

Catawba Neisseria Meningitis Investigation

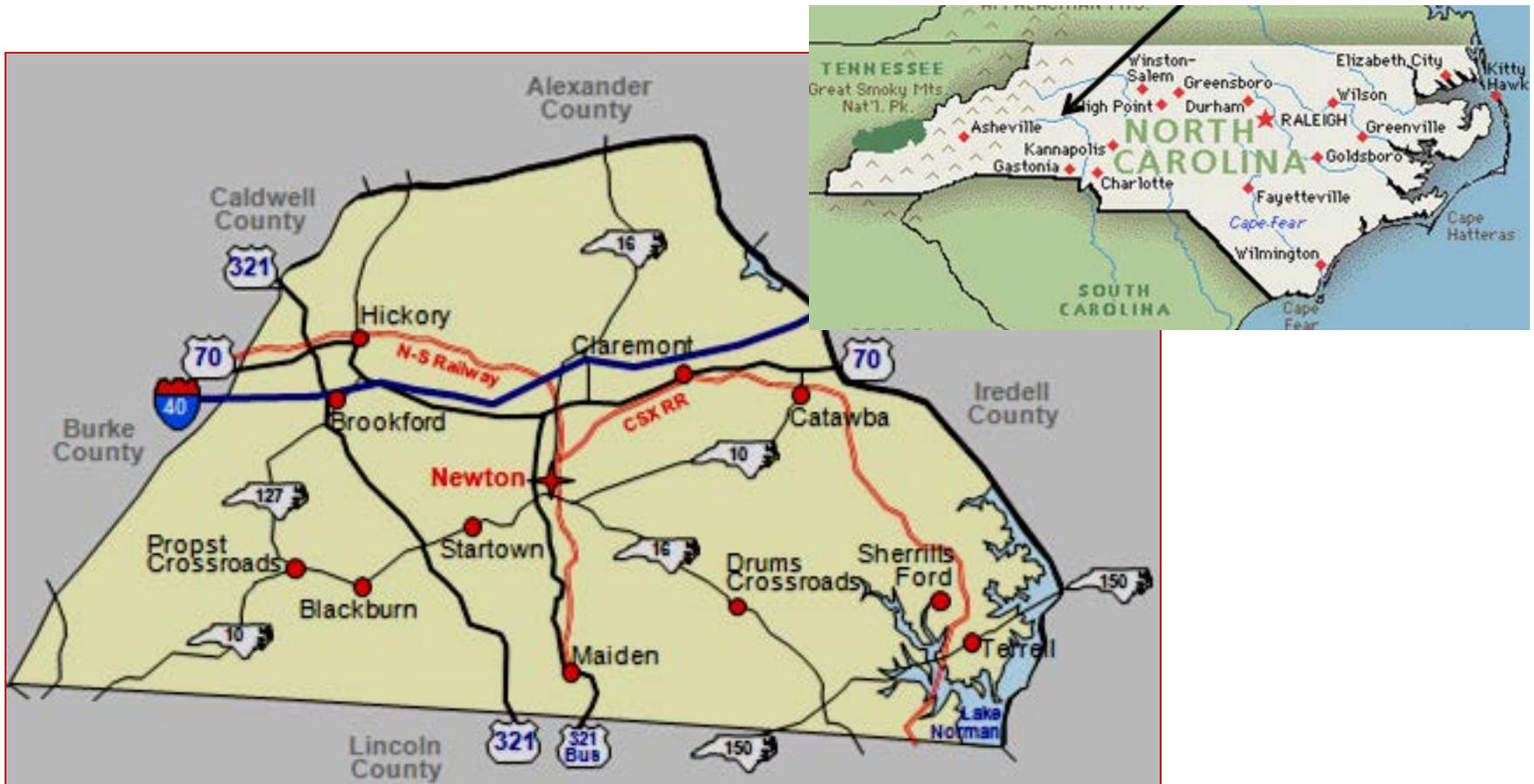
Meghan Bergman, RN, BSN

Charge Nurse II Communicable Disease

Catawba County Public Health

Catawba County

- 154,654 residents
- \$41,420 median household income
- 19.7% living below poverty level

