**Table S1.** Distribution (odds ratio and confidence intervals) of a main symptom associated with *Campylobacter* infection by age group.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Bloody diarrhoea** | | | **Non-bloody Diarrhoea** | | | **Abdominal pain** | | | **Fever** | | | **Vomiting** | | |
| Yes | No | p-value  OR (95%CI) | Yes | No | p-value  OR (95%CI) | Yes | No | p-value  OR (95%CI) | Yes | No | p-value  OR (95%CI) | Yes | No | p-value  OR (95%CI) |
| **Age** |  |  | <0.001 |  |  | <0.001 |  |  | <0.001 |  |  | <0.001 |  |  | <0.001 |
| <1 | 368 | 346 | Ref. | 323 | 390 | Ref. | 47 | 666 | Ref. | 82 | 633 | Ref. | 38 | 677 | Ref. |
| 1-4 | 699 | 812 | 0.809  (0.677-0.967) | 757 | 754 | 1.212  (1.014-1.449) | 151 | 1360 | 1.573  (1.120-2.211) | 206 | 1310 | 1.214  (0.924-1.595) | 71 | 1445 | 0.875  (0.584-1.312) |
| 5-9 | 198 | 295 | 0.631  (0.500-0.796) | 269 | 224 | 1.450  (1.151-1.826) | 85 | 410 | 2.938  (2.015-4.283) | 67 | 429 | 1.206  (0.854-1.703) | 45 | 451 | 1.778  (1.136-2.782) |
| 10-14 | 88 | 176 | 0.470  (0.350-0.631) | 143 | 120 | 1.44  (1.083-1.911) | 63 | 200 | 4.464  (2.964-6.722) | 49 | 215 | 1.759  (1.196-2.709) | 26 | 238 | 1.946  (1.157-3.274) |
| 15-44 | 78 | 269 | 0.273  (0.204-0.365) | 200 | 147 | 1.643  (1.268-2.128) | 84 | 264 | 4.509  (3.070-6.622) | 69 | 279 | 1.909  (1.346-2.274) | 23 | 325 | 1.261  (0.739-2.152) |
| 45-64 | 19 | 143 | 0.125  (0.076-0.206) | 112 | 50 | 2.705  (1.878-3.894) | 38 | 124 | 4.392  (2.718-6.938) | 35 | 128 | 2.111  (1.361-3.274) | 13 | 150 | 1.544  (0.803-2.970) |
| 65+ | 4 | 164 | 0.023  (0.008-1.063) | 137 | 31 | 5.386  (3.517-8.095) | 18 | 150 | 1.7  (0.960-3.011) | 24 | 144 | 1.287  (0.789-2.099) | 16 | 152 | 1.875  (1.019-3.452) |

**Table S2**. Risk ratio of cases of *Campylobacter* infection (male/female) by age group.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Age group** | | | | | | |
| **<1** | **1-4** | **5-9** | **10-14** | **15-44** | **45-64** | **65+** |
| **RR** | 0.931 | 1.065 | 1.026 | 1.144 | 0.799 | 0.998 | 0.935 |
| **(95% CI)** | (0.828-1.047) | (0.992-1.187) | (0.886-1.148) | (0.937-1.397) | (0.684-0.933) | (0.782-1.274) | (0.749-1.167) |
| **p-value** | 0.2333 | 0.0802 | 0.7351 | 0.1876 | 0.0045 | 0.988 | 0.5506 |

**Table S3.** Distribution of *Campylobacter* species for paediatric (<15 years old) and adult population by year.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **No. (% within group)** | | | | | | | | | | | | | |
|  |  | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **Overall** |
| **Paediatric population** | ***C. jejuni*** | 75  (87.2) | 185  (86.4) | 271  (87.4) | 258  (89.9) | 350  (91.9) | 293  (90.4) | 313  (87.7) | 383  (90.3) | 502  (93.1) | 456  (92.3) | 200  (88.9) | 137  (85.6) | 152  (86.9) | 3576  (89.9) |
| ***C. coli*** | 11  (12.8) | 29  (13.6) | 39  (12.6) | 29  (10.1) | 31  (8.1) | 31  (9.6) | 44  (12.3) | 41  (9.7) | 37  (6.9) | 38  (7.7) | 25  (11.1) | 23  (14.4) | 23  (13.1) | 401  (10.1) |
| **Total** | 86 | 214 | 310 | 287 | 381 | 324 | 357 | 424 | 539 | 494 | 225 | 160 | 175 | 3976 |
| **Adult population** | ***C. jejuni*** | 15  (71.4) | 19  (73.1) | 28  (77.8) | 35  (87.5) | 37  (94.9) | 73  (83.0) | 76  (76.8) | 89  (80.9) | 120  (85.1) | 127  (81.9) | 111  (79.9) | 84  (84.0) | 126  (84.0) | 940  (82.2) |
| ***C. coli*** | 6  (28.6) | 7  (26.9) | 8  (22.2) | 5  (12.5) | 2  (5.1) | 15  (17.0) | 23  (23.2) | 21  (19.1) | 21  (14.9) | 28  (18.1) | 28  (20.1) | 16  (16.0) | 24  (16.0) | 24  (16.0) |
| **Total** | 21 | 26 | 36 | 40 | 39 | 88 | 99 | 110 | 141 | 155 | 139 | 100 | 150 | 1144 |

