

SURVEILLANCE of INFECTIOUS INTESTINAL (IID), ZOO NOTIC 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 2 –2010

September 2010

This is the second quarterly report for 2010 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 2, 2010

Month	HSE area	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Apr	MW	Residential institution	12	0	28/03/2010	P-P	AIG
Apr	E	Other	19	8	02/04/2010	NK	Noroviral infection
Apr	NE	Comm. Hosp/Long-stay unit	7	1	30/03/2010	P-P & AB	Noroviral infection
Apr	SE	Residential institution	14	-	01/04/2010	P-P	AIG
Apr	SE	Hospital	18	-	29/03/2010	P-P	Noroviral infection
Apr	E	Hospital	101	-	02/04/2010	P-P	Noroviral infection
Apr	E	Residential institution	7	0	02/04/2010	P-P & AB	AIG
Apr	S	Comm. Hosp/Long-stay unit	15	0	09/02/2010	P-P	Noroviral infection
Apr	S	Residential institution	27	-	03/02/2010	P-P	Noroviral infection
Apr	SE	Residential institution	23	-	11/03/2010	P-P	AIG
Apr	W	Hotel	30	0	-	NK	Noroviral infection
Apr	E	Community outbreak	6	0	22/02/2010	P-P	Shigellosis
Apr	S	Comm. Hosp/Long-stay unit	9	0	-	P-P & AB	Noroviral infection
Apr	E	Residential institution	18	-	-	P-P	Noroviral infection
Apr	SE	Residential institution	17	0	21/04/2010	P-P	AIG
Apr	NW	Restaurant / Cafe	35	2	29/04/2010	NK	Rotavirus & Norovirus
May	NE	Residential institution	9	0	22/04/2010	P-P & AB	AIG
May	SE	Residential institution	15	0	24/04/2010	P-P	AIG
May	SE	Hospital	4	0	28/03/2010	P-P	Noroviral infection
May	E	Comm. Hosp/Long-stay unit	18	1	25/04/2010	P-P	Noroviral infection
May	M	Private house	15	2	25/04/2010	Not Specified	Salmonellosis
May	S	Comm. Hosp/Long-stay unit	4	-	24/04/2010	P-P & AB	Noroviral infection
May	S	Comm. Hosp/Long-stay unit	4	-	05/05/2010	P-P & AB	Noroviral infection
May	E	Comm. Hosp/Long-stay unit	12	-	06/05/2010	P-P	AIG
May	E	Residential institution	9	-	01/05/2010	P-P	Noroviral infection
May	NW	Comm. Hosp/Long-stay unit	13	-	13/05/2010	P-P	AIG
May	S	Other	1	1	24/04/2010	Not Specified	EHEC
May	E	Comm. Hosp/Long-stay unit	21	-	-	P-P	Noroviral infection
May	E	Comm. Hosp/Long-stay unit	8	-	14/05/2010	P-P	Noroviral infection
May	MW	Residential institution	3	2	22/05/2010	P-P	AIG
Jun	S	Other	3	-	31/05/2010	NK	Noroviral infection
Jun	HPSC	Community outbreak	4	1	18/05/2010	NK	Salmonellosis
Jun	E	Residential institution	23	-	31/05/2010	P-P	AIG
Jun	E	Hospital	149	134	-	P-P	Noroviral infection
Jun	MW	Hospital	2	2	28/05/2010	P-P	Noroviral infection

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 2, 2010

Month	HSE region	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Apr	S	Private house	4	2	27/03/2010	NK	EHEC
Apr	S	Extended family	2	-	02/04/2010	Not Specified	Cryptosporidiosis

Apr	E	Travel related	2	2	01/04/2010	FB & WB	Typhoid
Apr	NW	Private house	6	0	-	P-P	EHEC
May	NW	Private house	2	0	-	P-P	Rotavirus
May	NW	Private house	2	1	23/04/2010	P-P	Cryptosporidiosis
May	NW	Private house	2	0	25/04/2010	P-P & Animal	Salmonellosis
Jun	S	Private house	2	2	13/05/2010	Animal contact	Cryptosporidiosis
Jun	S	Extended family	5	2	23/05/2010	FB	Salmonellosis
Jun	NW	Private house	2	0	-	P-P	EHEC
Jun	NW	Private house	1	1	07/06/2010	P-P	EHEC
Jun	NW	Private house	2	0	-	P-P	Cryptosporidiosis
Jun	S	Private house	1	1	08/06/2010	NK	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 2, 2010

