Appendix

Syndromic Management of Vaginal Discharge

As per national guidelines, women reporting current abnormal vaginal discharge received intravaginal nystatin pessaries for 7 days or a single clotrimazole pessary and intravaginal clotrimazole cream for 7 days; 2 g oral amoxycillin; 1 g oral probenecid; 2 tablets of augmentin (500 mg amoxicillin and 125 mg clavulanic acid per tablet); and 1 g oral azithromycin. Those who tested positive for syphilis were treated with 3 weekly doses of 2.4 million units of intramuscular benzathine penicillin. If present at the clinic, the woman's partner was also treated; if not, they were referred to that facility’s STI clinic for treatment.

Additional Laboratory Methods

We used GeneXpert because it is becoming more widely available in PNG for tuberculosis testing (1). Testing usually occurred within 7 days of sample collection. We communicated results to participants to assist treatment decisions. Other samples were shipped to the Burnet Institute in Melbourne, Australia for further testing. GeneXpert uses 1 cartridge for Chlamydia trachomatis and Neisseria gonorrhoeae and a different cartridge for Trichomonas vaginalis. Because of a shipment delay to ENB of cartridges for T. vaginalis, we did not test all women for this pathogen. We determined a woman’s lifetime exposure to Treponema pallidum using the results of the syphilis test given at the point of care.

Shipped vaginal specimens were stored at the Burnet Institute Melbourne at −20°C or −80°C until all samples were received. After thawing the samples, we removed 450 μL from the 1.0 mL Copan Universal Transport Medium (Copan Diagnostics, Inc.,
https://www.copanusa.com) and extracted genomic DNA using the QIAamp BiOstic Bacteremia DNA kit (QIAGEN, https://www.qiagen.com). We tested the extracted DNA for Mycoplasma genitalium using the ResistancePlus MG kit (SpeeDx, https://plexpcr.com) which uses the PlexPCR and PlexPrime technologies (SpeeDx) for concurrent amplification of M. genitalium and detection of 5 M. genitalium point mutations (A2058G, A2058C, A2058T, A2059G, and A2059C) within the macrolide resistance–determining region of the 23S rRNA gene (2). The microscopist at Melbourne Sexual Health Centre diagnosed BV by analyzing Nugent scores (Nugent score of 7–10 indicates BV) and VVC by observing pseudohyphae, budding yeasts, or both. We could not facilitate treatment for women with M. genitalium infection, BV, or VVC because these diagnoses were based on stored samples that were analyzed many months after collection.

**Exposures and Outcomes**

We determined predictors of reproductive tract infection at each participant’s first antenatal clinic visit. Exposures of interest included clinic details, such as enrollment clinic and setting; participant characteristics at enrollment, such as age group (categorized as 16–24, 25–34, or ≥35 years of age), gravidity (primigravida or multigravida), marital status (partnered or single/separated), history of ever having used a modern contraceptive (World Health Organization definition: oral contraceptive pills, implants, injectables, female sterilization, male sterilization, intrauterine devices, diaphragm, emergency contraception, male and female condoms) (3), vaginal discharge, employment status, education, smoking, alcohol use, mid upper arm circumference (categorized as ≤23 cm or > 23cm), self-reported history of sexually transmitted infection, presence of nitrites on urine dipstick (as a proxy for urinary tract infection), previous pregnancy outcome (miscarriage, livebirth, or stillbirth), hemoglobin level (measured in g/dL) and World Health Organization anemia classification for pregnant women at sea level (mild anemia 10.0–10.9 g/dL; moderate 7.0–9.9 g/dL; severe <7.0 g/dL) (4); and household characteristics, such as partner education, polygamy, time traveled to clinic, and household monthly expenditure. Outcomes measured were M. genitalium, C. trachomatis, N. gonorrhoeae, T. vaginalis, T. pallidum (syphilis), bacterial vaginosis, and vaginal candidiasis.
Data Management

Questionnaire responses were entered by the research officer directly into an electronic tablet using a study-specific questionnaire on the platform Mobile Data Studio version 7.3 (CreativityCorp Pty Ltd, https://www.creativitycorp.com). After each clinical visit, questionnaires were uploaded into a central computer, verified for completeness, and exported from Mobile Data Studio to Microsoft Office Excel (Microsoft, https://www.microsoft.com). GeneXpert (Cepheid, https://www.cepheid.com) laboratory results were uploaded by the study data manager on a weekly basis and results checked for accuracy and exported. Laboratory results generated in Melbourne for *M. genitalium*, bacterial vaginosis, and vulvovaginal candidiasis were exported to Microsoft Excel (Microsoft). All Excel files were provided to the first author and uploaded into STATA version 15.0 (StataCorp LLC., https://www.stata.com). The databases were verified and cleaned using STATA 15.0 and merged into 1 database for analysis. All data was stored on password-protected computers accessible only to research personnel.

