

# Eastern Equine Encephalitis Hits New England

BY HEIDI SPLETE  
Senior Writer

Four cases of Eastern Equine Encephalitis were confirmed in Massachusetts as of late September, and two—including one in a 5-year-old child—have been fatal, according to the Massachusetts Department of Public Health.

Five cases—four adults and one 4-year-old child—were confirmed in New Hampshire, according to New Hampshire's De-

partment of Health and Human Services. One adult case, in a 20-year-old woman, has proved fatal.

Although Eastern Equine Encephalitis (EEE) is rare, it is a serious illness. The disease spreads to humans through a bite from an infected mosquito. Birds are the original source of infection, and mosquitoes can transmit the infection to horses, other animals, and humans after biting infected birds.

"We are advising people to limit their dusk and dawn activities," said Elizabeth

A. Talbot, M.D., deputy state epidemiologist of New Hampshire, in an interview. The department also has advised schools and day care centers to drain standing water on their property and encouraged parents to use insect repellent with DEET on children who are involved in outdoor activities after school. "It may be appropriate to spray to kill mosquitoes in some population-dense areas with high mosquito activity," Dr. Talbot said.

Since there is no specific treatment for

EEE, patients are treated with standard supportive care. Symptoms of EEE generally occur 4-10 days after being bitten by an infected mosquito. People at increased risk for disease include children younger than 15 years and adults older than age 50 years, according to the Centers for Disease Control and Prevention.

The disease can cause congestion of blood vessels and changes in nerve cells in all major parts of the brain. The symptoms include headache, sore throat, and mild flulike illness.

A sudden spike in fever, along with a headache and stiff neck, can be followed rapidly by a seizure or coma. Many patients who suffer seizures or comas experience permanent brain damage. ■

## Prevnar Use Results in Big Dip in IPD

Routine use of seven-valent pneumococcal conjugate vaccine in young children has dramatically reduced the incidence of vaccine-type and overall invasive pneumococcal disease in children and adults, the Centers for Disease Control and Prevention reported.

The most substantial decline in the rate of vaccine-type disease has been in the target population of children less than 5 years old, according to an analysis comparing disease rates in 2003 with those in 1998-1999, when the Prevnar vaccine was not available.

In this age group, vaccine-type invasive pneumococcal disease (IPD) decreased 94% from 80 cases per 100,000 population to 4.6 cases, the CDC reported (MMWR 2005;54:893-7).

Incidence rates of vaccine-type IPD also declined substantially among individuals outside the target population, with the largest absolute rate reduction occurring in those 65 years and older.

The routine use of the vaccine prevented 29,599 expected vaccine-type IPD cases in 2003, according to the analysis conducted by the Active Bacterial Core surveillance of the Emerging Infections Program Network in cooperation with the CDC.

An estimated 9,140 cases of vaccine-type IPD were directly prevented by vaccinating children less than 5 years old. An additional 20,459 cases (69%) were prevented through indirect effects of the vaccine across all ages.

"This is not the first vaccine to be shown to have a herd immunity effect, but the magnitude of the effect being so large is what makes this vaccine important," Deron C. Burton, M.D., of the CDC's division of bacterial and mycotic diseases, said in an interview.

Among children less than 5 years old and adults aged 40 years or older, the reduction in vaccine-type IPD was offset by an increase in disease caused by pneumococcal serotypes not included in the seven-valent vaccine.

—Patrice Wendling

DESPITE YOUR  
BEST EFFORTS,  
ROTAVIRUS CAUSES  
AN ESTIMATED  
**70,000**  
HOSPITALIZATIONS  
EVERY YEAR.<sup>1</sup>

### AN UNAVOIDABLE DISEASE...<sup>2</sup>

- The most common cause of severe gastroenteritis in infants and young children in the United States<sup>2</sup>
- Greatest risk for severe disease occurs primarily in young children between 6 and 24 months of age.<sup>3</sup>

### WITH UNPREDICTABLE CONSEQUENCES<sup>2,4</sup>

- No way to predict which infants will suffer severe disease<sup>5</sup>
- Potential for rapid deterioration in cases in which severe vomiting occurs<sup>5</sup>
- Responsible for an estimated 500,000 physician visits,<sup>1</sup> 70,000 hospitalizations,<sup>1</sup> and 160,000 ER visits<sup>6</sup> among children <5 years of age every year in the United States<sup>1,6</sup>
- Responsible for an estimated 100 deaths per year among children <5 years of age in the United States—an average of nearly 2 deaths per week<sup>7</sup>

Find out more at [www.rotavirusinfo.com](http://www.rotavirusinfo.com).

**References:** 1. Glass RI, Bresee JS, Parashar UD, et al. *Arch Pediatr*. 2005;12:844-847. 2. Centers for Disease Control and Prevention. *MMWR*. 1999;48(RR-2):1-24. 3. Bernstein DI, Ward RL. In: Feigin RD, Cherry JD, eds. *Textbook of Pediatric Infectious Diseases*. 4th ed. Vol 2. Philadelphia, Pa: Saunders; 1998:1901-1922. 4. Cornell SL. *Adv Nurse Pract*. 1997;5:41-44. 5. Clark HF, Offit PA. *Pediatr Ann*. 2004;33:537-543. 6. Tucker AW, Haddix AC, Bresee JS, Holman MS, Parashar UD, Glass RI. *JAMA*. 1998;279:1371-1376. 7. Parashar UD, Hummelman EG, Bresee JS, Miller MA, Glass RI. *Emerg Infect Dis*. 2003;9:565-571; Appendix B (online only). Available at [http://www.cdc.gov/ncidod/EID/vol9no5/02-0562\\_appB.htm](http://www.cdc.gov/ncidod/EID/vol9no5/02-0562_appB.htm). Accessed June 13, 2005.

Rotavirus hospitalizations