

SURVEILLANCE of INFECTIOUS INTESTINAL (IID), ZONOTIC AND VECTORBORNE DISEASE, and OUTBREAKS of INFECTIOUS DISEASE IN IRELAND



A quarterly report by the Health Protection Surveillance Centre in collaboration with the Departments of Public Health

Quarter 3 –2011

December 2011

This is the third quarterly report for 2011 produced by the Gastroenteric Unit of the Health Protection Surveillance Centre.

The production of this quarterly report would not be possible without the valuable input and commitment from the Directors of Public Health, Specialists in Public Health Medicine, Surveillance Scientists, Clinical Microbiologists, General Practitioners, Hospital Clinicians, Infection Control, Environmental Health and laboratory personnel, and other professionals who provide the data for the HPSC's surveillance systems.

Note: Data are collected and analysed using the Computerised Infectious Disease Reporting (CIDR) system. The data in this report are provisional and will not be regarded as final until all returns are received and data have been validated.

OUTBREAK SURVEILLANCE

Table 1. General Outbreaks of Infectious Intestinal Disease (IID) in Quarter 3, 2011

Month	HSE area	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Jul	M	Community outbreak	20	7	05/07/2011	WB	EHEC
Jul	E	Hospital	12	-	28/06/2011	Not Specified	AIG
Jul	S	Comm. Hosp/Long-stay unit	3	0	28/06/2011	P-P & AB	AIG
Jul	S	Comm. Hosp/Long-stay unit	7	0	03/07/2011	P-P & AB	AIG
Jul	SE	Residential institution	16	-		P-P	Norovirus
Jul	SE	Hospital	16	-	04/07/2011	P-P	Norovirus
Jul	NE	Hospital	15	2		P-P & AB	Norovirus
Jul	W	Hotel	33	0	07/07/2011	FB	AIG
Jul	E	Community outbreak	23	0	03/07/2011	P-P	AIG
Jul	NW	Hospital	11	11		P-P	Norovirus
Jul	NW	Comm. Hosp/Long-stay unit	4	0	10/07/2011	P-P	Norovirus
Jul	E	Residential institution	70	0	16/07/2011	P-P	Norovirus
Jul	M	Hotel	2	1	-	Unknown	EHEC
Jul	S	Coach tour	6	0	18/07/2011	Not Specified	AIG
Jul	NW	Travel related	3	0	08/07/2011	FB	Salmonella
Jul	E	Residential institution	27	0	-	P-P	Norovirus
Aug	E	Comm. Hosp/Long-stay unit	26	-	03/08/2011	Unknown	Norovirus
Aug	S	Comm. Hosp/Long-stay unit	19	0	04/08/2011	Not Specified	AIG
Aug	SE	Hospital	31	-	31/07/2011	Not Specified	Norovirus
Aug	E	Residential institution	21	-	11/08/2011	P-P	SRSV
Aug	NE	Other	10	-	10/08/2011	Not Specified	Norovirus
Aug	SE	Residential institution	27	0	10/08/2011	P-P	Norovirus
Aug	SE	Residential institution	28	-	12/08/2011	P-P	Norovirus
Aug	E	Comm. Hosp/Long-stay unit	4	4	20/08/2011	Unknown	AIG
Aug	E	Hotel	13	0	29/07/2011	FB	Salmonella
Aug	NE	Hospital	13	9	-	Not Specified	Norovirus
Aug	W	Residential institution	17	0	19/08/2011	P-P	AIG
Sep	E	Residential institution	2	0	25/08/2011	P-P	Clostridium difficile
Sep	E	Residential institution	44	27	03/09/2011	P-P	AIG
Sep	MW	Hospital	21	21	12/09/2011	P-P & AB	Norovirus
Sep	S	Hospital	2	2	03/09/2011	P-P & AB	Clostridium difficile
Sep	NE	Hospital	6	6	-	P-P & AB	Norovirus
Sep	SE	Hospital	3	-	13/09/2011	Not Specified	Norovirus
Sep	MW	Creche	3	-	10/08/2011	P-P	Shigella
Sep	MW	Comm. Hosp/Long-stay unit	6	6	-	P-P	Norovirus
Sep	S	Creche	33	2	20/08/2011	P-P	EHEC
Sep	E	Residential institution	14	-	22/09/2011	P-P	Norovirus
Sep	MW	Creche	3	0	01/09/2011	P-P	EHEC
Sep	MW	Comm. Hosp/Long-stay unit	8	8	26/09/2011	P-P & AB	Norovirus

