

HIV Screening in Pregnancy

This guideline has been reviewed by the Maternal Fetal Medicine Committee and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

PRINCIPAL AUTHORS

Lisa Keenan-Lindsay, RN, MN, Toronto ON

Mark H. Yudin, MD, MSc, FRCSC, Toronto ON

INFECTIOUS DISEASES COMMITTEE

Marc Boucher, MD, FRCSC, Montreal QC

Howard Ronald Cohen, MD, FRCSC, Toronto ON

Andrée Gruslin, MD, FRCSC, Ottawa ON

Catherine Jane MacKinnon, MD, FRCSC, Brantford ON

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Caroline Paquet, RM, MSc, Trois-Rivières QC

Marc Steben, MD, Montreal QC

Julie van Schalkwyk, MD, FRCSC, Vancouver BC

Thomas Wong, MD, MPH, FRCPC, Ottawa ON

Mark H. Yudin, MD, MSc, FRCSC, Toronto ON

Abstract

Objective: The purpose of this guideline is to provide recommendations to obstetric health care providers and to minimize practice variations for HIV screening, while taking provincial and territorial recommendations into account.

Outcomes: The risk of transmission of HIV from mother to fetus is significant if the mother is not treated. The primary outcome of screening for and treating HIV in pregnancy is a marked decrease in the rate of vertical transmission of HIV from mother to fetus. Secondary outcomes include confirmation of HIV infection in the woman, which allows optimization of her health and long-term management.

Evidence: The Cochrane Library and Medline were searched for English-language articles published related to HIV screening and pregnancy. Additional articles were identified through the references of these articles. All study types were reviewed.

Key Words: HIV, AIDS, pregnancy, perinatal, screening, counselling

Recommendations

1. All pregnant women should be offered HIV screening with appropriate counselling. This testing must be voluntary. Screening should be considered a standard of care, although women must be informed of the policy, its risks and benefits, and the right of refusal. Women must not be tested without their knowledge. (II-2 B)
2. Pre-test counselling and the patient's decision about testing should be documented in the patient's chart. (III-B)
3. Women who decline screening should still have concerns discussed and should continue to receive optimum antenatal care. (III-C)
4. Women should be offered HIV screening at their first prenatal visit. (I-A)
5. Women who test negative for HIV and continue to engage in high-risk behaviour should be retested in each trimester. (II-3 B)
6. Women with no prenatal care and unknown HIV status should be offered testing when admitted to hospital for labour and delivery. Women at high risk for HIV and with unknown status should be offered HIV prophylaxis in labour, and HIV prophylaxis should be given to the infant post partum. (III-B)
7. Women who test positive for HIV should be followed by practitioners who are knowledgeable in the care of HIV-positive women. (III-C)

J Obstet Gynaecol Can 2006;28(12):1103-1107

INTRODUCTION

The number of Canadians living with HIV continues to increase. An estimated 56 000 Canadians were living with HIV infection by the end of 2002.¹ This represents a 12% increase from the estimate of 49 800 at the end of 1999.¹ Overall, 9.1% of reported cases of AIDS are in women, and 87% of these women are of childbearing age.² Women also account for an increasing proportion of positive HIV tests in Canada at 26.6% of positive tests in 2004 compared with 9.8% of positive tests between 1985 and 1994.²

The probability of transmission of HIV from an untreated mother to fetus is between 15% and 40%.³⁻⁵ Appropriate treatment of HIV-infected women throughout pregnancy and during labour and of the newborn for six weeks

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Criteria for quality of evidence assessment and classification of recommendations

Level of evidence*	Classification of recommendations†
I: Evidence obtained from at least one properly designed randomized controlled trial.	A. There is good evidence to support the recommendation that the condition be specifically considered in a periodic health examination.
II-1: Evidence from well-designed controlled trials without randomization.	B. There is fair evidence to support the recommendation that the condition be specifically considered in a periodic health examination
II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group.	C. There is poor evidence regarding the inclusion or exclusion of the condition in a periodic health examination.
II-3: Evidence from comparisons between times or places with or without the intervention. Dramatic results from uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category.	D. There is fair evidence to support the recommendation that the condition not be considered in a periodic health examination.
III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.	E. There is good evidence to support the recommendation that the condition be excluded from consideration in a periodic health examination.

