

# **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 4 –2010**

**February 2011**

This is the fourth 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 4, 2010**

Month	HSE area	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Oct	W	Residential institution	9	0	09/10/2010	P - P	AIG
Oct	W	Hospital	21	18	-	P - P	Norovirus
Oct	S	Not Specified	2	-	-	Not Specified	<i>Clostridium difficile</i>
Oct	S	Residential institution	6	2	-	P - P	<i>Clostridium difficile</i>
Oct	E	Hotel	15	-	01/10/2010	Not Specified	AIG
Nov	SE	Hotel	5	1	26/10/2010	P - P	Campylobacter
Nov	HPSC	Travel related	4	2	18/09/2010	Unknown	Salmonella
Nov	SE	Hotel	13	0	24/10/2010	P-P & WB	Norovirus
Dec	E	Comm. Hosp/Long-stay unit	26	-	18/12/2010	P - P	AIG
Dec	E	Comm. Hosp/Long-stay unit	17	-	16/12/2010	P - P	AIG
Dec	E	Hospital	77	52	10/12/2010	P - P	Norovirus
Dec	E	Residential institution	22	-	13/12/2010	Unknown	AIG
Dec	NE	Residential institution		-	-	P - P	Norovirus
Dec	W	Residential institution	15	0	11/12/2010	P-P & AB	Norovirus
Dec	NW	Comm. Hosp/Long-stay unit	10	10	23/10/2010	P - P	<i>Clostridium difficile</i>
Dec	S	Residential institution	4	-	-	Not Specified	Norovirus
Dec	W	Hospital	23	17	26/11/2010	P-P & AB	Norovirus
Dec	NE	Residential institution	3	-	29/11/2010	P - P	AIG

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 4, 2010**

Month	HSE region	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Oct	E	Private house	2	0	25/06/2010	P - P	EHEC
Oct	NE	Private house	2	0	-	P - P	Cryptosporidiosis
Oct	M	Private house	2	1	14/10/2010	WB & Animal	EHEC
Oct	M	Travel related	2	1	12/10/2010	P-P & FB	Salmonella
Oct	M	Travel related	1	0	07/10/2010	WB	Cryptosporidiosis
Oct	NE	Extended family	1	1	20/09/2010	Unknown	EHEC
Oct	SE	Extended family	2	1	21/09/2010	P-P & FB	Salmonella
Oct	NW	Private house	2	1	20/09/2010	P-P & AB	EHEC
Oct	SE	Private house	2	0	11/09/2010	Unknown	EHEC
Oct	MW	Private house	1	1	25/08/2010	P - P	EHEC
Oct	MW	Private house	1	-	-	P - P	EHEC
Oct	NE	Private house	1	1	27/09/2010	P-P & WB	EHEC
Oct	M	Private house	1	0	17/09/2010	P-P & Animal	EHEC
Nov	M	Not Specified	1	1	12/11/2010	Not Specified	EHEC
Nov	MW	Private house	1	-	23/10/2010	P - P	EHEC
Nov	MW	Private house	3	1	01/11/2010	P - P	Salmonella
Nov	E	Travel related	2	-	24/09/2010	Unknown	Salmonella
Nov	E	Extended family	3	0	13/10/2010	P - P	Salmonella
Nov	M	Private house	2	0	02/11/2010	Unknown	EHEC

Nov	M	Private house	2	1	20/09/2010	P-P & Animal	EHEC
Dec	M	Private house	3	2	12/11/2010	P - P	Salmonella

