

Recent trends in chlamydia and gonorrhea in British Columbia

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After a prolonged period of decline, the rate of genital chlamydia infection in BC has steadily increased since 1998.¹ The 2007 rate of 227.6 per 100 000 rose to 239.3 in 2008, in parallel with Canadian rates. This increase was observed for both sexes; however, females continue to have twice the rate of infection compared with males. The majority of chlamydia infections were detected in persons less than 30 years of age, with the highest rates among females aged 15 to 19 and 20 to 24 years and males aged 20 to 24 years. Rates have been increasing over time in most age groups for both males and females. It is important to note that many genital chlamydia infections are asymptomatic, and diagnosed infections reflect a fraction of the total population burden. The greater number of infections among females is in part due to greater testing in females, as a result of routine screening at the time of visits for other reasons (e.g., Pap testing, contraception counseling).

After a prolonged period of declining or stable rates, the rate of genital gonorrhea infection in BC has also increased beginning in 1998, again paralleling Canadian rates.¹ The BC rate rose in 2008 to 31.3 per 100 000 from 27.9 in 2007, reflecting an increase in case reports from 1220 to 1391. In the past 5 years, the rate of infection among males has been relatively stable while the rate of infection among females has been increasing.

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Males continue to have a greater rate of infection compared with females. Females in the 15 to 19 and 20 to 24 year age groups had the highest rates of genital gonorrhea, and rates have been increasing in most age groups among females. Males in the 20 to 24 and 25 to 29 year age groups had the highest rates of genital gonorrhea; the greatest increases in rates among males were also in these age groups. Gonorrhea infections may be asymptomatic or symptoms may be mild. Males are more likely to show signs of gonorrheal infection (e.g., urethral discharge) which may lead to seeking medical attention and contribute to the observed greater number of gonorrheal infections observed in males in BC. Transmission of gonorrhea among men who have sex with men may also contribute to the increased number of cases observed in males.

Although chlamydia rates are 10 times higher than gonorrhea, both have increased over the last decade in a roughly parallel manner. The underlying causes for these increases have not been fully elucidated. Some of the following factors clearly overlap:

- The improved sensitivity of nucleic acid amplification testing (NAAT) identifies more true infections for both conditions.
- NAAT testing of urine and cervical specimens is more acceptable to patients, especially males.
- Awareness and knowledge among clinicians and patients has increased.

Higher levels of risky sexual behavior may have also played a role. There may be underlying causes specific to each condition, such as the arrested immunity hypothesis, which posits that early, expanded treatment of chlamydia arrests the natural immune response and enhances susceptibility to re-infection.² Up to 15% of

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annual incident chlamydia infections in BC are re-infections.³ In spite of these questions related to the immunology and recent epidemiology of genital chlamydia and gonorrhea infections, the management and follow-up of cases and contacts is firmly grounded in evidence-based science and remains unchanged.^{4,5}

References

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