

OzFoodNet

Enhancing Foodborne Disease Surveillance Across Australia

NSW FOURTH QUARTER REPORT October – December 2020



NSW OzFoodNet team
Communicable Diseases Branch
HEALTH PROTECTION NSW

Locked Mail Bag 961
North Sydney NSW 2059
Phone: 02 93919236/93919561
NSWH-enteric@health.nsw.gov.au

SHPN: (HP NSW) 210510 NSW
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Highlights Quarter 4, 2020

This report describes data for enteric conditions for quarter 4, 2020. The report is divided into four sections: enteric notifiable diseases highlights, *Salmonella* spotlight, foodborne outbreaks and gastroenteritis outbreaks in institutions. Data sources and analytical methods are described at the end of the report. Every endeavour has been made to ensure that the information provided in this document is accurate at the time of writing. However, infectious disease notification data are continuously updated and subject to change.

During the COVID-19 response in 2020 the control guidelines for public health unit management of some enteric conditions were temporarily amended. Therefore some information will not be available during this reporting period.

A total of 4140 enteric conditions were notified to NSW Public Health Units in quarter 4, 2020. Notifications of many enteric diseases decreased during this quarter compared to the 5-year quarterly mean for the same time period. The decrease is largely attributed to the effects of COVID-19 social distancing measures and hygiene measures (such as hand washing) on limiting the spread of other communicable diseases, as well as the reduction in international travel owing to Australian border closures.

The most notable increase above average levels in this quarter was for notifications of **shiga toxin-producing E.coli** (STEC) (123% increase). The increase was mainly observed in areas serviced by Health Pathology NSW - Pathology North, which introduced a more sensitive test for the pathogen, which had been rolled out in greater Sydney areas over the past 4 years.

Decreases were noted in notifications of cryptosporidiosis, giardiasis, rotavirus and HUS. There were no notifications of hepatitis A, hepatitis E, paratyphoid or cholera in this quarter. Two cases (81% below the quarterly average) of typhoid fever were notified, one of which was thought to be a latent infection acquired overseas prior to the introduction of international travel restrictions and the other was a secondary case acquired locally, infected by the person with latent infection.

Notifications of **shigellosis** were also well below above average (65% less than the five year average for the same period). Of the 46 shigellosis cases notified in quarter 4, 2020, 80% (37) were confirmed cases (*Shigella* isolated on culture) and 20% were probable cases (detection of *Shigella* on nucleic acid testing only without isolation of *Shigella* species).

A moderate increase in **listeriosis** was noted this quarter, with 8 notified cases (33% above the 5 year average for the same quarter). Routine genomic sequencing of the isolates revealed there was no link between the cases.

One case of **botulism** was reported this quarter. The case was a 7 week old infant, for whom no risk factors were identified on interview. The child's condition improved without the need for antitoxin.

Salmonellosis notifications were also low in quarter 4, 2020, down 12% compared to the five-year quarterly average for the same period. *Salmonella* Typhimurium cases (n=221) were down 23% compared to the 5 year quarterly average of 287 cases. *Salmonella* Saintpaul was the second highest notified serotype in quarter 4, 2020 (n=91, up 194%). The increase in *S. Saintpaul* notifications commenced in mid-December and by the end of the quarter was seen in multiple states and territories. A multi-jurisdictional outbreak investigation was initiated in January 2021 and the investigation will be described in the Quarter 1 2021 report.