Month	HSE area	Type of outbreak	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Organism
Apr	S	Family	Private house	3	1	04/03/2010	P-P	Measles
Apr	E	General	Creche	13	0	23/10/2009	P-P	Varicella-zoster Virus
Apr	E	General	Creche	2	1	10/03/2010	P-P & AB	Measles
Apr	E	General	School	2	1	21/03/2010	P-P & AB	Measles
Apr	S	Family	Private house	2	1	-	P-P	Measles
Apr	E	Family	Private house	2	0	-	P-P	Hepatitis B (acute and chronic)
Apr	S	Family	Private house	4	0	15/01/2010	P-P	Measles
Apr	E	General	Creche	9	0	05/03/2010	P-P & AB	Varicella
May	W	General	Other	2	-	16/04/2010	P-P	Measles
May	E	General	Other	2	0	31/03/2010	P-P	Hepatitis A (acute)
May	E	General	School	3	0	-	P-P	Parvovirus B19
May	E	Family	Private house	3	0	07/05/2010	P-P & AB	Measles
May	E	General	School	19	-	22/03/2010	P-P & AB	Varicella
May	NW	General	Community outbreak	46	1	10/05/2010	P-P	Pertussis
May	S	General	Other	3	2	-	P-P	Hepatitis A (acute)
Jun	E	General	Hospital	4	1	26/04/2010	P-P & AB	Varicella-zoster Virus
Jun	E	General	Creche	7	-	25/05/2010	NK	Measles

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 second quarter of 2010. There were 35 general and 13 family IID outbreaks reported during this period, resulting in at least 708 people being ill.

Norovirus (n = 19) and acute infectious gastroenteritis (AIG) (n = 11) were responsible for the majority of general outbreaks of IID (86% of all general outbreaks).

The most common cause of family outbreaks of IID was EHEC, with five outbreaks (38% of all family outbreaks) caused by this pathogen. The other diseases responsible for family outbreaks were cryptosporidiosis, rotavirus, salmonellosis and typhoid (Table 2).

Many general IID outbreaks were transmitted person-to-person (80%). Twenty-seven general outbreaks (77%) were reported to have occurred in healthcare settings, i.e. hospitals or residential institutions, during this period.

There were seventeen non-IID outbreaks reported during Quarter 2 - see Table 3.

Table 4 outlines the outbreak rate per HSE-area for outbreaks notified during Q2 2010.

Table 4. No. of infectious disease outbreaks per HSE region, Q2 2010

HSE Area	No. of outbreaks	Rate per 100,000 population
E	24	1.6
M	1	0.4
MW	3	0.8
NE	2	0.5
NW	10	4.2
SE	6	1.3
S	16	2.6
W	2	0.5
Total	64	1.5

NOTIFICATIONS OF INFECTIOUS INTESTINAL, ZOOBOTIC AND VECTORBORNE DISEASE

The number of notifications of infectious intestinal, zoonotic and vectorborne disease by HSE-Area for the second quarter of 2010 is shown in Table 5.

Table 5. Intestinal Infectious, Zoonotic and Vectorborne Disease Notifications Quarter 2, 2010 by HSE-Area

Infectious Intestinal Disease	E	M	MW	NE	NW	SE	S	W	Total
Acute infectious gastroenteritis* (incl. rotavirus & <i>C. difficile</i>)	372	189	78	101	175	259	245	279	1698
<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	138	27	47	24	21	55	68	49	429
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	3	9	21	8	17	27	27	42	154
Enterohaemorrhagic <i>Escherichia coli</i>	4	1	13	1	19	1	16	2	57
Giardiasis	3	0	0	3	0	0	5	0	11
Listeriosis	0	0	0	1	0	1	0	0	2
Noroviral infection	143	3	50	26	5	15	40	31	313
Paratyphoid	~	~	~	~	~	~	~	~	1
Salmonellosis	30	23	5	6	6	4	12	4	90
Shigellosis	8	0	0	1	2	1	1	1	14
Staphylococcal food poisoning	0	0	0	0	0	0	0	0	0
Typhoid	~	~	~	~	~	~	~	~	5
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	1	1
Leptospirosis	1	0	0	0	0	0	0	0	1
Plague	0	0	0	0	0	0	0	0	0
Q Fever	0	0	0	0	0	0	1	0	1
Rabies	0	0	0	0	0	0	0	0	0
Toxoplasmosis	3	2	1	1	1	0	0	1	9
Trichinosis	0	0	0	0	0	0	0	0	0
Typhus	0	0	0	0	0	0	0	0	0
Vectorborne Disease									
Malaria	4	3	1	0	2	5	2	2	19

