



MINNESOTA'S COLLABORATION SOLVES RAW PET FOOD OUTBREAK



Various diet plans are all the rage these days, including Keto, vegan, Paleo, and more. People want to feed themselves and their families the very best, and that includes their four-legged friends. Raw pet food sales have been on the rise, driven in part by the assumption that it is healthier and more natural for animals to eat like they would in the wild. But pet owners may be overlooking the fact that many wild animals die of parasites, microbial contaminants and viruses that are spread through consumption of raw meat. A US Food and Drug Administration (FDA) study spanning from October 2010 through July 2012 found that “compared to other types of pet food tested, raw pet food was more likely to be contaminated with disease-causing bacteria.”¹ In 2018, there have been several recalls due to contamination of raw pet food with *Salmonella*, *Listeria* and *E. coli*—all of which can be passed on to humans.

On January 29, 2018, the Minnesota Department of Health (MDH) received reports of four cases of *Salmonella* Reading, a serotype not usually found in humans. Minnesota typically sees less than ten cases of *Salmonella* Reading per year, so to have four at once with matching pulsed-field gel electrophoresis (PFGE) patterns was notable. Two of the cases were siblings in a household that fed their dog a raw food diet, including raw ground turkey pet food. One of the children developed



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both septicemia (a blood infection) and osteomyelitis (a bone infection) from exposure. Though the parents were adamant that the children did not have direct contact with the raw pet food, they could have been exposed by interacting with the dog.

Once it was determined there may be a link between the cases and raw pet food, MDH notified the Minnesota Department of Agriculture's (MDA's) Rapid Response Team, a unit of inspection and laboratory staff who work together in response to outbreaks, contamination events or special circumstances where food safety is a concern (e.g. natural disasters, large public events, etc.). MDA inspectors retrieved samples of the family's raw ground turkey and ground beef pet food. MDA laboratorians isolated and serotyped *Salmonella* Reading from the raw ground turkey sample, and the MDH laboratory performed PFGE and whole genome sequencing (WGS) to further characterize the isolate and confirm it was a match to the clinical cases. PFGE patterns also matched a ground turkey retail surveillance sample isolate collected by MDA in December 2017.

Epidemiological information from MDH, an environmental assessment by MDA at the pet food manufacturer's processing facility and laboratory results from both MDA and MDH provided sufficient evidence for FDA to move forward with a request for recall of this contaminated pet food product. The manufacturer recalled 4,000 pounds of its product on February 5, 2018.

This investigation presented a unique situation with indirect contact with a raw meat product as a culprit. Communication between MDH and MDA was critical at every point in the investigation. Information during the investigation process was routinely shared between all partners at MDH and MDA (laboratory, epidemiologists and inspectors), which was essential for prioritizing testing and ensuring common understanding.

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1 FDA, "Get the Facts! Raw Pet Food Diets can be Dangerous to You and Your Pet." Accessed June 13, 2018: <https://www.fda.gov/AnimalVeterinary/ResourcesforYou/AnimalHealthLiteracy/ucm373757.htm>