P-P denotes Person-to-Person transmission, FB denotes foodborne, WB denotes waterborne; AB denotes airborne; AIG denotes Acute Infectious Gastroenteritis; EHEC denotes infection with Enterohaemorrhagic *E. coli*; NK=unknown

* Total numbers ill does not include asymptomatic cases

Table 2. Family Outbreaks of Infectious Intestinal Disease (IID) in Quarter 3, 2011

Month	HSE region	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Jul	NE	Private house	1	-	-	P-P	EHEC
Jul	SE	Private house	2	1	28/05/2011	Animal contact	Cryptosporidium
Jul	W	Private house	2	1	03/07/2011	P-P & WB	Cryptosporidium
Jul	W	Private house	3	0	04/07/2011	Unknown	EHEC
Jul	W	Private house	2	0	-	Unknown	Campylobacter
Aug	W	Private house	2	0	13/07/2011	WB	Cryptosporidium
Aug	W	Private house	2	0	14/07/2011	Not Specified	Cryptosporidium
Aug	SE	Private house	4	0	23/06/2011	Unknown	Giardia
Aug	M	Unknown	2	0	06/08/2011	Unknown	EHEC
Aug	SE	Private house	2	2	31/07/2011	Unknown	EHEC
Aug	MW	Private house	1	-	-	P-P	EHEC
Aug	NE	Private house	3	0	04/08/2011	P-P	EHEC
Aug	M	Private house	2	0	25/07/2011	Unknown	Salmonella
Aug	E	Private house	2	0	16/07/2011	Unknown	EHEC
Sep	W	Private house	1	-	25/08/2011	Unknown	EHEC
Sep	E	Private house	1	-	-	Not Specified	EHEC
Sep	NE	Travel related	3	2	21/08/2011	P-P & FB	Salmonella
Sep	SE	Private house	2	0	20/08/2011	Unknown	Cryptosporidium
Sep	NE	Private house	2	1	25/08/2011	Unknown	EHEC

P-P denotes Person-to-Person transmission, FB denotes foodborne, WB denotes waterborne; AB denotes airborne; AIG denotes Acute Infectious Gastroenteritis; EHEC denotes infection with Enterohaemorrhagic *E. coli* NK denotes unknown

* Total numbers ill does not include asymptomatic cases

Table 3. Non-IID Outbreaks in Quarter 3, 2011

Month	HSE area	Type of outbreak	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Organism
Jul	E	General	Creche	5	-	05/07/2011	P-P	Suspected hand, foot & mouth disease
Jul	E	Family	Extended family	6	0	01/07/2011	P-P	Measles
Jul	E	General	Workplace	2	0	14/07/2011	P-P & AB	Measles
Jul	E	Family	Extended family	7	0	30/06/2011	P-P	Measles
Jul	W	General	Hospital	3	3	11/07/2011	P-P	MRSA
Aug	W	Family	Private house	4	0	-	P-P & AB	Pertussis
Aug	E	Family	Private house	2	0	27/07/2011	P-P & AB	Measles
Aug	SE	General	Creche	7	-	-	P-P	Suspected hand, foot & mouth disease
Aug	M	Family	Private house	3	-	-	P-P & AB	Pertussis
Aug	W	General	Creche	6	-	-	P-P	Hand, Foot & Mouth
Aug	M	Family	Private house	3	1	-	P-P & AB	Pertussis
Aug	SE	Family	Not Specified	8	1	24/07/2011	P-P	Pertussis
Aug	E	General	Community outbreak	25	-	20/05/2011	P-P & AB	Measles
Aug	E	General	Community outbreak	6	-	28/07/2011	P-P	Measles
Aug	E	General	Other	4	-	03/08/2011	AB	Measles
Aug	E	General	Community outbreak	4	-	07/08/2011	AB	Measles
Aug	E	Family	Extended family	6	-	29/07/2011	P-P	Measles
Sep	S	Family	Private house	4	1	15/06/2011	P-P	Pertussis

Sep	NE	Family	Private house	2	1	26/08/2011	AB	Measles
Sep	NW	Family	Private house	4	1	14/08/2011	P-P	Pertussis
Sep	E	Family	Travel related	5	0	16/08/2011	Vectorborne	Malaria
Sep	E	Family	Private house	2	-	-	P-P & AB	pertussis
Sep	NW	General	Creche	3	-	-	P-P	Varicella
Sep	E	Family	Private house	6	1	08/09/2011	P-P	Measles
Sep	E	General	Creche	5	-	12/09/2011	P-P	Measles
Sep	E	General	Creche	3	0	20/09/2011	P-P	Measles
Sep	M	Family	Private house	2	0	07/09/2011	P-P	Mumps
Sep	S	General	Public house	3	-	06/07/2011	Not Specified	Tuberculosis
Sep	SE	General	Residential institution	11	6	04/09/2011	AB	Human Metapneumovirus

