

# **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 2–2006**

**October 2006**

This is the second quarterly report for 2006 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

*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. Outbreaks of Infectious Intestinal Disease (IID) in Quarter 2, 2006**

Month	HSE region	Type of outbreak	Location	No.ill	No. Hos p.	Date Onset	Suspect mode of transmission	Organism
Apr	NEHB	General	Hospital	28	15	29-Mar-06	Not Specified	Norovirus
Apr	SEHB	General	Other	3	0	28-Mar-06	P-P	AIG - organism unknown
Apr	SEHB	General	Hospital	13	0	28-Feb-06	P-P	AIG - organism unknown
Apr	SEHB	General	Hospital	4	0	24-Mar-06	P-P	AIG - organism unknown
Apr	MWHB	General	Residential institution	14		29-Mar-06	P-P	Norovirus
Apr	ERHA	General	Hospital	395	211	5-Mar-06	P-P and Airborne	Norovirus
Apr	ERHA	General	Residential institution	10	0	26-Mar-06	P-P	Norovirus
Apr	ERHA	General	Hospital	14	0	31-Mar-06	P-P	Norovirus
Apr	ERHA	General	Restaurant / Cafe	20	0	18-Mar-06	P-P and FB	AIG - organism unknown
Apr	NWHB	General	Hospital	23	0		P-P	Norovirus
Apr	NWHB	General	Hospital	18	0	25-Mar-06	P-P	Norovirus
Apr	SHB	General	Hospital	6	0	25-May-06	P-P	Norovirus
Apr	SEHB	General	Residential institution	12	0	3-Apr-06	P-P	AIG - organism unknown
Apr	SHB	General	Residential institution	10	0	31-Mar-06	P-P and Airborne	Suspected Norovirus
Apr	SHB	General	Hotel	35		29-Mar-06	P-P	Norovirus
Apr	SHB	General	Residential institution	18	0	24-Mar-06	P-P and Airborne	Norovirus
Apr	SHB	General	Hospital	39	0	5-Apr-06	P-P and Airborne	Norovirus
Apr	NEHB	General	Hospital	16	13	2-Apr-06	P-P	Norovirus
Apr	SEHB	General	Hospital	20	0	6-Mar-06	P-P	AIG - organism unknown
Apr	SEHB	General	Hospital	24	0	10-Mar-06	P-P	AIG - organism unknown
Apr	SHB	General	Residential institution	22	0	13-Apr-06	P-P and Airborne	AIG - organism unknown
Apr	SEHB	Family	Private house	5	0	16-Apr-06	FB - Foodborne	AIG - organism unknown
Apr	SHB	General	Residential institution	7	0	28-Mar-06	P-P and Airborne	AIG - organism unknown
Apr	MHB	General	Residential institution	19		29-Mar-06	P-P and Airborne	Norovirus
Apr	NEHB	General	Hospital	17	17	10-Apr-06	P-P and Airborne	Norovirus
Apr	MHB	General	Hospital	6		13-Mar-06	Not Specified	AIG - organism unknown
Apr	MHB	General	Hospital	5	4	14-Mar-06	P-P, FB and Airborne	Norovirus
Apr	MHB	General	Hospital	6		9-Apr-06	P-P, FB and Airborne	Norovirus
Apr	MHB	General	Hospital	4	3	31-Mar-06	Not Specified	AIG - organism unknown
Apr	MHB	General	Hospital	8		31-Mar-06	P-P	AIG - organism unknown
Apr	SEHB	General	Not Specified	19	0		P-P	Norovirus

