CONNECTICUT DEPARTMENT OF PUBLIC HEALTH
Keeping Connecticut Healthy

Connecticut Epidemiologist

Volume 27, No. 5 **November 2007**

Free Influenza Testing

Efforts to isolate and identify circulating influenza virus strains are important components of the Connecticut Department of Public Health's (DPH) influenza surveillance system. The DPH encourages physicians to submit upper respiratory specimens (nasopharyngeal aspirates or swabs, nasal washings or swabs, or throat swabs) from patients with a typical influenza syndrome (abrupt onset of fever, myalgia, and cough) to the DPH Laboratory for virus isolation.

Specimens should be collected no later than 3 days after onset of symptoms and sent immediately to the DPH Laboratory on wet ice or cold packs, if possible. Respiratory viral reference collection kits (VRCs) may be obtained at no cost by calling the DPH Laboratory at 860-509-8501. Health care providers can submit specimens for influenza testing at no charge. Please check "181 V Influenza surveillance" on the microbiology test requisition form and provide all other necessary information.

If you have any questions about specimen collection, handling, or transport, please contact the DPH Virus Laboratory at 860-509-8553. All questions concerning DPH flu surveillance efforts including testing for avian influenza or other novel influenza A strains should be directed to the DPH Epidemiology & Emerging Infections Program (EEIP) at 860-509-7994.

Influenza Testing Practices of Primary Care Providers in Connecticut, 2007

Rapid diagnostic tests for influenza are increasingly available, especially in the primary care settings. In 2007, the Connecticut Emerging Infections Program (EIP) at Yale University conducted a cross sectional survey of Connecticut primary care physicians (PCPs) to gain a better understanding of the attitudes and practices of PCPs regarding influenza testing.

PCPs were identified through the DPH licensure database. For the purpose of the study, “primary care” included the following specialties: Internal Medicine, Pediatrics, Family Practice, and Obstetrics/Gynecology. Random, proportional sampling was done to select a representative sample of Connecticut physicians from each specialty. The survey instrument was designed to determine if, and by what test methods, PCPs diagnose influenza among patients presenting with influenza-like illness (ILI). In addition, PCPs were asked to indicate how likely they would be to order influenza testing based on various scenarios. The survey, protocol for sampling, and data analysis were reviewed by Yale University and DPH human investigations committees (HIC) and found to be exempt from HIC oversight.

The survey was mailed to the selected physicians. Unique identifiers were assigned to track the responders and non-responders. Non-responders were sent a second and third mailing, if necessary. All responses were entered into a Microsoft Access database and analyzed using SAS 9.1. Responses from PCPs who practiced in Connecticut an average of at least 8 hours per week and who saw patients with ILI since October 2006 were considered “eligible” and included in the analysis.

Of the 4,890 PCPs licensed to practice in Connecticut, 863 (18%) were randomly selected to receive the survey. Of these, 449 (52%) responded as of September 30, 2007; 175 (39%) met eligibility criteria (Table 1). By primary practice type, Internal Medicine accounted for 49% of the responses followed by Pediatrics (31%), Family Practice (22%) and Obstetrics/Gynecology (7%). Most PCPs (82%) were in private, outpatient-based practices.

Ever ordering influenza testing of any type was reported by 62% (109) of PCPs. Thirty-five percent (62) of PCPs currently use on-site rapid influenza tests; 94% (58/62) of these PCPs use on-site testing as the primary assay to diagnosis influenza

In this issue...

in their patients. The most important reasons reported for ordering an influenza test were "desire to know the etiology of the illness" (59%) and "to decide on antiviral treatment" (32%). The most common reasons reported for not testing patients for influenza were untimely results (38%) and inconvenience (32%). Over half (93/175; 53%) of the PCPs indicated they had prescribed antiviral medications to a patient with ILI during the most recent influenza season.

The distribution of primary practice type for PCPs reporting on-site influenza testing differed from that of all eligible PCPs (p = 0.01), with no testing reported by Obstetrics/Gynecology. Years since training did not significantly impact on-site influenza testing, nor did practice setting. However, PCPs whose practices currently perform on-site influenza testing were more likely to report that they had prescribed antiviral medications to patients with ILI (Table 1).

PCPs were asked how likely they would be to order influenza testing for an adult or pediatric patient presenting with suspect influenza at the beginning, middle, and after the peak of the influenza season. The percentage of PCPs reporting that they would "usually" order an influenza test for an adult or pediatric patient decreased as the influenza season progressed (Figure 1).

