Gastroenteric, Zoonotic and Vectorborne Diseases in Ireland: Quarterly report

Quarter 2, 2024

August 2024

Acknowledgements

Sincere thanks are extended to all those who participated in the collection of the data used in this report. This includes the notifying physicians, staff in public health departments, epidemiologists, surveillance staff, microbiologists, nurses, laboratory staff and administrative staff.

Additional thanks to our colleagues in the Public Health Laboratory (PHL) in Cherry Orchard, the National Salmonella, Shigella and Listeria Reference Laboratory (NSSLRL) and the National Virus Reference Laboratory (NVRL) for ongoing collaboration, support and advice in the surveillance of gastroenteric, zoonotic and vectorborne diseases in Ireland.

These slides were prepared by Niamh Lynch, Helen Byrne, Anthony Ortiz, Aoife Colgan, Patricia Garvey and Paul McKeown from the Gastroenteric, Zoonotic and Vectorborne Diseases team in HPSC.

Preventing Gastroenteritis and other Zoonotic diseases

See HPSC website for information on prevention of gastroenteritis: Gastroenteritis Fact Sheet

- Ensure that you regularly wash your hands with soap under warm running water and especially:
  - After using or cleaning the toilet
  - After attending to anyone with diarrhoea or vomiting or touching anything contaminated by diarrhoea or vomiting
  - After handling household and garden waste or rubbish (including nappies)
  - After touching or handling pets or other animals
  - On returning to the house having been working in the garden or on the farm
  - Before handling, preparing, serving, or consuming food or drink
- Cook meats and eggs thoroughly before consumption.
- Clean kitchen work surfaces and utensils with soap and water immediately after they have been in contact with raw meat.
- Wash fruit and vegetables thoroughly in clean water, especially those that will not be cooked further.

See HPSC website for travel advice for international travellers: Travel Health Fact Sheet

- When on holiday, you should take extra travel precautions with your and your family's health and ensure your travel vaccinations are up to date.

If anyone in your house is suffering from vomiting or diarrhoea, the toilet and other areas should be cleaned and disinfected after use. Anyone who is ill with diarrhoea or vomiting should stay off work/school until they have been symptom free for 48 hours.

Preventing Vectorborne diseases

See HPSC website for information on prevention of mosquito-borne diseases: Protect yourself against mosquitoes

- The best protection against mosquito-borne diseases is to protect yourself against their bites
- Avoid areas where mosquitoes live and breed, such as near standing or slow-moving water including rainwater collections, ponds, lakes and marshes
- Protect your skin from mosquito bites by wearing long sleeves, long trousers, closed shoes and hats
- Use bug spray/insect repellent and read the instructions on the label carefully before use. Your local pharmacist can advise you on the best product for your trip.
- To prevent malaria there are effective prophylactic medications that should be taken as prescribed

See HPSC website for information on prevention of tick-borne diseases: Prevent tick bites

- Protect yourself against bites as above
- Check skin, hair and warm skin folds (especially the neck and scalp of children) for ticks, after a day out
- Check for ticks and remove any from your pets/clothing/outdoor gear
- Remove any ticks and consult with a GP if symptoms develop

Additional Resources

Additional information on minimising the risk of foodborne illness:

- www.safefood.net/food-safety
- www.fsai.ie/consumer-advice/food-safety-and-hygiene

Additional information on minimising the risk of zoonotic infection:

- www.hpsc.ie/a-z/zoonotic/petsandotheranimals/

Additional information on minimising the risk of travel-associated infection:

- www.ireland.ie/en/dfa/overseas-travel/advice/
- www.who.int/travel-advice
- www.hse.ie/eng/health/immunisation/pubinfo/travelvacc/

Additional information on minimising the risk associated with sexual transmission of shigellosis:

- www.sexualwellbeing.ie/sexual-health/sexually-transmitted-infections/types-of-stis/shigella-in-gbmsm.html
- man2man.ie/shigella/

See Department of Foreign Affairs website for information on Zika virus in Thailand:

Since 2023, Thai authorities have reported a 300% increase in cases of Zika virus disease, with more than 800 cases identified last year. Zika virus is a mosquito-borne disease and can have serious health impacts on babies if contracted during pregnancy.

Gastroenteric, Zoonotic and Vectorborne Diseases: Key Points Q2 2024

- **Norovirus Infection:**
  - Notifications of Norovirus infection remained unseasonably high during Q2 2024
  - This increase was also reported in other European countries and the US
  - A shift in the predominant norovirus genotype from GII.4 to GII.17 or a general increase in genotype GII.17 was observed in many countries, including Ireland
  - Further information is available here: www.hpsc.ie/news/title-24410-en.html and www.ecdc.europa.eu/Communicable-disease-threats-report-week-23-2024.pdf

- **Dengue Fever:**
  - Notifications of Dengue Fever in Ireland continued to increase during Q2 2024, with the majority of cases reporting travel to the Americas
  - This is likely connected to an ongoing outbreak of Dengue Fever that started in the second half of 2023 in that region
  - Further information on the increased risk of acquiring dengue fever while travelling to the Americas is available here: https://ndsc.newsweaver.ie/4otaa688p3/181olthayhq?lang=en&a=1&p=64301224&t=31302969

- Notifications of **Campylobacteriosis**, **Cryptosporidiosis**, **Giardiasis**, **Rotavirus infection** and **Salmonellosis** also increased, while notifications of other GZV diseases decreased or remained largely unchanged in Q2 2024 compared to Q2 2023

- **Oropouche virus disease:**
  - A vectorborne disease, caused by the Oropouche virus (OROV), and frequently reported in the Americas but not notifiable in Ireland
  - Imported cases of OROV disease were reported for the first time in the EU (Spain, Italy and Germany) in Q2 2024
  - No cases have been reported in Ireland to date; HPSC is closely monitoring the situation
  - Fatal outcomes of OROV disease are rare for most people, but recent reports of possible mother-to-child transmission and fetopathy are currently under investigation
  - ECDC have recently published a threat assessment, available here: www.ecdc.europa.eu/threat-assessment-brief-oropouche-virus-disease

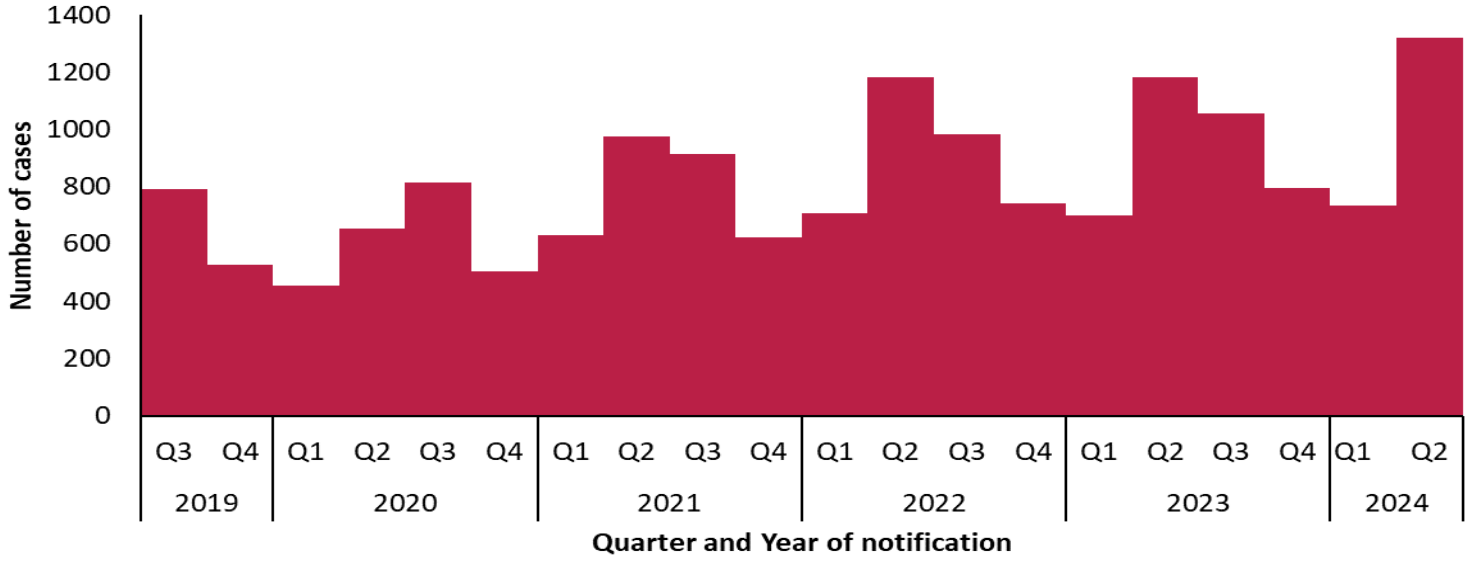
GZV diseases in Ireland summary, Q2 2024