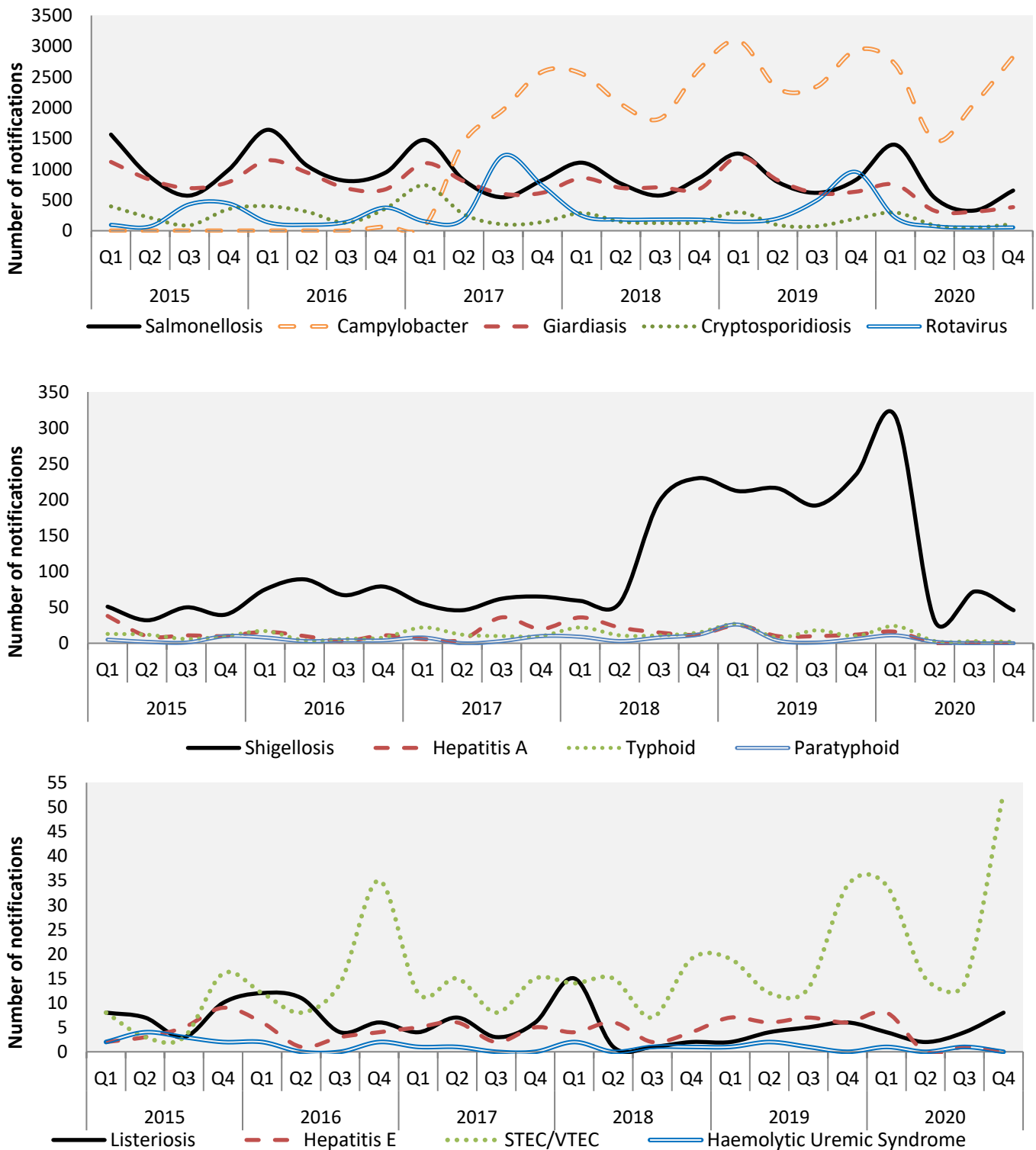
Long term trends are not available for campylobacteriosis, which became notifiable on 7 April 2017, however notifications received in this quarter (n=2829) are slightly below the same quarter in the previous year (n=2932). The long term trends for 13 notifiable enteric conditions in NSW are shown in Figures 1-3.

There were 563 outbreaks of gastroenteritis in institutions reported in quarter 4 2020, an increase of 206% compared to the previous five year average. The increase was due to a large number of outbreaks in childcare centres, at 288% above average for the quarter. A media alert was issued in [November 2020](#) reminding parents and carers of young children to maintain hand hygiene and to keep sick children home from childcare.

Five **foodborne or suspected foodborne outbreaks** were reported affecting 15 residents of NSW, of whom one was hospitalised (Table 3). A causative agent was linked to a food source in three outbreaks: scombroid poisoning linked to consumption of kingfish steaks, *Campylobacter* linked to consumption of chicken liver pate and *Salmonella* Senftenberg linked to takeaway kebabs. In two other outbreaks the pathogen was determined (*Salmonella* and *Campylobacter* in one each) but the food cause could not be determined.

Highlights continued

Figures 1-3. Number of notifications by year, quarter and disease, Jan 2015 to Dec 2020^{1,2}



¹ Campylobacteriosis became notifiable on 7 April 2017. Data is likely to be incomplete for this quarterly report due to the methods of notification from laboratories.