P-P denotes Person-to-Person transmission, WB denotes waterborne; AB denotes airborne; IDU denotes Injecting Drug Use; NK denotes unknown

* Total numbers ill does not include asymptomatic cases

Since July 2001, outbreaks have been reported to HPSC. Preliminary information is provided by a public health professional when the outbreak is first notified. Further information is provided by the lead investigator once more complete data are available. The data requested includes information on the source of reporting of the outbreak, the extent of the outbreak, mode of transmission, location, pathogen involved, laboratory investigation, morbidity and mortality data, suspect vehicle and factors contributing to the outbreak. The data provided is crucial in providing information on the reasons why the outbreak occurred, the factors that lead to the spread of disease and the lessons that can be learnt to prevent further such outbreaks.

Since the 1st January 2004, with the amendment to the Infectious Diseases Regulations (2003), there is a statutory requirement for medical practitioners and clinical directors of a diagnostic laboratory to notify to the medical officer of health 'any unusual clusters or changing patterns of any illness, and individual cases thereof, that may be of public health concern'.

Tables 1 and 2 present a line listing of all general and family outbreaks of IID reported to HPSC in the third quarter of 2011. There were 39 general and 19 family IID outbreaks reported during this period, resulting in at least 659 people being ill.

Norovirus (n=19) and Acute infectious gastroenteritis (AIG) (n = 10) were responsible for the majority of general outbreaks of IID (74% of all general outbreaks).

The most common causes of family outbreaks of IID were EHEC (n=10) [53%] and cryptosporidiosis (n=5) [26%]. The other diseases responsible for family outbreaks were Campylobacter infection, giardiasis and salmonellosis (Table 2).

Twenty-five general IID outbreaks were transmitted person-to-person (64%). Twenty-eight general outbreaks (72%) were reported to have occurred in healthcare settings, i.e. hospitals or residential institutions, during this period.

There were twenty-nine non-IID outbreaks reported during Quarter 3 - see Table 3.

Table 4 outlines the outbreak rate per HSE-area for outbreaks notified during Q3 2011.

Table 4. Number of Infectious Disease Outbreaks per HSE Region, Q3 2011

HSE Area	No. of outbreaks	Rate per 100,000 population
E	28	1.9
HPSC	-	-
M	7	2.3
MW	6	1.7
NE	9	2.3
NW	5	2.1
SE	13	2.8
S	8	1.3
W	11	2.7
Total	87	2.0

NOTIFICATIONS OF INFECTIOUS INTESTINAL, ZOOBOTIC AND VECTORBORNE DISEASE

The number of notifications of infectious intestinal, zoonotic and vectorborne disease by HSE-Area for the third quarter of 2011 is shown in Table 5.

Table 5. Intestinal Infectious, Zoonotic and Vectorborne Disease Notifications Quarter 3, 2011 by HSE-Area

Infected Intestinal Disease	E	M	MW	NE	NW	SE	S	W	Total
Acute infectious gastroenteritis* (incl. rotavirus & <i>C. difficile</i>)	198	31	44	31	31	93	74	64	566
<i>Bacillus cereus</i> foodborne infection/intoxication	0	0	0	0	0	0	0	0	0
Botulism	0	0	0	0	0	0	0	0	0
Campylobacter infection	234	44	70	48	35	93	87	69	680
Cholera	0	0	0	0	0	0	0	0	0
<i>Clostridium perfringens</i> (type A) food-borne disease	0	0	0	0	0	0	0	0	0
Cryptosporidiosis	1	4	10	8	5	12	9	20	69
Enterohaemorrhagic <i>Escherichia coli</i>	6	42	13	9	2	10	13	7	102
Giardiasis	1	1	1	1	1	8	5	1	19
Listeriosis	1	0	0	0	1	0	0	1	3
Noroviral infection	68	3	50	24	3	29	10	3	190
Paratyphoid	~	~	~	~	~	~	~	~	1
Salmonellosis	41	9	16	11	8	15	8	12	120
Shigellosis	5	1	4	0	0	1	0	0	11
Staphylococcal food poisoning	0	0	0	0	0	0	0	0	0
Typhoid	~	~	~	~	~	~	~	~	2
Yersiniosis	0	0	0	0	0	0	0	0	0
Zoonotic Disease									
Anthrax	0	0	0	0	0	0	0	0	0
Brucellosis	0	0	0	0	0	0	0	0	0
Echinococcosis	0	0	0	0	0	0	0	0	0
Leptospirosis	1	1	3	0	0	0	2	0	7
Plague	0	0	0	0	0	0	0	0	0
Q Fever	0	1	0	0	0	0	0	1	2
Rabies	0	0	0	0	0	0	0	0	0
Toxoplasmosis	2	0	0	0	0	1	3	2	8
Trichinosis	0	0	0	0	0	0	0	0	0
Typhus	0	0	0	0	0	0	0	0	0
Vectorborne Disease									
Malaria	18	1	1	3	0	0	4	3	30

