

# OzFoodNet

Enhancing Foodborne Disease Surveillance Across Australia

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## NSW ANNUAL REPORT

2024



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# GLOSSARY

ACF	Aged-care facility	N/A	Not available
CC	Central Coast LHD	NBM	Nepean Blue Mountains LHD
CCC	Childcare centre	NNSW	Northern NSW LHD
DPIRD	Department of Primary Industries and Regional Development	NS	Northern Sydney LHD
FW	Far West LHD	NSW	New South Wales
HNE	Hunter New England LHD	NSWFA	NSW Food Authority
HUS	haemolytic uraemic syndrome	Q	Quarter
ICPMR	Institute of Clinical Pathology and Medical Research	SES	South Eastern Sydney LHD
IS	Illawarra Shoalhaven LHD	SNP	single nucleotide polymorphisms
LHD	Local Health Districts	SNSW	Southern NSW LHD
M	Murrumbidgee LHD	STEC	Shiga toxin-producing <i>Escherichia Coli</i>
MDR	Multi-drug resistant	SWS	South Western Sydney LHD
MLST	Multi-locus sequence typing	SYD	Sydney LHD
MNC	Mid North Coast LHD	WGS	Whole genome sequencing
N	Number	WNSW	Western NSW LHD
		WS	Western Sydney LHD
		Yr	Year

# SUMMARY – ENTERIC INFECTIONS IN NSW

This report summarises NSW enteric disease surveillance data for viral, bacterial and parasitic pathogens for 2024, changes in notifications over time, and other activities in 2024. NSW Health undertakes surveillance of enteric diseases to monitor trends and identify outbreaks, with the aim of implementing control measures to prevent further illness within the community. Disease notification represents only a portion of cases in the community, as it usually relies on people seeing a doctor, and the doctor ordering a test that detects the infection, to generate a notification.

Note: Between 2020-2022, the Covid-19 pandemic changed the way people interacted with the health system. Fewer in-person doctor appointments, changed testing capacity and reduced social interaction each had an impact on the incidence of many diseases, including enteric infections. These changes need to be considered when interpreting the 5-year annual mean and epidemiological evidence from that period.

## Cases of infection and incidence 2024

Notifications of enteric conditions: 25,193

Reported hospitalisations: 783

Reported deaths: 14

Notification rate per 100,000 population: 304.58

## Notified incidence and reported hospitalisation due to enteric pathogens in NSW, 2024

	N 2024	5yr annual mean	% change	Notified Rate	Reported Hospitalisations <sup>a</sup>
Campylobacter	10,759	12,291.2	-12%	130.07	5
Rotavirus	3,914	1,524.8	157%	47.32	93
Cryptosporidiosis	3,499	600.0	483%	42.30	193
Salmonellosis	2,919	3,064.8	-5%	35.29	98
Giardiasis	2,742	2,187.4	25%	33.15	1
Shigellosis	935	558.6	67%	11.30	130
STEC/VTEC	208	131.8	58%	2.51	95
Typhoid	79	45.6	73%	0.96	67
Hepatitis A	67	38.6	74%	0.81	39
Paratyphoid	35	20.4	72%	0.42	28
Listeriosis	21	25.2	-17%	0.25	21
Hepatitis E	7	11.8	-41%	0.08	7
Haemolytic Uremic Syndrome	5	3.4	47%	0.06	4
Cholera	3	1.0	200%	0.04	2
Botulism	0	0.8	-100%	0.00	0
<b>Total</b>	<b>25,193</b>	<b>20,505.4</b>	<b>23%</b>	<b>304.58</b>	<b>783</b>

<sup>a</sup> Hospitalisations may be underestimated as counts are limited to those infections investigated by a public health unit

## Notable conditions in 2024

- Campylobacteriosis was the highest enteric infection notified in 2024. Since its introduction as a notifiable condition in NSW in 2017, campylobacteriosis notifications have exceeded all other enteric infections (page 6).
- Cryptosporidiosis notifications increased by 483% compared to the five-year annual average. This increase occurred in early 2024 and corresponded to large increases in cryptosporidiosis notifications in other jurisdictions in Australia and overseas at a similar time.
- There were 3 Cholera notifications in 2024. These were all serogroup O1 and were acquired overseas.

## Reported enteric disease outbreaks

- 28 foodborne or potentially foodborne disease outbreaks were reported affecting at least 300 people; a 39% decrease in the number of reported foodborne or probable foodborne disease outbreaks compared to 2023 (n=46)
- 1,882 viral or probable viral gastroenteritis outbreaks in institutions were reported, affecting at least 23,132 people; a 9% decrease in the number of reported gastroenteritis outbreaks in institutions compared to 2023 (n=2,079)

# CAMPYLOBACTERIOSIS

Campylobacteriosis is a disease caused by *Campylobacter* bacteria, usually through contaminated and uncooked food, untreated water and contact with unwell animals. It usually causes diarrhoea, abdominal pain, fever, malaise, nausea, and sometimes vomiting. Notified cases are only investigated if they are part of, or suspected to be part of, an outbreak.

## Summary 2024

- Case count: 10,759
- Reported hospitalisations: 5\*
- Reported deaths: 0
- Notification rate per 100,000: 130.1

\*Hospitalisations may be underestimated as most cases are not interviewed by public health officers

## Overall trend

There was a decrease of 12% in the 2024 notification rate compared to the 5-year annual mean (150.62 per 100,000)

## Groups with highest notification rate in 2024

Age: 0-4 years (8.5% of cases - 192.03 per 100,000)

Sex: Male (55.4% of cases - 145.55 per 100,000)

LHD: Murrumbidgee (4.9% of cases - 171.7 per 100,000)

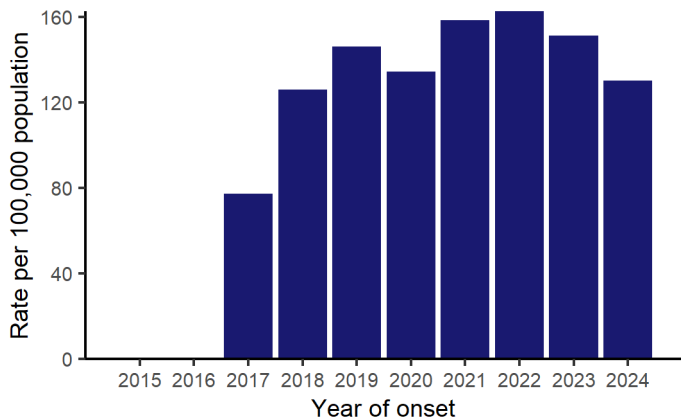
## Seasonality

Campylobacteriosis notifications were highest in the Summer

## Outbreaks

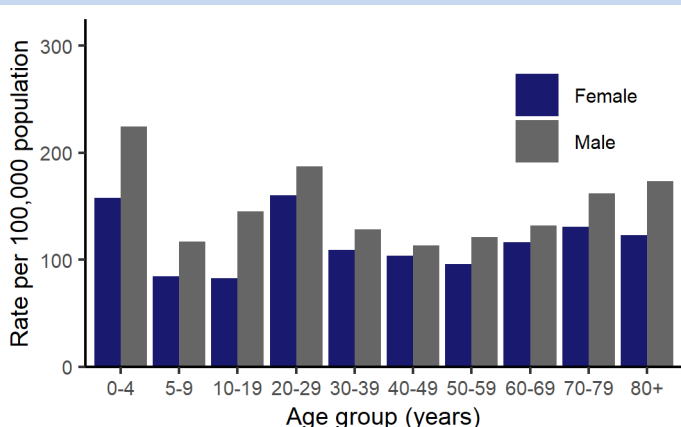
Two outbreaks were detected in NSW in 2024 affecting 12 people. (pages 24-28)

Notification rate per 100,000 population by year, 2015 – 2024, NSW



\* Campylobacteriosis became a notifiable condition on 7 April 2017, therefore 2017 notifications only represent 9 months of data.

Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	493.2	445	141.9	125.6
FW	32.6	30	113.5	108.4
HNE	1,253.6	877	132.1	90.1
IS	628.0	651	146.5	147.2
MNC	318.8	299	140.3	129.2
MURR	580.4	525	192.5	171.7
NBM	568.2	521	148.1	134.9
NNSW	544.8	519	176.7	165.9
NS	1,723.4	1,496	180.3	155.2
SES	1,626.6	1,487	172.2	160.2
SNSW	377.4	355	175.3	160.2
SWS	1,308.0	1,008	124.7	93.9
SYD	963.8	824	138.2	118.3
WNSW	508.8	412	180.2	144.2
WS	1,357.0	1,304	130.2	122.2
<b>NSW</b>	<b>12,291.2</b>	<b>10,759</b>	<b>150.6</b>	<b>130.1</b>

\*grey shading – >50% increase compared to 5yr mean

# SALMONELLOSIS

Salmonellosis is caused by infection with *Salmonella* bacteria. In Australia, most *Salmonella* infections occur after eating contaminated food, and sometimes after close contact with another person or animals with salmonellosis. Notified cases are usually only investigated if they are part of, or suspected to be part of, an outbreak.

## Summary 2024

- Case count: 2,919
- Reported hospitalisations: 98\*
- Reported deaths: 0
- Notification rate per 100,000: 35.3

\*Hospitalisations may be underestimated as most cases are not interviewed by public health officers

## Overall trend

There was a decrease of 5% in the 2024 notification rate compared to the 5-year annual mean (35.56 per 100,000)

## Groups with highest notification rate in 2024

Age: 0-4 years (22.3% of cases - 128.02 per 100,000)

Sex: Male (51.1% of cases - 33.97 per 100,000)

LHD: Northern NSW (11.8% of cases - 102.26 per 100,000)

## Seasonality

Salmonella notifications were highest in the Summer

## Top serotypes in 2024 (% of all types *Salmonella*)

1. Typhimurium (15.3%)

2. Wangata (11.9%)

3. Enteritidis (6.7%)

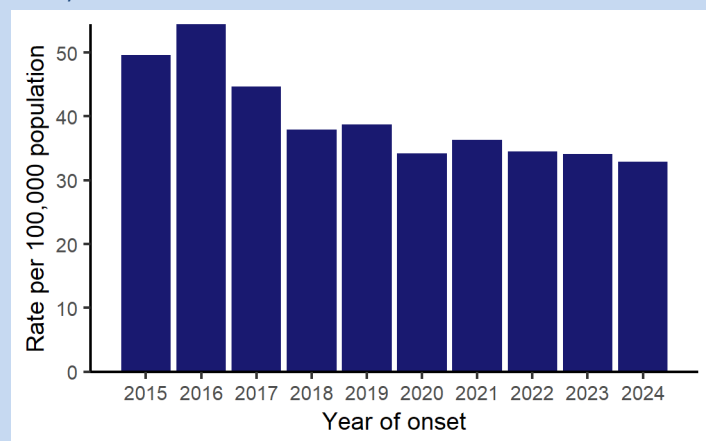
4. Paratyphi B bv Java (5.9%)

