



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

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

Summary.

Data on campylobacteriosis were supplied by 15 of the 36 participating countries. In total there were 8,950 cases of *Campylobacter* infection reported to Enter-net during the first quarter of 2005.

Rates of infection ranged from 34.5 to 0.1 per 100,000 of the population. However, the surveillance systems which monitor *Campylobacter* infection vary considerably. In some countries campylobacteriosis is a notifiable disease, whilst in others, surveillance is carried out on a voluntary basis, and some countries are only just introducing national reference facilities.

Species Differentiation.

Species differentiation of all *Campylobacter* isolates was undertaken by seven of the countries that submitted data (46.7%). A further three countries (20.0%) only speciated a subset of isolates; in five countries no further characterisation took place (33.3%). *Campylobacter jejuni* was the predominant species identified (Table 1).

Table 1 Number and proportion of isolates by species.

Species	Number	%
<i>C. jejuni</i>	5,053	56.5
<i>C. coli</i>	204	2.3
Other	603	6.7
Not typed	3,090	34.5
Total	8,950	100.0

Age and gender.

Just under half of all cases were between 15 and 64 years of age (Table 2). The distribution of cases showed little variation by gender.

Age group	Males (%)	Females (%)	Unknown (%)	Total (%)
<1 year	273 (3.1)	235 (2.6)	20 (0.2)	528 (5.9)
1-5 years	911 (10.2)	776 (8.7)	35 (0.4)	1,722 (19.2)
6-14 years	544 (6.1)	399 (4.5)	9 (0.1)	952 (10.6)
15-64 years	2,181 (24.4)	2,201 (24.6)	20 (0.2)	4,402 (49.2)
>65 years	284 (3.2)	356 (4.0)	5 (0.1)	645 (7.2)
Unknown	9 (0.1)	13 (0.1)	679 (7.6)	701 (7.8)
Total	4,202 (46.9)	3,980 (44.5)	768 (8.6)	8,950 (100.0)

Table 2 Age and gender breakdown of all *Campylobacter* isolates reported to Enter-net during the first quarter of 2005.

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Travel associated cases.

Few countries actively attempt to distinguish between domestic and imported cases, thus information on travel history is not reliably recorded. Where data are available 12.5% of cases are travel related. The most frequently reported countries of travel were Thailand (15.4%), Egypt (14.6%) and India (13.9%).

Antimicrobial resistance.

Antimicrobial susceptibility testing of *Campylobacter* isolates was undertaken by seven of the countries that submitted data (46.7%). In total 1,038 isolates underwent some form of antimicrobial susceptibility testing (11.6%). The proportion of resistant isolates varied by species (Table 3).

Antimicrobial agent	Number tested	Proportion of isolates resistant (%)			
		<i>C. jejuni</i>	<i>C. coli</i>	Other	All <i>Campylobacter</i>
Gentamicin	339	0.0	0.0	0.0	0.0
Ampicillin	493	23.8	17.7	30.6	23.5
Amoxicillin/Clavulanic acid	310	0.0	0.0	0.0	0.0
Erythromycin	935	1.6	8.6	4.7	2.4
Tetracyclines	843	24.5	34.6	7.7	25.3
Nalidixic acid	515	38.8	41.9	71.9	39.8
Ciprofloxacin	1,038	37.8	37.1	30.8	37.9

Table 3 Antimicrobial susceptibility testing results showing the proportion (%) of isolates resistant to the testing panel of antimicrobials by species.

Multi-drug resistance.

Multi-drug resistance results showing the proportion (%) of isolates by species that were found to be resistant to four or more different classes of antimicrobials. Six per cent of all *Campylobacter* isolates tested were multi-drug resistant (Table 4).

Table 4 Multi-drug resistance results showing the proportion (%) of isolates by species that were found to be resistant to four or more different classes of antimicrobials.

Species	Number tested	Percent MDR
<i>C. jejuni</i>	320	5.9
<i>C. coli</i>	51	11.8
Other/Unknown	45	0.0
Total	416	6.0