



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

Funded by the European Commission - DG SANCO

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**Enter-net Quarterly VTEC Report Apr-Jun 2005/2**

**Summary.**

This report gives details of the number of isolates identified by the national reference laboratories in the 2<sup>nd</sup> quarter of 2005 and incorporated in the Enter-net VTEC database. Twelve countries have supplied information. Three hundred and sixty-seven cases have been reported. The most common serogroups identified are O157 (123 cases, 33.5%), O26 (33, 9.0%), O103 (32, 8.7%), O91 (17, 4.6%), O111 (12, 3.3%), O145 (11, 3.0%) were the only serogroups in double figures. Sixty cases (16.3%) were untyped or untypable; the remaining 79 cases consisted of 36 other serogroups.

Serogroup	Freq	%	Freq	%
	2005		2004	
O157	89	26.7	83	31.2
O26	33	9.9	22	8.3
O103	32	9.6	10	3.8
O91	17	5.1	18	6.8
O111	12	3.6	4	1.5
O145	11	3.3	10	3.8
O55	8	2.4	1	0.4
O8	5	1.5	1	0.4
O76	5	1.5	4	1.5
O128	5	1.5	2	0.8
Untyped/untypable	60	18.0	52	19.5
Other	56	16.8	59	22.2
Total	333		266	

Table 1

**Quarterly data - major trends.**

Details left and below refer to the eight countries that have supplied comparable data electronically for 2005 and 2004. The total number of reports in the database shows an increase over the same period in 2004 from 266 to 333 up 25.2%.

*E. coli* O157 was the most commonly identified serogroup (table 1). Where phage typing is performed phage type 21/28 was the predominant strain as it was in 2004 (table 2).

All data are provisional, the month of report is based on the date of receipt in the reference laboratory; November, 2005.

O157 Phage type	Freq	%	Freq	%
	2005		2004	
21/28	26	29.2	28	33.7
8	10	11.2	7	8.4
2	8	9.0	11	13.3
88	4	4.5	0	0.0
4	3	3.4	1	1.2
32	2	2.2	1	1.2
14	1	1.1	2	2.4
31	1	1.1		0.0
34	1	1.1		0.0
38	1	1.1		0.0
Untyped/untypable	31	34.8	32	38.6
Other	1	1.1	1	1.2
Total	89		83	

Table 2

### Antimicrobial susceptibility testing results.

Antimicrobial susceptibility test results were available for 231 records. The majority of these are tested against the panel of 11 antimicrobials recommended by Enter-net, although not all strains are 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.

**Multi-drug resistance;** Table 4 shows the total number of strains with multiple-resistance (to four or more antimicrobials) and the percent of the total for that serotype with an associated antibiogram.

### Age and gender.

The age and gender breakdown is detailed in table 5. Cases of *E. coli* O157 and non-O157 are split evenly between males and females (serogroup=not known are excluded).

AST results by each Antimicrobial							
	Resistant		Intermediate		Sensitive		Tested
Streptomycin	41	17.8	13	5.7	176	76.5	230
Gentamicin	4	1.7	19	8.3	207	90.0	230
Kanamycin	11	4.8	25	10.9	194	84.3	230
Ampicillin	23	10.0	167	72.3	41	17.7	231
Cefotaxime	0	0.0	0	0.0	231	100.0	231
Sulphonamides	188	81.7	17	7.4	25	10.9	230
Trimethoprim	14	6.1	4	1.7	212	92.2	230
Chloramphenicol	8	3.5	0	0.0	222	96.5	230
Tetracyclines	35	15.2	106	46.1	89	38.7	230
Nalidixic Acid	4	1.7	0	0.0	226	98.3	230
Ciprofloxacin	0	0.0	0	0.0	231	100.0	231
Streptomycin	41	17.8	13	5.7	176	76.5	230

Table 3

Serogroup	No MDR (≥4)	Total	%
Untyped/untypable	3	42	7.1
O26	6	26	23.1
O111	3	9	33.3
Others	9	154	5.8
Total	21	231	9.1

Table 4

### Clinical manifestation.

The clinical manifestation is detailed for 99 of the cases in the database. HUS is more common in O157 than non-O157 infections (table 6).

	<b>O157</b>							<b>non-O157</b>						
	Male		Female		Not known		Total	Male		Female		Not known		Total
Ageband	Fre q	%	Fre q	%	Freq	%		Fre q	%	Fre q	%	Fre q	%	
0-11m	3	2.4	2	1.6		0.0	5	3	1.6	2	1.1		0.0	5
1-5y	20	16.3	25	20.3	1	0.8	46	45	24.6	50	27.3	3	1.6	98
6-14y	8	6.5	10	8.1		0.0	18	8	4.4	6	3.3		0.0	14
16-64y	19	15.4	23	18.7		0.0	42	25	13.7	30	16.4		0.0	55
65y+	5	4.1	7	5.7		0.0	12	3	1.6	4	2.2		0.0	7
Not known		0.0		0.0		0.0	0	2	1.1		0.0	2	1.1	4
	55		67		1		123	86		92		5		183

Table 5

<b>Clinical Manifestation</b>	<b>O157</b>		<b>non-O157</b>		<b>Serogroup not known</b>	
<b>Diarrhoea</b>	20	51.3	38	90.5	17	94.4
<b>Bloody diarrhoea</b>	14	35.9	2	4.8		0.0
<b>HUS</b>	5	12.8	2	4.8	1	5.6
<b>Asymptomatic</b>	0	0.0	0	0.0	0	0.0
	39		42		18	

Table 6