

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



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

Quarter 1 –2011

May 2011

This is the first 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 1, 2011

Month	HSE area	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Jan	E	Not Specified	13	-	02/01/2011	P-P	AIG
Jan	NE	Hotel	21	1	-	P-P & AB	Noroviral infection
Jan	W	Hospital	16	9	21/12/2010	P-P & AB	Noroviral infection
Jan	W	Hospital	14	14	25/12/2011	P-P	Noroviral infection
Jan	S	Comm. Hosp/Long-stay unit	26	0	06/01/2011	P-P & AB	AIG
Jan	S	Comm. Hosp/Long-stay unit	17	0	05/01/2011	P-P & AB	AIG
Jan	W	Hospital	5	-	14/01/2011	P-P	AIG
Jan	S	Comm. Hosp/Long-stay unit	25	0	20/10/2010	P-P & AB	AIG
Jan	NE	Comm. Hosp/Long-stay unit	2	-	-	P-P	Clostridium difficile
Jan	SE	Hospital	7	-	03/01/2011	P-P	AIG
Jan	SE	Hospital	7	-	11/01/2011	P-P	Noroviral infection
Jan	E	School	8	0	-	P-P & AB	Noroviral infection
Jan	SE	Hospital	10	-	15/11/2011	P-P	Noroviral infection
Jan	NW	Hospital	7	5	-	P-P	Noroviral infection
Jan	E	Residential institution	6	0	20/01/2011	NK	AIG
Jan	S	Comm. Hosp/Long-stay unit	8	0	-	Not Specified	Noroviral infection
Jan	W	Hospital	13	12	-	P-P	Noroviral infection
Jan	E	Comm. Hosp/Long-stay unit	39	-	18/01/2011	P-P	Noroviral infection
Jan	S	Hospital	6	6	-	P-P & AB	Noroviral infection
Jan	S	Comm. Hosp/Long-stay unit	15	0	28/01/2011	P-P & AB	AIG
Feb	S	Hospital	13	-	-	P-P & AB	Noroviral infection
Feb	MW	Hospital	7	7	-	P-P	Noroviral infection
Feb	W	Hospital	4	4	-	P-P & AB	Noroviral infection
Feb	SE	Residential institution	18	-	21/01/2011	P-P	AIG
Feb	SE	Residential institution	13	0	05/01/2011	P-P	AIG
Feb	SE	Residential institution	13	-	27/01/2011	P-P	AIG
Feb	W	Hospital	14	11	01/02/2011	P-P & AB	Noroviral infection
Feb	W	Hospital	7	6	-	P-P & AB	Noroviral infection
Feb	S	Hospital	2	-	-	P-P & AB	Noroviral infection
Feb	S	Comm. Hosp/Long-stay unit	22	0	28/01/2011	P-P & AB	Noroviral infection
Feb	SE	Comm. Hosp/Long-stay unit	12	-	07/02/2011	P-P	Noroviral infection
Feb	E	Restaurant / Cafe	7	-	12/02/2011	FB	AIG
Feb	E	Residential institution	10	0	-	Not Specified	AIG
Feb	S	Residential institution	4	0	16/02/2011	NK	AIG
Feb	NE	Residential institution	8	1	-	P-P & AB	Noroviral infection
Feb	E	Creche	17	0	-	P-P	Rotavirus
Mar	E	Residential institution	28	-	-	NK	Noroviral infection
Mar	E	Comm. Hosp/Long-stay unit	18	9	02/03/2011	NK	Noroviral infection
Mar	M	Residential institution	6	-	-	P-P & AB	Noroviral infection
Mar	NW	Comm. Hosp/Long-stay unit	8	7	26/02/2011	P-P	AIG
Mar	E	Hospital	27	11	04/03/2011	P-P	Noroviral infection
Mar	SE	Hospital	13	-	07/03/2011	P-P	Noroviral infection

