

**OzFoodNet—Enhancing Foodborne
Disease Surveillance Across Australia.**

**4th Quarter Summary, 2012
NSW/Hunter New England OFN sites
combined**

January 2013



Overview of Quarter

In NSW, foodborne outbreaks are identified via a range of mechanisms, including reports from the public to public health units (PHU), general practitioners, emergency departments, analysis of surveillance data, and reports to the NSW Food Authority's (NSWFA) Consumer Complaints Line. Reports to the NSWFA result in a number of outbreaks affecting small numbers of people being referred to public health units (PHUs). These outbreaks usually require limited epidemiological investigation and often the aetiology cannot be determined.

Incidence of Foodborne Disease in NSW

Salmonellosis notifications increased in the fourth quarter by 21% when compared to the previous five-year average for the same quarter, with 833 notifications compared with an average of 691 notifications.

There was a 2% decrease in **Giardia** notifications (425 cases) when compared to the five-year average of 435 notifications for the same quarter. **Cryptosporidiosis** notifications increased by 12% when compared to the five-year average for the fourth quarter, with 147 notifications compared with an average of 132 notifications.

Shigellosis notifications increased by 11% during this quarter with 34 cases reported, compared with 30.6 cases for the five-year average for the same quarter. Twelve notifications (35%) were typed as *Shigella sonnei* biotype G. Most cases (25, 74%) were noted as having travelled overseas during their incubation period, five acquired their infection in Australia from family members who had travelled overseas, two had acquired it from male to male sex and for two cases the place of acquisition was unknown.

There was a decrease in notifications of **hepatitis A** for the quarter when compared to the previous five year average for the same quarter (15 notifications compared to 19 notifications). Eighty percent (12) of the people notified with hepatitis A infections acquired their infection overseas. For the 3 who did not report any overseas travel, the cause could not be identified.

Three cases of **Shiga-toxin producing *E. coli* (STEC)** infection were notified during the fourth quarter, which was a decrease over the five-year average of 7.4 cases for the same quarter. One of the STEC cases was also diagnosed with **haemolytic uraemic syndrome (HUS)**. This is lower than the five-year average of 4.7 cases for the same quarter.

There were 13 notifications of **listeriosis** in the fourth quarter of 2012 (five-year average 5.6 cases). Four of these cases were linked to a multi-jurisdictional outbreak associated with soft cheese produced in Victoria that started in August 2012. There were no epi-links or source identified for the other cases.

Typhoid notifications for the fourth quarter of 2012 were 33% higher than the five-year mean for the same quarter (12 vs. 9 cases). Ten cases were overseas acquired, one was acquired from a family member who had travelled overseas and one could not determine the place of acquisition.

During the fourth quarter of 2012, the public health units in NSW and OzFoodNet investigated 12 foodborne or suspected foodborne outbreaks. In addition, 178 outbreaks with likely person to person transmission in institutional settings were reported.

Foodborne Disease Outbreaks

Of the 12 foodborne or suspected foodborne outbreaks reported by members of the public or identified through routine surveillance of *Salmonella* data in this quarter, two were due to *Salmonella* Typhimurium, one was due to *Salmonella* Singapore, two were due to *Clostridium perfringens*, one was due to norovirus, and the others were due to unknown pathogens. In three outbreaks the food vehicle was identified.

***Clostridium perfringens* poisoning outbreak associated with a restaurant**

Gastrointestinal illness in a group that ate at a Mexican restaurant on 27/10/2012 was investigated. Four people from a group of seven, developed diarrhoea and abdominal cramps 12-15 hours after eating the meal. The 4 ill people all consumed a chicken burrito which came with shredded chicken, cheese, rice and beans. The NSWFA inspected to premises, took some samples and observed the full cooking process and it was suspected that there was an insufficient temperature control via a

delay in placing foods to cool in the fridge and inadequate thermometer use. Samples of the cooked chicken were positive for *Clostridium perfringens*. The restaurant was issued with an improvement notice, and the cooking process was further observed and samples taken ensure compliance. These later samples were negative for all pathogens and provided evidence of proper temperature controls undertaken following Authority recommendations. (NS33608)

