Communicable Diseases Prevention Unit,
Public Health Services

OzFoodNet Tasmania Quarterly Report, 2023

October – December 2023

Report prepared on 13 February 2024

Department of **Health**

Tasmanian Government

Executive Summary

This report describes enteric disease notifications and gastrointestinal outbreak investigations in Tasmania for the fourth quarter of 2023, covering the period from 1 October 2023 to 31 December 2023.

- During the fourth quarter of 2023, a total 477 notifications of enteric disease were reported.
- The most frequently notified enteric diseases this quarter were campylobacteriosis (369 notifications) and salmonellosis (69 notifications).
- Notifications of salmonellosis were slightly higher than expected when compared to historical data (Table 1).
- There were 17 non-foodborne outbreaks reported, which is similar to the number expected compared to historical data for the same time period.
- There were several cluster investigations during the fourth quarter of 2023, with three *Salmonella* clusters and one STEC cluster identified.

Data Sources

Case notification data is obtained from the Tasmanian Notifiable Disease Surveillance System (TNDSS). Gastroenteritis outbreak data is obtained from the Communicable Disease Prevention Unit (CDPU) Gastro Outbreak Database and TNDSS.

Notifications of diseases and conditions are reported to Public Health Services under the *Public Health Act* (1997) and *Guidelines for Notifying Diseases and Food Contaminants*. Pathology laboratories in Tasmania are required to report cases of notifiable diseases diagnosed in the laboratories. Suspected cases of food or waterborne illness and clinical cases of haemolytic uraemic syndrome (HUS) are required to be notified by medical practitioners. Suspected gastroenteritis outbreaks in institutional settings are required to be notified by the relevant facility (aged care, childcare and hospitals).

Data in this report represents notifications of enteric disease where the case residential address is in Tasmania or overseas. Interstate residents are notified in the jurisdiction of residence. Data are presented by 'calculated onset date': which is the true onset date if known, or the earliest of specimen date or notification date. Cases are defined as per the national Communicable Disease Network Australia (CDNA) surveillance case definitions or local case definitions within CDPU.

Data was extracted on 13 February 2024 and covers the period from 1 January 2018 to 31 December 2023. Data presented in this report is correct at the time of publication and is subject to change due to data cleaning and late notifications.

Table 1: Number of notifications of enteric disease in the fourth quarter (Q4) 2023 compared to historical five-year means(5YM), Tasmania.

Disease	Q4 2023	Q4 5YM (2018-2022)
Botulism	0	0.2
Campylobacteriosis	369	297.2
Cryptosporidiosis	10	11.8
Haemolytic Uraemic Syndrome	2	0.0
Hepatitis A	0	0.0
Hepatitis E	0	0.0
Listeriosis	0	0.0
Paratyphoid	0	0.0
Salmonellosis	69	52.0
Shiga-toxin producing *Escherichia coli*	6	0.6
Shigellosis	8	1.8
Typhoid	0	0.2
Vibrio infection (foodborne)	0	0.4
Yersinia	13	12.2
Total	**477**	**376.4**

*Includes both confirmed and probable cases as per national case definition change 1 July 2018

Campylobacteriosis

Campylobacteriosis is disease caused by the bacteria *Campylobacter*. Symptoms may include diarrhoea, abdominal pain, fever and vomiting and illness may last a few days to a week or longer.

There were 369 notifications of campylobacteriosis reported this quarter. Case notifications were 24% higher than expected compared to the five-year mean for the same period (297 notifications). Notifications from the North of the state were 24% higher than expected compared to historical data for the region for the same time period. Notifications from the South and North-West of the state were similar to that expected compared to historical data for the region for the same time period. Notification numbers are small when stratified at this level. The most commonly reported *Campylobacter* species reported was *Campylobacter jejuni* (198 notifications, 54% of all notifications), followed by *C. coli* (77 notifications, 21% of all notifications). Approximately a quarter of *Campylobacter* isolates were not speciated (94 cases, 25% of all notifications). Species identification is dependent on the methodology in place in each laboratory.

Campylobacteriosis trends over time are summarised in Figure 1. There were a total 1089 notifications of campylobacteriosis in Tasmania in 2023.

Salmonellosis

Salmonellosis is a disease caused by the bacterium *Salmonella*. Symptoms may include diarrhoea, abdominal pain, fever, nausea and vomiting and illness may last a few days to a week or longer.

The number of salmonellosis notifications (69 notifications) were higher than the five-year mean for the same period (52 notifications). *Salmonella* notifications generally increase in the warmer months of the year, and during the fourth quarter of 2023 were 39% higher than the previous quarter (42 notifications). Notifications across all regions of the state were elevated in comparison to historical data, though notification numbers are small when stratified at this level. *Salmonella* Mississippi was the most commonly reported serotype in Tasmania during this quarter, with 19 notifications , representing 28% of all salmonellosis notifications. *Salmonella* Virchow was the second most commonly reported serotype (12 notifications) with this serotype associated with a cluster investigation (see below). There were a small number of *Salmonella*. Typhimurium notifications (7 notifications). There were six notifications of *Salmonella* Saintpaul that were linked to a national investigation. The remaining salmonellosis notifications consisted of several different serovars with small numbers of cases each. At the time of data extraction, 4% of salmonellosis isolates were untyped.

