Communicable Diseases Prevention Unit,
Public Health Services

OzFoodNet Tasmania Quarterly Report, 2023

January – March 2023

Report prepared on 11 May 2023

Department of **Health**

Tasmanian Government

Executive Summary

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

- During the first quarter of 2023, a total 435 notifications of enteric disease were reported.
- The most frequently notified enteric diseases this quarter were campylobacteriosis (304 notifications) and salmonellosis (99 notifications).
- There were higher than expected numbers of campylobacteriosis, and shiga toxin producing *Escherichia coli* (*E. coli*) notifications in comparison to historical data (Table 1).
- There were two foodborne outbreaks investigated, with the etiological agents being *Staphylococcus aureus* and *Salmonella* Infantis.
- There were three *Salmonella* cluster investigations conducted.
- There were relatively high numbers of travel associated infections (such as typhoid and shigellosis) during the first quarter of 2023.
- Notifications of non-foodborne outbreaks were over two times higher than expected.

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 11 May 2023 and covers the period from 1 January 2018 to 31 March 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 first quarter (Q1) 2023 compared to historical five-year means (5YM), Tasmania.

Disease	Q1 2023	Q1 5YM (2018-2022)
Botulism	0	0.0
Campylobacteriosis	304	238.2
Cryptosporidiosis	2	4.2
Haemolytic Uraemic Syndrome	0	0.0
Hepatitis A	1	0.2
Hepatitis E	0	0.4
Listeriosis	1	0.6
Paratyphoid	1	0.0
Salmonellosis	99	98.8
Shiga-toxin producing *Escherichia coli*	5	1.4
Shigellosis*	4	2.0
Typhoid	4	0.6
Vibrio infection (foodborne)	0	1.8
Yersiniosis	14	10.0
Total	**435**	**358.2**

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

Campylobacteriosis

Campylobacteriosis is a 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 304 notifications of campylobacteriosis reported this quarter. Notifications were 13% higher than expected compared to the five-year mean for the same period (238 notifications). An increase in notifications was noted in all regions of Tasmania. In the North West, notifications were 22% were higher than expected, and in the South 15% higher than expected. Only a small increase was noted in the North of the state (3%). The most commonly reported *Campylobacter* species reported was *Campylobacter jejuni* (184 notifications, 61% of all notifications), followed by *C. coli* (30 notifications, 10% of all notifications). There were a small number of *C. lari* notifications (5 notifications). Approximately a third of *Campylobacter* isolates were not speciated (85 notifications, 28% of all notifications). Species identification is dependent on the methodology in place in each laboratory.

Campylobacteriosis trends over time are summarised in Figure 1.

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 (99 notifications) were identical to the five-year mean for the same period. Notifications in the North of the state were elevated in comparison to historical data, with 40 notifications in the region reported compared to the five year mean of 30 notifications. *Salmonella* Mississippi was the most commonly reported serotype in Tasmania during this quarter, with 38 notifications, representing 38% of all salmonellosis notifications. *Salmonella* Infantis was the second most commonly notified serotype (15 notifications), followed by *Salmonella* Stanley (11 notifications). Cluster investigations were undertaken in relation to these latter two serotypes. There were 10 notifications of *Salmonella* Typhimurium, this serotype is usually the second most frequently reported serotype in Tasmania. The remaining salmonellosis notifications consisted of several different serotypes with small numbers of notifications each. Approximately 10% of salmonellosis isolates were untyped at the writing of this report.