5. Birkenhead (3.7%)

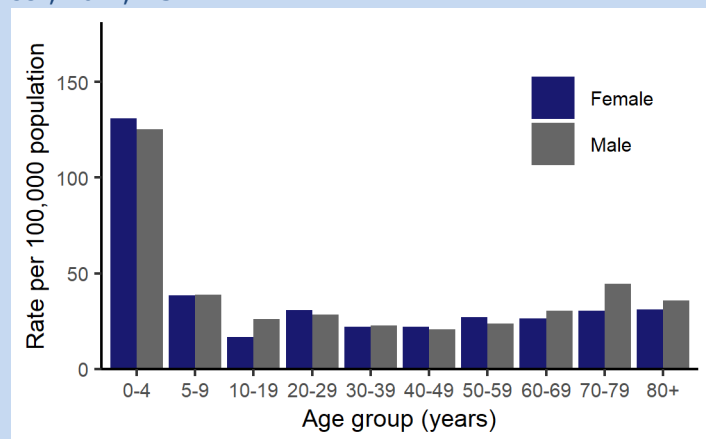
## Outbreaks

4 foodborne outbreaks caused by *Salmonella* were detected in NSW in 2024, affecting 42 people (1.4% of all *Salmonella*) (pages 24-28)

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5Yr mean	2024
CC	133.4	126	38.4	35.6
FW	10.2	8	35.5	28.9
HNE	351.2	307	37.0	31.5
IS	129.6	125	30.2	28.3
MNC	115.2	103	50.7	44.5
MURR	130.8	112	43.4	36.6
NBM	129.8	113	33.8	29.3
NNSW	269.0	327	87.2	104.5
NS	375.0	363	39.2	37.6
SES	316.6	301	33.5	32.4
SNSW	75.6	94	35.1	42.4
SWS	352.6	327	33.6	30.5
SYD	200.8	195	28.8	28.0
WNSW	125.4	96	44.4	33.6
WS	346.2	320	33.2	30.0
<b>NSW</b>	<b>3,064.8</b>	<b>2,919</b>	<b>37.6</b>	<b>35.3</b>

\*grey shading – >50% increase compared to 5yr mean

# Salmonellosis continued

## Salmonella serotypes

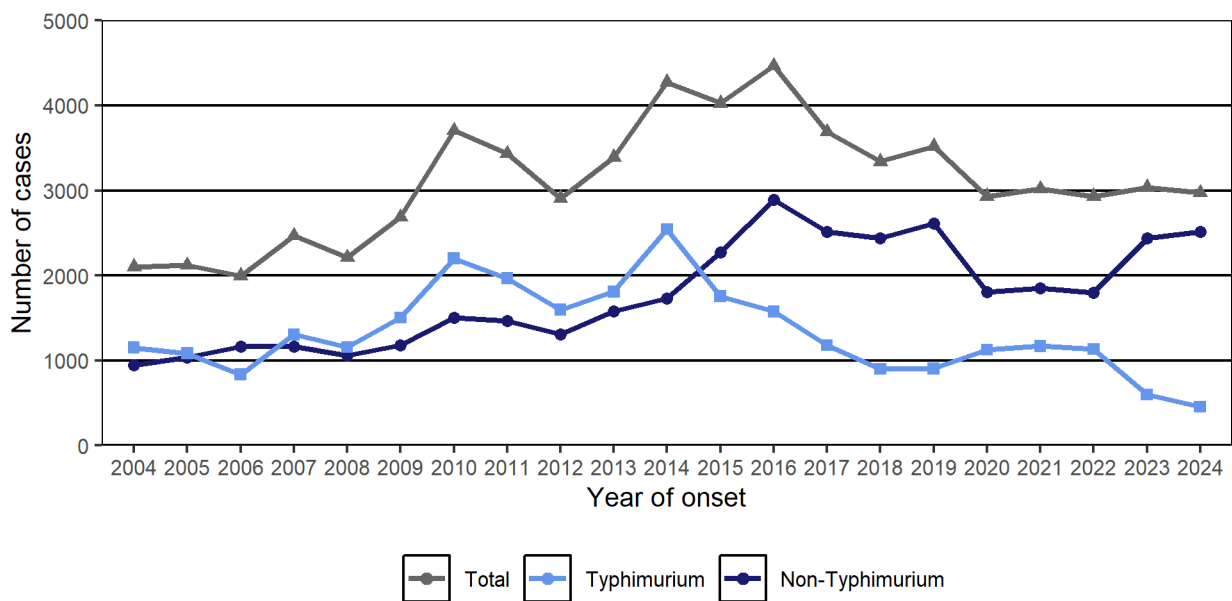
Top 5 *Salmonella* serotypes in NSW, 2020-2024 (number of notifications)

	2020	2021	2022	2023	2024
1	Typhimurium (1127)	Typhimurium (1168)	Typhimurium (1134)	Typhimurium (600)	Typhimurium (455)
2	Wangata (264)	Saintpaul (256)	Wangata (166)	Wangata (304)	Wangata (353)
3	Saintpaul (156)	Wangata (252)	Virchow (90)	Enteritidis (218)	Enteritidis (197)
4	Enteritidis (114)	Birkenhead (83)	Enteritidis (88)	Paratyphi B bv Java (121)	Paratyphi B bv Java (176)
5	Virchow (105)	Virchow (83)	Paratyphi B bv Java (81)	ser 4,5,12:i:- (94)	Birkenhead (111)

## Salmonella Typhimurium trends

In 2024 *Salmonella* Typhimurium notifications decreased by 24.2% when compared to 2023.

Number of *Salmonella* Typhimurium infections compared to other *Salmonella* serotypes in NSW, 2004-2024.



# SALMONELLA ENTERITIDIS INFECTION

While *Salmonella* Enteritidis is endemic in commercial poultry farms in most countries, it was not thought to be present in Australia until 2018 when an outbreak occurred originating from NSW egg farms. All notified cases of *Salmonella* Enteritidis are investigated in NSW to determine likely place of acquisition (local vs overseas); locally acquired cases are further investigated in conjunction with the NSW Food Authority.

## Summary 2024

- Case count: 197
- Reported hospitalisations: 47\*
- Reported deaths: 0
- Notification rate per 100,000: 2.4

## Overall trend

There was an increase of 21% in the 2024 notification rate compared to the 5-year annual mean (2.00 per 100,000)

## Groups with highest notification rate in 2024

Age: 0-4 years (15.7% of cases - 6.53 per 100,000)

Sex: Male (49.7% of cases - 2.39 per 100,000)

LHD: Northern Sydney (21.3% of cases - 4.36 per 100,000)

## Seasonality

*Salmonella* Enteritidis notifications were highest in the Winter

## Place of acquisition in 2024

In Australia: 16.8%

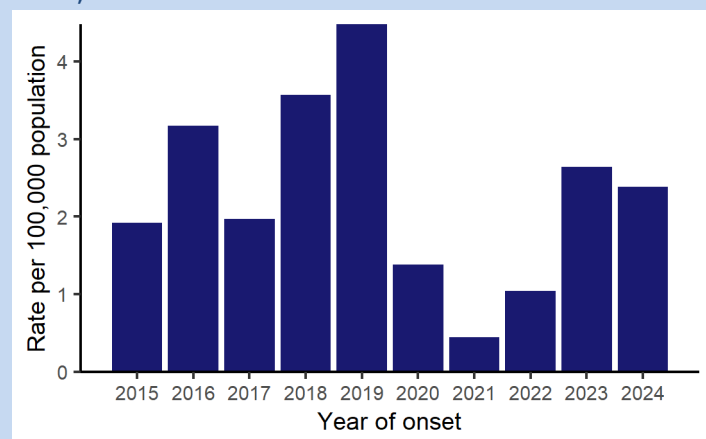
Overseas: 81.2%

Unknown: 2.0%

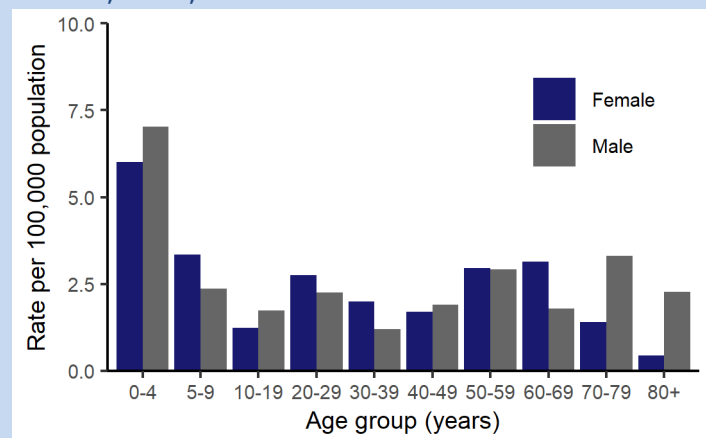
## Outbreaks

There was one local *Salmonella* Enteritidis cluster investigation affecting 4 people in 2024.

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	5.2	14	1.5	4.0
FW	0	0	0	0.0
HNE	11.2	20	1.2	2.1
IS	8.2	16	1.9	3.6
MNC	2.2	3	1.0	1.3
MURR	1.4	5	0.5	1.6
NBM	8.2	5	2.1	1.3
NNSW	5.6	7	1.8	2.2
NS	32.4	42	3.4	4.4
SES	26.8	26	2.8	2.8
SNSW	2.8	1	1.3	0.5
SWS	19.2	20	1.8	1.9
SYD	13.2	14	1.9	2.0
WNSW	2.2	2	0.8	0.7
WS	23.2	22	2.2	2.1
<b>NSW</b>	<b>162.6</b>	<b>197</b>	<b>2.0</b>	<b>2.4</b>

\*grey shading – >50% increase compared to 5yr mean

# TYPHOID & PARATYPHOID FEVER

Typhoid & paratyphoid fever are caused by infections with *Salmonella* Typhi and *Salmonella* Paratyphi bacteria, respectively. Together, they are called Enteric Fever. In Australia, most diagnosed infections are acquired overseas by individuals ingesting contaminated food or water while visiting countries where typhoid or paratyphoid is endemic. All notified cases of typhoid and paratyphoid are investigated in NSW.