² The shigellosis case definition changed on 1 July 2018 to include probable cases (PCR positive only). The trend number of confirmed cases only, which is more comparable to previous counts of shigellosis prior to the case definition change, is provided by the black dotted line.

Table 1. Notifiable enteric conditions, Quarter 4 2020, by local health district

Notifiable Disease		CC	FW	HNE	IS	M	MNC	NBM	NNSW	NS	SES	SNSW	SWS	Syd	WNSW	WS	NSW
Botulism	Notified, Q4 2020	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5 y Q4 mean, 2015-2019	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Campylobacteriosis ²	Notified, Q4 2020	98	10	200	148	177	69	178	122	406	348	165	180	154	185	389	2829
	5 y Q4 mean, 2015-2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptosporidiosis	Notified, Q4 2020	2	0	9	7	10	2	12	3	15	9	6	7	4	15	8	109
	5 y Q4 mean, 2015-2019	7.4	0.6	52.2	16.6	16.2	5.2	9.6	13.8	31.2	21.0	7.0	13.0	9.6	21.6	12.8	237.8
Giardiasis	Notified, Q4 2020	25	1	37	18	10	10	18	40	61	32	7	34	26	18	47	384
	5 y Q4 mean, 2015-2019	29.2	1.2	81.6	35.8	36.4	20.8	29.4	41.0	99.8	102.4	10.8	52.2	56.4	26.6	56.4	680.0
Hepatitis A	Notified, Q4 2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 y Q4 mean, 2015-2019	0.6	0.0	0.4	0.4	0.0	0.0	0.2	0.0	1.4	1.2	0.0	1.8	1.4	0.0	5.6	13.0
Hepatitis E	Notified, Q4 2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 y Q4 mean, 2015-2019	0.4	0.0	0.0	0.0	0.0	0.2	0.0	0.2	1.0	0.2	0.0	0.6	0.4	0.0	0.8	3.8
Listeriosis	Notified, Q4 2020	0	0	1	2	0	0	0	0	1	1	0	1	1	0	1	8
	5 y Q4 mean, 2015-2019	0.2	0.0	0.6	0.2	0.0	0.6	0.2	0.2	0.6	1.0	0.2	0.4	0.8	0.0	0.8	6.0
Paratyphoid	Notified, Q4 2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 y Q4 mean, 2015-2019	0.4	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.6	1.4	0.0	0.4	0.4	0.0	4.6	8.4
Rotavirus	Notified, Q4 2020	1	0	3	1	8	0	5	2	2	3	3	16	4	0	4	54
	5 y Q4 mean, 2015-2019	15.8	2.4	47.4	15.0	19.6	3.2	25.8	21.2	80.4	61.2	7.0	83.2	49.2	0.0	84.6	539.0
Salmonellosis ³	Notified, Q4 2020	31	4	98	42	26	24	31	59	59	55	18	75	32	0	65	654
	5 y Q4 mean, 2015-2019	41.8	5.0	106.0	43.6	40.0	34.6	37.8	63.6	109.2	105.6	23.0	87.4	74.0	0.0	95.2	890.6
Shigellosis	Notified, Q4 2020	1	0	0	2	0	0	0	0	3	19	1	2	7	0	10	46
	5 y Q4 mean, 2015-2019	2.8	0.0	7.6	4.6	2.4	1.8	2.8	7.0	16.6	31.4	1.4	10.6	25.2	0.0	13.6	129.8
STEC	Notified, Q4 2020	1	0	16	0	6	1	5	0	3	0	5	1	0	0	7	53
	5 y Q4 mean, 2015-2019	0.2	0.0	2.6	0.6	4.0	0.2	0.4	0.6	0.4	1.8	3.4	0.4	0.2	0.0	4.4	23.8
HUS	Notified, Q4 2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 y Q4 mean, 2015-2019	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.4	1.0
Typhoid	Notified, Q4 2020	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
	5 y Q4 mean, 2015-2019	0.0	0.0	0.2	0.2	0.0	0.0	0.2	0.2	0.6	1.4	0.0	2.6	1.6	0.0	3.2	10.6
Foodborne ¹ Outbreaks	Notified, Q4 2020	0	0	0	0	0	0	0	0	1	3	0	0	1	1	1	7
	People affected	0	0	0	0	0	0	0	0	2	17	0	0	2	4	3	15

Legend: Blue shading refers to a 100% or greater increase in the number of notifications compared to the five year quarterly average. Notes: ¹ Total NSW numbers may differ to the sum of cases by LHD due to some cases not being attributed to an LHD and/or single outbreaks with cases across multiple LHDs; ² Campylobacteriosis became notifiable on 7 April 2017, 5 year quarterly average data not available (NA); ³ Data is likely to be incomplete for this quarterly report due to changes in the methods of notification from laboratories; ⁴ Case definition changed on 1 July 2018 to include 'probable' cases; ⁵ Foodborne or potentially foodborne outbreaks.