Calculation for *M. genitalium* Prevalence in East New Britain (ENB) Province.

Recruitment occurred over a period of 26 months and 3 weeks (116.14 weeks [813 days] during March 16, 2015–June 6, 2017. Midpoint was 13.3 months (58.1 weeks [406 days]) after recruitment began, so April 25, 2016.

The population of ENB at the 2011 census was 328,369 (taken July 10, 2011), an annual growth rate of 3.6% since the previous census in 2000. In 2011 in Papua New Guinea, there was a total of 3,497,244 women, of which 1,932,533 (55.3%) were of reproductive age (15–49 years of age). The province of ENB had 159,609 women in 2011. We estimated the number of women of reproductive age (15–49 years) in ENB at the 2011 census as 159,609 × 0.553 = 88,263.8 women. In total, 4 years, 9 months, and 2 weeks (or 4.769 years) elapsed between the July 2011 census and recruitment midpoint. We estimated the number of women 15–49 years of age in ENB at study mid-point as the 2011 census count plus the estimated population growth since census, i.e., 88,263.8 + (88,263.8 × 4.769 × 0.036) = 103,417.278. We found a 12.5% (95% CI 10.0–15.3) estimated population prevalence for *M. genitalium*. We therefore estimated the
number of *M. genitalium* infections among women of childbearing age in ENB 2016 as $103,417.278 \times 0.125 = 12,927.159$ (95% CI $10,341.728–15,822.843$).

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### Appendix Table 1. Sociodemographic characteristics and obstetric history of pregnant women tested for reproductive tract infections, East New Britain, Papua New Guinea, 2015–2017

