

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

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Enter-net Quarterly VTEC Report Jan-Mar 2005/1

Summary.

This report gives details of the number of isolates identified by the national reference laboratories in the 1st quarter of 2005 and incorporated in the Enter-net VTEC database. Six countries have supplied information.

Quarterly data - major trends.

| Serogroup | Freq | % | Freq | % | |
|--|---|---|---|---|--|
| | 20 | 04 | | | |
| O157 | 46 | 22.3 | 49 | 19.9 | |
| O91 | 24 | 11.7 | 25 | 10.2 | |
| O103 | 19 | 9.2 | 15 | 6.1 | |
| O26 | 15 | 7.3 | 15 | 6.1 | |
| O146 | 10 | 4.9 | 7 | 2.8 | |
| O145 | 9 | 4.4 | 8 | 3.3 | |
| O113 | 6 | 2.9 | 4 | 1.6 | |
| 0117 | 5 | 2.4 | 4 | 1.6 | |
| O128 | 4 | 1.9 | 5 | 2.0 | |
| O55 | 3 | 1.5 | 0 | 0.0 | |
| Untyped/untypabl | | | | | |
| е | 36 | 17.5 | 65 | 26.4 | |
| Other | 32 | 15.5 | 49 | 19.9 | |
| Total | 206 | | 246 | | |
| | Table | 1 | | | |
| | | | | | |
| O157 Phage type | Freq | % | Freq | % | |
| O157 Phage type | Freq 20 | % 05 | Freq 20 | % 04 | |
| O157 Phage type 21/28 | Freq 20 11 | % 05 23.9 | Freq 20 12 | % 04 24.5 | |
| 0157 Phage type 21/28 8 | Freq 20 11 9 | % 05 23.9 19.6 | Freq 20 12 4 | % 04 24.5 8.2 | |
| 0157 Phage type 21/28 8 88 | Freq 20 11 9 9 | % 05 23.9 19.6 19.6 | Freq 20 12 4 0 | % 04 24.5 8.2 0.0 | |
| 0157 Phage type 21/28 8 88 2 | Freq 20 11 9 9 5 | % 05 23.9 19.6 19.6 10.9 | Freq 20 12 4 0 4 | % 04 24.5 8.2 0.0 8.2 | |
| 0157 Phage type 21/28 8 88 2 34 | Freq 20 11 9 9 5 2 | % 05 23.9 19.6 19.6 10.9 4.3 | Freq 20 12 4 0 4 0 | % 04 24.5 8.2 0.0 8.2 0.0 | |
| 0157 Phage type 21/28 8 88 2 34 4 | Freq 20 11 9 9 5 2 1 | % 05 23.9 19.6 19.6 10.9 4.3 2.2 | Freq 20 12 4 0 4 0 0 0 | % 24.5 8.2 0.0 8.2 0.0 0.0 | |
| 0157 Phage type 21/28 8 88 2 34 4 32 | Freq 20 11 9 9 5 2 1 1 | % 05 23.9 19.6 19.6 10.9 4.3 2.2 2.2 | Freq 20 12 4 0 4 0 0 0 0 | % 24.5 8.2 0.0 8.2 0.0 0.0 0.0 0.0 | |
| 0157 Phage type 21/28 8 8 2 34 4 32 | Freq 20 11 9 9 5 2 1 1 1 | % 23.9 19.6 19.6 10.9 4.3 2.2 2.2 | Freq 20 12 4 0 0 0 0 0 | % 24.5 8.2 0.0 8.2 0.0 0.0 0.0 0.0 | |
| O157 Phage type 21/28 8 8 8 2 34 4 32 | Freq 20 11 9 9 5 2 2 1 1 1 | % 05 23.9 19.6 19.6 10.9 4.3 2.2 2.2 | Freq 20 12 4 0 4 0 0 0 0 | % 24.5 8.2 0.0 8.2 0.0 0.0 0.0 | |
| O157 Phage type 21/28 8 8 8 2 34 4 32 | Freq 20 11 9 9 5 2 1 1 1 | % 23.9 19.6 19.6 10.9 4.3 2.2 2.2 | Freq 20 12 4 0 4 0 0 0 0 | % 24.5 8.2 0.0 8.2 0.0 0.0 0.0 0.0 0.0 | |
| O157 Phage type 21/28 8 8 2 34 4 32 Untyped/untypabl | Freq 20 11 9 9 5 2 1 1 1 | % 23.9 19.6 19.7 10.9 4.3 2.2 2.2 | Freq 20 12 4 0 4 0 0 0 0 | % 04 24.5 8.2 0.0 8.2 0.0 0.0 0.0 0.0 | |
| O157 Phage type 21/28 8 8 2 34 4 32 Untyped/untypabl e | Freq 20 11 9 9 5 2 1 1 1 1 8 | % 23.9 19.6 19.7 22 2.2 2.2 2.2 10.9 17.4 | Freq 20 12 4 0 0 0 0 0 0 27 | % 04 24.5 8.2 0.0 8.2 0.0 0.0 0.0 0.0 55.1 | |
| O157 Phage type 21/28 8 8 8 2 34 4 32 32 Untyped/untypabl e Other | Freq 20 11 9 9 5 2 1 1 1 1 1 8 0 | % 05 23.9 19.6 19.6 10.9 4.3 2.2 2.2 2.2 17.4 0.0 | Freq 20 12 4 0 4 0 0 0 0 0 0 0 27 27 | % 24.5 8.2 0.0 8.2 0.0 0.0 0.0 0.0 55.1 4.1 | |
| O157 Phage type 21/28 8 8 2 34 4 32 34 4 32 Untyped/untypabl e Other Total | Freq 20 11 9 9 5 2 1 1 1 1 1 8 0 46 | % 05 23.9 19.6 19.6 10.9 4.3 2.2 2.2 2.2 17.4 0.0 | Freq 20 12 4 0 4 0 0 0 0 0 0 0 0 27 2 2 49 | % 24.5 8.2 0.0 8.2 0.0 0.0 0.0 0.0 55.1 4.1 | |