**Table S4**. Time (in days) elapsed from onset of symptoms to the date of sample collection according to gender and age group.

|  |  |  |
| --- | --- | --- |
|  | **Time (days)** | |
|  | **Mean (SD)** | **Median (IQR)** |
| **Gender** |  |  |
| Male | 4.52 (6.818) | 3 (2-5) |
| Female | 5.49 (9.049) | 4 (2-6) |
| P |  | 0.014 |
| **Age group (years)** |  |  |
| <1 | 4.71 (8.099) | 3 (1-5) |
| 1-4 | 5.08 (9.054) | 4 (2-5) |
| 5-9 | 4.50 (5.108) | 3 (2-5) |
| 10-14 | 4.47 (5.574) | 3.5 (2-5) |
| 15-44 | 5.40 (7.128) | 3 (2-5) |
| 45-64 | 5.63 (6.113) | 3 (3-7.5) |
| 65+ | 5.63 (6.927) | 3 (2-6.25) |
| P |  | 0.896 |

**Table S5.** Evolution of resistance (%) to different antimicrobial agents for *Campylobacter jejuni* and *Campylobacter coli*.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2013** | | **2014** | | **2015** | | **2016** | | **2017** | | **2018** | | **2019** | | **2020** | | **2021** | |
| **Antibiotic** | ***C. jejuni***  **(n=97)** | ***C. coli***  **(n=22)** | ***C. jejuni***  **(n=103)** | ***C. coli***  **(n=32)** | ***C. jejuni***  **(n=140)** | ***C. coli***  **(n=42)** | ***C. jejuni***  **(n=153)** | ***C. coli***  **(n=38)** | ***C. jejuni***  **(n=246)** | ***C. coli***  **(n=43)** | ***C. jejuni***  **(n=280)** | ***C. coli***  **(n=56)** | ***C. jejuni***  **(n=298)** | ***C. coli***  **(n=51)** | ***C. jejuni***  **(n=212)** | ***C. coli***  **(n=36)** | ***C. jejuni***  **(n=256)** | ***C. coli***  **(n=47)** |
| **Ciprofloxacin**  **(CIP)** | 89.7 | 90.9 | 98.1 | 96.9 | 97.9 | 100 | 94.1 | 100 | 96.3 | 97.7 | 94.6 | 94.6 | 93.0 | 96.1 | 89.6 | 88.9 | 92.1 | 100 |
| **Erythromycin**  **(ERY)** | 4.1 | 45.5 | 4.9 | 43.8 | 3.6 | 50.0 | 3.9 | 44.7 | 2.8 | 53.5 | 5.4 | 57.1 | 2.3 | 72.5 | 0.9 | 36.1 | 3.2 | 53.2 |
| **Tetracycline (TCY)** | 70.1 | 86.4 | 77.7 | 87.5 | 82.9 | 92.9 | 79.7 | 92.1 | 84.1 | 88.4 | 82.5 | 96.4 | 77.5 | 98.0 | 73.6 | 88.9 | 79.1 | 100 |
| **Gentamicin**  **(GEN** | 0 | 9.1 | 0 | 0 | 0 | 2.4 | 0 | 0 | 0 | 2.3 | 0.4 | 3.6 | 0.3 | 3.9 | 0 | 0 | 0 | 2.1 |
| **Amoxicillin-clavulanic acid**  **(AMC)** | - | - | - | - | - | - | - | - | 0 | 2.3 | 1.1 | 14.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Ertapenem (ETP)** | - | - | - | - | - | - | - | - | 0.4 | 9.3 | 1.4  (4/277) | 3.6  (2/55) | 0.7 | 5.9 | 0.5 | 5.6 | 0.4 | 8.5 |
| **Ampicillin**  **(AMP)** | - | - | - | - | - | - | - | - | - | - | 79.6  (203/264) | 67.9  (36/53) | 77.2 | 88.2 | 66.8 | 80.6 | 79.1 | 85.1 |