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 4, 2010**

Month	HSE area	Type of outbreak	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Organism
Nov	SE	General	Residential institution	21	-	01/08/2010	P - P	Suspected Scabies
Nov	S	Family	Private house	2	2	06/11/2010	P-P & AB	Meningococcal disease
Oct	E	General	Hotel	2	2	17/08/2010	WB	Legionella
Oct	S	General	Other	6	0	-	P-P & AB	Hand Foot & Mouth Disease
Oct	NW	Family	Private house	2	0	24/09/2010	Not Specified	Measles
Oct	E	Family	School	4	0	14/09/2010	Other	Mumps
Dec	S	General	School	25	0	-	Not Specified	Influenza-like illness
Dec	S	General	School	13	0	-	Not Specified	Influenza-like illness
Dec	W	General	Community outbreak	12	0	05/12/2010	P - P	Influenza A(H1N1)v
Dec	S	General	School	33	0	-	Not Specified	Influenza-like illness
Dec	E	General	Hospital	10	6	29/11/2010	P - P	Influenza A(H1N1)v
Dec	W	General	School	41	0	06/12/2010	P - P	Influenza A(H1N1)v
Dec	E	General	Community outbreak	3	0	06/12/2010	P - P	Influenza-like illness

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 1<sup>st</sup> 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 fourth quarter of 2010. There were 18 general and 21

family IID outbreaks reported during this period, resulting in at least 309 people being ill.

Acute infectious gastroenteritis (AIG) (n = 6) and Norovirus (n = 7) were responsible for the majority of general outbreaks of IID (72% of all general outbreaks).

The most common cause of family outbreaks of IID was EHEC, with 13 outbreaks (62% of all family outbreaks) caused by this pathogen. The other diseases responsible for family outbreaks were salmonellosis and cryptosporidiosis (Table 2).

Many general IID outbreaks were transmitted person-to-person (55%). Thirteen general outbreaks (72%) were reported to have occurred in healthcare settings, i.e. hospitals or residential institutions, during this period.

There were thirteen non-IID outbreaks reported during Quarter 4 - see Table 3.

Table 4 outlines the outbreak rate per HSE-area for outbreaks notified during Q4 2010.

**Table 4. No. of infectious disease outbreaks  
per HSE region, Q4 2010**

<b>HSE Area</b>	<b>No. of outbreaks</b>	<b>Rate per 100,000 population</b>
<b>E</b>	12	0.8
<b>HPSC</b>	1	n/a
<b>M</b>	8	3.2
<b>MW</b>	4	1.1
<b>NE</b>	5	1.3
<b>NW</b>	3	1.3
<b>SE</b>	5	1.1
<b>S</b>	8	1.3
<b>W</b>	6	1.5
<b>Total</b>	<b>52</b>	<b>1.2</b>