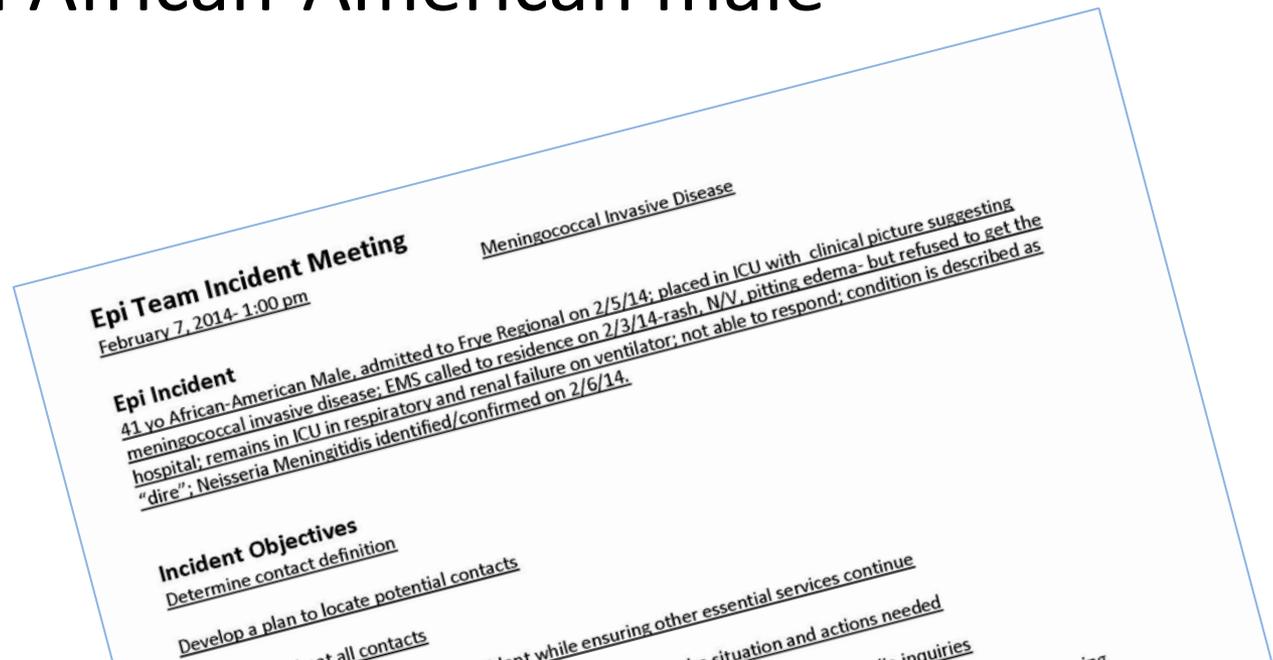


Presentation Outline

- Presenting Scenario
- Clinical Picture
- Challenges and Strategies
- Key Players and Resources
- Lessons Learned
- Questions

