Buncombe County Health and Human Services
Aging and Veteran's Services ~ Social Work Services
Public Assistance & Work Support Strategies ~ Public Health
Amanda Stone, MSW
Health and Human Services Director

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

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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 (polyarthralgia, polyarthritis, 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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  - 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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