

# ◆ Connecticut Epidemiologist ◆

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## State of Connecticut, Department of Public Health

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### Influenza Testing

Isolation and identification of circulating influenza virus strains is an important part of Connecticut's influenza surveillance system. The Connecticut Department of Public Health encourages physicians to submit throat swabs for virus isolation to the Department's Virology Laboratory from patients with a typical influenza syndrome (abrupt onset of fever, myalgia, and cough). Specimens should be collected no later than 3 days after onset of symptoms and sent immediately to the Virology Laboratory on wet ice, if possible.

Throat swab kits (VRCs) may be obtained from the State Laboratory (860-509-8501). Throat swabs submitted by a health care provider for influenza will be exempt from fees effective October 1, 1999 through March 31, 2000. To be eligible for the fee exemption, the health care provider must specify "FLU STUDY" in Section #1 of the Virology request form. All requested information on the form should be provided as well. For questions on specimen collection and submission, call the Virology Laboratory in Hartford at (860) 509-8553.

### U.S. Sentinel Physician Influenza Surveillance

The Connecticut Department of Health is participating for the third year in the Centers for Disease Control and Prevention (CDC) US Sentinel Physician Influenza Surveillance. This year, 45 states and the District of Columbia have agreed to participate in this project. In Connecticut, 21 physicians have enrolled in this surveillance

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project, which lasts annually from October 1 until mid-May.

On a weekly basis, the sentinel physicians report the number of cases of influenza-like illness (ILI) by four age categories. An ILI is defined as the presence of a fever  $\geq 100^{\circ}$  F and cough or sore throat in the absence of a known cause. Reporting is done by either a toll free phone number, fax, or the Internet. A weekly summary is compiled by the CDC Influenza Surveillance Branch, which is sent electronically to participant states and posted to the Internet.

This Internet posting on the CDC WebSite has created the nation's first weekly real-time disease reporting network. Participating physicians also have free throat culture confirmation testing available to them through a CDC contract laboratory.

In Connecticut, the sentinel physician system supplements the laboratory-based influenza surveillance system. For additional information on the Sentinel Physician Influenza Surveillance Project, please contact Dr. Zygmunt Dembek in the Epidemiology Program at (860)509-7994.

## Cryptosporidiosis Case-Control Study – 1998

A case-control study for risk factors of acquiring cryptosporidiosis was conducted in Connecticut in 1998. The purpose of the study was to pilot the methodology to be used among the seven states with Emerging Infections Programs in 1999. Also, hypotheses based on surveillance and case interviews conducted in Connecticut since 1995 were tested (1). The study included immunocompetent patients with diarrhea and positive stool samples collected between August 10 and December 10, 1998.

During the study period, 24 incident cases were reported. Of the 24 cases, 15 were enrolled in the study. Fourteen (93%) patients were non-Hispanic whites and one was black. Nine (60%) patients were male. Patients ranged in age from 9 months to 53 years (median, 5 years) and were residents of six counties and 14 different cities. Telephone interviews, using a standardized questionnaire, were conducted with each patient and two age-matched controls.

Twelve of the 15 patients reported that diarrhea accompanied the onset of illness. Three patients, developed diarrhea within 3 days of onset of other symptoms. The median duration of diarrhea was 14 days (range, 3-42 days). Other symptoms included cramps (57%), excessive gas (53%),

vomiting (53%), nausea (43%), and fever (33%) (temperature range, 101.0-103.4F). Twelve (80%) patients reported loss of weight (range, 1-18 lbs., median, 8.5 lbs.) representing 3-10% of body weight.

Of the 15 patients, 12 (80%) traveled out of Connecticut during the 2 weeks before onset of illness. Nine traveled to neighboring states and three internationally. Controls were less likely to have traveled out of Connecticut (40%, Odds Ratio [OR] = 5.8, 95% Confidence Interval [CI] = 1.3-31.8). Two patients were out of the United States for the entire incubation period.

Among potential exposures in which direct person or animal contact were examined, only farm visits and contact with cattle showed strong association with illness (OR = 3.4 and 6.0 respectively, Table 1). However, fewer than a third of patients had farm or cattle exposure. There was no suggestion that daycare, sexual contact, or household pets were associated with illness.

Patients more frequently reported swimming than controls among all age groups (77% vs. 50%, Table 2). Forty-six percent of patients swam in a public pool compared to 15% of controls. Submerging one's face into the water was also associated with illness. However, swimming on a weekend or in a lake was not associated with illness.

**Table 1. Person-to-person and animal-to-person exposures.**

Potential exposure	No. persons exposed (%)		Matched OR (95% CI)	p-value
	Patients	Controls		
Daycare attendance (case <12 y.o.)	3/7 (43)	5/14 (36)	1.3 (0.2-10.5)	0.55
Daycare attendee in household*	1/10 (10)	2/20 (10)	0.8 (0.01-15.6)	0.67
Household member wears diapers	3/13 (23)	4/26 (15)	1.2 (0.08-18.1)	0.63
Contact - person with intestinal illness	2/12 (17)	0/26 (0)	-	0.21
Sexual activity (case >17 y.o.)	2/5 (40)	8/10 (80)	-	0.31
- anal contact	0	0	-	-
Pet cat in home	6/13 (46)	10/26 (38)	1.4 (0.3-7.6)	0.45
Pet dog in home	5/13 (38)	13/26 (50)	0.7 (0.2-2.7)	0.38
Visited a farm	4/13 (31)	3/26 (12)	3.4 (0.4-38.2)	0.12
Contact with cattle	3/13 (23)	1/26 (4)	6.0 (0.5-315)	0.11
Contact with horses	3/13 (23)	3/26 (12)	2.4 (0.2-29.9)	0.31

\*Excludes cases who attended daycare.

