

**Lyme Disease Advisory Committee Meeting
March 11, 2010, Sacramento, California**

Committee members in attendance

Barbara Barsocchini, California Lyme Disease Association
Vicki Kramer, Ph.D., California Department of Public Health (CDPH)
Robert Lane, Ph.D., University of California, Berkeley
Christian Parlier, Lyme Disease Support Network
Lisa Messner, CPhT., Lyme Disease Support Network (via phone)
James Miller, Ph.D., University of California, Los Angeles (via phone)
Chindi Peavey, Ph.D., Mosquito and Vector Control Association of California (MVCAC)
Raphael Stricker, M.D., California Medical Association (CMA)

Committee members not in attendance

Scott Morrow, M.D., M.P.H., California conference of Local Health Officers

Other attendees

Anne Kjemtrup, D.V.M., M.P.V.M., Ph.D., CDPH, Committee Coordinator

Approximately 20 individuals representing the interested public and public health agencies

The meeting was brought to order by Mr. Parlier at 9:40am

I. Review and approval of minutes of 12/18/2009 teleconference

The motion was made and seconded to approve the minutes as written. There was no discussion. The minutes were unanimously approved.

II. Opening comments

Dr. Kramer announced that there is a Lyme Disease Support Network vacancy on the Lyme Disease Advisory Committee (LDAC) and that recruitment for the position is underway. Anyone interested should contact Dr. Anne Kjemtrup. Dr. Kjemtrup recently sent out this announcement to an email distribution list of people who want information about the LDAC. Deadline for application is April 1, 2010.

Dr. Kramer noted that this was the tenth year of the LDAC and that one member of the committee has never missed a meeting- specifically Mr. Chris Parlier. Dr. Kramer presented a certificate to Mr. Parlier in gratitude for his commitment to the Committee

III. CDPH Progress Report

Dr. Kjemtrup presented the semi-annual review of the activities of the Vector-Borne Disease Section (VBDS) for 2009. CDPH-VBDS pushed the winter tick-bite prevention

messages via postings on the CDPH facebook page and via Twitter. Both these outlets have many news and health agencies and individuals following them. The “Don’t Let the Ticks Bite” campaign with Timothy Tickfinder has been translated into Spanish; a curriculum has been developed and will be promoted on the CDPH tick-borne disease webpage and with other organizations as opportunities are identified. New and emerging tick-borne disease agents such as the identification of a human case of *Rickettsia* 364D provided opportunity to reach out to physicians in specific areas to remind them about the dangers of tick-borne diseases. Local health agencies including vector-control agencies, were regularly updated on CDPH’s educational program. Over 15 presentations about Lyme and other tick-borne diseases were made by various VBDS biologists and scientists to the medical and veterinary community, collaborators such as park employees, vector control agencies, universities, and the general public. In terms of surveillance, 78 LD cases were reported in 2008; final 2009 numbers are not finalized until mid April. Over 2,000 *Ixodes pacificus* adult and nearly 1,000 nymphal ticks were collected from 14 counties as part of regular surveillance. To date, 575 adult ticks have been tested and of these, 1.5% were identified as positive for *Borrelia* spp. from three counties (Los Angeles, Santa Cruz and Lake). Testing continues on tick samples collected in 2009 both by the U.S. Army and by CDPH. Other surveillance activities included participation in studies with other vector control agencies regarding the role of birds in local *Borrelia* ecology, and follow-up of unusual human cases of tick-borne disease including tick-borne relapsing fever, *Rickettsia* 364D, and Rocky Mountain spotted fever. The role of *Dermacentor* spp. nymphs in *Rickettsia* spp. ecology is being investigated. VBDS partnered with the National Park Service (NPS) to conduct a questionnaire on vector-borne disease risk factors and perceived risk among NPS employees. Results were summarized in a report distributed to NPS employees with the goal of increasing awareness and prevention of vector-borne diseases.

