

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 –2008

February 2009

This is the fourth quarterly report for 2008 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, 2008

Month	HSE area	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Oct	E	Comm. Hosp/Long-stay unit	10	5	08/09/2008	P-P	Norovirus
Oct	E	Comm. Hosp/Long-stay unit	7	7	04/10/2008	Not Specified	Norovirus
Oct	MW	Residential institution	5	-	03/10/2008	P-P	AIG
Oct	NW	Residential institution	9	0	03/10/2008	P-P	AIG
Oct	E	Not Specified	12	0	10/10/2008	Not Specified	Norovirus
Oct	NW	Other	15	0	12/10/2008	P-P	AIG
Oct	NW	Creche	5	0	-	P-P	AIG
Oct	S	Other	12	-	15/10/2008	P-P and AB	AIG
Oct	MW	Hospital	5	4	-	P-P	AIG
Oct	NW	Comm. Hosp/Long-stay unit	11	9	29/10/2008	P-P	AIG
Oct	E	Not Specified	20	-	-	Not Specified	Norovirus
Nov	NW	Comm. Hosp/Long-stay unit	16	11	11/11/2008	P-P	Norovirus
Nov	NW	Hospital	5	4	-	P-P	Norovirus
Nov	NE	Hospital	17	17	-	P-P and AB	Norovirus
Nov	E	Other	14	-	29/10/2008	P-P	Norovirus
Nov	E	Creche	2	0	29/09/2008	Unknown	EHEC
Nov	E	Comm. Hosp/Long-stay unit	10	1	02/11/2008	P-P	Norovirus
Nov	E	Residential institution	17	0	06/11/2008	P-P and AB	AIG
Nov	S	Hospital	5	-	-	Not Specified	Norovirus
Nov	SE	Creche	29	1	15/10/2008	Unknown	Norovirus
Nov	MW	Residential institution	25	-	-	P-P	Norovirus
Nov	NE	Residential institution	15	0	-	P-P and AB	Norovirus
Nov	E	Comm. Hosp/Long-stay unit	9	6	09/11/2008	Not Specified	Norovirus
Nov	E	Comm. Hosp/Long-stay unit	26	23	13/11/2008	Not Specified	Norovirus
Nov	NE	Residential institution	12	0	15/11/2008	P-P and AB	Norovirus
Nov	W	Hospital	7	-	12/11/2008	P-P	AIG
Nov	W	Hospital	2	2	-	P-P	AIG
Nov	W	Residential institution	3	2	14/02/2008	P-P	Salmonellosis
Nov	E	Residential institution	39	0	26/11/2008	P-P and AB	Norovirus
Nov	E	Other	16	-	-	Not Specified	AIG
Dec	S	Residential institution	10	0	14/11/2008	P-P and AB	AIG
Dec	HPSC	Community outbreak	9	3	18/08/2008	FB	Salmonellosis
Dec	SE	Community outbreak	2	0	24/11/2008	P-P and FB	Hepatitis A
Dec	E	Residential institution	24	-	06/12/2008	Not Specified	Norovirus
Dec	E	Residential institution	26	0	06/12/2008	Not Specified	Norovirus
Dec	SE	University/College	30	-	09/12/2008	P-P and AB	AIG
Dec	NW	Hospital	15	11	-	P-P	Norovirus
Dec	NE	Hospital	3	3	24/11/2008	FB	Salmonellosis
Dec	E	Residential institution	28	0	14/12/2008	Not Specified	Norovirus
Dec	SE	Hospital	35	-	05/12/2008	P-P	Norovirus
Dec	E	Hospital	59	-	13/12/2008	P-P	Norovirus
Dec	W	Hospital	5	-	30/11/2008	P-P	Norovirus