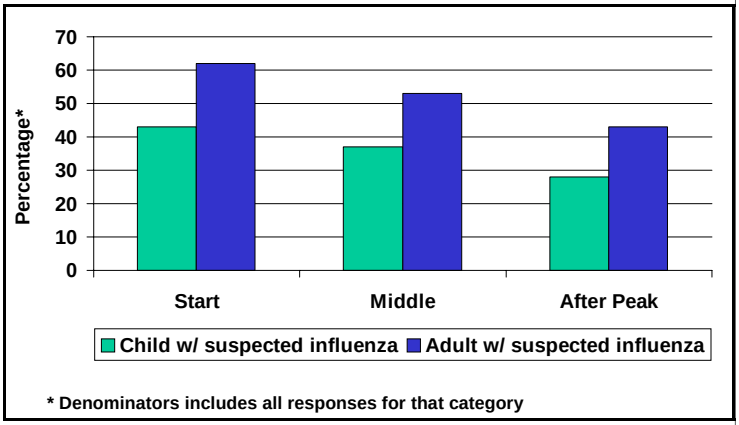
Reported by: John Palumbo, Darcy Fazio, Alison Laufer, James Meek, Yale University, Emerging Infections Program.

Table 1: Characteristics of Connecticut primary care providers responding to the survey.

	Eligible (n=175)	On-site rapid testing (n=62)	
	n (%)	n (%)	p-value
Primary practice type			0.01*
Internal Medicine	86 (49)	30 (48)	
Pediatrics	55 (31)	26 (42)	
Family Practice	22 (13)	6 (10)	
OB/GYN	12 (7)	0	
Years since training			0.85**
<15 years	68 (39)	25 (40)	
≥ 15 years	89 (51)	34 (55)	
Missing	18 (10)	3 (5)	
Setting			0.18**
Outpatient private	143 (82)	47 (76)	
Hospital based	20 (11)	11 (18)	
Other	11 (6)	4 (6)	
Missing	1 (1)	0	
Prescribe antivirals	93 (53)	40 (65)	0.03**

* Fishers Exact, ** Chi-square

Figure 1. Percentage of PCPs who would "USUALLY" order a flu test on patients at various times in the flu season



*** Denominators includes all responses for that category**

Editorial Note:

Influenza has been a laboratory-reportable significant finding in Connecticut since 1976. Reports of positive influenza tests from licensed clinical laboratories are reportable to local health departments and the Connecticut Department of Public Health (DPH) (1). The results of rapid diagnostic tests for influenza performed in clinical settings that are not licensed clinical laboratories (e. g., many PCP offices) are not reportable laboratory findings in Connecticut.

Although the generalizability of this study is limited by the response rate (52%), this survey suggests that up to 35% of PCPs in Connecticut may be using on-site rapid tests to diagnose influenza in their patients and that PCPs are more likely to use these tests early in the flu season.

References

1. Connecticut Department of Public Health. List of Laboratory Reportable Significant Findings. Connecticut Epidemiologist. January 2007; 27(1):2. Available at: http://www.ct.gov/dph/lib/dph/infectious_diseases/pdf_forms_/vol27no1.pdf.

Investigation of a Rash Illness Following Participation in a Cross Country Championship Meet in a Connecticut Park, 2006

On November 3, 2006, the Connecticut Department of Public Health (DPH) was informed by the Maine Center for Disease Control and Prevention of an outbreak of rash illness among participants of an intercollegiate cross-country track meet. The meet was held at a New London County state park on October 28, 2006. Unusually heavy rain occurred that day, resulting in flooding throughout the course. The local college that hosted the race confirmed the

existence of rash illnesses among Connecticut athletes.

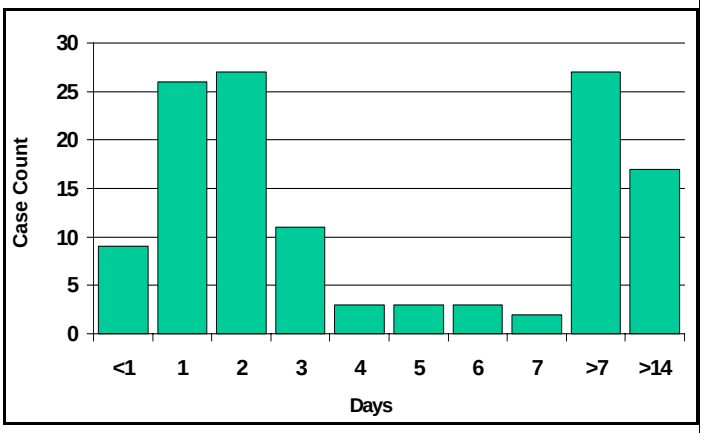
This report describes the environmental assessment, rash surveillance, and case-control study conducted to identify possible causes of this rash illness.

Environmental Assessment: Local health and environmental officials conducted an initial assessment of the race site in November 2006 to identify possible causes of rash illness. Two possible environmental factors associated with rashes having similar descriptions include poison ivy and "swimmers itch" (1,2,3). Sites were searched for poison ivy plants and snail species that serve as hosts for avian schistosome cercariae associated with swimmers itch. The onset of the winter season delayed completion of these assessments, which were completed during the next cross country season in the fall of 2007. Poison ivy was found in multiple low lying areas in the park where the meet was held, including the race course.