Details below refer to the five countries that have supplied comparable data electronically for 2005 and 2004. The total number of reports in the database shows a decrease over the same period of 2005 from 246 to 206 down 16.3% in 2004.

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, September, 2005

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Antimicrobial susceptibility testing results.

susceptibility Antimicrobial test results were available for 151 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 | | resis | stance; | Tab | four | |
|------------|-----|-------|---------|-----|------|-------|
| shows | the | total | number | of | st | rains |

with multiple-resistance (to four or mo antimicrobials) and the percent of the tot for that serotype with an associate antibiogram.

| AST Results by each Antimicrobial | | | | | | | | | | |
|-----------------------------------|-----------|--------|-------|--------|--------------------------|------|--------|------------|--|--|
| | | Resi | stant | Intern | termediat e Sensitive | | sitive | Teste d | | |
| | | | % | Freq | % | Freq | % | | | |
| Strept | omycin | 16 | 10.6 | 7 | 4.6 | 128 | 84.8 | 151 | | |
| Genta | micin | 0 | 0.0 | 19 | 12.6 | 132 | 87.4 | 151 | | |
| Kanar | nycin | 2 | 1.3 | 8 | 5.3 | 141 | 93.4 | 151 | | |
| Ampic | illin | 10 | 6.6 | 120 | 79.5 | 21 | 13.9 | 151 | | |
| Cefota | axime | 0 | 0.0 | 0 | 0.0 | 151 | 100.0 | 151 | | |
| Sulph | onamides | 132 | 87.4 | 6 | 4.0 | 13 | 8.6 | 151 | | |
| Trime | thoprim | 11 | 7.3 | 6 | 4.0 | 134 | 88.7 | 151 | | |
| Chlora I | amphenico | 9 | 6.0 | 0 | 0.0 | 142 | 94.0 | 151 | | |
| Tetrac | cyclines | 12 | 7.9 | 78 | 51.7 | 61 | 40.4 | 151 | | |
| Nalidiz | kic Acid | 1 | 0.7 | 0 | 0.0 | 150 | 99.3 | 151 | | |
| Ciprof | loxacin | 0 | 0.0 | 0 | 0.0 | 151 | 100.0 | 151 | | |
| | | | Т | able 3 | | | | | | |
| | Serogrou | ıp | | No N | IDR (>: | 3) | Total | % | | |
| nore | Untyped/ | untypa | abl | | | | | | | |
| total | е | | | | 4 | 27 | 14.8 | | | |
| ated | O91 | | | | | 2 | 24 | 8.3 | | |
| | 014 | | | | | 1 | 1 | 100.0 | | |
| | O86 | | | | | 1 | 1 | 100.0 | | |
| | O103 | | | | | 1 | 18 | 5.6 | | |
| | O158 | | | | | 1 | 1 | 100.0 | | |
| | Total | | | | | 10 | 72 | 13.9 | | |
| I IS | | | | Tab | le 4 | | | | | |