Disease category	Disease	Q2 2023	Q2 2024	Increase/ Decrease	% Change
Bacterial IID infections	Campylobacter infection	1057	1320	263	25%
	Cholera	0	0	0	0%
	Listeriosis	7	7	0	0%
	Paratyphoid	4	1	-3	-75%
	Salmonellosis	73	94	21	29%
	Shigellosis	43	40	-3	-7%
	Typhoid	2	4	2	100%
	Verotoxigenic Escherichia coli infection	246	262	16	7%
	Yersiniosis	9	15	6	67%
Viral IID infections	Noroviral infection	281	559	278	99%
	Rotavirus infection	254	335	81	32%
Foodborne Hepatitis	Hepatitis A	11	16	5	45%
	Hepatitis E	14	6	-8	-57%
Parasitic IID infections	Cryptosporidiosis	278	349	71	26%
	Giardiasis	68	93	25	37%
IID toxins	Clostridium perfringens (type A) food-borne disease	0	0	0	0%
	Bacillus cereus food-borne infection/intoxication	0	0	0	0%
	Botulism	0	0	0	0%
	Staphylococcal food poisoning	0	0	0	0%

GZV diseases in Ireland summary, Q2 2024 continued

Disease category	Disease	Q2 2023	Q2 2024	Increase/ Decrease	% Change
Non-IID Zoonotic infections	Anthrax	0	0	0	0%
	Brucellosis	2	1	-1	-50%
	Echinococcosis	0	1	1	N/A
	Leptospirosis	9	4	-5	-56%
	Plague	0	0	0	0%
	Q fever	1	0	-1	-100%
	Rabies	0	0	0	0%
	Toxoplasmosis	3	4	1	33%
	Trichinosis	0	0	0	0%
Vectorborne Diseases	Chikungunya disease	0	0	0	0%
	Dengue fever	2	13	11	550%
	Lyme disease	1	1	0	0%
	Malaria	27	12	-15	-56%
	Tularemia	0	0	0	0%
	Typhus	0	0	0	0%
	Viral encephalitis (TBE only)	0	0	0	0%
	West Nile fever	0	0	0	0%
	Yellow fever	0	0	0	0%
	Zika virus infection	0	0	0	0%
	Viral haemorrhagic fevers	0	0	0	0%

Campylobacter in Ireland, Q2 2024



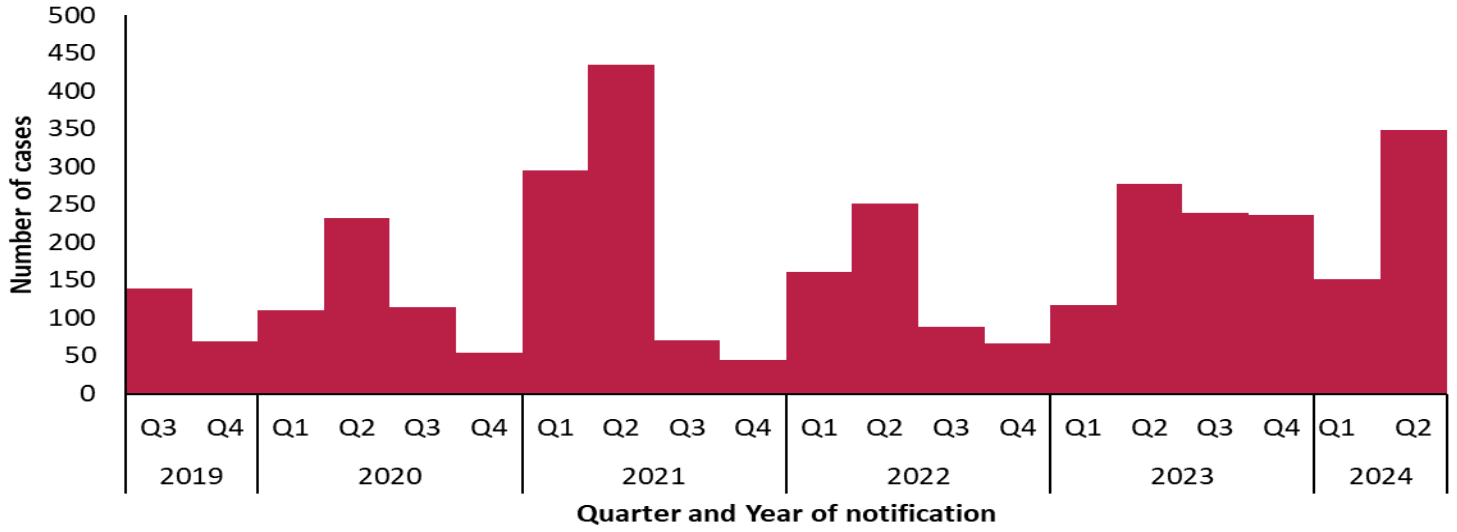
Type	Outbreaks (N)	Number ill	Range ill
Family	1	2	N/a

Species	Number of isolates	Proportion of sequenced isolates
Campylobacter jejuni	70	92%
Campylobacter coli	6	8%
Total	**76**	**100%**

- 1,320 cases of Campylobacteriosis notified in Q2 2024, which was higher than reported in Q2 2023 (n=1057).
- One Campylobacter outbreak notified in Q2 2024. Lower than the number of outbreaks reported for the same time period in 2023 (n=3)
- 76 Campylobacter isolates were sequenced in the sentinel Campylobacter Reference Laboratory, representing approximately 6% of campylobacteriosis cases notified
- 92% of isolates sequenced were *C. jejuni*

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024 and Public Health Laboratory, Cherry Orchard 12/07/2024