Dec	W	Hospital	7	5	-	P-P	Norovirus
Dec	E	Residential institution	14	-	12/12/2008	Not Specified	Norovirus
Dec	SE	Hospital	7	-	19/12/2008	P-P	AIG
Dec	NE	Hospital	25	25	-	AB	Norovirus
Dec	NE	Comm. Hosp/Long-stay unit	19	-	-	P-P	Norovirus
Dec	NE	Hospital	2	-	-	P-P	Norovirus
Dec	NE	Hospital	5	-	-	P-P	Norovirus
Dec	E	Comm. Hosp/Long-stay unit	6	-	-	P-P	Norovirus
Dec	W	Residential institution	15	-	17/12/2008	P-P	Norovirus
Dec	SE	Hospital	17	-	27/12/2008	P-P	AIG
Dec	E	Residential institution	8	0	26/12/2008	P-P	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*

* Total numbers ill does not include asymptomatic cases

Table 2. Family Outbreaks of Infectious Intestinal Disease (IID) in Quarter 4, 2008

Month	HSE region	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Disease
Oct	NE	Private house	2	2	-	P-P and AB	Rotavirus
Oct	E	Private house	2	2	-	P-P and FB	Shigellosis
Oct	M	Private house	2	2	24/09/2008	FB	EHEC
Oct	MW	Private house	3	1	27/09/2008	Not Specified	EHEC
Nov	MW	Private house	2	-	-	Unknown	EHEC
Nov	MW	Private house	3	1	13/09/2008	P-P	EHEC
Nov	NE	Private house	5	0	01/11/2008	P-P and FB	Salmonellosis
Nov	SE	Private house	2	1	17/10/2008	P-P and FB	Salmonellosis
Nov	W	Private house	2	2	06/10/2008	Unknown	Hepatitis A
Dec	SE	Private house	3	0	03/12/2008	P-P	EHEC
Dec	MW	Private house	2	-	04/11/2008	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*

* Total numbers ill does not include asymptomatic cases

Table 3. Non-IID Outbreaks in Quarter 4, 2008

Month	HSE region	Type of outbreak	Location	No. ill *	No. Hosp.	Date Onset	Suspect mode of transmission	Organism
Oct	E	Family	Private house	2	0	-	P-P	Hepatitis B
Oct	E	General	Other	2	0	25/08/2008	P-P and AB	Mumps
Oct	E	General	Community outbreak	7	0	23/09/2008	P-P	Mumps
Oct	SE	Family	Private house	4	-	27/07/2008	P-P	Mumps
Oct	NW	General	University/College	56	-	21/09/2008	P-P	Mumps
Oct	W	Family	Private house	4	-	06/09/2008	P-P	Mumps
Oct	NW	General	Hospital	6	-	-	P-P	MRSA
Oct	E	General	Other	3	1	19/09/2008	P-P and AB	Mumps
Oct	E	General	School	8	0	18/10/2008	P-P and AB	Mumps
Oct	NE	General	School	2	0	13/10/2008	P-P	Mumps
Oct	NW	General	Comm. Hosp/Long-stay unit	4	1	24/10/2008	P-P	Varicella
Oct	NW	General	University/College	2	0	06/10/2008	P-P	Mumps
Nov	E	General	Other	3	0	14/10/2008	P-P and AB	Mumps
Nov	W	Family	Private house	3	0	16/09/2008	Unknown	Mumps

Nov	W	General	University/College	2	-	17/10/2008	P-P	Mumps
Nov	W	General	Residential institution	3	1	26/09/2008	P-P	ESBL <i>E. coli</i>
Nov	M	General	University/College	4	0	01/11/2008	P-P	Mumps
Nov	W	General	University/College	2	-	-	P-P	Mumps
Nov	NW	Family	Private house	2	1	-	P-P	Mumps
Nov	E	Family	Private house	3	0	07/10/2008	P-P and AB	Mumps
Nov	NW	General	University/College	3	0	15/11/2008	P-P	Mumps
Nov	E	General	Comm. Hosp/Long-stay unit	8	5	07/11/2008	P-P and AB	Influenza
Nov	S	General	University/College	30	-	11/09/2008	P-P	Mumps
Nov	S	General	University/College	5	-	18/10/2008	P-P	Mumps
Nov	W	General	Community outbreak	2	-	16/10/2008	P-P	Mumps
Nov	NW	General	University/College	2	0	03/11/2008	P-P	Mumps
Nov	W	General	Private house	3	-	20/10/2008	P-P	Mumps
Nov	NE	General	University/College	5	0	05/11/2008	Not Specified	Mumps
Dec	E	General	Other	5	5	15/11/2008	IDU	<i>Clostridium botulinum</i>
Dec	W	Family	Private house	2	-	08/11/2008	P-P	Mumps
Dec	W	Family	Private house	2	-	30/10/2008	P-P	Mumps
Dec	W	Family	Private house	2	-	17/11/2008	P-P	Suspected Mumps
Dec	E	Family	Private house	5	0	25/11/2008	P-P	Mumps
Dec	W	General	Hospital	3	3	03/12/2008	P-P	ESBL <i>E. coli</i>
Dec	E	General	University/College	7	0	02/12/2008	P-P	Mumps
Dec	E	General	University/College	3	0	10/12/2008	P-P	Mumps
Dec	E	General	Other	4	1	26/12/2008	P-P and AB	Influenza
Dec	E	General	Private house	2	2	01/12/2008	P-P and AB	Meningococcal disease