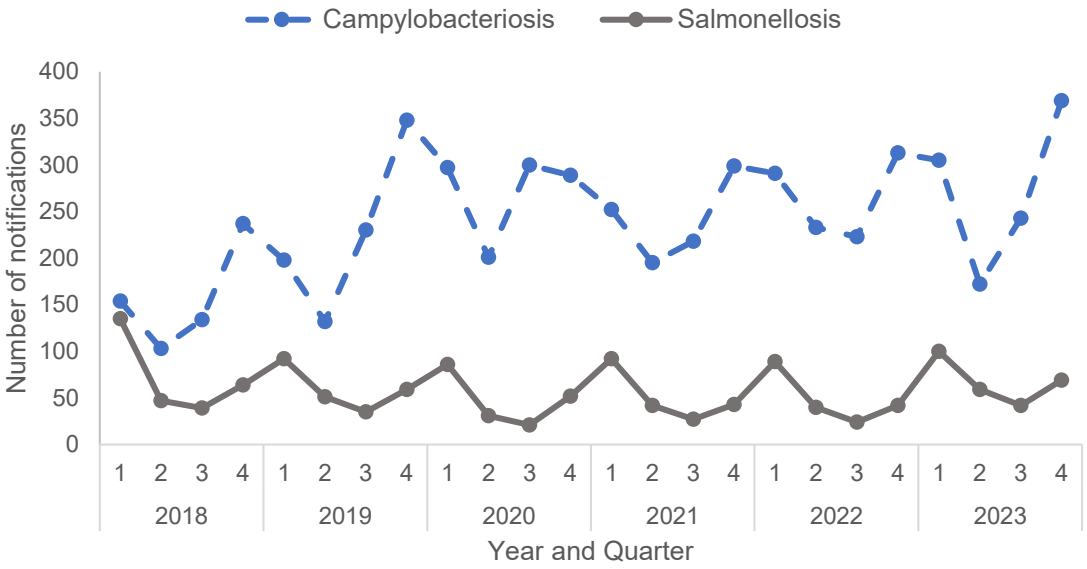
Salmonellosis trends over time are summarised in Figure 1. There were a total of 270 salmonellosis notifications in Tasmania in 2023.

Other enteric diseases

There were eight shigellosis notifications this quarter. All were probable cases and the majority were associated with overseas travel to different countries. Place of acquisition was unknown for a small number of notifications.

Six notifications of Shiga-toxin producing *E coli* (STEC) were reported during the fourth quarter of 2023. Two notifications were the same serotype (O26) and epidemiologically linked. These two STEC notifications also developed haemolytic uremic syndrome (HUS) and joined a cluster investigation (see below). The remaining four STEC notifications were all different serotypes and not linked.

Figure 1: Number of notifications of Campylobacteriosis and Salmonellosis by year and quarter, Tasmania, January 2018 to December 2023



Foodborne outbreaks

There were no foodborne outbreaks identified and investigated during the fourth quarter of 2023 .

Non-foodborne Outbreaks

During the fourth quarter of 2023, a total 17 non-foodborne outbreaks were reported in Tasmania. This is the same as the average number of non-foodborne outbreaks reported during the same quarter from 2018 to 2022 (17 outbreaks). A total of 231 people were ill, no people were hospitalised as a result of their illness and no deaths were reported. The majority of non-foodborne outbreaks were reported in childcare centres (10 outbreaks, 59 %). There were three outbreaks in hospitals, three outbreaks in aged care facilities, and one outbreak in the community. Most outbreaks were classified as person to person transmission outbreaks (15 outbreaks, 88%), with a small number classified as unknown mode of transmission (2 outbreaks, 12%). The aetiogical agent was identified as norovirus in seven outbreaks, and unknown in the 10 remaining non foodborne outbreaks.

Cluster investigations

A cluster investigation into cases of STEC serotype O26 with the stx2 gene detected was undertaken during the fourth quarter of 2023. There were four cases in the cluster and onset dates were between 07/09/2023 and 20/10/2023. Three of the case developed HUS and one case died. The source of infection was not identified.

A cluster investigation was conducted into cases of *Salmonella* Virchow at a childcare centre. There were 10 confirmed cases of *S*. Virchow in children and one secondary case in parent. The median age of cases was 2.5 years (range 1 to 5 years) and 50% were male. Three children had

bacteraemia and four cases were hospitalised. Extensive food and environmental sampling was undertaken but no food samples had *Salmonella* detected. *Salmonella* Virchow was detected in a sample of vacuum cleaner dust and the isolate was closely related to the isolates from children via genomic analysis. The vacuum was not considered the source of *Salmonella* for the outbreak, and the source was not identified. The vacuum cleaner was replaced and no *Salmonella* was isolated from the new vacuum cleaner.

Six cases of *Salmonella* Saintpaul were investigated and identified as part of a national multi-jurisdictional salmonellosis outbreak. A suspected vehicle was identified and public health control measures considered. Multi-jurisdictional foodborne disease outbreaks are investigated by OzFoodNet utilising national guidelines.

A cluster of two cases of *Salmonella* Kottbus was investigated. Cases were epidemiologically linked and had reported exposure to sick cattle diagnosed with salmonellosis. The same serotype of *Salmonella* was identified from the cattle at the property.

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