

LEGIONELLOSIS

Legionellosis, a bacterial disease caused by *Legionellae* bacteria, has two distinct manifestations: “Legionnaires’ disease” and “Pontiac fever”. Both illnesses have an acute onset characterized by malaise, headache, and fever. In Legionnaires’ disease, pneumonia may develop and progress to respiratory failure. Patients with Pontiac fever do not develop pneumonia and recover within two to five days. Airborne transmission by aerosol producing devices (e.g. spas, humidifiers, air conditioning cooling towers) is the most likely method of transmission. Legionnaires’ disease occurs both sporadically and in outbreaks. Pontiac fever is identified primarily in community outbreaks.

Laboratory Criteria for Confirmation:

- Isolation of *Legionella* species from respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluids, **OR**
- Positive Direct Fluorescence Antibody (DFA) test of lower respiratory secretion, pleural fluid or tissue specimen for *Legionella pneumophila* serogroup 1, **OR**
- Fourfold or greater change of serum reciprocal immunofluorescence antibody titer to ≥ 128 against *Legionella pneumophila* serogroup 1 between paired acute and convalescent-phase serum specimens, **OR**
- Demonstration of *L. pneumophila* serogroup 1 antigens in urine by radioimmunoassay (RIA) or enzyme-linked immunosorbent assay (ELISA).

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.

Comment

The previously used category of “probable case” which was based on a single IFA titer, lacks specificity for surveillance and is no longer used.

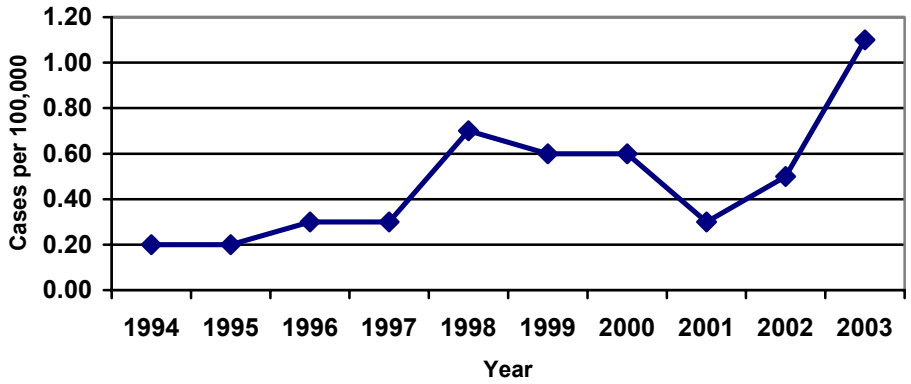
Epidemiology

Kentucky 2003	Rate per 100,000	U.S. Rate (2002) per 100,000
Cases 46	1.1	0.47

Cases by Gender

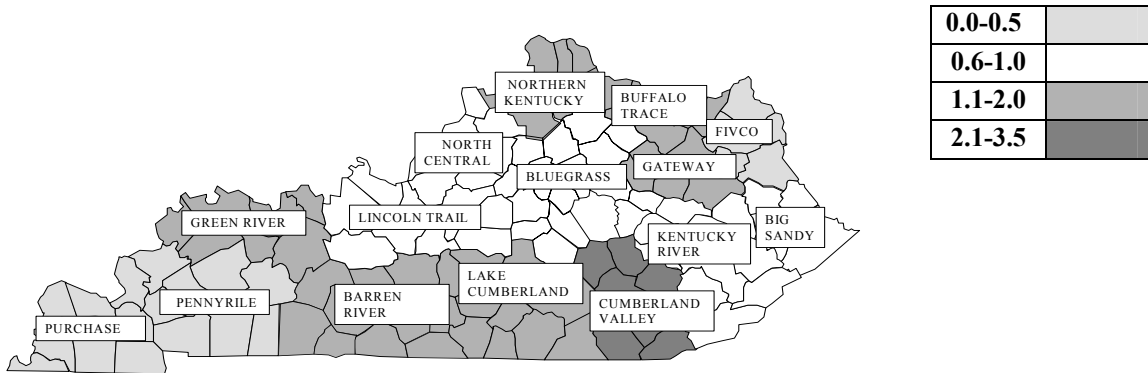
Female	12	0.6
Male	34	1.7

Legionellosis Incidence, Kentucky 1994-2003



The age range for cases statewide was from 21 to 90 years. The highest incidence rate of 3.7 cases per 100,000 was in the 60-69 age group. A change in the testing for Legionella as well as an increase in testing may be partially responsible for the rise in incidence. The urine antigen test has proven to be more sensitive as well as more convenient to collect than the serum test.

Legionellosis by District Rates per 100,000



Cumberland Valley District had the highest rate of 3.3 cases per 100,000, followed by Barren River District with 1.9 cases per 100,000. There were no reports of outbreaks of Legionella in 2003, only single cases that were not epidemiologically linked.