Mar	SE	Hospital	11	-	04/03/2011	P-P	AIG
Mar	SE	Hospital	4	0	04/03/2011	P-P	AIG
Mar	M	Comm. Hosp/Long-stay unit	9	-	-	P-P & AB	Noroviral infection
Mar	E	Comm. Hosp/Long-stay unit	18	12	14/03/2011	P-P	AIG
Mar	E	Hospital	22	18	17/03/2011	P-P	Noroviral infection
Mar	S	Residential institution	14	0	09/03/2011	NK	AIG
Mar	SE	Hospital	13	-	14/03/2011	P-P	AIG
Mar	E	Comm. Hosp/Long-stay unit	27	0	-	P-P	Noroviral infection
Mar	S	Comm. Hosp/Long-stay unit	12	-	-	P-P & AB	Noroviral infection
Mar	E	Comm. Hosp/Long-stay unit	8	0	26/03/2011	Not Specified	Noroviral infection
Mar	MW	Hospital	4	-	22/03/2011	P-P	Noroviral infection
Mar	NE	Hospital	44	44	-	P-P & AB	Noroviral infection
Mar	E	Hospital	6	4	25/03/2011	P-P	Noroviral infection
Mar	MW	Community outbreak	3	1	03/01/2011	NK	Salmonellosis

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 1, 2011

Month	HSE region	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Jan	E	Private house	2	0	-	P-P	Giardiasis
Jan	NE	Private house	1	1	04/01/2011	P-P	EHEC
Jan	NW	Private house	2	2	-	P-P	Rotavirus
Jan	NW	Private house	2	2	-	P-P	Rotavirus
Feb	E	Extended family	7	1	23/01/2011	P-P & FB	EHEC
Feb	NW	Private house	4	0	-	P-P	Campylobacter infection
Feb	MW	Private house	3	-	01/11/2010	P-P	EHEC
Feb	SE	Private house	5	4	05/02/2011	P-P & Animal	Cryptosporidiosis
Feb	S	Private house	2	0	05/02/2011	P-P	Cryptosporidiosis
Feb	S	Private house	5	4	27/01/2011	P-P	Cryptosporidiosis
Mar	M	Private house	2	0	17/02/2011	WB	EHEC
Mar	E	Private house	3	1	14/02/2011	Animal contact	Cryptosporidiosis
Mar	W	Private house	3	-	-	P-P & Animal	Cryptosporidiosis
Mar	MW	Private house	3	-	30/01/2011	P-P	EHEC
Mar	M	Private house	1	0	27/02/2011	WB	EHEC
Mar	NE	Private house	3	1	27/02/2011	P-P	Cryptosporidiosis
Mar	MW	Private house	1	-	04/03/2011	P-P	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 1, 2011

Month	HSE area	Type of outbreak	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Organism
Jan	E	General	Other	13	2	06/01/2011	P-P & AB	Influenza
Jan	E	General	Residential institution	9	2	29/12/2010	P-P	Influenza
Jan	E	General	Hospital	3	3	03/01/2011	NK	Influenza
Jan	S	General	School	21	0	-	P-P & AB	Influenza-like illness

Jan	S	General	School	11	0	-	P-P & AB	Influenza-like illness
Jan	S	General	School	7	0	-	P-P & AB	Influenza-like illness
Jan	S	General	School	7	0	-	P-P & AB	Influenza-like illness
Feb	MW	General	Hospital	2	2	17/01/2010	NK	Klebsiella pneumoniae KPC
Mar	S	General	Comm. Hosp/Long-stay unit	29	-	-	P-P	Suspected Scabies
Mar	E	General	Creche	15	0	21/02/2011	P-P	Hand, foot & mouth disease
Mar	E	General	Creche	9	0	09/03/2011	P-P	Hand, foot & mouth disease
Mar	S	General	Hospital	20	-	05/03/2011	P-P	Scabies
Mar	MW	General	Community outbreak	5	-	-	P-P	Enterovirus
Mar	NE	General	Hospital	3	7	02/03/2011	P-P	Vancomycin Resistant Enterococci (VRE)

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. Initial information is provided by a public health professional using a preliminary notification form (by fax or email). A full report is then forwarded 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 on final reports 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 first quarter of 2011. There were 56 general and 17 family IID outbreaks reported during this period, resulting in at least 780 people being ill.

