Lyme Disease Advisory Committee (LDAC) Spring Conference Call Meeting
April 9, 2020
Minutes

Committee members in attendance (via phone/WebEx)
Barbara Barsocchini, California Lyme Disease Association (LymeDisease.org)
Karen Chew, Lyme Disease Support Network
Vicki Kramer, PhD, California Department of Public Health (CDPH)
Robert Lane, PhD, University of California, Berkeley
Chindi Peavey, PhD, Mosquito and Vector Control Association of California (MVCAC)
Raphael Stricker, MD, California Medical Association

Committee members absent
Chris Parlier, Lyme Disease Support Network, Committee Chair
Lisa Messner, Lyme Disease Support Network
James Miller, PhD, University of California, Los Angeles
Scott Morrow, MD, MPH, San Mateo County Health Department

Other attendees
CDPH Vector-Borne Disease Section (CDPH-VBDS) staff included:
Elizabeth Andrews, PhD, Associate Public Health Biologist
Anne Kjemtrup, DVM, MPVM, PhD, Research Scientist III
Allyx Nicolici, MPH, CHES®, Health Educator
Kerry Padgett, PhD, Supervising Public Health Biologist
Megan Saunders, PhD, MSPH, Senior Public Health Biologist

Other members of CDPH, local vector control agencies, and the public joined the meeting via phone and WebEx.

I. Roll Call and Opening Comments

Meeting brought to order by Dr. Vicki Kramer in lieu of Chris Parlier, LDAC Chair, at 10:12am. It was announced that Dr. Chindi Peavey will be retiring in the fall of 2020. The Committee thanked Dr. Peavey for her service representing MVCAC on the LDAC. Dr. Kramer also announced that Dr. Megan Saunders, Senior Public Health Biologist, is the new lead for the CDPH-VBDS tick surveillance program.

II. Committee Member Updates

Dr. Robert Lane provided a brief update on research at the UC Hopland Research and Extension Center in Mendocino County. Due to the current COVID-19 outbreak, Dr. Lane

and his team have not been able to make progress on tick ecology research at the UC Hopland Center, but will resume field work when possible.

Dr. Chindi Peavey reported that the San Mateo County Mosquito and Vector Control District is suspending tick surveillance due to the COVID-19 outbreak. Angie Nakano, District Laboratory Director, provided an update on site surveys conducted at schools near tick-endemic areas in San Mateo County prior to the COVID-19 outbreak. This project was started because of concerns regarding ticks on school athletic fields. Tick collection will resume after the COVID-19 outbreak.

III. CDPH Progress Report

A. Surveillance Update (Megan Saunders, PhD, MSPH)

Dr. Saunders provided an update of reported Lyme disease cases in California through 2019, and detailed the results of *Ixodes pacificus* ticks tested for *Borrelia* spp. by CDPH-VBDS from October 2019 to April 2020. Over 3,600 adult and 27 nymphal *I. pacificus* ticks were submitted for testing. Testing results of note included two adult ticks that were coinfected with *B. burgdorferi* senu lato and *B. miyamotoi*. Current CDPH projects and goals for tick surveillance and testing were also described.

Following the presentation, the Committee discussed specifics of various tick testing assays.

B. Education Update (Allyx Nicolici, MPH, CHES®)

Ms. Nicolici provided an overview of tick-related outreach and education efforts since November 2019. The distribution of CDPH's tick-bite prevention educational materials (including tick identification wallet cards and brochures) was detailed, and it was noted that a new effort was being made to distribute these resources at animal service agencies (including veterinary clinics and animal shelters) as a way to expand outreach to individuals coming in contact with ticks via their pets. Ms. Nicolici also provided an overview of updates to the CDPH Lyme disease webpage and shared the results of social media efforts since the fall of 2019. It was noted that social media efforts have declined in recent months because CDPH has been prioritizing COVID-19 messages from their social media platforms.

Following the presentation, the Committee briefly discussed Lyme disease testing in dogs, and also provided feedback and suggestions for ways to improve the new graphics added to the updated Lyme disease webpage.

IV. Presentation: An overview of tick vectors in California (Anne Kjemtrup, DVM, MPVM, PhD)

Dr. Kjemtrup provided an overview of hard and soft tick vectors in California, comparing the classification, ecology, feeding behavior, and habitat of these ticks.

Following the presentation, the Committee briefly discussed the presence of *Ornithodoros turicata* ticks in California and that they are unlikely to be found in central California; *O. hermsi* is more widely distributed in the state.

V. Presentation: Effect of elevation on *Ixodes pacificus* nymph seasonality, abundance, and infection rates in the Sierra Nevada foothills (Elizabeth Andrews, PhD)

Dr. Andrews provided an overview of her current tick ecology research at CDPH-VBDS. Research objectives included: 1) determining how elevation affects *I. pacificus* nymph seasonality and abundance, and 2) examining nymph infection rates by *Borrelia* spp. Study results included the following:

- Surveillance sites below 1,000 ft. elevation had the highest density and prevalence of nymphs
- Seasonal activity of nymphs started later at higher elevations
- Nymphs are active into August at elevations above 1,000 ft.
- Preliminary findings suggest that density and prevalence of nymphs was similar on both rock and log substrates
- During peak spring activity, up to half the rocks and logs in an area may have nymphs on them

Following the presentation, the Committee discussed the implications of this research on tick bite prevention messaging and information for the public.

VI. Discussion: New Lyme disease transmission cycle graphic (Allyx Nicolici, MPH, CHES®)

Ms. Nicolici shared CDPH-VBDS's plan to create a Lyme disease transmission cycle graphic that can be used on future Lyme disease and tick-bite prevention resources. Examples of transmission cycles created by other agencies were shared, and a draft of a new transmission cycle was offered to the Committee as a basis for discussion. The Committee discussed essential elements to be included in the new graphic. It was determined that a transmission cycle should depict both nymphal and adult *I. pacificus* ticks because they both play key roles in Lyme disease transmission to humans. A draft of a Lyme disease transmission cycle will be developed by CDPH-VBDS and reviewed by the Committee at a later date.

VII. Public Comment

- A member of the public commented about the utility of including a picture of a "bullseye rash" on information resources that depict Lyme disease symptoms. It was suggested that this depiction might be misleading because erythema migrans (EM) rashes do not always present in a bullseye pattern.

  The Committee discussed if the bullseye rash is a common appearance in Lyme disease patients, and it was suggested that a variety of images depicting EM rashes be included in educational materials.

- A member of the public commented (via WebEx comment) that the University of Rhode Island has a graphic representing a tick lifecycle that would be a good reference when CDPH-VBDS develops new graphics: https://tickencounter.org/tick_identification/deer_tick_life_cycle

- A member of the public recommended a website by the University of Rhode Island called "Can you spot the tick?" that provided important information about how small ticks can be. It was reiterated that the public needs to be informed about how tiny ticks can be.

The next LDAC meeting will be held in the fall, likely in November 2020. Date and time to be determined.

Meeting adjourned at 12:15pm.