



**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 2005/4
Confidential

Summary.

This report gives details of the number of isolates identified by the national reference laboratories in the 4th quarter of 2005 and incorporated in the Enter-net VTEC database. Seventeen countries have supplied the relevant data electronically (or reported a nil return). Four hundred and thirteen cases have been reported. The most common serogroups identified were O157 (199 cases, 48.2%), O26 (23, 5.6%), O91 (20, 4.8%), O103 (15, 3.6%), O145 (10, 2.4%), O146 (9, 2.2%), O111 (8, 1.9%), O76 (6, 1.5%), and O128 (6, 1.5%), these were the only serogroups with five-or-more cases. Seventy-three cases (17.7%) were untyped or untypable; the remaining 44 cases (10.6%) consisted of 31 other serogroups.

Serogroup	Freq	%	Freq	%
	2005		2004	
O157	127	39.9	89	31.7
O91	20	6.3	12	4.3
O103	15	4.7	10	3.6
O26	13	4.1	20	7.1
O145	10	3.1	17	6.0
O146	9	2.8	3	1.1
O111	8	2.5	3	1.1
O76	6	1.9	1	0.4
O75	4	1.3	1	0.4
O177	4	1.3	5	1.8
NT	65	20.4	54	19.2
Other	37	11.6	66	23.5
Total	318		281	

Table 1

Quarterly data – major trends.

Details in the tables to the left refer to the ten countries that have supplied data electronically for 2005 and 2004. The total number of reports in the database shows an increase of 13.2% over the same period in 2004 from 281 to 318 cases.

E. coli O157 was the most commonly identified serogroup (table 1). Where phage typing is performed phage type 32 was the predominant strain unlike in 2004 when it was phage type 21/28 (table 2).

The breakdown of serogroups by country is given in table 7.

O157 Phage type	Freq	%	Freq	%
	2005		2004	
32	28	30.4	10	20.0
21/28	20	21.7	14	28.0
8	18	19.6	8	16.0
4	8	8.7	1	2.0
2	5	5.4	3	6.0
14	4	4.3	5	10.0
23	1	1.1	0	0.0
34	1	1.1	0	0.0
54	1	1.1	0	0.0
63	1	1.1	0	0.0
NT	5	5.4	2	4.0
Other	0	0.0	7	14.0
Total	92		50	

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.

Prepared 10 February, 2006.

Antimicrobial susceptibility testing results.

Antimicrobial susceptibility test results were available for 149 records. The majority of these are tested against the panel of 11 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	29	19.5	4	2.7	116	77.9	149	
Gentamicin		0.0	8	5.4	141	94.6	149	
Kanamycin	6	4.0	12	8.1	131	87.9	149	
Ampicillin	17	11.4	107	71.8	25	16.8	149	
Cefotaxime		0.0		0.0	149	100.0	149	
Sulphonamides	76	51.0	46	30.9	27	18.1	149	
Trimethoprim	9	6.0	1	0.7	139	93.3	149	
Chloramphenicol	4	2.7		0.0	145	97.3	149	
Tetracyclines	17	11.4	76	51.0	56	37.6	149	
Nalidixic Acid	3	2.0		0.0	146	98.0	149	
Ciprofloxacin	1	0.7		0.0	148	99.3	149	

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.

* Eight different serogroups plus one not-typed.

Serogroup	No MDR (≥4)	Total	%
O111	3	8	37.5
O177	2	4	50.0
Other*	9	137	6.6
Total	14	149	9.4

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	6	3.0	5	2.5		0.0	11	5.5	5	3.5	10	7.1		0.0	15	10.6
1-5y	38	19.1	35	17.6		0.0	73	36.7	23	16.3	29	20.6	2	1.4	54	38.3
6-14y	22	11.1	19	9.5		0.0	41	20.6	15	10.6	7	5.0		0.0	22	15.6
16-64y	22	11.1	31	15.6	1	0.5	54	27.1	11	7.8	23	16.3	1	0.7	35	24.8
65y+	3	1.5	13	6.5		0.0	16	8.0	6	4.3	5	3.5		0.0	11	7.8
NK	1	0.5	2	1.0	1	0.5	4	2.0	3	2.1		0.0	1	0.7	4	2.8
Total	92	46.2	105	52.8	2	1.0	199	100	63	44.7	74	52.5	4	2.8	141	100

Table 5

Clinical manifestation.

The clinical manifestation is detailed for 192 of the cases in the database. Bloody diarrhoea is more common in cases with O157 infections compared to non-O157 infections, HUS is split evenly between the two (table 6).

Clinical Manifestation	O157		non-O157		Serogroup not known	
	Freq	%	Freq	%	Freq	%
Diarrhoea	35	28.2	31	68.9	11	47.8
Bloody diarrhoea	39	31.5	3	6.7	3	13.0
HUS	29	23.4	11	24.4	7	30.4
Asymptomatic	21	16.9		0.0	2	8.7
Total	124		45		23	

Table 6

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