| Characteristics                                      | Total at ANC1 no. (%) | Data NA | Mycoplasma genitalium (n (%)) | Data NA | Neisseria gonorrhoeae (n (%)) | Data NA | Trichomonas vaginalis (n (%)) | Data NA | Syphilis (n (%)) | Data NA | Bacterial vaginosis and vaginal candidiasis (n (%)) | Data NA |
|------------------------------------------------------|-----------------------|---------|-------------------------------|---------|-----------------------------|---------|-------------------------------|---------|----------------|---------|--------------------------------------------------|---------|
| Total                                                | 699 (100.0)           | 626 (100.0) | 641 (100.0) | 581 (100.0) | 437 (100.0) | 653 (100.0) |
| **Sociodemographic**                                 |                       |         |                               |         |                             |         |                               |         |                             |         |                                                 |         |
| Enrollment clinic                                     |                       |         |                               |         |                             |         |                               |         |                             |         |                                                 |         |
| St. Mary’s Hospital Vunapope                          | 184 (26.3)            | 157 (25.1) | 169 (26.4) | 164 (28.2) | 89 (20.4) | 161 (24.7) |
| Nonga General Hospital                                | 83 (11.9)             | 81 (13.0) | 73 (11.4) | 64 (11.0) | 68 (15.6) | 80 (12.3) |
| Kerevat Rural Hospital                                | 125 (17.9)            | 114 (18.2) | 118 (18.4) | 90 (15.5) | 86 (19.7) | 123 (18.8) |
| Napapar Health Centre                                 | 158 (22.6)            | 136 (21.8) | 141 (22.0) | 131 (22.5) | 101 (23.1) | 152 (23.3) |
| Paparatawa Health Centre                              | 149 (21.3)            | 137 (21.9) | 140 (21.8) | 132 (22.7) | 93 (21.3) | 137 (21.0) |
| Clinic administration                                 |                       |         |                               |         |                             |         |                               |         |                             |         |                                                 |         |
| Government                                           | 208 (29.8)            | 195 (31.2) | 191 (29.8) | 154 (26.5) | 154 (35.2) | 203 (31.1) |
| Catholic Health Services                              | 491 (70.2)            | 430 (68.8) | 450 (70.2) | 427 (73.5) | 283 (64.8) | 450 (68.9) |
| **Location**                                          |                       |         |                               |         |                             |         |                               |         |                             |         |                                                 |         |
| Urban                                                | 342 (48.9)            | 293 (46.9) | 310 (48.4) | 295 (50.8) | 190 (43.5) | 313 (47.9) |
| Rural                                                | 357 (51.1)            | 332 (53.1) | 331 (51.6) | 286 (49.2) | 247 (56.5) | 340 (52.1) |
| Mean age, y (SD); range                              | 26.8 (5.6); 9         | 26.8 (5.5); 9 | 26.8 (5.6); 9 | 26.9 (5.6); 7 | 26.7 (5.6); 7 | 26.7 (5.5); 9 |
| Age, y                                                | 16–49                 | 16–49     | 16–49            | 17–49    | 16–49            | 17–49    |
| >35                                                  | 83 (12.0)             | 73 (11.8) | 77 (12.1) | 69 (12.0) | 48 (11.1) | 74 (11.5) |
| Highest level of education completed                  | 1                     | 1         | 1                         | 1         | 1                             |         |
| Primary (grade 8 or less)                             | 325 (46.6)            | 302 (48.4) | 301 (47.0) | 274 (47.2) | 204 (46.7) | 305 (46.8) |
| High school (grade 9,10)                              | 177 (25.4)            | 151 (24.2) | 160 (25.0) | 138 (23.8) | 112 (25.6) | 165 (25.3) |
| Secondary, vocational, or student                     | 196 (28.1)            | 171 (27.4) | 179 (28.0) | 168 (29.0) | 121 (27.7) | 182 (27.9) |
| **tertiary**                                          |                       |         |                               |         |                             |         |                               |         |                             |         |                                                 |         |
| Employment status                                     |                       |         |                               |         |                             |         |                               |         |                             |         |                                                 |         |
| Unemployed                                           | 531 (76.0)            | 475 (76.0) | 488 (76.1) | 443 (76.2) | 339 (77.6) | 492 (75.3) |
| Employed in paid work or student                      | 168 (24.0)            | 150 (24.0) | 153 (23.9) | 138 (23.8) | 98 (22.4) | 161 (24.7) |
| Province of birth                                     |                       |         |                               |         |                             |         |                               |         |                             |         |                                                 |         |
| East New Britain                                      | 578 (82.7)            | 518 (82.9) | 529 (82.5) | 479 (82.4) | 362 (82.8) | 539 (82.5) |
| Other Province                                        | 121 (17.3)            | 107 (17.1) | 112 (17.5) | 102 (17.6) | 75 (17.2) | 114 (17.5) |
| Religion                                              | 1                     | 1         | 1                             | 1         | 1                             | 1         |
