OzFoodNet—Enhancing Foodborne Disease Surveillance Across Australia.

Second Quarter Summary, 2008
Queensland

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April – June 2008
Overview of Quarter

This is the second quarterly report for 2008 from the Queensland foodborne disease surveillance site, one of eight sentinel sites around Australia which comprise OzFoodNet. This report summarises the surveillance activities and outbreak/cluster investigations conducted in Queensland between April and June 2008. Surveillance data is summarised for the following nine pathogens/conditions: *Salmonella* spp, *Listeria monocytogenes*, *Campylobacter* spp, *Shigella* spp, *Yersinia enterocolitica*, Typhoid Fever, Paratyphoid Fever, Shiga toxin-producing *E. coli* and Haemolytic Uraemic Syndrome (HUS).

The following are key points from this report:

- During the April - June 2008 reporting period 1,472 cases of illness due to the nine foodborne pathogens or conditions under surveillance were notified to Queensland Health. This compares with 1,716 cases notified for the corresponding period in 2007 and 2,349 cases notified for the first quarter 2008.
- *Campylobacter* notifications decreased by 6.6% in comparison to the same reporting period in 2007 but were 3.1% higher than the 5-year mean.
- There was 1 case of listeriosis and 5 cases of STEC infection reported during this quarter.
- There were 69 documented outbreaks of gastrointestinal illness in Queensland during the second quarter 2008 affecting at least 1,376 people. Two of these outbreaks were likely to have involved foodborne transmission. Norovirus was confirmed as the aetiological agent in 43/67 (64%) non-foodborne outbreaks.

Incidence of Foodborne Disease

During the April to June 2008 reporting period 1,472 cases of illness due to the nine foodborne pathogens or conditions under surveillance were notified to Queensland Health (Appendix: Table 1). This compares with 1,716 cases notified for the corresponding period in 2007, a decrease of 14.5%, and 2,349 cases notified in the first quarter 2008. *Campylobacter* was the most frequently notified foodborne pathogen followed by *Salmonella*. *Campylobacter* notifications (941) for this period were 6.6% lower than the same period in 2007 but 3.1% higher than the 5-year mean (2003-2007). Whereas, the number of notifications of *Salmonella* (469) received during the second quarter of 2008 decreased by 29.9% in comparison to the same period in 2007 and were 28.3% lower than the 5-year mean. Together, these two pathogens contributed almost 96% of the total foodborne illness notifications received during the second quarter.
There was one case of *Listeria monocytogenes* serotype 1/2a infection notified in April which occurred in a 71 year old male from the Gold Coast. No source of infection was identified.

Five cases of Shiga toxin-producing *E. coli* (STEC) infections were reported during the quarter. Two of the 5 cases were overseas acquired infections. One of these cases was an 8 year-old female from New Zealand who was diagnosed with an *E. coli* O157 (H7 and H-strains) infection whilst holidaying at the Gold Coast. This case was likely to be part of an ongoing community-wide *E. coli* O157 outbreak that was occurring in New Zealand prior to her arriving at the Gold Coast. All five cases had shiga-toxin detected in their stools using EIA and four cases were culture positive. Two case isolates were typed as O157, one was type O26 and one was non-typable. The remaining case was culture negative and not serotyped. No source of infection was identified for any of the three locally-acquired cases and all appeared to be sporadic infections. Cases were aged 7 - 66 years (median 57 years) among 4 females and 1 male. There were no deaths among these cases. No cases of Haemolytic Uraemic Syndrome were reported during the quarter.

**Foodborne Disease Outbreaks**

Two outbreaks of foodborne illness were investigated during the second quarter of 2008.

Six cases of suspected ciguatera fish poisoning were reported in April by the Wide Bay PHU. All six persons, who were from Maryborough, became ill on 22/3/2008 approximately 10 – 12 hours after consuming a privately caught Black Kingfish. Symptoms included reverse temperature sensation, numbness of hands, mouth and feet, skin rash and muscle pain.

Two males aged 54 and 43 years became ill with diarrhoea and stomach cramps after consuming chicken enchiladas with refried beans and rice from a Mexican restaurant in Brisbane on 29/4/2008. Both cases developed symptoms approximately twelve hours after the meal. One stool specimen was submitted for testing. Food samples collected for testing included chicken enchiladas, refried beans, and rice. *Clostridium perfringens* were detected in both the faecal specimen (faecal spore count 6 x 10^5 orgs/g) and the refried bean sample (approximately 1 x 10^5 orgs/g). Other food samples were culture negative. Results suggested time-temperature abuse of the refried beans was the contributing factor for this outbreak. No other cases were reported.