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

* 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 fourth quarter of 2008. There were 53 general and 11 family IID outbreaks reported during this period, resulting in at least 779 people being ill.

Norovirus was responsible for the majority of general outbreaks of IID (62% of all general outbreaks).

The most common cause of family outbreaks of IID was EHEC, with six outbreaks (55% of all family outbreaks) caused by this pathogen. The other pathogens responsible for family outbreaks were hepatitis A, rotavirus, shigellosis and salmonellosis (Table 2).

Most general IID outbreaks were transmitted person-to-person & airborne (70%). Forty-one general outbreaks (77%) were reported to have occurred in healthcare settings, i.e. hospitals or residential institutions, during this period.

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

Table 4 outlines the outbreak rate per HSE-area for outbreaks notified during Q4 2008.

Table 4. No. of infectious disease outbreaks per HSE region, Q4 2008

HSE Area	No. of outbreaks	Rate per 100,000 population
E	34	2.3
M	2	0.8
MW	7	2.0
NE	12	3.0
NW	14	6.0
SE	9	2.0
S	5	0.8
W	18	4.3
Total	101	2.4

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 2008 is shown in Table 5.

Table 5. Intestinal Infectious, Zoonotic and Vectorborne Disease Notifications Quarter 4, 2008 by HSE-Area

Infectious Intestinal Disease	E	M	MW	NE	NW	SE	S	W	Total
Acute infectious gastroenteritis* (incl. rotavirus & <i>C. difficile</i>)	355	13	50	14	30	57	95	89	703
<i>Bacillus cereus</i> foodborne infection/intoxication	0	0	0	0	0	0	0	0	0
Botulism	6	0	0	0	0	0	0	0	6
Campylobacter infection	169	35	48	38	23	48	72	53	486
Cholera	0	0	0	0	0	0	0	0	0
<i>Clostridium perfringens</i> (type A) food-borne disease	1	0	0	0	0	0	0	0	1
Cryptosporidiosis	4	4	8	8	4	11	11	8	58
Enterohaemorrhagic <i>Escherichia coli</i>	5	8	10	0	1	6	5	6	41
Giardiasis	9	0	1	0	1	1	2	1	15
Listeriosis	2	0	1	0	1	0	1	0	5
Noroviral infection	206	8	24	66	23	14	35	74	450
Paratyphoid	0	0	0	0	0	0	0	0	0
Salmonellosis	33	6	5	17	2	12	8	12	95
Shigellosis	8	0	1	2	1	0	1	1	14
Staphylococcal food poisoning	0	0	0	0	0	0	0	0	0
Typhoid	0	0	0	0	0	0	0	0	0
Yersiniosis	0	0	1	0	0	0	0	0	1
Zoonotic Disease									
Anthrax	0	0	0	0	0	0	0	0	0
Brucellosis	0	0	0	0	0	0	0	0	0
Echinococcosis	1	0	0	0	0	0	0	0	1
Leptospirosis	5	1	2	0	0	0	2	2	12
Plague	0	0	0	0	0	0	0	0	0
Q Fever	0	0	1	0	0	0	2	0	3
Rabies	0	0	0	0	0	0	0	0	0
Toxoplasmosis	2	0	1	0	0	2	7	0	12
Trichinosis	0	0	0	0	0	0	0	0	0
Typhus	0	0	0	0	0	0	0	0	0
Vectorborne Disease									
Malaria	7	0	1	3	1	1	2	0	15

*Since May 4th 2008, the category Acute Infectious Gastroenteritis 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 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 2008. Comparison of trends with previous years is shown in Figure 1 below.