| Catholic                                              | 345 (49.4)            | 302 (48.4) | 317 (49.5) | 281 (48.4) | 217 (49.8) | 315 (48.3) |
| Other                                                 | 353 (50.6)            | 322 (51.6) | 323 (50.5) | 299 (51.6) | 219 (50.2) | 337 (51.7) |
| Marital status                                        | 2                     | 2         | 2                             | 2         | 2                             | 2         |
| Married or cohabiting                                 | 663 (95.1)            | 593 (95.2) | 608 (95.1) | 550 (95.0) | 418 (95.7) | 620 (95.2) |
| Single, separated, or widowed                         | 34 (4.9)              | 30 (4.8) | 31 (4.9) | 29 (5.0) | 19 (4.3) | 31 (4.8) |
| Polygamy                                              | 37 (5.5)              | 33 (5.5) | 34 (5.4) | 31 (5.4) | 18 (4.3) | 34 (5.4) |
| Characteristics                              | Testing                                                                 |
|---------------------------------------------|------------------------------------------------------------------------|
|                                             | **Total at ANC1** | **Chlamydia** | **Mycoplasma** | **Trichomonas** | **Syphilis** | **Bacterial vaginosis and vaginal candidiasis** |
|                                             | no. (%)        | genitium   | trachomatis and | vaginalis | n (%)   | n (%)   | n (%)   | n (%)   | n (%)   |
| 1 wife                                      | 583 (88.1)     | 523 (88.3) | 531 (87.5)      | 483 (87.8) | 369 (88.1) | 548 (88.5) |
| >1 wife                                     | 79 (11.9)      | 69 (11.7)  | 76 (12.5)       | 67 (12.2)  | 50 (11.9)  | 71 (11.5)  |
| Median household monthly                    | 150 (50−300)  | 150 (50−300) | 35 (19.3)      | 150 (60−300) | 17 (5.4)  | 150 (60−35) |
| expenditure, kina (IQR)                     |               |             |               |             |           |           |
| Median cost of ANC, kina (IQR)              | 4 (2−20)       | 4 (2−20)   | 15 (19.3)      | 4 (2−20)   | 14 (23.8) | 12 (23.8) |
| Family planning                             | Has used modern contraception                                         | 9 (2.2)     | 9 (2.2)        | 9 (2.2)   | 4 (1.3)   | 9 (2.2)   |
| No                                          | 569 (82.5)     | 510 (82.8) | 513 (81.2)      | 469 (82.0) | 361 (83.4) | 530 (82.3) |
| Yes                                         | 121 (17.5)     | 106 (17.2) | 119 (18.8)      | 103 (18.0) | 72 (16.6)  | 114 (17.7) |
| Maternal health parameters at ANC1          | Gravidity       | 2          | 2              | 1          | 1          | 2          | 2          |
|                                             | Primigravidae   | 177 (25.4) | 159 (25.5)     | 166 (25.9) | 145 (25.0) | 111 (25.5) | 160 (24.6) |
|                                             | Multigravidae (2−4) | 384 (55.1) | 343 (55.1)     | 343 (53.6) | 318 (54.8) | 243 (55.9) | 363 (55.8) |
|                                             | Grandmulti (≥5) | 138 (19.8) | 123 (19.7)     | 132 (20.6) | 118 (20.3) | 83 (19.1)  | 128 (19.7) |
| Abnormal vaginal discharge                  | At any time in current pregnancy                                      | 1           | 1              | 1          | 1          | 1          |
|                                             | Currently       | 98 (14.0)  | 118 (18.9)     | 93 (14.5)  | 81 (13.9)  | 59 (13.5)  | 92 (14.1)  |
|                                             | Smoking         | 1           | 1              | 1          | 1          | 1          |
|                                             | Never smoked    | 427 (61.2) | 384 (61.5)     | 387 (60.5) | 352 (60.7) | 268 (61.5) | 396 (60.7) |
|                                             | Stopped when pregnant | 241 (34.5) | 217 (34.8)     | 226 (35.3) | 204 (35.2) | 151 (34.6) | 27 (4.1)  |
|                                             | Current smoker  | 29 (4.2)   | 23 (3.7)       | 27 (4.2)   | 24 (4.1)   | 17 (3.9)   | 229 (35.1) |
| Previous pregnancy outcomes                 | Median age at first pregnancy, y (IQR)                               | 7           | 7              | 5          | 5          | 7          |
|                                             | History pregnancy loss†                                            | 466 (74.8) | 475 (74.1)     | 436 (75.0) | 326 (74.6) | 491 (75.2) |
|                                             | Miscarriage      | 46 (8.8)   | 44 (9.4)       | 43 (9.1)   | 39 (8.9)   | 29 (8.9)   | 1 (0.2)   |
|                                             | Abortion         | 1 (0.2)    | 1 (0.2)        | 1 (0.2)    | 1 (0.2)    | 0          | 43 (8.8)  |
|                                             | Stillbirth       | 16 (3.1)   | 14 (3.0)       | 16 (3.4)   | 14 (3.2)   | 5 (1.5)    | 15 (3.1)  |
| Partner details                             | Partner's employment status                                         | 18          | 18             | 17          | 14          | 10         | 18         |
|                                             | Unemployed       | 269 (39.5) | 240 (39.5)     | 249 (39.9) | 229 (40.4) | 165 (38.6) | 247 (38.9) |
|                                             | Employed in paid work    | 411 (60.4) | 367 (60.5)     | 375 (60.1) | 338 (59.6) | 262 (61.4) | 388 (61.1) |
|                                             | Partner attending ANC1                                             | 3           | 3              | 3           | 2          | 2          | 4          |
|                                             | No               | 571 (82.0) | 518 (83.3)     | 529 (82.9) | 477 (82.4) | 363 (83.4) | 532 (82.0) |
|                                             | Yes              | 123 (17.7) | 104 (16.7)     | 109 (17.1) | 102 (17.6) | 72 (16.6)  | 117 (18.0) |