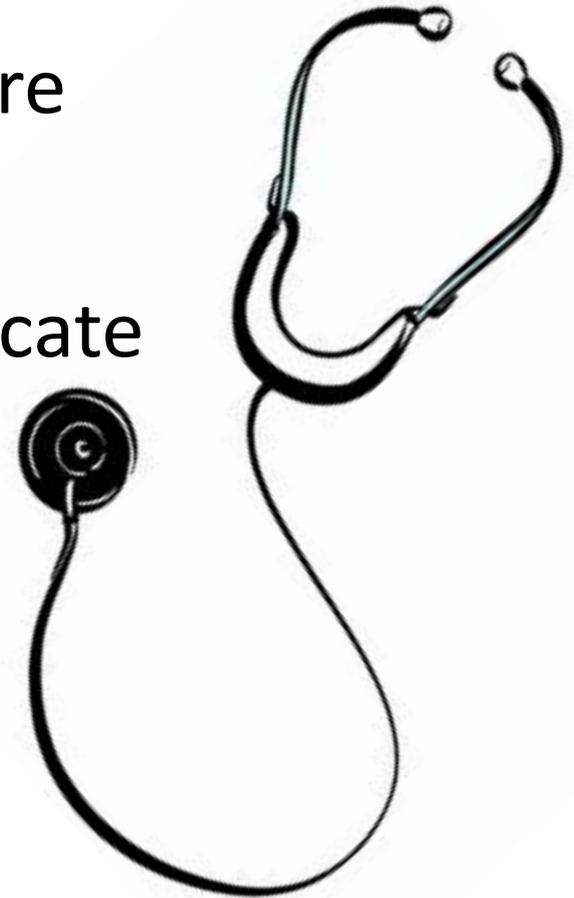
It All Started With...A Phone Call

- From a local hospital
- On Wednesday, 2/5/14 around 3:00 pm
- Suspected Meningococcal invasive disease (gram stain negative diplococci)
- 41-year-old African-American male



“Grim” Clinical Picture

- Hospitalized in ICU
- DIC, respiratory and renal failure
- Purpuric rash
- Intubated, unable to communicate



F Avenue

- High crime neighborhood with known drug use and prostitution
- Source case apartment-known Brothel and drug activity
- Frequent surveillance by law enforcement



Disease Characteristics





Epi Team Meet to Develop Plan

- **Four challenges:**
 - Contact Investigation
 - Communication
 - Treatment
 - Staff/Resources

Contact Investigation

- No identified contacts (patient non-verbal)
- Family not accessible/resistant
- High risk contacts
- Active crime area



- Performed field based, door-to-door contact investigation
- Identified community insiders
- Worked with law enforcement

External Communication

- Non-trusting
- Transient
- Non-reliable
- Illegal activity
- Not traditional media users



- Created flyers to help with word of mouth communications
 - Customized header
 - Specific call to action
- Disseminated in neighborhood and service organizations

Internal Communication

- PH Staff

- Key Leadership

- NC EPI

- Hospitals



- Consistent message via talking points

- Right information at right time

- Consultation and next steps

- Persistent follow up

Communication Materials



Catawba County Public Health
www.catawbacountync.gov/phealth
3070 11th Ave. Dr. SE, Hickory, NC 28602
Phone (828) 695-5800
Fax (828) 695-4410

IMPORTANT HEALTH ALERT

There has been a risk of exposure to meningococcal disease to people visiting a residence located on the **700 block of F Avenue Southeast in Hickory** between **January 27 – February 4** (from a week ago Monday through this past Tuesday).

Meningococcal disease is a serious disease that can be deadly. Symptoms include the sudden onset of fever, severe headache, rash, stiff neck, stomach pain, nausea, or vomiting. It spreads through contact with saliva, which can happen through:

- Sharing foods or eating utensils
- Sharing cigarettes, smoking devices, or other drug paraphernalia
- Sexual activity
- Spending one or more nights in the affected residence

Anyone who may have been exposed should **call the health department at (828) 695-5800 right away for treatment** to prevent getting sick.

If you are experiencing any symptoms, go to the emergency room (ER) right away.

"Leading the Way to a Healthier Community"



Catawba County Public Health
www.catawbacountync.gov/phealth
3070 11th Ave. Dr. SE, Hickory, NC 28602
Phone (828) 695-5800
Fax (828) 695-4410

MENINGOCOCCAL DISEASE FACT SHEET

What is meningococcal disease?

Meningococcal disease is a disease caused by a kind of bacteria known as meningococcus. These bacteria can sometimes cause sepsis (infection of the bloodstream), meningitis (infection of the lining of the brain and spinal cord) and other serious illnesses.

How can you be exposed to meningococcal disease?

People can be exposed to meningococcus by direct contact with nose or throat fluids of an infected person. This can occur by coughing, kissing, sharing utensils or drinking glasses, etc. Fortunately, these bacteria are spread by casual contact or by simply breathing the air where a person with meningococcal disease has been. People in the same household, roommates, or anyone with direct contact with a patient's oral secretions, meaning saliva or spit, (such as a boyfriend or girlfriend) are at risk of getting the infection.

What are the symptoms of meningococcal disease?

The most common type of meningococcal disease is meningitis (infection of the lining of the brain and spinal cord). Symptoms in most children and adults the symptoms of meningitis are high fever, headache and stiff neck. Other symptoms may include nausea, vomiting, sensitivity to light, confusion and sleepiness. Symptoms in infants and small infants may be hard to recognize. As the disease progresses, patients may have more symptoms such as seizure, coma and death.

