The Current State of Dengue Fever

Emory University Resources:

- Session Resources
  - Post session resources (podcast of webinar, presentation slides, responses to unanswered questions) can be found on our website
    - https://med.emory.edu/departments/medicine/divisions/infectious-diseases/serious-communicable-diseases-program/covid-19-resources/access-past-echo-recordings.html
- Region 4 Situation Report
  - https://med.emory.edu/departments/medicine/divisions/infectious-diseases/serious-communicable-diseases-program/covid-19-resources/region-4-situation-reports1.html
- Register for upcoming sessions on our website
  - https://med.emory.edu/departments/medicine/divisions/infectious-diseases/serious-communicable-diseases-program/covid-19-resources/echo-upcoming-session.html
- HHS Region IV Emory University SCDP Resources
  - https://med.emory.edu/departments/medicine/divisions/infectious-diseases/serious-communicable-diseases-program/covid-19-resources/index.html
- Region IV Concept of Operations (CONOPS) - Regional Partners and Contacts
  - https://netec.org/about-netec/partners-regional-contacts/#regional-contacts
- Emory Serious Communicable Diseases Unit – Additional Resources
  - https://med.emory.edu/departments/medicine/divisions/infectious-diseases/serious-communicable-diseases-program/ebola-resources/index.html
- NETEC
  - https://netec.org/
- NETEC – National Special Pathogens System of Care (NSPS)
  - https://netec.org/nsps/

General External Resources:

Disclaimer - Our program provides additional resources that may be of use to our session attendees. This list is not inclusive, nor does our program endorse specific organizations.

- Healthmap.org (Location based alerts)
- Center for Infectious Disease Research and Policy (CIDRAP), University of Minnesota (UNM)
- The University of Nebraska Medical Center (UNMC) - Global Center for Health Security: The Transmission
- Global Biodefense

- CDC – Division of High-Consequence Pathogens and Pathology
- Georgia Department of Public Health – Travel Clinical Assistant (TCA)
    - https://dph.georgia.gov/TravelClinicalAssistant
- ProMED – International Society for Infectious Diseases

Please continue to check your local and state public health websites for additional resources and guidance.

Session Resources:

- Dengue in Puerto Rico
    - https://www.cdc.gov/dengue/outbreaks/2024/index.html
    - https://www.salud.pr.gov/CMS/365 (Spanish - Official DoH reports)
- Burden of Postinfectious Symptoms after Acute Dengue, Vietnam
    - https://wwwnc.cdc.gov/eid/article/29/1/22-0838_article
- CDC – Public Health Considerations for Dengue
    - https://www.cdc.gov/dengue/php/public-health-considerations/index.html

Session Reminders:

- Do not donate blood when febrile

Responses to Unanswered Questions:

- What if someone thought they had Dengue, but did not test? How long after could they be tested and have a positive outcome?
    - Molecular tests (RT-PCR, NS1) are usually positive during the first 7-10 days of symptoms. These tests are confirmatory. Viremia has been shown to correlate with fever and other symptoms of the febrile phase. CDC recommends testing using both a molecular test and IgM test during the acute phase of dengue.
    - IgM antibodies, showing recent infection, are usually positive starting around day 4-5 after symptom onset and can be reliably detected for 3 months (sometimes longer) after infection. Patients who have IgM antibodies against dengue virus in a single sample are classified as having a presumptive, recent dengue virus infection. Note: Antibodies tests can cross-react with other flaviviruses such as Zika, and this is especially important in areas where several arboviruses cocirculate.
    - IgG antibodies, showing past infection, are usually positive starting around day 10 after symptom onset during a first infection, and persist for life. Serologic testing by IgG in a single specimen is not recommended for diagnosis of acute dengue in patients, as these tests can be negative in acute infections, or may detect antibodies from dengue infections or other flavivirus infections that occurred in the past. IgG can be used for diagnosis of dengue in paired samples if there is a

change from negative to positive IgG results (first sample collected during the first 7 days of illness, and second sample collected after symptoms subside).

- How long does Dengue live in the bloodstream for people donating blood?
    - Dengue transmission through blood transfusion is considered rare.
    - There are few reports of transmission of dengue through blood transfusion, with cases described in Hong Kong, Singapore, Puerto Rico, and Brazil.
    - Symptomatic and asymptomatic infected people are viremic. The duration of detectable viremia by RT-PCR is estimated to be about 7 days.
    - There is limited information on the time range of potential infection after donation, one of the reported cases in the literature involved a 38-day old RBC unit.