*Values are no. (%) except as indicated. ANC1, first antenatal clinic visit; NA, not available.
†Out of 520 women who had a previous pregnancy. Totals to the right are out of women who had a previous pregnancy and indicated testing.
### Appendix Table 2. Relationships between current sexually transmitted infections in pregnant women, East New Britain, Papua New Guinea, 2015–2017*

| Primary infection | Total | Monoinfection | Coinfection | M. genitalium | C. trachomatis | N. gonorrhoeae | T. vaginalis |
|-------------------|-------|---------------|------------|---------------|---------------|---------------|-------------|
| Mycoplasma genitalium | 78    | 32 (41.0)     | 28 (35.9)  | –             | 20            | 6             | 13          |
| Chlamydia trachomatis | 122   | 36 (29.5)     | 66 (54.1)  | 20            | –             | –             | 25          |
| Neisseria gonorrhoeae | 35    | 4 (11.4)      | 28 (80.0)  | 6             | 25            | –             | 8           |
| Trichomonas vaginalis | 117   | 56 (47.9)     | 44 (37.6)  | 13            | 36            | 8             | –           |

*Total ofs do not equal sum of coinfections because some women had multiple infections and not all women received testing for all infections. Sum of mono- and coinfections does not equal infection totals because some women only had 1 test done; whether these women had a mono- or coinfection is unknown.