Norovirus infection associated with consumption of raw oysters

On 30 October 2012, the NSW Food Authority received a report of 6/30 ill with gastroenteritis associated with a five day social event on the North Coast of NSW, from 22-26 October 2012. Further reports of gastroenteritis affecting a husband and wife couple who were not a part of the social event were also reported. All eight cases consumed oysters from the local area from 24-25 October. This was the only commonly consumed food in this group. There had been no contact between the two groups or with ill people prior to the onset of illness. The median incubation period was 36 hours with duration of illness up to 48 hours. One stool sample was collected which was positive for norovirus genotype II by polymerase chain reaction (PCR). An environmental investigation identified a damaged sewerage pipe that had been leaking into the waterway where the local oysters were harvested. Oyster samples from this waterway subsequently tested positive by PCR for norovirus genotype II. The waterway was closed to oyster harvesting and the broken pipe was repaired. (HUN0467)

Salmonella Singapore outbreak associated with a restaurant

Ten cases of *Salmonella* Singapore were notified to a PHU clustered in time. Seven cases were confirmed to have eaten at a Japanese restaurant from 2/11/2012 to 16/11/2012. Most people consumed a pork ramen dish, though one consumed a teriyaki chicken with rice dish. The NSWFA inspected the premises on 16/11/2012. Samples were taken and a pickled boiled egg tested positive for *Salmonella* Singapore. It is thought that a random cross contamination error occurred rather than a flawed systematic ongoing process. They advised the restaurant to increase hygiene standards and ensure that the pork in the ramen dish underwent a heating step immediately prior to being served (previously it was cooked in advance and just added to hot soup). (NS33828)

Salmonella Typhimurium 170 (MLVA type 3-9-8-13-523) infection associated with a cafe

A complaint of illness was made to the NSWFA following a christening on 14/10/2012. Three people were interviewed who were ill, two were positive for *Salmonella* Typhimurium (MLVA 3-9-8-13-523). They consumed numerous food items including the chicken dish for a main (alternate lamb dish). A survey was put out but only three others (all controls) completed it. These controls all had the lamb dish for the main. The complainant reported the chicken was pink. The christening had 80 guests, and since the only reported illness was in one immediate family group who had eaten other food together, the christening meal could not be confirmed as the source. (WS33689)

***Salmonella* Typhimurium 170 (MLVA type 3-9-8-13-523) infection associated with a cafe**

A complaint of illness was made to the NSWFA following a meal at a cafe on 21/12/2012. Four people from a group of five, developed vomiting, abdominal cramps and diarrhoea 20-27 hours after eating at the cafe. The group ate various breakfast dishes; the only food item common to the ill people was mushrooms. Two stool specimens were submitted and one was positive for *Salmonella* Typhimurium (MLVA 3-9-8-13-523). The NSWFA inspected the cafe but no route for contamination could be determined and all foods were thoroughly cooked. The cause may have been a one off cross contamination event. (CC34096)

***Clostridium perfringens* poisoning outbreak associated with a restaurant**

A complaint of illness was made to the NSWFA following a meal at a restaurant on 15/12/2012. Thirteen people from a group of sixteen developed diarrhoea 12 hours after eating the meal. Symptoms lasted from a few hours to a few days. Foods consumed were various dishes from a buffet. All cases that were interviewed had consumed the roast beef and the controls interviewed had not eaten this. Stool samples were submitted for three cases and *Clostridium perfringens* Enterotoxin type A was identified in one sample. The NSWFA inspected the premises and issued improvement notices for issues with storage and holding temperatures of food. The lack of temperature controls point to the possibility of *Clostridium perfringens* being able to proliferate to high enough levels to cause illness. (WS34233)

For the other 8 suspected foodborne outbreaks, the pathogen and cause could not be established. In summary:

A PHU received a complaint of suspected food poisoning from two separate groups after eating at a restaurant on 8/10/2012. One was a family group of 5 and the other a group of 15 work colleagues. Totalling 20 people ill from a total of 85 people in the groups. The foods consumed were an assortment from a buffet. Only four cases were interviewed and incubation periods ranged from 3-24 hours and lasted 4-5 days. No food could be implicated. One case submitted a stool sample which was positive for Giardia, though this case had been overseas prior to the event and claims that is likely where they acquired that. The local council inspected the premises and found no issues. The pathogen and cause could not be established. (III33621)

A complaint of illness was made to the NSWFA following a meal at a restaurant on 28/11/2012. An outbreak of gastroenteritis amongst attendees of a corporate dinner was reported to the NSW Food Authority. Questionnaires were sent to the 37 attendees. Twenty-three attendees returned surveys, of which seven fit the case definition for illness. Symptoms reported were vomiting, diarrhoea and abdominal cramps with symptom duration from 8 to 36 hours. Analysis of foods consumed did not show any association with illness. No stool samples were submitted. Illness was more indicative of a viral pathogen, but it is unclear if it was person to person transmission or contamination of food that was consumed. (SES34005)

This outbreak was identified through two complaints about a restaurant to the local council. Sixteen people from a total of 26 developed nausea, fever, abdominal pain, diarrhoea and vomiting 3-12 hours after a meal at a Mexican restaurant on 20/12/2012 and 21/12/2012. The people were two separate groups of 15 and 11 (8 ill from each group). They ate various dishes and shared corn chips and salsa. Three stool specimens were submitted for testing but were negative for pathogens. The local council inspected the restaurant which was found to have good practices for temperature control, cleanliness and knowledge of food safety. The cause of the outbreak remains unknown. (GS201201)

A complaint of illness was made to the NSWFA following a meal at a restaurant on 15/12/2012. Twelve people from a group of 43, developed vomiting and diarrhoea 3 to 14 hours after eating at a buffet in the restaurant. The group ate numerous Chinese bain-marie dishes with rice. Symptom duration was from 12 to 48 hours. The local council inspected the premises and found no issues. An online survey was employed which ten people completed, four cases and six controls. No significant

relative risks from foods were found from those who completed the questionnaire. The cause of the outbreak remains unknown (NS34169)

A PHU received a complaint of suspected food poisoning from a group after eating at a restaurant on 14/12/2012. Eight people from a group of 17 who attended the dinner reported symptoms of fever, nausea, vomiting, diarrhoea and abdominal cramps. Interviews were carried out with all eight ill. Onset of illness was 15/12/12 for three cases and 16/12/12 for the other five cases. Foods consumed by all affected people were tiramisu and panna cotta, though it was not known if the well people consumed these items. No clinical specimens were provided. While the symptoms and onsets could be representative of a salmonellosis outbreak, no positive samples were found from sampling of left-over foods to confirm this as the cause of illness. The cases did eat a raw egg tiramisu and whilst the use of raw eggs in the making of the tiramisu may have been a vehicle for salmonella, in the absence of any further information, the cause of the illness for these cases cannot be determined. (SSW34188)

A complaint of illness was made to the NSWFA following a meal at a restaurant on 7/12/2012. Seven people from a group of 36 developed nausea, vomiting and diarrhoea 5 hours after eating a set menu of modern Chinese. Symptom onset was short and illness duration not more than 24 hours. The PHU could not get interviews from more than the complainant. No PHU action was taken. (SSW34201)

Cluster Investigations

Since 2008, ICPMR routinely uses MLVA to type *Salmonella* Typhimurium to improve surveillance capacity. The top five *Salmonella* Typhimurium notifications by MLVA type in the fourth quarter of 2012 were:

MLVA type	Associated with phage type*	Number of notifications
3-17-9-12-523	135	84
3-9-8-13-523	170	43
3-16-9-12-523	135	34
3-9-7-13-523	170	23
3-9-9-13-523	170	15

* At the time of writing of this report, phage types were not known for these notifications. However, in the past the recorded MLVA types have been associated with the recorded phage types in this table. MLVA was also not recorded for 23 *Salmonella* Typhimurium cases at the time of writing this report.