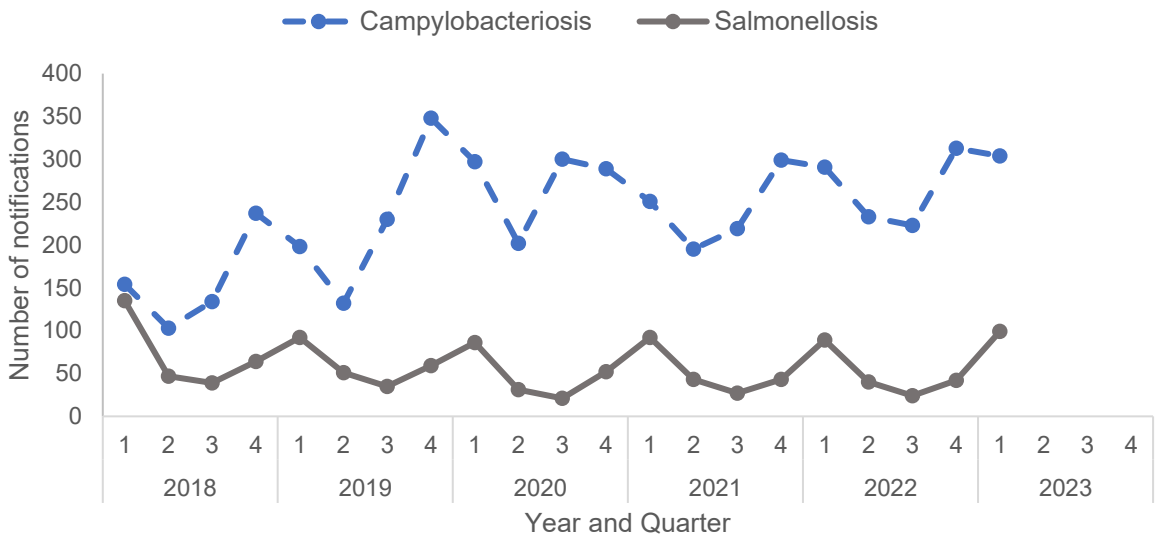
Salmonellosis trends over time are summarised in Figure 1.

Other enteric diseases

During the first quarter of 2023, there were a relatively large number of travel associated infections reported. There were four notifications of typhoid fever notified in this quarter, which was significantly higher than expected compared to the five year mean (1 notification). All cases were overseas acquired and reported travel to India. There was one notification of paratyphoid fever also reported (also acquired in India). There were four probable shigellosis notifications reported, all cases were overseas acquired with travel to Indonesia, India, and Thailand reported. Vaccinations are available for Hepatitis A and typhoid and those that are travelling overseas should consider vaccination.

Notifications of Shiga-toxin producing *E coli* (STEC) were higher than expected but this was possibly due to changes in testing methodology and algorithms in laboratories. Cases were all considered sporadic and unrelated, with no outbreaks or clusters identified.

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



Foodborne outbreaks

During the first quarter of 2023 there were two foodborne illness outbreak investigations.

An outbreak of gastroenteric illness associated with pre-prepared sandwiches was investigated. There were four cases identified, and their illness profile was suggestive of *Staphylococcus* toxin ingestion. Local council investigated the implicated food business. Food samples of prepared sandwiches and shredded chicken were found to have high levels of *Staphylococcus* present. Food safety issues around hand hygiene, temperature control and general cleaning were identified during the investigation, with the business taking corrective action to address these issues.

A salmonellosis outbreak associated with a restaurant was investigated during this quarter. There were five cases of *Salmonella* Infantis identified. The vehicle for the outbreak was a suspected to be cream based sauce containing raw eggs that was used in a variety of pasta dishes. The restaurant ceased using raw eggs in the sauce as a preventative measure. There were no further cases associated with the restaurant identified. There were an additional 12 community cases of *S.* Infantis notified. These were not linked to the restaurant outbreak but were likely associated with consumption of eggs in the community. Environmental testing at the implicated farm identified *S.* Infantis present on site and several of the farm *Salmonella* isolates were closely related to the human case isolates via genomic analysis.

Non-foodborne Outbreaks

During the first quarter of 2023 a total 36 non-foodborne outbreaks were reported in Tasmania. This was more than two times the average number of non-foodborne outbreaks reported during the same quarter from 2018 to 2022 (14 outbreaks). A total of 598 people were ill, 12 people were hospitalised and no deaths were reported. The majority of non-foodborne outbreaks were reported in childcare facilities (21 outbreaks, 58%). There were 11 outbreaks in aged care facilities, and four schools reported experiencing gastroenteritis outbreaks. Most outbreaks were classified as person to person transmission outbreaks (33 outbreaks, 92%) with a small number classified as unknown mode of transmission. The aetiogical agent was identified as norovirus in five outbreaks, and unknown in all remaining outbreaks.

Cluster investigations

There were three *Salmonella* cluster investigations conducted during the first quarter of 2023. Two notifications of *Salmonella* Kottbus were investigated but the source of infection was not identified. There were 11 notifications of *Salmonella* Stanley investigated. The majority of cases were clustered in the South of the state with a small number in the North. The source of infection was not identified. The remaining cluster investigation into notifications of *S*. Infantis is described above.

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