orally as a single dose or doxycycline 100 mg orally twice daily for 7 days. CDC no longer recommends cefixime at any dose as a first-line regimen for treatment of gonococcal infections. If cefixime is used as an alternative agent, then the patient should return in 1 week for a test-of-cure at the site of infection.

Treatement of patients with gonorrhea with the most effective therapy will limit the transmission of gonorrhea, prevent complications, and likely will slow emergence of resistance.

The complete publication can be found at CDC's MMWR August 10, 2012 issue.

For more information, contact Beth Quinn at 704.336.5398 or Elizabeth.Quinn@MecklenburgCountyNC.gov.

Scabies—Treatment and Control Measures

Scabies, or itching mites, are commonly transmitted through prolonged direct and/or indirect contact. The most common symptom of scabies is intense itching, especially at night, along with a papular rash. Persons with crusted (Norwegian) scabies may not show the usual signs and symptoms of scabies such as the characteristic rash or itching.

Control measures include laundering clothes, bedding, towels, or other fabric in a hot washer and dryer. Any items that cannot be laundered may be vacuumed and/or placed in a plastic bag for a minimum of 4 days. Mites cannot live more than 48-72 hours away from a human host. Pesticides and other chemical fumigation of the affected environment are not recommended.

Primary treatment is Permethrin 5% cream, applied from the head to the soles of the feet (unnecessary to apply to scalp). Two (or more) applications, each about a week apart, may be necessary to eliminate all mites, particularly when treating crusted scabies.

Infants and the elderly may require treatment of the scalp. Permethrin may be used in infants over the age of 2 months. One treatment is generally curative however a second treatment may be necessary if itching persists 2 weeks after initial treatment.

Prophylactic treatment of casual contact is not recommended, however treatment of household and sexual contacts is necessary.

Scabies rash and itching may persist for 2 to 4 weeks after effective treatment. If itching or rash persists beyond 2-4 weeks, retreatment of Permethrin cream or treatment with a different scabicide may be necessary.

For additional information contact Beth Young at 704.336.5076 or Elizabeth.Young@MecklenburgCountyNC.gov.
**Communicable Disease Control**

**UPDATE**

North Carolina Department of Health and Human Services
Division of Public Health • Epidemiology Section
Communicable Disease Branch • Immunization Branch (WCH Section)

**CONFIDENTIAL COMMUNICABLE DISEASE REPORT—PART 1**

<table>
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<tr>
<th>Patient's First Name</th>
<th>Middle</th>
<th>Last</th>
<th>Sex</th>
<th>Date of Birth (mm/dd/yyyy)</th>
<th>Sex</th>
<th>Parent or Guardian (of minors)</th>
<th>Patient ID</th>
<th>SSN</th>
<th>Phone</th>
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**DATE OF SYMPTOM ONSET**

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<tr>
<th>Age</th>
<th>Age Type</th>
<th>Race (check all that apply):</th>
<th>Ethnic Origin</th>
<th>Patient's Street Address</th>
<th>City</th>
<th>State</th>
<th>ZIP</th>
<th>County</th>
<th>Phone</th>
</tr>
</thead>
</table>

**Initial Source of Report to Public Health:**

- Health Care Provider (specify):
  - Hospital
  - Private clinic/practice
  - Health Department
  - Correctional facility
  - Laboratory
  - Other

**Contact Person/Title:**

**Name:**

**Phone:**

**Fax:**

**Date Local Health Department Notified:**

**Where was disease/condition most likely acquired?**

- In patient's county of residence
- Outside county, but within NC - County:
- Out of state - State/Territory:
- Out of USA - Country:
- Unknown

**Local Health Department Use Only**

**Communicable Disease Nurse or Designee Reporting to DPH:**

**Name:**

**Phone:**

**Date sent to DPH:**

**Local Health Director's Signature or Stamp Approving Report**

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**CLINICAL INFORMATION**

Specify patient symptoms and treatment:

For sexually transmitted diseases only—if patient was treated, specify medication, dosage, & duration:

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**DIAGNOSTIC TESTING**

**LABORATORY TESTING:**

<table>
<thead>
<tr>
<th>Collection Date</th>
<th>Result Date</th>
<th>Type of Test</th>
<th>Specimen Source</th>
<th>Results (include serogroup/strain)</th>
<th>Reference Range</th>
<th>Lab Name—City/State</th>
</tr>
</thead>
</table>

**Attach Lab Report**

DHHS 2124 (Revised January 2008) EPIDEMIOLOGY
Reporting Communicable Diseases – Mecklenburg County

To request N.C. Communicable Disease Report Forms, telephone 704.336.2817
Mark all correspondence “CONFIDENTIAL”

Tuberculosis:
TB Clinic
Mecklenburg County Health Department
2845 Beatties Ford Road
Charlotte, NC  28216

Sexually Transmitted Diseases, HIV, & AIDS:
HIV/STD Surveillance
Mecklenburg County Health Department
700 N. Tryon Street, Suite 214
Charlotte, NC  28202

All Other Reportable Communicable Diseases including Viral Hepatitis A, B & C:
Report to any of the following nurses:
Freda Grant, RN 704.336.6436
Jane Hoffman, RN 704.336.5490
Elizabeth Quinn, RN 704.336.5398
Belinda Worsham, RN 704.336.5498
Penny Moore, RN 704.353.1270
Communicable Disease Control 704.353.1202
Mecklenburg County Health Department
700 N. Tryon Street, Suite 271
Charlotte, NC  28202

Animal Bite Consultation / Zoonoses / Rabies Prevention:
Al Piercy, RS 704.336.6440
Communicable Disease Control 704.432.6708
Mecklenburg County Health Department
618 N. College St.
Charlotte, NC  28202
or State Veterinarian, Carl Williams, DVM 919.707.5900
State after hours 919.733.3419

Child Care Nurse Consultant:
Elizabeth Young, RN 704.336.5076
Communicable Disease Control 704.353.1202
Mecklenburg County Health Department
700 N. Tryon Street, Suite 271
Charlotte, NC  28202

Suspected Food borne Outbreaks / Restaurant, Lodging, Pool and Institutional Sanitation:
Food & Facilities Sanitation (Mon-Fri) 704.336.5100
Mecklenburg County Health Department (evenings; Sat/Sun) 704.432.1054
700 N. Tryon Street, Suite 208 (pager evenings; Sat/Sun) 704.580.0666
Charlotte, NC  28202
Communicable Disease Control FAX 704.336.5306

Mecklenburg County Health Department