**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-valueOR (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 | 66 | 614916 | 0.490Ref0.670(0.215-2.088) | 372568 | 127167 | 0.269Ref1.161(0.661-1.121) | 8101225 | 4878 | 0.704Ref0.931(0.643-1.348) | 112138 | 1185746 | 0.08Ref0.789(0.605-1.029) | 1113 | 605909 | 0.561Ref0.787(0.350-1.767) | 65 | 8521298 | 0.320Ref0.547(0.166-1.798) | 7081055 | 150248 | 0.363Ref0.901(0.720-1.128) |
| **Age**<1515-4445+ | 822 | 960302267 | 0.956Ref0.795(0.168-3.763)0.899(0.19-4.258) | 589184168 | 1606767 | **0.040**Ref0.746(0.536-1.037)0.681(0.488-0.950) | 1344355337 | 633033 | **0.001**Ref.0.555(0.354-0.870)0.479(0.309-0.342) | 1484457 | 1259341313 | **0.034**Ref.1.098(0.768-1.569)1.549(1.114-2.154) | 1653 | 948299267 | 0.809Ref.0.991(0.360-2.727)0-666(0.193-2.302) | 722 | 1400383368 | 0.994Ref.1.044(0.216-5.048)1.087(0.225-5.254) | 1178308278 | 2297792 | **<0.001**Ref.0.778(0.584-1.036)0.587(0.446-0.773) |
| **Species***C. jejuni**C. coli* | 39 | 1311224 | **<0.001**Ref.17.558(4.717-65.354) | 794150 | 25737 | 0.168Ref.1.312(0.892-1.931) | 1694354 | 11313 | **0.046**Ref.1.816(1.012-3.262) | 60192 | 1747175 | **<0.001**Ref.31.945(22.99-44.39) | 915 | 1302217 | **<0.001**Ref.10.0(4.323-23.14) | 29 | 1805358 | **<0.001**Ref.22.689(4.88-105.45) | 1431342 | 37625 | **<0.001**Ref.3.594(2.358-5.48) |
| **Region**NorthCenterLisbon and TV | 534 | 690176668 | 0.360Ref.2.352(0.557-9.937)0.826 (0.221-3.091) | 403112428 | 13632126 | 0.563Ref.1.181(0.762-1.831)1.146(0.868-1.514) | 940227880 | 592047 | 0.195Ref.0.712(0.420-1.207)1.175 (0.792-1.743) | 9835119 | 901212808 | **0.048**Ref.1.518(1.003-2.296)1.354 (1.020-1.798) | 6216 | 686177655 | 0.083Ref.1.292(0.259-6.455)2.793 (1.086-7.18) | 317 | 996246920 | 0.386Ref.1.350(0.14-13.03)2.526 (0.651-9.798) | 828203741 | 17144186 | 0.241Ref.0.953(0.661-1.373)0.823 (0.654-1.036) |