*Since May 4th 2008, the category Acute Infectious Gastroenteritis (AIG) has included *C. difficile*. Note that data for AIG since this time is not directly comparable with data collected previous to this

SALMONELLA ENTERICA

Human salmonellosis (*S. enterica*) is a notifiable disease. The National Salmonella, Shigella and Listeria Reference Laboratory (NSSLRL) in Ireland was established in 2000 in the Dept. of Medical Microbiology, University College Hospital, Galway. This laboratory accepts *S. enterica* isolates from all clinical and food laboratories in Ireland for serotyping, phage typing and antimicrobial sensitivity testing. Table 6 shows the number of salmonellosis notifications by HSE-Area and month for the third quarter of 2011. Comparison of trends with previous years is shown in Figure 1.

Table 6. Salmonellosis Notifications by HSE-Area and Month, Q3 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jul	10	1	3	3	7	5	2	4	35
Aug	20	7	6	7	0	6	4	5	55
Sep	11	1	7	1	1	4	2	3	30
Total	41	9	16	11	8	15	8	12	120

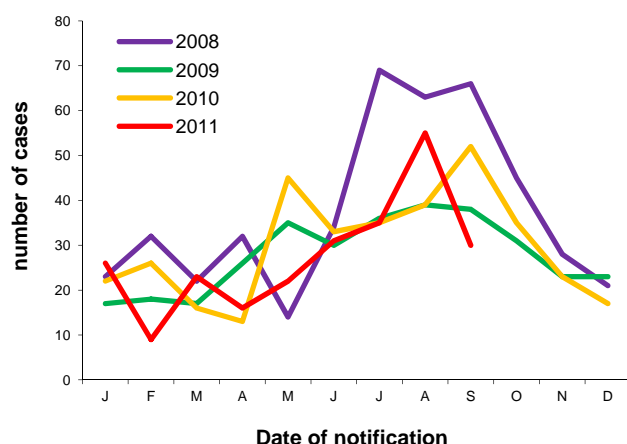


Figure 1. Seasonal Distribution of Human Salmonellosis Notifications, 2008 to end quarter 3 2011

Table 7 shows the serotypes for the *Salmonella* isolates typed by the NSSLRL in the third quarter of 2011 by HSE area (n=123). The commonest human serotypes isolated were *S. Typhimurium* (n= 45 [37%] –includes 8 cases of monophasic *S. Typhimurium* (4,5,12:i:-), and *S. Enteritidis* (n= 27 [22%]).

Forty-one (33%) *S. enterica* isolates were reported to NSSLRL as being associated with travel outside of Ireland during this quarter.

Table 8 shows the serotype distribution of confirmed *Salmonella* notifications by travel status this quarter among salmonellosis notifications on CIDR.

Table 7. Serotypes of *S. enterica* Referred to NSSLRL in Quarter 3, 2011 (Data are provided courtesy of Prof. Martin Cormican and staff, NSSLRL).

Serotype	E	M	MW	NE	NW	SE	S	W	Total
4,5,12:i:-	3	1	0	0	0	1	3	0	8
Agona	0	0	0	0	0	2	0	0	2
Braenderup	2	0	0	0	0	0	1	0	3
Bredeney	1	0	0	0	0	0	0	1	2
Concord	0	0	0	0	0	0	1	0	1
Enteritidis	9	4	1	1	3	4	0	5	27
Give	0	1	0	0	0	0	0	0	1
Goldcoast	0	0	0	0	0	1	0	0	1
Heidelberg	0	0	0	1	4	2	0	0	7
Il 6,7:m,t:-	1	0	0	0	0	0	0	0	1
Infantis	2	0	0	1	0	0	0	0	3
Kottbus	1	0	0	0	0	0	0	0	1
Monschau	1	0	0	0	0	0	0	0	1
Newport	3	2	0	0	0	0	0	1	6
Paratyphi A	~	~	~	~	~	~	~	~	2
Pomona	0	0	0	0	0	0	0	1	1
Poona	1	0	0	0	0	0	0	0	1
Saintpaul	0	0	0	0	0	1	0	0	1
Stanley	1	1	0	0	0	1	1	1	5
Typhi	~	~	~	~	~	~	~	~	3
Typhimurium	6	9	4	5	1	4	4	4	37
Unnamed	4	2	0	1	1	0	0	0	8
Weltevreden	0	0	0	0	0	0	1	0	1
Total	36	22	5	10	9	16	12	13	123