Table 6. Salmonellosis Notifications by HSE-Area and Month, Q4 2008

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	21	3	2	8	0	5	3	3	45
Nov	7	1	2	5	1	5	2	5	28
Dec	5	2	1	4	1	2	3	4	22
Total	33	6	5	17	2	12	8	12	95

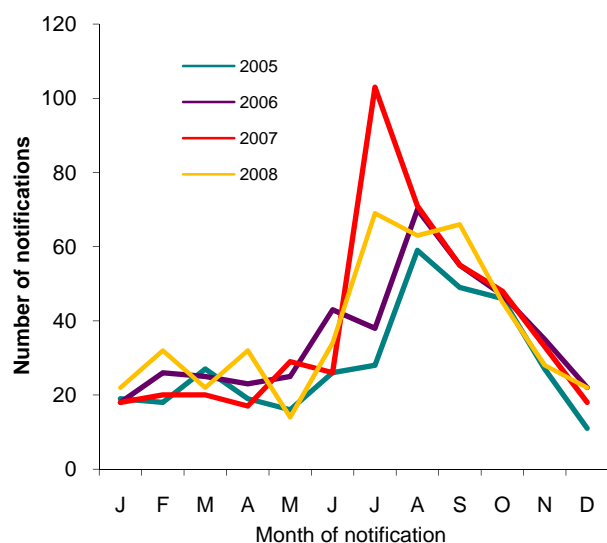


Figure 1. Seasonal Distribution of Human Salmonellosis Notifications, 2005 to end quarter 4 2008

Table 7 shows the *S. enterica* isolates typed by the NSRL in the fourth quarter of 2008 (n=87). The commonest human serotypes isolated were *S. Typhimurium* (n=23 [26%]) and *S. Enteritidis* (n= 21 [24%]).

Twenty-five (28%) *S. enterica* isolates were reported to be associated with travel outside of Ireland during this quarter.

Table 7. Serotypes of *S. enterica* referred to NSRL in Quarter 4, 2008 (Data are provided courtesy of Prof. Martin Cormican and Dr Geraldine Corbett-Feeney, NSRL).

Serotype	E	M	MW	NE	NW	SE	S	W	Total
4,5,12:i:-	1	0	0	0	0	1	0	0	2
Agona	0	0	1	0	0	0	0	0	1
Ajiobo	1	0	0	0	0	0	0	0	1
Bareilly	0	0	0	0	0	0	1	0	1
Brandenburg	0	0	0	0	0	1	0	0	1
Corvallis	1	0	0	0	0	0	0	0	1
Dublin	0	0	1	0	0	0	0	0	1
Eastbourne	0	0	0	3	0	0	0	0	3
Enteritidis	6	1	1	5	0	3	2	3	21
Hadar	0	0	1	0	0	1	0	0	2
Heidelberg	0	0	1	0	0	0	0	0	1
Hull	0	0	0	0	0	1	0	0	1
Java	1	0	0	0	0	0	0	0	1
Javiana	1	0	0	0	0	0	0	0	1
Kentucky	1	0	0	0	0	0	0	0	1
Kottbus	0	0	0	1	0	0	0	0	1
Mikawasima	1	0	0	0	0	0	0	0	1
Mississippi	1	0	0	0	0	0	0	0	1
Napoli	0	0	0	1	0	0	0	0	1
Newport	2	0	0	1	0	0	0	0	3
Panama	1	0	0	0	0	2	0	0	3
Pomona	1	0	0	0	0	0	0	0	1
Saintpaul	1	0	1	1	1	0	0	0	4
Tshiongwé	1	0	0	0	0	0	0	0	1
Typhimurium	7	3	0	3	0	2	3	5	23
Unnamed	1	0	0	1	0	0	0	0	2
Virchow	2	0	0	0	0	0	0	0	2
Weltevreden	1	0	0	0	0	0	0	0	1
Worthington	0	0	0	0	0	0	0	4	4
Total	31	4	6	16	1	11	6	12	87

S. Typhi and *S. Paratyphi*

There were no cases of *S. Typhi* or *S. Paratyphi* A notified during Q4 2008.