What are the symptoms of sepsis (infection of the bloodstream)?

Symptoms of meningococcal disease is sepsis (infection of the bloodstream). Symptoms may include: chills; severe pain in the muscles, joints, chest or stomach; rapid breathing; and diarrhea. In some cases, a dark purple rash can appear all over the body.

How long do symptoms appear?

Symptoms usually appear within 2 to 10 days with 3 to 4 days being the most common.

What should I do if I think I have been exposed to meningococcal disease?

If you think you have been exposed to someone with meningococcal disease, you may need antibiotics to prevent you from getting sick. The health department investigates each case of meningococcal disease to make sure you are identified and receive antibiotics. This does not mean that the contacts have the disease. If you or a family member has any of the above symptoms, see a doctor right away.

How can meningococcal disease be prevented?

Antibiotics can decrease the risk of developing meningococcal disease. Adults and children should take antibiotics after sneezing and coughing, before eating or when hands are dirty. People should avoid sharing eating utensils, drinking cups or anything that would help the spread of nose and throat secretions.

How can I help prevent bacterial meningitis?

Antibiotics can decrease the risk of developing meningococcal disease. Adults and children should take antibiotics after sneezing and coughing, before eating or when hands are dirty. People should avoid sharing eating utensils, drinking cups or anything that would help the spread of nose and throat fluids.

Disease Control and Prevention (CDC)
"Leading the Way to a Healthier Community"



MENINGOCOCCAL DISEASE – MEDIA TALKING POINTS

Media outlets have been notified of one case of meningococcal disease in Catawba County. We are taking proactive measures to prevent the spread of the disease by contacting individuals who may be affected and providing preventive treatment.

Under privacy laws we cannot disclose personal information related to the case.

Meningococcal disease is a disease caused by a kind of bacteria known as meningococcus. These bacteria can sometimes cause sepsis (infection of the bloodstream), meningitis (infection of the lining of the brain and spinal cord) and other serious illnesses. Symptoms may include: sudden onset of fever, severe headache, rash, stomach pain, nausea or vomiting. The disease progresses through direct contact with oral secretions (saliva) such as sharing eating utensils, foods, kissing, and sharing cigarettes.

Antibiotics can decrease the risk of developing meningococcal disease. Adults and children should wash their hands after sneezing and coughing, before eating or when hands are dirty. People should avoid sharing eating utensils, drinking cups or anything that would help the spread of nose and throat fluids.

Treatment

- Non-reliable
- Low income
- Self-identified
- Contact definition challenged



- Field based PEP dispensing
- PH covered cost (Few ¢ per person)
- Erred on the side of caution

Staff/Resources

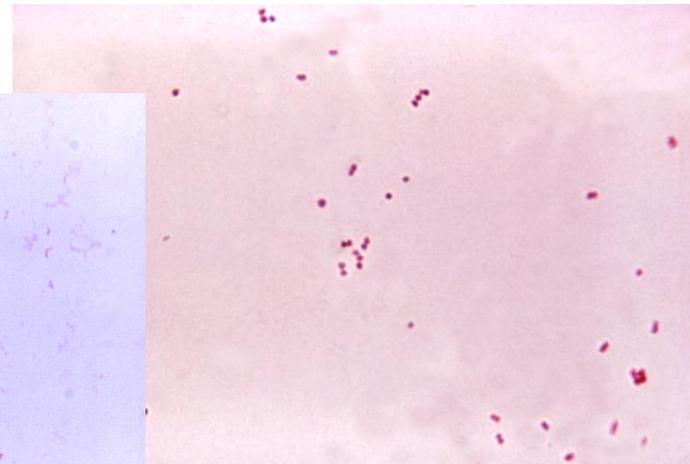
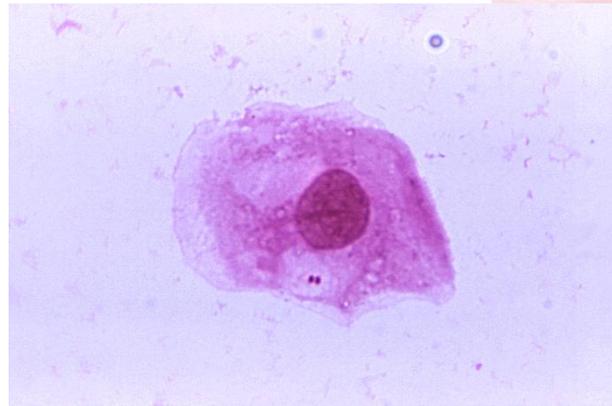
- Staff dedicated to investigation
- Staff to maintain PH operations
- Required additional resources and expertise



