

Connecticut Epidemiologist

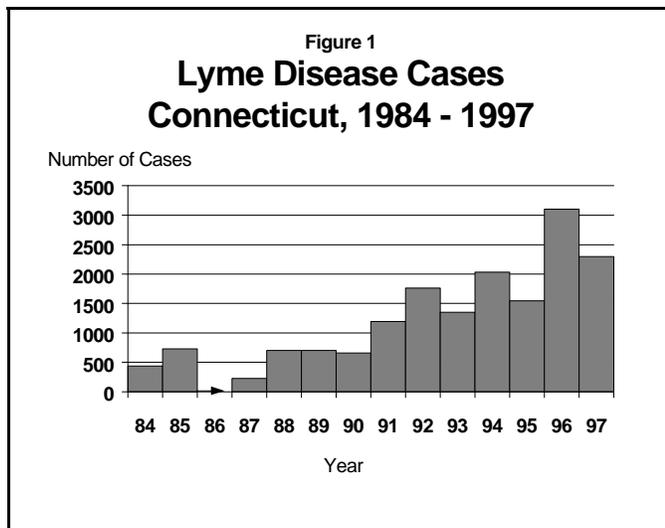
Volume 18, No. 3

July 1998

State of Connecticut, Department of Public Health
Stephen A. Harriman, Commissioner

Lyme Disease in Connecticut

The Connecticut Department of Public Health (DPH) has been conducting surveillance for Lyme disease (LD) since 1984, although the disease did not become officially reportable until July 1987 (Figure 1).



In 1991, through a cooperative agreement with the Centers for Disease Control and Prevention (CDC), the DPH established an active surveillance system for LD in the 12-town Lyme, Connecticut area (Chester, Clinton, Deep River, East Haddam, Essex, Haddam, Killingworth, Lyme, Madison, Old Lyme, Old Saybrook, and Westbrook) where LD is hyperendemic and in Litchfield County where LD is emerging. Case reports from other parts of the state are received

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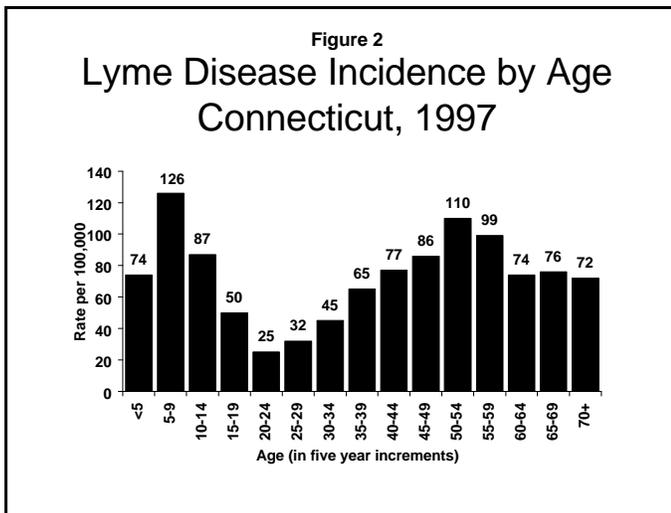
through the regular public health surveillance system.

Lyme disease case reports that meet the national LD surveillance case definition are counted as cases [MMWR 1997;46(RR-10):20]. Follow-up questionnaires are sent to physicians who report a case of LD without supplying clinical information. Reports without clinical information are not counted as cases.

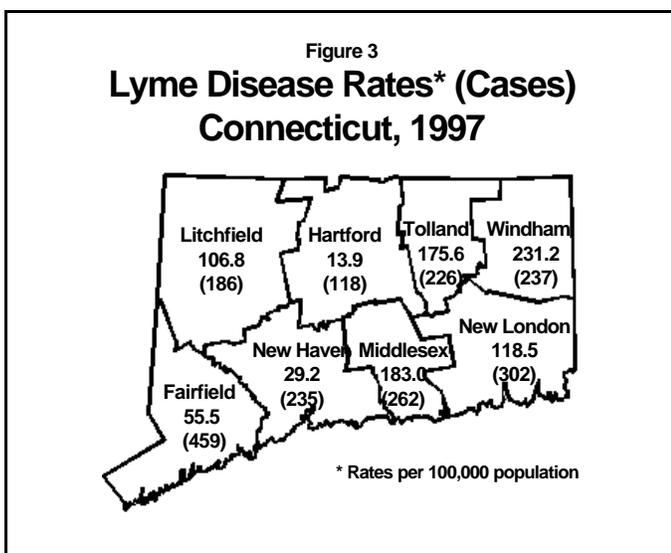
Of the 4,023 LD reports received by the DPH in 1997, 2,297 (57%) met the surveillance case definition. Of these, 1,420 (62%) were reports of erythema migrans (EM) only and 149 (7%) were reports of EM and a systemic manifestation of LD.