## NOTIFICATIONS OF INFECTIOUS INTESTINAL, ZONOTIC AND VECTORBORNE DISEASE

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

**Table 5. Intestinal Infectious, Zoonotic and Vectorborne Disease Notifications Quarter 4, 2010 by HSE-Area**

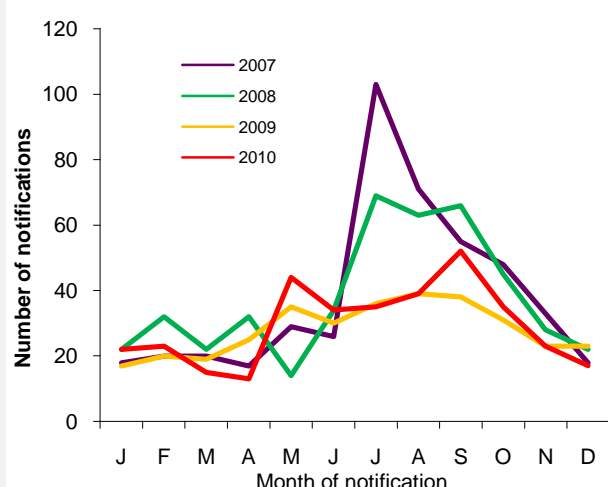
<b>Infectious Intestinal Disease</b>	<b>E</b>	<b>M</b>	<b>MW</b>	<b>NE</b>	<b>NW</b>	<b>SE</b>	<b>S</b>	<b>W</b>	<b>Total</b>
Acute infectious gastroenteritis* (incl. rotavirus & <i>C. difficile</i> )	178	15	26	21	36	99	135	47	<b>557</b>
<i>Bacillus cereus</i> foodborne infection/intoxication	0	0	0	0	0	0	0	0	<b>0</b>
Botulism	0	0	0	0	0	0	0	0	<b>0</b>
Campylobacter infection	138	39	38	31	27	50	54	48	<b>425</b>
Cholera	0	0	0	0	0	0	0	0	<b>0</b>
<i>Clostridium perfringens</i> (type A) food-borne disease	0	0	0	0	0	0	0	0	<b>0</b>
Cryptosporidiosis	5	4	3	5	1	2	3	4	<b>27</b>
Enterohaemorrhagic <i>Escherichia coli</i>	6	13	6	3	2	4	4	2	<b>40</b>
Giardiasis	3	1	1	3	0	3	4	0	<b>15</b>
Listeriosis	2	0	0	0	0	0	0	0	<b>2</b>
Noroviral infection	57	2	4	6	2	4	10	21	<b>106</b>
Paratyphoid	~	~	~	~	~	~	~	~	<b>2</b>
Salmonellosis	29	10	9	6	1	8	6	6	<b>75</b>
Shigellosis	8	1	2	0	0	1	4	2	<b>18</b>
Staphylococcal food poisoning	0	0	0	0	0	0	0	0	<b>0</b>
Typhoid	~	~	~	~	~	~	~	~	<b>0</b>
Yersiniosis	0	0	0	0	0	0	0	0	<b>0</b>
<b>Zoonotic Disease</b>									
Anthrax	0	0	0	0	0	0	0	0	<b>0</b>
Brucellosis	0	0	0	0	0	0	0	0	<b>0</b>
Echinococcosis	0	0	0	0	0	0	0	0	<b>0</b>
Leptospirosis	2	0	0	0	1	0	1	1	<b>5</b>
Plague	0	0	0	0	0	0	0	0	<b>0</b>
Q Fever	0	0	3	0	0	0	0	0	<b>3</b>
Rabies	0	0	0	0	0	0	0	0	<b>0</b>
Toxoplasmosis	4	0	2	0	0	0	3	3	<b>12</b>
Trichinosis	0	0	0	0	0	0	0	0	<b>0</b>
Typhus	0	0	0	0	0	0	0	0	<b>0</b>
<b>Vectorborne Disease</b>									
Malaria	11	1	1	1	1	1	2	2	<b>20</b>

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

**Table 6. Salmonellosis Notifications by HSE-Area and Month, Q4 2010**

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	16	4	0	3	1	7	1	3	35
Nov	9	2	3	2	0	1	4	2	23
Dec	4	4	6	1	0	0	1	1	17
<b>Total</b>	<b>29</b>	<b>10</b>	<b>9</b>	<b>6</b>	<b>1</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>75</b>



**Figure 1. Seasonal Distribution of Human Salmonellosis Notifications, 2007 to end quarter 4 2010**

Table 7 shows the serotypes for the *Salmonella* isolates typed by the NSRL in the fourth quarter of 2010 by HSE area (n=80). The commonest human serotypes isolated were *S. Typhimurium* (n= 35 [44%] –includes 3 cases of monophasic *S. Typhimurium*, 4,5,12:i:-) and *S. Enteritidis* (n=17 [21%]).

