



Universal HIV testing in pregnancy

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From The Motherisk-HIV National Healthline

The human immunodeficiency virus continues to spread around the world causing an estimated 16 000 new infections a day.¹ In 1998, 2.1 million women and 590 000 children younger than 15 years of age were newly infected with HIV.¹ Most of these children were infected through their mothers before or during birth or through breastfeeding.¹

The rate of maternal-infant HIV type 1 transmission without a therapeutic intervention is between 15% and 40%.² If untreated, between 25% and 50% of all children with perinatally acquired HIV infection develop AIDS within their first year of life, and 80% go on to develop AIDS within 3 to 5 years.³ An estimated 2.5 million people died of AIDS in 1998, of whom 900 000 were women and 510 000 were children.¹

In Canada 924 infants were reported to have been born to HIV-positive women from 1984 to 1998, of whom 218 had confirmed infection, 65 had indeterminate HIV status at the time of reporting, 107 had died of AIDS, and 17 died of other causes.⁴ The estimated HIV prevalence among pregnant women in Canada is about 3 to 4 in 10 000, with large metropolitan areas having higher rates (eg, 15.3 for Montreal vs 3.4 for the rest of Quebec in 1990).⁵

Reports obtained from physicians from seven clinics in Ontario (Toronto, Ottawa, Hamilton, London, Kingston, Sudbury, Windsor) from 1994 to 1996 showed a total of 86 perinatally exposed infants of whom only 39 (45%) were identified in pregnancy and treated with zidovudine (AZT). The number of infected infants in the untreated group was 18, and the number infected in the treatment group was one. If all 86 women had been identified early in pregnancy and treated, then the expected number of infected infants would have been two instead of 19.⁶ The 47 unidentified HIV-infected pregnant mothers and the 17 potentially preventable HIV-infected children reinforce the fact that the momentum

for prevention has not kept pace with the growing epidemic.

In 1994 the AIDS Clinical Trial Group demonstrated that peripartum AZT treatment reduced the rate of HIV transmission from 25.5% to 8.3%.⁷ A study⁸ from Thailand showed that administering AZT during late pregnancy (starting at 36 weeks) and delivery reduced vertical transmission by 51%. Transmission rates in the treatment group and placebo group were 9.2% and 18.6%, respectively.

These studies show that identifying HIV status at any stage of pregnancy would benefit mothers, children, and society, as each prevented neonatal HIV infection provides a normal life expectancy for infants, avoids grief and burden on the families or caregivers, and possibly reduces health care costs.^{9,10}

Identifying HIV-positive women

The first step in this intervention strategy is to identify HIV-positive pregnant women. Almost 50% of the HIV-positive cases found were in women who did not report risk factors for HIV infection and would have been missed if only the high-risk group was screened.¹¹ When all pregnant women were routinely offered HIV testing (universal testing) after either individual or group counseling sessions, the acceptance rates for voluntary screening programs ranged between 75% and 100%.^{11,12}

The medical community is still debating the ethical issues of whether physicians should offer routine HIV counseling and testing to all patients with the ability to opt out, offer counseling to all patients with testing on request, or offer counseling and testing only in the presence of risk factors. A study¹³ in the United States shows that there is considerable support among obstetricians for mandatory (64%) versus voluntary (36%) HIV testing in pregnancy. A joint statement¹⁴ issued by the American Academy of Pediatrics and The

American College of Obstetricians and Gynecologists strongly supports the recommendations of the Institute of Medicine for universal HIV testing with patient notification as part of routine prenatal care unless patients opt out.

In Canada HIV testing in pregnancy is voluntary, requiring informed consent. Many Canadian provinces have guidelines or recommendations for physicians to encourage HIV testing in pregnancy (**Table 1**¹⁵).

Family physicians and universal testing

Most pregnant women visit their family physicians first, and they might be the only health care providers throughout the pregnancy. Screening for HIV offered at the first prenatal visit not only facilitates effective early intervention but also allows the option of terminating the pregnancy. Sometimes physicians might see pregnant women only in the late stage of pregnancy; it would still be beneficial to identify HIV status so that appropriate management options can be offered.

Many pregnant women with HIV do not have obvious risk factors, and the only way to identify them would be by HIV testing. Voluntary screening programs offered to all pregnant women reduce problems of discrimination and, as shown in the studies mentioned above, would be generally more widely accepted with less stigma attached when all are offered screening. The existence of a treatment that significantly reduces the risk of perinatal HIV transmission should increase the likelihood of acceptance of the test and consent to treatment in both low-risk and high-risk populations. Availability of anonymous testing sites should be mentioned to all patients as part of routine counseling. However, physicians' open-minded attitudes toward screening are also crucial for successful implementation of universal screening, and physicians' concerns should be addressed.

In a survey¹⁶ conducted in Toronto, the Motherisk team polled family physicians and obstetricians to determine their attitudes toward universal HIV testing in pregnancy. The response rate was approximately 50%. Most respondents (92%) favoured universal HIV testing in pregnancy and reported that offering HIV testing to all pregnant women would make it easier for them to discuss HIV testing with their patients. Nonrespondents differed significantly from respondents in practicing for a greater number of years; therefore, their response cannot be assumed to be similar to that of respondents.¹⁶

Table 1. Guidelines and practices in Canadian provinces and territories¹⁵

Newfoundland, Alberta, Northwest Territories, and Nunavut: HIV testing is part of prenatal care unless women decline testing.

Quebec: Offering HIV testing to all pregnant women and women contemplating pregnancy is recommended.

British Columbia and Ontario: HIV testing is offered as part of routine prenatal care after counseling and informed consent.

Manitoba: The College of Physicians and Surgeons of Manitoba's Guidelines to Practice recommends that all physicians offer pretest counseling and HIV testing after informed consent to all pregnant women.

Saskatchewan: The College of Physicians and Surgeons of Saskatchewan advised physicians to assess a woman's risk and inform her that HIV testing is available.

Nova Scotia: The Reproductive Care Program recommends that HIV testing should be offered to all pregnant women with the other prenatal bloodwork in the first trimester. Then offer HIV testing again later in pregnancy to women who declined testing in their first trimester and to women known to engage in high-risk activities.

Prince Edward Island: No formal policy for prenatal HIV testing has been stated. The Chief Medical Officer of Health has recommended that all women who present with risk factors for HIV be tested.

New Brunswick: No formal policy for prenatal HIV testing has been stated, and practices vary across the province.

Yukon Territory: The Chief Medical Officer of Health in conjunction with the Yukon Communicable Disease Control has strongly recommended that all women who present with risk factors for HIV be tested.

Conclusion

Offering HIV screening to all pregnant women should make it easier for physicians to discuss screening with their patients. However, physicians' attitudes toward screening are also crucial, and their concerns should be addressed. Vertical HIV transmission can be reduced only when physicians are actively involved and comfortable in offering HIV screening to all pregnant women. Physicians' education programs, together with standardized counseling and educational material, have to be developed to make universal screening successful. ❁

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