Women's, Children's, & Family Health

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Sexually Transmitted Diseases and HIV among Women in Alaska

The Centers for Disease Control and Prevention estimate that 19 million new sexually transmitted diseases (STDs) occur each year in the United States, almost half of them occurring among young people 15 to 24 years of age.[1] Chlamydia and gonorrhea are the most frequently reported infectious diseases.[1] The true burden of STDs is unknown because many cases are undiagnosed and other types of infections, such as human papillomarvirus and genital herpes, are not reported.

Women, especially young women, disproportionately bear the long-term consequences of STDs.[1] The case rate for chlamydia is over 3 times higher for females than for males, partly due to higher screening rates among females.[^]

Seriousness

Healthy People 2010 Targets and National Data

Indicator	Alaska 2005	Nation 2005	Healthy People 2010 Goal*
Incidence of gonorrhea among women rate per 100,000	110.3[†]	119.1[†]	19.0[***]
Proportion chlamydia infections among females ages 15-24 attending family planning clinics	5.5%[^]	6.3%[^]	3.0%
Sustained domestic transmission of primary and secondary syphilis among women rate per 100,000	0.3[¥]	0.9[¥]	0.2
Congenital Syphilis per 100,000 live births	0.0[¥]	8.0[¥]	1.0[***]
Incidence of HIV/AIDS among females, per 100,000 population	6.23[‡] (2001-2005)	12.2[**€]	1.0[***]

** Data based on 33 states with confidential name-based HIV infection reporting

*** HP target for males and females

- The gonorrhea incidence rate among Alaskan women during 2005 was 110.3 per 100,000 population. This is slightly lower than the national rate of 119.1, but 5.8 times higher than the Healthy People 2010 (HP2010) goal of 19 per 100,000 population for both men and women.

- The proportion of chlamydia infections among females ages 15 to 24 years attending family planning clinics during 2005 was 5.5%, 1.8 times the HP2010 goal of 3.0% but one-fourth lower than the US rate of 6.3%.

- In 2005 the rate for transmission of primary and secondary syphilis among women in Alaska was 0.3 per 100,000 population, slightly above the HP2010 goal of 0.2 per 100,000 population. Alaska had no cases congenital syphilis among infants that year.

- Alaska's reported chlamydia rate for women (all ages) in 2005 was the second highest in the Nation at 918.7 per 100,000 population – 1.8 times that of the U.S. rate of 496.5 per 100,000.[^]

Severity

STDs, mainly untreated chlamydia and gonorrhea, are the largest preventable cause of pelvic inflammatory disease (PID). PID can lead to serious consequences including infertility, pelvic abscess and chronic pelvic pain.[1,2] PID also increases the risk of ectopic pregnancy. Up to 40 percent of females with untreated chlamydia infections develop PID, and up to 20 percent of those may become infertile.[1]

Chlamydia is the most frequently reported bacterial STD in the U.S.[1] More than 50% of all preventable infertility among women is a result of infection with chlamydia, and three-quarters of all women infected have no symptoms. Infected women are up to 5 times more likely to become infected with HIV, if exposed.[3]

Some types of human papillomavirus (HPV), which can be transmitted through sexual intercourse, can cause cervical cancer. Other cancers caused by STDs include liver cancer (hepatitis B virus), T-cell leukemia (human T-cell lymphotropic virus type 1), Kaposi's sarcoma (human immunodeficiency virus), and body cavity lymphoma (human immunodeficiency virus).[4]

A pregnant woman with a sexually transmitted disease has an increased risk of preterm labor, premature rupture of membranes, and uterine infection after delivery.[5]

Chlamydia is a leading cause of pneumonia and conjunctivitis during early infancy.[3] Other poor perinatal outcomes may include stillbirth, low birth weight, neonatal sepsis, neurological damage, blindness, deafness, acute hepatitis, meningitis, chronic liver disease, and cirrhosis.[3]

Urgency

- The rate for reported cases of gonorrhea among Alaska women increased 41%, from 65.3 to 110.3 per 100,000 population, between 2000 and 2005.†
- The rate for reported cases of chlamydia among Alaska women increased 33%, from 614.6 to 918.7 per 100,000 population, between 2000 and 2005.†
- The increase in gonorrhea and chlamydia rates can be attributed to rising disease incidence, improved testing and screening, and expanded partner notification.[6]
- CDC estimates that by age 50, at least 80% of women will have acquired genital HPV infection.[7]

Disparities

National surveillance data indicated that sex, age, and race were associated with higher incidence of STDs.[1]

- National trends show that women were 3 times as likely to have chlamydia and more than 2 times as likely to have gonorrhea as men.^
- In Alaska, during 2005, the highest chlamydia case rates were among females aged 20-24 years (5,289 per 100,000 population) and 15-19 years (4,145 per 100,000 population).[6]
- In 2005 chlamydia case rates among Alaska females were highest in Alaska Natives/American Indians (2,716 per 100,000 population) and Blacks (1,522 per 100,000 population).[6]
- In Alaska, during 2005, the highest gonorrhea case rates were among females aged 20-24 years (525 per 100,000 population) and 15-19 years (325 per 100,000 population).[8]
- In 2005 gonorrhea case rates among Alaska females were highest in Alaska Natives/American Indians (392 cases per 100,000 females) and Blacks (275 cases per 100,000 females).[8]

