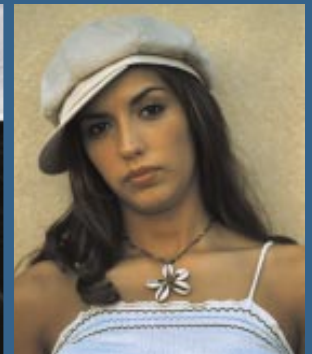


To the Point

HALIBURTON • KAWARTHA • PINE • RIDGE • DISTRICT • HEALTH • UNIT

CHLAMYDIA



Chlamydia is the most commonly reported sexually transmitted infection in Canada.

Sexually transmitted infections (STIs) pose a significant threat to the health and well-being of young adults.¹ This report will focus on chlamydia, which is the most commonly reported STI in Canada as well as in the Haliburton, Kawartha, Pine Ridge (HKPR) District. Chlamydia is caused by the bacterium *Chlamydia Trachomatis* and is transmitted through vaginal, anal and oral sex and can be transmitted from mother to child during childbirth. It is known as the 'silent disease,' because more than 50 per cent of infected males and 70 per cent of infected females are asymptomatic.²

Although precise estimates are not currently available, the annual medical costs associated with chlamydia in Canada may be in excess of \$100 million.³

Risks for Chlamydia

The major risk factor for chlamydia is unprotected sex. Laboratory studies confirm that latex condoms are impermeable to *Chlamydia Trachomatis* and prevalence research demonstrates that consistent condom users (condom use 100 per cent of the time) have significantly lower rates of chlamydia than inconsistent condom users (condom use 25 per cent to 75 per cent of the time).¹ Age is another important risk factor for chlamydia. Due to a number of biological, social-developmental, and behavioural factors, chlamydia affects disproportionately more adolescents compared to other population groups.¹

Health Effects of Chlamydia

Chlamydia infection, particularly if it is undetected and therefore untreated, has significant health consequences. For up to 40 per cent of infected women, untreated chlamydia can progress to pelvic inflammatory disease (PID). Effects of PID include abdominal pain, fever, internal abscesses and long-lasting pelvic pain; effects also include scarring of the fallopian tubes, which can potentially lead to infertility and an increased chance of ectopic or tubal pregnancies.² An infected pregnant woman may pass chlamydia to her baby and the baby may be born prematurely, have eye infections or develop pneumonia.²

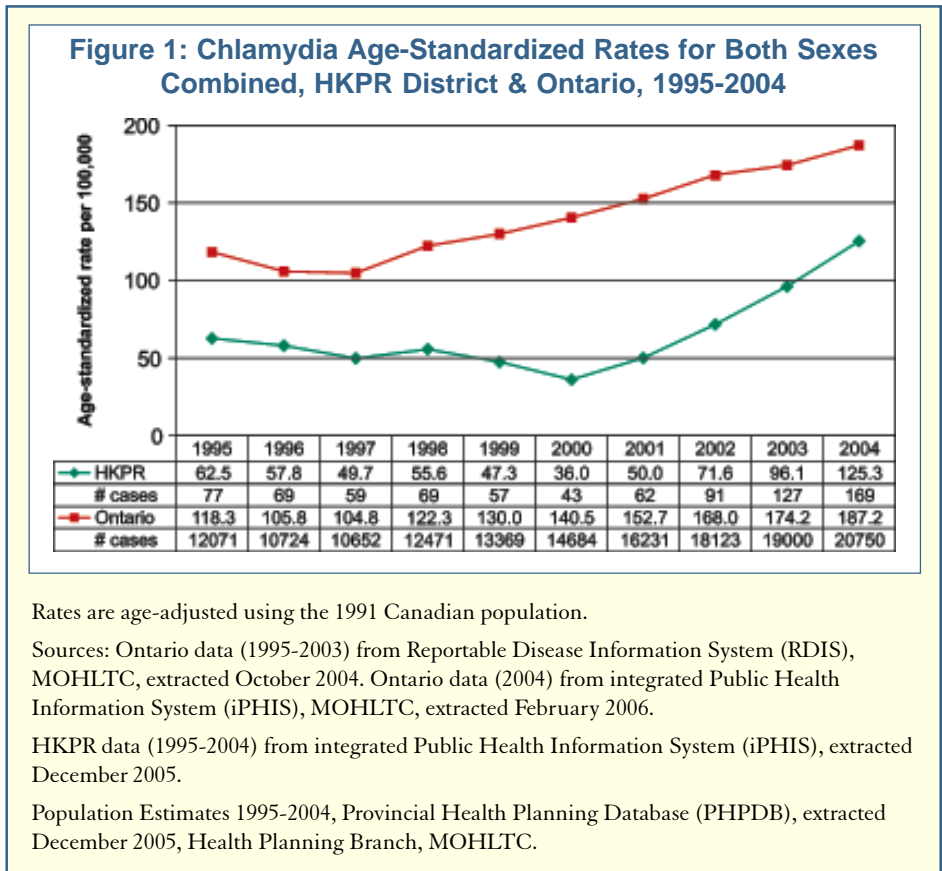
Health consequences for men include scarring of the urethra, which makes urination difficult and may occasionally cause infertility.²