## Summary 2024

- Case count: 114
- Reported hospitalisations: 95\*
- Reported deaths: 0
- Notification rate per 100,000: 1.4

## Overall trend

There was an increase of 73% in the 2024 notification rate compared to the 5-year annual mean (0.81 per 100,000)

## Groups with highest notification rate in 2024

Age: 0-4 years (11.4% of cases - 2.73 per 100,000)

Sex: Male (52.6% of cases - 1.46 per 100,000)

LHD: Western Sydney (43.9% of cases - 4.68 per 100,000)

## Seasonality

Typhoid/Paratyphoid notifications were highest in the Summer

## Place of acquisition in 2024

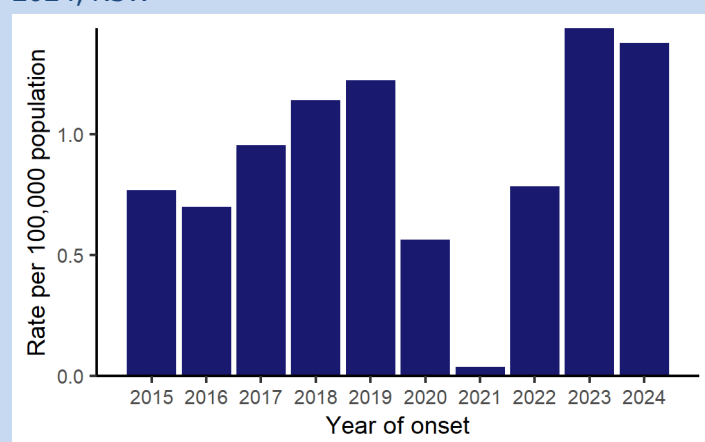
In Australia: 4.4%\*

Overseas: 93.9%

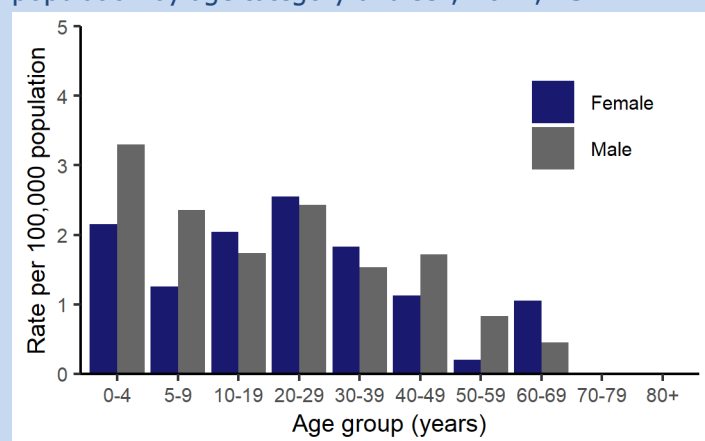
Unknown: 1.8%

\* Acquired in NSW from contact with returned travellers

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Typhoid and paratyphoid notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	1.0	4	0.3	1.1
FW	0	0	0	0
HNE	2.6	4	0.3	0.4
IS	1.4	1	0.3	0.2
MNC	0.2	2	0.1	0.9
MURR	0.8	5	0.3	1.6
NBM	2.4	7	0.6	1.8
NNSW	0.4	0	0.1	0.0
NS	4.8	9	0.5	0.9
SES	4.4	8	0.5	0.9
SNSW	0.8	1	0.4	0.5
SWS	10.6	13	1.0	1.2
SYD	6.6	10	0.9	1.4
WNSW	0.4	0	0.1	0.0
WS	29.0	50	2.8	4.7
<b>NSW</b>	<b>66.0</b>	<b>114</b>	<b>0.8</b>	<b>1.4</b>

\* grey shading – >50% increase compared to 5yr mean

# SHIGELLOSIS

Shigellosis is a disease caused by infection with *Shigella* bacteria. It causes diarrhoea and is easily spread among people. All cases of shigellosis are investigated in NSW to determine if the infection was acquired overseas or from local sources. *Shigella* can be spread person-to-person or via contaminated food. A change in the national case definition occurred on 1 July 2018 to include probable cases (detection by PCR test only), which has affected the trend in recent years.

## Summary 2024

- Case count: 935
- Reported hospitalisations: 130\*
- Reported deaths: 0
- Notification rate per 100,000: 11.3

\*Hospitalisations may be underestimated as usually only confirmed cases are interviewed by public health officers

## Overall trend

There was an increase of 67% in the 2024 notification rate compared to the 5-year annual mean (6.8 per 100,000)

## Groups with highest notification rate in 2024

Age: 0-4 years (10.5% of cases - 20.6 per 100,000)

Sex: Male (58.1% of cases - 13.2 per 100,000)

LHD: South Eastern Sydney (21.3% of cases - 21.4 per 100,000)

## Seasonality

Shigella notifications were highest in the Autumn.

## Place of acquisition in 2024 (confirmed cases only)

In Australia: 50.9%

Overseas: 38.0%

Unknown: 11.7%

## Risk exposures reported (locally acquired only)

Men who have sex with men (MSM): 60%

Contact with a confirmed/possible case: 11%

Unknown: 39%

## Typing of confirmed cases

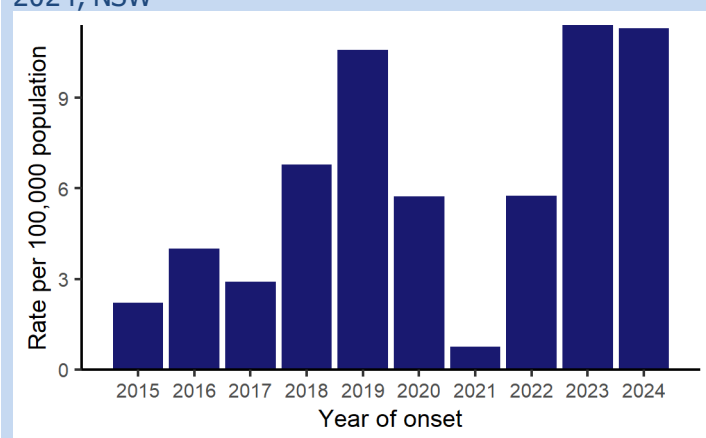
Sonnei: 45.7%

Boydii: 3.1%

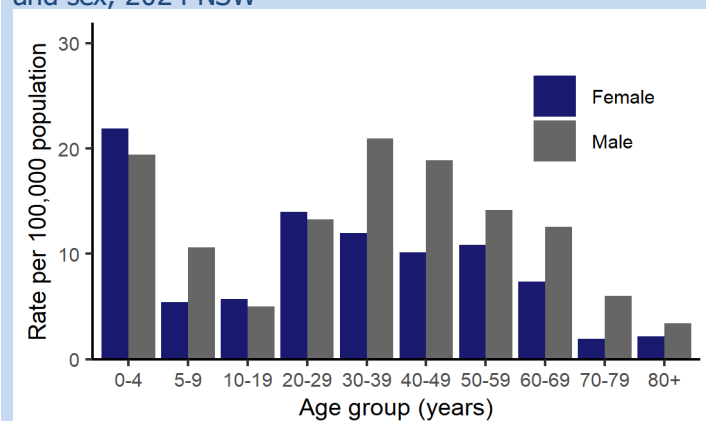
Flexneri: 50.4%

Dysenteriae: 0.8%

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024 NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	13.8	25	4.0	7.1
FW	1.0	0	3.5	0.0
HNE	26.8	56	2.8	5.8
IS	15.0	28	3.5	6.3
MNC	4.8	11	2.1	4.8
MURR	8.8	14	2.9	4.6
NBM	16.8	40	4.4	10.4
NNSW	22.8	35	7.4	11.2
NS	82.6	105	8.6	10.9
SES	128.2	199	13.6	21.4
SNSW	5.0	5	2.3	2.3
SWS	48.0	101	4.6	9.4
SYD	88.2	128	12.6	18.4
WNSW	6.8	9	2.4	3.2
WS	88.8	178	8.5	16.7
<b>NSW</b>	<b>558.6</b>	<b>935</b>	<b>6.8</b>	<b>11.3</b>

\* grey shading – >50% increase compared to 5yr mean

# LISTERIOSIS

Listeriosis is an illness usually acquired after eating foods contaminated with the bacterium *Listeria monocytogenes*. Listeriosis is a serious disease in pregnant women and their foetuses, the elderly and people with weakened immune systems. All notified cases of listeriosis are investigated in NSW.

## Summary 2024

- Case count: 21
- Reported hospitalisations: 21\*
- Reported deaths: 6
- Notification rate per 100,000: 0.3

## Place of acquisition in 2024

In NSW: 100%

## Seasonality

Listeriosis notifications were highest in the Spring.

## Outbreaks

There was no outbreaks due to listeriosis in 2024

## Most common comorbidities reported

Cancer: 10

Heart disease: 10

Hypertension: 9

## Perinatal

Two perinatal cases were reported in 2024.

## Overall trend

There was a decrease of 17% in the 2024 notification rate compared to the 5-year annual mean (0.31 per 100,000)

## Groups with highest notification rate in 2024

Age: 80+ years (28.6% of cases - 1.47 per 100,000)

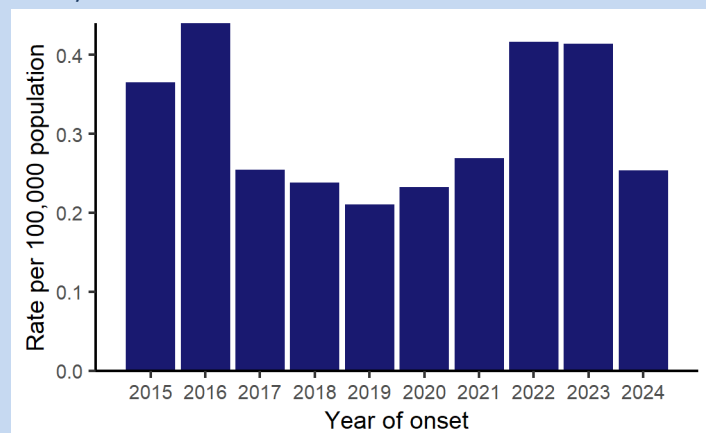
Sex: Male (52.4% of cases - 0.269 per 100,000)

LHD: Sydney (19.0% of cases - 0.57 per 100,000)

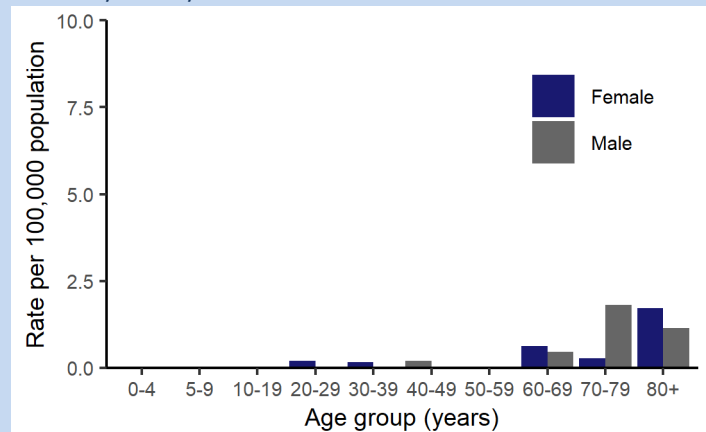
## Deaths

Six deaths occurred in people aged 74-96 years

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	0.8	0	0.2	0.0
FW	0.2	0	0.7	0.0
HNE	3.0	2	0.3	0.2
IS	1.6	2	0.4	0.5
MNC	0.2	0	0.1	0.0
MURR	1.4	0	0.5	0.0
NBM	0.8	2	0.2	0.5
NNSW	0.4	0	0.1	0.0
NS	3.4	1	0.4	0.1
SES	2.4	4	0.3	0.4
SNSW	0.8	0	0.4	0.0
SWS	2.8	4	0.3	0.4
SYD	2.2	4	0.3	0.6
WNSW	0.8	0	0.3	0.0
WS	3.8	2	0.4	0.2
<b>NSW</b>	<b>25.2</b>	<b>21</b>	<b>0.3</b>	<b>0.3</b>

\* grey shading – >50% increase compared to 5yr mean

# SHIGA TOXIN PRODUCING *E. COLI* INFECTION (STEC)

STEC is a bacterial infection that can cause serious disease, including bloody diarrhoea, and sometimes haemolytic uraemic syndrome (HUS). Infection usually results from consuming contaminated food or water, or from contact with infected animals or people. All notifications of STEC infection are investigated in NSW.

## Summary 2024

- Case count: 208
- Reported hospitalisations: 95\*
- Reported deaths: 1
- Notification rate per 100,000: 2.5

## Overall trend

There was an increase of 58% in the 2024 notification rate compared to the 5-year annual mean (1.6 per 100,000). The widespread use of a more sensitive laboratory method (PCR) in NSW laboratories since 2020 may have attributed to the increase in notification rate.