Apr	SEHB	General	Residential institution	21	0	8-Apr-06	P-P	AIG - organism unknown
Apr	ERHA	General	Residential institution	7	0	13-Apr-06	P-P	AIG - organism unknown
Apr	SHB	General	Hospital				P-P and Airborne	Norovirus
Apr	SHB	General	Hospital				P-P and Airborne	Norovirus
Apr	ERHA	General	Other	9	0	6-Apr-06	FB - Foodborne	Norovirus
Apr	ERHA	General	Hospital	35	0	5-Apr-06	P-P	Norovirus
Apr	ERHA	General	Residential institution	24	0	22-Apr-06	P-P	Norovirus
Apr	ERHA	General	Residential institution	6	0	18-Apr-06	P-P	Rotavirus
Apr	SEHB	General	Residential institution	9	0	21-Apr-06	P-P	AIG - organism unknown
Apr	SEHB	General	Hospital	6	0	26-Apr-06	P-P	AIG - organism unknown
May	SHB	General	Hospital				P-P and Airborne	Norovirus
May	SHB	General	Hospital				P-P and Airborne	Norovirus
May	ERHA	General	Hospital	35		23-Apr-06	P-P	Norovirus
May	ERHA	General	Residential institution	52		29-Apr-06	P-P	Norovirus
May	ERHA	Family	Private house	3		1-May-06	Unknown	<i>Campylobacter jejuni</i>
May	SHB	General	Hospital			14-Mar-06	P-P and Airborne	Norovirus
May	SEHB	Family	Private house	2	1	16-Apr-06	P-P	Cryptosporidium
May	ERHA	General	Hospital	22	0	17-Mar-06	P-P	AIG - organism unknown
May	SHB	General	Hospital	29		6-May-06	P-P and Airborne	Norovirus
May	SHB	General	Hotel	2		8-May-06	Not Specified	Norovirus
May	ERHA	General	Hospital	9		1-May-06	P-P	Norovirus
May	SEHB	General	Residential institution	9	0	9-May-06	P-P	Norovirus
May	SEHB	General	Hospital	11	0	4-May-06	P-P	AIG - organism unknown
May	WHB	General	Other	8		23-Jan-06	P-P	Suspected Norovirus
May	SHB	Family	Private house	2	2	16-Apr-06	P-P	Hepatitis A
May	WHB	General	Other				Other	Suspected norovirus
May	WHB	General	Residential institution	8		20-Jan-06	P-P	Suspected norovirus
May	WHB	General	Residential institution	39		10-Jan-06	P-P	Norovirus
May	WHB	General	Hospital	17			Not Specified	Norovirus
May	MHB	General	Comm. Hosp/Long-stay unit	3		16-Mar-06	P-P	Norovirus
May	ERHA	General	Hospital	21		16-May-06	P-P	Norovirus
May	MWHB	Family	Private house	1	0	17-May-06	P-P	<i>E coli</i> O157
May	MHB	General	Hospital	2			Not Specified	Norovirus
May	MHB	General	Hospital	8	8	25-Mar-06	Not Specified	Norovirus
May	SHB	Family	Other	5	5	1-May-06	P-P and WB	Hepatitis A
May	MHB	General	Hotel	79	0	26-May-06	Not Specified	Norovirus
May	NWHB	Family	Private house				WB - Waterborne	<i>E coli</i> O26
Jun	ERHA	General	Hotel	39	0	28-May-06	P-P	Norovirus
Jun	ERHA	Family	Private house	2		17-May-06	P-P	Rotavirus
Jun	ERHA	Family	Private house	2			Not Specified	Salmonella sp.
Jun	ERHA	General	Residential institution	26	0	3-Jun-06	P-P	Suspected Norovirus

Jun	SHB	General	Residential institution	19		5-Jun-06	P-P and Airborne	Norovirus
Jun	SEHB	Family	Private house	2			FB - Foodborne	Campylobacter
Jun	MHB	Family	Private house	2	1	21-May-06	Not Specified	<i>E coli</i> O157
Jun	NEHB	General	Hotel	50	0	31-May-06	Unknown	Norovirus
Jun	SEHB	General	Hospital	30	0		P-P	Norovirus
Jun	MHB	General	Not Specified			18-May-06	Not Specified	AIG - organism unknown
Jun	ERHA	Family	Private house			10-Jun-06	Not Specified	<i>E coli</i> O26
Jun	MHB	Family	Not Specified			12-Jun-06	Not Specified	<i>E coli</i> O157
Jun	MHB	General	Hospital	64		29-May-06	Not Specified	Norovirus
Jun	MHB	General	Hospital			22-Apr-06	Not Specified	Norovirus
Jun	ERHA	General	Comm. Hosp/Long-stay unit	7		4-Jun-06	P-P	Norovirus
Jun	SHB	General	Residential institution	9	0	17-Jun-06	P-P and Airborne	Norovirus
Jun	SHB	General	Hotel	14	0	30-May-06	P-P and Airborne	Norovirus
Jun	ERHA	General	Hotel	6	0	14-Jun-06	FB - Foodborne	AIG - organism unknown
Jun	ERHA	General	Comm. Hosp/Long-stay unit	10		17-Jun-06	P-P	AIG - organism unknown
Jun	MHB	Family	Private house			10-Jun-06	Not Specified	<i>E coli</i> O157
Jun	SHB	General	Coach tour	6	0	2-Feb-06	P-P and Airborne	Norovirus
Jun	SHB	General	Comm. Hosp/Long-stay unit	13	9	17-Jun-06	P-P and Airborne	Norovirus
Jun	SHB	General	Coach tour	5	0	24-May-06	P-P and Airborne	Norovirus