**Table S6.** Univariate logistic regression analysis of the relationship between *Campylobacter jejuni* and *Campylobacter coli* resistance and sociodemographic features.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Amoxicillin** | | | **Ampicillin** | | | **Ciprofloxacin** | | | **Erythromycin** | | | **Ertapenem** | | | **Gentamicin** | | | **Tetracycline** | | | |
|  | R | S | P value  OR (95%CI) | R | S | P value  OR (95%CI) | R | S | P value  OR (95%CI) | R | S | P value  OR (95%CI) | R | S | P value  OR (95%CI) | R | S | P value  OR (95%CI) | | R | S | P value  OR (95%CI) |
| **Gender**  Female  Male | 6  6 | 614  916 | 0.490  Ref  0.670  (0.215-2.088) | 372  568 | 127  167 | 0.269  Ref  1.161  (0.661-1.121) | 810  1225 | 48  78 | 0.704  Ref  0.931  (0.643-1.348) | 112  138 | 1185  746 | 0.08  Ref  0.789  (0.605-1.029) | 11  13 | 605  909 | 0.561  Ref  0.787  (0.350-1.767) | 6  5 | 852  1298 | 0.320  Ref  0.547  (0.166-1.798) | | 708  1055 | 150  248 | 0.363  Ref  0.901  (0.720-1.128) |
| **Age**  <15  15-44  45+ | 8  2  2 | 960  302  267 | 0.956  Ref  0.795  (0.168-3.763)  0.899  (0.19-4.258) | 589  184  168 | 160  67  67 | **0.040**  Ref  0.746  (0.536-1.037)  0.681  (0.488-0.950) | 1344  355  337 | 63  30  33 | **0.001**  Ref.  0.555  (0.354-0.870)  0.479  (0.309-0.342) | 148  44  57 | 1259  341  313 | **0.034**  Ref.  1.098  (0.768-1.569)  1.549  (1.114-2.154) | 16  5  3 | 948  299  267 | 0.809  Ref.  0.991  (0.360-2.727)  0-666  (0.193-2.302) | 7  2  2 | 1400  383  368 | 0.994  Ref.  1.044  (0.216-5.048)  1.087  (0.225-5.254) | | 1178  308  278 | 229  77  92 | **<0.001**  Ref.  0.778  (0.584-1.036)  0.587  (0.446-0.773) |
| **Species**  *C. jejuni*  *C. coli* | 3  9 | 1311  224 | **<0.001**  Ref.  17.558  (4.717-65.354) | 794  150 | 257  37 | 0.168  Ref.  1.312  (0.892-1.931) | 1694  354 | 113  13 | **0.046**  Ref.  1.816  (1.012-3.262) | 60  192 | 1747  175 | **<0.001**  Ref.  31.945  (22.99-44.39) | 9  15 | 1302  217 | **<0.001**  Ref.  10.0  (4.323-23.14) | 2  9 | 1805  358 | **<0.001**  Ref.  22.689  (4.88-105.45) | | 1431  342 | 376  25 | **<0.001**  Ref.  3.594  (2.358-5.48) |
| **Region**  North  Center  Lisbon and TV | 5  3  4 | 690  176  668 | 0.360  Ref.  2.352  (0.557-9.937)  0.826  (0.221-3.091) | 403  112  428 | 136  32  126 | 0.563  Ref.  1.181  (0.762-1.831)  1.146  (0.868-1.514) | 940  227  880 | 59  20  47 | 0.195  Ref.  0.712  (0.420-1.207)  1.175  (0.792-1.743) | 98  35  119 | 901  212  808 | **0.048**  Ref.  1.518  (1.003-2.296)  1.354  (1.020-1.798) | 6  2  16 | 686  177  655 | 0.083  Ref.  1.292  (0.259-6.455)  2.793  (1.086-7.18) | 3  1  7 | 996  246  920 | 0.386  Ref.  1.350  (0.14-13.03)  2.526  (0.651-9.798) | | 828  203  741 | 171  44  186 | 0.241  Ref.  0.953  (0.661-1.373)  0.823  (0.654-1.036) |