MINISTRY OF HEALTH
MANATŪ HAUORA

Circular letter to health professionals

HIV in Pregnancy

Risk screening guidelines and information for health professionals

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HIV IN PREGNANCY

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Contributors

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Introduction

This information has been prepared by the Ministry of Health and is intended to provide health professionals with current information and general guidelines on issues surrounding mother-to-child transmission of HIV. It is intended to supplement the *1997 Clinical Management Guidelines: HIV/AIDS* produced by the AIDS Medical Technical Advisory Committee (AMTAC).

These risk screening guidelines are an interim approach with a focus on early screening and testing while data are being collected to determine if routine antenatal testing is appropriate or indeed desirable. It is not intended to provide details of management of mothers and infants, or to provide discussion about the adverse effects of any current treatment regimes. Women found to be at risk and who test positive will clearly need the involvement of appropriate specialists in any future management as well as the involvement of their other maternity carers. When a woman is referred for specialist treatment then that would be the appropriate time to explain details of the advantages and disadvantages of treatment.

Concurrent education material for women is planned with the development of appropriate resources that alert women to matters regarding HIV in pregnancy at the time they present for antenatal consultations.

It is envisaged that the book *Your Pregnancy: To Haputanga* (Public Health Commission 1995) and the leaflet *Women and HIV/AIDS* (Public Health Commission 1994) will both be updated to include current information on mother-to-child transmission of HIV. Information alerting midwives and doctors of the need to assess HIV infection risks in pregnant women was included in ***Prescriber Update No. 13*** published by the Therapeutics Section of the Ministry of Health in October 1996.

Background

Now that effective strategies to interrupt the transmission of HIV infection from an infected mother to her baby are available, the issue of screening and testing for HIV as part of antenatal care has been raised. Strategies available to interrupt transmission from an infected mother to her baby include the administration of zidovudine (ZDV) during pregnancy, labour and in the perinatal period, in addition to the avoidance of breastfeeding (Connor et al 1994).

The AIDS Medical Technical Advisory Committee (AMTAC) recommended in April 1995 that the Ministry of Health recommend to medical practitioners and midwives:

- to screen all pregnant women for risk behaviours that could predispose them to HIV
- to develop screening initiatives to include risk practices of their sexual partner(s)
- for those women whose personal risk status, or whose partner's (or partners') risk status placed them at risk for HIV infection, or whose risk status was unclear or not known then such women should be counselled and offered testing for HIV.

Women who were found to be HIV-positive should be offered treatment with zidovudine (ZDV) therapy to prevent materno-fetal transmission, which has been shown in a clinical trial to reduce transmission by approximately two-thirds. Given an effective intervention is now available to reduce neonatal infection, emphasis must be placed on identifying infected women.

The present information has particular emphasis on:

- a summary of the current key research findings in the area of HIV in pregnancy

- approaches to HIV risk assessment of women and their partners
- issues and advice surrounding testing
- details about management of HIV-infected women
- possible future directions in the management of mother-to-child transmission.

This resource is aimed at assisting health professionals with ways of assessing and managing pregnant women, their partner(s) and children who are at risk for HIV transmission during pregnancy. Recommended approaches described in the document are based on current experiences and practices, largely from overseas.

While the focus is on women 'at risk' the Ministry, in conjunction with AMTAC, is considering the cost-effectiveness of introducing routine voluntary testing of all pregnant women. While the policy options are still to be analysed and agreed to, it is imperative that health professionals are equipped at the present time to advise and manage women and their partners who present antenatally and may be at risk.

What are the current research findings?

Maternal-infant transmission is the primary means by which young children become infected with HIV (Newell and Peckham 1993). The World Health Organization estimates that over 1.5 million children worldwide have been infected with HIV through mother-to-child transmission (Bulterys and Goedert 1996). The risk of transmission from an infected mother to her child varies in different series from 15 to 45 percent. This variation may be related to obstetric practices, and/or the extent of breastfeeding in infancy, virus subtype (phenotype), maternal immune status and maternal viral burden. Transmission may occur in utero, intra partum or postnatally through breastfeeding.

In spite of a number of studies, current knowledge of the precise timing and mechanism of transmission remains uncertain, but evidence indicates that at least half of perinatally transmitted infection occurs during the third trimester of pregnancy (Mertens and Burton 1996).

With respect to breastfeeding, mothers with HIV infection have been advised that given the ready availability of safe and effective alternatives to breast milk in New Zealand, breastfeeding their baby is contraindicated as

this increases the risk of HIV transmission by 10–20 percent (United States Public Health Service 1995).

Initial international guidelines on antenatal HIV screening suggested that testing should be offered to those women in whom risk factors have been recognised (Centers for Disease Control 1985). Subsequent research conducted in Great Britain and the United States shows that a substantial number of women underestimate their degree of risk for HIV (Hawken et al 1995; Minkoff et al 1988).