*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 second quarter of 2010. Comparison of trends with previous years is shown in Figure 1.

Table 6. Salmonellosis Notifications by HSE-Area and Month, Q2 2010

Month	E	M	MW	NE	NW	SE	S	W	Total
Apr	6	2	1	1	2	0	1	0	13
May	13	17	2	2	2	2	5	1	44
Jun	11	4	2	3	2	2	6	3	33
Total	30	23	5	6	6	4	12	4	90

Note: includes 7 probable cases reported as epi-linked to confirmed cases



Figure 1. Seasonal Distribution of Human Salmonellosis Notifications, 2007 to end quarter 2 2010

Table 7 shows the serotypes for the *S. enterica* isolates typed by the NSRL in the second quarter of 2010 by HSE area (n=73). The commonest human serotypes isolated were *S. Typhimurium* (n= 23 [28%]) and *S. Enteritidis* (n=13 [16%]).

Twenty-three (28%) *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.

Table 7. Serotypes of *S. enterica* referred to NSRL in Quarter 2, 2010 (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:-	0	1	0	1	0	3	0	1	6
Aberdeen	1	0	0	0	0	0	0	0	1
Cerro	0	0	0	0	0	1	0	0	1
Chester	1	0	0	0	0	0	0	0	1
Concord	0	0	0	1	0	0	0	0	1
Dublin	0	1	0	0	0	0	0	0	1
Enteritidis	8	1	3	0	0	0	0	1	13
Indiana	0	0	1	0	0	0	0	0	1
Infantis	1	8	0	0	0	0	0	0	9
Itami	0	0	0	1	0	0	0	0	1
Java	2	0	1	0	0	0	1	0	4
Kentucky	0	0	0	0	0	0	1	0	1
Mbandaka	1	0	0	0	0	0	0	0	1
Montevideo	2	0	0	2	0	0	0	0	4
Muenster	0	1	0	0	0	0	0	0	1
Newport	0	0	0	0	2	0	0	0	2
Paratyphi A	0	0	0	0	0	1	0	0	1
Saintpaul	1	0	0	0	0	0	0	0	1
Senftenberg	1	0	0	0	0	0	0	0	1
Typhi	3	0	0	0	0	1	0	0	4
Typhimurium	10	3	0	0	2	6	2	0	23
Umbilo	0	0	0	0	0	1	0	0	1
Unnamed	2	0	0	0	0	0	0	0	2
Worthington	0	0	0	1	0	0	0	0	1
Total	33	15	5	6	4	13	4	2	82

Table 8. Confirmed *Salmonella* notifications by serotype and travel status, Q2 2010 [n(%)]

Serotype	Indigenous	Travel-associated	Unk/not specified	Total
S. Enteritidis	0 (0%)	8 (44%)	5 (19%)	13 (16%)
S. Typhimurium	16 (41%)	3 (17%)	9 (35%)	28 (34%)
Other	19 (49%)	7 (39%)	8 (31%)	34 (41%)
Not specified	4 (10%)	0 (0%)	4 (15%)	8 (9%)
Total	39 (100%)	18 (100%)	26 (100%)	83

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 5 notifications of *S. Typhi* reported during Q2 2010, which were associated with travel to India (n=2) and Bangladesh (n=2), and one not specified. There was one notification of *S. Paratyphi* reported during Q2 2010, associated with travel to Pakistan.

Outbreaks of salmonellosis

There were four outbreaks of salmonellosis reported in Q2 2010, two family outbreaks and two general outbreaks (Tables 1&2). There was one family outbreak of *S. Typhi* associated with travel to India.

