TARGETED MATERNAL HEALTH TESTS

Summary of tests

Condition	Offer test to:	Test(s)	Follow-up/rationale
*Chlamydia**	Women younger than 30 years All pregnant women in areas of high prevalence	Vaginal, urine or endocervical specimens NAAT	Treatment may reduce the risk of preterm birth, premature rupture of the membranes and low birth weight
*Gonorrhoea**	Women with known risk factors or living in areas where prevalence is high	Vaginal, urine or cervical specimens NAAT	Treatment may prevent neonatal infection
*Trichomoniasis**	Women with symptoms	PCR testing of vaginal swabs	Treatment may prevent certain infections in the newborn but is associated with adverse effects
Toxoplasmosis	Women may request testing based on exposure to sources	Studies into tests are limited and inconclusive	Insufficient evidence on treatment. Advice on prevention may reduce the risk of infection
Cytomegalovirus	Women who have frequent contact with many very young children	Studies into tests are limited and inconclusive	Advice on prevention may reduce the risk of infection; seek expert advice if infection is identified
Asymptomatic bacterial vaginosis	Women with a previous preterm birth	High vaginal swab Amsel's criteria Nugent's criteria	Early treatment (<20 wks) may reduce risk of premature rupture of the membranes and low birth weight
Thyroid function	Women with symptoms or risk factors	Blood test for thyroid-stimulating hormone	Treatment improves maternal and newborn outcomes
Vitamin D status#	Women who meet MBS criteria for testing	Blood test for serum 25-OHD	The evidence on the harms and benefits of vitamin D supplementation remains unclear
Human papilloma virus	Women who have not had a cervical screen in the recommended time period	HPV testing of cervical samples	Allows detection of precancerous cervical abnormalities

* Psychosocial support, partner testing and contact tracing are required for women with sexually transmitted infections.

\# In the absence of signs, symptoms or other test results, criteria under MBS item 66833 are having deeply pigmented skin, or chronic and severe lack of sun exposure for cultural, medical, occupational or residential reasons.

25-OHD=25-hydroxyvitamin D; HPV=human papilloma virus; MBS=Medicare Benefits Schedule; NAAT=nucleic acid amplification test; PCR=polymerase chain reaction

Before testing

- Discuss the reasons for testing, harms, benefits and associated treatments and provide appropriate resources
- Give women opportunities to ask questions about tests, implications and treatments
- Reassure women that test results remain confidential (unless the condition is notifiable)
- Inform women that it is their choice to have tests
- Document discussions about consent
- Offer women who decline testing the opportunity to discuss any concerns without coercion

After a positive test result

- Give women who receive a diagnosis of a condition that may affect pregnancy and/or the health of the baby information about available supports and assist them to access these
- If a sexually transmitted infection is identified, offer testing, treatment and contact tracing
- Consider specific supports for women identified as using intravenous drugs
- Follow State/Territory legislation on notification of communicable diseases

Other considerations

- When offering tests, consult and engage with women
- Keep up-to-date with the latest developments and evidence about tests during pregnancy
- In rural and remote areas, access to tests may be limited, so respond to local needs
- When testing, use standard precautions for infection prevention and control

Chlamydia (see Guideline Chapter 40)

Consensus-based recommendation

Routinely offer chlamydia testing at the first antenatal visit to pregnant women younger than 30 years.

Testing for chlamydia

Nucleic acid amplification testing of first pass urine, endocervical, vaginal or anorectal swabs (if the woman has anal sex or anorectal symptoms)

Consensus-based recommendation

When testing for chlamydia in pregnant women, consider the use of urine samples or self-collected vaginal samples.

Practice summary

When: At the first contact with women younger than 30 years

Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander health worker; multicultural health worker

- ☐ **Discuss chlamydia:** Explain the association between chlamydia and preterm birth and low birth weight, that tests for the infection are available and that it is easily treated with antibiotics.
- ☐ **Take a holistic approach**: If a woman tests positive for chlamydia, important considerations include counselling, contact tracing, partner testing, testing for other sexually transmitted infections and follow-up. Any positive tests should be notified to public health.
- ☐ **Learn about locally available resources:** Available testing services and support organisations will vary by location.

Gonorrhoea (see Guideline Chapter 41)

Consensus-based recommendations

Do not routinely offer gonorrhoea testing to all women as part of antenatal care.

Offer gonorrhoea testing to pregnant women who have known risk factors or who live in or come from areas where prevalence is high.

Testing for gonorrhoea

Culture methods can be performed on self-collected vaginal swabs, urine and endocervical specimens

The sensitivity and specificity of vaginal swabs are similar whether collected by the woman or health professional, identifying as many infections as endocervical swabs and more than first catch urine samples

Where possible, positive results should be confirmed with culture for antibiotic sensitivity testing to exclude false positives, particularly in women at low risk

Practice summary

When: A woman has risk factors for gonorrhoea infection, lives in an area of high prevalence or has come from a country with high prevalence

Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander health practitioner; Aboriginal and Torres Strait Islander health worker; multicultural health worker; sexual health worker

- **Discuss the reasons for gonorrhoea testing:** Explain that it is important to find out whether a woman has gonorrhoea because of the effects that infection can have on the pregnancy and the baby.
- **Take a holistic approach**: If a woman is found to have gonorrhoea infection, arrange counselling, contact tracing, partner testing, testing for other sexually transmitted infections and follow-up.
- **Document and follow-up:** If a woman is tested for gonorrhoea, tell her the results and note them in her antenatal record. Have a follow-up system in place so that infected women receive timely treatment or referral. Consider repeat testing for women who may be at ongoing risk of infection.