Offering HIV testing only to those with recognised risk factors has therefore resulted in the omission of a large proportion of HIV-positive women from testing, and thus more recent policy guidelines recommend HIV counselling and voluntary testing for all pregnant women (United States Public Health Service 1995; Cozen et al 1993; Hawken et al 1995; Lindsay 1993). While this may be highly desirable in New Zealand where the prevalence of HIV infection among women is low, policy is still in the process of being developed.

What is the current situation in New Zealand?

Up to June 1996, a total of six children have been identified as infected with HIV by mother-to-child transmission, four of them in 1995 (none so far in 1996) (AIDS Epidemiology Group 1996a, 1996b). Up to 30 June 1996, 101 women in New Zealand have been reported as infected with HIV and 23 women have been notified as having AIDS, of whom 15 are known to have died and three have left New Zealand.

It is estimated that of the women identified with HIV infection still alive, 64 are in the 15 to 40 years age group. The number of women in New Zealand who have been pregnant while infected with HIV is not known but is estimated to be between 13 and 40. Over the past few years the total New Zealand birth rate has varied a little around 60,000 births each year.

What are the issues surrounding testing/ screening pregnant women?

Until such time as voluntary testing might be introduced as part of routine pregnancy care, it is recommended that as part of the antenatal discussion, the risk of HIV for both the woman and her partner(s) should be assessed

and in cases where risk factors are identified or are not clear, counselling and voluntary testing be offered.

While each primary care setting where maternity and related services are offered may use different approaches to assessing and managing pregnant women, it is up to each health professional to use their own clinical style and judgement to elicit and understand answers to antenatal risk assessments.

The questions developed below are focused on achieving a better understanding of a woman's HIV risk with the view to being able to advise on the need for testing as soon as possible; these questions are designed to elicit the minimum information required. The approach can be either written or oral (at the discretion of the health professional). What is important is that screening takes place routinely.

It is suggested the following two approaches (written and oral) be used as a framework for discussing the need for HIV testing.

Screening questions – written

Because women infected with HIV may pass the virus to their baby during pregnancy, childbirth, or breastfeeding and there are now effective measures available to prevent such transmission, we wish to check whether or not you or your partner(s) are at risk of HIV infection. If you are at risk of HIV infection or cannot identify your risk status, we wish to offer further counselling and a blood test for HIV.

Would you please consider the following questions, and indicate whether the answer to any of them is YES for either yourself or your partner(s)/husband. At this stage we do not need to know which of you or your partner(s), or which question(s) is/are responsible for the answer, only whether or not there is a YES answer. At this stage the only information that will be recorded will be that these questions have been considered. We acknowledge that you may not be able to answer or may not know the answer to some questions, particularly as they relate to your partner(s). Please indicate if this is the case. If you have any concerns or need any further information we are happy to discuss these with you.

1. Have your partner(s) ever had male-to-male sexual experience in the past (including only a single such experience)?

2. Have you or your partner(s) ever injected yourselves, or been injected by others, with drugs that were not prescribed by a doctor or ever shared drug-injecting equipment used by other people?
3. Have you or your partner(s) ever had sexual contact with anyone likely to be described as gay or bisexual or who was a known drug user?
4. Have you or your partner(s) ever exchanged or received money or drugs for sex at any stage?
5. Have you or your partner(s) ever had sexual contact with a person from an overseas country, particularly one where HIV/AIDS is common such as in Africa or Asia?
6. Have you or your partner(s) ever received a blood transfusion or clotting factors prior to 1985?
7. Do you have any worry or concern that you or your partner(s) may possibly be infected with HIV?
8. Have you or your partner(s) ever been diagnosed with a sexually transmitted disease?

If the answer to any of these questions is YES, or if you are at all uncertain, we will arrange counselling and a blood test for HIV.

Screening questions – oral

'I should like to ask about HIV because effective treatment is available now to prevent the virus passing from a pregnant woman to her unborn child. There is a blood test that checks for HIV which requires counselling for the pregnant woman before and after the test.'

'Do you have any worries about HIV? If yes, would you like a test? Some ways a woman can contract HIV include:

- having had sexual partner(s) who have had unprotected sex with another man
- you or your sexual partner(s) having ever been an injecting drug user and have shared needles
- having had a sexual partner(s) who has had sexual contact overseas particularly where HIV/AIDS is common
- having had a blood transfusion prior to 1985.'

'Do you think any of these may apply to you?'

What are the issues and advice surrounding testing?

If possible at the first antenatal visit, women should be asked about risk behaviours for HIV infection to both themselves and their partner(s), the purpose of which is to identify those women who are pregnant and may be infected with HIV and who should be offered counselling and testing to prevent transmission of HIV to their child. Partners should also be advised to be counselled and tested for HIV if their behaviour places them at personal risk. Testing only those women with identified risks for infection will not, however, identify all cases of HIV. If there are any doubts about a woman's risk status, it is better to offer counselling and testing rather than miss a preventable episode of HIV transmission to the infant. The following points should be covered at the time a test is indicated.