Norovirus (n=33) and Acute infectious gastroenteritis (AIG) (n = 20) were responsible for the majority of general outbreaks of IID (95% of all general outbreaks).

The most common causes of family outbreaks of IID were EHEC (n=7) [41%] and cryptosporidiosis (n=6) [35%]. The other diseases responsible for family outbreaks were Campylobacter infection, giardiasis and rotavirus (Table 2).

Many general IID outbreaks were transmitted person-to-person (82%). Fifty general outbreaks (89%) were reported to have occurred in healthcare settings, i.e. hospitals or residential institutions, during this period.

There were fourteen non-IID outbreaks reported during Quarter 1 - see Table 3.

Table 4 outlines the outbreak rate per HSE-area for outbreaks notified during Q1 2011.

Table 4. Number of Infectious Disease Outbreaks per HSE Region, Q1 2011

HSE Area	No. of outbreaks	Rate per 100,000 population
E	23	1.5
HPSC	-	-
M	4	1.6
MW	8	2.2
NE	7	1.8
NW	5	2.1
SE	12	2.6
S	20	3.2
W	8	2.0
Total	87	2.1

NOTIFICATIONS OF INFECTIOUS INTESTINAL, ZONOTIC AND VECTORBORNE DISEASE

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

Table 5. Intestinal Infectious, Zoonotic and Vectorborne Disease Notifications Quarter 1, 2011 by HSE-Area

Infectious Intestinal Disease	E	M	MW	NE	NW	SE	S	W	Total
Acute infectious gastroenteritis* (incl. rotavirus & <i>C. difficile</i>)	429	97	112	135	75	305	344	212	1709
<i>Bacillus cereus</i> foodborne infection/intoxication	0	0	0	0	0	0	0	0	0
Botulism	~	~	~	~	~	~	~	~	1
Campylobacter infection	134	45	43	38	29	65	62	52	468
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	4	18	15	6	6	16	25	16	106
Enterohaemorrhagic <i>Escherichia coli</i>	5	4	18	2	2	0	1	2	34
Giardiasis	11	0	0	0	0	0	2	3	16
Listeriosis	0	0	0	0	0	0	0	1	1
Noroviral infection	117	19	39	57	5	48	37	38	360
Paratyphoid	~	~	~	~	~	~	~	~	0
Salmonellosis	19	1	13	3	4	5	7	6	58
Shigellosis	5	1	2	0	1	0	1	1	11
Staphylococcal food poisoning	0	0	0	0	0	0	0	0	0
Typhoid	~	~	~	~	~	~	~	~	1
Yersiniosis	1	0	0	0	0	0	1	0	2
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	0	0	0	0	0	2	0	3
Plague	0	0	0	0	0	0	0	0	0
Q Fever	0	0	0	0	0	0	0	0	0
Rabies	0	0	0	0	0	0	0	0	0
Toxoplasmosis	2	1	0	1	0	0	4	0	8
Trichinosis	0	0	0	0	0	0	0	0	0
Typhus	0	0	0	0	0	0	0	0	0
Vectorborne Disease									
Malaria	2	2	0	3	0	0	1	1	9

*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

Human salmonellosis (*S. enterica*) is a notifiable disease. The National Reference Laboratory for Salmonella (NSRL) 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 first quarter of 2011. Comparison of trends with previous years is shown in Figure 1.

Table 6. Salmonellosis Notifications by HSE-Area and Month, Q1 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jan	7	1	7	2	3	1	4	1	26
Feb	3	0	2	1	0	0	1	2	9
Mar	9	0	4	0	1	4	2	3	23
Total	19	1	13	3	4	5	7	6	58