Answers to questions from the committee and public included:

- The Timothy Tickfinder curriculum is available to any local vector agency. It was developed specifically following the California 4th grade curriculum guidelines. VBDS is working on packaging the curriculum for easy distribution to local vector agencies for their school presentations. More “train the trainer” sessions are being planned to facilitate vector agencies, teachers, outdoor educators etc...taking the program to the classroom.
- Education efforts span the entire state; presentations in southern California are principally given by VBDS staff from the Ontario office.
- When positive ticks are found, signs are posted at the discretion of the park and/or local vector-control agencies.
- Pertaining to the relapsing fever cases at lower elevations, VBDS continues to investigate if other species besides *Borrelia hermsii* are involved.
- Both DEET and permethrin are mentioned as methods to prevent tick bites.
- It was noted that other curriculums such as Time for Lyme are available on the web.
- Vector control agencies communicate with each other about outreach programs via the MVCAC Public Education Committee.

IV. Committee Member Updates

Mr. Parlier noted that he has written some op-ed pieces regarding tick-borne diseases published in his local paper.

Ms. Messner reported that her support groups have moved to a quarterly time frame, focusing efforts on finding important speakers that draw a bigger crowd.

Dr. Lane stated that he has recently retired from his university position but continues to do tick research as a professor emeritus. He has recently returned from field work in Malibu where he investigated the ecology of *Ixodes* spp. ticks in the area. *Ixodes pacificus* nymphs appear to be difficult to collect there: after 3 days of field work, 12 nymphs were collected. They did not find nymphs on picnic tables. To date, no field-collected *Borrelia*-infected nymphal ticks have been found in southern California. He recently had a tick awareness article published in a turkey-hunter magazine and a scientific paper published on strain-typing of California *Borrelia*. Dr. Lane noted that he and Dr. Peavey are doing a survey of mosquito and vector control districts to find out what tick research and surveillance activities they are doing.

Ms. Barsocchini reported that the California Lyme Disease Association (CALDA) will have its annual conference in Anaheim to educate nurses. The second annual conference in the Bay Area had 325 attendees. CALDA continues to offer a physician education grant scholar program- now in its 4th year. They have expanded the program to nationwide. CALDA currently has more recognition in California than it did 15 years ago.

Dr. Peavey reported that the MVCAC just completed their annual statewide conference and many districts presented information on public health education. There seems to be increased awareness among districts of tick-borne diseases in all of their surveillance, education, and outreach activities.

Dr. Kramer noted that the State of California is looking at a huge budget deficit of at least \$20 billion. State worker furloughs have impacted work. Resources are more limited but VBDS strives to do their best. At the federal level, the vector-borne disease funding line item in the 2011 federal budget is proposed to be eliminated. The proposed 2011 budget does not recommend a reduction in the line item appropriation of approximately \$9 million for Lyme disease initiated in 2010.

V. Goal Matrix

The Committee discussed the Goal Matrix (last page of minutes)

Specific suggestions included:

- Add under 6 months-
 - Educate Medical Community: Make physicians aware of webinar offered by DEET education program on ticks and include material specific to California.
 - Educate School Children: include evaluation with curriculum posting on website.

- Educate School Children: Offer Timothy Tickfinder to CDC’s nationwide public health education site.
- On Tweets and Facebook page, include link that goes directly to website.

VI. Review of Facebook article and tweets

Specific suggestions on the Facebook prevention article included:

- Call ticks “spider-like bugs”
- Add “several” to “Can transmit several pathogens”
- Mention checking clothing and skin, check children and pets
- Remove vegetated and add “parks”
- Include mini-URL to tick-borne disease website
- Dr. Lane will send photo of a nymphal tick next to a poppy seed to include in the Facebook posting.

A list of tweets proposed by a community member were reviewed and discussed.

Specific suggestions on tweets included:

- Once-a-month tweets during tick season with tiny URL helpful
- In the tweet on how NOT to remove a tick, note that “it’s not the OLD way” or strongly state, “WRONG”
- Promote Timothy Tickfinder with a statement about him such as “Learn about Timothy Tickfinder and his dog Bullseye (+ link)”
- “Beware: Ticking Lyme bomb (+link)”

VII. Review of Lyme disease human case surveillance

Dr. Kjemtrup reviewed general public health surveillance principals and discussed specific issues surrounding LD human case surveillance including the change in the Council of State and Territorial Epidemiologists (CSTE) case definition, the importance of denominators in data presentation and interpretation, and the impact of low prevalence on diagnostic test interpretation. Questions and comments from the committee included:

- Good to see that there is a “probable” category.
- The problem with LD is that getting numerator information (diagnosis) is difficult.
- Incident statistics do not reflect the impact of chronic disease.
- The reason why canine LD testing and human LD incidence data are not comparable is because testing done in canines is usually not done for LD specifically- thus many of the “positive” canines are likely false positives or not clinically affected dogs.
- A large and diverse state like California needs to be broken down to at least regional level to understand LD epidemiology; it is difficult to generalize concepts across the state.
- The difference between surveillance and clinical case definition is lost on the public.