Cryptosporidiosis in Ireland, Q2 2024



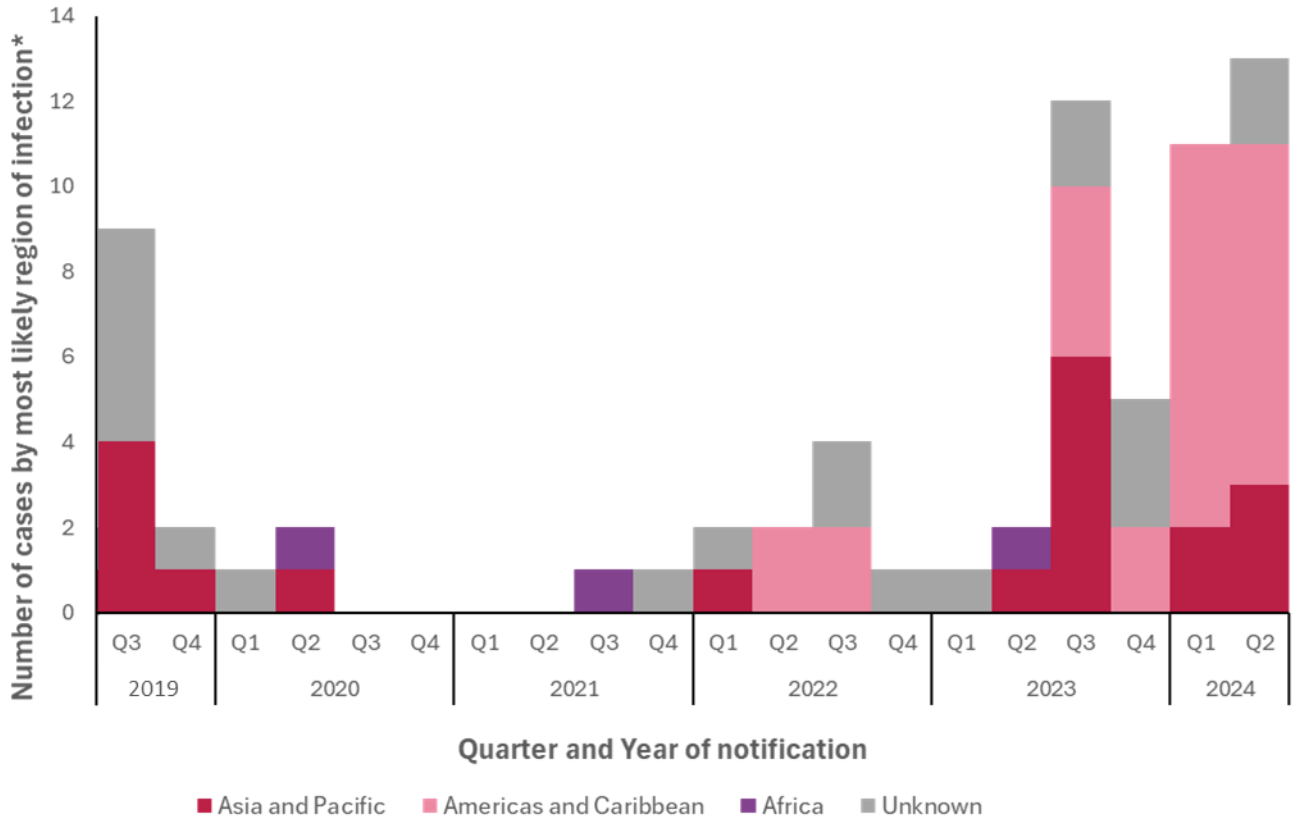
	N	% where known
Indigenous	302	94%
Travel-related	20	6%
Travel status not known	27	n/a
Total	**349**	

Type	Outbreaks (N)	Number ill	Median ill	Range ill
Family	22	53	2	2-4
General	2	15	7	4-11

- 349 cases of cryptosporidiosis notified in Q2 2024, higher than in Q2 2023 (n=278).
- 24 Cryptosporidiosis outbreaks notified in Q2 2024, which is higher than the number of outbreaks reported for the same time period in 2023 (n=13)
- 94% of cases in Q2 2024 were reported as indigenous (where travel status was known).

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024

Dengue Fever in Ireland, Q2 2024



	Q2 2023	Q2 2024	% Change
Number of cases	2	13	+550%
No. hospitalised	1	0	-100%

- There was an increase in Dengue Fever notifications in Q2 2024 with 13 cases compared to 2 in Q2 2023.
- Most cases notified in 2024, where travel history was known, returned from the Americas.
- This is likely connected to an ongoing outbreak of Dengue Fever that started in the second half of 2023.[1]

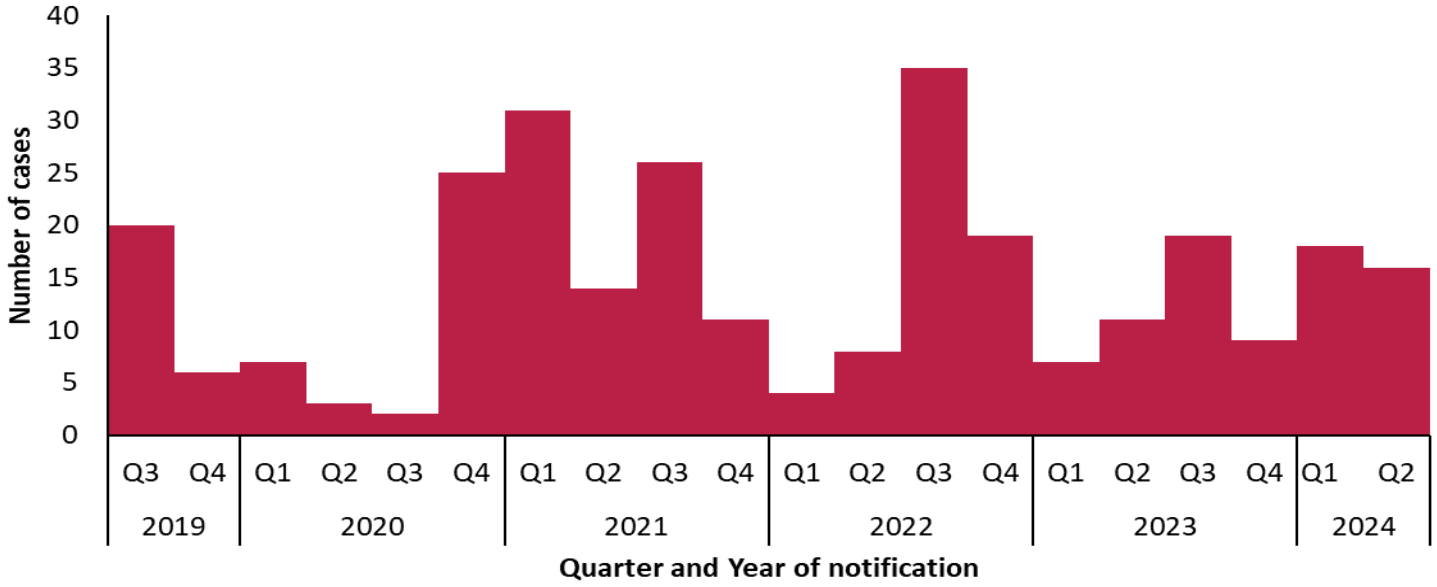
*Likely region of infection is a composite variable using country of infection data as well as free text comments indicating travel to one or more countries where definitive country of infection could not be determined.

1. Epidemiological Alert - Increase in dengue cases in the Region of the Americas - 16 February 2024- PAHO/WHO | Pan American Health Organization

Data completeness related to countries of travel is low. Therefore, caution is advised when interpreting these data.