Table 8. Confirmed *Salmonella* notifications by Serotype and Travel Status, Q3 2011 [n(%)]

Serotype	Indigenous	Travel-associated	Unk/not specified	Total
<i>S. Enteritidis</i>	4 (11%)	16 (36%)	5 (13%)	25 (21%)
<i>S. Typhimurium</i>	20 (56%)	6 (13%)	15 (38%)	41 (34%)
Other	12 (33%)	19 (42%)	12 (31%)	43 (36%)
<i>S. spp</i>	0 (0%)	4 (9%)	7 (18%)	11 (9%)
Total	36 (100%)	45 (100%)	39 (100%)	120 (100%)

Note: Data source CIDR. Travel status is inferred from *Country of Infection* variable on CIDR. Note excludes probable notifications

S. Typhi and *S. Paratyphi*

There were two cases of typhoid notified this quarter, both associated with travel to Pakistan. There was one notification of paratyphoid, also associated with travel to Pakistan (Table 5).

Outbreaks of Salmonellosis

There were two general and two family outbreaks of salmonellosis reported in Q3 2011 (Tables 1 & 2).

VEROTOXIGENIC *E. COLI* (VTEC)

Illness caused by enterohaemorrhagic *E. coli* (EHEC) became a notifiable disease on January 1st 2004. Under EHEC, all verotoxin positive *E. coli*, and *E. coli* of serogroups O157, O26, O111, O103, O145 regardless of whether verotoxin producers, are reported. Previously, VTEC were notified under the category of 'Food Poisoning (bacterial other than Salmonella)'.

The number of EHEC notified in Q3 2011 is shown in Table 5. Under the legislation, it is required that information on EHEC be gathered and reported. However, because of their clinical and public health significance, it is important to distinguish between those isolates that are verotoxin-producers and those that are not.

A hundred and two EHEC were notified in this quarter, 97 of which were confirmed or probable VTEC (Table 9). This compares with 95 VTEC cases notified in Q3 2010 and 95 in Q3 2009 (Figure 2). Table 9 shows the number of VTEC cases reported by serogroup and month, Q3 2011.

Table 9. Confirmed and Probable VTEC Notified by Serogroup and Month, Q3 2011

Month	O157	O26	Other	Total
Jul	24	2	1	27
Aug	34	7	5	46
Sep	20	4	0	24
Total	78	13	6	97

Four confirmed cases notified during this quarter were reported as having developed HUS –three were infected with *E. coli* O157 and one with an Ungroupable VTEC strain.

Outbreaks of VTEC infection

During this quarter, four general outbreak and ten family outbreaks of EHEC infection were reported (see Tables 1 & 2).

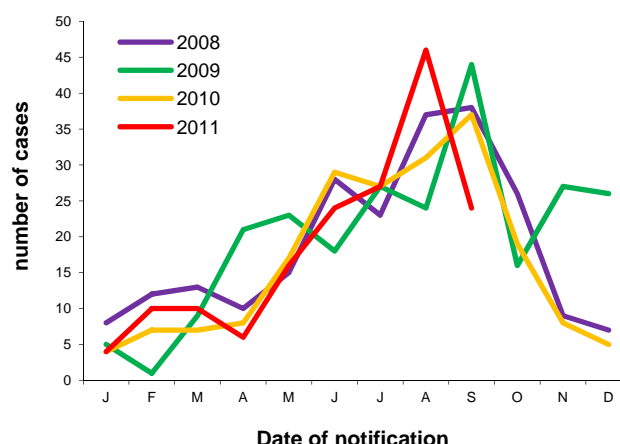


Figure 2. Seasonal Distribution of Confirmed and Probable VTEC Cases Notified 2008 to end quarter 3 2011

The HSE-DML Public Health Laboratory at Cherry Orchard Hospital, Dublin provides a national *E. coli* O157 and non-O157 diagnostic service for clinical samples, including *E. coli* serotyping, verotoxin detection and VTEC molecular typing. Table 10 shows the *vt* types of VTEC isolates referred to the laboratory in Q3 2011.

