

# Connecticut Epidemiologist



STATE OF CONNECTICUT DEPARTMENT OF HEALTH SERVICES  
 FREDERICK G. ADAMS, D.D.S., M.P.H., Commissioner

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## MEASLES UPDATE

In April-May 1987, the Immunization Program officially received reports of 15 cases of measles, with an additional three cases awaiting confirmation. More cases have already been reported in 1987 than in any entire year since 1980.

So far four separate outbreaks have been investigated; three outbreaks began with exposure to an index case in a doctor's office or emergency room. In none of the outbreaks was the suspect index case promptly reported to the state, resulting in delays in the initiation of control measures. All medical care providers are reminded that measles is a reportable disease, and we need to be informed of suspect cases as quickly as possible so that appropriate investigation and control measures may be started. We are especially concerned that physicians may fail to consider measles as a diagnosis when confronted with classical symptoms or fail to report the case even after making a clinical diagnosis of measles.

"Classical" measles symptoms include a 2 to 4 day prodromal illness (fever, cough, coryza, conjunctivitis) followed by a maculopapular rash usually beginning on the forehead or face and spreading to the trunk and extremities. (Variations of symptoms and degrees of severity may, of course, be noted.)

Please contact the Immunization Program at 566-4141 if you have questions regarding measles or any immunization related material.

## SALMONELLA UPDATE

In the past two years, seven Salmonella enteritidis outbreaks have been investigated in Connecticut; five outbreaks occurred in institutions and two were associated with restaurants. The number of outbreak-related cases ranged from five to 329 (median 24 cases) with a total of 432.

The largest outbreak occurred in January and February 1987 among patrons and employees of a West Hartford restaurant; 329 persons were estimated to have stool culture confirmed salmonellosis and ten persons were known to have been hospitalized. Several lines of evidence indicated that the outbreak was caused by multiple contaminated foods: a patron case-control study implicated four different menu items, including several egg-based dishes; 11 patrons who ate only one restaurant menu item had eaten 17 different menu items, and cultures of 12 restaurant foods yielded S. enteritidis. The environmental inspection revealed poor food-handling practices that could have allowed cross contamination of foods and conditions suitable for subsequent bacterial growth. This outbreak appears to be related to the general increase in S. enteritidis infections in the Northeast.

In the last 10 years, New England and the Middle Atlantic region have experienced a five-fold increase in the reported isolation rate of S. enteritidis

(Figure 1). The increase exceeds the regional 1.7-fold increase in the collective isolation rate reported for

FIGURE 1

Rates of reported *S. enteritidis* infections, by region  
— United States, 1976-1985



all other *Salmonella* serotypes. In 1985, *S. enteritidis* replaced *S. typhimurium* as the single most commonly reported serotype in New Jersey, New York, and New Hampshire. The reasons for this increase are not understood. The median age of persons infected with *S. enteritidis* increased from 10 years to 24 years between 1975 and 1985, but the seasonality of the infections has not changed. In 1986, investigations of outbreaks of *S. enteritidis* infections in the northeastern United States implicated a variety of food vehicles, including a liquid protein supplement in Pennsylvania, home-made ziti in New Jersey, Italian-style rice balls in New York City, Hollandaise sauce in New York State, roast beef in Massachusetts and one brand of commercial frozen pasta products in multiple states in the region. No single reservoir that would connect all of these outbreaks and the many sporadically occurring cases has been detected.

On November 1, 1986, epidemiologists from state health departments in the Northeast and the CDC met to review the findings of recent *S. enteritidis* outbreak investigations and to discuss possible approaches to the improved understanding and control of *S. enteritidis* infections in the region. An *S. enteritidis* Working Group was established to facilitate communication and cooperation among public health officials in several states and the CDC in the investigation of *S. enteritidis* outbreaks. Since the serogroup of a *Salmonella* isolate is often known before its serotype and because more than 90% of Group D isolates in the Northeast are *S. enteritidis*, a strategy was developed to intensify the rapid investigation of outbreaks of Group D *Salmonella* in the region. The U.S. Department of Agriculture and the Food and Drug Administration are assisting the Working Group in investigations that suggest a food production or food processing source for the contamination.

Editorial Note: The majority of outbreaks of non-typhoid *Salmonella* infections in the United States come from foods of animal origin, and this is also likely to be the case for *S. enteritidis* (1). *Salmonella* may be introduced into such foods on the farm, during slaughter or processing, or during final food preparation. A broad increase in regional rates of human infections by a specific *Salmonella* serotype indicates that a regional increase in contamination may have occurred at one or more of these steps in the food chain.