Economic Loss

In 2000, the estimated direct medical costs of STDs acquired by individuals younger than 25 years were $6.5 billion. Female adolescents experience a large proportion of the costs. The average lifetime cost per case of chlamydial infection to female adolescents is $244 compared with a per-case cost of $20 to male adolescents.[10]

The cost of treating HIV/AIDS over a lifetime is estimated at $155,000 per person.[11]

Interventions & Recommendations

Primary Interventions: The CDC Compendium of HIV Prevention Interventions with Evidence of Effectiveness (revised August 31, 2001) defines three broad categories of interventions. Behavioral interventions aim to change risk behaviors, usually in individual or small group settings. Social interventions aim to change risk behaviors by changing peer or community norms, or changing environmental factors. Policy interventions cover administrative or legal actions such as HIV education in schools. The Compendium lists 28 programs that were determined to be effective interventions.[12]

Secondary Interventions: The U.S. Preventive Services Task Force recommends all sexually active women aged 25 years and younger, and other asymptomatic women at increased risk for infection, be screened for chlamydial infection.[14] Cohort studies show that many individuals change their risky behaviors once they are aware of their positive HIV status. Use of the new rapid HIV test would be useful in promoting early knowledge of HIV status, especially in settings where clients tend not to return for HIV test results.[15] Some researchers recommend clinicians routinely offer HIV testing to all sexually active persons irrespective of perceived risk.[16]

Intervention Effectiveness

Increasing and maintaining the proportion of youth who exhibit protective behaviors reduces the risk of contracting infection. Successful school programs have several important characteristics: targeting a specific risk behavior (e.g. unprotected sex), using social learning theory, personalizing risk information (making students feel more vulnerable), addressing social influences that pressure teens into having intercourse, and providing practice in refusal and negotiation skills.[17]

Age-based screening is the most cost effective screening strategy in preventing PID, but in areas of high prevalence, universal screening may be a more cost effective alternative.[18] Routine STD screening of all young women attending family planning clinics could capture a large percentage of prevalent infections and therefore reduce the incidence of PID.[19]

Given that there are now proven treatments to reduce the progress of HIV and to virtually halt perinatal infection, widespread screening with the new rapid HIV test seems plausible in settings not previously deemed appropriate for HIV testing. Making the rapid test more widely available has the potential for dramatically expanding the number of

individuals accepting the screening. For example, the Municipality of Anchorage Reproductive Health Clinic now takes its rapid HIV screening tests to nontraditional settings such as popular "hang outs" of youth and target groups, rather than waiting for clients to come to the clinic site for testing.

Capacity

Propriety

Issues of STD infection and its impact on the health of women, children, and especially infants falls within the overall mission of the Women's, Children's, and Family Health (WCFH) Section. Responsibility for addressing the STD problem is shared with the Section of Epidemiology and the Section of Public Health Nursing. National initiatives have been set forth to address this issue (HP2010) and the Maternal and Child Health Bureau requires the collection and monitoring of two STD indicators among the population of women of childbearing age on a yearly basis (Title V Block Grant).

Economic Feasibility

The WCFH Section has the capacity to retain the department's federal grant for abstinence education of youth.

The WCFH Section has a dedicated liaison with the State's Infertility Prevention Program (IPP) so the Section has influence in regional and state chlamydia and gonorrhea screening efforts. The state does not currently contribute funds to this program. CDC funding for the IPP are directed to the public health laboratory to purchase testing materials. The IPP committee structure addresses a wide variety of STDs due to the common transmission patterns of many STDs and the frequency of co-infection.

Acceptability

Sexuality education targeting youth with messages regarding responsible and appropriate sexual behavior is controversial. Despite the evidence that prevention education that includes condom or birth control use is more effective, abstinence-only programs currently receive a substantial proportion of federal support and funding.

Screening activities focused on youth are similarly controversial. There is continuing pressure to include parental consent for such services to minors. Public health facilities continue to be primary providers of screening services to youth as well as for low-income individuals and those who are seeking confidential care.

Resources

The "abstinence education" grant will be continued.

Three entities provide comprehensive and confidential services under the Title X Family Planning Program: Planned Parenthood of Alaska, the Municipality of Anchorage, and the Alaska Department of Health and Social Services.

Public Health Centers statewide provide screening, diagnosis, and, sometimes, treatment services. The IPP project provides testing supplies and laboratory services to select facilities statewide.

The Breast & Cervical Cancer Screening program screens for cervical cancer, provides HPV typing, and provides other diagnostic services for cervical cancer and precancerous conditions known to be caused by sexually transmitted infection. This program could be instrumental in organizing distribution and administration of HPV vaccine.

Legality

Not an issue.

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