## Deaths

Two deaths relating to STEC were reported in 2024.

## Groups with highest notification rate in 2024

Age: 80+ years (13.0% of cases - 6.6 per 100,000)

Sex: Female (60.6% of cases - 3.0 per 100,000)

LHD: Western NSW (17.3% of cases - 12.6 per 100,000)

## Seasonality

STEC notifications were highest in the Summer

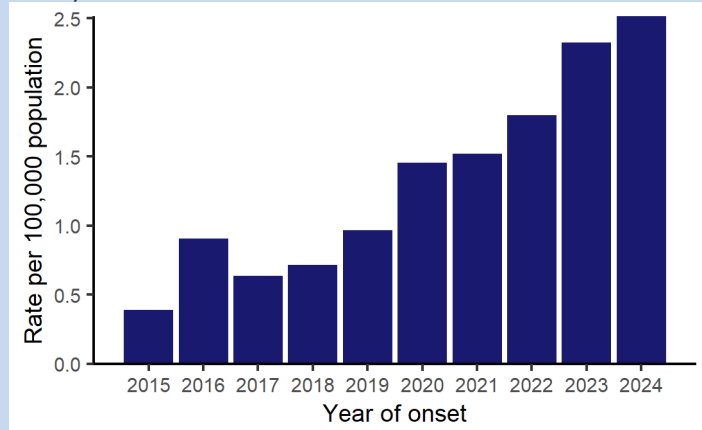
## Place of acquisition in 2024

In Australia: 56.2%

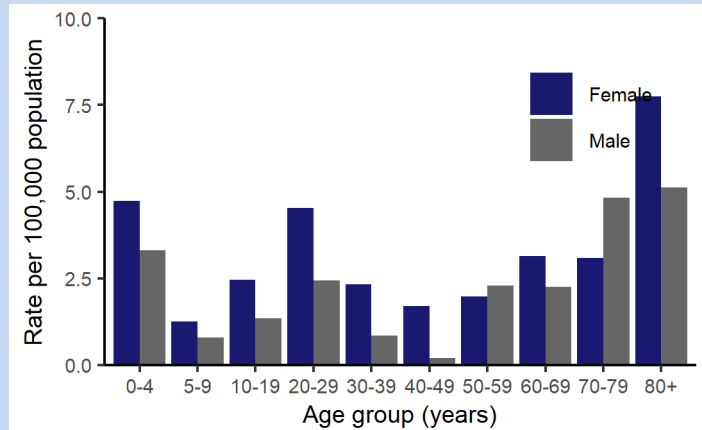
Overseas: 3.4%

Unknown: 40.4%

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	2.2	7	0.6	2.0
FW	1.2	2	4.2	7.2
HNE	23.8	35	2.5	3.6
IS	1.0	3	0.2	0.7
MNC	5.2	4	2.3	1.7
MURR	17.6	22	5.8	7.2
NBM	7.4	6	1.9	1.6
NNSW	4.6	10	1.5	3.2
NS	5.0	22	0.5	2.3
SES	7.8	7	0.8	0.8
SNSW	10.6	10	4.9	4.5
SWS	4.0	10	0.4	0.9
SYD	2.2	12	0.3	1.7
WNSW	20.4	36	7.2	12.6
WS	17.8	19	1.7	1.8
<b>NSW</b>	<b>131.8</b>	<b>208</b>	<b>1.6</b>	<b>2.5</b>

\* grey shading – >50% increase compared to 5yr mean

# HAEMOLYTIC URAEMIC SYNDROME (HUS)

HUS is a clinical syndrome characterized by progressive renal failure that is associated with haemolytic anaemia and thrombocytopenia. In patients with HUS associated with diarrhoea, STEC is the primary cause. All notified cases of HUS are investigated in NSW.

## Summary 2024

- Case count: 5
- Reported hospitalisations: 5
- Reported deaths: 0
- Notification rate per 100,000: 0.1

## Bacterial infection

STEC infections were identified in all of the notified HUS cases in 2024. One case was serogroup O157, one as O145, and no serogroup was identified for the remaining cases.

## Overall trend

There was an increase of 47% in the 2024 notification rate compared to the 5-year annual mean (0.05 per 100,000)

## Deaths

No deaths relating to HUS were reported in 2024.

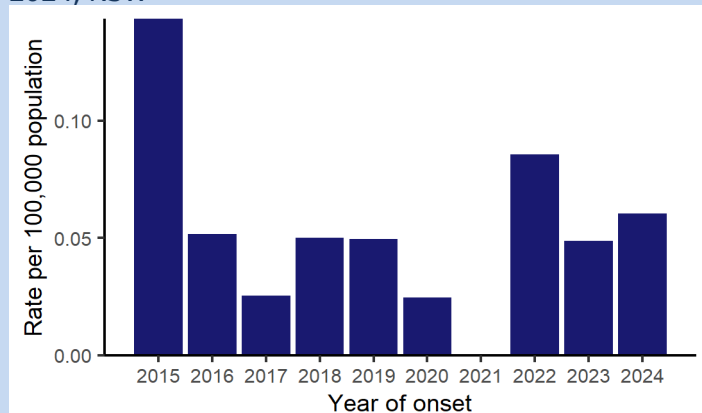
## Groups with highest notification rate in 2024

Age: 80+ years (20.0% of cases - 0.24 per 100,000)

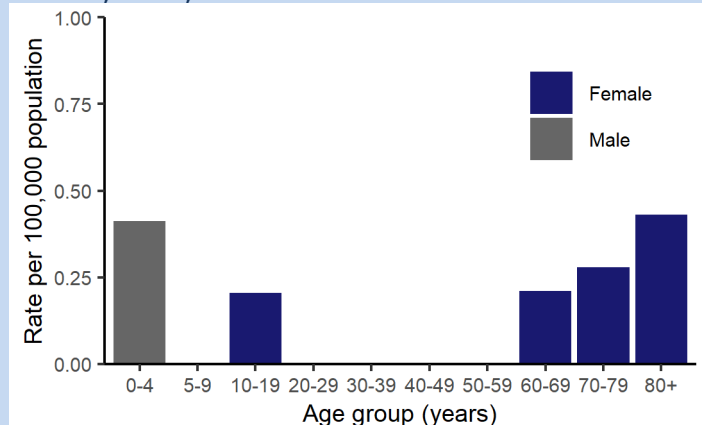
Sex: Female (80.0% of cases - 0.09 per 100,000)

LHD: Northern NSW (20.0% of cases - 0.32 per 100,000)

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	0.2	1	0.1	0.3
FW	0	0	0	0
HNE	1.0	0	0.1	0.0
IS	0.6	0	0.1	0.0
MNC	0.2	0	0.1	0.0
MURR	0.2	0	0.1	0.0
NBM	0.0	1	0.0	0.3
NNSW	0.4	1	0.1	0.3
NS	0.0	1	0.0	0.1
SES	0.0	1	0.0	0.1
SNSW	0.2	0	0.1	0.0
SWS	0.4	0	0.0	0.0
SYD	0	0	0	0
WNSW	0.2	0	0.1	0.0
WS	0	0	0	0
<b>NSW</b>	<b>3.4</b>	<b>5</b>	<b>0.1</b>	<b>0.1</b>

\* grey shading – >50% increase compared to 5yr mean

# CRYPTOSPORIDIOSIS

Cryptosporidiosis is a disease caused by swallowing the *Cryptosporidium* parasite, most commonly in contaminated water. It mainly causes diarrhoea and abdominal cramps.

## Summary 2024

- Case count: 3,499
- Reported hospitalisations: 193\*
- Reported deaths: 0
- Notification rate per 100,000: 42.3

## Overall trend

There was an increase of 483% in the 2024 notification rate compared to the 5-year annual mean (7.35 per 100,000)

## Groups with highest notification rate in 2024

Age: 0-4 years (25.6% of cases - 188.45 per 100,000)

Sex: Female (54.4% of cases - 45.58 per 100,000)

LHD: Southern NSW (4.0% of cases - 63.17 per 100,000)

## Seasonality

Cryptosporidiosis notifications were highest in the Autumn

## Place of acquisition in 2024

In Australia: 51.4%

Overseas: 7.0%

Unknown: 41.7%

## Risk exposures reported (locally acquired only)\*

Farm/farm animal exposure: 9%

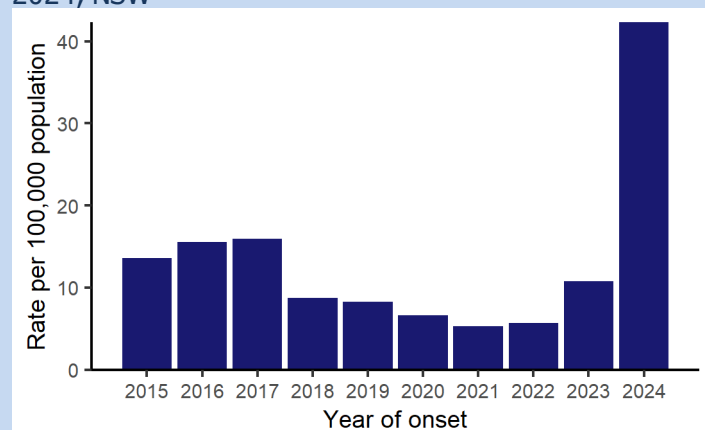
Swimming pool: 45%

Drank water other than town or bottled water: 7%

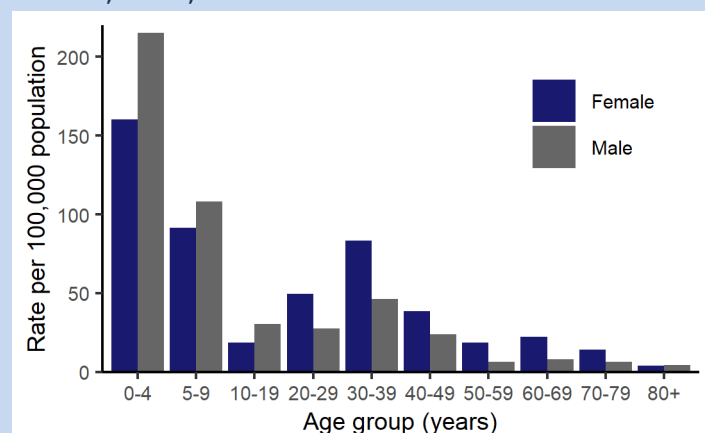
**Note:** Some cases may report more than one risk factor.

\*Of interviewed cases.

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	16.6	210	4.8	59.3
FW	1.2	5	4.2	18.1
HNE	75.0	541	7.9	55.6
IS	43.6	176	10.2	39.8
MNC	17.8	86	7.8	37.2
MURR	28.8	129	9.6	42.2
NBM	28.8	199	7.5	51.5
NNSW	35.8	196	11.6	62.6
NS	82.2	395	8.6	41.0
SES	68.2	504	7.2	54.3
SNSW	17.6	140	8.2	63.2
SWS	54.4	359	5.2	33.4
SYD	37.8	190	5.4	27.3
WNSW	35.4	117	12.5	41.0
WS	55.8	248	5.4	23.2
<b>NSW</b>	<b>600.0</b>	<b>3,499</b>	<b>7.4</b>	<b>42.3</b>

\* grey shading – >50% increase compared to 5yr mean

# GIARDIASIS

Giardiasis is an infection mainly of the small intestine caused by the parasite *Giardia lamblia*. Giardiasis has been reported in humans and in a variety of animals. Notified cases of giardiasis are not routinely followed up in NSW.