Although rare, both sexes are at risk of a type of arthritis known as Reiter's Syndrome – an inflammation and swelling caused by the spread of the infection through the bloodstream into the joints.² Individuals infected with chlamydia also increase their risk of contracting HIV by a factor of three to five, as they are more susceptible to HIV infection when exposed.¹

Incidence of Chlamydia

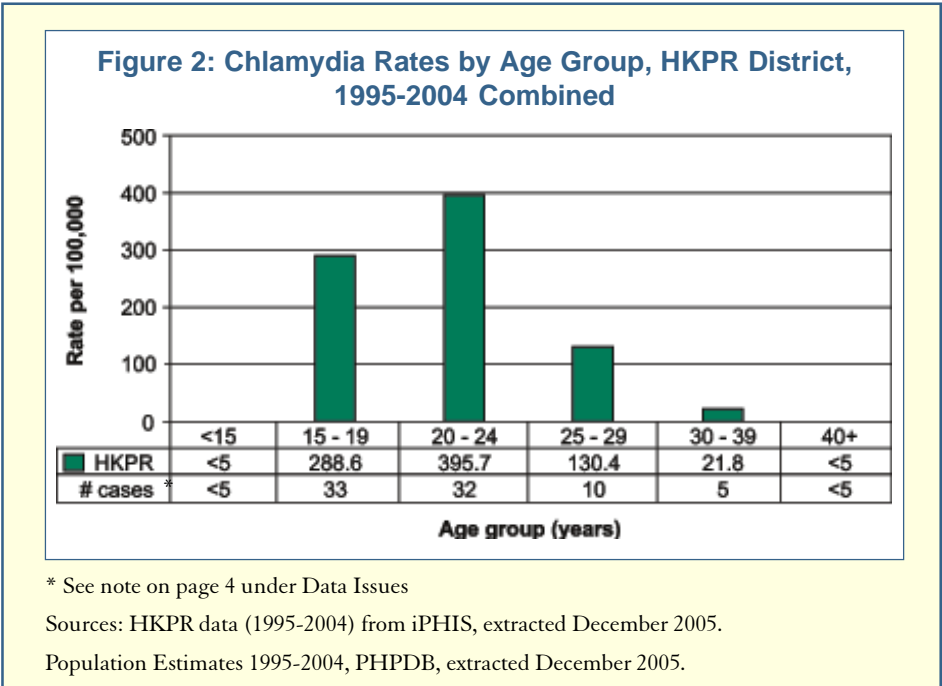
The incidence of chlamydia, the most commonly reported STI in HKPR, has dramatically increased from 2000 to 2004 (36 to 125 per 100,000 population). There are approximately 129 cases of chlamydia reported in the HKPR District annually (three year running average 2002-2004). The increase in the age-standardized rate of chlamydia in HKPR is consistent with the trend observed across Ontario as well as Canada, although the provincial and national trends show a more conservative increase. Health Canada reports that after being in decline for many years, rates of chlamydia infection have risen steadily since 1997. In Figure 1, the difference in the age-standardized rates between HKPR and Ontario may be primarily due to a lack of clinical services as HKPR District has been designated an under-served area with respect to family physicians.