Table 2. Notifiable enteric conditions, quarter 4 2020, by overseas or local acquisition

Notifiable Disease	Place infection acquired	NSW, Q4 2020	5 yr Q4 mean 2015-2019	2020 % change
Enteritidis	Locally acquired	7	18.8	-63%
	Overseas acquired	0	48.2	-100%
	Unknown	1	2.6	-62%
Hepatitis A	Locally acquired	0	3.4	-100%
	Overseas acquired	0	9.4	-100%
	Unknown	0	0.2	-100%
Hepatitis E	Locally acquired	0	1.6	-100%
	Overseas acquired	0	3.4	-100%
	Unknown	0	0.6	-100%
Paratyphi	Locally acquired	0	0.2	0%
	Overseas acquired	0	8.0	-100%
	Unknown	0	0.2	0%
STEC/VTEC	Locally acquired	41	18.0	128%
	Overseas acquired	0	1.8	-100%
	Unknown	12	4.0	200%
Shigellosis ^a	Locally acquired	39	44.2	-12%
	Overseas acquired	0	58.2	-100%
	Unknown	7	27.4	-74%
Typhoid	Locally acquired	1	0.2	400%
	Overseas acquired	1	10.2	-90%
	Unknown	0	0.2	0%

Legend: Blue shading refers to a 100% or greater increase in the number of notifications compared to the five year quarterly average.

^a The Shigellosis case definition changed on 1 July 2018 to include probable cases (PCR positive only). As per the [NSW Shigellosis Control Guidelines for Public Health Units](#), place of infection is only investigated for probable shigellosis cases if (a) they meet criteria for "considered to be at greater risk of ongoing transmission", or (b) they subsequently become a confirmed case.

Foodborne and suspected foodborne outbreaks

NSW Health investigates all potential foodborne disease outbreaks. Gastroenteritis and foodborne outbreaks are identified via a range of mechanisms, including reports from the public, general practitioners, institutions such as residential care facilities and child care centres, emergency departments, analysis of surveillance data, and reports to the NSW Food Authority's (NSWFA) Consumer Complaints Line. The most notable outbreaks are described on pages 7-8.

Table 3. Foodborne and potentially foodborne disease outbreaks investigated in NSW, quarter 4 2020

PHU ID	Month ¹	Setting	Agent responsible	No. ill	Lab confirmed	No. Hospitalised	Evidence*	Responsible vehicles	Contributing factors
SES202004	October	Takeaway	<i>Salmonella</i> Senftenberg	5	4	0	AM	Cooked chicken kebab	Inadequate cleaning of equipment
SYD202003	October	Restaurant	<i>Campylobacter</i>	2	1	Unknown	D, M, A	Unknown	Cross contamination from raw ingredients
SES68561	October	Restaurant	<i>Campylobacter</i>	2	1	1	D, A	Chicken liver pate	Inadequate cooking
NS68756	November	Restaurant	Scombroid	2	0	0	D	Kingfish	Toxic substance or part of tissue
WNSW202001	December	Aged Care	<i>Salmonella</i> (NFS)	4	1	0	D, M	Unknown	Unknown

*Evidence: D=Descriptive evidence implicating the suspected vehicle or suggesting foodborne transmission; A=Analytical association between illness and food; M=Microbiological confirmation in the suspected vehicle and cases; AM=Analytical and microbiological evidence.

Notable Foodborne Outbreaks

Key points

- Temperature control is very important to prevent harmful bacteria from growing in food. Cold food should be maintained at a temperature of 5°C or below, and hot food at 60°C or above.
- Histamine in fish is not destroyed by cooking, therefore the best way to keep histamine at a minimum is to ensure proper temperature control from catch to table. This can be achieved by purchasing from reputable suppliers who store the fish on ice or under refrigeration.
- *Campylobacter* is highly prevalent in poultry worldwide. As a result, poultry meat and liver should always be cooked thoroughly until well done, allowing the heat to penetrate right through to the centre. No pink should be visible, and juices should run clear after cooking.