Outbreaks of salmonellosis

There were five outbreaks of salmonellosis reported in Q4 2008, three general and two family outbreaks (see Table 1 and Table 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 Q4 2008 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-one EHEC were notified in this quarter, 38 of which were confirmed and 3 were probable VTEC (Table 8). This compares with 25 VTEC cases notified in Q4 2007 and 46 in Q4 2006 (Figure 2). Table 8 shows the number of VTEC cases reported by serogroup and month, Q4 2008.

Table 8. Confirmed and Probable VTEC Notified by Serogroup and Month, Q4 2008

Month	O157	O26	Other	Total
Oct	18	6 ^{a,b}	2	26
Nov	6	2	1	9
Dec	6 ^a	0	0	6
Total	30	8	3	41

a—one probable case notified on basis of epi-link

b—one probable case notified on the basis of detection of *vt* genes

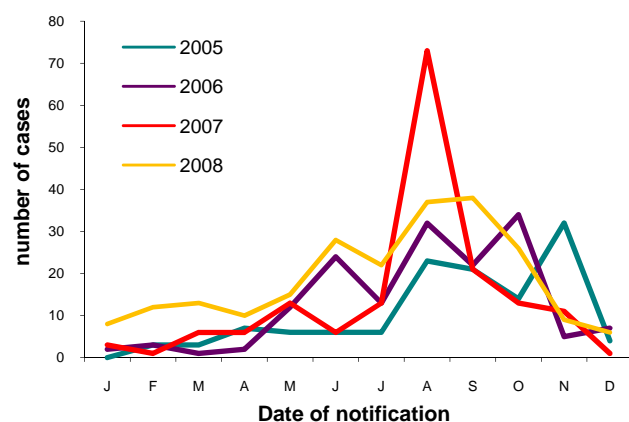


Figure 2. Seasonal distribution of confirmed and probable VTEC cases notified 2005 to end quarter 4 2008

Four cases notified during this quarter were reported as having developed HUS: one confirmed *E. coli* O157 case, one confirmed case of *E. coli* O26 and two probable *E. coli* O26 cases.

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. Tables 9 and 10 show the phage types and VT types of VTEC isolates referred to the laboratory in Q4 2008.

Table 9. Phage Types of VTEC O157 isolates referred to the HSE DML Public Health Laboratory, Cherry Orchard Hospital in Q4 2008. (Data are provided courtesy of Dr. Eleanor McNamara and Dr. Anne Carroll).

Phage type	Number of isolates
32	13
14	4
2	2
31	2
8	1
34	1
To follow	6
Total	29

Includes isolates from confirmed cases only

Table 10. Verotoxin typing results of VTEC isolates referred to the HSE DML Public Health Laboratory, Cherry Orchard Hospital in Q4 2008. (Data are provided courtesy of Dr. Eleanor McNamara and Dr. Anne Carroll).

Serogroup	vt1	vt2	vt1+vt2	Total
O157	0	26	3	29
O26	1	1	5	7
Other	1	0	2	3
Total	2	27	10	39

Outbreaks of VTEC infection

During this quarter, six family outbreaks and one general outbreak of VTEC infection were reported (see Tables 1 and 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 fourth quarter of 2008 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 2008

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	78	9	19	19	14	33	31	27	230
Nov	42	17	19	12	5	5	22	6	128
Dec	49	9	10	7	4	10	19	20	128
Total	169	35	48	38	23	48	72	53	486

Outbreaks of Campylobacter infection

There were no outbreaks of campylobacteriosis reported in Q4 2008.

