Allegheny County Health Department’s Roles & Responsibilities for Tick-Related Activities

Leah Lamonte, M.S.
NACCHO Vector Summit – April 17, 2019
Sheraton Pittsburgh Hotel at Station Square
• For past two decades, *Ixodes scapularis* has expanded range across state.
• PA has led the nation in annual reported Lyme cases since 2011.

PA DEP Study  
Published 2015  
*I. scapularis* sampling locations and regional infection rates for *B. burgdorferi* (Bb), *A. phagocytophilum* (Ap), and *B. microti* (Bm) in adults collected from Pennsylvania in the fall of 2013.

J. Med. Entomol. 1–6 (2015); DOI: 10.1093/jme/tjv037
Recognizing the increase in tick-borne disease, PA legislature passed Act 83 of 2014.

Established a 20-member task force that recommended prevention, education and surveillance strategies in 2015.

**Prevention**
- Schools in high-risk areas
- Park staff
- Standard brochures for physician distribution
- Transfusion-transmitted babesiosis

**Education**
- Public awareness campaign
- Health care provider education

**Surveillance**
- Notifiable disease list update (babesiosis, Powassan virus)
- Statewide survey
- Funding for research & info sharing
- Expand/standardize case investigations
2014: assessment of Lyme disease burden in County
2015 to 2018: adopted 20% sampling method

Lyme disease reports by year
Allegheny County, 2009-2018

2015 Lyme Press Conference
with Dr. Hacker (ACHD Director) and Dr. Murphy (then PA Secretary of Health)
• Working group comprised of ACHD employees from Vector Control, Epidemiology, Communications, and LiveWell Allegheny.
• Focus on prevention, education, and surveillance of vector-borne diseases (Lyme disease & West Nile virus).
• ACHD Vector Control is supported by WNV grant from PA Department of Environmental Protection.
• PA DEP funds large network of county mosquito surveillance that is shifting to include ticks.
From 2011-2018, all 67 PA counties were surveyed for adult *Ixodes scapularis* (Total Collected = 11,431)
- *Borrelia burgdorferi* 47%
- *Babesia microti* 3%
- *Anaplasma* variants 5.5%

In 2019, PA DEP announced 5-year tick surveillance effort to reduce the number of tick bites to PA residents:
- Answer habitat, biology and environmental questions
- Analyze effectiveness of habitat management strategies
- Delineate species presence and correlation to disease incidence
- Track tick bite reporting and tick population density (acaralogic risk)
Gathering baseline data in grant-funded counties

Initial survey to determine nymphal densities of *Ixodes scapularis*

Weekly dragging at two sites (City of Pittsburgh Parks)

Each week change plot/transect

Testing for Lyme, Anaplasma, Babesia

Presence/absence of:
- *Dermacentor variabilis*
- *Amblyomma americanum*
- *Ixodes cookei*
- *Haemaphysalis longicornis*

*Year 1: Nymph Survey (May - August 2019)*
Collaboration with stakeholders and academia to determine strategy moving forward.

Expand testing for human pathogenic disease.
- Powassan virus
- *Borrelia miyamotoi*
- *Francisella tularensis*

Work with parks on prevention based on findings.

DOH and DEP want to study connection between ER visit tick bites & tick surveillance efforts.
Wide Variety of Events & Audiences

- Venture Outdoors Pittsburgh (trail leaders)
- Garden Club of McKeesport
- Audubon Society of Western Pennsylvania
- “Lunch & Learn” Seminars at Health Dept.
- Western PA Pest Management Association
- Pittsburgh International Airport Maintenance
- Office of Surface Mining (Pgh Field Division)
- Cinema in the Park (City of Pgh)
- Open Streets Pittsburgh
- LiveWell Allegheny Events
- Kinzua Country Tick Fest (McKean County)
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- Fun location at Kinzua Bridge State Park
- Well attended & interested audience
- Tick games, songs, prizes, T-shirts, Chinese Auction
- Dr. Dick Dryden (Master Tick Wrangler from W&J College)
- Food truck & band
Community concern brings large crowd to Kinzua Country Tick Fest

This glass vial contains ticks in various stages of their life cycle, from the smallest nymph stage to adult. Gino Lucchetti sings tick songs he wrote to entertain the crowd at the inaugural Kinzua Country Tick Fest, held.
Social Media Presence

Vector Control & Multimedia staff making tick video for Facebook and website.
County Entomologist identifies tick species & estimates duration of attachment for residents, hospitals, etc.

Education material is mailed, emailed, and accessed via ACHD website.
Outreach to Schools

- School staff, parents, students.
- Annual communication with schools by sending letter to school nurses & superintendents.
- SciTech Days at Carnegie Science Center for middle & high school students (biannually).
- Materials for schools on ACHD website.

Greetings,

On behalf of the Allegheny County Health Department (ACHD), I would like to pass along some very important information regarding Lyme disease.

Lyme disease is the most commonly reported vector-borne illness in the United States, with approximately 30,000 cases reported nationally each year. From 2006 through 2016, the number of Lyme disease reports received by ACHD increased substantially. In 2017, there were an estimated 1,469 reported cases of Lyme Disease in Allegheny County. Children aged 5-14 years are at high risk.

Lyme disease is caused by the bacterium *Borrelia burgdorferi* and is transmitted to humans through the bite of infected blacklegged ticks. The first symptom is usually a "bull’s eye" rash that may appear 3 to 30 days after a tick bite. Most (70-80%) infected persons will develop this type of rash. Other symptoms may include fever, headache, joint or muscle aches and fatigue. Lyme disease can be treated with antibiotics and recovery is usually rapid and complete if it is identified early. If not treated early, complications such as chronic joint pain, headaches or other neurologic symptoms may develop.

I’d like to take this opportunity to remind you that although ticks are most active in warmer months (April through October), they can emerge year-round. ACHD recommends prevention measures, including avoiding bare skin contact with wooded and brushy areas, using repellents with DEET for skin or permethrin for clothing, showering as soon as possible after coming indoors, and finding and removing ticks from skin as soon as possible. For more information on Lyme disease, visit the ACHD website: [http://bit.ly/ACHD Lyme](http://bit.ly/ACHD Lyme).

I encourage you to share these materials with your faculty and staff members, students, and your family and friends, and to utilize these precautions to minimize the possibility of getting Lyme disease. Please call 412-687-ACHD (2243) if you have any questions.

Sincerely,

Karen Hacker, M.D., M.P.H.
Director, Allegheny County Health Department
• ACHD Vector Control trains 130 municipalities including City of Pittsburgh (public works & code enforcement staff)
• PA Certified Pesticide Applicators (Category 23: Parks & Schools)
• Integrated pest management (IPM)
• Habitat modification, tick safe zones, maintaining trails, posting signs in parks, applying pesticides, etc.

PREVENT LYME DISEASE!

• WEAR REPELLENT
• CHECK FOR TICKS DAILY
• SHOWER SOON AFTER BEING OUTDOORS
• CALL YOUR DOCTOR IF YOU GET A FEVER OR RASH
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