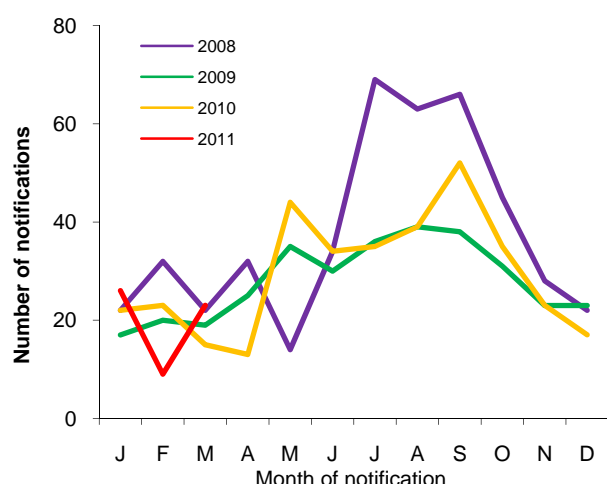


Figure 1. Seasonal Distribution of Human Salmonellosis Notifications, 2008 to end quarter 1 2011

Table 7 shows the serotypes for the *Salmonella* isolates typed by the NSRL in the first quarter of 2011 by HSE area (n=59). The commonest human serotypes isolated were *S. Typhimurium* (n= 20 [34%] –includes 6 cases of monophasic *S. Typhimurium*, 4,5,12:i:-) and *S. Enteritidis* (n= 8 [14%]).

Thirteen (22%) *S. enterica* isolates were reported to NSRL 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 NSRL in Quarter 1, 2011 (Data are provided courtesy of Prof. Martin Cormican and staff, NSRL).

Serotype	E	M	MW	NE	NW	SE	S	W	Total
4,5,12:i:-	3	0	1	0	1	0	1	0	6
Agona	1	0	0	0	0	0	0	0	1
Braenderup	1	0	2	0	0	0	0	0	3
Concord	1	0	0	2	1	0	0	0	4
Corvallis	0	0	1	0	0	0	0	0	1
Derby	1	0	0	0	0	0	0	0	1
Dublin	1	0	0	0	0	1	0	0	2
Enteritidis	4	0	0	1	0	2	1	0	8
Heidelberg	1	0	0	0	0	0	0	0	1
Infantis	0	0	0	0	0	0	0	1	1
Java	1	0	0	0	0	0	0	0	1
Kentucky	1	0	0	0	0	0	0	0	1
Litchfield	0	0	0	0	0	0	0	1	1
Ohio	0	0	0	0	0	0	1	0	1
Saintpaul	1	0	0	0	0	0	0	0	1
Senftenberg	0	0	0	1	0	0	0	0	1
Stanley	1	0	1	0	0	0	0	0	2
Stanleyville	0	0	1	0	0	0	1	0	2
Telekebir	0	0	0	0	0	0	0	1	1
Tennessee	0	0	0	0	0	1	0	0	1
Typhimurium	4	1	4	0	2	0	1	2	14
Umbilo	0	0	3	0	0	0	0	0	3
Unnamed	0	0	1	1	0	0	0	0	2
Total	21	1	14	5	4	4	5	5	59

Table 8. Confirmed *Salmonella* notifications by Serotype and Travel Status, Q1 2011 [n(%)]

Serotype	Indigenous	Travel-associated	Unk/not specified	Total
<i>S. Enteritidis</i>	2 (20%)	2 (14%)	5 (15%)	9 (16%)
<i>S. Typhimurium</i>	4 (40%)	1 (7%)	12 (35%)	17 (29%)
Other	4 (40%)	11 (79%)	17 (50%)	32 (55%)
Total	10 (100%)	14 (100%)	34 (100%)	58

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 was one case of typhoid notified this quarter but no cases of paratyphoid (Table 5). The typhoid case was associated with travel to India.

Outbreaks of Salmonellosis

There was one general outbreak of salmonellosis reported in Q1 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 Q1 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.

Thirty-four EHEC were notified in this quarter, 23 of which were confirmed or probable VTEC (Table 9). This compares with 18 VTEC cases notified in Q1 2010 and 15 in Q1 2009 (Figure 2). Table 9 shows the number of VTEC cases reported by serogroup and month, Q1 2011.

Table 9. Confirmed and Probable VTEC Notified by Serogroup and Month, Q1 2011

Month	O157	O26	Other	Total
Jan	3	1	0	4
Feb	1	6	3	10
Mar	5	4	0	9
Total	9	11	3	23

One confirmed case notified during this quarter was reported as having developed HUS –the case was infected with *E. coli* O26.