Age and gender.

The age and gender breakdown detailed in table 5. Cases of E. coli O157

| are split | evenly | between | male and | female, | but there | are | more | cases | of r | non-0157 | Е. | <i>coli</i> in |
|-----------|---------|-------------|-----------|---------|-----------|-----|------|-------|------|----------|----|----------------|
| females | than ma | ales (ratic | o 1:1.2). | | | | | | | | | |

| | 0157 | | | | | | | non-O157 | | | | | | |
|-----------|------|------|-----|------|------|-----|-------|----------|------|-----|------|-----|-----|-------|
| | Not | | | | | Not | | | | | | | | |
| | Ma | ale | Fen | nale | know | vn | | Ma | ale | Fen | nale | kno | wn | |
| | Fre | | Fre | | | | | Fre | | Fre | | Fre | | |
| Ageband | q | % | q | % | Freq | % | Total | q | % | q | % | q | % | Total |
| 0-11m | 2 | 4.3 | 1 | 2.2 | | | 3 | 2 | 1.6 | 2 | 1.6 | | 0.0 | 4 |
| 1-5y | 13 | 28.3 | 8 | 17.4 | | | 21 | 26 | 21.0 | 30 | 24.2 | 1 | 0.8 | 57 |
| 6-14y | 3 | 6.5 | 4 | 8.7 | | | 7 | 4 | 3.2 | 1 | 0.8 | 1 | 0.8 | 6 |
| 16-64y | 5 | 10.9 | 9 | 19.6 | | | 14 | 19 | 15.3 | 25 | 20.2 | 1 | 0.8 | 45 |
| 65y+ | 1 | 2.2 | | 0.0 | | | 1 | 2 | 1.6 | 7 | 5.6 | | 0.0 | 9 |
| Not known | | 0.0 | | 0.0 | | | 0 | 1 | 0.8 | 2 | 1.6 | | 0.0 | 3 |
| | 24 | | 22 | | 0 | | 46 | 54 | | 67 | | 3 | | 124 |
| | | | | | | Tab | le 5 | | | | | | | |

Clinical manifestation.

The clinical manifestation is detailed for 43 of the cases in the database. HUS is more common in O157 than non-O157 infections (table 6).

| | C | 0157 | non-0157 | | | | | |
|------------------|----|------|----------|------|--|--|--|--|
| Diarrhoea | 7 | 58.3 | 28 | 90.3 | | | | |
| Bloody diarrhoea | 1 | 8.3 | 2 | 6.5 | | | | |
| HUS | 4 | 33.3 | 1 | 3.2 | | | | |
| Asymptomatic | 0 | 0.0 | 0 | 0.0 | | | | |
| | 12 | | 31 | | | | | |
| Table 6 | | | | | | | | |

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