P-P denotes Person-to-Person transmission, FB denotes foodborne, WB denotes waterborne

**Table 2. Non-IID Outbreaks in Quarter 2, 2006**

Month	HSE region	Type of outbreak	Location	No. ill	No. Hosp.	Date Onset	Suspect mode of transmission	Organism
May	MHB	General	School	11		23-Apr-06	P-P	Varicella
May	NEHB	General	Hospital	2	2	11-May-06	P-P	VRE
Jun	SHB	General	Community outbreak			21-Apr-06	P-P	Bordetella pertussis
Jun	ERHA	General	Creche	5	0	10-Jun-06	P-P	Varicella

P-P denotes Person-to-Person transmission

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'.

Table 1 shows a line listing of all general and family IID outbreaks reported to the HPSC in the second quarter of 2006. There were 91 IID outbreaks reported during this period, resulting in at least 1630 people being ill. The most common cause of IID

outbreaks was Norovirus, with 55 outbreaks (60% of all outbreaks) confirmed or suspected to have been caused by this virus. Most of these outbreaks were transmitted person-to-person (80%). Four outbreaks were associated with foodborne transmission and one was suspected waterborne transmission. 62 outbreaks (68%) were reported to have occurred in healthcare settings, i.e. hospitals or residential institutions, during this period. There were 7 hotel outbreaks during this quarter. Norovirus was the causative agent in 6 of the outbreaks, resulting in over 200 people being ill. 12 outbreaks occurred in private houses – 1 AIG, 2 *Campylobacter*, 1 *Cryptosporidium*, 1 Hepatitis A, 1 Rotavirus, 1 *Salmonella*, 3 *E. coli* O157 and 2 *E. coli* O26.

There were 4 non-IID outbreaks (2 Varicella, 1 Pertussis and one VRE) reported during Quarter 2 - see Table 2.

**Table 3. No of IID outbreaks per HSE region**

HSE Area	No of IID outbreaks	Rate per 100,000 population
<b>E</b>	24	1.7
<b>M</b>	17	7.5
<b>MW</b>	2	0.6
<b>NE</b>	5	1.4
<b>NW</b>	3	1.4
<b>SE</b>	16	3.8
<b>S</b>	23	4
<b>W</b>	5	1.3

## NOTIFICATIONS OF INFECTIOUS INTESTINAL, ZONOTIC AND VECTORBORNE DISEASE

The number of notifications of infectious intestinal, zoonotic and vectorborne disease by HSE-Area for the second quarter of 2006 is shown in Table 4.