The introduction of the nucleic acid amplification test (NAAT) has had an impact on chlamydia data trends. This testing method, introduced in various regions of Canada in the late 1990s, permits the collection of urine-based samples instead of more invasive swabs⁴. This improved laboratory test has made screening easier and more acceptable. However, the NAAT alone does not adequately explain the persistent increase in reported cases of chlamydia. The expectation was that the increase would level off as



transmission was reduced by improved detection and treatment. This trend has not yet been observed, suggesting that other factors, such as risk behaviours, point toward a true increase in disease incidence.⁴ For example, Health Canada reports that the rising rates of infection are an indication that people are not consistently using safer sex methods.²

In the HKPR District, chlamydia was most commonly reported among young adults (20-24 years) and teenagers (15-19 years), with the highest incidence reported in the 20-24 year age group (refer to Figure 2). The national data also clearly indicate that chlamydia infection is common among the youth population in Canada.¹ As



mentioned, chlamydia infection occurs more commonly in younger individuals for a number of biological and behavioural reasons.

In the HKPR District, higher incidence rates are observed among the female population. Health Canada notes that since chlamydia became nationally notifiable, females have typically accounted for 75 per cent of reported cases.¹ This could be attributed, in part, to better screening and case finding for females rather than an accurate reflection of the distribution of cases between males and females. As less invasive methods for screening males become more widely implemented, this gap in the distribution of cases can be expected to narrow.¹ As well, the higher number of reported cases observed in the female population might be attributed to current screening guidelines and screening practices generally excluding males. Research indicates that the limited success of chlamydia control programs (e.g. declines in prevalence are often not sustained) are probably due, in part, to the focus on only screening females and suggests that long-term success in reducing the prevalence of chlamydia will require substantially enhanced efforts to focus screening and prevention programs on males.³



Minimizing the Risk

Following the suggestions below will help minimize your risk of chlamydia infection:

- Learn about safer sex methods.²
- Make informed decisions. Talk to your partner(s) about their STI status and the use of protection.²
- Use condoms correctly and consistently.²
- Dual protection (i.e. contraception and condom use).
- Get tested for chlamydia if you are sexually active.²
- If you are diagnosed and treated for chlamydia, be sure to follow your health care provider's treatment and follow-up recommendations.²
- Notify all of your sexual partners who may have been at risk of infection.²

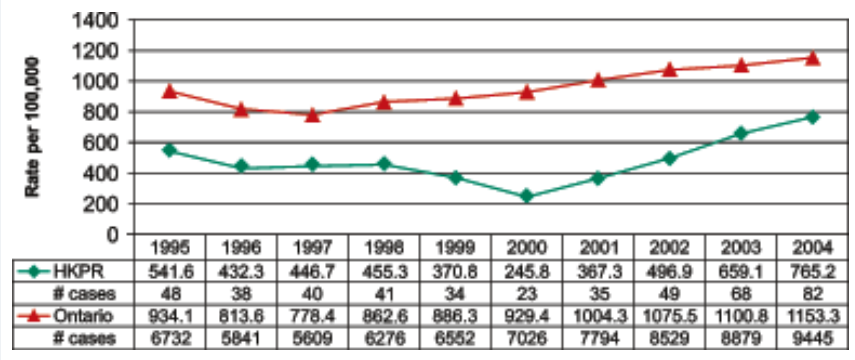
What the Health Unit is doing about Chlamydia

The local Health Unit is mandated by the Ministry of Health and Long-Term Care (MOHLTC) to meet specific expectations outlined in the *Mandatory Health Programs and Services Guidelines December 1997* document.