Recognition of the problem of *S. enteritidis* infections in the northeastern United States and the intensive investigation proposed by the *S. enteritidis* Working Group are both made possible by routine serotyping of *Salmonella* isolates in public health laboratories. It is hoped that the regional effort proposed by the Working Group to understand the epidemiology of *S. enteritidis* infections in the

Northeast will lead to specific control measures for S. enteritidis. Understanding the epidemiology of a specific serotype in a region of high incidence may also lead to a better understanding of the continuing long-term increase in salmonellosis in the United States.

[Adapted from MMWR, 1987, 36:10-11]

#### Reference

1. Feldman RA, Riley LW. Epidemiology of Salmonella and Shigella infections in the United States. In: Takeda Y, Miwatani T, eds. Bacterial Diarrheal Diseases. Tokyo: KTK Scientific Publishers, 1985:103-16.

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#### THE PUBLIC HEALTH FOLLOW-UP OF REPORTED CASES OF SALMONELLOSIS & SHIGELLOSIS

The epidemiologic and laboratory follow-up of laboratory-confirmed cases of salmonellosis and shigellosis can represent a major commitment of local and state staff time which is sometimes without a clear public health benefit. Not only are cases frequently visited for demographic and epidemiologic information, but clearance specimens are frequently obtained without regard to the risk those cases present to their contacts. Often, stool specimens are taken from household contacts as well, and these specimens can also entail follow-up when positive.

The Epidemiology Program recommends that follow-up stool cultures be obtained only from cases and contacts at high risk of transmitting infection (e.g., food handlers, persons employed by or attending a day care center, persons working in a health care setting providing direct patient care, such as

physicians, nurses, or nurses' aides). The collection of routine specimens from other cases or contacts is not recommended because the intervention -- health education -- is the same regardless of test results. Furthermore, a negative stool specimen from family members may only engender a false sense of security and detract from the importance of hygiene and handwashing. Routine follow-up with stool cultures of cases or contacts who are at high risk for transmitting infection is reasonable and necessary to document when these persons are no longer contagious.

Epidemiologic follow-up of salmonellosis and shigellosis should be targeted toward identifying common sources and identifying those at risk of transmitting infection in special settings. It should generally include, therefore, the following high priority activities:

1. Collect demographic and epidemiologic data.
2. Determine if the case is part of an outbreak (i.e., are there other ill persons at work, school, home or other common settings).
3. Provide health education and information emphasizing HANDWASHING to all cases and contacts.
4. Identify and obtain stool-culture follow-up from cases and contacts (whether symptomatic or asymptomatic) who are at high risk of transmitting infection.

If an outbreak of salmonellosis is suspected, it should be reported immediately by telephone to the Epidemiology Program, State Department of Health Services at 566-5058 or 566-4800 (24-hour number). Consultation and assistance are always available.

\*Adapted from "California Morbidity", Number #41, October 18, 1985, State of California Department of Health Services.

## RELEASE OF BOTULISM ANTITOXIN

Botulism antitoxin for patients with signs and symptoms of human foodborne or wound botulism is released to physicians by the Centers for Disease Control (CDC) from its quarantine stations located throughout the United States. Any health-care provider requesting botulism antitoxin should first contact the State Department of Health Services at 566-5058 or 566-4800 (24-hour number). If the State Health Department is unreachable during nights or on weekends, CDC may be called at (404) 329-2888 (24-hour number).

When botulism is suspected, a careful food history, especially for home-canned vegetables or fruits, should be sought, and the suspected food items saved. Stool and serum should be obtained from patients with possible botulism and refrigerated. Electromyography should be done using repetitive stimulation at 40 Hz or greater. When indicated, cerebrospinal fluid should be examined for white blood cells and protein, and a Tensilon challenge test should be done. The patient's vital capacity should be monitored. The results of these tests

are helpful in evaluating the need for botulism antitoxin.

[Adapted from MMWR, 1986; 36: 481.]

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COMMUNICABLE DISEASES REPORTED			
CONNECTICUT			
Weeks 1-21			
(Thru May 29, 1987)			
Name	1987 To Date	1986 To Date	% Change From 1986
AIDS	49	72	- 32.0
GONORRHEA	4,149	2,504	+ 65.7
SYPHILIS P&S	97	65	+ 49.2
MEASLES	15	0	--
RUBELLA	0	1	-100.0
TUBERCULOSIS	70	82	- 14.6
HEPATITIS A	44	48	- 8.3
HEPATITIS B	114	140	+ 18.6
SALMONELLOSIS	659	192	+243.2
SHIGELLOSIS	62	40	+ 55.0

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