Of the 2,454 non-EM reports received, 728 (30%) had one or more systemic manifestation and a positive serologic test for antibody to *Borrelia burgdorferi* and thus met the surveillance case definition. Arthritic symptoms occurred in 531 (73%), neurologic manifestations occurred in 190 (26%), and cardiac complications occurred in 7 (1%). The remaining 1,726 reports either did not meet the surveillance case definition (77%) or had no clinical information (i.e. laboratory reports only)(23%).

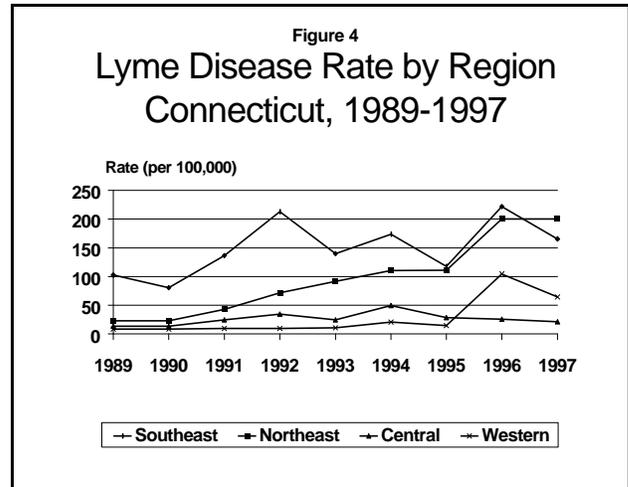
As in previous years, the majority of cases occurred in the summer months. In 1997, 71% of cases with known onset dates occurred during the months of June, July and August. The age group with the highest LD rate was children aged 5 through 9 years (Figure 2). The lowest rate occurred in the 20 to 24 year age group.



In 1997, Connecticut had the highest reported rate of LD of any state (69.9 cases per 100,000 population). Windham County reported the highest rate of LD with 231.2 cases per 100,000 population. In contrast, Hartford County reported 13.9 cases per 100,000 population, the lowest county rate in the state (Figure 3).



Over the past 7 years, there has been an upward trend in the rate of reported LD from the Northeastern part of the state (Tolland and Windham counties) (Figure 4).



HUMAN EHRLICHIOSIS

In Connecticut, statewide surveillance for ehrlichiosis has been conducted for the past 3 years. The results indicate that human granulocytic ehrlichiosis (HGE) is endemic in Connecticut while human monocytic ehrlichiosis (HME) remains rare (1).

To promote surveillance for ehrlichiosis, the Connecticut Emerging Infections Program, together with the DPH Bureau of Laboratory Services, **provides free serologic testing** for antibodies to both human HME, caused by *Ehrlichia chaffeensis*, and HGE, caused by *E. equi* or a closely related *Ehrlichia* species.

Effective May 1, 1998:

- ◆ Serologic testing for HGE is conducted on **all** specimens submitted for ehrlichiosis testing. **No screening criteria are applied.**

- ◆ Serologic testing for HME is no longer being routinely performed on specimens submitted for ehrlichiosis testing. However, HME testing will remain available upon request.

Between July 1995 and December 1997, 173 cases of ehrlichiosis were detected (131 confirmed cases, 42 probable cases) in Connecticut. One hundred fifty five (90%) were HGE, 9 (5%) HME, and 9 (5%) had evidence of dual HGE/HME infection. Illness onset occurred during all months except January, with 77% of cases occurring between May and September. The mean age of case patients was 53 years (range: 3 days to 90 years). Cases were evenly distributed between males and females.