Outbreaks of VTEC infection

During this quarter, seven family outbreaks of EHEC infection were reported (see Table 2).

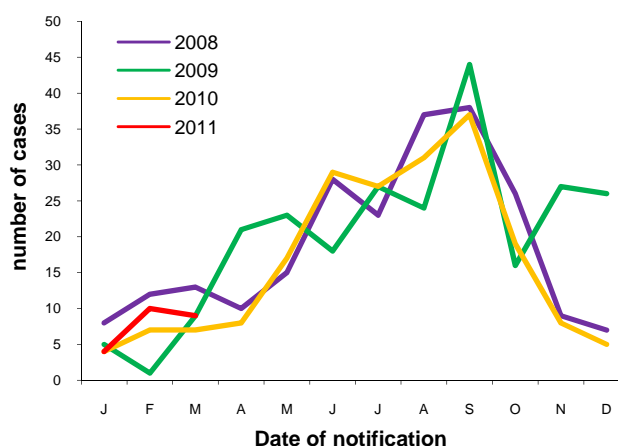


Figure 2. Seasonal Distribution of Confirmed and Probable VTEC Cases Notified 2008 to end quarter 1 2011

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 Q1 2011.

Table 10. Verotoxin typing results of VTEC isolates referred to the HSE DML Public Health Laboratory, Cherry Orchard Hospital in Q1 2011. (Data are provided courtesy of Dr. Eleanor McNamara and Dr. Anne Carroll).

Serogroup	vt1	vt2	vt1+vt2	Total
O157	0	8	1	9
O26	7	0	4	11
Other	0	0	3	3
Total	7	8	8	23

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 first quarter of 2011 are shown in Table 11. The number of cases notified this quarter was higher than quarter 1 in previous years (Figure 3).

Table 11. Campylobacter Notifications by HSE-Area and Month, Q1 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jan	24	6	11	15	5	20	16	13	110
Feb	50	21	15	12	11	21	14	16	160
Mar	60	18	17	11	13	24	32	23	198
Total	134	45	43	38	29	65	62	52	468

Outbreaks of Campylobacter infection

There was one family outbreak of campylobacteriosis reported in Q1 2011 (Tables 1 & 2).

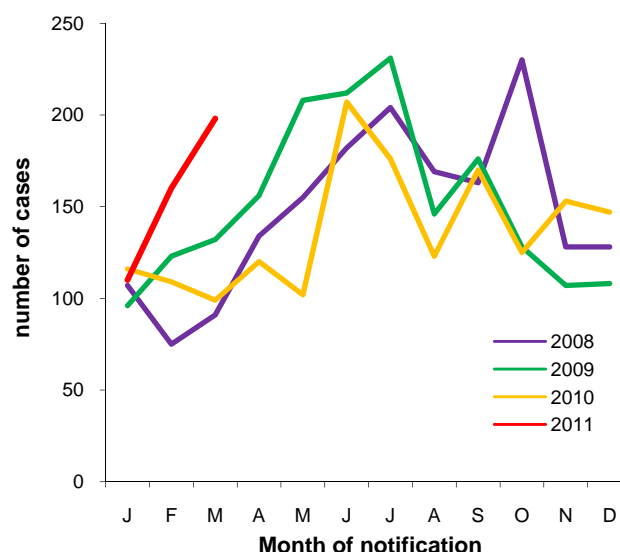


Figure 3. Seasonal distribution of Campylobacter notifications 2008 to end quarter 1 2011

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 Q1 2011, 106 cases of cryptosporidiosis were notified (Table 12), compared to 72 in the same period in 2010 and 62 in Q1 2009 (Figure 4).

Table 12. Cryptosporidiosis Notifications by HSE-Area and Month, Q1 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jan	0	0	1	0	2	0	2	2	7
Feb	1	1	0	0	1	5	8	2	18
Mar	3	17	14	6	3	11	15	12	81
Total	4	18	15	6	6	16	25	16	106

Outbreaks of cryptosporidiosis

There were six family outbreaks of cryptosporidiosis reported in quarter 1 (Tables 1 & 2).