**Table 4. Intestinal Infectious, Zoonotic and Vectorborne Disease Notifications Quarter 2 2006 by HSE-Area**

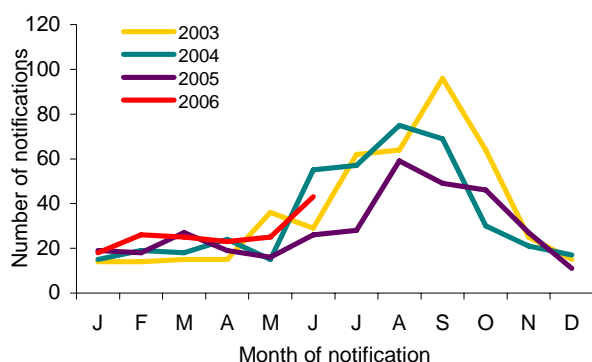
<b>Infectious Intestinal Disease</b>	<b>E</b>	<b>M</b>	<b>MW</b>	<b>NE</b>	<b>NW</b>	<b>SE</b>	<b>S</b>	<b>W</b>	<b>Total</b>
Acute infectious gastroenteritis (incl. rotavirus)	269	109	67	61	70	133	258	130	<b>1097</b>
<i>Bacillus cereus</i> foodborne infection/intoxication	0	0	0	0	0	0	0	0	<b>0</b>
Botulism	0	0	0	0	0	0	0	0	<b>0</b>
Campylobacter infection	150	38	41	44	29	62	89	75	<b>528</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	2	27	24	16	23	28	37	32	<b>189</b>
Enterohaemorrhagic <i>Escherichia coli</i>	8	9	4	2	6	0	2	12	<b>43</b>
Giardiasis	8	0	0	0	1	1	1	0	<b>11</b>
Listeriosis	0	0	0	0	0	0	0	0	<b>0</b>
Noroviral infection	207	173	25	44	58	10	110	3	<b>630</b>
Paratyphoid	0	0	0	0	0	0	0	0	<b>0</b>
Salmonellosis	34	6	7	12	4	7	10	11	<b>91</b>
Shigellosis	3	0	0	1	0	0	3	0	<b>7</b>
Staphylococcal food poisoning	0	0	0	0	0	0	0	0	<b>0</b>
Typhoid	0	0	0	1	0	0	1	0	<b>2</b>
Yersiniosis	1	0	0	0	0	0	0	0	<b>1</b>
<b>Zoonotic 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>
Anthrax	0	0	0	0	0	0	0	0	<b>0</b>
Brucellosis	0	0	7	0	0	0	1	0	<b>8</b>
Echinococcosis	0	0	0	0	0	0	0	0	<b>0</b>
Leptospirosis	0	0	1	0	0	0	0	0	<b>1</b>
Plague	0	0	0	0	0	0	0	0	<b>0</b>
Q Fever	0	0	1	1	1	0	1	1	<b>5</b>
Toxoplasmosis	5	2	0	0	0	0	0	0	<b>7</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>
Rabies	0	0	0	0	0	0	0	0	<b>0</b>
<b>Vectorborne 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>
Malaria	8	0	0	7	1	0	2	1	<b>19</b>

## 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 5 shows the number of salmonellosis notifications by HSE-Area and month for the second quarter of 2006. Comparison of trends with previous years is shown in Figure 1 below.

**Table 5. Salmonellosis Notifications by HSE-Area and Month, Q2 2006**

Salmonellosis	E	M	MW	NE	NW	SE	S	W	Total
April	6	1	2	5	2	3	2	2	23
May	8	2	2	3	1	1	4	4	25
June	20	3	3	4	1	3	4	5	43
Total	34	6	7	12	4	7	10	11	91



**Figure 1. Seasonal Distribution of Human Salmonellosis Notifications, 2003-2005 and to end Q2 2006**

Table 6 shows the *S. enterica* isolates typed by the NSRL in the second quarter of 2006 (n=88). The commonest human serotypes isolated were *S. Enteritidis* (n=34 [39%]) and *S. Typhimurium* (n=19 [22%]).

19 (22%) of *S. enterica* isolates were reported to be associated with travel outside of Ireland during this quarter.

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

There were no cases of typhoid or paratyphoid reported during Quarter 2, 2006.

### **Outbreaks of salmonellosis**

There was one outbreak of salmonellosis reported in Q2, 2006 (see Table 1).

**Table 6. Serotypes of *S. enterica* referred to NSRL in Quarter 2, 2006** (Data are provided courtesy of Prof. Martin Cormican and Dr Geraldine Corbett-Feeney, NSRL).

