

REPRODUCTIVE TRACT CONSEQUENCES OF BACTERIAL SEXUALLY TRANSMITTED INFECTIONS IN SOUTH AFRICA: COHORT STUDY

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Background:

The bacterial sexually transmitted infections (STIs) *Chlamydia trachomatis* and *Neisseria gonorrhoeae* can cause pelvic inflammatory disease, ectopic pregnancy and tubal factor infertility in women and epididymo-orchitis in men. Non-fatal and fatal reproductive tract consequences are a leading contributor to STI burden, but little is known from resource-limited settings, where STI are most common. This study aims to describe the incidence of upper genital tract conditions associated with bacterial STI in South Africa.

Methods:

We conducted a cohort study among beneficiaries of a South African medical insurance scheme aged 15-49 years from 2011 to 2020. Diagnoses were obtained from International Classification of Diseases 10th revision codes from both outpatients and inpatients for pelvic inflammatory disease, ectopic pregnancy, female infertility and epididymo-orchitis. We calculated incidence rates per 1,000 person-years of follow-up (with 95% Poisson confidence intervals, CI) for the first episode and stratified these by age and HIV status.

Results:

A total of 808,423 individuals were included, with 2,974,961 years of follow-up, including 419,050 women and 27,501 people living with HIV. Overall rates per 1000 person years (95% CI, number) were: pelvic inflammatory disease 33.6 (33.3-33.9, n=51,444); ectopic pregnancy 3.6 (3.5-3.7, n=5,438); female infertility 3.3 (3.2-3.4, n=4,957) and epididymo-orchitis 4.2 (4.1-4.3, n=5,991). All diagnosis rates were highest in 25-34 and 35-44 year olds and higher among people with HIV than those without. Pelvic inflammatory disease diagnoses declined over time.

Conclusion:

We generated direct all-cause estimates for reproductive tract conditions that can be caused by bacterial STIs. STI aetiology could not be assigned because most STI in South Africa are managed syndromically and consequences often occur some time after the infection. Health insurance recipients are not necessarily representative of the general population. Nevertheless, these data are essential inputs for modelling and economic analyses of the global STI burden and its impact.

Disclosure of Interest Statement:

No authors have any interests to declare.

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