Twenty-four (30%) *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 4, 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:-	2	0	0	0	0	0	0	1	3
Bareilly	0	0	0	1	0	0	0	0	1
Braenderup	2	0	0	0	0	1	1	0	4
Bredeney	0	0	0	1	0	0	0	0	1
Dublin	2	0	1	0	0	1	1	0	5
Enteritidis	7	3	2	1	0	2	1	1	17
Hvittingfoss	0	0	0	0	0	1	0	0	1
Infantis	0	0	0	1	0	1	0	0	2
I 45:g,z51	1	0	0	0	0	0	0	0	1
Javiana	1	0	0	0	0	0	0	0	1
Kottbus	0	0	1	0	0	0	0	0	1
Muenchen	1	0	0	0	0	0	0	0	1
Newport	1	0	0	0	0	0	0	0	1
Paratyphi A	~	~	~	~	~	~	~	~	1
Paratyphi B	~	~	~	~	~	~	~	~	1
Saintpaul	1	1	0	0	0	0	0	0	2
Senftenberg	0	1	0	0	0	0	0	0	1
Stanley	1	0	0	0	0	0	0	0	1
Tafo	0	0	0	0	0	1	0	0	1
Typhimurium	10	7	4	1	2	1	4	3	32
Unnamed	1	0	0	1	0	0	0	0	2
<b>Total</b>	<b>31</b>	<b>12</b>	<b>8</b>	<b>6</b>	<b>2</b>	<b>9</b>	<b>7</b>	<b>5</b>	<b>80</b>

**Table 8. Confirmed *Salmonella* notifications by serotype and travel status, Q4 2010 [n(%)]**

Serotype	Indigenous	Travel-associated	Unk/not specified	Total
<i>S. Enteritidis</i>	2 (8%)	7 (27%)	4 (17%)	13 (17%)
<i>S. Typhimurium</i>	15 (57%)	7 (27%)	7 (31%)	29 (39%)
Other	7 (27%)	7 (27%)	8 (35%)	22 (29%)
Not specified	2 (8%)	5 (19%)	4 (17%)	11 (15%)
<b>Total</b>	<b>26 (100%)</b>	<b>26 (100%)</b>	<b>23 (100%)</b>	<b>75</b>

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

### ***S. Typhi* and *S. Paratyphi***

One *S. Paratyphi* A notification reported during Q4 2010 was associated with travel to Bangladesh, and one *S. Paratyphi* B notification was associated with travel to the United States.

### **Outbreaks of salmonellosis**

There were 6 family outbreaks and one general outbreak of salmonellosis reported in Q4 2010 (Tables 1 & 2).

## VEROTOXIGENIC *E. COLI* (VTEC)

Illness caused by enterohaemorrhagic *E. coli* (EHEC) became a notifiable disease on January 1<sup>st</sup> 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 Q4 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.

Forty EHEC were notified in this quarter, 32 of which were confirmed or probable VTEC (Table 9). This compares with 69 VTEC cases notified in Q4 2009 and 42 in Q4 2008 (Figure 2). Table 9 shows the number of VTEC cases reported by serogroup and month, Q4 2010.

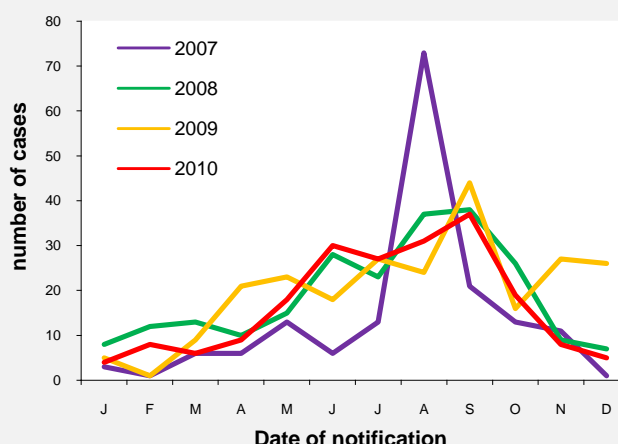
**Table 9. Confirmed and Probable VTEC Notified by Serogroup and Month, Q3 2010**

Month	O157	O26	Other	Total
Oct	16	3	0	19
Nov	3	4	1	8
Dec	2	0	3	5
<b>Total</b>	<b>21</b>	<b>7</b>	<b>4</b>	<b>32</b>

Three cases notified during this quarter was reported as having developed HUS –one infected with *E. coli* O157, and 2 with *E. coli* O26.