## Summary 2024

- Case count: 2,742
- Reported hospitalisations: 1\*
- Reported deaths: 0
- Notification rate per 100,000: 33.2

\*Hospitalisations may be underestimated as most cases are not interviewed by public health officers

## Overall trend

There was an increase of 25% in the 2024 notification rate compared to the 5-year annual mean (26.8 per 100,000)

## Groups with highest notification rate in 2024

Age: 0-4 years (12.8% of cases - 73.9 per 100,000)

Sex: Male (52.6% of cases - 35.1 per 100,000)

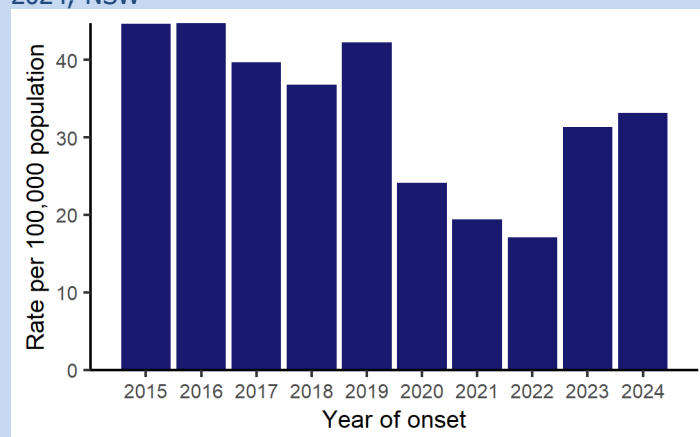
LHD: South Eastern Sydney (18.2% of cases - 53.7 per 100,000)

## Seasonality

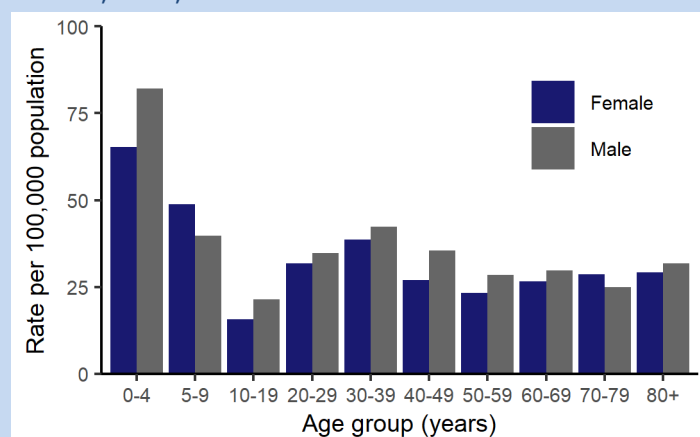
Giardia notifications were highest in the Autumn

**Note:** Risk factor information is not available as cases are not routinely followed up

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	95.4	117	27.4	33.0
FW	6.4	8	22.3	28.9
HNE	228.6	204	24.1	21.0
IS	92.2	114	21.5	25.8
MNC	53.6	58	23.6	25.1
MURR	78.8	74	26.1	24.2
NBM	101.8	122	26.5	31.6
NNSW	137.2	93	44.5	29.7
NS	300.6	360	31.4	37.3
SES	359.2	499	38.0	53.7
SNSW	31.8	44	14.8	19.9
SWS	209.4	361	20.0	33.6
SYD	181.8	250	26.1	35.9
WNSW	78.6	83	27.8	29.1
WS	229.6	352	22.0	33.0
<b>NSW</b>	<b>2,187.4</b>	<b>2,742</b>	<b>26.8</b>	<b>33.2</b>

\* grey shading – >50% increase compared to 5yr mean

# HEPATITIS A

Hepatitis A is caused by a viral infection of the liver. The virus is mainly spread by the faecal-oral route, usually by consuming contaminated food or water or by direct contact with an infected person. All notified cases of hepatitis A are investigated in NSW.

## Summary 2024

- Case count: 67
- Reported hospitalisations: 39
- Reported deaths: 0
- Notification rate per 100,000: 0.8

## Seasonality

Hepatitis A notifications were highest in the Summer

## Place of acquisition in 2024

In Australia: 17.9%  
Overseas: 80.6%  
Unknown: 1.5%

## Overall trend

There was an increase of 74% in the 2024 notification rate compared to the 5-year annual mean (0.47 per 100,000)

## Groups with highest notification rate in 2024

Age: 5-9 years (14.9% of cases - 2.02 per 100,000)

Sex: Male (52.2% of cases - 0.85 per 100,000)

LHD: Western Sydney (25.4% of cases - 1.59 per 100,000)

## Risk exposures reported (locally acquired)

Household contact with HAV case: 42%

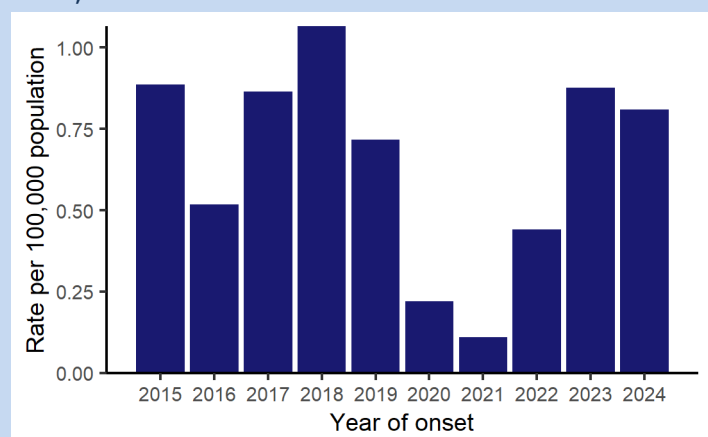
Household contact with recent travellers from HAV endemic areas: 42%

Unknown: 8%

## Outbreaks

There were no foodborne outbreaks of hepatitis A detected in 2024.

Notification rate per 100,000 population by year, 2015 – 2024, NSW

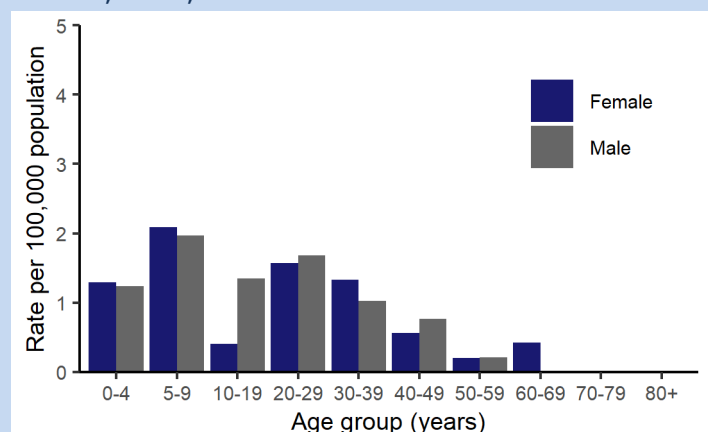


Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	0.2	0	0.1	0.0
FW	0	0	0	0
HNE	0.8	4	0.1	0.4
IS	1.4	2	0.3	0.5
MNC	0.0	1	0.0	0.4
MURR	1.0	0	0.3	0.0
NBM	1.2	4	0.3	1.0
NNSW	0.8	0	0.3	0.0
NS	4.4	9	0.5	0.9
SES	3.0	7	0.3	0.8
SNSW	0.4	3	0.2	1.4
SWS	6.4	13	0.6	1.2
SYD	3.4	6	0.5	0.9
WNSW	0.6	0	0.2	0.0
WS	14.6	17	1.4	1.6
<b>NSW</b>	<b>38.6</b>	<b>67</b>	<b>0.5</b>	<b>0.8</b>

\* grey shading – >50% increase compared to 5yr mean

Notification rate per 100,000 population by age category and sex, 2024, NSW



# HEPATITIS E

Hepatitis E is caused by a viral infection of the liver. The virus is mainly spread by the faecal-oral route, usually by consuming contaminated food or water or by direct contact with an infected person. All cases of hepatitis E are investigated in NSW.

## Summary 2024

- Case count: 7
- Reported hospitalisations: 7
- Reported deaths: 0
- Notification rate per 100,000: 0.1

## Place of acquisition in 2024

In Australia: 14.2%  
Overseas: 85.7%

## Risk exposures reported (locally acquired)

Consumed pork products: 100%  
No risk identified: 0%

## Overall trend

There was a decrease of 41% in the 2024 notification rate compared to the 5-year annual mean (0.16 per 100,000)

## Groups with highest notification rate in 2024

Age: 70-79 years (28.6% of cases - 0.29 per 100,000)

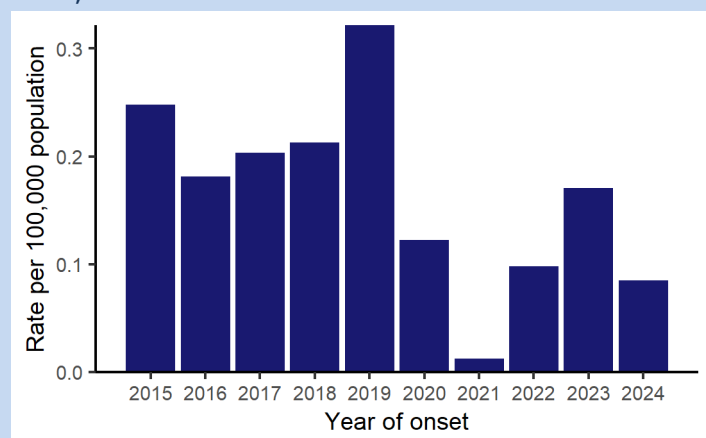
Sex: Male (71.4% of cases - 0.12 per 100,000)

LHD: Sydney (28.6% of cases - 0.29 per 100,000)

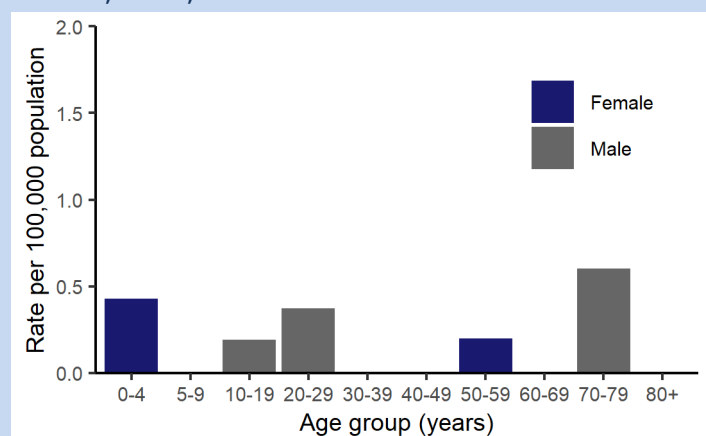
## Outbreaks

There were no foodborne outbreaks of hepatitis E detected in 2024.