*The quality of evidence reported in these guidelines has been adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on the Periodic Health Exam.¹³

†Recommendations included in these guidelines have been adapted from the Classification of Recommendations criteria described in the Canadian Task Force on the Periodic Health Exam.¹³

following delivery has decreased the rate of vertical transmission to approximately 1% or less.⁵⁻⁸ The most important step in the prevention of vertical transmission is the identification of HIV in pregnant women, as most transmissions occur in women who are not screened.⁹ The identification of HIV infection in pregnancy provides women with the opportunity for counselling about treatment options during the pregnancy.⁹ Universal testing of all pregnant women is currently recommended and supported by The Canadian Pediatric Society (CPS), The American Academy of Pediatrics (AAP), The Institute of Medicine (IOM), The American College of Obstetricians and Gynecologists (ACOG), and the Society of Obstetricians and Gynaecologists of Canada (SOGC).¹⁰⁻¹²

The aim of these guidelines is to provide health care providers and pregnant women with information about HIV screening in pregnancy. The quality of the evidence reported in these guidelines has been described using the Evaluation of Evidence criteria outlined in the Report of the Canadian Task Force on the Periodic Health Examination.¹³

WHO SHOULD BE SCREENED?

All Canadian provinces currently recommend prenatal HIV screening in a variety of models.¹⁴ Provinces use either an opt-in or an opt-out approach to screening in pregnancy. The recommendations vary from *mandatory* testing with notification/opt-out approach (Newfoundland and

Alberta), to *offering* screening to all women (Manitoba and Quebec), to *encouraging* screening (New Brunswick), to *informing* the woman that the test is available (Saskatchewan).¹⁴ Screening rates vary across the country, and national screening rates could be increased by consistent recommendations.¹⁵

Presently, HIV screening during pregnancy in Canada is voluntary. The use of mandatory screening may affect the ability to make an informed choice and could lead some women to avoid antenatal care.^{9,15-18} When testing is offered appropriately, uptake rates are high.^{18,19} Targeted testing of pregnant women who are perceived to be at increased risk for infection fails to identify a significant number of HIV positive women^{19,20} as some infected women are not perceived to be at risk by either themselves or their health care providers. Routine screening increases identification of those who are infected, and with appropriate treatment, the rate of vertical transmission can be decreased. A policy of universal testing will increase the likelihood that a physician will offer the test.¹⁵ Universal screening has been shown to be cost-effective in areas of low to moderate seroprevalence.^{17,21-23}

HIGH-RISK BEHAVIOURS

- Sharing needles or any other components during intravenous drug use
- Unprotected sex with multiple partners
- Unprotected sex with a known HIV-positive individual

- Unprotected sex with a partner who is from an HIV-endemic area
- Unprotected sex with a partner participating in known high-risk behaviour

OPT-IN VERSUS OPT-OUT

The opt-in approach to screening requires that a woman receive an extensive pre-test counselling session and that she provide informed consent, either orally or in writing.^{9,24} There is often a correlation between the quality and quantity of counselling and the rate of women accepting the test.²⁵ The opt-out approach requires that all women be informed that testing is routine and will be performed, although they have the right to refuse.^{24,25} Notifying patients that a universal testing policy is in effect decreases the need for extensive pre-test counselling. With the opt-out approach, there are psychosocial and ethical issues to consider, and the health care provider must inform the woman of the risks and benefits of the test and of her right to refuse the test.⁹ At the same time, the health care provider can ensure the woman is aware of the counselling services that will be available to her if the HIV test is positive.^{9,15,26}