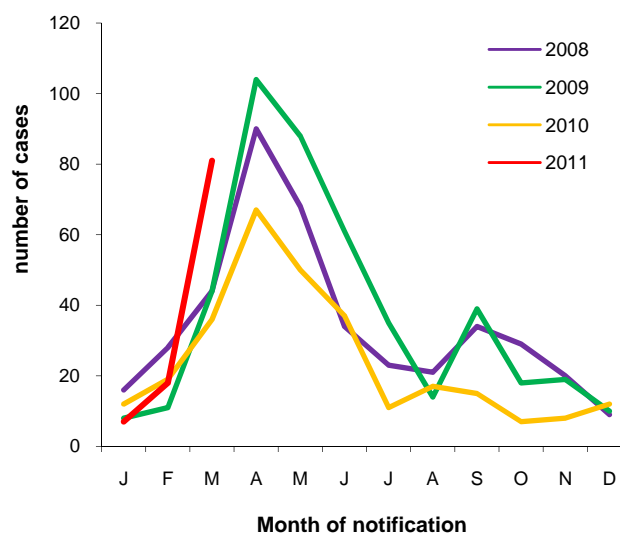


Figure 4. Seasonal distribution of cryptosporidiosis notifications 2008 to end quarter 1 2011

NOROVIRUS

Human noroviral infection became a notifiable disease on January 1st 2004. There were 360 cases notified in the first quarter of 2011, as shown in Table 13. These data are certainly an under-ascertainment of the true burden of disease due to this pathogen.

Table 13. Norovirus Notifications by HSE-Area and Month, Q1 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jan	29	3	17	18	4	23	10	26	130
Feb	30	3	7	9	1	3	25	11	89
Mar	58	13	15	30	0	22	2	1	141
Total	117	19	39	57	5	48	37	38	360

Norovirus outbreaks

Norovirus or suspect viral aetiology is the commonest cause of outbreaks of acute gastroenteritis in Ireland. In the first quarter of 2011 there were 33 outbreaks confirmed as being caused by this virus, involving at least 462 people becoming ill, as outlined in Table 1. The seasonal trend is outlined in Figure 5.

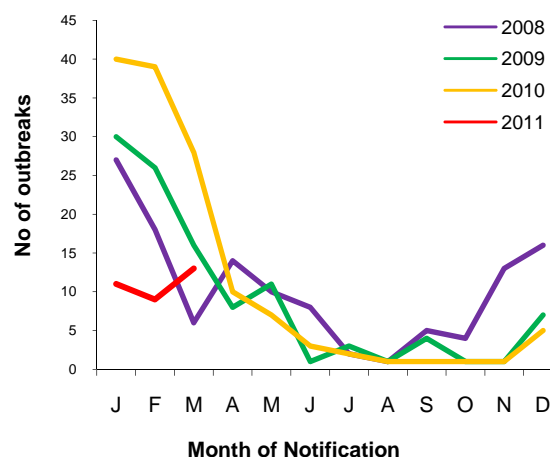


Figure 5. Seasonal Distribution of Confirmed Norovirus Outbreaks, 2008 to end quarter 1 2011.

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 was one case of listeriosis notified in Q1 2011, compared to one in quarter 1 2010 and two in Quarter 1 2009. The case notified this quarter was an adult

case. One human isolate was referred to the NSRL this quarter.

Table 14: Serotypes of Q1 2011 human *Listeria* isolates referred to the NSRL (Data are provided courtesy of Prof. Martin Cormican and staff at the NSRL).

Serotype	Number of isolates
1/2	1

SHIGELLA

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

During Q1 2011, eleven cases of shigellosis were notified (Table 5). This compares with 9 cases notified as shigellosis in Q1 2010 and 15 in Q1 2009. Eight cases were reported as *S. sonnei*, two as *S. flexneri* and one as *S. boydii*.

Eight cases (73%) were reported to have acquired their illness abroad, while country of infection was reported as Ireland for the remaining three cases.