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5yr mean	2024
CC	0.2	0	0.1	0.0
FW	0.0	0	0.0	0.0
HNE	0.2	1	0.0	0.1
IS	0.6	0	0.1	0.0
MNC	0.0	0	0.0	0.0
MURR	0.4	0	0.1	0.0
NBM	0.4	0	0.1	0.0
NNSW	0.0	0	0.0	0.0
NS	1.0	2	0.1	0.2
SES	0.6	0	0.1	0.0
SNSW	0.0	0	0.0	0.0
SWS	3.2	1	0.3	0.1
SYD	1.2	2	0.2	0.3
WNSW	0.2	0	0.1	0.0
WS	3.8	1	0.4	0.1
<b>NSW</b>	<b>11.8</b>	<b>7</b>	<b>0.2</b>	<b>0.1</b>

\* grey shading – >50% increase compared to 5yr mean

# ROTAVIRUS INFECTION

Rotavirus is a viral infection that causes gastroenteritis. Globally, rotavirus is the most common cause of severe gastroenteritis in early childhood. A vaccine is available and is provided free for children less than 6 months of age in NSW. Single notified cases of rotavirus are not routinely followed up in NSW.

## Summary 2024

- Case count: 3,914
- Reported hospitalisations: 93\*
- Reported deaths: 1
- Notification rate per 100,000: 47.3

\*Hospitalisations may be underestimated as not all cases are interviewed by public health officers

## Overall trend

There was an increase of 157% in the 2024 notification rate compared to the 5-year annual mean (18.68 per 100,000)

## Seasonality

Rotavirus notifications were highest in the Spring

## Groups with highest notification rate in 2024

Age: 0-4 years (52.1% of cases - 429.34 per 100,000)

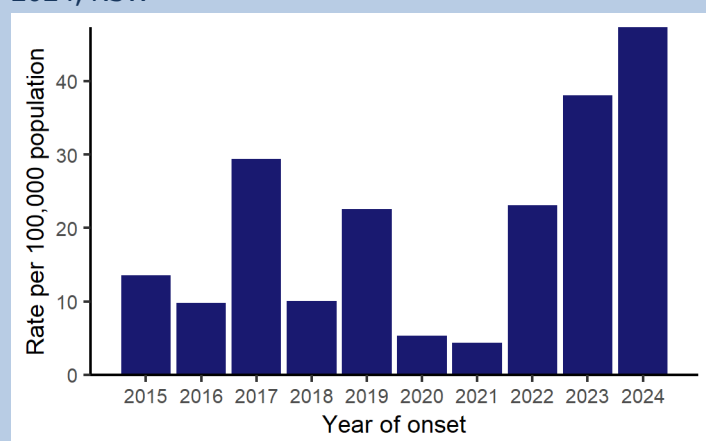
Sex: Male (50.6% of cases - 48.355 per 100,000)

LHD: South Eastern Sydney (17.7% of cases - 74.425 per 100,000)

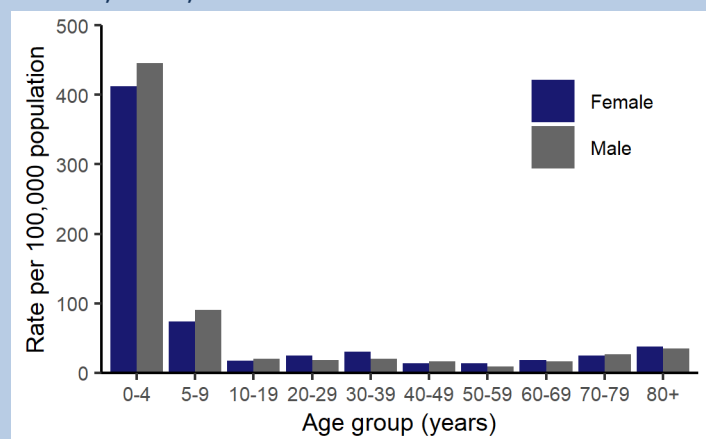
## Outbreaks

Cases found to be associated with an institutional outbreak: 70 cases (1.8%) associated with 51 institutional outbreaks.

Notification rate per 100,000 population by year, 2015 – 2024, NSW



Notification rate per 100,000 population by age category and sex, 2024, NSW



Number of cases and rates (per 100,000) by Local Health District, 2024, NSW

LHD	Count		Rate	
	5Yr mean	2024	5Yr mean	2024
CC	49.4	141	14.2	39.8
FW	1.6	8	5.6	28.9
HNE	107.0	201	11.3	20.6
IS	46.0	209	10.7	47.3
MNC	21.0	40	9.2	17.3
MURR	48.4	96	16.1	31.4
NBM	92.4	276	24.1	71.4
NNSW	76.4	70	24.8	22.4
NS	217.0	644	22.7	66.8
SES	162.4	691	17.2	74.4
SNSW	24.0	91	11.1	41.1
SWS	280.8	520	26.8	48.4
SYD	120.6	345	17.3	49.5
WNSW	52.8	52	18.7	18.2
WS	222.2	516	21.3	48.3
<b>NSW</b>	<b>1,524.8</b>	<b>3,914</b>	<b>18.7</b>	<b>47.3</b>

\* grey shading – >50% increase compared to 5yr mean

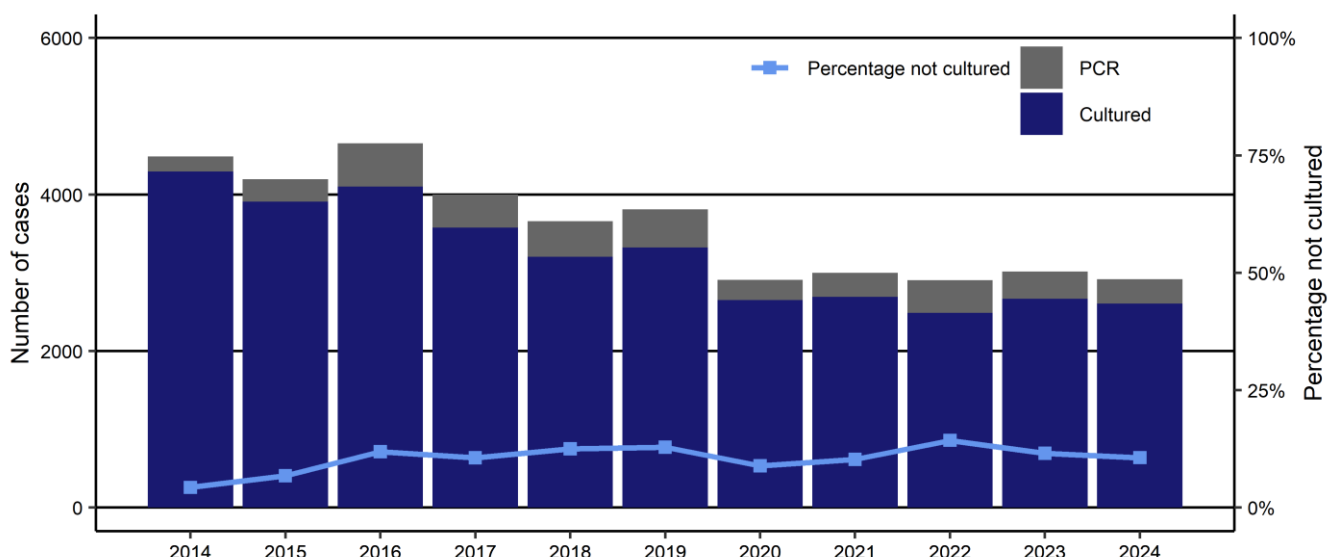
# CULTURE INDEPENDENT TESTING

Culture independent testing (CIDT) does not require isolation and identification of living micro-organisms but works by detecting the presence of specific antigens using polymerase chain reaction (PCR). CIDT was introduced by NSW laboratories in 2014. These tests can be conducted more rapidly and yield results sooner than can be reached through traditional culturing methods. Culture is needed, however, to further characterise the organisms that cause infections.

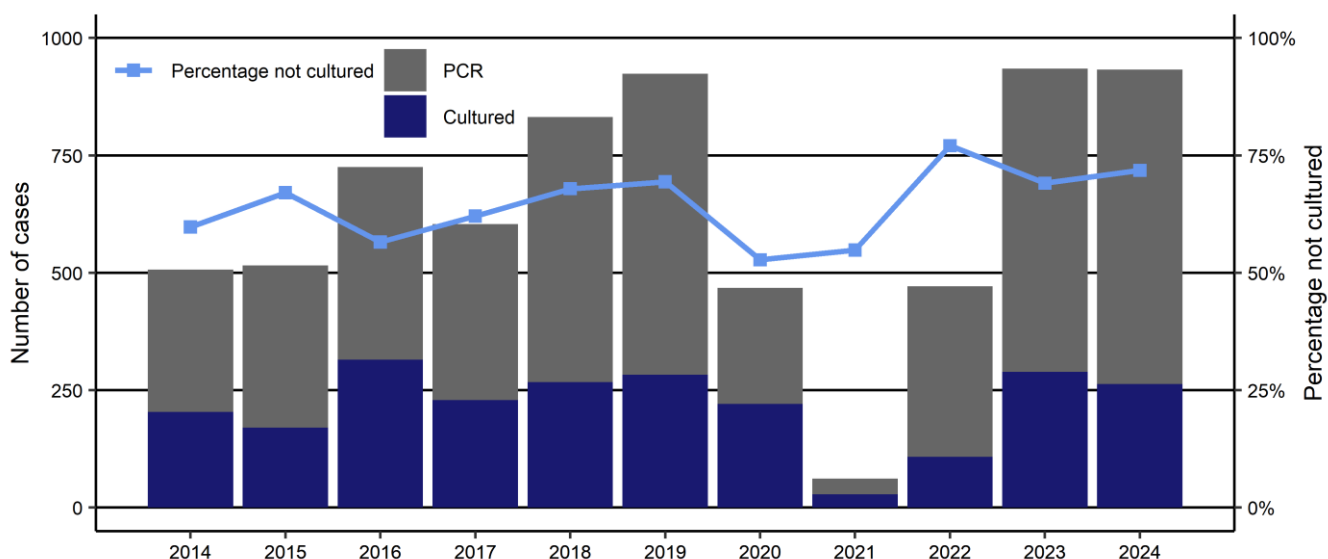
Summary for 2024:

- 11% of *Salmonella* notifications in 2024 were based on diagnosis by PCR methods only.
  - Some laboratories in NSW do not culture *Salmonella* unless it has been requested by the treating doctor.
- 72% of *Shigella* notifications in 2024 could not be cultured or were not cultured.
  - The national shigellosis case definition changed on 1 July 2019 to include 'probable cases.' Probable cases include those with a detection of *Shigella* on nucleic acid testing only (PCR).
  - PCR positive *Shigella* samples should be routinely cultured because the antigen target for *Shigella* is also found in enteroinvasive *E. coli*. For this reason PCR-only detections are only considered probable cases.
  - Culture for *Shigella* has a high false negative rate due to the fastidious nature of the organism.

The number of *Salmonella* notifications, by test type, and the percentage PCR only, in NSW, 2014 - 2024



The number of *Shigella* notifications, by test type, and the percentage with only PCR positive result in NSW, 2014 - 2024



# SURVEILLANCE OF FOODBORNE OUTBREAKS

A food-borne disease outbreak is defined as a situation where two or more people report acute onset of enteric or other symptoms caused by ingestion of infectious agents or toxins in the same contaminated food or drink. An investigation into suspected foodborne outbreaks is triggered following the identification of disease clusters in time and place, when complaints are received by the NSW Food Authority, or when reports of illness in two or more people are reported directly to public health units. This section includes potential outbreaks investigated as pathogen clusters.

