Recommended Antenatal Testing for Sexually Transmissible Infections and Blood-Borne Viruses

Since 2009, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists have recommended universal offering of syphilis, HIV and hepatitis B and C tests to all antenatal women. The Department of Health and Ageing’s *National HIV Testing Policy 2011* and *National Hepatitis C Testing Policy 2012* recommend that any woman seeking antenatal care should be made aware of the benefits of HIV and hepatitis C infection diagnosis and management. The Centers for Disease Control and Prevention (CDC 2006) recommends that all pregnant women should be routinely tested for chlamydia at the first antenatal visit.

Women with symptoms or clinical signs of an STI or BBV should be tested and managed in accordance with best practice guidelines.

**Tests Recommended during Antenatal Care**

**Chlamydia**

Chlamydia infection during pregnancy is associated with higher rates of pre-term birth and intrauterine growth restriction. If left untreated chlamydia can lead to maternal postnatal complications and chlamydia infection in the infant.

As recommended in the Department of Health’s *Antenatal Shared Care Guidelines for General Practitioners*, chlamydia testing should be *offered to all* women at the first antenatal visit, and especially to women at increased risk of STIs (e.g. women aged less than 25 years, who have had a recent partner change or more than one sexual partner in the past 12 months).

Chlamydia should be tested for by nucleic acid testing or PCR of first void urine, i.e. the first part of the urinary stream AND either a self-obtained lower vaginal swab (SOLVS) or a practitioner-obtained endocervical swab. Please refer to the Department of Health’s *Guidelines for Managing Sexually Transmitted Infections (Silver Book)* for more information.

Women at increased risk for chlamydia should be retested during the third trimester.

**Hepatitis B**

The effect of hepatitis B infection on pregnancy varies with the severity of clinical disease, e.g. mild acute hepatitis has little risk for healthy females, but severe acute disease may cause intrauterine death or premature labour.

Maternal acute hepatitis B in the first and second trimester is seldom transmitted to the neonate, but in the last trimester or puerperium, the risk is high. As many as 85 per cent of babies born to mothers who are hepatitis B e antigen (HBeAg) positive, will become hepatitis B surface antigen (HBsAg) carriers and subsequently become chronic carriers. Infection rates are significantly reduced by the use of hepatitis B vaccine and hepatitis B immunoglobulin (HBIG) in exposed neonates.

As recommended by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists, serological testing for hepatitis B should be performed on all pregnant women during the first antenatal visit, even if they have been previously vaccinated or tested, so that
effective postnatal intervention can be offered to infected women to decrease the risk of mother-to-child transmission.

Women who were not tested antenatally, those who engage in behaviours that put them at high risk for infection (e.g. more than one sexual partner in the previous 6 months, evaluation or treatment for an STI, recent or current injecting drug use, and a HBsAg-positive sexual partner), and those with clinical hepatitis should be retested at the time of admission to hospital for delivery.

**Hepatitis C**

The general risk of hepatitis C virus (HCV) transmission from mother to child during pregnancy or at birth is estimated to be 3 to 5 per cent. Where there is co-infection with HIV, vertical transmission rates increase. It is not known whether the method of delivery (vaginal or caesarean) changes the risk of transmission.

As recommended by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists and the National Hepatitis C Testing Policy, testing for hepatitis C should be offered to all pregnant women at the first antenatal visit. Women who were not tested antenatally, those who engage in behaviours that put them at high risk for infection (e.g. recent or current injecting drug use) and those with clinical hepatitis should be retested at the time of admission to hospital for delivery. Testing should always be associated with specific informed consent, the provision of information about the meaning of the results and post-test discussion.

Approximately 25 per cent of people with hepatitis C will clear the virus within 2 to 6 months of becoming infected; however, they will continue to carry antibodies to the virus. If the mother has spontaneously cleared the viral infection, transmission from mother-to-child will not occur. Therefore, all pregnant women who test positive for HCV antibodies should be offered qualitative HCV RNA testing to determine if the virus is present or not. (This indication for qualitative HCV RNA testing is currently covered under the Medicare Benefits Schedule.)

No treatment is available for HCV-infected pregnant women. However, all women with HCV infection should receive appropriate counselling and supportive care as needed. No vaccine is available to prevent HCV transmission.

**HIV**

The goals of antenatal HIV testing are to:

- decrease the incidence of mother-to-child HIV transmissions. Without treatment, the risk of vertical transmission from an HIV-positive mother to her baby is 25 per cent. However, antiretroviral therapy has reduced the risk of transmission to less than 1 per cent.
- enable an HIV-positive woman to receive optimal care for herself
- decrease the risk of transmission to sexual partners.

As recommended by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists and the National HIV Testing Policy 2011, HIV serology testing should be routinely offered to all women at the first antenatal visit. Antenatal testing must only be performed with the informed consent of the woman. When testing for HIV, pre- and post-test discussions should be provided as outlined in the Department of Health’s Guidelines for Managing Sexually Transmitted Infections.

Women at high risk for acquiring HIV infection (e.g. women who inject drugs, or who are sexual partners of HIV-infected men or men at high risk of HIV) should be retested in the third trimester.
Syphilis

Syphilis is strongly associated with spontaneous abortion during the second and third trimester of pregnancy and still birth. It can also result in the foetus/neonate having congenital syphilis.

Syphilis serology should be performed on all pregnant women in the first trimester of pregnancy or at the first antenatal visit because treatment is beneficial to the mother and foetus.

Syphilis testing should be performed by screening with a specific *Treponema pallidum* assay, for example the *Treponema pallidum* haemagglutination assay (TPHA) or the *Treponema pallidum* particle agglutination assay (TPPA). Less likely to pick up latent infection, although cheaper are the non-specific *Treponema pallidum* assays, such as the rapid plasma reagin (RPR) test (RANZCOG 2006).

Women who are at risk of acquiring syphilis, who live in high prevalence areas, are previously untested, or have positive serology in the first trimester should have a further test in the third trimester (28-36 weeks) or at delivery. The serological status of the mother should be documented at least once during confinement.

**Additional Tests for Women Living in STI-Endemic Areas**

All women living in STI-endemic regions of WA, i.e. the Kimberley, Pilbara and Goldfields, where rates of infection for syphilis, gonorrhoea, chlamydia and donovanosis are well above the State average should be offered the following additional tests:

- At the first antenatal visit request specimens collected for chlamydia to also be tested for gonorrhoea.
- Between 28 and 36 weeks retest HIV and syphilis serology.
- At 36 weeks retest for chlamydia and gonorrhoea.