An outbreak of *Salmonella* Typhimurium phage type 44 linked to a restaurant in South Australia

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In October 2000, a cluster of eleven cases of salmonellosis were investigated by the Communicable Disease Control Branch. Hypothesis generating interviews sought demographic, illness, food purchasing practices, food consumption, social activities, and animal contact information for the seven day period prior to the onset of symptoms. One case reported a history of overseas travel. Of the remaining ten (6 female, 4 male) cases, the age range was 16 to 80 years. Cases were reported from both metropolitan and rural areas of South Australia. All ten cases reported eating at an Adelaide metropolitan restaurant between the 4 and 7 October 2000. The predominant symptoms were abdominal pain (80%), diarrhoea (80%), fever (60%), nausea (60%), and bloody diarrhoea (40%). The median incubation period was 39.5 hours (range: 24 to 168 hours). One urine and nine stool specimens obtained from cases were positive for *Salmonella* Typhimurium phage type 44. Faecal specimens obtained from two symptomatic family members, were negative for *Salmonella* sp. There were no reports of gastrointestinal illness in restaurant employees.

A case-control study suggested de-boned roast pork, (Odds Ratio (OR) undefined, 95% Confidence Interval (CI) 1.24 - undefined) and apple sauce, (OR 21..33, CI 2.27 – 263.58), as two possible vehicles for the infections. An environmental investigation conducted two weeks after the exposures found customary cooking times and storage temperatures for de-boned roast pork were adequate. Although one patron reported the consumption of inadequately cooked roast pork, no other reports were received. The de-boned pork are spiced and roasted in pairs. The turn over of individual de-boned roast pork in this restaurant was estimated at 1.5 days. Assuming this, to suggest de-boned roast pork was responsible for these infections would indicate abnormalities in food handling had occurred on no less than two consecutive occasions. Similarly, the preparation and storage of the apple sauce was consistent with good hygiene practices. Commercial canned apples were used to make the apple sauce. The apple sauce was prepared in bulk and stored in a sealed container in the cool room. The apple sauce was decanted to serving dishes as required. The turn over of individual batches of apple sauce in this restaurant was estimated at three to four days. There were no food samples available for microbiological testing. Spices used in the preparation of the roast pork were negative for *Salmonella* sp. Cross-contamination of food items could not be identified.

Although the source for this outbreak was not established, patrons reported lapses in restaurant hygiene practices. These included the presence of insects in the restaurant environment and flies in prepared food and drinking water. However, the environmental investigation was unable to substantiate these claims. No further cases of *Salmonella* Typhimurium phage type 44 infection reported dining at this restaurant.

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