No differences in sources of drinking water, water consumption, or the use of water filters were found between patients and controls. The median number of 8 ounce glasses of water consumed by patients was four compared to three for controls. Patients and controls who consumed city water either at home or out of the home, at work or in school, reported drinking a median of three glasses.

When asked about foods consumed, patients more frequently reported eating cold cuts than controls (83% vs. 58%, OR = 6.4, 95%CI = 0.7-315). Nearly all patients and controls who had eaten cold cuts did so at home. The median cold cut consumption count was two for patients and three for controls. Consumption of unpasteurized products was also associated with illness (OR = 4.0, 95%CI = 0.2-235), but only two patients consumed them. Consumption of other foods including shellfish was not associated with illness. Patients were less likely than controls to have eaten lettuce or garden salad (OR = 0.1, 95%CI = 0.1-1.0). This was particularly so among females (OR [unmatched] = 0.1, 95%CI = 0.01-1.4) when compared to males (OR [unmatched] = 0.5, 95% CI = 0.05-5.1).

**Editorial Note:** The Department of Public Health has been conducting surveillance for cryptosporidiosis since 1994 when it was declared a reportable disease. During 1998, 45 cases were reported. Seventy two percent of the patients were HIV-negative and 36% were children less than 13 years old, reflecting an increasing proportion of cases among these groups. As in previous years, most cases (53%) were diagnosed during August and September.

In this pilot study, patients had onset of illness from August 5 to September 27. Possible risk

factors of particular interest included domestic and foreign travel, exposure to cattle, and swimming in public pools. Physicians should consider *Cryptosporidium* as a possible cause of diarrheal illness among patients with onset of symptoms during the summer and early fall. A history of farm visits, travel, or swimming may help to identify patients at greatest risk for cryptosporidiosis. Testing of stool specimens for *Cryptosporidium* should be specifically requested when specimens are submitted.

A cryptosporidiosis fact sheet is available at the DPH WebSite (<http://www.state.ct.us/dph>). For additional information contact the Epidemiology Program at (860) 509-7994.

#### References

Connecticut Department of Public Health. Cryptosporidiosis 1994-1997. *Conn Epid.* 1998;18:13-16.

## Public Health Preparedness and Response for Bioterrorism

In September 1999, the Centers for Disease Control and Prevention (CDC) awarded federal money to states and major cities to expand and upgrade their ability to detect and respond to biological and chemical agents, and provide a public health response to terrorist acts in the United States. These funds will allow communities to develop or enhance public health capacities at the local and state level.

The Connecticut Department of Public Health received funding to:

1. Enhance laboratory capacity to manage specimens submitted for testing or

**Table 2. Recreational water exposure (fresh water).**

Activity	No. persons exposed (%)		Matched OR (95% CI)	p-value
	Patients	Controls		
Swimming	10/13 (77)	13/26 (50)	6.4 (0.7-315)	0.07
Submerged face in water	9/13 (69)	10/26 (38)	7.8 (0.9-374)	0.04
Swimming on weekend	8/13 (62)	12/26 (46)	2.1 (0.4-14.6)	0.26
Swimming in a lake	2/13 (15)	3/26 (12)	2.0 (0.03-157)	0.56
Swimming in a public pool*	6/13 (46)	4/26 (15)	8.6 (0.9-414)	0.03

\*Municipal, hotel, or country club pool.

***In This Issue...***

**Influenza, Cryptosporidiosis, Bioterrorism, Minority Health Resources**

confirmation of biological agents possibly associated with bioterrorism;

2. Establish an electronic communications network, including Internet access, for rapid and ongoing communication of critical public health information between the DPH and local health departments and other key surveillance and response partners; and
3. Establish a capacity for coordination of distance learning so that all local health departments are aware of distance learning opportunities and have established locally convenient sites for linking to live training programs provided by the CDC and its partners.

For questions concerning the Departments activities related to preparedness and response for bioterrorism, please contact Dr. Zygmunt Dembeck in the Epidemiology Program at (860) 509-7994.

## Minority Health Resources

The Connecticut Department of Public Health (DPH) released a report in June 1999 entitled *Multicultural Health—The Health Status of Minority Groups in Connecticut*. The report compares the health status of African American, Hispanic, Asian American and Pacific Islander, and Native American to white residents, in the context of socioeconomic differences that affect health and access to health care.

Thirty-four areas of health disparities for Connecticut's minority residents are examined. The findings are expressed as population-based rates, relative risks compared to whites, and excess events that would not have occurred if the minority group had the same rate or percentage as the white population. For a free copy of the report, call the DPH Office of Multicultural Affairs (860) 509-7140 or e-mail <webmaster.dph@po.state.ct.us>.

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