Serotype	E	M	MW	NE	NW	SE	S	W	Total
Abony	1	0	0	0	0	0	0	0	1
Agona	1	0	0	1	0	0	0	0	2
Blockley	0	0	0	1	0	0	0	0	1
Bredeney	0	0	1	0	0	0	0	0	1
Concord	0	0	0	0	0	0	1	0	1
Enteritidis	17	3	4	0	0	3	4	3	34
Florida	0	0	0	0	0	0	1	0	1
Freetown	0	1	0	0	0	0	0	0	1
Give	0	0	0	0	0	0	0	1	1
Hadar	1	0	0	0	0	0	0	0	1
Indiana	0	0	0	1	0	0	0	0	1
Infantis	0	1	0	0	0	0	0	2	3
Java	0	1	0	0	0	0	0	0	1
Kentucky	0	0	0	0	0	0	1	0	1
Manhattan	1	0	0	0	0	0	0	0	1
Mbandaka	0	0	0	1	0	0	0	0	1
Meleagridis	1	0	0	0	0	0	0	0	1
Mikawasima	0	0	0	0	1	0	0	0	1
Minnesota	1	0	0	0	0	0	0	0	1
Monschau	0	0	0	0	0	1	0	0	1
Newport	1	0	0	0	0	0	0	0	1
Poona	0	1	0	0	0	0	0	0	1
Saintpaul	1	0	0	0	0	0	0	0	1
Senftenberg	1	0	0	0	0	0	0	0	1
Stanley	0	0	1	0	0	1	0	0	2
Typhimurium	4	3	0	2	2	2	3	3	19
Unnamed	1	0	0	1	0	0	0	1	3
Virchow	1	0	0	0	0	1	0	0	2
Worthington	0	0	0	0	0	1	0	0	1
Zanzibar	0	0	0	0	0	0	1	0	1
Total	32	10	6	7	3	9	11	10	88



## 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)'.

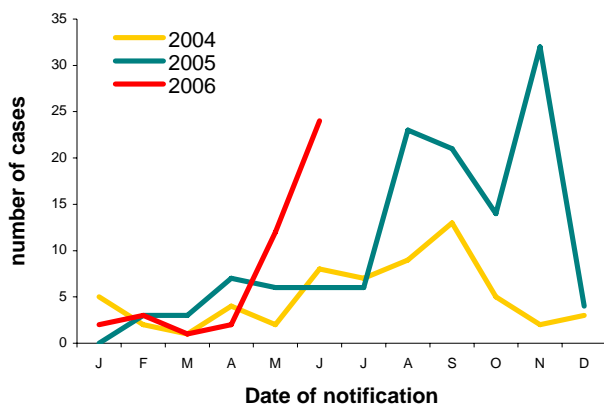
The number of EHEC notified in Q2 2006 is shown in Table 4. Under the legislation, it is required that information on EHEC be gathered and reported. However, because of their clinical and public health significance, it is important to distinguish between those isolates that are verotoxin-producers and those that are not.

Forty-three EHEC were notified in this quarter, thirty-eight of which are VTEC (37 confirmed and 1 probable -Table 7). This compares with 19 VTEC cases notified in Q2 2005 and 17 in Q2 2004 (Figure 2). Table 7 shows the number of VTEC cases reported by serogroup and month, Q2 2006.

**Table 7. Confirmed and Probable VTEC Notified by Serogroup and Month, Q2 2006**

VTEC	O157	O26	O103	Total
April	1	1	0	2
May	6	6	0	12
June	17 <sup>a</sup>	6	1	24
<b>Total</b>	<b>24</b>	<b>13</b>	<b>1</b>	<b>38</b>

<sup>a</sup>Includes two linked cases infected with sorbitol fermenting (SF) VTEC O157, one confirmed and one probable



**Figure 2. Seasonal distribution of confirmed and probable VTEC cases notified 2004-2005, and to Q2 2006**

Enhanced information is provided by HSE-Area personnel on all VTEC cases. Four VTEC cases (3 confirmed and 1 probable) notified in this quarter developed HUS.

The HSE SWA 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 8 and 9 show the phage types and VT types of VTEC isolates referred to this laboratory in Q2 2006.

**Table 8. Phage Types of VTEC O157 isolates referred to the HSE SWA Public Health Laboratory, Cherry Orchard Hospital in Q2 2006.** (Data are provided courtesy of Dr. Eleanor McNamara and Dr. Anne Carroll).