Table 10. Verotoxin typing results of VTEC isolates referred to the HSE DML Public Health Laboratory, Cherry Orchard Hospital in Q3 2011 (Data are provided courtesy of Dr. Eleanor McNamara and Dr. Anne Carroll).

Serogroup	vt1	vt2	vt1+ vt2	Unk	Total
O157	0	39	38	1	78
O26	5	0	8	0	13
Other	1	1	4	0	6
Total	6	40	50	1	97

CAMPYLOBACTER

Human campylobacteriosis became a notifiable disease on January 1st 2004. Prior to this, human campylobacter infection was notified under the category of 'Food Poisoning (bacterial other than Salmonella)'. The notifications for the third quarter of 2011 are shown in Table 11. Comparison with previous years is shown in Figure 3. The current upsurge involves an increase in sporadic *Campylobacter* cases. Despite analysis of the distribution of cases by age, sex and HSE-area, it has not been possible, so far, to determine the cause of this increase.

Table 11. Campylobacter Notifications by HSE-Area and Month, Q3 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jul	76	6	27	19	10	33	27	15	213
Aug	92	19	28	15	15	32	39	26	266
Sep	66	19	15	14	10	28	21	28	201
Total	234	44	70	48	35	93	87	69	680

Outbreaks of Campylobacter infection

There was one family outbreak of campylobacteriosis reported in Q3 2011 (Table 2).

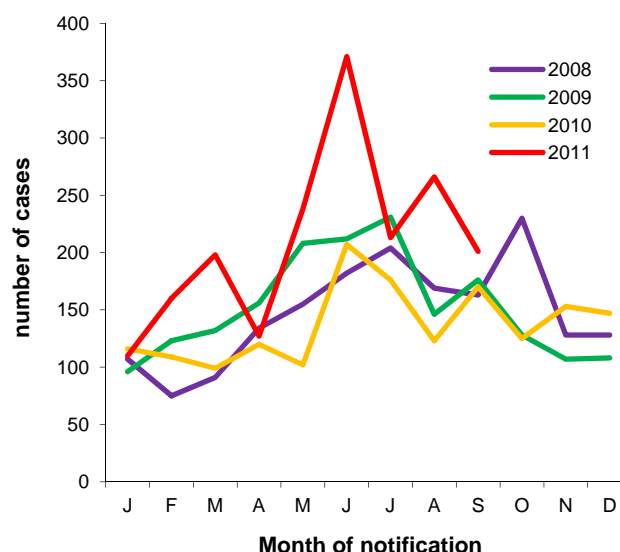


Figure 3. Seasonal distribution of Campylobacter notifications 2008 to end quarter 3 2011

CRYPTOSPORIDIUM

Human cryptosporidiosis became a notifiable disease on January 1st 2004. Prior to this, cryptosporidiosis was notifiable in Ireland only in young children under the category 'Gastroenteritis in Children Under 2'. In Q3 2011, 69 cases of cryptosporidiosis were notified (Table 12), compared to 43 in the same period in 2010 and 87 in Q3 2009 (Figure 4).

Table 12. Cryptosporidiosis Notifications by HSE-Area and Month, Q3 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jul	0	0	3	6	0	6	3	11	29
Aug	0	2	4	1	3	2	4	4	20
Sep	1	2	3	1	2	4	2	5	20
Total	1	4	10	8	5	12	9	20	69

Outbreaks of cryptosporidiosis

There were five family outbreaks of cryptosporidiosis reported in quarter 3 (Table 2).

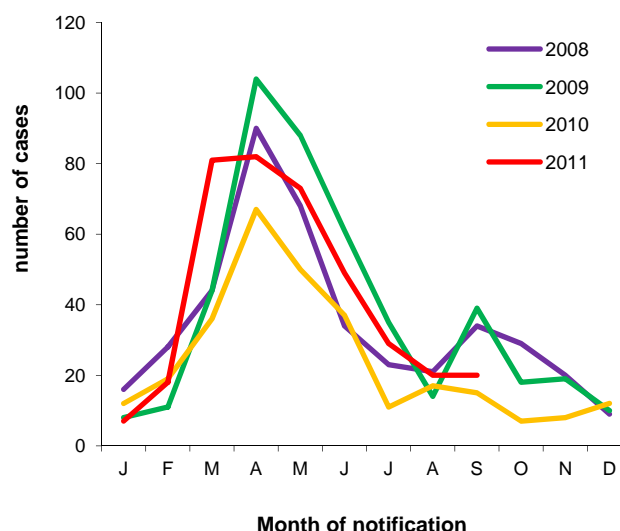


Figure 4. Seasonal distribution of cryptosporidiosis notifications 2008 to end quarter 3 2011

NOROVIRUS

Human noroviral infection became a notifiable disease on January 1st 2004. There were 190 cases notified in the third quarter of 2011 (Table 13). These data are certainly an under-ascertainment of the true burden of disease due to this pathogen. Cumulatively, Norovirus infection levels have been low year-to-date in 2011.

