

Understanding the gender gap in antibiotic prescribing: a cross-sectional analysis of English primary care

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Online supplementary appendix

Table S1. Primary care consultations and antibiotic prescribing proportions per consultation in adult men and women (aged 19 – 64 years) with and without comorbidities for 12 different conditions. Consultations from all practices in THIN are included, regardless of whether or not patients were registered there.

| Condition                          | Number of consultations (% of total) | Ratio of female:male consultation | Proportion of patients receiving prescription when consulting (95% CI) | Relative risk of receiving antibiotic prescription when consulting as female (95% CI) (p-value) |
|------------------------------------|-------------------------------------|-----------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
|                                    | Women: 46,041 (74%) Men: 16,456 (26%) | 2.80                              | Women: 41% (40% – 41%) Men: 60% (59% – 61%)                          | 0.67 (0.67 – 0.69) (p<0.001)                                                                  |
| Acne                               | [395x110]Acne with comorbidity: 3,938 (66%) Women: 1,993 (34%) Men: 1,993 (34%) | 1.98                              | Women: 42% (40% – 44%) Men: 55% (53% – 58%)                          | 0.76 (0.72 – 0.80) (p<0.001)                                                                  |
| Bronchitis                         | 12,318 (61%) Women: 7,977 (39%) Men: 7,977 (39%) | 1.54                              | Women: 83% (82% – 84%) Men: 84% (83% – 85%)                           | 0.99 (0.98 – 1.00) (p=0.09)                                                                   |
| Bronchitis with comorbidity        | 4,916 (59%) Women: 3,375 (41%) Men: 3,375 (41%) | 1.46                              | Women: 87% (86% – 88%) Men: 89% (88% – 90%)                           | 0.98 (0.96 – 1.00) (p=0.01)                                                                   |
| COPD                               | 5,263 (59%) Women: 3,688 (41%) Men: 3,688 (41%) | 1.43                              | Women: 71% (70% – 73%) Men: 69% (67% – 71%)                           | 1.03 (1.00 – 1.06) (p=0.04)                                                                   |
| COPD with non-RTI comorbidity      | 2,050 (54%) Women: 1,718 (46%) Men: 1,718 (46%) | 1.19                              | Women: 70% (67% – 72%) Men: 67% (64% – 70%)                           | 1.04 (1.00 – 1.09) (p=0.08)                                                                   |
| Cough                              | 255,587 (60%) Women: 166,899 (40%) Men: 166,899 (40%) | 1.53                              | Women: 49% (49% – 50%) Men: 49% (49% – 49%)                           | 1.01 (1.00 – 1.02) (p<0.001)                                                                  |
| Cough with comorbidity             | 104,317 (59%) Women: 71,401 (41%) Men: 71,401 (41%) | 1.46                              | Women: 58% (58% – 58%) Men: 56% (56% – 57%)                           | 1.03 (1.02 – 1.04) (p<0.001)                                                                  |
| Gastroenteritis                    | 70,835 (57%) Women: 52,796 (43%) Men: 52,796 (43%) | 1.34                              | Women: 6% (6% – 6%) Men: 6% (6% – 6%)                                | 0.98 (0.93 – 1.02) (p=0.32)                                                                   |
| Gastroenteritis with comorbidity   | 19,636 (56%) Women: 15,118 (44%) Men: 15,118 (44%) | 1.30                              | Women: 7% (7% – 7%) Men: 8% (7% – 8%)                                | 0.91 (0.85 – 0.99) (p=0.02)                                                                   |
| Condition                  | Total with Comorbidity | Comorbidity | Relative Risk | 95% CI          | p-value |
|----------------------------|------------------------|-------------|---------------|-----------------|---------|
| ILI                        | 17,050 (58%)           | 12,546 (42%)| 1.36          | 20% (19% – 20%) | 1.01    |
| ILI with comorbidity       | 3,034 (56%)            | 2,336 (44%) | 1.30          | 26% (24% – 27%) | 0.93    |
| Impetigo                  | 8,707 (64%)            | 4,803 (36%) | 1.81          | 52% (51% – 53%) | 0.85    |
| Impetigo with comorbidity | 1,686 (65%)            | 925 (35%)   | 1.82          | 51% (49% – 54%) | 0.84    |
| LRTI                      | 89,644 (59%)           | 61,550 (41%)| 1.46          | 88% (88% – 89%) | 1.01    |
| LRTI with comorbidity     | 57,609 (59%)           | 39,687 (41%)| 1.45          | 88% (87% – 88%) | 1.02    |
| Otitis media              | 19,440 (64%)           | 10,985 (36%)| 1.77          | 82% (81% – 82%) | 1.01    |
| Otitis media with comorbidity | 3,935 (64%)       | 2,246 (36%) | 1.75          | 83% (82% – 84%) | 1.02    |
| Sinusitis                 | 74,863 (73%)           | 27,339 (27%)| 2.74          | 87% (87% – 88%) | 1.02    |
| Sinusitis with comorbidity| 18,475 (73%)           | 6,865 (27%) | 2.69          | 90% (89% – 90%) | 1.02    |
| Sore throat               | 224,537 (67%)          | 109,975 (33%)| 2.04          | 57% (56% – 57%) | 0.99    |
| Sore throat with comorbidity | 37,446 (66%)       | 18,973 (34%)| 1.97          | 53% (53% – 54%) | 1.06    |
| URTI                      | 148,959 (68%)          | 71,244 (32%)| 2.09          | 35% (34% – 35%) | 0.96    |
| URTI with comorbidity     | 35,450 (64%)           | 19,630 (36%)| 1.81          | 45% (45% – 46%) | 0.99    |
Table S2. The relative risk of receiving an antibiotic prescription when consulting with comorbidity. All adult patients consulting at their primary registered practice are included.