### Outbreaks of VTEC infection

During this quarter, 13 family outbreaks of EHEC infection were reported (see Table 2).



**Figure 2. Seasonal distribution of confirmed and probable VTEC cases notified 2007 to end quarter 4 2010**

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 Q4 2010.

**Table 10. Verotoxin typing results of VTEC isolates referred to the HSE DML Public Health Laboratory, Cherry Orchard Hospital in Q4 2010.** (Data are provided courtesy of Dr. Eleanor McNamara and Dr. Anne Carroll).

Serogroup	vt1	vt2	vt1+vt2	Total
O157	0	19	2	21
O26	2	2	3	7
Other	0	0	4	4
<b>Total</b>	<b>2</b>	<b>21</b>	<b>9</b>	<b>32</b>



## CAMPYLOBACTER

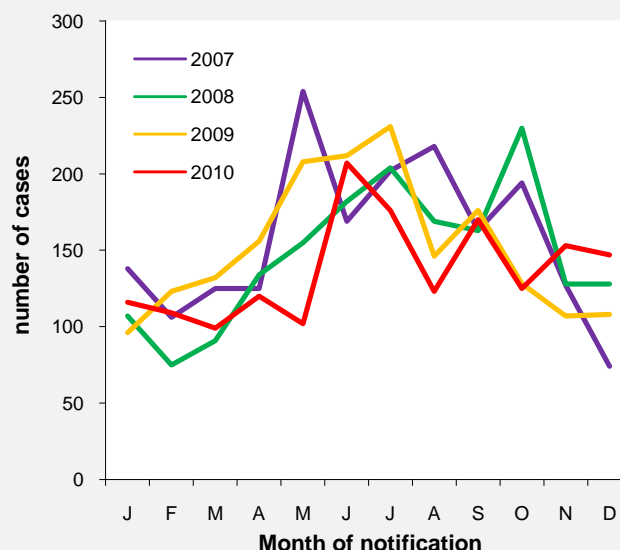
Human campylobacteriosis became a notifiable disease on January 1<sup>st</sup> 2004. Prior to this, human campylobacter infection was notified under the category of 'Food Poisoning (bacterial other than Salmonella)'. The notifications for the fourth quarter of 2010 are shown in Table 11. The number of cases notified this quarter is similar to quarter 4 in previous years (Figure 3).

**Table 11. Campylobacter Notifications by HSE-Area and Month, Q4 2010**

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	42	13	7	8	11	18	11	15	125
Nov	49	14	16	9	8	12	28	17	153
Dec	47	12	15	14	8	20	15	16	147
Total	138	39	38	31	27	50	54	48	425

### Outbreaks of Campylobacter infection

There was one general outbreak of campylobacteriosis reported in Q4 2010 (Tables 1 & 2).



**Figure 3. Seasonal distribution of Campylobacter notifications 2007 to end quarter 4 2010**

## CRYPTOSPORIDIUM

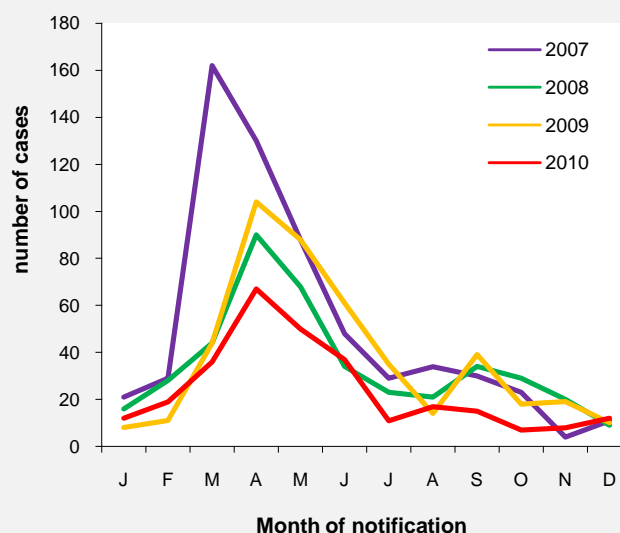
Human cryptosporidiosis became a notifiable disease on January 1<sup>st</sup> 2004. Prior to this, cryptosporidiosis was notifiable in Ireland only in young children under the category 'Gastroenteritis in Children Under 2'. In Q4 2010, 27 cases of cryptosporidiosis were notified (Table 12), compared to 47 in the same period in 2009 and 57 in Q4 2008 (Figure 4).