The statewide average annual incidence was 1.8 cases per 100,000 population. Cases of ehrlichiosis were detected in all eight counties with the highest incidence rates found in Middlesex and New London counties (9.3/100,000 and 4.8/100,000 respectively). Age specific incidence increased with age, the highest rate found among those aged 70-79 years.

Continued surveillance is necessary to increase our understanding of *Ehrlichia* infections in this state. During mild weather conditions, adult and nymphal ticks become active leading to the possible increased transmission of *Ehrlichia*. Serum samples--both acute and convalescent--from patients presenting with a clinical course compatible with ehrlichiosis should continue to be submitted to the DPH for free *Ehrlichia* serologic testing. For additional information please contact Jim Meek at (203) 764-4364 or Dr. Matthew Cartter at (860) 509-7994.

Reference

- 1 CDC. Statewide surveillance for Ehrlichiosis - Connecticut and New York, 1994-1997. *MMWR*. 1998; 24:476-80.

Cyclosporiasis

Cyclospora cayetanensis, a coccidian protozoa with worldwide distribution was first diagnosed in humans in 1977. Before 1996, only three outbreaks of *Cyclospora* infection had been reported in the United States (U. S.). In 1996 and 1997, national outbreaks, which affected more than 1,000 persons each year, were associated with the consumption of imported raspberries (1,2).

Cyclosporiasis has been a physician and laboratory reportable disease since January 1997. During 1997, 29 confirmed and nine probable cases were reported to the DPH. Cases ranged in age from 4 - 71 years (median, 53) and included residents of all eight counties. Persons with domestically acquired infection had onset of illness between May 13 and August 22. Two separate clusters associated with consumption of imported raspberries were identified. So far in 1998, one case has been reported in Connecticut with infection acquired outside the U.S.

To improve the national detection of outbreaks, three laboratories in Connecticut participate in an enhanced multistate surveillance system. Results of stool specimen testing are reported weekly from April through September to the Centers for Disease Control and Prevention.

To assess laboratory testing practices for *Cyclospora*, the DPH conducted a survey of clinical laboratories in 1997. Thirty of 42 laboratories tested onsite for *Cyclospora*. Two laboratories tested all ova and parasite (O&P) specimens and 25 tested for *Cyclospora* if the presence of oocysts was suspected after routine preparation of an O&P. Most laboratories used acid fast stains. Among laboratories able to provide testing data, 31% of specimens were tested for *Cyclospora* and 0.3% were positive.

Editorial Note: Cyclosporiasis is caused by ingestion of *C. cayetanensis* oocysts. Contaminated water and food are possible sources. The national investigations in 1996 and 1997 implicated raspberries grown in Guatemala as a source of *Cyclospora* infection and resulted in a ban on their importation into the U.S. during 1998.

Persons of all ages are at risk for infection. The risk may vary with season; some evidence suggests that infection is most common in spring and summer (2). Symptoms, including watery diarrhea, abdominal cramps, and fatigue, typically begin after a one week incubation period. The course of illness can last weeks with relapsing diarrhea and weight loss and can be particularly severe in HIV-infected persons. Early diagnosis and treatment with trimethoprim-sulfamethoxazole combinations are effective in reducing the severity and duration of illness (3).

To determine the occurrence of *Cyclospora* in Connecticut, DPH requests:

- ◆ *Cyclospora* be considered in the differential diagnosis of all persons with persistent gastroenteritis, persons who present during spring and summer or with a history of international travel.
- ◆ Examination for *Cyclospora* be specifically requested when submitting stool for laboratory diagnosis.
- ◆ All cases of *Cyclospora* be reported to the Epidemiology Program, at (860) 509-7994.

References

1. Herwaldt BL, Ackers M, et al. An outbreak in 1996 of cyclosporiasis associated with imported raspberries. *N Eng J Med.* 1997; 336: 1548-56.
2. CDC. Update: Outbreaks of cyclosporiasis - United States and Canada, 1997. *MMWR.* 1997; 46: 521-23.
3. Soave R. *Cyclospora*: An overview. *Clin Infect Dis.* 1996; 23: 429-37.

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