Salmonella Senftenberg linked to a kebab takeaway venue (SES202004)

An investigation into an increase in *Salmonella* Senftenberg notifications commenced in August 2020. Fourteen cases were notified between 1 July to 6 October 2020, compared to 2 notifications of this serotype for the same period in 2019. The cases lived in metropolitan Sydney. The median age was 48 years old (range 1 years old – 83 years old), 42% were male.

Eight (57%) cases were able to be contacted for interview. Of these, four reported consuming a takeaway kebab from the implicated kebab venue; located in a shopping centre food court. Two cases reported possibly eating a kebab during the exposure period, however could not recall where they may have purchased from. The remaining two cases did not recall eating at the venue nor any kebabs specifically, however reported routinely shopping at this same centre.

There was also one probable case linked to this cluster in a relative of a case whom also reported eating a kebab from the same venue, and subsequently developed gastroenteritis symptoms, but did not get tested.

The NSW Food Authority conducted an inspection of the venue which revealed minor issues with sanitisation and hygiene. Food samples and environmental swabs were collected for testing, in which multiple samples were positive for *Salmonella* Senftenberg, including a sample of cooked chicken, the wash sink, cool room floor, front service area floor and back kitchen floor. The facility was prohibited from operating until they improved the cleanliness of the venue.

Scombroid poisoning linked to kingfish consumption at a restaurant (NS68756)

Two cases of scombroid poisoning linked to a restaurant venue in Northern Sydney were investigated in November. The outbreak was notified to the public health unit by a medical registrar, following the two presentations to the Emergency Department.

The cases were from the same dining group and developed headache, itchiness, heart palpitations, hyperventilation, breathing difficulties, facial flushing, dry mouth, and erythema twenty minutes after consuming a kingfish dish at a restaurant. They reported their symptoms to the waitress, were provided with an oral antihistamine, and were later transported to hospital via ambulance. Both cases also required admission to hospital.

The NSW Food Authority followed-up with the venue, however all implicated product had been consumed and so no samples were available for analysis. No issues were identified in temperature control at the restaurant.

Campylobacteriosis associated with a restaurant in Eastern Sydney (SES68561)

An outbreak of campylobacteriosis was investigated by the local public health unit in October following a food complaint submitted to the NSW Food Authority.

Two cases had developed onset of symptoms including vomiting, fever, bloody diarrhoea and vomiting 72 hours after eating a shared meal at a Sydney restaurant. The cases did not share any other common exposures during the week before illness. They did not live in the same household and no one in their household reported a similar illness. One case was admitted to hospital.

The cases had shared meal included a poached chicken salad, chicken liver pate and baked potatoes with chilli mayonnaise. The diners reported that the chicken liver pate was pink when they consumed it and parts of the pate were warm.

The NSW Food Authority was notified. The local council conducted an inspection of the venue, where cleaning, hygiene measures and food handling

techniques were reviewed. No issues were identified. The assessment concluded that if the restaurant was the likely source of illness, which could not be proven, the issue was isolated to one batch of pate. The venue was nevertheless provided with general education regarding the heat requirements of cooking pate to prevent any further issues.

Institutional gastrointestinal outbreaks

From 1 October 2020 to 31 December 2020, a total of 563 outbreaks of suspected viral gastrointestinal illness in institutions were reported in NSW affecting at least 8788 people (Table 4). This represents an increase of 206% compared to the average number of outbreaks reported during the same quarter from 2015 to 2019 (n=184), and an increase of 222% compared to the mean number of people affected as a result of the gastroenteritis outbreaks during the same quarter from 2015 to 2019 (n=2730).

Of the 563 outbreaks, 505 (90%) occurred in childcare centres, 41 (7%) in aged care facilities, 7 (1%) in hospitals and ten (2%) in other facilities (Table 4). The number of outbreaks during quarter 4 was higher than the five-year quarterly average for childcare centres and hospitals; outbreaks in childcare centres were 288% above average, and outbreaks in hospitals were 17% above average. However, outbreaks in aged care facilities 15% lower than the five year quarterly average (Figure 4).