**Table 12. Cryptosporidiosis Notifications by HSE-Area and Month, Q4 2010**

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	0	4	0	3	0	0	0	0	7
Nov	2	0	2	1	0	0	0	3	8
Dec	3	0	1	1	1	2	3	1	12
Total	5	4	3	5	1	2	3	4	27

### Outbreaks of cryptosporidiosis

There were two family outbreaks of cryptosporidiosis reported in quarter 4 (Tables 1 & 2).



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



## NOROVIRUS

Human noroviral infection became a notifiable disease on January 1<sup>st</sup> 2004. There were 106 cases notified in the fourth 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.

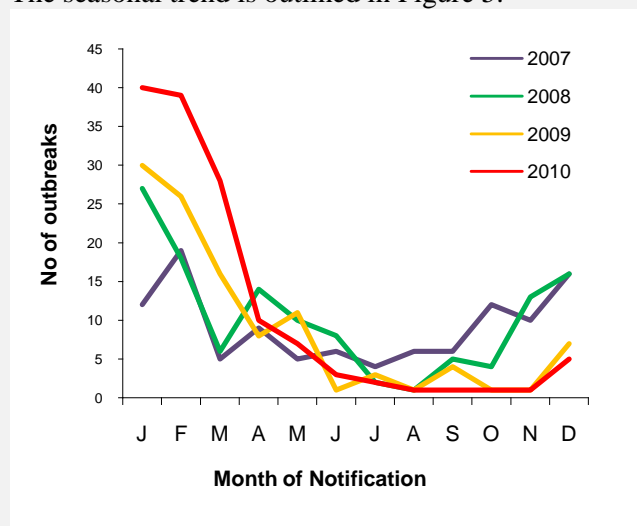
**Table 13. Norovirus Notifications by HSE-Area and Month, Q4 2010**

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	14	0	1	2	0	2	2	4	25
Nov	18	0	1	1	1	2	1	1	25
Dec	25	2	2	3	1	0	7	16	56
Total	57	2	4	6	2	4	10	21	106

### Norovirus outbreaks

Norovirus or suspect viral aetiology is the commonest cause of outbreaks of acute gastroenteritis in Ireland. In the fourth quarter of 2010 there were 7 outbreaks confirmed as being caused by this virus, involving at

least 153 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 4 2010.**

## LISTERIA

Human listeriosis became a notifiable disease on January 1<sup>st</sup> 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 Q4 2010, compared to three in quarter 4 2009 and five in quarter 4 2008. These comprised one maternal and

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

**Table 14: Serotypes of Q4 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 1<sup>st</sup> 2004, infection with *Shigella* spp. became notifiable as 'Shigellosis'. Prior to this, it was notifiable as 'Bacillary Dysentery'.

During Q4 2010, eighteen cases of shigellosis were notified (Table 5). This compares with 10 cases notified as shigellosis in Q4 2009 and 14 in Q4 2008. Nine cases were reported as *S. sonnei*, six as *S. flexneri*, one as *S. boydii* and two as *Shigella* species.

Eight cases (44%) were reported to have acquired their illness abroad. Country of infection was reported as Ireland for five cases and 'not specified' or 'unknown' for the remaining five cases.

