Zika Virus: Preparedness in Pennsylvania

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Zika Virus (ZIKV)

- Arthropod-borne virus (arbovirus)
- Mosquitoes acquire ZIKV from infected humans
  - *Aedes aegypti* (primary vector) rarely found in Pennsylvania
  - *Aedes albopictus* (potential vector) found in Southern tier of state primarily
- PA is familiar with arbovirus surveillance – West Nile Virus
ZIKV Planning Activities

• DOH participated in Zika Virus Planning Summit in Atlanta - (4/1/2016)
• Drafted Zika Response Plan-based on CDC template
• Engaged initial key internal and external partners to review and revise plan
• DOH presented plan to Governor - accepted and posted

ZIKV Planning Activities

• Bureau of Epidemiology assembled Zika team
• DOH leadership team assembled
• Leadership calls established
• Bureau of Epidemiology calls established with:
  • Lab & community health nursing
  • A larger group including DEP
  • Outside partners: counties and municipalities, blood banks and March of Dimes
ZIKV- Mosquito Surveillance

• Challenge- identifying where PA had competent vector
• Department of Environmental Protection (DEP) built on past mosquito surveillance for West Nile Virus (WNV)
• PA reportable disease law was broad and able to include Zika virus

ZIKV- Surveillance

• Challenges in timely development of guidance and algorithms given fast moving CDC guidance and complexity
• Complications (adverse pregnancy outcomes; nervous system disorders) not easily incorporated into surveillance in PA
**ZIKV – Surveillance Activities**

- Communication on rapidly emerging details
- Ongoing communication with local health departments; communication with DEP
- Cluster definition and cluster response activities
- Challenge was timing of ELC* funding for needed supplies for DEP

*CDC’s Epidemiology and Laboratory Capacity for Infectious Diseases Cooperative Agreement (ELC)*

**ZIKV – Laboratory Partnership**

- State Laboratory
  - Enhancing testing capacity and capability
  - Funding support (ELC) and PHEP
  - Delay in getting testing instate resulted in early backlog of specimens at CDC
Cross-Sector Partner Engagement

- **March of Dimes**
  - With no birth defect registry in place had no infrastructure - Birth defect surveillance planning challenging
  - MOD assisting in putting together calls with providers and academic centers

- **Blood banks**
  - Local transmission notification and reporting logistics
  - Multiple blood banks in PA

Statewide Communications

- **Zika Town Hall meeting broadcast and sponsored through Governors’ Office**
- **Zika Prevention Kits provided (4000)**
  - 2 waves of dissemination
- **Mosquito Control Door Hangers**
- **Airport Messaging**
- **Presentations, media response**
Partner Engagement (External)

- Healthcare providers
  - Targeted communications to OBs
    - PA chapter of ACOG
  - Health Alert Network (PA-HAN) messages
    - 14 PA-HANs released since January 2016 to keep providers up-to-date with evolving guidance

Pennsylvania Update

- 4 cluster responses, 46,800 mosquito specimens tested – all negative and no A. aegypti found to date in traps
- 1,800+ ZIKV specimens processed by state lab since January 2016
- Current Status:
  - ZIKV Infections: 112 but 141 with new case definition
  - Pending results (state lab): 24

As of 9/23/2016
MERS-CoV: Threat to the U.S.

- Two cases reported in the U.S.
  - 1st case in April 2014 – Indiana
  - 2nd case- May 2014 – Florida
  - Both cases did medical work in Saudi Arabia
- Over 800 across the US have been tested - all negative

Health Alert Network
Emerging Issues Lessons Learned

- World is a Small place
  - Qatar Airways in April 2014 began to have direct flights from Doha, Qatar to Philadelphia

- Need to be prepared
  - Plans, protocols, need to exercised
  - LRN approved laboratories are now capable of testing for MERS
  - Decisions on when to use incident command structure

- Early recognition
  - Travel history

- Proper infection control
  - Isolation
  - Adherence to guidance

Emerging Issues Lessons Learned

- Funding is crucial, timing is crucial
  - Preparedness funds and ELC work together to fund epidemiology teams, response and laboratory
  - Delays in funding streams impact states ability to respond and can impact day to day activities as states shift to handle new issue

- Collaboration is critical
  - Amongst clinicians, hospitals, laboratories, and public health
  - Need to understand the flow of patient and patient information
  - PA has diverse jurisdictional system, Philadelphia, Pittsburgh and other areas – communication is more complicated

- Communications
  - COCA calls, HAN's, CDC-State conference calls, Website, FAQ sheets
  - Internal communications critical