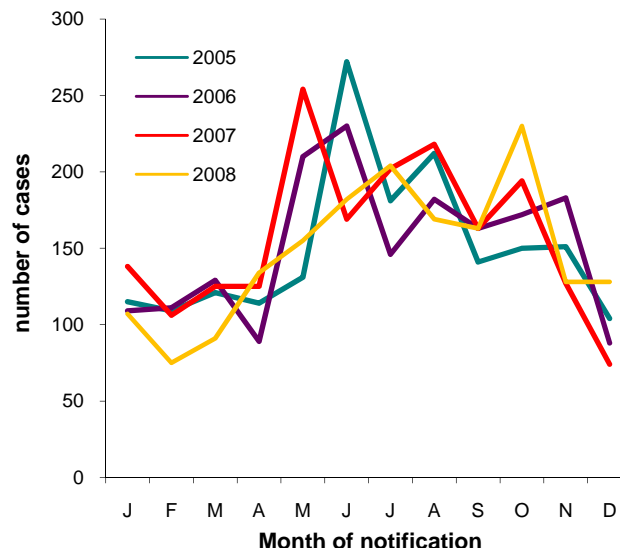


Figure 3. Seasonal distribution of Campylobacter notifications 2005 to end quarter 4 2008

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 Q4 2008, 58 cases of cryptosporidiosis were notified (Table 12), compared to 38 in the same period last year and 47 in Q4 2006 (Figure 4).

Table 12. Cryptosporidiosis Notifications by HSE-Area and Month, Q4 2008

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	1	3	3	4	1	5	7	5	29
Nov	1	1	4	1	3	5	3	1	20
Dec	2	0	1	3	0	1	1	2	9
Total	4	4	8	8	4	11	11	8	58

Outbreaks of cryptosporidiosis

There were no outbreaks of cryptosporidiosis reported in Quarter 4.

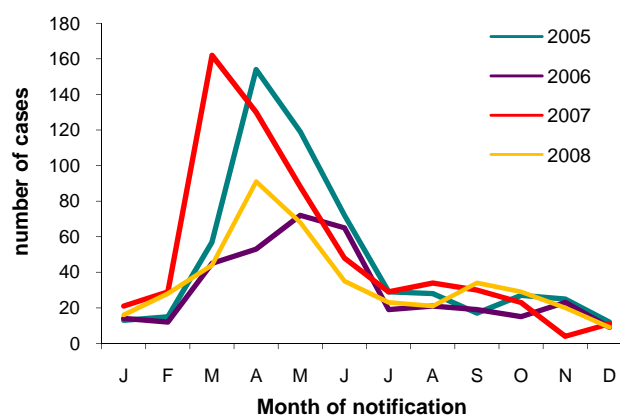


Figure 4. Seasonal distribution of cryptosporidiosis notifications 2005 to end quarter 4 2008

NOROVIRUS

Human noroviral infection became a notifiable disease on January 1st 2004. There were 450 cases reported in the fourth quarter of 2008, 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 2008

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	43	1	13	8	2	0	1	4	72
Nov	63	2	8	26	10	2	13	15	139
Dec	100	5	3	32	11	12	21	55	239
Total	206	8	24	66	23	14	35	74	450

Norovirus outbreaks

Norovirus or suspect viral aetiology is the commonest cause of outbreaks of acute gastroenteritis in Ireland. In the fourth quarter of 2008 there were 33 outbreaks confirmed as being caused by this virus, involving at

least 564 people becoming ill, as outlined in Table 1. The seasonal trend is outlined in Figure 5.

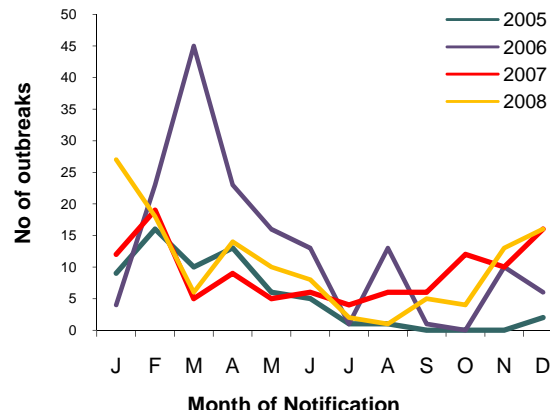


Figure 5. Seasonal distribution of confirmed norovirus outbreaks, 2005 to end quarter 4 2008.