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024

Hepatitis A in Ireland, Q2 2024

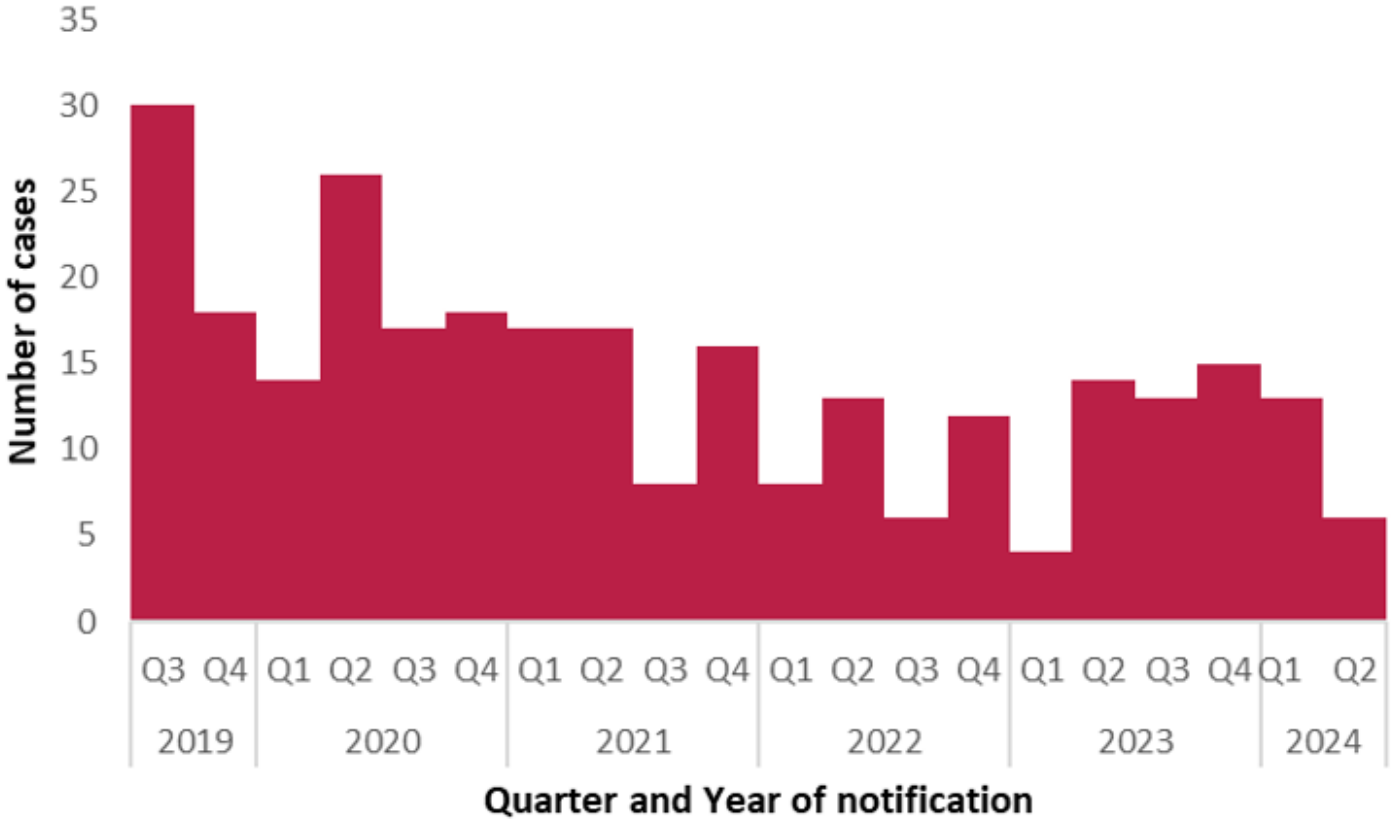


	N	% where known
Indigenous	8	53%
Travel-related	7	47%
Travel status not known	1	n/a
Total	**16**	

- 16 cases of Hepatitis A notified in Q2 2024, higher than in Q2 2023 (n=11).
- No Hepatitis A outbreaks notified in Q2 2024. One outbreak was reported for the same time period in 2023.
- 53% of cases in Q2 2024 were reported as indigenous (where travel status was known).

Data source: Computerised Infectious Diseases Reporting (CIDR) system 22/04/2024

Hepatitis E in Ireland, Q2 2024

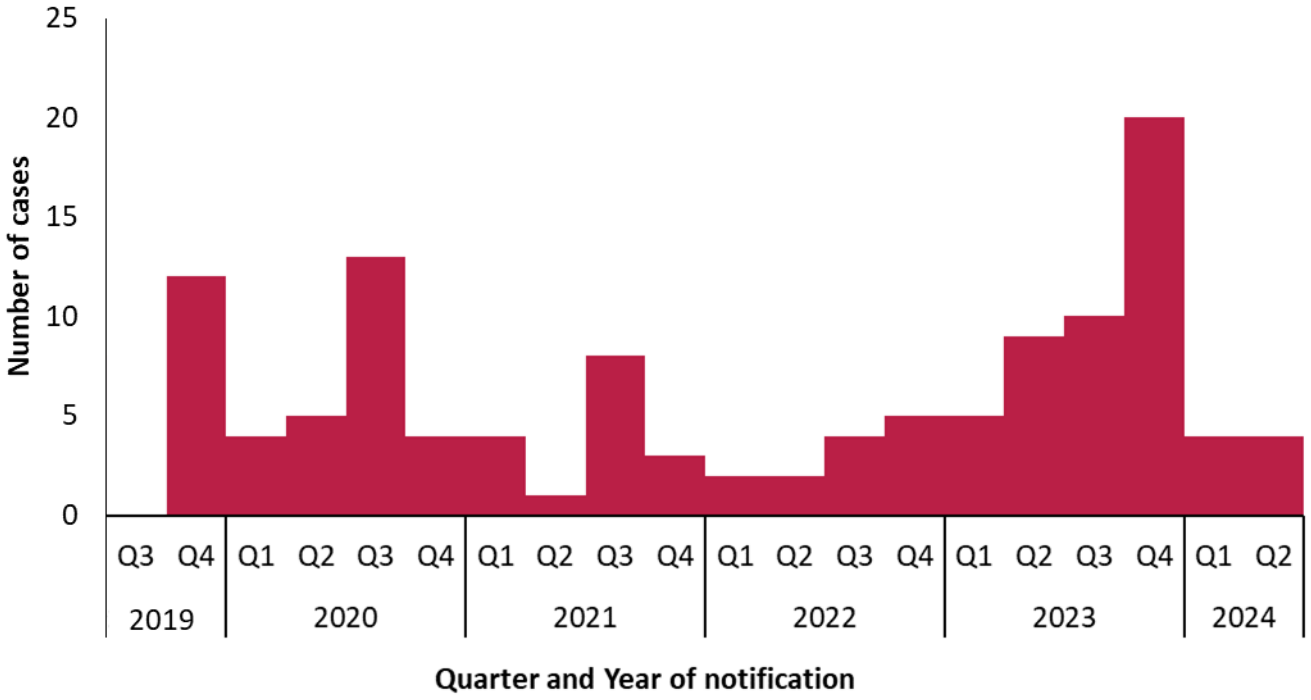


Country of Infection	N	% where known
Not specified	6	n/a
Total	**6**	

- 6 cases of Hepatitis E were notified in Q2 2024, compared to 14 in Q2 2023.
- No Hepatitis E outbreaks were reported in Q2 2024.
- Country of Infection (COI) was not specified in 100% (n=6) of cases in Q2 2024.

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024

Leptospirosis in Ireland, Q2 2024

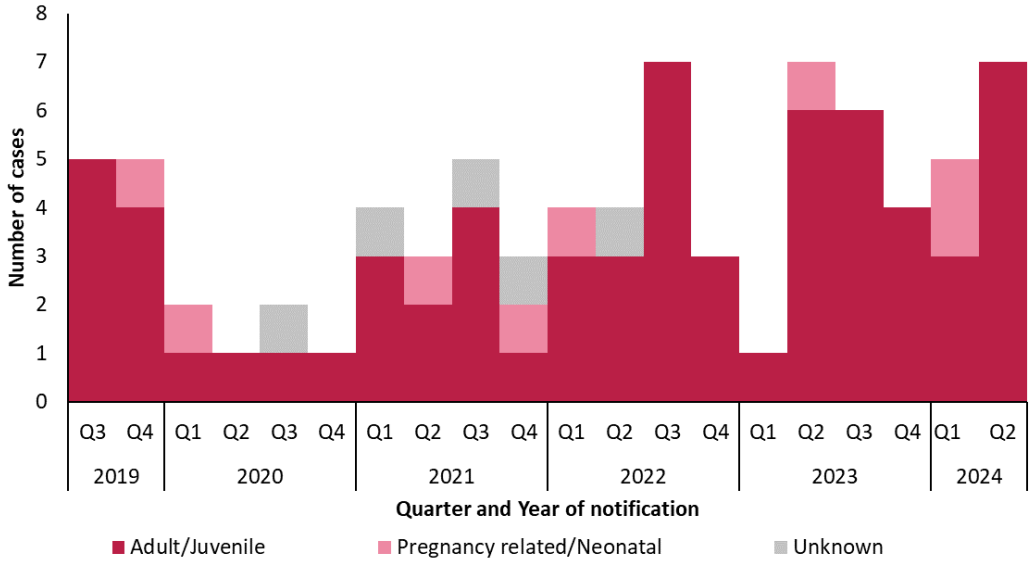


	Q2 2023	Q2 2024	% Change
Number of cases	9	4	-56%
No. hospitalised	5	3	-40%

- There were 4 notified cases of leptospirosis in Q2 2024, a decrease of 56% from Q2 2023 (n=9) and similar to Q1 2024 (n=4)
- 50% of cases in 2024 were reported to have been acquired occupationally including 3 farmers and 1 surveyor

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024

Listeriosis in Ireland, Q2 2024



Adult/Juvenile case Principal Diagnosis	Number of cases
Septicaemia	4
Meningitis	2
Not specified	1
Total	**7**

Pregnancy related case outcome	Number of cases
Still pregnant	N/A
Live birth	N/A
Total	**0**