**Non-foodborne Investigations**

There were 67 non-foodborne outbreaks affecting a total of 1,368 people notified during the second quarter 2008, with 60 suspected to have been propagated by person-to-person transmission. The remaining seven outbreaks were of unknown transmission. The outbreaks occurred in aged care facilities (56), child care facilities (6), hospitals (3), camp (1) and a
Norovirus was confirmed as the aetiological agent in 43/67 (64%) outbreaks. No agent was identified in the remaining outbreaks, however all were suspected to have a viral aetiology. Twenty hospitalisations were reported among the 67 outbreaks. Nineteen hospitalisations were associated with aged care facilities and the remaining hospitalisation occurred during a child care centre outbreak. Four deaths were also reported during the second quarter 2008. All were associated with aged care facility outbreaks. Norovirus was the confirmed aetiological agent in 38/56 (68%) aged care facility outbreaks reported this quarter.

**Cluster Investigations**

There were two cluster investigations conducted during the quarter which included two cases of *Salmonella* Zanzibar and two cases of an unknown aetiology. No common food vehicle or source of infection could be identified during these investigations.

The first investigation was conducted in June after two people reported ill with symptoms including diarrhoea, abdominal cramps and nausea after attending a Brisbane training academy in the week beginning 2/6/2008. Stool specimens were collected but were negative for both bacterial and viral pathogens. No further cases were reported from this training centre and the investigation ceased.

The second investigation involved two cases of *Salmonella* Zanzibar which were reported in July. Both cases were females aged 67 years and 68 years whose onsets of illness were 16/6/2008 and 22/6/2008. The isolates from both cases had the same antibiotic susceptibility profile. The strains were resistant to cephalothin, gentamicin, tobramycin, amikacin and sensitive to ampicillin, augmentin, cotrimoxazole, ceftriaxone, ceftazidime and timentin. No common exposures were identified between the two cases and no further cases were reported to the surveillance system.

**Site Activities**

During the Quarter the Queensland Site:

- Attended the OzFoodNet face-to-face meeting held in Adelaide in June 2008.
- Continued the review of the Queensland Foodborne Illness Outbreak Management Guidelines.
- Continued formal surveillance of norovirus genotypes in viral enteric outbreaks in Queensland (in conjunction with the Virology unit, Queensland Health Forensic & Scientific Services).
- Commenced data collection for a state-wide aged care outbreak management survey.
Publications/Reports/Conference Presentations

Second Quarter 2008 Journal Publications


Posters/Presentations/Seminars


## APPENDIX

Table 1. Number of notified cases of foodborne pathogens in Queensland, second quarter 2008

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<tbody>
<tr>
<td></td>
<td>Apr</td>
<td>May</td>
<td>Jun</td>
<td>Apr-Jun</td>
<td>May-Jun</td>
<td>Jun</td>
</tr>
<tr>
<td>Salmonella</td>
<td>208</td>
<td>143</td>
<td>118</td>
<td>469</td>
<td>669</td>
<td>654</td>
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<tr>
<td>Listeria – materno-foetal</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>Listeria – other</td>
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<tr>
<td>Campylobacter</td>
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<td>330</td>
<td>281</td>
<td>941</td>
<td>1008</td>
<td>913</td>
</tr>
<tr>
<td>Typhoid</td>
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<tr>
<td>Paratyphoid</td>
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</tr>
<tr>
<td>Yersinia</td>
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<td>11</td>
<td>3</td>
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<tr>
<td>Shigella</td>
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<td>7</td>
<td>8</td>
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<td>10</td>
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<tr>
<td>STEC</td>
<td>3</td>
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<td>1</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>HUS</td>
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<td>0</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>565</td>
<td>494</td>
<td>413</td>
<td>1472</td>
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<td>1619</td>
</tr>
</tbody>
</table>

\(^*\) STEC : Shiga-toxin producing E. coli  
\(^*\) H.U.S : Haemolytic Uraemic Syndrome  
\(^*\) YTD: Apr-Jun 2008