Several public health actions were taken in response to the increase in childcare centre outbreaks, including the

distribution of a media release and an alert to childcare centres which provided advice on measures to decrease the risk of spread within institutions.

Overall, 14% of staff members and 13% of non-staff became sick during gastroenteritis outbreaks in quarter 4 (Table 5). The highest attack rate for gastrointestinal disease for staff was in childcare centres and other facilities (both 13%) and for non-staff was in hospitals (20%). Outbreaks lasted eleven days on average (Table 5).

One or more stool samples were collected in 85 (15%) of the outbreaks. Norovirus was identified in 31 (36%) of these outbreaks and rotavirus was identified in 2 (2%) of these outbreaks. The results of the other samples were negative, or not reported (Table 5).

Public health units monitor gastroenteritis outbreaks in institutions and provide advice on control measures.

Figure 4. Number of reported outbreaks of gastrointestinal illness in institutions, quarter 4 2020 compared to the 5 year quarterly average, by month and facility type

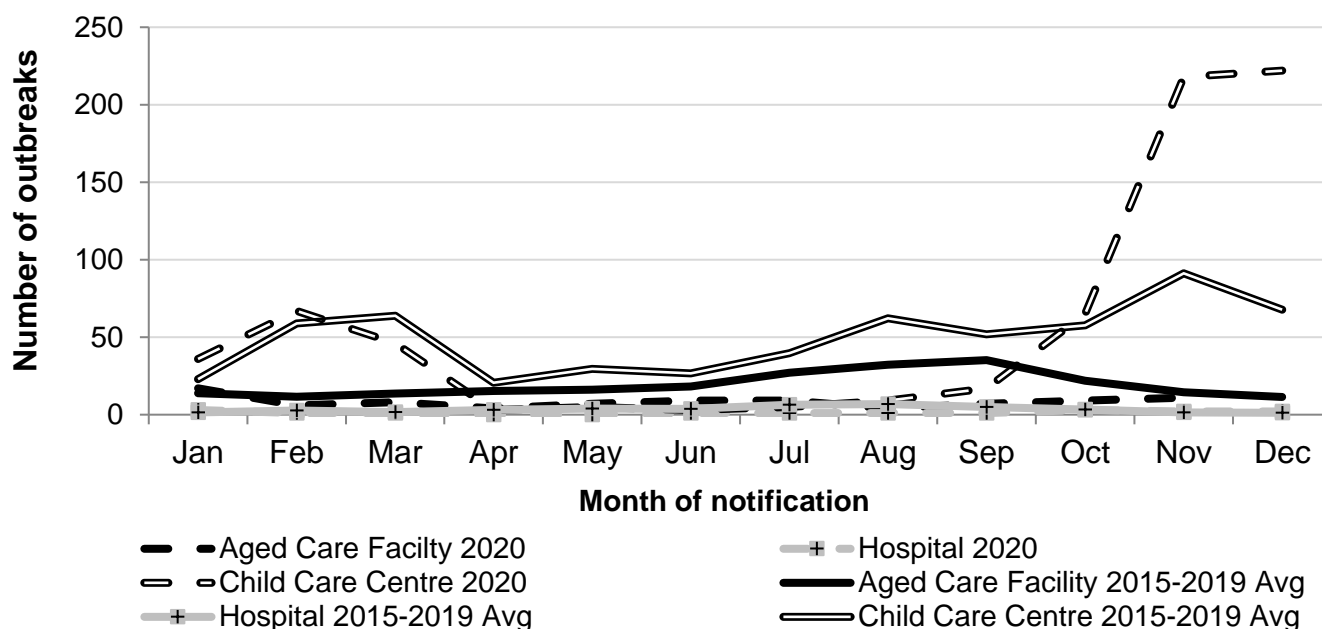


Table 4. Outbreaks of gastroenteritis in institutions reported in NSW, quarter 4 2020, by local health district