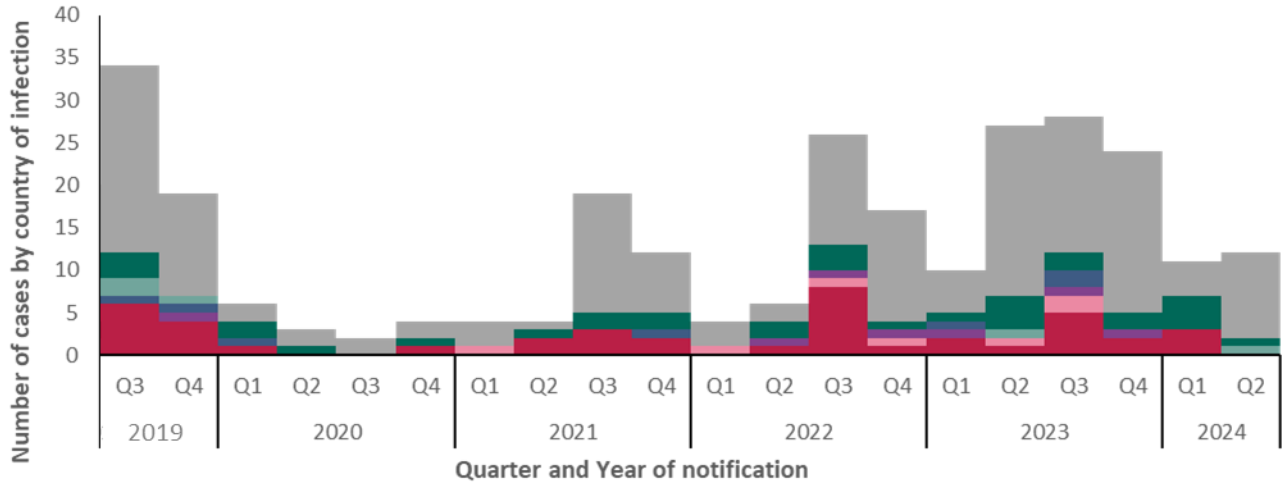
Serotype	Number of isolates
Listeria monocytogenes 1/2a	3
Listeria monocytogenes 1/2b	1
Listeria monocytogenes 1/2c	1
Total	**5**

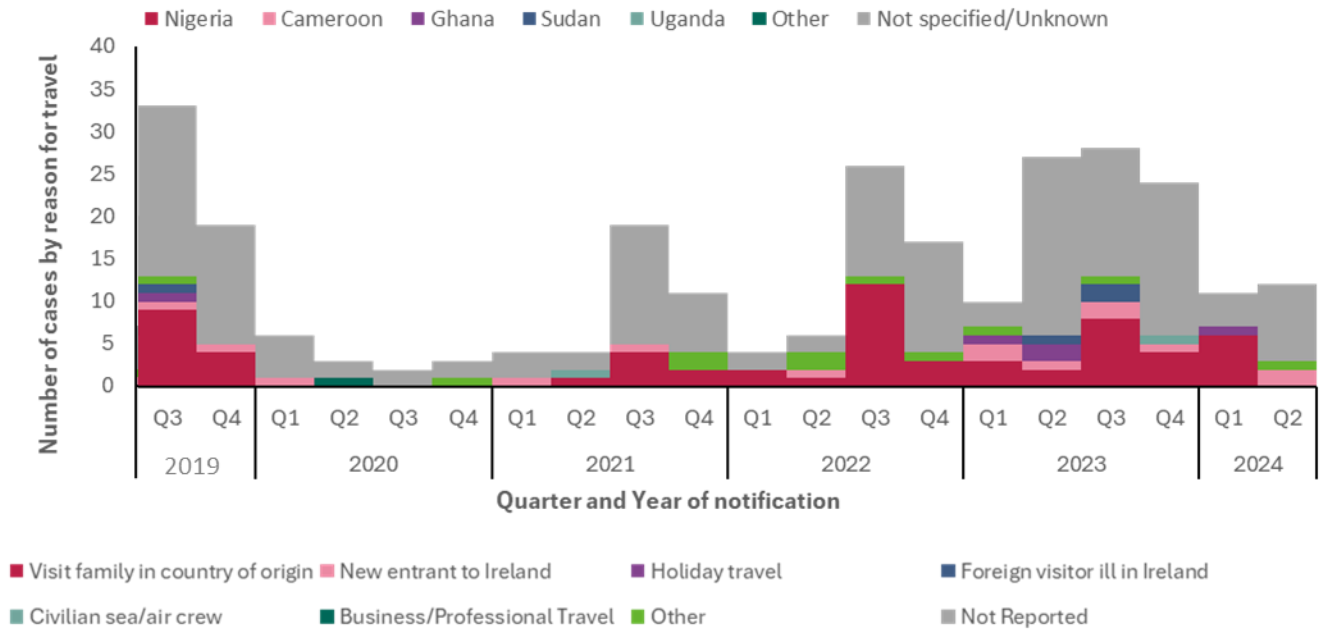
*The number of isolates sequenced in the NSSLRL may not match the number of cases notified, as dates are based on date received in the laboratory which may not align with notification date. Furthermore, additional isolates for mother/baby pairs may be sequenced in the NSSLRL but only the mother will be notified as a listeriosis case in line with the Irish case definition. Finally, some cases may have been confirmed by molecular methods only and isolates were not available for sequencing.

- Seven cases of listeriosis notified in Q2 2024, unchanged from seven cases notified in Q2 2023
- All were adult/juvenile cases, there were no pregnancy related/neonatal cases notified in Q2 2024
- Five isolates of *Listeria monocytogenes* were sequenced in the NSSLRL*
- The most frequently seen serotype in Q2 2024 was 1/2a
- There was one outbreak of listeriosis reported in Q2 2024. This was a national multi-strain outbreak with a total of 3 confirmed cases.

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024 and National Salmonella, Shigella and Listeria Reference Laboratory (NSSLRL)

Malaria in Ireland, Q2 2024





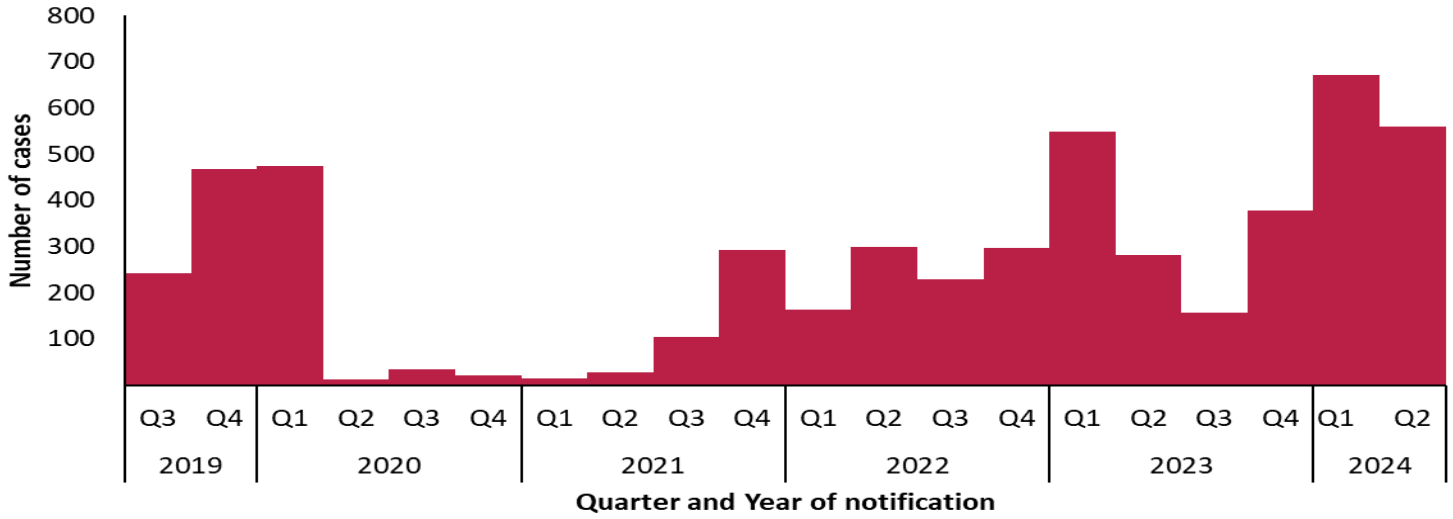
	Q2 2023	Q2 2024	% Change
Number of cases	27	12	-56%
Number hospitalised	7	1	-86%

- 12 cases of malaria reported in Q2 2024 in Ireland. This is a decrease of 56% from Q2 2023 (n=27) and similar to Q1 2024 (n=11).
- Data completeness for country of infection and reason for travel in Q2 2024 does not allow for comparison with Q1 2024 or Q2 2023.