Outbreaks of shigellosis

There were no outbreaks of shigellosis reported in Q1 2011 (Tables 1 & 2).

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 1 2011, 16 cases of giardiasis were notified (Table 5); this compares with 15 cases notified in Q1 2010 and 16 in Q1 2009.

Eleven cases (69%) were reported to have acquired their illness abroad. Country of infection was reported as Ireland for four cases and 'not specified' or 'unknown' for the remaining case.

Outbreaks of giardiasis

There was one family outbreak of giardiasis notified in Q1 2011 (Tables 1 & 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)'.

One case of infant botulism was reported this quarter which was associated with pet turtles.¹

Outbreaks of foodborne intoxications

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

¹HPSC Warns of the Dangers of Reptiles to Children. <http://www.hpsc.ie/hpsc/PressReleases/2011PressReleases/MainBody.12387.en.aspx>

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.

Table 15. Rotaviral Infections Notified under the Category of 'Acute Infectious Gastroenteritis' by HSE-Area and Month, Q1 2011

Month	E	M	MW	NE	NW	SE	S	W	Total
Jan	24	1	10	10	12	20	55	21	153
Feb	51	19	35	26	10	77	67	30	315
Mar	174	67	49	65	23	104	117	107	706
Total	249	87	94	101	45	201	239	158	1174

During Quarter 1 2011, there were 1709 notifications of acute infectious gastroenteritis. Of these, 1174 (69%) were reported as rotavirus (Table 15 & Figure 6). Eight hundred and ninety-five rotavirus

notifications (76%) were for children less than two years of age.

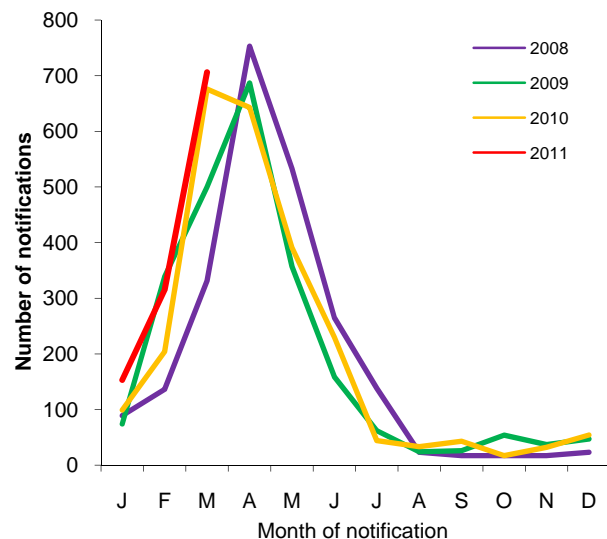


Figure 6. Seasonal Distribution of Rotavirus Notifications, 2008 to end quarter 1 2011

Outbreaks of Rotavirus

There was one general and two family outbreaks of rotavirus notified this quarter (Tables 1 & 2).

NON-IID ZOO NOTIC DISEASES

Non-IID zoonoses now notifiable include: anthrax, brucellosis, echinococcosis, leptospirosis, plague, Q fever, toxoplasmosis, trichinosis, typhus and rabies. The Q1 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 twelve cases notified in the same period in 2010 and 14 cases in Q1 2009.

Three cases of leptospirosis were notified in Q1 2011; this compares with 6 in Q1 2010 and five in Q1 2009. One case reported possible exposure during recreational activities, one as a result of animal contact and the exposure history was unknown for the remaining case.

There were no cases of Q fever notified this quarter, compared to five in Q1 2010 and three in Q1 2009.

MALARIA

Malaria is a notifiable disease for many years. The Q1 2011 notifications are reported in Table 5 by HSE-Area.

Nine cases of malaria were notified in Q1 2011. This compares with 18 cases reported in Q1 2010 and 13 in Q1 2009.

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

Five cases were exposed in Sub-Saharan Africa. No data were provided on country of infection for the remaining four cases.

The reason for travel for three cases was reported as 'visiting family in country of origin', one case reported holiday travel and one case occurred in an Irish citizen living abroad. The reason for travel was not specified/unknown for four cases.

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