Phage type	Number of isolates
32	10
21/28	11
8	1
RDNC <sup>a</sup>	1
<b>Total</b>	<b>23<sup>b</sup></b>

<sup>a</sup>RDNC reacts with the panel of phages but does not conform to a designated type.

<sup>b</sup>Note: no isolate available for probable case

**Table 9. Verotoxin typing results of VTEC isolates referred to the HSE SWA Public Health Laboratory, Cherry Orchard Hospital in Q2 2006.** (Data are provided courtesy of Dr. Eleanor McNamara and Dr. Anne Carroll).

Serogroup	Vt1	Vt2	Vt1+Vt2	Total
<i>E. coli</i> O157	0	22	1	23 <sup>a</sup>
<i>E. coli</i> O26	8	4	1	13
<i>E. coli</i> O103	1	0	0	1
<b>Total</b>	<b>9</b>	<b>26</b>	<b>2</b>	<b>37</b>

<sup>a</sup>Note: no isolate available for probable case

### Outbreaks of VTEC infection

During this quarter, six family outbreaks of VTEC infection were reported, 4 due to *E. coli* O157 and 2 due to *E. coli* O26 (see table 1).

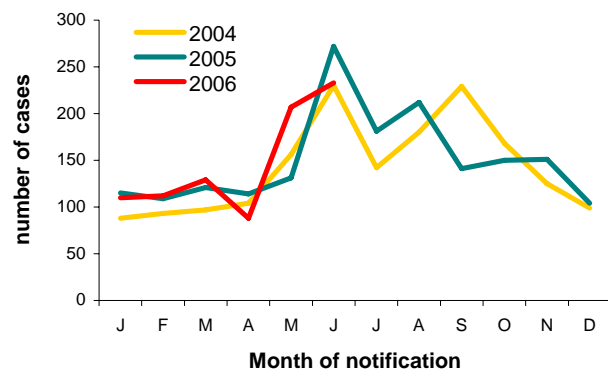


## CAMPYLOBACTER

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 2006 are shown in Table 10. The seasonal trend is broadly similar to the same period for the last year as depicted in Figure 3.

**Table 10. Campylobacter Notifications by HSE-Area and Month, Q2 2006**

Campylobacter Infection	E	M	MW	NE	NW	SE	S	W	Total
April	29	6	5	5	9	11	12	11	88
May	52	21	22	16	5	17	40	34	207
June	69	11	14	23	15	34	37	30	233
Total	150	38	41	44	29	62	89	75	528



**Figure 3. Seasonal distribution of Campylobacter notifications 2004, 2005 and to end Q2 2006**

### Outbreaks of Campylobacter infection

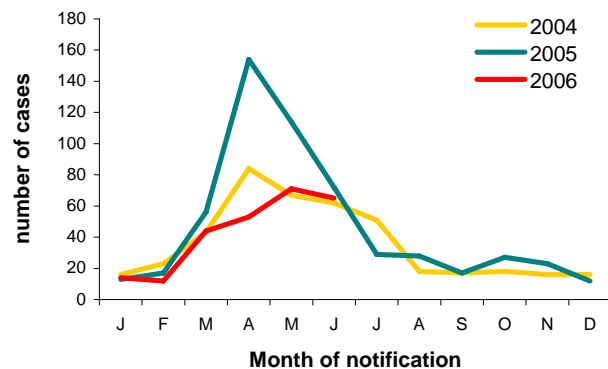
Two family outbreaks of Campylobacter infection were reported in Q2 2006 (Table 1).

## 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 2006, 189 cases of cryptosporidiosis were notified (Table 11), compared to 355 in same period last year and 213 in Q2 2004 (Figure 4).

**Table 11. Cryptosporidiosis Notifications by HSE-Area and Month, Q2 2006**

Cryptosporidiosis	E	M	MW	NE	NW	SE	S	W	Total
April	1	8	9	2	5	11	14	3	53
May	1	12	8	7	9	13	9	12	71
June	0	7	7	7	9	4	14	17	65
Total	2	27	24	16	23	28	37	32	189



**Figure 4. Seasonal distribution of cryptosporidiosis notifications 2004, 2005 and to end Q2 2006**

### Outbreaks of cryptosporidiosis

In quarter 2, one family outbreak of cryptosporidiosis was reported by the HSE-SE (Table 1).

