Background Young women in sub-Saharan Africa are at high risk for sexually transmitted infections (STIs) and often rely on hormonal contraception (HC) to prevent unwanted pregnancies. Some observational data suggest that HC might affect STI risk. We examined the impact of three HC methods on the adolescent STI incidence and BV prevalence in a randomized trial.

Methods 130 adolescent females aged 15 to 19 from Cape Town were enrolled and randomized into three study arms: 1. injectable norethisterone enanthate (NET-EN), 2. combined oral contraceptives (COCs) or 3. combined contraceptive vaginal ring (CCVR) for 16 weeks. Participants then switched to a second HC for a final four months. Vaginal samples were collected at baseline, crossover and exit for STI (chlamydia, gonorrhea, mycoplasma and trichomoniasis) and bacterial vaginosis (BV) testing by Nugent scoring.

Results At baseline, the BV and STI prevalence was 44% and 42%, respectively. There were no significant differences in STI incidence between study arms at crossover, however in an according to protocol analyses, participants using COCs were significantly less likely to present with any STI than participants using either NET-EN (OR 0.22, 95% CI 0.06–0.69, p=0.015) or CCVR (OR 0.21, 95% CI 0.05–0.69, p=0.015). Specifically, participants on CCVR were more likely to be infected with N. gonorrhoea (OR 11.7, 95% CI 2.0–224, p=0.025). These associations stayed significant after adjusting for self-reported sexual intercourse: 52% of girls with Nugent score ≥7 reported prior sex, compared to 18% of those with Nugent score 0–3 (p = 0.001).

Conclusion Kenyan adolescent girls in a low-risk cohort have Lactobacillus-dominated vaginal microbiota, and only 5.6% of girls had evidence of BV. BV was found more often in girls who self-reported sexual intercourse. Interventions to prevent the onset of vaginal dysbiosis could be beneficial for African women.

Disclosure No significant relationships.