| Condition                  | Relative Risk (95% Confidence Interval) (p-value) | Relative Risk (95% Confidence Interval) (p-value) |
|----------------------------|--------------------------------------------------|--------------------------------------------------|
| Acne                       | 0.99 (0.94 – 1.05) (p=0.80)                      | 0.91 (0.87 – 0.97) (p<0.001)                      |
| Bronchitis                 | 1.05 (1.03 – 1.06) (p<0.001)                      | 1.06 (1.04 – 1.08) (p<0.001)                      |
| COPD (non-respiratory comorbidity) | 1.02 (0.98 – 1.05) (p=0.32)                      | 0.98 (0.94 – 1.03) (p=0.42)                       |
| Cough                      | 1.19 (1.18 – 1.20) (p<0.001)                      | 1.17 (1.16 – 1.18) (p<0.001)                      |
| Gastroenteritis            | 1.27 (1.18 – 1.40) (p<0.001)                      | 1.24 (1.14 – 1.35) (p<0.001)                      |
| ILI                        | 1.29 (1.18 – 1.40) (p<0.001)                      | 1.51 (1.38 – 1.65) (p<0.001)                      |
| Impetigo                   | 1.04 (0.98 – 1.10) (p=0.24)                       | 1.02 (0.95 – 1.09) (p=0.68)                       |
| LRTI                       | 0.99 (0.99 – 1.00) (p=0.002)                      | 0.99 (0.98 – 0.99) (p<0.001)                      |
| Otitis media               | 1.01 (0.99 – 1.03) (p=0.18)                       | 1.00 (0.98 – 1.03) (p=0.76)                       |
| Sinusitis                  | 1.02 (1.02 – 1.03) (p<0.001)                      | 1.03 (1.02 – 1.04) (p<0.001)                      |
| Sore throat                | 0.94 (0.93 – 0.95) (p<0.001)                      | 0.88 (0.87 – 0.90) (p<0.001)                      |
| URTI                       | 1.32 (1.30 – 1.35) (p<0.001)                      | 1.27 (1.24 – 1.30) (p<0.001)                      |
Figure S1. For common conditions in general practice, the proportions of all consultations (circles) and prescriptions (triangles) attributed to women (red) and men (blue). Consultations and prescriptions include all adult patients (aged 19-64) with comorbidity who consulted at their primary registered practice. Conditions are ordered by consultation proportion.
Figure S2. For common conditions in general practice, the proportions of all consultations (circles) and prescriptions (triangles) attributed to women (red) and men (blue). Consultations and prescriptions include all adult patients (aged 19-64) without comorbidity, including those who consulted outside their primary registered practice. Conditions are ordered by consultation proportion.
Figure S3. For common conditions in general practice, the proportions of all consultations (circles) and prescriptions (triangles) attributed to women (red) and men (blue). Consultations and prescriptions include all adult patients (aged 19-64) with comorbidity, including those who consulted outside their primary registered practice. Conditions are ordered by consultation proportion.