*Data completeness for reason for travel and country of infection is low. Therefore, caution is advised when interpreting these data.

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024

Norovirus and Acute Infectious Gastroenteritis (AIG) in Ireland, Q2 2024



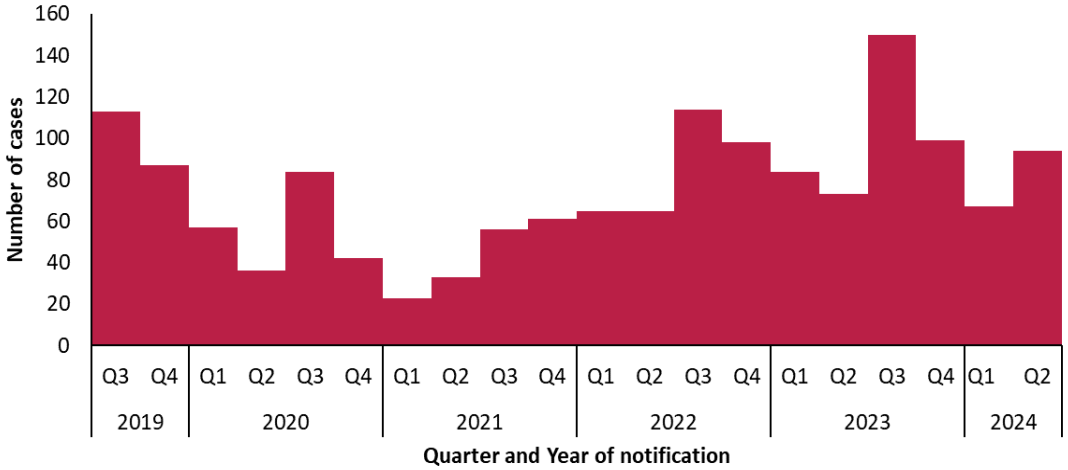
Location	Outbreaks (N)		Total Number ill		Median ill		Range ill	
	Noro	AIG	Noro	AIG	Noro	AIG	Noro	AIG
Hospital	43	3	355	15	6	6	2-37	3-6
Nursing home	11	13	330	185	22	8	7-83	3-56
Residential institution	3	12	22	53	8	4	4-10	3-8
Comm. Hosp/Long-stay unit	4	2	55	7	14	3.5	10-18	3-4
Other	1	2	26	12	26	6	26	5-7
Total	62	32	788	272	14	6	2-83	3-56

- There were 559 cases of Norovirus infection notified in Q2 2024, increased from 281 in Q2 2023
- 67 Norovirus and 42 AIG outbreaks were reported in Q2 2024
- 62 Norovirus and 32 AIG outbreaks occurred in health care settings (see table)
- Since April 2024, the UK have reported an increase in the proportion of norovirus cases characterised as GII.171
- Of 23 representative samples from Q2 sequenced by the NVRL, 17 (74%) were genogroup 2 and of those 88% (n=15) were GII.17

[1] Official Statistics. National norovirus and rotavirus report, week 32 report: data to week 30 (28 July 2024). Published 8 August 2024. Available at: https://www.gov.uk/government/statistics/national-norovirus-and-rotavirus-surveillance-reports-2024-to-2025-season/national-norovirus-and-rotavirus-report-week-32-report-data-to-week-30-28-july-2024

Data sources: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024, the National Virus Reference Laboratory (NVRL) 07/08/2024

Salmonellosis in Ireland, Q2 2024



Serotype	Travel status			Total
	Domestic	Travel	Unknown	
Salmonella Enteritidis	3	6	6	**15**
Salmonella Typhimurium inc. monophasic Typhimurium	10	9	5	**24**
Other serotypes	28	14	13	**55**
Total	**41**	**29**	**24**	**94**

Outbreak Type	Number of outbreaks	Total number ill	Range number ill
Family	0	N/A	N/A
General	1	2	N/A
Total	**1**	**2**	**N/A**

- 94 cases of salmonellosis were notified in Q2 2024, increased from 73 in Q2 2023
- Where travel history was known (n=70), 41% of cases were travel-associated and 59% were domestically-acquired
- Infection with *S*. Typhimurium was more common than infection with *S*. Enteritidis among travel-associated and domestic cases, but travel status was missing for 25% of cases so these data should be interpreted with caution
- One outbreak of salmonellosis was notified in Q2 2024

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024

Genomic analysis of non-typhoidal *Salmonella* in Ireland, Q2 2024

Serotype	Number of isolates	Proportion of sequenced isolates
Salmonella Typhimurium inc. monophasic Typhimurium	24	28%
Salmonella Enteritidis	14	16%
Salmonella Bovismorbificans	5	6%
Salmonella Java	4	5%
Salmonella Coeln	4	5%
Other serotypes	35	41%
Total	**86**	**100%**

Specimen type	Number of isolates
Faeces	78
Blood	5
Urine	3
Total	**86**

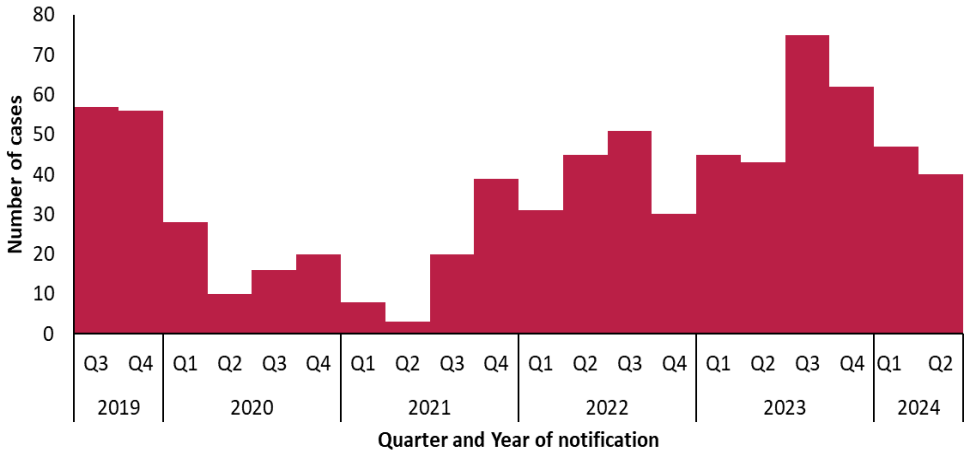
Antimicrobial class	Number isolates with resistance markers	Proportion of sequenced isolates
Quinolones	40	47%
Tetracycline	17	20%
Ampicillin	16	19%
Sulphonamides	13	15%
Chloramphenicol	4	5%
Trimethoprim	2	2%
Third Generation Cephalosporins	1	1%
Azithromycin	1	1%
Aminoglycosides	1	1%

- 86 non-typhoidal *Salmonella* (NTS) isolates were sequenced in the NSSLRL in Q2 2024*
- The most frequently seen serotypes were *S.* Typhimurium and *S.* Enteritidis
- 6% of isolates were from bloodstream infections
- Antimicrobial resistance is predicted based on whole genome sequencing (WGS) data

*The number of isolates sequenced in the NSSLRL may not match the number of cases notified, as dates are based on date received in the laboratory which may not align with notification date. Furthermore, isolates may be sequenced in the NSSLRL for cases that do not meet the criteria for notification under the Irish case definition.

