**Table 6. Prospective associations between hormonal contraceptive use and *Chlamydia trachomatis* (CT) (N=9).**

| **Study** | **N, study sample, *N of incident cases or incident rate*** | **Length of follow-up; frequency STI assessment** | **STI Diagnostic test** | **Covariates** | **Reference group** | **OCP**a | **Injectable** | **Implant** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Borgdorff, 2015 [37] | 397, HIV-negative sex workers in Kigali, Rwanda ages 18-49; *N=30 incident casesb,e* | 12M; 0M, 6M, 12M | Endocervical swabs via Amplicor CT/NG PCR test (Roche Diagnostics) | Age, education, years worked as sex worker, breast-feeding, consistent condom use, antibiotic use past 14 d, ever used antibiotics, time duration between assessments | Non-pregnant non-hormonal user | OCP aOR: 6.13 (1.5, 23.8)\* | Injectable (type not specifiedd) aOR: 2.24 (0.69, 7.29) | NA |
| Baeten, 2001 [21] | 948, HIV-1 negative sex workers in Mombasa, Kenya ages 16-48; N=175 incident cases (11.1/100 PY) | Range 15 to 2366 days (median: 421 days); median time b/w visits: 35 days | Enzyme-linked immunoabsorbent assay (ELISA) (Microtrak) | Age, years of education, years of prostitution, parity, number of sexual partners, place of work (ie, bar vs. nightclub), number of sexual contacts, and condom usage | No contraceptives or tubal ligation | OCP aHR: 1.8 (1.1, 2.9)\* | DMPA aHR: 1.6 (1.1, 2.4)\* | NA |
| Kapiga, 2009 [47] | 958, HIV negative women ages 16 to 62 in Lusaka, Zambia (ZA), Moshi Tanzania (TZ) and Durban/Hlabisa, South Africa (SA); *Incidence rateb: 19.5/100 PYAR (SA); 4.9/100 PYAR (TZ, ZA)* | 12M, every 3M | TZ/ZA site: endocervical swabs via enzyme-linked  immunosorbent assay (ELISA), (Murex Biotech); SA site: urine samples via BD Probe Tec ET assay | Age, site, partner earns income, # sex partners, frequency vaginal sex in past 1W, anal sex in past 3M, other STIs, bacterial vaginosis, candida, abnormal vaginal discharge on exam, abnormal cervical discharge on exam, incident HIV  Final model (empirical approach): site, age, # sex partners, incident HIV infection and *N. gonorrhoeae* infection (SA model); site, presence of candida and abnormal vaginal discharge on exam (TZ/ZA model) | Not specified | OCP SA aOR: NR (ns); Moshi TZ/ ZA site aOR: NR (ns) | DMPA SA aOR: 1.8 (1.0, 3.3)\*; TZ/ ZA site aOR: NR (ns) | Norplant SA aOR: NR (ns); Norplant TZ/ZA site aOR: NR (ns) |
| Louv, 1989 [23] | 818, U.S. women ages 19 to 29 attending a STI clinic in Birmingham Alabama; *N=214 incident cases* b | 6M; Monthly | Fluorescein-tagged antibody; Microtrak Culture confirmation (Syva CO) | Age, mean number of sex acts per month, mean number of partners during follow-up period, parity, gravidity | Tubal ligation or IUD user | COC: aHR: 1.73 (1.08, 2.77)\* | NA | NA |
| Lavreys, 2004 [22] | 242, HIV-1 positive commercial sex workers attending STI clinic in Mombasa, Kenya; *N=26 incident cases, incidence rate: 7.7/100 PY* | Median follow-up 35M (IQR: 11-62M); Every 1M | Antigen test by ELISA (Microtrak, Syva) | Age, years of education, years of sex work, parity, workplace, number of sexual partners per week, condom use | No contraception or tubal ligation | OCP: aHR 2.20 (0.70, 7.30) | DMPA: aHR 3.10 (1.0, 9.4)# | NA |