- Efficiencies through ICS structure, Epi Team
- Collaboration with state, community partners

Outcomes

- 66 people received PEP in first two days
- Monitored close contacts daily for 14 days post exposure
- Patient recovered
- NC SLPH confirmed *Neisseria Meningitidis* group Y from bacteria isolate



And Yet Again...With an Email

- From the school superintendent
- On Sunday, 4/13/14 at 12:30 pm
- Suspected Meningococcal invasive disease (gram stain negative diplococci)
- 43-year-old female
- Before/After School Program Director
- Presented to ED with ear infection, returned next day admitted to ICU, placed on ventilator due to altered mental status
- Prognosis good outcome

Action

- Proactive communication-materials developed
 - Before/After School only
 - School community need to know vs. patient privacy
- Control measures taken immediately
 - Identify any potential exposures-PEP 12
 - Active surveillance
- NC SLPH confirmed *Haemophilus influenzae* type F from bacteria isolate

HDR
Hickory Daily Record
WEDNESDAY, APRIL 16, 2014


GRILL LIKE A GOURMET, 13A

MERRY BOONE
WEALTH STRATEGIES
An Independent Firm
828-270-3200 1333 2nd St NE, Suite 302 merry.boone@raymondjames.com
Fax: 828-270-3202 Hickory, NC 28601 merryboonewealthstrategies.com
Securities offered through Raymond James Financial Services, Inc., member FINRA/SIPC
www.hickoryrecord.com 75 cents

MUST READS

1 CONVICTED
A news release from the 25th Prosecutorial District Attorney's office announces 21 felony convictions last week in Burke, Caldwell and Catawba counties.

2A

Sherrills Ford Elementary School

School worker hospitalized

BY MARY ELIZABETH ROBERTSON
mrobertson@hickoryrecord.com

SHERRILLS FORD — A Sherrills Ford Elementary School worker for a before and after-school program was hospitalized with a possible case of meningococcal disease.

Catawba County Health Department spokeswoman Kelly Schermerhorn said it was unlikely students were infected through casual contact.

"We have been proactive by taking preventative measures," Schermerhorn said. "It's spread through oral secretions like sharing food utensils, saliva," she said. "It's the meningococcal disease. It can lead to meningitis, which can result in death. At this point, it is just a suspected case."

Schermerhorn said the cause is being investigated.

the suspected case could be confirmed, and students are safe to attend the school.

Catawba County Schools said they took immediate action after finding out about the potentially infected worker.

"We immediately notified the health department," Catawba County Schools Superintendent Dan Brigman said. "I commend the Health Department for

Communication Materials



Catawba Co
www.catawbaco.gov

3070 11th Ave
Phone (828) 695-5800
Fax (828) 695-5800



Catawba County Public Health
www.catawbacountync.gov/phealth

3070 11th Ave. Dr. SE, Hickory, NC 28602
Phone (828) 695-5800
Fax (828) 695-4410

April 14, 2014

Dear Physician:

Catawba County Public Health was notified Sunday afternoon of meningococcal disease in an individual at Sherrill Ford Elementary School. We are continuing to monitor the situation and are taking steps to prevent potential illness among direct contacts of this case.

We are also advising parents to observe their children if their children show any of the following meningococcal symptoms:

- sudden onset of fever
- severe headache
- rash, stiff neck
- stomach pain
- nausea or vomiting

During this time, we are reminded that being up-to-date on meningococcal vaccines for children and adults. If you do not have access to a vaccine provider, please refer patients in need of immunization to Catawba County Public Health.