## Summary 2024

- Foodborne outbreaks investigated: 28
- Outbreak related cases: 300

## Overall trend

30% decrease in the number of outbreaks compared to 5-year annual mean (40 outbreaks)

42% decrease in the number of outbreak-related cases compared to 5-year annual mean (521 people ill)

## Top 5 Causative agent in 2024

*Salmonella*: 14%

Norovirus: 11%

*Campylobacter*: 7%

*Bacillus cereus*: 7%

Scombroid fish poisoning: 7%

## Top contributing factors in 2024

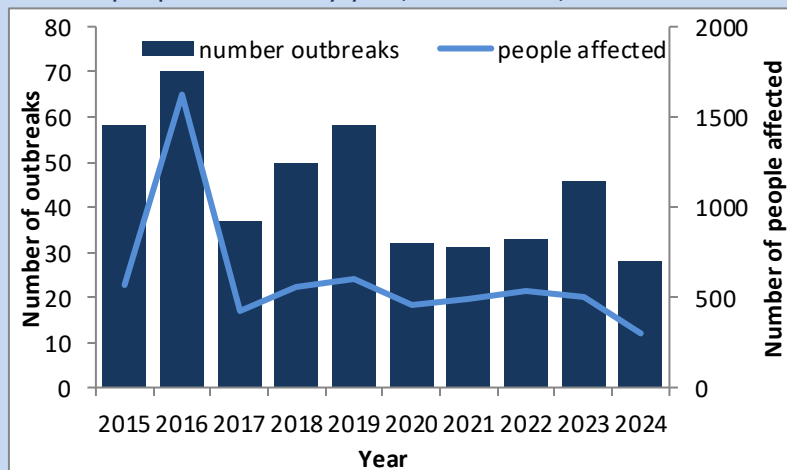
Food contaminated by ill food handler: 18%

Inadequate temperature control: 18%

Ingestion of contaminated raw product: 4%

Cross contamination from raw ingredient: 4%

Number of foodborne or suspected foodborne outbreaks and number people affected by year, 2015-2024, NSW



Number of foodborne outbreaks and number of people affected by local health district, 2024, NSW

LHD	2024	No. ill
CC	1	6
HNE	0	0
IS	0	0
M	3	35
MNC	2	9
NBM	0	0
NNSW	1	8
NS	2	61
SES	6	35
SWS	5	40
Syd	2	28
WNSW	1	2
WS	2	25
NSW*	3	51
Total	28	300

\*Outbreaks affecting more than one LHD counted in NSW resident cases only \*\*

Foodborne outbreak by causative agent & year, 2019-2024 NSW

Causative agent	2019	2020	2021	2022	2023	2024
<i>Salmonella</i> (all serotypes)	24	10	13	13	10	4
<i>Salmonella</i> Typhimurium	12	6	5	10	6	1
Unknown	13	13	7	8	20	12
<i>Campylobacter</i>	1	3	3	7	3	2
Fish poisoning	7	3	4	2	0	2
Norovirus	3	1	0	1	7	3
<i>Clostridium perfringens</i>	0	0	0	0	0	0
<i>Listeria</i>	2	0	0	0	3	0
Hepatitis E	1	0	0	0	1	0
STEC	0	0	0	0	0	1
Hepatitis A	1	0	1	0	0	0
<i>Bacillus cereus</i> toxin	0	1	0	0	1	2
<i>Vibrio parahaemolyticus</i>	0	0	1	0	0	1
Other	1	1	2	2	1	1
Total outbreaks	53	32	31	33	46	28

# Foodborne outbreaks continued

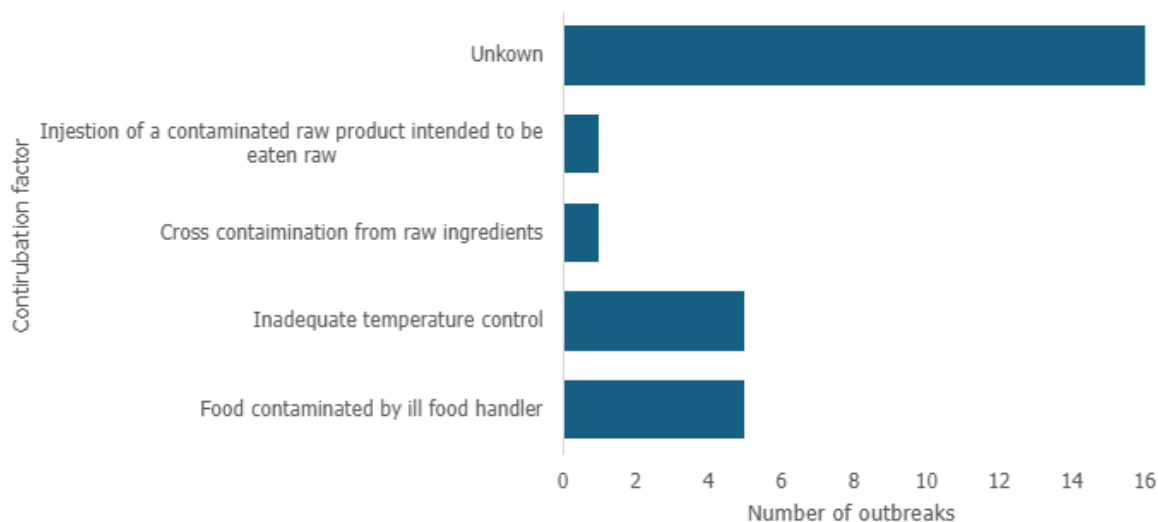
## Description of outbreaks by causative agent

Number of outbreaks, number ill and number hospitalised by causative agent, 2024, NSW

Causative agent	Number of outbreaks	Number ill	Ratio ill per outbreak	Number hospitalised	Ratio hospitalised per outbreak
Norovirus	3	57	15.7	0	0.0
<i>Salmonella</i>	4	42	10.5	12	3.0
<i>Bacillus cereus</i>	2	58	29.0	2	1.0
<i>Campylobacter</i>	2	12	6.0	1	0.5
Scombroid fish poisoning	2	4	2.0	1	0.5
STEC	1	2	2.0	0	0.0
<i>Vibrio species</i>	1	37	37.0	6	6.0
Yersiniosis	1	8	8.0	0	0.0
Unknown	12	90	8.0	1	0.0
<b>Total</b>	<b>28</b>	<b>300</b>	<b>27.3</b>	<b>23</b>	<b>0.8</b>

## Summary foodborne outbreaks by contributing factors

Foodborne outbreaks by contributing factors, 2024, NSW



# OUTBREAK SUMMARY 2024

Foodborne and potentially foodborne disease outbreaks investigated in NSW, 2024

PHU ID	Month <sup>1</sup>	Setting	Agent responsible	No. ill	Lab confirmed	No. Hospitalised	Study Evidence*	Responsible vehicles	Contributing factors
SWS46-118	Feb	Restaurant	Unknown	8	0	0	None	Suspect chicken curry or hainanese chicken dishes	Inadequate temperature control
SWS46-119	Feb	Private residence	<i>Salmonella</i> Zanzibar	22	10	1	None	Biryani rice with boiled egg or chicken kebab	Cross contamination from raw ingredients
WS46-121	Feb	Restaurant	Unknown	8	0	0	None	Unknown	Unknown
OHB46-120	Feb	Community	<i>Vibrio parahaemolyticus</i>	37	37	6	M,T	Raw oysters	Ingestion of contaminated raw product intended to be eaten raw
M46-117	Feb	Restaurant	Unknown	5	0	0	None	Chicken schnitzel wrap	Inadequate temperature control
SWS46-116	March	Restaurant	Unknown	2	0	1	D	Pizza	Unknown
NNSW46-112	March	Restaurant	<i>Yersinosis</i>	8	1	0	None	Unknown	Unknown
CC46-127	May	Hospital	<i>Salmonella</i> Typhimurium	6	6	6	None	Scrambled eggs	Unknown
OHB46-128	June	Cluster investigation	<i>Salmonella</i> Enteritidis	4	4	3	None	Eggs	Unknown
WS46-126	July	Private residence	<i>Norovirus</i>	17	1	0	D	Unknown	Person to food to person
SES46-125	July	Restaurant	<i>Campylobacter</i>	2	2	1	D	Unknown	Unknown
M46-130	August	Restaurant	Unknown	28	0	0	D	Unknown	Food handler contamination
MNC46-136	August	Restaurant	Unknown	4	0	0	None	Unknown	Unknown

PHU ID	Month <sup>1</sup>	Setting	Agent responsible	No. ill	Lab confirmed	No. Hospitalised	Study Evidence*	Responsible vehicles	Contributing factors
SYD46-131	August	Restaurant	Unknown	6	0	0	None	Unknown	Person to food to person
WNSW46-133	January	Commercial caterer	Shiga toxin producing <i>E.coli</i>	2	2	0	D	Unknown	Unknown
M46-132	January	Private residence	Scombroid fish poisoning	2	0	0	D	Marlin	Inadequate temperature control
SYD46-129	August	Restaurant	<i>Norovirus</i>	22	1	0	None	Unknown	Person to food to person
MNC46-138	August	Restaurant	Unknown	5	0	0	None	Unknown	Unknown
NS46-135	September	Take-away	<i>Bacillus cereus</i>	53	0	1	M	Frozen Acai	Inadequate temperature control
SES46-140	October	Restaurant	Scombroid fish poisoning	2	0	1	M	Mackerel	Unknown
NS46-147	November	Restaurant	<i>Norovirus</i>	8	1	0	None	Unknown	Person to food to person
SES46-141	November	Restaurant	<i>Campylobacter</i>	10	1	0	None	suspect chicken skewers	Unknown
OHB61	November	Cluster investigation	<i>Salmonella</i> Potsdam	10	10	2	D	Unknown	Unknown
SES46-146	November	Restaurant	Unknown	6	0	0	D	Steak with Black Pepper & Marrow Sauce	Unknown
SES46-142	December	Restaurant	Unknown	7	0	0	None	Nachos or tacos	Unknown
SES46-145	December	Restaurant	Unknown	8	0	0	None	Unknown	Unknown
SWS46-134	November	Take-away	<i>Bacillus cereus</i>	5	0	1	M,T	Frozen Acai	Inadequate temperature control
SWS46-144	December	Restaurant	Unknown	3	0	0	None	Curry and rice	Unknown

\*Evidence: A = Analytical (Statistical evidence), M = Microbiological (Laboratory evidence in food vehicle), D = Descriptive (Compelling descriptive evidence), E = Equipment/environmental detection (Equipment / environmental detection), T = Traceback (Traceback evidence).

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# INSTITUTIONAL GASTROINTESTINAL OUTBREAKS

Viral gastroenteritis is highly infectious and outbreaks are common and can be difficult to control. Outbreaks often occur in institutional settings, such as residential care facilities, educational institutions, or health care facilities. Gastroenteritis among two or more people of any age from an institution and linked in time should be notified to the local PHU. This ensures appropriate control and prevention strategies are implemented.