| Masese, 2013 [51] | 865, HIV positive and HIV-negative women who report engaging in transactional sex, ages 18 to 50 in Mombasa, Kenya; *N=101 incident casesb, incidence rate = 5.0/100 PY* | 4Y, every 1-3M | Endocervical swab via  Gen-Probe Aptima GC/CT Detection System | Age, vaginal microbiota, place of work (bar vs. nightclub or home based/ other), educational level, marital status, unprotected intercourse in past wk, # of sex partners in past wk, vaginal washing, presence of other genital tract infections (*T. vaginalis*, *C. albicans*, *N. gonorrhoeae*), HIV-1 serostatus, and cervical ectopy  Final model (empirical approach): Age, unprotected sex with >1 sex partner in past week, HIV status, *N. gonorrhoeae* infection | Non-hormonal user | OCP aHR: 0.2 (0.0, 1.7) | DMPA aHR: 1.8 (1.1, 3.0)\* | NA |
| Pettifor, 2009 [48] | 567, HIV-negative women ages 18 to 40 recruited from family planning clinics in Orange Farm, South Africa; *N=119 incident cases b, incident rate: 28.2 per 100 PY* | 1Y; every 3M | Urine sample via  ligase chain reaction (LCx®; Abbot Laboratories) | Age, relationship status, education, frequency of sex in the past 3M, # partners in the past 3M, condom use in the past 3M, vaginal douching past 3M, age of first sex  Final model (empirical and theoretical approach): Age, education, condom use consistency in past 3M | Non- pregnant, non-hormonal user | NA | DMPA aIRR: 1.24 (0.80, 1.94); NET-EN aIRR: 0.91 (0.59, 1.43) | NA |
| Romer, 2013 [50] | 342, adolescent girls ages 14-17 attending clinics in inner-city areas of Indianapolis, USA; *N=165 incident cases b* | Originally 27M, extended to 5Y for some participants; every 3M | Clinician obtained cervical samples or self-obtained vaginal swabs via nucleic acid amplification tests (NAATs)  (Amplicor PCR, Roche Diagnostics) | Age, positive STI test at start of period, # of partners in past 3M, # of lifetime partners, # of sexual events in last 3M (diary period), # of unprotected sexual events in last 3M (diary period) | Non-hormonal user | NA | DMPA, use in past 3M aOR: 0.76 (0.45, 1.31); DMPA used 3-6M ago aOR: 1.17 (0.69, 1.96) | NA |
| Russell, 2016 [52] | 225, HIV-negative women recruited from outpatient clinics ages 15-35 who had lower genital tract infection or were biologically at risk of STI infection from Pittsburgh PA, USA; *Incidence rate: 48 women tested positive, 28 per 100 PYc incident rate* | Median 12M FU; 0M, 1M, 4M, 8M, 12M | Endocervical swab via  nucleic acid amplification tests (NAATs) | Age, education, site of *C. trachomatis* (CT) infection at enrollment (cervix vs. cervix/endometrium, or uninfected), GN infection during follow-up, STI diagnosis among partner during follow-up, # of male partners since last visit, new male partners since last visit, sex with uncircumcised male in last 3M, condoms (reported at any visit)  Final model (empirical approach): age, *N. gonorrhoeae* during follow-up, site of CT infection, CT infection by partner during follow-up, new male partner since last visit, sex with uncircumcised male last 3M | Non-user of OCP or DMPA, respectively | OCP aHR: NR (ns) | DMPA aHR: 1.03 (0.59, 1.78) | NA |

Notes:PY: person-years at risk. \* Statistically significant at p<0.05. # p=0.05

a OCP type was unspecified unless COC (combined oral contraception) or POP (progestin-only) is noted.

bMultiple incident cases per woman were allowed, i.e., incident cases defined as a positive test following a negative test.

c Incident infection defined as any positive test during follow-up.

d Injectable type not reported but authors note most commonly DMPA in setting with occasional norethisterone enanthate (NE-ENT) use.

e Excluding cases among pregnant women.