We will continue to closely monitor this situation. For more information or recommendations, please contact Meghan Egan at 828-695-5823.

Sincerely,

Doug Umland, Health Director

CATAWBA COUNTY
Public Health

MENINGOCOCCAL DISEASE – MEDIA TALKING POINTS 4/14/14

Have you been notified of meningococcal disease at a local school?
Yes, we have been notified of one suspected case of meningococcal disease in an adult associated with Sherrills Ford Elementary School Before/After School Program. We have taken proactive measures to prevent the spread of the disease by contacting individuals who may be affected and recommended preventive treatment.

What are the precautionary measures that are being recommended?
Individuals who were specifically identified to be at risk were recommended to take an antibiotic treatment to prevent illness. Anyone who suspects they may be sick with the symptoms are advised to see their doctor immediately.

Can students still attend the Before/After School Program?
Students can continue to go to the Sherrills Ford Elementary School Before/After School Program since the spread of meningococcal disease in a classroom/school setting is rare as the disease is not spread through casual contact. Additionally, control measures had already been put in place as early as Sunday afternoon (4/13/14).

What is meningococcal disease?
Meningococcal disease is a disease caused by a kind of bacteria known as meningococcus. These bacteria can sometimes cause sepsis (infection of the bloodstream), meningitis (infection of the lining of the brain and spinal cord) and other serious illnesses.

What are the symptoms of meningococcal disease?
Symptoms may include the following: sudden onset of fever, severe headache, rash, stiff neck, stomach pain, nausea or vomiting. The disease progresses quickly and can be deadly.

How is the disease spread?
The disease is spread by direct contact with oral secretions (saliva) such as shared eating utensils, foods, and kissing.

What can you do to prevent meningococcal disease?
Vaccines are available which can decrease the risk of developing meningococcal disease. Adults and children should wash their hands after sneezing and coughing, before eating or when hands are dirty. People should avoid sharing eating utensils, drinking cups or anything that would help the spread of nose and throat secretions.

April 14, 2014

Dear Parent,

Catawba County Public Health was notified Sunday afternoon, April 13, 2014, of meningococcal disease in an individual at Sherrills Ford Elementary School.

As a parent of a child enrolled in the Before/After School Program, you may have facts about the situation and meningococcal disease in a classroom/school setting is rare. How you observe your child for any symptoms of the disease. The disease is spread through oral secretions (saliva) such as shared eating utensils, foods, and drinks. Preventive treatment is being recommended.

Meningococcal disease is an irritation of the covering of the brain and spinal cord. Symptoms may include:

- sudden onset of fever
- severe headache
- rash, stiff neck
- stomach pain
- nausea or vomiting

If your child displays any of these symptoms in the future, please contact your doctor immediately.

During this time, we are reminded that using good hand hygiene is important to prevent the spread of disease. Additionally, encourage your child not to share personal items.

A vaccine to prevent this disease is available; ask your doctor for more information.

Again, if your child has any of the symptoms listed above, please call your doctor immediately. We appreciate your attention in helping to prevent the spread of this disease.

We will continue to closely monitor this situation. For more information or recommendations, please contact Meghan Egan at 828-695-5823.

Lessons Learned



- Immediate action is critical
- Collaborative planning & response is essential
 - Expertise provided across staff and partners
- Must be ready to mobilize at moment's notice
- Clearly defined and understood contact definition
- Must tailor outreach/availability to target audience
 - Door-to-door vs. phone calls
 - Grassroots v. traditional media outreach
 - Daytime and after hours contacts

County Boundary

Lakes

Municipalities

- Brookford
- Catawba
- Claremont
- Conover
- Hickory
- Longview
- Maiden
- Newton

This map product was prepared from the Catawba County Geographic Information System. Catawba County has no liability for any errors or omissions. Catawba County reserves the right to modify this map product at any time without notice. Catawba County is not responsible for any damage or loss of data that may result from the use of this map product. Catawba County is not responsible for any damage or loss of data that may result from the use of this map product.

Questions?

Meghan Bergman, RN, BSN
Charge Nurse II Communicable Disease
Catawba County Public Health
mbergman@catawbacountync.gov

828.695.5823