### Appendix Table 3. Relationship between bacterial vaginosis and current sexually transmitted infections in pregnant women, East New Britain, Papua New Guinea, 2015–2017*

| Status                  | Total  | Monoinfection | Coinfection | Mycoplasma genitalium | Chlamydia trachomatis | Neisseria gonorrhoeae | Trichomonas vaginalis |
|-------------------------|--------|---------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Bacterial vaginosis     | 170    | 74 (43.5)     | 69 (40.6)   | 21                    | 41                    | 13                    | 21                    |

*Total ofs do not equal sum of coinfections because some women had multiple infections and not all women received testing for all infections. Sum of mono- and coinfections does not equal infection totals because some women only had 1 test done; whether these women had a mono- or coinfection is unknown.

### Appendix Table 4. Sensitivity and specificity of clinical symptoms as a marker of RTIs in pregnant women, East New Britain, Papua New Guinea, 2015–2017*

| Category                  | P value | Sensitivity; specificity | NPV; PPV   | P value | Sensitivity; specificity | NPV; PPV               |
|---------------------------|---------|--------------------------|------------|---------|--------------------------|------------------------|
| Reproductive tract infection |         |                          |            |         |                          |                        |
| Mycoplasma genitalium     | 0.63    | 15.4 (8.2–25.3); 86.6   | 14.1 (7.5–23.4); | 0.48    | 21.8 (13.2–32.6); 81.5   | 14.4 (8.6–22.1); 88    |
| (83.5–94.9)               | (78–84.7); 84.7–90.4 | (78–84.7); 84.7–90.4 |            |         |                          |                        |
| Chlamydia trachomatis     | 0.08    | 19.7 (13–27.8); 86.7   | 25.8 (17.3–35.9); | 0.06    | 26.2 (18.7–35); 81.3     | 24.8 (17.6–33.2); 82.4 |
| (83.4–98.5)               | (77.6–84.5); 78.8–85.6 | (78.8–85.6) |            |         |                          |                        |
| Neisseria gonorrhoeae     | 0.35    | 20.5 (8.4–36.9); 85.8  | 7.5 (3.1–14.9); 94.9 | 0.40    | 25.7 (12.5–43.3); 80.2   | 7 (3.2–12.8); 94.9    |
| (82.7–88.5)               | (78.6–83.3); 92.6–96.6 | (92.6–96.6) |            |         |                          |                        |
| Trichomonas vaginalis     | 0.05    | 19.7 (12.9–28); 87.5   | 28.4 (18.9–39.5); | <0.01   | 29.1 (21–38.2); 82.5     | 29.6 (21.4–38.8); 82.2 |
| (81.4–90.3)               | (78–85.9); 78.4–85.6 | (78.4–85.6) |            |         |                          |                        |
| Bacterial vaginosis       | 1.00    | 14.1 (9.3–20.3); 85.9  | 26.1 (17.5–36.3); | 0.88    | 20 (14.3–26.8); 80.5     | 26.6 (19.1–35.1); 74.1 |
| (82.5–88.9)               | (76.7–84.0) | (70.1–77.5) |            |         |                          |                        |
| Vulvovaginal candidiasis  | <0.01   | 18.8 (14.1–24.2); 50    | 39.4 (34.0–60.6); | <0.01   | 25.7 (20.4–31.7); 84.1    | 49.2 (40.3–58.2); 65.3 |
| (85.2–91.6)               | (80.1–87.5); 81.3–94.4 | (60.3–88.4) |            |         |                          |                        |

*Symptoms refer to abnormal vaginal discharge only (not genital warts, ulcers, or sores). Values expressed are no. (95% CI). BT, bacterial vaginosis; CT, Chlamydia trachomatis; MG, Mycoplasma genitalium; NG, Neisseria gonorrhoeae; NPV, negative predictive value; PPV, positive predictive value; RTI, reproductive tract infection; STI, sexually transmitted infection; TV, Trichomonas vaginalis; VVC, vulvovaginal candidiasis.

†1 woman who responded yes to the second question had a missing response to the first question.

‡p value derived from Pearson’s χ² test.

§Current RTIs include MG, CT, NG, TV, BC, and VVC (syphilis not included).