### Outbreaks of shigellosis

There were no outbreaks of shigellosis reported in Q4 2010 (Tables 1 & 2).

## GIARDIA

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

During Quarter 4 2010, 15 cases of giardiasis were notified (Table 5); this compares with 7 cases notified in Q4 2009 and 15 in Q4 2008.

### Outbreaks of giardiasis

There were no outbreaks of giardiasis notified in Q4 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 1<sup>st</sup> 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 (Tables 1 & 2).

## ACUTE INFECTIOUS GASTROENTERITIS incl. ROTAVIRUS

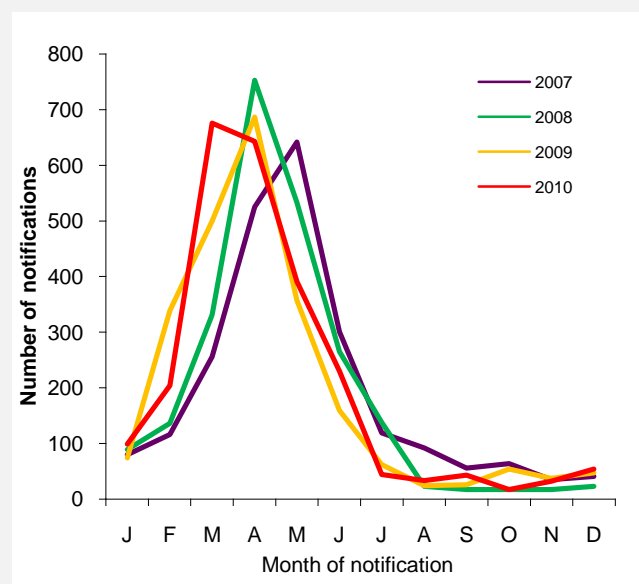
Since 1<sup>st</sup> January 2004, there is a notifiable disease category termed 'Acute Infectious Gastroenteritis'. Until May 3<sup>rd</sup> 2008, this included all unspecified causes of gastroenteritis and also specifically, gastroenteritis due to rotavirus. Since May 4<sup>th</sup> 2008, it has also 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, Q4 2010**

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	2	0	1	2	0	7	3	2	17
Nov	4	4	0	3	4	7	8	2	32
Dec	1	2	1	2	0	17	30	1	54
Total	7	6	2	7	4	31	41	5	103

During Quarter 4 2010, there were 557 notifications of acute infectious gastroenteritis. Of these, 103 (18%) were reported as rotavirus (Table 15 & Figure 6).

Eighty-three rotavirus notifications (80%) were for children less than two years of age.



**Figure 6. Seasonal distribution of rotavirus notifications 2007 to end quarter 4 2010**

### 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 Q4 2010 notifications of these zoonotic diseases are reported by HSE-Area in Table 5.

Twelve cases of toxoplasmosis were notified in this quarter. This compares with six cases notified in the same period in 2009 and 7 cases in Q4 2008.

There were no cases of brucellosis reported during this quarter compared with none in both Q4 2009 and Q4 2008.

Five cases of leptospirosis were notified in Q4 2010; this compares with 10 in Q4 2009 and twelve in Q4 2008. Two cases reported possible exposure during occupational activities, two during recreational activities and one case had recent travel to South America.

There were three cases of Q fever notified this quarter, compared to two in Q4 in 2009 and three in Q4 2008.

## MALARIA

---

Malaria is a notifiable disease for many years. The Q4 2010 notifications are reported in Table 5 by HSE-Area.

Twenty cases of malaria were notified in Q4 2010. This compares with 14 cases reported in Q4 2009 and 15 in Q4 2008.

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

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

The reason for travel for nine cases was reported as visiting family in country of origin, two cases reported holiday travel, one reported business travel and one was a new entrant to Ireland. The reason for travel was not specified/unknown for seven cases.

### Report prepared by:

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