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 Q2 2010 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.

Fifty-seven EHEC were notified in this quarter, all of which were confirmed or probable VTEC (Table 9). This compares with 62 VTEC cases notified in Q2 2009 and 53 in Q2 2008 (Figure 2). Table 9 shows the number of VTEC cases reported by serogroup and month, Q2 2010.

Table 9. Confirmed and Probable VTEC Notified by Serogroup and Month, Q2 2010

Month	O157	O26	Other	Total
Apr	5	3	1	9
May	9	6	3	18
Jun	7	23 ^a	0	30
Total	21	32	4	57

^a includes one case reported as a probable case on the basis of being epidemiologically linked to a confirmed case

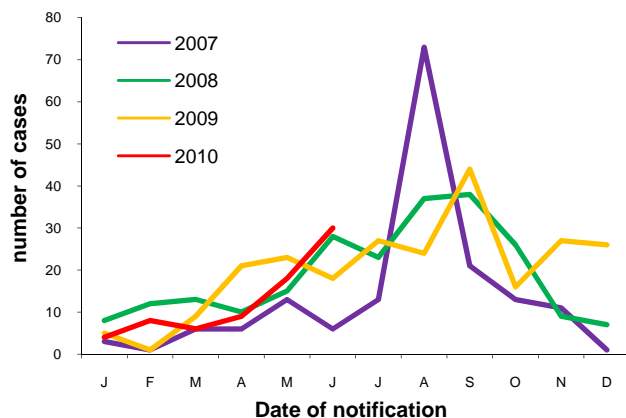


Figure 2. Seasonal distribution of confirmed and probable VTEC cases notified 2007 to end quarter 2 2010

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

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 Q2 2010.

Table 10. Verotoxin typing results of VTEC isolates referred to the HSE DML Public Health Laboratory, Cherry Orchard Hospital in Q2 2010. (Data are provided courtesy of Dr. Eleanor McNamara and Dr. Anne Carroll).

Serogroup	vt1	vt2	vt1+vt2	Pending	Total
O157	0	16	5	0	21
O26	20	1	9	1	31
Other	0	3	1	0	4
Total	20	20	15	1	56^a

^aexcludes one notified probable case as no isolate available for typing

Outbreaks of VTEC infection

During this quarter, one general and five family outbreaks of VTEC infection were reported (see Tables 1 & 2).

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 second quarter of 2010 are shown in Table 11. The number of cases notified this quarter is similar to quarter 2 in previous years (Figure 3).

Table 11. Campylobacter Notifications by HSE-Area and Month, Q2 2010

Month	E	M	MW	NE	NW	SE	S	W	Total
Apr	38	8	20	5	5	13	21	10	120
May	38	6	10	7	5	18	11	7	102
Jun	62	13	17	12	11	24	36	32	207
Total	138	27	47	24	21	55	68	49	429

Outbreaks of Campylobacter infection

There were no outbreaks of campylobacteriosis reported in Q2 2010 (Table 2).

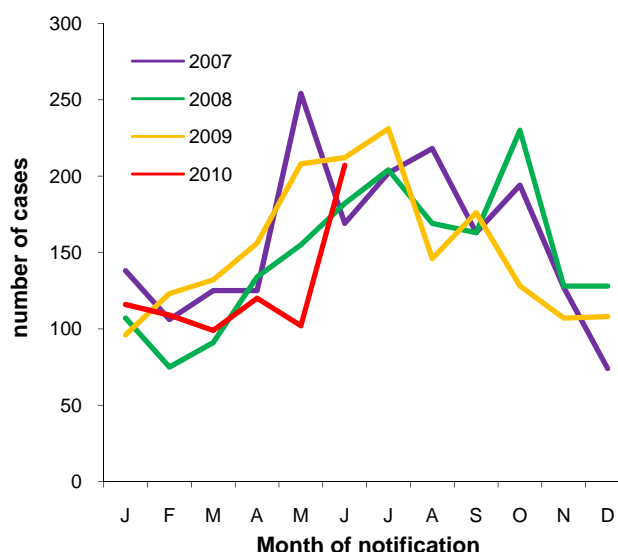


Figure 3. Seasonal distribution of Campylobacter notifications 2007 to end quarter 2 2010

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 Q2 2010, 154 cases of cryptosporidiosis were notified (Table 12), compared to 249 in the same period last year and 192 in Q2 2008 (Figure 4).