¶Current STIs include MG, CT, NG, and TV (syphilis not included).

#Cervical infections include MG, CT, and NG.

**Vulvar infections include BV, TV, and VCV.

††GeneXpert diagnosed infections include CT, NG, and TV (Cepheid, https://www.cepheid.com).
Appendix Table 5. Univariable analysis of factors associated with current curable sexually transmitted infections in pregnant women, East New Britain, Papua New Guinea, 2015–2017

| Characteristic | Mycoplasma genitalium | Chlamydia trachomatis | Neisseria gonorrhoeae | Trichomonas vaginalis | >1 current infection |
|----------------|-----------------------|-----------------------|----------------------|-----------------------|---------------------|
| **Enrollment clinic** |                        |                       |                      |                       |                     |
| Vunapope       | Referent              | Referent              | Referent             | Referent              | Referent            |
| Nonga          | 0.67 (0.29–1.59); 0.365 | 0.95 (0.48–1.87); 0.878 | 2.44 (0.82–7.23); 0.108 | 0.82 (0.4–1.7); 0.595 | 0.78 (0.42–1.47); 0.443 |
| Kerevat        | 0.86 (0.42–1.76); 0.679 | 0.58 (0.3–1.09); 0.929 | 1.02 (0.32–3.29); 0.977 | 0.65 (0.33–1.29); 0.222 | 0.5 (0.27–0.91); 0.024 |
| Napapar        | 0.76 (0.38–1.53); 0.444 | 0.99 (0.57–1.71); 0.974 | 1.2 (0.41–3.51); 0.737 | 1.06 (0.61–1.83); 0.846 | 0.59 (0.34–1); 0.05 |
| Paparatava     | 0.99 (0.51–1.91); 0.972 | 0.8 (0.45–1.41); 0.434 | 1.58 (0.57–4.36); 0.377 | 0.83 (0.47–1.47); 0.525 | 0.81 (0.49–1.35); 0.42 |
| **Clinic administration** |                        |                       |                      |                       |                     |
| Government Catholic Health Services | Referent | Referent | Referent | Referent | Referent |
| Location       | Urban Referent | 1.18 (0.7–1.99); 0.542 | 1.31 (0.84–2.05); 0.235 | 0.81 (0.39–1.65); 0.555 | 1.33 (0.82–2.16); 0.241 | 1.3 (0.86–1.98); 0.215 |
| Rural          | 0.97 (0.61–1.57); 0.916 | 0.75 (0.5–1.11); 0.154 | 1.43 (0.71–2.86); 0.315 | 0.75 (0.5–1.13); 0.173 | 0.88 (0.61–1.27); 0.503 |
| **Age, y**      |                        |                       |                      |                       |                     |
| >35            | Referent | 0.81 (0.37–1.79); 0.609 | 2.66 (1.02–6.95); 0.045 | 1.16 (0.24–5.46); 0.855 | 2.04 (0.88–4.71); 0.096 | 1.84 (0.94–3.6); 0.076 |
| 25–34          | 1.32 (0.6–2.87); 0.487 | 5.31 (2.06–13.71); 0.001 | 3.7 (0.85–16.07); 0.081 | 2.88 (1.25–6.66); 0.013 | 3.12 (1.58–6.14); 0.001 |
| 16–24          | 1.16 (0.69–2); 0.549 | 3.01 (1.99–4.55); <0.001 | 5.42 (2.66–11.03); <0.001 | 1.78 (1.14–2.76); 0.01 | 2.07 (1.37–3.14); 0.001 |
| **Gravidity**  |                        |                       |                      |                       |                     |
| Multigravidae  | Referent | Referent | Referent | Referent | Referent |
| Primigravidae  | 1.16 (0.69–2); 0.549 | 3.01 (1.99–4.55); <0.001 | 5.42 (2.66–11.03); <0.001 | 1.78 (1.14–2.76); 0.01 | 2.07 (1.37–3.14); 0.001 |
| **Highest level of education completed** |                        |                       |                      |                       |                     |
| Primary (grade 8 or less) | Referent | Referent | Referent | Referent | Referent |
| High school (grade 9,10) | 0.97 (0.53–1.77); 0.919 | 0.85 (0.51–1.41); 0.529 | 1.51 (0.67–3.42); 0.318 | 1.1 (0.67–1.81); 0.698 | 1.33 (0.84–2.11); 0.22 |
| Secondary, vocational, or tertiary education | 1.11 (0.64–1.94); 0.707 | 1.23 (0.78–1.94); 0.381 | 1.22 (0.53–2.81); 0.64 | 0.76 (0.46–1.26); 0.285 | 1.11 (0.72–1.72); 0.636 |
| Unemployed Employment status | Referent | Referent | Referent | Referent | Referent |
| Employed       | 0.87 (0.49–1.54); 0.626 | 1.36 (0.88–2.12); 0.17 | 2.24 (1.14–4.51); 0.025 | 1.07 (0.67–1.72); 0.769 | 1.34 (0.88–2.06); 0.172 |
| **Time to clinic, min** |                        |                       |                      |                       |                     |
| <25            | Referent | 1.4 (0.81–2.42); 0.23 | 1.19 (0.75–1.88); 0.45 | 1.07 (0.5–2.31); 0.855 | 1.06 (0.7–1.62); 0.771 | 0.779 |
| >25            | Referent | Referent | Referent | Referent | Referent |
| **Mean household monthly expenditure, kina** |                        |                       |                      |                       |                     |
| <50            | Referent | Referent | Referent | Referent | Referent |
| 50–150         | 1.16 (0.61–2.19); 0.656 | 1.4 (0.81–2.42); 0.233 | 1.05 (0.39–2.79); 0.924 | 1.15 (0.64–2.05); 0.642 | 1.19 (0.71–2.01); 0.507 |
| 150–300        | 0.87 (0.44–1.71); 0.682 | 1.14 (0.64–2.04); 0.65 | 1.18 (0.44–3.14); 0.741 | 1.33 (0.74–2.37); 0.335 | 1.18 (0.7–2); 0.527 |
| >300           | 0.75 (0.35–1.59); 0.449 | 1.02 (0.55–1.9); 0.939 | 0.77 (0.25–2.42); 0.66 | 0.95 (0.51–1.78); 0.882 | 1.15 (0.66–1.99); 0.622 |
| **Marital status** |                        |                       |                      |                       |                     |
| Married or cohabiting | Referent | Referent | Referent | Referent | Referent |
| Single, separated, or widowed | 1.1 (0.37–3.23); 0.868 | 2.49 (1.16–5.34); 0.02 | 1.2 (0.27–5.24); 0.809 | 4.71 (2.2–10.06); <0.001 | 1.86 (0.8–4.31); 0.147 |
| **Polygamy**   |                        |                       |                      |                       |                     |
| 1 wife         | Referent | Referent | Referent | Referent | Referent |
| >1 wife        | 0.65 (0.27–1.56); 0.332 | 1.35 (0.75–2.41); 0.32 | 0.7 (0.21–3.4); 0.558 | 1.55 (0.85–2.61); 0.152 | 1.39 (0.79–2.47); 0.256 |
| **Smoking history** |                        |                       |                      |                       |                     |
| Never smoked   | Referent | Referent | Referent | Referent | Referent |
| Current smoker | Referent | Referent | Referent | Referent | Referent |
| Ex-smoker      | Referent | Referent | Referent | Referent | Referent |