The Health Unit conducts follow up of cases and contacts of chlamydia to ensure appropriate case management and treatment as per the Canadian Sexually Transmitted Disease (STD) 2006 Guidelines and the MOHLTC Infectious Disease Branch STD Control Protocol (updated March 2005). Locally, the



Figure 3: Chlamydia Rates in Females Aged 15-24 Years, HKPR District & Ontario, 1995-2004



Sources: Ontario data (1995-2003) from RDIS, MOHLTC, extracted October 2004. Ontario data (2004) from iPHIS, MOHLTC, extracted February 2006.
 HKPR data (1995-2004) from iPHIS, extracted December 2005.
 Population Estimates 1995-2004, PHPDB, extracted December 2005.

As illustrated in Figure 3, the trend of chlamydia infection in females aged 15-24 years in the HKPR District is consistent with the provincial trend. Concurrently, in Canada, reported rates of chlamydia are highest among the 15-24 year-old female population.³

This pattern of persistently high chlamydia rates for Canadian women ranging in age from the mid-teens through the mid-twenties may partially be the result of patterns of contraceptive use (i.e. choosing the oral contraceptive pill for prevention of pregnancy while remaining at risk of acquiring an STI through unprotected sex) and sexual behaviour (i.e. serial monogamy).¹ Rising chlamydia rates among adolescents and young adult females are likely due, in part, to a true increased incidence of the infection in these groups.³

Health Unit has partnered with selected physicians to ensure the prompt and appropriate treatment of STI cases, and provides testing, counselling and treatment of STIs to youth in a high school based sexual health clinic in Haliburton County. Plans to expand the sexual health clinics to City of Kawartha Lakes and Northumberland County will occur in late 2006. Educational sessions are also facilitated by the sexual health nurses in the high schools on STIs and sexual health related topics.



The Point

Prevention of chlamydia is achievable through behavioural measures – namely consistent condom use.

Early detection and treatment through routine screening play a key role in reducing the morbidity and high costs associated with chlamydia infection.

Data Issues

When reviewing the data presented in this report it is important to note that surveillance systems capture only those cases in which an individual has presented to a health care professional, been tested, and received a positive laboratory result for chlamydia. As a result, the true number of chlamydia cases in HKPR District is likely much higher than reported. Lack of awareness, combined with lack of symptoms and testing, further contributes to under-reporting as well as lack of access to clinical services.⁴

*For the analysis in Figure 2, the average annual number of cases by age group was calculated for HKPR from 1995-2004 and was divided by the mid-point population and multiplied by 100,000 to produce the age-specific rate.

Data Sources

Chlamydia Incidence data

Under the Ontario Health Protection and Promotion Act (HPPA) all reports of chlamydia are required to be reported to the local Medical Officer of Health. From 1990-2005, this information was collected in a public health surveillance system called the Reportable Disease Information System (RDIS). In 2005, RDIS was replaced by a new public health surveillance system called the integrated Public Health Information System (iPHIS).

Sources: HKPR data (1995-2004) were obtained from the integrated Public Health Information System (iPHIS), extracted December 2005. Counts less than five have been suppressed.

Ontario data (1995-2003) were obtained from the Reportable Disease Information System (RDIS), extracted October 2004. Ontario data (2004) were obtained from the integrated Public Health Information System (iPHIS), extracted February 2006.

Population Estimates

Population estimates were obtained from the Ontario Ministry of Health and Long-Term Care's Provincial Health Planning Database (PHPDB).

Source: PHPDB Extracted December 2005, Health Planning Branch, Ontario Ministry of Health and Long-Term Care (MOHLTC).

Definitions

What is an age-standardized rate?

An age-standardized rate takes into account the age distribution of different populations so that rates can be compared over time. An age-standardized rate is the number of events (e.g. number of STI cases) per 100,000 population that would occur in the population if it had the same age distribution as the 1991 Canadian population.⁵

Surveillance

The ongoing systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public health practice, as well as the timely dissemination of these data to those who need to know.⁶

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