Table 12. Cryptosporidiosis Notifications by HSE-Area and Month, Q2 2010

Month	E	M	MW	NE	NW	SE	S	W	Total
Apr	1	6	11	2	2	14	13	18	67
May	1	1	5	2	9	7	9	16	50
Jun	1	2	5	4	6	6	5	8	37
Total	3	9	21	8	17	27	27	42	154

Outbreaks of cryptosporidiosis

There were four family outbreaks of cryptosporidiosis reported in Quarter 2 (Table 2).

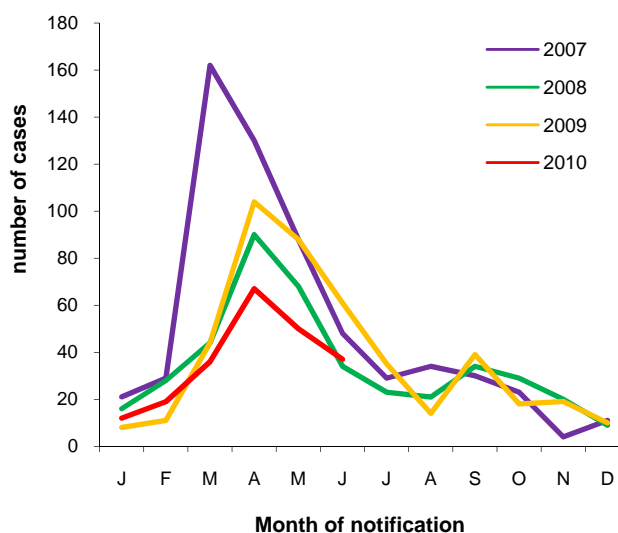


Figure 4. Seasonal distribution of cryptosporidiosis notifications 2007 to end quarter 2 2010

NOROVIRUS

Human noroviral infection became a notifiable disease on January 1st 2004. There were 313 cases notified in the second quarter of 2010, 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, Q2 2010

Month	E	M	MW	NE	NW	SE	S	W	Total
Apr	77	3	32	23	3	7	20	19	184
May	51	0	9	2	2	5	13	10	92
Jun	15	0	9	1	0	3	7	2	37
Total	143	3	50	26	5	15	40	31	313

Norovirus outbreaks

Norovirus or suspect viral aetiology is the commonest cause of outbreaks of acute gastroenteritis in Ireland. In the second quarter of 2010 there were 19 outbreaks confirmed as being caused by this virus, involving at

least 406 people becoming ill, as outlined in Table 1. The seasonal trend is outlined in Figure 5.

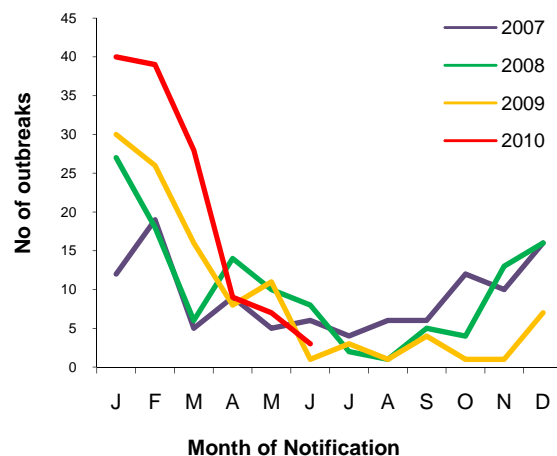


Figure 5. Seasonal distribution of confirmed norovirus outbreaks, 2007 to end quarter 2 2010.

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 two cases of listeriosis notified in Q2 2010, compared to three in quarter 2 2009 and two in quarter 2 2008. There was one pregnancy related case

and one non-pregnancy related adult case. One human isolate was referred to the NSRL this quarter.

Table 14: Serotypes of Q2 2010 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 Q2 2010, fourteen cases of shigellosis were notified (Table 5). This compares with 18 cases notified as shigellosis in Q2 2009 and 30 in Q2 2008. Ten cases were reported as *S. sonnei*, two as *S. flexneri* and two as *Shigella* species.