Infection, OR (95% CI); p value
| Characteristic                                      | Mycoplasma genitalium | Chlamydia trachomatis | Neisseria gonorrhoeae | Trichomonas vaginalis | >1 current infection |
|----------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
| Current or past smoker                            | 1.44 (0.89–2.32)      | 1.12 (0.75–1.67)      | 1.5 (0.66–2.59)       | 1.19 (0.79–1.8)       | 0.94 (0.65–1.37)    |
| Alcohol consumption in previous month             | 0.137                 | 0.579                 | 0.447                 | 0.396                 | 0.76                |
| Yes                                               | 1.11 (0.37–3.28)      | 0.77 (0.29–2.05)      | 1.27 (0.29–5.61)      | 1.14 (0.45–2.91)      | 1.21 (0.52–2.8)     |
| No                                                | 0.853                 | 0.597                 | 0.756                 | 0.785                 | 0.658               |
| Current abnormal vaginal discharge                |                       |                       |                       |                       |                     |
| No                                                | Referrer              | Referrer              | Referrer              | Referrer              | Referrer            |
| Yes                                               | 1.18 (0.61–2.29)      | 1.59 (0.95–2.66)      | 1.51 (0.64–3.56)      | 1.71 (1–2.91)         | 1.39 (0.82–2.35)    |
| History of abnormal vaginal discharge during current pregnancy |           |                       |                       |                       |                     |
| No                                                | Referrer              | Referrer              | Referrer              | Referrer              | Referrer            |
| Yes                                               | 1.23 (0.69–2.2)       | 1.54 (0.97–2.44)      | 1.4 (0.64–3.06)       | 1.94 (1.22–3.09)      | 1.4 (0.89–2.2)      |
| Previous STI                                       | 0.483                 | 0.064                 | 0.401                 | 0.005                 | 0.147               |
| Yes (self-reported)                               |                      |                       |                       |                       |                     |
| No                                                | Referrer              | Referrer              | Referrer              | Referrer              | Referrer            |
| Yes                                               | 0.83 (0.4–1.74)       | 0.68 (0.35–1.29)      | 0.61 (0.18–2.03)      | 1.25 (0.7–2.21)       | 0.95 (0.56–1.62)    |
| Have used modern contraception                    |                       |                       |                       |                       |                     |
| No                                                | Referrer              | Referrer              | Referrer              | Referrer              | Referrer            |
| Yes                                               | 1.92 (0.89–4.11)      | 1.66 (0.94–2.93)      | 1.83 (0.63–5.3)       | 1.61 (0.89–2.9)       | 1.63 (0.98–2.7)     |
| Mid-upper arm circumference, cm                   |                       |                       |                       |                       |                     |
| >23                                                |                       |                       |                       |                       |                     |
| ≤23                                                | 1.13 (0.6–2.15)       | 0.74 (0.4–1.36)       | 1.02 (0.38–2.71)      | 0.83 (0.45–1.53)      | 0.7 (0.41–1.2)      |
| Height, cm                                          |                         |                       |                       |                       |                     |
| >23                                                | 0.726                 | 0.664                 | 0.566                 | 0.785                 | 0.471               |
| ≤23                                                | 0.99 (0.95–1.04)      | 1.01 (0.97–1.05)      | 0.98 (0.92–1.05)      | 0.99 (0.96–1.03)      | 0.99 (0.96–1.02)    |
| Hemoglobin                                         |                       |                       |                       |                       |                     |
| HemocueResult†                                     | 0.96 (0.81–1.14)      | 1.02 (0.88–1.18)      | 1.16 (0.89–1.52)      | 0.96 (0.83–1.12)      | 0.98 (0.85–1.13)    |
| Not anemic                                         | 0.628                 | 0.815                 | 0.258                 | 0.631                 | 0.757               |
| Mild anemia                                        | 0.67 (0.29–1.54)      | 1.12 (0.56–2.26)      | 1.58 (0.52–4.77)      | 1.72 (0.85–3.46)      | 0.89 (0.47–1.69)    |
| Moderate anemia                                    | 0.346                 | 0.746                 | 0.421                 | 0.131                 | 0.733               |
| Severe anemia                                      | 0.94 (0.47–1.85)      | 1.39 (0.76–2.55)      | 1.05 (0.37–2.97)      | 1.27 (0.67–2.38)      | 1.04 (0.61–1.77)    |
| Urine nitrites‡                                     |                       |                       |                       |                       |                     |
| Trace                                              | Referrer              | Referrer              | Referrer              | Referrer              | Referrer            |
| Positive                                           | 0.54 (0.13–2.34)      | 0.93 (0.31–2.79)      | 0.8 (0.1–6.14)        | 0.83 (0.49–1.76)      | 0.44 (0.14–1.34)    |
| Referent                                           | 0.611                 | 0.879                 | 0.227                 | 0.148                 |                     |
| Referent                                           | 1.28 (0.58–2.84)      | 1.79 (0.95–3.39)      | 1.47 (0.5–4.34)       | 1.59 (0.81–3.13)      | 1.48 (0.76–2.87)    |
| Referent                                           | 0.542                 | 0.073                 | 0.489                 | 0.179                 | 0.252               |
| Severe anemia                                      | 0.851                 | 0.286                 | 0.465                 | 0.888                 |                     |
| Positive                                           | 1.6 (0.51–5.03)       | 0.7 (0.19–2.62)       | 1                      | 0.57 (0.12–2.7)       | 1.23 (0.42–3.58)    |
| Referent                                           | 0.422                 | 0.595                 | 0.477                 | 0.703                 |                     |
| Fever during pregnancy                             |                       |                       |                       |                       |                     |
| No                                                | Referrer              | Referrer              | Referrer              | Referrer              | Referrer            |
| Yes (before ANC1)                                  | 1.22 (0.72–2.08)      | 0.87 (0.55–1.39)      | 0.88 (0.39–1.99)      | 1.71 (1.1–2.66)       | 1.21 (0.79–1.86)    |
| Referent                                           | 0.457                 | 0.561                 | 0.763                 | 0.017                 | 0.379               |

*ANC1, first antenatal clinic; OR, odds ratio.
†HemoCue, https://www.hemocue.com?
‡Indicates urinary tract infection.