Data source: National Salmonella, Shigella and Listeria Reference Laboratory (NSSLRL)

Shigellosis in Ireland, Q2 2024



Travel	Child		Adult Female		Adult Male		Total	
	N	%	N	%	N	%	N	%
Domestic	0	0%	0	0%	16	57%	16	40%
Travel - Europe	0	0%	0	0%	3	11%	3	8%
Travel - Outside Europe	1	50%	7	70%	2	7%	10	25%
Unknown	1	50%	3	30%	7	25%	11	28%
Total	**2**	**100%**	**10**	**100%**	**28**	**100%**	**40**	**100%**

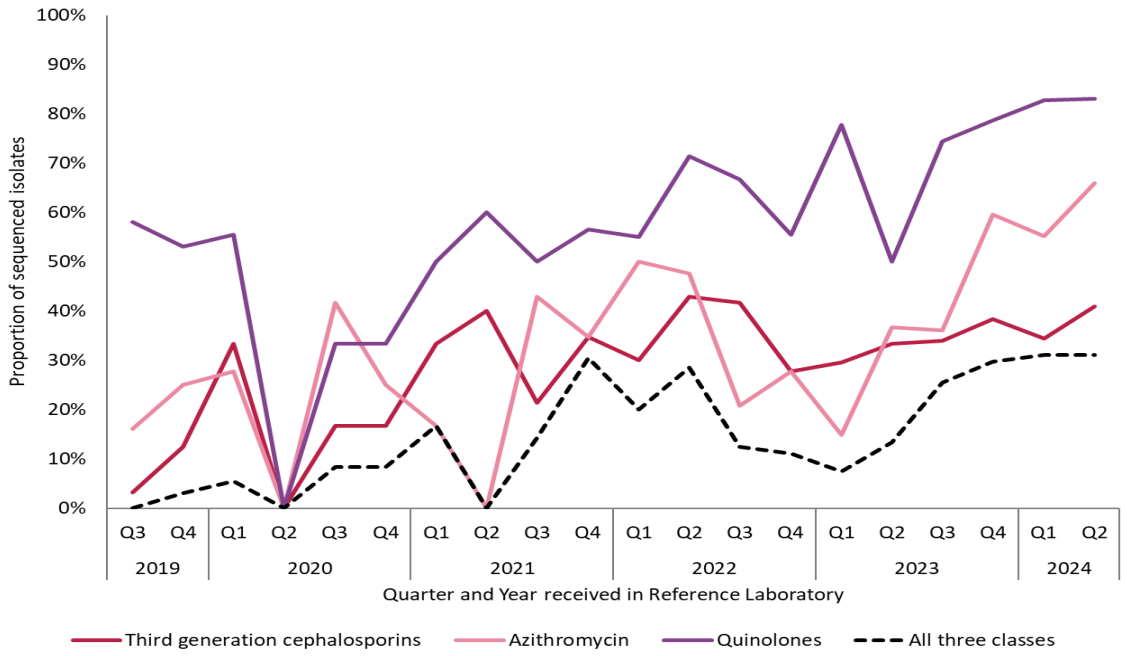
Outbreak Type	Number of outbreaks	Total number ill	Range number ill
Family	0	N/A	N/A
General	0	N/A	N/A
Total	**0**	**N/A**	**N/A**

- 40 cases of shigellosis were notified in Q2 2024 (37 confirmed and 3 probable), comparable to 43 in Q2 2023
- Where travel history was known, 45% were associated with international travel and 55% were domestically-acquired
- All domestically-acquired cases were among adult males and adult females were more likely to have been infected outside Europe, but caution is advised when interpreting these data as travel status was incomplete for 28% of cases
- Adult males continued to be the group most affected as sexual transmission among gay, bisexual and other men who have sex with men (gbMSM) is a key feature of shigellosis in Ireland
- No outbreaks were notified during Q2 2024

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024

Genomic analysis of *Shigella* in Ireland, Q2 2024

Serotype	Number of isolates	Proportion of sequenced isolates
Shigella flexneri	15	52%
Shigella sonnei	14	48%
Total	**29**	**100%**



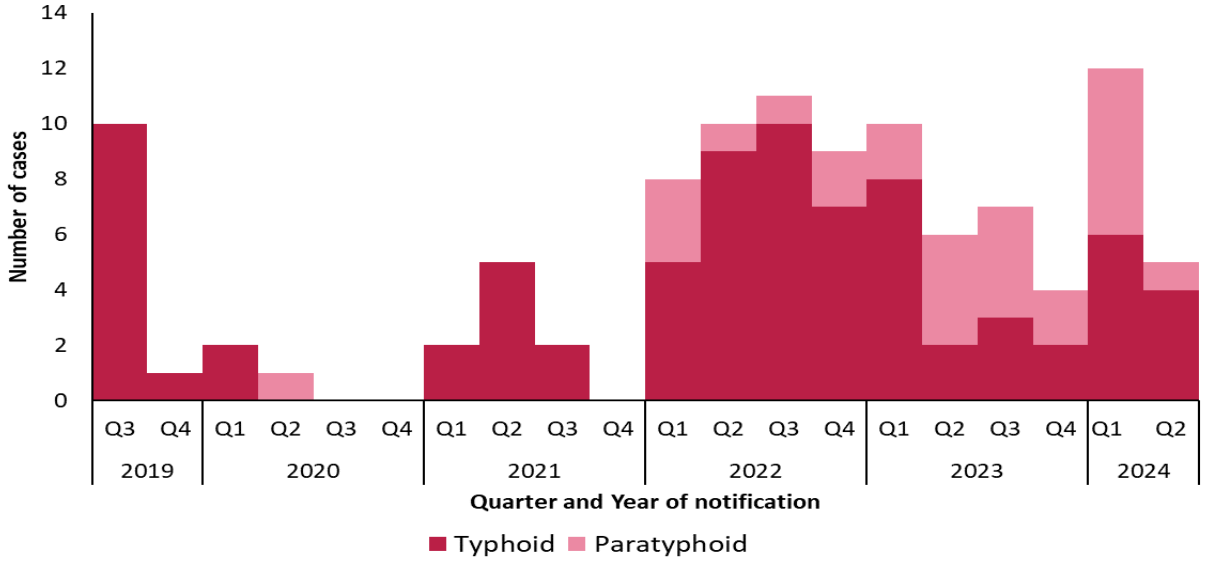
- 29 *Shigella* isolates were sequenced in the NSSLRL in Q1 2024*
- All serotypes were either *S. flexneri* or *S. sonnei*
- Antimicrobial resistance is predicted based on whole genome sequencing (WGS) data:
  - 83% of isolates were predicted to be fluroquinolone resistant, increased from 72% in 2023*
  - 66% were predicted to be azithromycin resistant, increased from 40% in 2023*
  - 41% were predicted to be resistant to third generation cephalosporins, increased from 34% in 2023*
  - 31% were predicted to be resistant to all three classes of antimicrobials, increased from 21% in 2023* but unchanged from Q1 2024

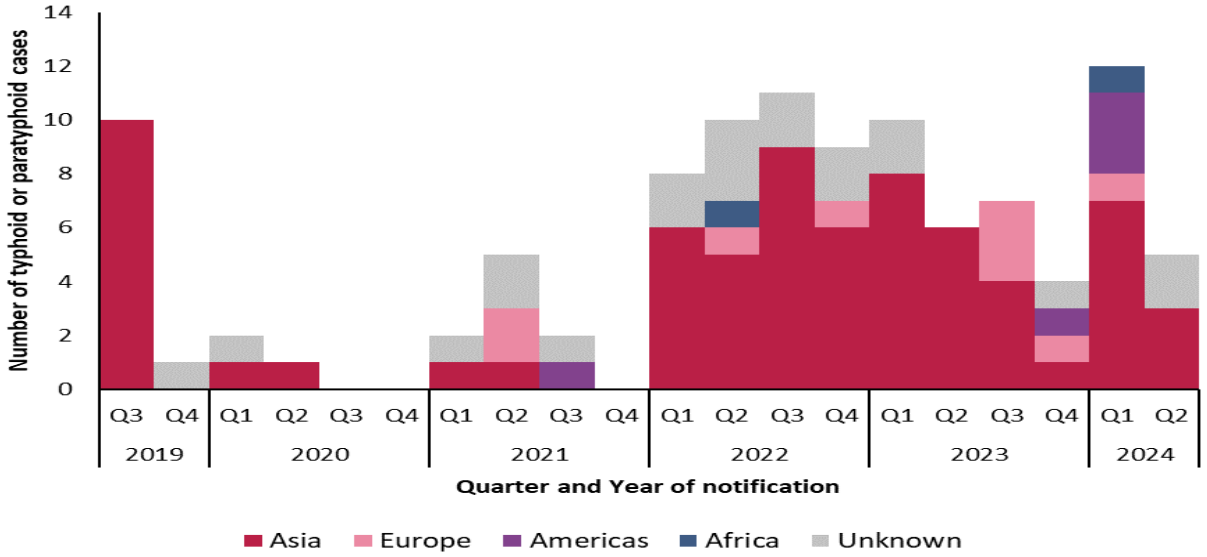
*full year data

*The number of isolates sequenced in the NSSLRL may not match the number of cases notified, as dates are based on date received in the laboratory which may not align with notification date. Furthermore, according to the Irish case definition probable cases of shigellosis may be notified when *Shigella* spp. nucleic acid is detected in a clinical specimen in the absence of subsequent culture confirmation.