Table 13. Norovirus Notifications by HSE-Area and Month, Q3 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jul	26	2	3	5	3	2	1	0	42
Aug	24	1	4	11	0	22	6	1	69
Sep	18	0	43	8	0	5	3	2	79
Total	68	3	50	24	3	29	10	3	190

Norovirus outbreaks

Norovirus or suspect viral aetiology is the commonest cause of outbreaks of acute gastroenteritis in Ireland. In the third quarter of 2011 there were 19 outbreaks confirmed as being caused by this virus, involving at

least 352 people becoming ill, as outlined in Tables 1 & 2. The seasonal trend is outlined in Figure 5.

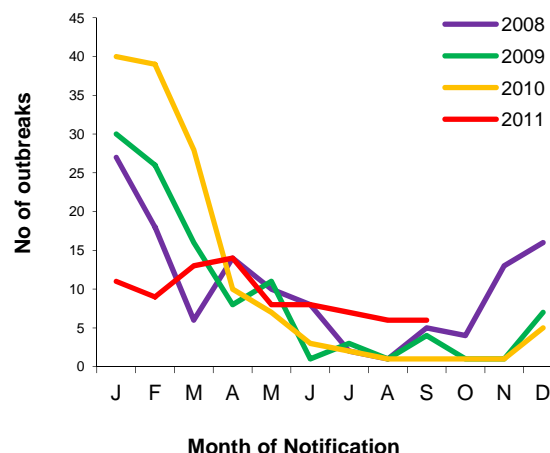


Figure 5. Seasonal Distribution of Confirmed Norovirus Outbreaks, 2008 to end quarter 3 2011.

LISTERIA

Human listeriosis became a notifiable disease on January 1st 2004. Prior to this, listeriosis was notified under the category of 'Food Poisoning (bacterial other than Salmonella)' or 'Bacterial Meningitis' as appropriate.

There were three cases of listeriosis notified in Q3 2011, compared to five in quarter 3 2010 and two in quarter 3 2009. These included one adult, one

pregnancy-related and one neonatal case. All three isolates were referred to the NSSLRL (Table 14).

Table 14: Serotypes of Q3 2011 human *Listeria* isolates referred to the NSSLRL (Data are provided courtesy of Prof. Martin Cormican and staff at the NSSLRL).

Serotype	Number of isolates
4b	3

SHIGELLA

On January 1st 2004, infection with *Shigella* spp. became notifiable as 'Shigellosis'. Prior to this, it was notifiable as 'Bacillary Dysentery'.

During Q3 2011, eleven cases of shigellosis were notified (Table 5). This compares with 20 cases notified as shigellosis in Q3 2010 and 28 in Q3 2009. Nine cases were reported as *S. sonnei* and two as *S. flexneri*.

Five cases (45%) were reported to have acquired their illness abroad, two cases acquired their illness in Ireland while country of infection was reported as unknown or not specified for the remaining four cases.

Outbreaks of shigellosis

There was one general outbreak of shigellosis reported in Q3 2011 (Table 1).

GIARDIA

Human giardiasis became a notifiable disease on January 1st 2004. Prior to this, giardiasis was notifiable in Ireland only in young children under the category 'gastroenteritis in children under 2 years'.

During Quarter 3 2011, 19 cases of giardiasis were notified (Table 5); this compares with 15 cases notified in Q3 2010 and 16 in Q3 2009.

Six cases (32%) were reported to have acquired their illness abroad. Country of infection was reported as 'not specified' for the remaining thirteen cases.

Outbreaks of giardiasis

There was one family outbreak of giardiasis notified in Q3 2011 (Table 2).

FOODBORNE INTOXICATIONS

Bacillus cereus foodborne infection/intoxication, botulism, *Clostridium perfringens* (type A) foodborne disease and staphylococcal food poisoning became notifiable diseases on January 1st 2004. Prior to this, these diseases were notified under the category of 'Food Poisoning (bacterial other than Salmonella)'.

No cases of foodborne intoxication were notified this quarter.

Outbreaks of foodborne intoxications

There were no outbreaks of food-borne infection/intoxication notified this quarter (Tables 1 & 2).