Pretest discussion checklist

Specific consent to be tested for HIV must always be obtained. Discussion should cover:

1. what an HIV antibody test means (it is not a test for AIDS)
2. the significance of a negative test ('window period' in relation to recent risk behaviour)
3. the significance of a positive test with respect to:
   - the unborn child/children
   - zidovudine (ZDV) therapy – reduction of the risk of perinatal transmission
   - termination of pregnancy – abortion
   - medical implications (prognosis, treatment) for the mother
   - psychological issues (coping, support, relationships)
   - notification requirements for AIDS (note: HIV status is not notifiable)
   - social implications (who needs, or does not need, to know, employment, discrimination)
4. what are the safeguards with respect to preservation of confidentiality
5. future preventive aspects (to be addressed irrespective of the outcome of the test):
   - safer sexual behaviour
   - safer drug-injecting behaviour

6. how the test results are to be obtained (in person, face-to-face)
7. any costs that may be involved.

Post-test discussion

Delivering the outcome of the testing, whatever the result, is to be conducted personally, face-to-face, and not by telephone or mail.

1. Explanation of test results:
   - significance of either a positive or negative test
   - possible significance of the 'window period', especially if there has been recent risk behaviour
   - future preventive aspects (safer sex/drug injecting behaviour)
   - referral to a specialist with experience in HIV medicine
2. If negative:
   - possible significance of the 'window period', especially if there has been recent risk behaviour
   - future preventive aspects (safer sexual/drug-injecting behaviour)
3. If positive:
   - necessity for repeat and confirmatory testing
   - repeat, confirmatory test organised
   - arrangements for counselling and assessment for antiretroviral therapy
   - referral to a specialist with experience in HIV medicine (Department of Health 1993).

Counselling persons with recognised risk behaviours for HIV is best done by an experienced person who deals with these situations frequently. If risk behaviours are acknowledged, and you have little experience in dealing with discussion in these areas, you are advised to seek the assistance of an advisor or counsellor from a sexual health clinic or a counsellor from the local alcohol and drug clinic as appropriate. In addition, women found to be positive after testing will require a specialist referral. A list of specialists is provided in this resource for advice and referral in the first instance.

What are the management approaches for HIV-positive women during pregnancy

Strategies available to interrupt transmission from an HIV-infected mother to her baby include the administration of zidovudine (ZDV) to the mother during pregnancy and delivery, and to the newborn. A study has demonstrated that using zidovudine from the second trimester onwards, intravenously at the time of parturition, and administered orally to the infant for six weeks post-partum, can reduce the transmission of HIV by approximately two-thirds (United States Public Health Service 1994).

Factors that are associated with materno-fetal transmission include:

- *maternal plasma viral burden*
  women with higher viral burdens have higher rates of transmission
- *maternal immune status*
  higher rates of transmission occur with lower CD4+ cell counts
- *viral phenotype*
  the significance of syncytium including (SI) phenotype is not clear.

Those women found to be HIV-positive should be tested to assess viral burden and CD4+ cell numbers. This may necessitate referral to a physician experienced in managing HIV infection to evaluate the clinical status of the pregnant woman. Women who test positive for HIV should be offered zidovudine (ZDV) to prevent HIV transmission to their baby.

What are the future directions in respect of managing HIV-positive women?

It is known that other antiretroviral agents (such as stavudine (d4T) and lamivudine (3TC)) can cross the placenta. The role of these agents, and the value of combination therapies (such as AZT and 3TC) in further reducing materno-fetal transmission is being addressed in studies currently underway. Further, the impact of protease inhibitors on materno-fetal transmission is being studied in clinical trials that are just commencing.

It is hoped that improved therapies may reduce transmission rates to below 10 percent, but for this to occur it will become necessary to identify all HIV-infected pregnant women. This would necessitate HIV testing to become one of the routine antenatal tests recommended for all pregnant women.

Contact details of specialists

The following are specialists available in the first instance for advice or referral:

HIV specialists

Dr R Meech, Napier Hospital. Ph: (06) 834-1828

Dr R Ellis-Pegler, Auckland Hospital. Ph: (09) 379-7440

Dr M Thomas, Auckland Hospital. Ph: (09) 379-7440

Dr K Romeril, Wellington Hospital. Ph: (04) 385-5999

Dr S Chambers, Christchurch Hospital. Ph: (03) 364-0915

Paediatricians

Prof D Lennon, Middlemore Hospital. Ph: (09) 276-0044

Prof D Teele, Christchurch Hospital. Ph: (03) 364-0747

Obstetrician

Dr MAH Baird, National Women's Hospital. Ph: (09) 638-9919

Further information about HIV in pregnancy

For further information about HIV in pregnancy please contact:

Ministry of Health	Ph: (04) 496-2000
Dr Alison Roberts	Senior Advisor, Public Health Medicine
Dr Harry Nicholls	Senior Advisor, Communicable Diseases

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