Three cases (21%) were reported to have acquired their illness abroad, in Egypt, India and Nigeria, respectively. Country of infection was reported as Ireland for four cases and 'not specified' or 'unknown' for the remaining seven cases.

Outbreaks of shigellosis

There was one general outbreak of shigellosis reported in Q2 2010 (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 1 2010, 11 cases of giardiasis were notified (Table 5); this compares with 22 cases notified in Q2 2009 and 22 in Q2 2008.

Outbreaks of giardiasis

There were no outbreaks of giardiasis notified in Q2 2010 (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)'.

There were no cases of foodborne infection/intoxication notified during this quarter.

Outbreaks of foodborne intoxications

There were no outbreaks of food-borne infection/intoxication notified this quarter (Table 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.

Table 15. Rotaviral Infections Notified under the Category of 'Acute Infectious Gastroenteritis' by HSE-Area and Month, Q2 2010

Month	E	M	MW	NE	NW	SE	S	W	Total
Apr	112	94	26	45	62	110	89	105	643
May	62	52	25	28	46	54	50	74	391
Jun	24	35	4	20	43	27	36	41	230
Total	198	181	55	93	151	191	175	220	1264

During Quarter 2 2010, there were 1698 notifications of acute infectious gastroenteritis. Of these, 1264 (74%) were reported as rotavirus (as shown in Table 15 & Figure 6).

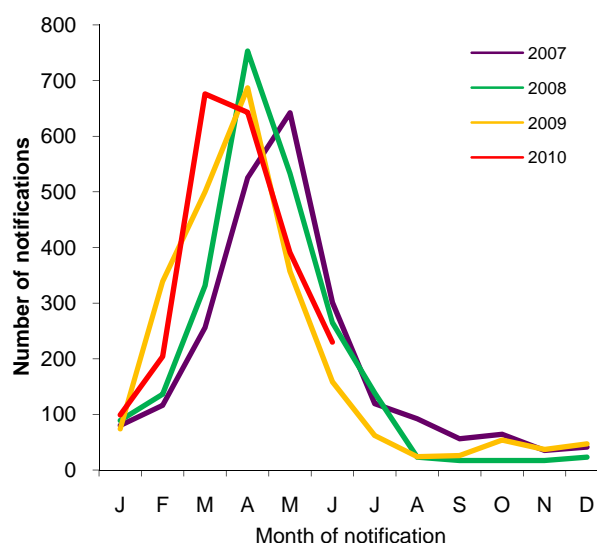


Figure 6. Seasonal distribution of rotavirus notifications 2007 to end quarter 2 2010

Outbreaks of Rotavirus

There was one family outbreak of rotavirus and one general outbreak of rotavirus and norovirus 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 Q2 2010 notifications of these zoonotic diseases are reported by HSE-Area in Table 5.

Nine cases of toxoplasmosis were notified in this quarter. This compares with seven cases notified in the same period in 2009 and 17 cases in Q2 2008.

There were no cases of brucellosis reported during this quarter compared with none in Q2 2009 and one in Q2 2008.

One case of leptospirosis was notified in Q2 2010; this compares with 3 in Q2 2009 and three in Q2 2008. This case was reported as having had occupational exposure.

There was one case of Q fever notified this quarter, compared to eight in Q2 in 2009 and three in Q2 2008.

There was one case of echinococcosis notified in Q2 2010.

MALARIA

Malaria is a notifiable disease for many years. The Q4 2009 notifications are reported in Table 5 by HSE-Area.

Nineteen cases of malaria were notified in Q2 2010. This compares with 16 cases reported in Q2 2009 and 21 in Q2 2008.

Twelve cases were reported as *P. falciparum*, three as *P. ovale*, one as *P. vivax* and the species was not specified for three cases.

Thirteen cases were exposed in Sub-Saharan Africa and one in Asia. No data were provided on country of infection for the remaining five cases.

The reason for travel for nine cases was reported as visiting family in country of origin, three cases were Irish citizens living abroad, one was reported as business/professional travel and the reason for travel for two cases was reported as 'other'. The reason for travel was not specified/unknown for four cases.

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