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 five cases of listeriosis notified in Q4 2008, compared to seven in quarter 4 2007 and one in quarter 4 2006. Three were non-pregnancy related adult cases, one was pregnancy-related case and there was one neonatal case. Four isolates were referred to

the NSRL this quarter. Table 14 lists the serotypes for these isolates.

Table 14: Serotypes of Q4 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	2
4b	2

SHIGELLA

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

During Q4 2008, fourteen cases of shigellosis were notified (Table 5). This compares with ten cases notified as shigellosis in Q4 in 2007 and 12 in Q4 2006. Five cases were reported as *S. sonnei*, eight as *S. flexneri* and one as *S. boydii*.

During this quarter, five cases (36%) were reported to have acquired their illness abroad, one each in Ghana, India, Pakistan, Egypt and Spain. Country of infection was reported as Ireland for two further cases, and as 'not specified' or 'unknown' for the remaining seven cases.

Outbreaks of shigellosis

There was one family outbreak of shigellosis reported in Q4 2008 (Table 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 4 2008, fifteen cases of giardiasis were notified (Table 5); this compares with 15 cases notified in Q4 2007 and 20 in Q4 2006.

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 was one case of *Clostridium perfringens* (type A) food-borne disease notified in Q4 2008 (Table 5).

The six notifications of botulism this quarter (Table 5) were all reported as wound botulism.¹

¹Barry et al. 2009. Botulism in Injecting Drug Users, Dublin, Ireland, 2008. <http://www.hpsc.ie/hpsc/EPI-Insight/Volume102009/File.3376.en.pdf>

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 4 2008, there were 703 notifications of acute infectious gastroenteritis. 57 of these (8.0%) were reported as rotavirus (as shown in Table 15).

Table 15. Rotaviral Infections Notified under the Category of 'Acute Infectious Gastroenteritis' by HSE-Area and Month, Q4 2008

Month	E	M	MW	NE	NW	SE	S	W	Total
Oct	2	2	1	7	0	1	1	3	17
Nov	5	1	0	3	0	2	3	3	17
Dec	3	1	2	0	0	4	7	6	23
Total	10	4	3	10	0	7	11	12	57

NON-IID ZOONOTIC DISEASES

Non-IID zoonoses now notifiable include: anthrax, brucellosis, echinococcosis, leptospirosis, plague, Q Fever, toxoplasmosis, trichinosis, typhus and rabies. The Q4 2008 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 15 cases notified in the same period in 2007 and ten cases in Q4 2006.

There were no cases of brucellosis reported during this quarter compared with seven in Q4 2007 and six in Q4 2006.

Twelve cases of leptospirosis were notified in Q4 2008; this compares with seven in Q4 2007 and ten in Q4 2006. Seven were reported as associated with leisure activities, two acquired their illness through other known exposures, and no information was provided for three cases.

There were three cases of Q fever notified this quarter, compared to two in Q4 in 2007 and three in Q4 2006.

MALARIA

Malaria is a notifiable disease for many years. The Q4 2008 notifications are reported in Table 5 by HSE-Area.

Fifteen cases of malaria were notified in Q4 2008. This compares with 18 cases reported in Q4 2007 and 19 in Q4 2006.

Thirteen cases were reported as *P. falciparum*, one as *P. vivax*, and one as a mixed *P. falciparum/P. vivax* infection.

Eight cases were exposed in Sub-Saharan Africa, one in South America, while no data were provided on country of infection for the remaining six cases.

The reason for travel for six cases was reported as visiting family in country of origin, three were exposed during holiday travel, and the reason for travel not specified for six cases.

Report prepared by:

Ms Fiona Cloak
Dr Patricia Garvey
Ms. Mairead Skally
Dr Paul McKeown