



**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 Jul-Sep 2005/3

Summary.

This report gives details of the number of isolates identified by the national reference laboratories in the 3rd quarter of 2005 and incorporated in the Enter-net VTEC database. Nineteen countries have supplied the relevant data electronically (or reported a nil return). Five hundred and forty-four cases have been reported. The most common serogroups identified were O157 (224 cases, 41.2%), O26 (66, 12.1%), O103 (46, 8.5%), O145 (22, 4.0%), O91 (21, 3.9%), O111 (16, 2.9%), these were the only serogroups in double figures. Seventy-six cases (14.0%) were untyped or untypable; the remaining 73 cases (13.4%) consisted of 37 other serogroups.

Serogroup	2005		2004	
	Freq	%	Freq	%
O157	188	38.6	252	45.2
O26	56	11.5	46	8.3
O103	42	8.6	20	3.6
O91	21	4.3	28	5.0
O145	20	4.1	16	2.9
O111	16	3.3	8	1.4
O128ab	7	1.4	1	0.2
O128	6	1.2	4	0.7
O5	5	1.0	3	0.5
O55	5	1.0	8	1.4
NT	73	15.0	94	16.9
Other	48	9.9	77	13.8
Total	487		557	

Table 1

Quarterly data – major trends.

Details in the tables to the left refer to the eleven countries that have supplied data electronically for 2005 and 2004. The total number of reports in the database shows a decrease of 12.6% over the same period in 2004 from 557 to 487 cases.

E. coli O157 was the most commonly identified serogroup (table 1). Where phage typing is performed phage type 8 was the predominant strain unlike in 2004 when it was phage type 21/28 (table 2).

O157 Phage type	2005		2004	
	Freq	%	Freq	%
8	30	28.6	30	17.1
32	26	24.8	19	10.9
21/28	20	19.0	67	38.3
2	5	4.8	28	16.0
14	5	4.8	11	6.3
54	3	2.9	2	1.1
31	2	1.9	4	2.3
34	2	1.9	4	2.3
49	1	1.0	0	0.0
88	1	1.0	2	1.1
NT	10	9.5	3	1.7
Other	0	0.0	5	2.9
Total	105		175	

Table 2

The phrase 'NT' is used throughout this report and stands for untyped or untypable for whatever reason.

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

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Antimicrobial susceptibility testing results.

Antimicrobial susceptibility test results were available for 263 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.

AST results by each Antimicrobial							
	Resistant		Intermediate		Sensitive		Tested
Streptomycin	49	18.6	3	1.1	211	80.2	263
Gentamicin	2	0.8	11	4.2	250	95.1	263
Kanamycin	9	3.4	17	6.5	237	90.1	263
Ampicillin	23	8.7	186	70.7	54	20.5	263
Cefotaxime	0	0.0	0	0.0	263	100.0	263
Sulphonamides	174	66.2	46	17.5	43	16.3	263
Trimethoprim	20	7.6	3	1.1	240	91.3	263
Chloramphenicol	15	5.7	0	0.0	248	94.3	263
Tetracyclines	39	14.8	138	52.5	86	32.7	263
Nalidixic Acid	5	1.9	0	0.0	258	98.1	263
Ciprofloxacin	1	0.4	0	0.0	262	99.6	263

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.

Serogroup	No MDR (≥4)	Total	%
O111	6	12	50.0
O91	3	20	15.0
O26	5	41	12.2
O103	2	26	7.7
NT	4	55	7.3
Others	5	109	4.6
Total	25	263	9.5

Table 4

Age and gender.

The age and gender breakdown is detailed in table 5. The ratio of males to females differs between cases of *E. coli* O157 and non-O157 with O157 cases having a ratio of 1:1.1, and non-O157 cases being 1:0.78 (serogroup=not known are excluded).

Ageband	O157								non-O157							
	Male		Female		NK		Total		Male		Female		NK		Total	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
0-11m	5	2.2	9	4.0	1	0.4	15	6.7	8	3.3	2	0.8		0.0	10	4.1
1-5y	38	17.0	41	18.3		0.0	79	35.3	84	34.4	62	25.4	2	0.8	148	60.7
6-14y	14	6.3	8	3.6		0.0	22	9.8	10	4.1	6	2.5		0.0	16	6.6
16-64y	40	17.9	48	21.4		0.0	88	39.3	20	8.2	28	11.5	1	0.4	49	20.1
65y+	7	3.1	11	4.9		0.0	18	8.0	7	2.9	3	1.2		0.0	10	4.1
NK	2	0.9	0	0.0		0.0	2	0.9		0.0		0.0	11	4.5	11	4.5
	106	47.3	117	52.2	1	0.4	224	100	129	52.9	101	41.4	14	5.7	244	

Table 5

Clinical manifestation.

The clinical manifestation is detailed for 185 of the cases in the database. Bloody diarrhoea and HUS are more common in O157 than non-O157 infections (table 6).

Clinical Manifestation	O157		non-O157		Serogroup not known	
	Freq	%	Freq	%	Freq	%
Diarrhoea	28	27.5	45	73.8	17	77.3
Bloody diarrhoea	44	43.1	6	9.8	3	13.6
HUS	25	24.5	9	14.8	1	4.5
Asymptomatic	5	4.9	1	1.6	1	4.5
Total	102		61		22	

Table 6

This report was prepared by Ian Fisher, Scientific Co-ordinator and Francine Stalham, Administrator on behalf of the Enter-net participants.