## Summary 2024

- Number of outbreaks: 1,882
- Number of people affected: 23,132
- Number of outbreaks with at least one stool sample collected: 394 (20.9%)

## Overall trend (compared to 5-year average)

- 29% increase in the number of outbreaks
- 36% increase in the number of people affected

## Seasonality

- Aged care facilities and Childcare centres: Peaked in September
- Hospitals: Peaked in October

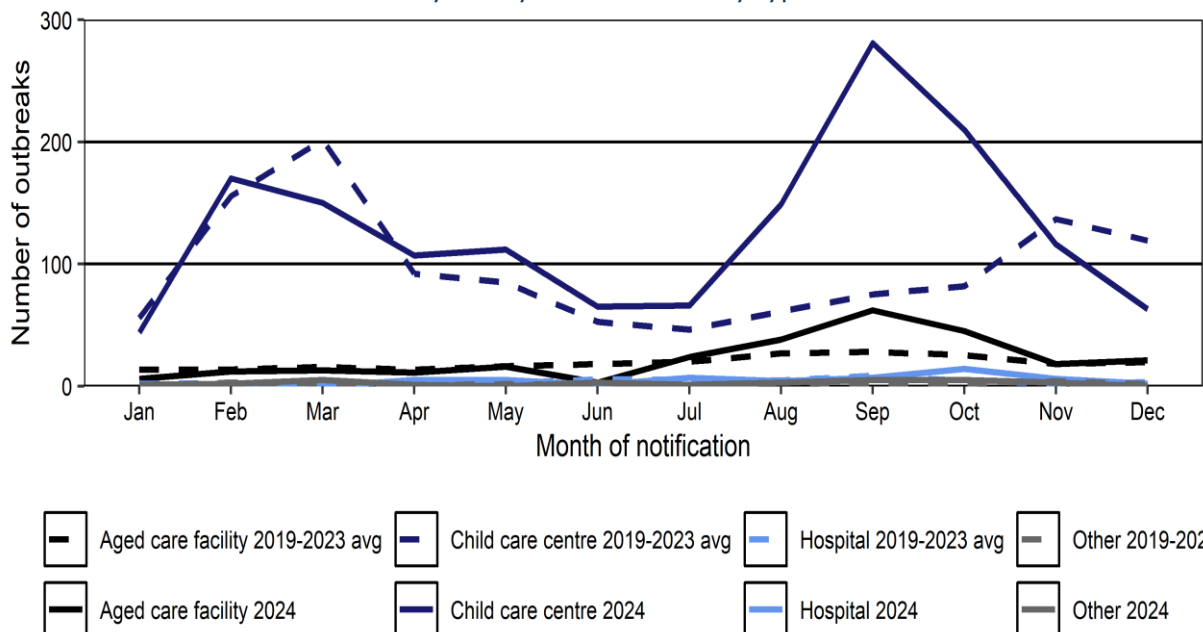
## Groups with highest frequency in 2024

- Facility type: childcare centres, 1,533 (81%) of outbreaks
- Attack rate in staff: hospitals at 14.4%
- Attack rate in non-staff: hospitals at 33.3%
- Average duration of outbreaks: Childcare centres at 7 days

## Causative agent

- Norovirus (confirmed): 9.5% of outbreaks (45.4% of outbreaks with sample collected)
- Rotavirus (confirmed): 2.7% of outbreaks (12.9% of outbreaks with sample collected)

Number of reported outbreaks of gastrointestinal illness in institutions in 2024 and average of the previous 5-years by month and facility type



Characteristics of outbreaks of gastrointestinal illness in institutions reported to NSW in 2024

Setting	No of Outbreaks (n)	Staff Affected (n: attack rate)	Non-staff affected (n: attack rate)	Avg duration of outbreak (days)	Outbreaks with stool collected (n: %)	Outbreaks with pathogen found (n: pathogen)
Aged Care	269	1042: 4.0%	3837: 17.7%	6	197: 73.2%	98: Norovirus 17: Other 7: Rotavirus
Child care	1533	3577: 11.3%	14178: 9.3%	7	145: 9.5%	35: Norovirus 39: Rotavirus
Hospital	51	64: 14.4%	216: 33.3%	6	41: 80.4%	40: Norovirus 5: Rotavirus
Other*	29	63: 11.5%	155: 14.3%	5	11: 37.9%	6: Norovirus 1: Campy
TOTAL	1882	4746: 8.1%	18386: 10.4%	7	394: 20.9%	179: Norovirus 51: Rotavirus

\*Military institution, Function Centre, Police, School, Disability support & other educational or residential care facilities

# METHODS

The data in this report are derived from disease surveillance and outbreak investigation activities undertaken by staff from NSW public health units, One Health Branch (OHB), Health Protection NSW, OzFoodNet (OFN) staff and the NSW Food Authority (NSWFA).

The management of suspected foodborne disease outbreaks in NSW is the shared responsibility of NSW public health units, Health Protection NSW, NSW OFN sites and the NSW Food Authority. NSW Health is responsible for the human health and epidemiological aspects of outbreak investigations and the NSW Food Authority is responsible for the environmental investigation, food testing and food trace-back components of an outbreak investigation. A Memorandum of Understanding between NSW Health and the NSW Food Authority outlines the roles and responsibilities of each agency, and the Investigation of Foodborne Illness Response Protocol describes the interaction and communication between NSW Health and the NSW Food Authority in relation to foodborne illness surveillance and investigations of food-related outbreaks and complaints in NSW.

## Notifiable enteric diseases in NSW

Under the Public Health Act 2010 (NSW), the following enteric diseases and conditions are notifiable in NSW: botulism, *Campylobacter*, cholera, cryptosporidiosis, giardiasis, hepatitis A, haemolytic uraemic syndrome (HUS), hepatitis E, listeriosis, paratyphoid, rotavirus, Shiga toxin producing *Escherichia coli* (STEC/VTEC) infections, shigellosis, salmonellosis, typhoid, institutional gastroenteritis in

two or more people, and foodborne disease in two or more people. Individual cases of other enteric diseases such as norovirus infection are not notifiable in NSW.

NSW laboratories report cases of notifiable enteric diseases to public health units (PHUs). Outbreaks of foodborne or suspected foodborne illness and institutional gastroenteritis are reportable by doctors, hospitals, child care centres and aged care facilities. Notifiable disease data are routinely entered by public health unit staff into the NSW Notifiable Conditions Information Management System (NCIMS).

## Data sources for this report

Data in this report has been extracted from the NSW Notifiable Conditions Information Management System, NSW OFN Outbreak Database and the NSW Gastroenteritis in Institutions Database, all held by Health Protection NSW.

## Methods

We analysed data for the following notifiable enteric pathogens; *Salmonella*<sup>i</sup>, *Salmonella* Enteritidis, *Salmonella* Typhi & Paratyphi, *Listeria monocytogenes*, *Shigella*, HUS and STEC, *Cryptosporidium*, *Giardia*, *Campylobacter*, rotavirus, cholera and hepatitis A & E viruses. There were no cases of botulism in 2024.

On 10 March 2025, 2024 data was extracted from NCIMS using Secure Analytics for Population Health Research and Intelligence (SAPHaRI)<sup>ii</sup> using the

<sup>i</sup> We define *Salmonella* as all *Salmonella* serovars, excluding *S. Typhi* and *S. Paratyphi*, in accordance with the definition of *Salmonella* endorsed by the Communicable Diseases Network of Australia (CDNA).

<sup>ii</sup> NSW Health Notifiable Conditions Information Management System (NCIMS), Communicable Diseases Branch and Centre for Epidemiology and Evidence, NSW Ministry of Health.

## Methods continued

date of onset of disease. The counts of each notifiable enteric disease<sup>iii</sup> for 2024 were compared with the average annual count for the years 2019 to 2023. The NSW estimated resident population for 30 June of each year from 2019-2024 was used to calculate crude incidence rates for each disease.<sup>iv</sup>

Individual factors such as place of acquisition, possible risk exposures, hospitalisation, and if the case died due to the infection are reported for cases where that information has been collected by the public health unit. "Unknown" place of acquisition usually indicates that the person was in more than one place during their exposure period, so that the place of acquisition cannot be definitively assigned. Possible risk factors are those reported by the case on questioning and cannot be attributed as the source unless further investigation is undertaken.

Laboratory testing data from 15 public and private laboratories is available for *Cryptosporidium*, *Giardia*, *Salmonella* and *Shigella*. Care should be taken in interpreting this data as there is some duplication of the number of tests undertaken where more than one method of testing is used. Faecal specimens are tested for both *Cryptosporidium* and *Giardia* by nucleic acid amplification test (NAAT). The laboratory testing data does not provide any information on whether there are repeat tests performed on the same individual.

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<sup>iii</sup> Notifiable enteric diseases in NSW include cryptosporidiosis, giardiasis, haemolytic uraemic syndrome, rotavirus, salmonellosis (including paratyphoid), shigellosis, listeriosis, hepatitis A, hepatitis E, typhoid and Shiga toxin-producing *Escherichia coli* (STEC) infection

Notification data for *Campylobacter*, *Cryptosporidium*, *Giardia*, *Salmonella* and *Shigella* were analysed for the period between 1 January 2015 and 31 December 2024, based on the specimen date. The ratio of positive notifications was calculated by dividing the overall positive results notified to NSW Health by all laboratories, by the total number of tests performed as reported from the participating laboratories. The overall positive results included in the analysis are for individual people notified with each condition reported from all laboratories. However, the testing data are for individual tests reported from participating laboratories and may include multiple specimens per individual. As such, the ratio of positive notifications per test may be an underestimate of the per cent of people tested that are positive for the condition.

Data for outbreaks of suspected point-source foodborne enteric diseases were collected from the NSW Food Authority and the Public Health Units and entered into a national REDCap database. Data for enteric disease outbreaks in institutions with suspected person-to-person transmission of a viral pathogen were entered directly into NCIMS by public health units. Data from these registers are analysed using MS Excel at Health Protection NSW.

<sup>iv</sup> Australian Bureau of Statistics. Estimated resident populations based on 2011 Census counts and mid-series experimental population projections.

# ACKNOWLEDGEMENTS

The NSW OzFoodNet Annual Report 2024 was possible due to the collaborative work of many people, some mentioned by name here, who contribute in varying capacities to the management of communicable enteric diseases in NSW:

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- Enteric reference laboratory and genomics laboratory, ICPMR team Professor Vitali Sintchenko, Dr Qinning Wang, Basel Suliman, Dr Grace Blackwell, Dr Anne Watt
- HAPS, IMVS, MDU and other public and private laboratory staff in New South Wales, Queensland, Victoria and South Australia
- Food and Waterborne Diseases team, One Health Branch, Health Protection, NSW
- Hunter New England OzFoodNet team and Dr Tony Merritt, Dr Craig Dalton and Dr David Durrheim, Hunter New England Local Health District
- Keira Glasgow, Director, One Health Branch, Health Protection NSW
- Dr Christine Selvey, NSW CDNA rep and Director, Communicable Diseases Branch, Health Protection NSW
- Dr Jeremy McAnulty, Executive Director, Health Protection NSW
- Clinicians across NSW who assist in the diagnosis and follow up enteric disease
- The New South Wales Food Authority (now part of NSW Department of Primary Industries and Regional Development) for management of environmental aspects of outbreak investigations
- Local Councils in NSW that contribute to enteric disease investigations
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- All OzFoodNet epidemiologists and collaborators
- Partners in NSW Department of Primary Industries and Regional Development and associated stakeholders