## NOROVIRUS

Human noroviral infection became a notifiable disease on January 1<sup>st</sup> 2004. There were 630 cases reported in the second quarter of 2006, as shown in Table 12. These data are certainly an under-ascertainment of the true burden of disease due to this pathogen.

### Norovirus outbreaks

Norovirus or suspect viral aetiology is the commonest cause of outbreaks of acute gastroenteritis in Ireland. In the second quarter of 2006 there were 55 outbreaks confirmed or suspected as being caused by this virus,

involving at least 1363 people becoming ill, as outlined in Table 1.

**Table 12. Norovirus Notifications by HSE-Area and Month, Q2 2006**

Noroviral Infection	E	M	MW	NE	NW	SE	S	W	Total
April	103	27	14	22	20	2	55	1	244
May	72	52	3	17	20	2	34	2	202
June	32	94	8	5	18	6	21	0	184
Total	207	173	25	44	58	10	110	3	630

## 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 no cases of listeriosis notified in Q2 2006, compared to three in the same period 2005 and three in Q2 2004.

## 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 Q2 2006, seven cases of shigellosis were notified (Table 4). This compares with nine cases

notified as shigellosis in Q2 in 2005 and nine in Q2 2004.

Three cases were reported as *S. sonnei*, three as *S. flexneri* and one as *Shigella* sp.

## 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'.

During Quarter 2 2006, 11 cases of giardiasis were notified (Table 4); this compares with 13 cases notified in Q2 2005 and nine in Q2 2004.

## 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*)'.

No cases of foodborne intoxication were notified in Q2 2006 (Table 4).

## ACUTE INFECTIOUS GASTROENTERITIS incl. ROTAVIRUS

Since 1<sup>st</sup> January 2004, there is a notifiable disease category termed 'Acute Infectious Gastroenteritis'. This includes all unspecified causes of gastroenteritis and also specifically, gastroenteritis due to rotavirus. It should be noted that acute infectious gastroenteritis is now notifiable in all age groups, unlike the former notifiable disease category of 'Gastroenteritis in children under 2 years'.

During Quarter 2 2006, there were 1097 notifications of acute infectious gastroenteritis. 959 were reported as rotavirus (Table 13) and 75% of these were in children under 2 years of age.

**Table 13. Rotaviral Infections Notified under the Category of 'Acute Infectious Gastroenteritis' by HSE-Area and Month, Q2 2006**

Rotaviral Infection	E	M	MW	NE	NW	SE	S	W	Total
April	132	30	41	19	37	54	133	17	463
May	79	37	18	32	21	50	90	22	349
June	38	18	8	10	12	16	31	14	147
Total	249	85	67	61	70	120	254	53	959

## NON-IID ZOONOTIC DISEASES

Non-IID zoonoses now notifiable include: anthrax, brucellosis, echinococcosis, leptospirosis, plague, Q Fever, toxoplasmosis, trichinosis, typhus and rabies. The Q2 2006 notifications of these zoonotic diseases are reported by HSE-Area in Table 4.

Seven cases of toxoplasmosis were notified in this quarter. This compares with 8 cases notified in the same period in 2005 and 13 cases in Q2 2004.

There were 8 cases of brucellosis reported during this quarter compared with 16 in Q2 2005 and 20 in Q2 2004.

One case of leptospirosis was notified in Q2 2006; this compares with 1 in Q2 2005 and 1 in Q2 2004.

There were also 5 cases of Q fever notified this quarter, compared to 1 in Q2 in each year 2005 and 2004.

## MALARIA

Malaria is a notifiable disease for many years. The Q2 2006 notifications are reported in Table 4 by HSE-Area.

Nineteen cases of malaria were notified in Q2 2006.

This compares with 16 cases reported in Q2 2005 and five in Q2 2004.

Sixteen cases were reported as *P. falciparum* and for three notifications, the species was not specified.

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