If all women received routine HIV testing, the stigma of such testing would be reduced, and women who refused testing would be in the minority.^{26–28} Health care providers need to be aware that the stigma of a positive test may lead to their being ostracized in some communities.^{20,26} In a review of testing rates between the opt-in and opt-out approaches, it was determined that the opt-out strategy provides higher screening rates.^{25,28} Presently only two provinces and two territories have an opt-out approach.¹⁴

COUNSELLING

Most women will agree to HIV screening.^{9,19,29–31} It is important that counselling is individualized and based on a collaborative relationship between the health care provider and the patient, recognizing that a power differential can influence the decisions that patients make.¹⁹ Truly supporting women's right to make decisions and supporting the decisions she makes will ensure woman-centered care.^{29,30}

Open discussion of the patient's concerns and reasons for test refusal could help to increase the patient's understanding of the test and build trust and may encourage the woman to agree to testing in the future.^{15,29,30,32} Women who decline to have testing performed must continue to receive the same standard of antenatal care.

Recommendations

1. All pregnant women should have HIV screening with appropriate counselling. This testing must be voluntary. Screening should be considered a standard of care,

although women must be informed of the policy, its risks and benefits, and the right of refusal. Women must not be tested without their knowledge. (II-2 B)

2. Pre-test counselling and the patient's decision about testing should be documented in the patient's chart. (III-B)

3. Women who decline screening should still have concerns discussed and should continue to receive optimum antenatal care. (III-C)

WHEN TO PROVIDE SCREENING

Women should be offered HIV screening at the first prenatal visit, as the ideal time to initiate treatment of the HIV positive woman is between 15 and 19 weeks' gestation.^{4,5}

Women who initially test negative for HIV in pregnancy and continue to engage in high risk behaviours (see list) should be offered repeat testing in each trimester.^{4,17} It has yet to be determined whether it would be cost-effective to offer repeat HIV testing to all negative women later in pregnancy or only to women at continued risk for infection. Selective partner testing in high-risk situations may prevent transmission to pregnant women and thus decrease risk of transmission to the fetus.^{9,16}

In women not treated during pregnancy, antiretroviral therapy during labour and for the newborn after delivery has been shown to decrease the risk of perinatal transmission to 12% to 13%.^{33–35} Rapid testing is currently under study, and there is one test now available for use in Canada. This technology holds promise as a new way to identify infection in women who present at the time of labour and delivery whose HIV status is unknown at labour and delivery.²⁸ Once identified, these women can be offered treatment, which can decrease the rate of vertical transmission. In the absence of rapid testing, women who present in labour with no prior test in the pregnancy should be offered testing while in hospital.^{25,28} Women who are at high risk for HIV and whose status is unknown should be offered prophylaxis in labour. Infants of these women should be tested and should receive prophylaxis in the postpartum period. Further studies are needed to determine the cost-effectiveness of offering this regimen to all women with unknown status rather than to selected populations and to determine how rapid testing can best be integrated into clinical practice.

Recommendations

4. Women should be offered HIV screening at their first prenatal visit. (I-A)

5. Women who test negative for HIV and continue to engage in high-risk behaviour should be retested in each trimester of pregnancy. (II-3 B)

6. Women with no prenatal care and unknown HIV status should be offered testing when admitted to hospital for labour and delivery. Women at high risk for HIV and with unknown status should be offered HIV prophylaxis in labour, and HIV prophylaxis should be given to the infant post partum. (III-B)

APPROPRIATE FOLLOW-UP

Appropriate post-test counselling is critical. Balanced information about HIV and the implications of HIV in pregnancy should be given. Positive results must be relayed to pregnant women as soon as possible to allow them to make informed choices about continuation of the pregnancy and treatment options.²⁶ Optimal management of HIV in pregnancy requires expert care, and data about management change rapidly. Women should receive care from providers who are comfortable with and knowledgeable about the care of HIV-positive women. Whenever possible, care of an HIV-positive pregnant woman should be shared between an obstetrician and an HIV specialist.

Recommendation

7. Women who test positive for HIV should be followed by practitioners who are knowledgeable in the care of HIV-positive women. (III-C)

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