

SENSOR Occupational Lung Disease Bulletin

A project of the Massachusetts Department of Public Health's Occupational Health Surveillance Program, the Massachusetts Thoracic Society, and the Massachusetts Allergy Society

Massachusetts Department of Public Health, Occupational Health Surveillance Program
250 Washington Street, 6th floor, Boston, MA 02108 Tel: (617) 624-5632 Fax: (617) 624-5696

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Dear Health Care Provider:

For the last five years, Catharine Tumpowsky managed the MDPH occupational asthma surveillance project and authored the *Occupational Lung Disease Bulletin*. This summer, Catharine left the Department to spend more time with her family. Please join me in wishing Catharine the best and welcoming Beatriz Pazos and Rebecca Ray who will be working together on occupational asthma surveillance.

Environmental hazards, which affect the community at large, are often considered separately from occupational hazards that affect individuals in the workplace. In reality, the boundaries between environmental and occupational hazards are not clear cut. In this issue of the *Bulletin* we report on an unusual respiratory hazard which poses risks for workers and the general public alike.

Letitia Davis, ScD, Director
Occupational Health Surveillance Program

ulceroglandular. The majority of cases (73%) had a pneumonic presentation, which is fairly uncommon and much more serious. Clinical diagnosis can be confirmed through culture or serology and the disease is treated with antibiotics.

Tularemia has been reported to occur sporadically on Martha's Vineyard since rabbits were introduced sixty years ago. Between 1990 and 1999, 17 cases of tularemia statewide were reported to MDPH with the majority coming from the Cape and Islands region. All of these cases had the ulceroglandular presentation.

On July 5, 2000, MDPH was notified of two suspect cases of pneumonic tularemia occurring among residents of Martha's Vineyard and by mid-July three additional suspect cases were reported. At that time, MDPH notified hospital infection control practitioners and local boards of health on Martha's Vineyard, Nantucket and Cape Cod as well as all medical providers on both Islands of the cluster of tularemia cases.

On July 18, 2000, MDPH requested assistance from the Centers for Disease Control and Prevention (CDC) in investigating the cluster. Officers from the Epidemic Intelligence Service (EIS) traveled to Massachusetts where they interviewed all cases and attending physicians and performed retrospective case finding at hospitals on Cape Cod and the Islands. Environmental samples were also taken. Results from this initial investigation did not uncover any common source of infection; however, it appeared that persons recently involved in outdoor occupations, such as landscapers or construction workers, were at an increased risk of disease.

REPORT MAY 2001-AUGUST 2001 CASES NOW

By September 30th, report all occupational lung disease cases seen for the first time between May 2001 and August 2001. If you have NOT seen any cases, it is not necessary to return the report form.

Tularemia on Martha's Vineyard

In early July 2000 the Massachusetts Department of Public Health (MDPH) began investigating a cluster of tularemia cases among full and part-time residents of Martha's Vineyard. Tularemia, sometimes referred to as "rabbit fever" after its most common reservoir, is a relatively rare zoonotic disease caused by the bacterium *Francisella tularensis*. The disease can be transmitted from direct or indirect contact with numerous animals, the bite of a tick, the consumption of contaminated water, or the inhalation of the infecting organism. Clinical presentation will vary depending on the route of transmission and the virulence of the infecting strain. Ulceroglandular tularemia is caused by a tick bite or by skin contact with the bacteria and is the most common presentation nationally and statewide; however, in the 2000 outbreak on Martha's Vineyard, only 13% of the fifteen cases were

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By mid-August MDPH was investigating six confirmed pneumonic tularemia cases. Because two of these confirmed cases were part-time residents of Martha's Vineyard who had sought medical care outside of the Vineyard, MDPH notified all emergency room physicians statewide of the tularemia cluster. At the end of August MDPH issued a public health advisory to all Martha's Vineyard residents and visitors making them aware of the situation and how they could best protect themselves.

On September 6, 2000, the CDC EIS officers returned to Martha's Vineyard where they again interviewed cases and physicians and collected a variety of environmental samples. A case-control study was initiated to determine what behaviors were associated with tularemia infection. By the end of September all confirmed cases and 100 randomly selected controls had been surveyed about their outdoor activities and potential exposures. Data collected from this survey confirmed that persons who were involved in brush cutting or lawn mowing activities were at a higher risk of disease. Investigators believe these workers became infected after inhaling contaminated particles of dust, soil or grass.

A total of fifteen confirmed cases of tularemia among Martha's Vineyard residents was reported to MDPH during the year 2000. The majority of these cases were men (93%) over the age of forty (53%). Ten of the fifteen cases (67%) were involved in outdoor occupations. Two cases had onset dates in late May, five in June, one in July, five in August, one in September, and one in October. One individual died. Nine of the eleven (82%) pneumonic cases reported lawn mowing or brush cutting prior to their onset.

In February 2001, MDPH held a public health forum on Martha's Vineyard to update residents on the results from CDC's investigation. MDPH also released a public health advisory that summarized key aspects of the 2000 outbreak and outlined recommended prevention measures. The prevention measures include wearing a respirator when involved in outdoor dust-generating activities, avoiding contact with wild animals and ticks, dressing and cooking wild game appropriately, and avoiding contact with potentially contaminated water. A copy of this public health advisory can be obtained on the MDPH website at

<http://www.state.ma.us/dph/cdc/epii/tular/tulmv.pdf> or by calling the MDPH Division of Epidemiology and Immunization at 617-983-6800.

MDPH has received reports of four confirmed tularemia cases associated with Martha's Vineyard this year to date. The first was an ulceroglandular case occurring in April in a child from the greater Boston area who had been on Martha's Vineyard during his incubation period. The remaining three cases have all been pneumonic, occurring in Martha's Vineyard residents involved in outdoor occupations. One case occurred in June and two in early July. All of the cases this year have been successfully treated and have recovered. The CDC returned to Martha's Vineyard at the end of June to continue its investigation into this unusual outbreak.

Susan Soliva, M.P.H.
Epidemiologist
Division of Epidemiology and Immunization

**Work-Related Asthma Cases Reported to
Massachusetts SENSOR
November 2000 – April 2001**

Total cases from March 1992 to October 2000: 804

Nov 2000	Dec 2000	Jan 2001	Feb 2001	Mar 2001	Apr 2001
1	4	5	2	4	20

The Massachusetts Department of Public Health, Bureau of Communicable Disease Control recommends:

- Prior to lawn mowing or brush cutting, check the area to make sure it is clear of any visible animal carcasses. When removing a carcass, use gloves or a shovel and either bury it or double bag it in plastic and dispose in the trash.
- Minimize exposure to aerosols by maintaining equipment in good condition. Use a respirator to further reduce exposure.
- Avoid direct contact with wild animals, especially rabbits and rodents.
- Minimize rodent and rabbit populations by keeping woodpiles off the ground and in sunny areas, and securing garbage in rodent-proof containers.
- Take care to avoid ticks by wearing long pants and long sleeves; stay on trails; use insect repellent appropriately.

For more information, call 617-983-6800