ACUTE INFECTIOUS GASTROENTERITIS incl. ROTAVIRUS

Since 1st January 2004, there is a notifiable disease category termed 'Acute Infectious Gastroenteritis'. Until May 3rd 2008, this included all unspecified causes of gastroenteritis and also specifically, gastroenteritis due to rotavirus. Since May 4th 2008, it has also specifically included *Clostridium difficile* associated disease (CDAD). AIG cases due to unspecified causes or to rotavirus are notifiable in all age groups, unlike the former notifiable disease category of 'Gastroenteritis in children under 2 years'. CDAD cases are only notifiable in patients two years or older that meet the case definition.

During Quarter 3 2011, there were 566 notifications of acute infectious gastroenteritis. Of these, 155 (27%) were reported as rotavirus (Table 15 & Figure 6).

Table 15. Rotaviral Infections Notified under the Category of 'Acute Infectious Gastroenteritis' by HSE-Area and Month, Q3 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jul	4	9	4	7	10	18	7	7	66
Aug	10	6	6	4	3	14	6	8	57
Sep	6	5	5	4	2	5	2	3	32
Total	20	20	15	15	15	37	15	18	155

One hundred and six rotavirus notifications (68%) were for children less than two years of age.

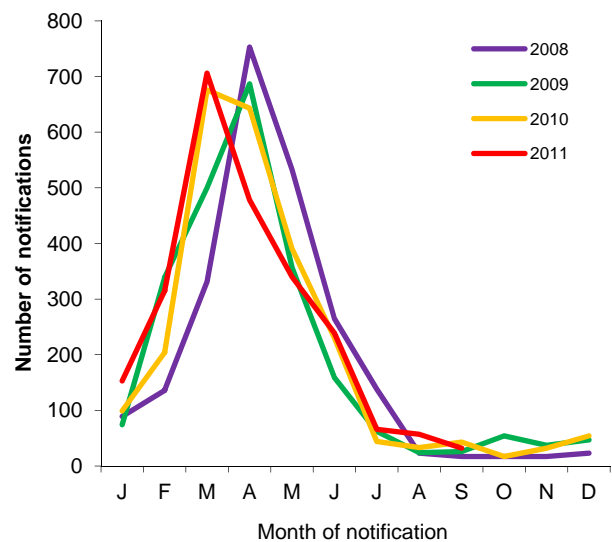


Figure 6. Seasonal Distribution of Rotavirus Notifications, 2008 to end quarter 3 2011

Outbreaks of Rotavirus

There were no outbreaks of rotavirus notified this quarter (Tables 1 & 2).

NON-IID ZONOTIC DISEASES

Non-IID zoonoses now notifiable include: anthrax, brucellosis, echinococcosis, leptospirosis, plague, Q fever, toxoplasmosis, trichinosis, typhus and rabies. The Q3 2011 notifications of these zoonotic diseases are reported by HSE-Area in Table 5.

Eight cases of toxoplasmosis were notified in this quarter. This compares with four cases notified in the same period in 2010 and ten cases in Q3 2009.

Seven cases of leptospirosis were notified in Q3 2011; this compares with five in Q3 2010 and six in Q3

2009. Two cases reported possible exposure during recreational activities abroad, and four reported possible occupational exposure. The source of infection was unknown for the remaining case.

There were two cases of Q fever notified in Q3 2011; this compares with one in Q3 2010 and four in Q3 2009.

There were no cases of echinococcosis or trichinosis notified this quarter.

MALARIA

Malaria is a notifiable disease for many years. The Q3 2011 notifications are reported in Table 5 by HSE-Area.

Thirty cases of malaria were notified in Q3 2011. This compares with 25 cases reported in Q3 2010 and 47 in Q3 2009.

Twenty-one cases were reported as *P. falciparum*, seven as *P. vivax* and the organism was not specified for the remaining two cases.

Thirteen cases were exposed in Sub-Saharan Africa and seven in the Indian sub-continent. No data were provided on country of infection for the remaining ten cases.

The reason for travel for seventeen cases was reported as 'visiting family in country of origin', one case reported business travel, one case was a new entrant to Ireland and two cases were in children visiting their parents abroad. The reason for travel was not specified/unknown for the remaining nine cases.

Health Protection Surveillance Centre
25-27 Middle Gardiner St, Dublin 1, Ireland
www.hpsc.ie
Tel: +353-1-8765300
Fax: +353-1-8561299

Report prepared by:

Ms Fiona Cloak
Dr Patricia Garvey
Ms. Sarah Jackson
Dr Paul McKeown