

Fall 2008 Course Offering: *The Investigation of Disease Clusters*

1 credit; Tuesdays 3-6 PM from Sept. 2-30; Instructor: Dr. Wartenberg

Disease clusters, or aggregations of similar or related diseases in specific groups of people, raise concern when the disease appears more common in a given population than is typical in populations of similar size, age and demographics. Observers want to know if there is an obvious cause or explanation for the apparent disease clustering in a given population. This often leads to media coverage, politics and controversy. Why is there so much concern over clusters among the public, so much attention to clusters by the media and so much controversy over disease clusters in the scientific community?

This course will review the nature and context of disease clusters, how they tend to be identified, how health departments respond to them, and the science underlying their investigation and eventual resolution. Topics include:

- (1) the history and context of cluster investigations;
- (2) the design, conduct and analyses of cluster evaluation strategies;
- (3) methods for determining statistically whether an observation is sufficiently unusual to warrant further investigation, whether it might be linked to a specific cause of disease (environmental or other), or just a quirk of a stochastic, random, or unpredictable disease process due in part to what is called the multiple comparisons problem;
- (4) a perspective on how the media respond to clusters and how cluster investigators might respond to the media;
- (5) the public health context of disease clusters;
- (6) recommendations and strategies for effective cluster investigations.

Students will be expected to complete readings each week and to participate in discussions. Critiques of particular articles and related home work assignments may be given.

In addition, there will be a 1 hour exam during the last class

The course will be more meaningful for students who have already taken:
Introduction to Biostatistics and Principles of Epidemiology