- LD testing over the years has had a problem with specificity. With our continued lack of understanding of this disease, diagnostic test evaluation remains problematic.

Dr. Kjemtrup provided an update on electronic reporting with a presentation provided to her by the California Reportable Disease Information Exchange (Cal-REDIE) project management team. This effort has advanced to pilot testing phase with results from the three-county pilot testing under evaluation. Responses to questions and comments included:

- The system must be promoted to each county because it involves change to ingrained systems.
- The initial decision as to whether a case meets the surveillance criteria still rests with the county.
- The system is designed to facilitate the current system where physicians essentially begin the reporting process and they can do so by entering reports directly into the system.
- A subject matter expert at all levels evaluates the reports- it is not the computer that does the evaluation.
- Counties control their own data. Counties decide if they will use the system. As more counties use it, hopefully it will gain acceptance.

VIII. The next LDAC meeting will be held November 2010.

Consider dates November 9th, 10th or 16th . Information will be posted on the LDAC website when the date is confirmed.

IX. Public Comment

- In the speaker's estimation, less than 20% of LD cases have the rash- thus the emphasis on rash as a symptom may decrease awareness among people that they may have LD.
- The speaker inquired how 1,200 yearly laboratory reports of LD in California end up as only 75 reported cases to the state. Dr. Kjemtrup noted that laboratory tests do not always reflect new cases and that positive test results reported to local health departments must meet surveillance criteria in order for them to be forwarded to the state. The speaker also inquired how the progression of LD into new areas can be evaluated if it is a requirement that cases that meet the surveillance criteria come only from endemic areas. Dr. Kjemtrup noted that the definition of endemic continues to be a point of discussion but may also include tick data.
- In San Bernardino County, there is a problem of getting doctors to approve treatment for patients who have been previously infected; it would be helpful to have educational materials available to communicate with doctors. The speaker would like to see more testing of ticks collected from San Bernardino. Dr. Kramer stated that she will mention this to Ontario staff and continue to encourage them to work with the local health department.

- The speaker would like the committee to address the fact that there are a lot of people in the workforce, such as in regional parks, who are regularly exposed to ticks and tick-borne diseases. She would like the committee to recommend setting up training and informational sessions to workforce with employers who may not be regular CDPH-VBDS partners, such as regional parks. Working through unions is an excellent way to get education material out to the workforce. Dr. Kjemtrup noted that this suggestion will be added to the goal matrix.
- It appears that the current surveillance methods catch incidence, not prevalence data about LD. Other diseases, such as syphilis, cancer, HIV look at prevalence. The speaker is concerned that without this data people think there is no LD in California and the medical community does not get the picture.
- The speaker would like regional parks to get more updated information. There is difficulty accessing comprehensive medical treatment without paying out of pocket.
- May is Lyme Disease Awareness month. CDPH could mention this in the twitter and Facebook postings.
- The speaker started the Humboldt Lyme Awareness Group about a year ago and there are currently 250 people who belong to the group with the disease. The group provides educational programs and awareness in the community. Humboldt County Health Department appreciates their efforts because of their own limited resources.
- The speaker mentioned that the Infectious Disease Society of America (IDSA) diagnosis and treatment guidelines are under review. The speaker stated that the guidelines are ineffective and cause a lot of suffering. CALDA has obtained copies from the meetings of the review panel. On testing issues, the panel was divided 4-4; the agreement with the Connecticut attorney general stipulated that a two thirds majority must approve current guidelines. The Connecticut attorney general has notified the IDSA about the violation.
- The speaker knows of many workers who need education about tick-borne disease prevention. The speaker would like to see expansion of tick repellents to include essential oils which she has read are effective. The speaker is also aware of people who contracted LD locally in San Francisco simply by going through vegetation. She feels that the tick surveillance information does not reflect that ticks can be found randomly in vegetation.
- The speaker felt that directly detecting the agent in biopsies would be the most irrefutable evidence that LD exists commonly and wondered what would be the barriers to get diagnostic biopsies.