A cluster of MLVA is defined as 5 isolates with the same MLVA type collected over a period of 4 weeks. MLVA cluster alerts have been used to identify foodborne outbreaks and to initiate cluster investigations.

A cluster of MLVA 3-10-15-12-496 was identified and investigated in this quarter. Three cases with similar collection dates were initially noticed all living on the same street in the south west of Sydney. A total of nine of this MLVA were recorded in an 11 day period. Eight of these were interviewed and they shared no common events. Three cases reported eating from a BBQ chicken shop in the area (chicken pasta salad or coleslaw) but no other links could be established between the eight interviewed. The NSWFA inspected the chicken shop and found that the business had a good standard of food safety. They sampled the salads but found no pathogens. There was no evidence to support this business was the cause of the salmonellosis cluster. There were no further leads for this cluster.

Non-foodborne Disease Outbreaks

One hundred and seventy-eight outbreaks of (suspected) viral gastrointestinal disease in institutions were reported to PHUs as part of mandatory reporting in the 4th quarter of 2012. Of them, 80 (45%) occurred in aged care facilities, 78 (44%) occurred in child care centres, 19 (11%) occurred in hospitals, and 1 (0.6%) occurred in a residential care unit. The outbreaks affected a total of 2,900 people. In 53% (95/178) of all outbreaks samples were taken for laboratory testing, and in 64% (61/95) of these pathogens were detected. Norovirus was identified in 48% (46/95) of the outbreaks and rotavirus was identified in 13% (12/95). In three outbreaks of norovirus outbreaks in hospitals, *Clostridium difficile* was identified in single patients and was believed to be antibiotic associated and unrelated to the outbreak pathogen. Even though pathogen results were not available for 66% of institutional outbreaks the epidemiology is consistent with viral gastroenteritis spread from person to person.

In September/October, 2012, HNE OzFoodNet participated in gastrointestinal surveillance for the 13th Australian Transplant Games held in Newcastle. The Games were conducted from 28/09 to 6/10/2012 at a number of sporting facilities in the Newcastle region. Approximately 600 athletes and their support teams attended the games. A number of medical services were made available for the athletes and their support teams in the event of illness.

Line lists of cases of gastrointestinal illness were provided to HNE OzFoodNet each day during the Games and for three days post Games. All cases were interviewed using a standardised suspected foodborne illness questionnaire. Details on demographics, symptom profile, onset, duration, contact with ill persons, event attendance, accommodation, transport and a three day food history were collected and collated.

A case was defined as a person who reported vomiting and/or diarrhoea plus one or more symptoms of gastrointestinal illness with onset from 28/09/2012-09/10/2012. In total, eighteen cases were identified. Onsets ranged from 29/09/2012-05/10/2012. Eight cases occurred in families and four of these eight cases were determined to be secondary cases. Six cases provided stool specimens with three cases positive for rotavirus, two cases positive for norovirus and one case with no pathogen identified. A wide variety of exposures were identified through interviewing, however no point source outbreaks were identified.

Notes for Quarterly Report

In NSW, foodborne outbreaks are often reported to the NSWFA Consumer Complaints Line by members of the public. This results in a number of outbreaks affecting small numbers of people being referred to PHUs. These outbreaks usually require limited epidemiological investigation and are often of unknown aetiology and as such are not reported here.

Data was reported as received by the Communicable Diseases Branch on 7 May 2013. For both (suspected) foodborne illness outbreaks as well as gastroenteritis outbreaks in institutions, PHUs are required to complete a summary form within 1 month of completion of the investigation, or within 1 month of notification respectively. This means that for outbreaks reported after 7 April 2013, the information in this report and in the Outbreak Register may not be complete.

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