



**International surveillance network for  
the enteric infections -  
Salmonella, VTEC O157 and Campylobacter**

Funded by the European Centre for Disease Prevention and Control

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**Enter-net Quarterly VTEC Report 2007/1**  
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**Confidential**

**Summary.**

This report gives details of the number of isolates identified by the national reference laboratories in the 1<sup>st</sup> quarter of 2007 and incorporated in the Enter-net VTEC database. Twenty-two countries have supplied the relevant data electronically (or reported a nil return). Three hundred and fifty-two cases have been reported. *E. coli* O157 was the most commonly identified serogroup; other serogroups identified are detailed in table 1, within the 34 (9.7%) others there were 26 different serogroups, 12 cases (3.4%) were non-O157s with no specific serogroup identified.

Details in tables 1 & 2 refer to the sixteen countries that have supplied data electronically for 2006 and 2005. Tables 3-7 show the results from all cases that are in the database.

**Quarterly data – major trends.**

The total number of reports in the database shows a decrease of 20.0% over the same period last year with 352 cases as compared to 440 in 2006. Where phage typing is performed PT8 was the predominant strain as it was in 2006 (table 2). The breakdown of serogroups by country is given in table 7.

The phrase 'NT' is used throughout this report and stands for untyped, untypable or not definitively typed for whatever reason. All data are **provisional**; the month of report is based on the date of receipt in the reference laboratory.

Report prepared – May, 2007.

Serogroup	Freq	%	Freq	%
	2007		2006	
O157	149	42.3	183	41.6
O26	35	9.9	12	2.7
O91	15	4.3	32	7.3
O103	12	3.4	43	9.8
O113	10	2.8	7	1.6
O117	6	1.7	8	1.8
O128	6	1.7	4	0.9
O145	5	1.4	10	2.3
O146	4	1.1	13	3.0
O63	3	0.9	1	0.2
Non-O157	12	3.4	10	2.3
NT	61	17.3	52	11.8
Other	34	9.7	65	14.8
Total	352		440	

Table 1

O157 PT	Freq	%	Freq	%
	2007		2006	
8	31	36.5	29	25.0
21/28	26	30.6	25	21.6
32	11	12.9	7	6.0
4	3	3.5	4	3.4
14	3	3.5	19	16.4
2	2	2.4	10	8.6
54	2	2.4	1	0.9
24	1	1.2	0	0.0
33	1	1.2	3	2.6
43	1	1.2	0	0.0
NT	4	4.7	6	5.2
Other	0	0.0	12	10.3
Total	85		116	

Table 2

### Antimicrobial susceptibility testing results.

Antimicrobial susceptibility test results were available for 118 records. The majority of these are tested against the full panel of antimicrobials recommended by Enter-net, although not all strains are necessarily tested against each one. The frequency and percent in the categories resistant, intermediate and sensitive (as defined by each reference laboratory) are given in table 3.

AST results by each Antimicrobial							
	Resistant		Intermediate		Sensitive		Tested
Streptomycin	16	14.8	4	3.7	88	81.5	108
Gentamicin	1	0.8	3	2.5	114	96.6	118
Kanamycin	1	0.9	4	3.7	103	95.4	108
Ampicillin	11	9.3	76	64.4	31	26.3	118
Cefotaxime	1	0.8		0.0	117	99.2	118
Sulphonamides	32	29.6	36	33.3	40	37.0	108
Trimethoprim	11	9.3	0	0.0	107	90.7	118
Chloramphenicol	5	4.6		0.0	103	95.4	108
Tetracyclines	15	13.9	46	42.6	47	43.5	108
Nalidixic Acid	3	2.6		0.0	114	97.4	117
Ciprofloxacin		0.0		0.0	118	100	118

Table 3

### Multi-drug resistance.

Table 4 shows the total number of strains with multi-resistance (to four or more antimicrobials) and the percent of the total for that serogroup with an associated antibiogram.

\* Three different serogroups.

Serogroup	No MDR (≥4)	Total	%
untyped/untypable	2	38	5.3
O157	1	8	12.5
O26	1	10	10.0
O103	1	7	14.3
O111	1	2	50.0
O145	0	4	0.0
Others*	3	52	5.8
Total	9	121	7.4

Table 4

### Age and gender.

The age and gender breakdown is detailed in table 5.

Ageband	O157								non-O157							
	Male		Female		NK		Total		Male		Female		NK		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
0-11m	4	2.7	2	1.3	1	0.7	7	4.7	4	2.8	4	2.8		0.0	8	5.7
1-5y	19	12.8	23	15.4	1	0.7	43	28.9	34	24.1	27	19.1		0.0	61	43.3
6-14y	12	8.1	11	7.4		0.0	23	15.4	4	2.8	8	5.7		0.0	12	8.5
16-64y	23	15.4	31	20.8	2	1.3	56	37.6	22	15.6	22	15.6	1	0.7	45	31.9
65y+	6	4.0	11	7.4		0.0	17	11.4	2	1.4	9	6.4		0.0	11	7.8
NK		0.0	3	2.0		0.0	3	2.0	2	1.4	2	1.4		0.0	4	2.8
Total	64	43.0	81	54.4	4	2.7	149	100	68	48.2	72	51.1	1	0.7	141	100

Table 5

### Clinical manifestation.

The clinical manifestation is detailed for 181 of the cases in the database. Bloody diarrhoea is more common in cases with O157 infections compared to non-O157 infections (table 6).

Clinical Manifestation	O157		non-O157		Serogroup not known	
	Freq	%	Freq	%	Freq	%
Diarrhoea	40	51.3	65	76.5	11	61.1
Bloody diarrhoea	29	37.2	6	7.1	2	11.1
HUS	9	11.5	7	8.2	4	22.2
Asymptomatic		0.0	7	8.2	1	5.6
Total	78		85		18	

Table 6