



Epiville Case Study Mirrors Real-life Mystery Disease

In an uncanny instance of life imitating classroom “art,” a recent news story about the emergence of a mystery illness in a small Minnesota town struck a familiar chord with Mailman School students and faculty who have taken, or taught, the School’s core course, Principles of Epidemiology. The class employs a Web-based program called ‘Epiville,’ which simulates unexpected public health crises such as the outbreak of disease and other natural and man-made disasters. Students must then use a series of exercises to help them overcome these real-life challenges.

According to Dan Herman, DSW, associate professor of Epidemiology and a former director of the course, one of the Epiville scenarios focuses on a sudden dramatic increase in the number of individuals suffering from a mysterious cluster of neurological symptoms thought to be linked to an environmental exposure. “Several exposures are considered as possible causes, including the Porks-A-Lot Pig Farm, suspected of discharging tainted water into Epiville’s reservoir system.”

In the real news story, “A Mystery Illness Unfolds in Minnesota” (*New York Times*, 2/5/2008), doctors at the Austin Medical Center in Austin, Minn., were confronted with a small group of patients who had the same highly unusual set of symptoms: fatigue, pain, weakness, numbness, and tingling in the legs and feet. The patients shared another common factor as well—they all worked at Quality Pork Processors, a local meatpacking plant.

The investigation to uncover the cause of these symptoms has involved plant management, neurologists from the Mayo Clinic, epidemiologists from the Minnesota Department of Health and the Centers for Disease Control and Prevention, a veterinarian from the disease centers, a professor of public health from the University of Minnesota, and—in another bizarre twist—Ian Lipkin, MD, John Snow Professor of Epidemiology, Neurology, and Pathology and director of the Mailman School’s Center for Infection and Immunity, who has been called upon for his expertise on the role of the immune system in neurological diseases.

Said Maren Olson, a current MPH student who took Principles of Epidemiology about a year and a half ago, “As I read the article in the *Times*, I was struck by how similar the steps taken by this group of experts are to the ones we used in my class. While taking the course, I wondered how much our scenario related to reality and how our work could be applied in real life. It’s great to know that I learned things that are really useful in cases that arise in the real world, and that with careful investigation and analysis, a riddle can be solved.”

Investigators in Austin are still working on solving their mystery, but several causes have been ruled out. In the meantime, according to the article, safety precautions have been taken at the

plant to protect and hopefully prevent more workers from coming down with the unidentified illness.

Said Dr. Lipkin of the mystery illness conundrum, “It’s an interesting problem. I think we can solve it.”