Data source: National Salmonella, Shigella and Listeria Reference Laboratory (NSSLRL)

Typhoid and Paratyphoid in Ireland, Q1 2024





- Four cases of typhoid were notified in Q2 2024, increased from two cases notified in Q2 2023
- One case of paratyphoid was notified in Q2 2024, decreased from four cases notified in Q2 2023
- Where travel history was known, all cases travelled to Asia, most frequently to Pakistan

* Ireland was reported as country of infection for a small number of cases. These infections were typically secondary infections, following return of a close contact from an endemic country or were laboratory-acquired infections.

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024

Genomic analysis of *Salmonella* Typhi and Paratyphi in Ireland, Q2 2024

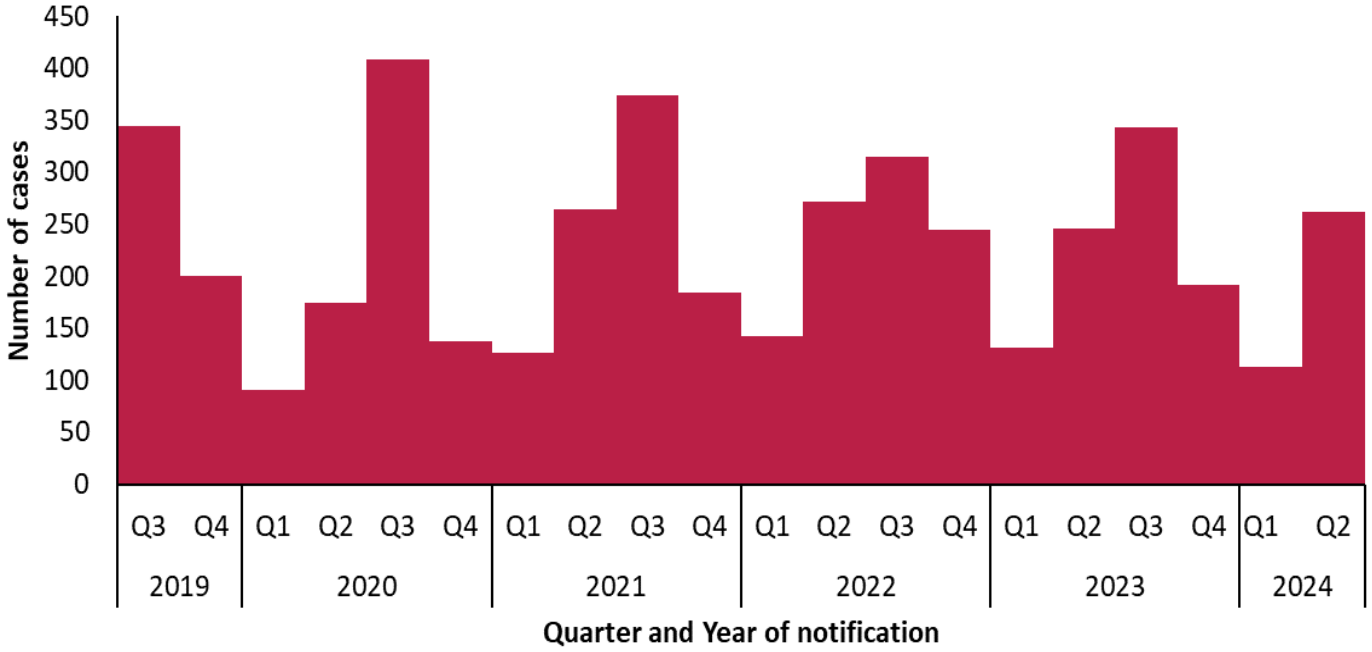
Antimicrobial class	Number of isolates with resistance determinants	Proportion of sequenced isolates
Quinolone	5	83%
Ampicillin	3	50%
Chloramphenicol	3	50%
Sulphonamide	3	50%
Tetracycline	3	50%
Third Generation Cephalosporin	2	33%
Trimethoprim	0	0%
Azithromycin	0	0%
Aminoglycoside	0	0%

- Six isolates of Salmonella Typhi (n=5), S. Paratyphi A (n=1) and S. Paratyphi B (n=0) were sequenced in the NSSLRL in Q2 2024*
- Antimicrobial resistance is predicted based on whole genome sequencing (WGS) data: 83% of isolates sequenced were predicted to be resistant to quinolones, while 33% were predicted to be resistant to third generation cephalosporins, increased from 0% in Q1 2024.

*The number of isolates sequenced in the NSSLRL may not match the number of cases notified, as dates are based on date received in the laboratory which may not align with notification date. Furthermore, isolates may be sequenced in the NSSLRL for cases that do not meet the criteria for notification under the Irish case definitions for typhoid and paratyphoid.

Data source: National Salmonella, Shigella and Listeria Reference Laboratory (NSSLRL)

VTEC in Ireland, Q2 2024



Patient type	Number of cases	Proportion of cases
Hospital Inpatient	82	31%
GP Patient	112	43%
A&E Patient/Outpatient	35	13%
Other	26	10%
Unknown	7	3%
Total	**262**	**100%**

Type	Outbreaks (N)	Number ill	Median ill	Range ill
General	3	26	5	3-18
Family	14	34	2	2-4
Total	**17**	**60**	**2**	**2-18**

	Bloody diarrhoea		HUS	
	N	% (where known)	N	% (where known)
Yes	70	31%	12	6%
No	149	65%	162	81%
Unknown	10	4%	26	13%
Not specified	33	N/A	62	N/A
Total	**262**	**N/A**	**262**	**N/A**

Genomic analysis of VTEC in Ireland, Q2 2024

Serogroup	Verotoxin	N	%	*eae* positive		*ehxA* positive	
				N	%	N	%
E. coli O157	vt1	0	N/A	0	N/A	0	N/A
	vt2	14	70%	14	100%	14	100%
	vt1 + vt2	6	30%	6	100%	6	100%
E. coli O26	vt1	37	37%	37	100%	32	86%
	vt2	10	10%	9	90%	8	80%
	vt1 + vt2	52	53%	49	94%	52	100%
Other serogroups	vt1	42	44%	30	71%	34	81%
	vt2	30	32%	14	47%	22	73%
	vt1 + vt2	23	24%	12	52%	16	70%

- 262 cases of VTEC notified in Q2 2024, higher than in Q2 2023 (n=246)
- 31% were hospital inpatients
- 12 cases of HUS in Q2 2024, increased from eight cases of HUS in Q2 2023
- 17 VTEC outbreaks were reported, including 1 outbreak in a childcare facility.
- 217 isolates were sequenced in the VTEC Reference Laboratory*
- The most common serogroups reported among culture confirmed cases were as follows: O157 (7%; n=20), O26 (46%; n=99), and O145 (6%; n=13)

*The number of isolates sequenced in the Public Health Laboratory, Cherry Orchard (Reference Laboratory) may not match the number of cases notified, as dates are based on date received in the laboratory which may not align with notification date. Furthermore, isolates may be sequenced in the Reference Laboratory for cases that do not meet the criteria for notification under the Irish case definitions for VTEC.

Data source: Computerised Infectious Diseases Reporting (CIDR) system 17/07/2024 and Public Health Laboratory, Cherry Orchard 12/07/2024