Contaminated Raw Milk Case Study

Two cases of laboratory-confirmedinfection with *Salmonella enterica* serotype Typhimurium were reported to the Pennsylvania Department of Health (PDH) in February 2007. Both patients reported consuming unpasteurized, or raw, milk from the same dairy—Dairy A, located in York County, Pennsylvania. At the same time, the Pennsylvania Department of Agriculture (PDA) received several reports of diarrheal illness associated with consumption of raw milk from Dairy A. (In Pennsylvania, the PDA regulates raw-milk sales, issuing permits to dairies that adhere to milk sanitation regulations and displaying public notices explaining the potential hazards of consuming raw milk.)

On February 26, the PDH and the PDA initiated an investigation to identify the source of the salmonellosis outbreak and to determine how many cases could be traced to the initial source. Samples taken from the raw-milk bulk tank at Dairy A yielded *S. enterica* Typhimurium genetically identical to that seen in the patients. Stool samples of patients and family members were also tested for the presence of the pathogen, and food histories were obtained for each patient. By July 14, a total of 29 cases of diarrheal illness caused by *S. enterica* Typhimurium and associated with consumption of raw milk from Dairy A had been identified and grouped into three distinct time periods.

* How do you think milk can become contaminated by *Salmonella,* an organism that colonizes the digestive tract?
* How can milk be tested for contamination?