X. Adjourn

Meeting was adjourned at 3:40pm by Mr. Parlier

Goals recommended by the Lyme Disease Advisory Committee

(For Review March 2010)

Goal Area	Accomplished 2009-2010	On-going	6 months	12 -18 months
Educate Medical Community	<ul style="list-style-type: none"> Published article on tick-removal in CA Physician Newsletter Sent brochures to all California hospitals for inclusion in their libraries. 	<ul style="list-style-type: none"> <i>“Awareness of Tick-borne disease in CA” presentations for Grand Rounds as requested</i> <i>Continue to make brochures available to local health departments. Include information on local incidence; and encourage the HD to send brochures to local physicians.</i> <i>Continue posting facebook/tweets coinciding with tick season</i> 	<ul style="list-style-type: none"> Send tick removal article to ER rooms throughout state Make physicians aware of webinar offered by DEET education program on ticks with a mail-out and include material specific to California. 	<ul style="list-style-type: none"> Get brief articles into HMO newsletters.
Educate General Public	<ul style="list-style-type: none"> Updated Tick Caution sign Re-labeled website to make it easier to navigate Mailed out material to CA public library main branches Distributed info to regional parks and state parks facebook article and/Tweets to coincide w/ tick season 	<ul style="list-style-type: none"> <i>Target high risk groups for presentations</i> <i>Post areas of risk with information about prevention</i> <i>Provide consultation to and collaborate with LD support groups to facilitate public education</i> <i>Continue update of tick surveillance data on website.</i> <i>Retool and re-release “Bright White” public service announcement.</i> <i>Focus on regional parks and state parks for information distribution.</i> 	<ul style="list-style-type: none"> <i>Make a You-tube video on how to remove a tick</i> <i>Make a You-tube video on personal protective measures</i> 	<ul style="list-style-type: none"> Develop instructional poster on how to remove a tick Develop work-place presentation available on the website on the epidemiology and prevention of tick-borne diseases
Educate School Children	<ul style="list-style-type: none"> Encourage local agencies to send brochures to school librarians within their jurisdiction. Made a kid’s section on the website Coordinated with other school-based organizations to distribute material 	<ul style="list-style-type: none"> <i>Use the website to provide information for school-age children (tick i.d. and coloring pages, etc.)</i> 	<ul style="list-style-type: none"> <i>Implement and evaluate “Don’t Let the Ticks Bite” program. Target health departments and vector control districts in all counties.</i> Add Curriculum to website: include evaluation. Offer Timothy Tickfinder to CDC’s nationwide public health education site. 	<ul style="list-style-type: none"> Make “Don’t Let the Ticks Bite” poster into laminatable PowerPoint slides for use in field.
Risk Assessment	<ul style="list-style-type: none"> Translated “Timothy Tickfinder” into Spanish 	<ul style="list-style-type: none"> <i>Encourage and facilitate local vector control districts to conduct nymphal and adult tick surveillance; provide consultation as needed</i> <i>Encourage local agencies to submit tick testing data to state-wide database</i> <i>Encourage tick studies in every county to determine nymphal infectivity rates.</i> <i>Follow development of electronic reporting system’s ability to capture “probable,” “suspect,” and “confirmed” LD cases.</i> 		<ul style="list-style-type: none"> Solicit grant if possible for expanding tick-testing for surveillance
Research		<ul style="list-style-type: none"> <i>Ground-truth model of nymphal tick risk in California</i> <i>Encourage studies that evaluate tick-borne disease risk and make recommendations</i> 		<ul style="list-style-type: none"> Increase awareness such that legislative funding is made available for LD research Evaluate tick removal techniques (UC Berkeley, VBDS)

*Key: Goals in normal font = previously suggested goals, still in consideration
Goals in *italics* = in progress
Goals in **Bold**= new