Epidemiologic Investigation: To assess the extent of the outbreak, a questionnaire was developed and distributed to race participants via email through the student health services department at each school. Cases were defined as race participants who developed a rash within 6 weeks of the meet. Of 147 students and staff who responded to the questionnaire, 129 (88%) reported a rash illness. Based on the schools with high response rates, the attack rate was estimated at 60%. The rash was highly pruritic (99%) and characterized by papules (98%), blisters (48%), and pustules (30%). It occurred most often on the legs (98%) and ankles (92%), although other areas of the body were also affected. Cases ranged in age from 17-53 years (median 20 yrs); 96 (65%) were female. The incubation period appeared to be bimodal, with peaks at 2 and >7 days (range= <1 - >14 days) (Figure 1). As a result of their illness, 18 (14%) persons reported missing at least one class. A total of 88 (68%) race participants sought medical evaluation, 84 (67%) were treated with topical medication and 69 (56%) with oral medication.

Among participants, rash illness was significantly associated with a prior history of rash caused by poison ivy, oak, or sumac (OR=5.24, 95% CI 1.45-18.97, p=0.006). Participants with early rash onset (<7 days) were more likely than those with late rash onset to have a prior history of poison ivy, oak, or sumac rash (84% vs. 7%, OR=71.1, p<0.0001). Affected participants were less likely to have used any type of lotion prior to the race (OR=0.23, 95% CI 0.06 – 0.88, p=0.043), daily medications in the week before the meet (OR=0.33, 95% CI 0.12-0.89, p=0.024), or participated in the women's race (OR=0.34, 95% CI 0.12 – 0.93, p=0.031). Stratified analysis showed that illness remained significantly associated with not using lotion prior to the race (OR=0.30, 95% CI 0.09-1.04, p=0.008) independent of participation in the women's race or use of daily medications in the week before the meet.

Figure 1. Number of Rash Cases by Day of Onset



Reported by: A Siniscalchi, MPH, MS, M Andrews, MPH, L Sosa, MD, J Hadler, MD, MPH, Epidemiology and Emerging Infections Program, Infectious Diseases Section, DPH

Editorial Note:

The severity and high attack rate of this rash illness resulted in considerable interest among staff and participating student athletes. A dedicated *Facebook*® site was organized by students to share photos and experiences among the eleven schools participating in the meet.

Although clinical evaluations included both poison ivy and swimmers itch among the differential diagnoses, analysis of the questionnaire data strongly suggested poison ivy rash. The rash illness was likely due to exposure to poison ivy, possibly in the form of the allergen (urushiol) mixed with floodwaters. The high correlation between those who experienced a late onset rash and lack of prior history of poison ivy rash provides additional support by suggesting new sensitization to this irritating plant. Moreover, wearing lotion, but not tights, was protective.

Potential sources of exposure to poison ivy were identified in the park and the course has been

Connecticut Department of Public Health
410 Capitol Ave., MS11EPI
P.O. Box 340308
Hartford, CT 06134-0308

PRSRT STD
U.S. Postage
PAID
Hartford, CT
Permit No 4313

modified to avoid them. Consideration should be given to warning persons participating in future races in any setting with active flooding of the possibility of exposure to environmental hazards that may have been washed into the floodwaters. In addition to this outbreak, outbreaks of leptospirosis have occurred in the United States among triathlon participants in competitions following heavy rains (4,5).

References

1. Gladman, AC. Toxicodendron dermatitis: poison ivy, oak, and sumac. *Wilderness Environ Med.* 2006;17(2):120-8.
2. CDC. Cercarial dermatitis outbreak at a state park – Delaware, 1991. *MMWR.* 1992;41(14):225-228.
3. Adams, BB. Dermatological disorders of the athlete. *Sports Medicine.* 2002;32(5):309-21.
4. CDC. Update: leptospirosis and unexplained acute febrile illness among athletes participating in a triathlon – Illinois and Wisconsin, 1998. *MMWR* 1998;47:673-676.
5. Morgan J et al. Outbreak of leptospirosis among triathlon participants and community residents in Springfield, Illinois, 1998. *Clin Inf Dis* 2002;34:1593-1599.

Erratum: Vol. 27, No. 4

In the report, "Vancomycin-Intermediate *Staphylococcus aureus* (VISA) Infection in a Connecticut Resident", an error occurred on page 15. We reported the first confirmed case of vancomycin-intermediate *Staphylococcus aureus* (VISA) occurred in February 2007. However, after a physician's inquiry, and additional review of our records, the first confirmed case of VISA infection in a Connecticut resident actually occurred in 2004. This patient was dialysis dependent and had multiple episodes of methicillin-resistant *S. aureus* (MRSA) infection. Several weeks of vancomycin treatment preceded the diagnosis. The Department of Public Health conducts surveillance for VISA and vancomycin-resistant *S. aureus* infections. All laboratories are encouraged to report and send suspect isolates to the state public health laboratory for confirmatory testing.

For Public Health Emergencies after 4:30 p.m. or on Weekends call the Department of Public Health at (860) 509-8000.

To order free copies of the Reportable Disease Confidential Case Report Form PD-23, contact the Epidemiology and Emerging Infections Program at (860) 509-7994.