Facility type	Q4 2020	HNE	IS	M	MNC	NBM	NNSW	NS	SES	SNSW	SWS	SYD	WNSW	WS	FW	CC	NSW
ACF	No. of outbreaks	10	1	4	0	0	2	4	3	5	2	4	1	4	1	0	41
	Staff affected	20	2	2	0	0	23	6	7	17	0	0	0	5	3	0	85
	Non-staff affectedd	90	7	17	0	0	37	22	31	23	9	15	4	21	5	0	281
CCC	No. of outbreaks	125	18	41	7	55	4	59	41	18	34	35	8	49	0	11	505
	Staff affected	505	81	135	11	233	26	201	99	86	95	62	25	128	0	32	1719
	Non-staff affectedd	1744	236	536	52	786	69	708	553	331	297	378	96	536	0	148	6470
Hospital	No. of outbreaks	1	0	0	1	0	0	0	2	1	0	0	0	1	0	0	7
	Staff affected	3	0	0	0	0	0	0	1	13	0	0	0	3	0	0	20
	Non-staff affectedd	10	0	0	5	0	0	0	18	5	0	0	0	5	0	0	43
Other ¹	No. of outbreaks	0	1	1	0	3	0	0	1	0	1	1	1	1	0	0	10
	Staff affected	0	10	7	0	4	0	0	3	0	2	0	9	3	0	0	38
	Non-staff affectedd	0	29	2	0	50	0	0	13	0	9	2	21	6	0	0	132

¹ Other= disability care centre, school, family and community services facility

Table 5. Outbreaks of gastroenteritis in institutions reported in NSW, quarter 4 2020, by facility type

Setting	No of Outbreaks (n)	Staff Affected (n: attack rate)	Non-staff affected (n: attack rate)	Average duration of outbreak (days)	Outbreaks with stool collected (n: %)	Outbreaks with pathogen found (n: pathogen found)
ACF	41	85: 2%	281: 9%	7	28: 68%	6: norovirus, 2: rotavirus
CCC	505	1719: 19%	6470: 13%	11	48: 10%	21: norovirus
Hospital	7	20: 5%	43: 20%	6	7: 100%	3: norovirus
Other ¹	10	38: 19%	132: 9%	11	2: 20%	1: norovirus
Total	563	1862: 14%	6926: 13%	11	85: 15%	31: norovirus, 2: rotavirus

¹ Other= disability care centre, school, family and community services facility

METHODS

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

Notifiable enteric diseases in NSW

Under the Public Health Act 2010 (NSW), the following enteric diseases and conditions are notifiable in NSW: botulism, campylobacteriosis, 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.

Data for outbreaks of suspected point-source foodborne enteric diseases were collected from the

NSW Food Authority Notification of Foodborne Illness Outbreak Form, the Public Health Unit Environmental Request Form and the OFN Outbreak Summary Form and entered into an MS Access 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.

Methods

Data for all notifiable enteric diseases and conditions was extracted from NCIMS using Secure Analytics for Population Health Research and Intelligence (SAPHARI)ⁱ using the calculated date of onset of disease. This is a composite field of the true date of onset provided by the notifying doctor or obtained during case follow-up, the date of specimen collection for laboratory notified cases, the date of notification by the doctor or laboratory, or the date of receipt of notification, whichever is earliest.

The counts of each notifiable enteric disease for Quarter 4 2020 were compared with the average annual count for the same quarter for the years 2015 to 2019 using SAS Enterprise Guide and MS Excel at Health Protection NSW.

Individual factors such as possible risk exposures 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.

ⁱ NSW Health Notifiable Conditions Information Management System (NCIMS), Communicable Diseases Branch and Centre for Epidemiology and Evidence, NSW Ministry of Health.

GLOSSARY

ACF	Aged-care facility	NBM	Nepean Blue Mountains LHD
CC	Central Coast LHD	NFS	Not further specified
CCC	Childcare centre	NNSW	Northern NSW LHD
FW	Far West LHD	NS	Northern Sydney LHD
HNE	Hunter New England LHD	NSW	New South Wales
HUS	haemolytic uraemic syndrome	NSWFA	NSW Food Authority
ICPMR	Institute of Clinical Pathology and Medical Research	Q	Quarter
IS	Illawarra Shoalhaven LHD	SES	South Eastern Sydney LHD
LHD	Local Health Districts	SNP	single nucleotide polymorphisms
M	Murrumbidgee LHD	SNSW	Southern NSW LHD
MLVA	Multi-locus variable number tandem repeat analysis	STEC	Shiga toxin-producing <i>Escherichia Coli</i>
MLST	Multi-locus sequence typing	SWS	South Western Sydney LHD
MNC	Mid North Coast LHD	SYD	Sydney LHD
N	Number	WNSW	Western NSW LHD
NA	Not available	WS	Western Sydney LHD
		Yr	Year