To: Buncombe County Medical Providers  
From: Dr. Jennifer Mullendore, Medical Director  
Date: June 24, 2014  
RE: Health alert from the Buncombe Co. Dept. of Health: Information for medical providers on Chikungunya

On June 12, 2014, North Carolina's first case of chikungunya was confirmed in a resident who recently traveled to the Caribbean. Below, I highlight some of the key points from the memo from the NC DHHS re: chikungunya virus infection and the CDC website (http://www.cdc.gov/chikungunya/hc/index.html). I'm also making available the CDC handout for providers and a sheet of FAQs on chikungunya from NC DHHS that you may want to share with patients, colleagues, family & friends.

Chikungunya now is required to be reported to your local health dept. immediately when clinically suspected. Do not wait for laboratory confirmation to call us!

As always, if you have any questions regarding this or any other communicable disease, please contact the Buncombe County Disease Control staff at 250-5109.

Thank you,

Jenni

Jennifer Mullendore, MD, MSPH

Medical Director

Buncombe County Department of Health and Human Services
Chikungunya

- Mosquito-borne infection
- Can be spread person-to-mosquito-to-person
- Recent outbreaks in the Caribbean are expected to lead to an increased # of cases among US travelers
- **There is concern that imported cases may lead to virus introduction to the US and local spread**
  - The southeast US (including NC) has a mosquito that can serve as a vector
  - Individuals become viremic ~2 days before symptoms begin and remain viremic for up to 7 days
  - During this time of viremia, a person can transmit the virus to mosquitoes that bite them; this could then lead to spread of the infection to other people

**Clinical presentation**

- Most infected people become symptomatic
- **Incubation period** following mosquito bite is usually **3-7 days** (range 1-12 days)
- Most common findings = **acute onset of fever (typically ≥ 39°C/102.2°F)** and polyarthralgia
  - Joint pain
    - **Mainly affecting hands, wrist, ankles, feet**
    - **Usually bilateral and symmetric**
    - **Often severe, debilitating**
- Other possible symptoms: headache, myalgia, arthritis, conjunctivitis, nausea/vomiting, or maculopapular rash
- **Lab findings**
  - Lymphopenia, thrombocytopenia, elevated creatinine, elevated hepatic transaminases
- Acute symptoms usually resolve in 7-10 days
- Some persons may have relapse of rheumatologic symptoms (polyarthritis, polyarthralgia, tenosynovitis, Raynaud’s syndrome) in the months after the acute illness
- Those most at risk of severe disease = neonates exposed intrapartum, adults ≥ 65 yo, persons with underlying medical conditions (including hypertension, diabetes, CV disease)
- Mortality is rare & occurs mainly in older adults

**Who to suspect of having chikungunya**

- **Persons who develop acute onset of fever and polyarthralgia within 2 weeks of returning from the Caribbean or from other endemic areas** (central Africa, Southeast Asia, islands in the Indian and Pacific Oceans)

**Differential diagnosis**

- **Needs to include Dengue fever** as it is transmitted by the same mosquitoes and has similar clinical features
  - Chikungunya virus infection is more likely to cause high fever, severe arthralgia, arthritis, rash and lymphopenia

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**HHS Administration**
- p. 828.250.5700
- f. 828.250.6235
- PO Box 7408
- Asheville, NC 28802

**Aging & Veteran’s Services**
- p. 828.250.5726
- f. 828.250.6235
- PO Box 7408
- Asheville, NC 28802

**Social Work Services**
- p. 828.250.5500
- f. 828.250.6235
- PO Box 7408
- Asheville, NC 28802

**Public Assistance**
- p. 828.250.5500
- f. 828.250.6235
- PO Box 7408
- Asheville, NC 28802
Dengue virus infection is more likely to cause neutropenia, thrombocytopenia, hemorrhage, shock and death. CDC recommends that you manage these patients as having dengue fever until dengue is ruled out because proper clinical management of dengue reduces risk of severe disease & death.

- Other possibilities include leptospirosis, malaria, rickettsia, group A streptococcus, rubella, measles, parvovirus, enteroviruses, adenovirus, post-infectious arthritis, rheumatologic conditions.

### Management of suspected or known cases

- No specific antiviral treatment
- Symptomatic care (rest, fluids, analgesics, antipyretics)
  - Use acetaminophen for initial fever and pain control
  - If inadequate, consider using narcotics or NSAIDs
    - Do not use aspirin or NSAIDs if suspect dengue until afebrile > 48 hours and no dengue warning signs (severe bleeding, pleural effusion or ascites, lethargy, enlarged liver, and increased haematocrit with decrease in platelet count)
    - Persistent joint pain may benefit from NSAIDs, corticosteroids, or PT
- Encourage persons to stay indoors or use mosquito repellent consistently during the first 5 days of illness (when they are likely to be viremic) to decrease the risk of transmission to local mosquitoes.

### Diagnostic testing

- Serologic testing available from Focus Diagnostics and the CDC (see memo for more details)

### Reporting

- Chikungunya is required to be reported to your local health dept. immediately when clinically suspected.
- A suspected case is defined as a clinically compatible illness:
  - Fever or chills as reported by the patient or health care provider, AND
  - Arthralgia or arthritis involving 2 or more joints, AND
  - Absence of a more likely clinical explanation.

### Prevention

- No vaccine or medication available to prevent infection
- Inform travelers going to areas with known virus transmission about the risk of chikungunya (and dengue) and the importance of mosquito protection, even during daytime hours
  - Advise people at risk for severe disease to avoid travel to areas with ongoing outbreaks (visit http://wwwnc.cdc.gov/travel/notices)

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