Trichomoniasis (see Guideline Chapter 42)

Recommendation	Grade B
Offer testing to women who have symptoms of trichomoniasis but not to asymptomatic women.	

Testing for trichomoniasis

Self-collected vaginal swabs correlate with specimens collected by health professionals

Self-collection of tampon samples is acceptable to women, is easily incorporated into practice and may be suitable in remote settings as samples do not require refrigeration

Follow-up

Among women diagnosed with trichomoniasis, retesting 3 months after treatment may be a consideration

Practice summary

When: A woman has signs or symptoms of vaginitis

Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander health practitioner; Aboriginal and Torres Strait Islander health worker; multicultural health worker; sexual health worker

- **Discuss the reasons for testing for trichomoniasis in women with symptoms:** Explain that testing is necessary to identify the cause of the symptoms.
- **Take a holistic approach**: If a woman is found to have trichomoniasis, arrange counselling, contact tracing, partner testing and treatment and testing for other sexually transmitted infections.
- **Document and follow-up:** If a woman is tested for trichomoniasis, tell her the results and note them in her antenatal record. Have a system in place so that women's decisions about treatment are documented and women who test positive are given ongoing follow-up and information.

Toxoplasmosis (see Guideline Chapter 43)

Recommendation	Grade C
Do not routinely offer testing for toxoplasmosis to pregnant women.	

Discussing prevention

Recommendation	Grade C
Advise pregnant women about measures to avoid toxoplasmosis infection such as: washing hands before handling food; thoroughly washing all fruit and vegetables, including ready-prepared salads, before eating; thoroughly cooking raw meat and ready-prepared chilled meals; wearing gloves and thoroughly washing hands after handling soil and gardening; and avoiding cat faeces in cat litter or in soil.	

Testing for toxoplasmosis

Studies have compared a range of tests for IgG and IgM antibodies and IgG avidity

Studies into the timing of testing are limited and inconclusive

Follow-up

It is not clear whether treatment of pregnant women with presumed toxoplasmosis reduces transmission

Practice summary

When: Early in pregnancy

Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander health practitioner; Aboriginal and Torres Strait Islander health worker; multicultural health worker

- **Discuss sources of toxoplasmosis:** Explain that it is important to avoid infection as becoming infected with toxoplasmosis during pregnancy can lead to the infection being transmitted to the baby.
- **Take a holistic approach**: Women who are originally from an area of low prevalence are at risk of primary infection if they travel to countries where toxoplasmosis is highly prevalent.
- **Document and follow-up:** If a woman is tested for toxoplasmosis, tell her the results and note them in her antenatal record. Have a system in place so that women who become infected with toxoplasmosis during pregnancy are given ongoing follow-up and information.

Cytomegalovirus (see Guideline Chapter 44)

Consensus-based recommendations

Advise all pregnant women about hygiene measures to help reduce the risk of cytomegalovirus infection, including avoiding contact with a child's saliva or urine and hand washing after such exposure.

Testing for cytomegalovirus

Consensus-based recommendations

Offer testing for cytomegalovirus to women who come into frequent contact with large numbers of very young children (eg child care workers), using serology (cytomegalovirus-specific IgG only).

Offer testing for cytomegalovirus to pregnant women if they have symptoms suggestive of cytomegalovirus that are not attributable to another specific infection or when imaging findings suggest fetal infection.

Follow-up

Cytomegalovirus hyperimmune globulin and intravenous immunoglobulin treatment do not significantly reduce the risk of congenital infection; the evidence for cytomegalovirus antiviral therapy as prophylaxis or treatment of pregnant women is too limited for conclusions to be drawn

Given the absence of an effective treatment, it is advisable to seek expert advice, including regarding assessment of the baby after the birth

Practice summary

When: Early in pregnancy

Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander Health Practitioner; Aboriginal and Torres Strait Islander Health Worker; multicultural health worker; infectious disease specialist

- **Discuss transmission of cytomegalovirus:** Explain that becoming infected with cytomegalovirus during pregnancy can lead to the infection being transmitted to the baby and that babies born with cytomegalovirus infection are at risk of impaired hearing and developmental delay.
- **Take a holistic approach:** Explain that avoiding contact with a young child's saliva and frequent hand washing are the most important measures in reducing infection with cytomegalovirus and are especially important after contact with objects contaminated with urine or saliva.
- **Document and follow-up:** If a woman is tested for cytomegalovirus, tell her the results and note them in her antenatal record. If a woman has a result suggestive of recent infection, seek advice or referral to a health professional with appropriate expertise in infections in pregnancy.

Asymptomatic bacterial vaginosis (see Guideline Chapter 45)

Recommendation	**Grade B**
Do not routinely offer pregnant women testing for bacterial vaginosis.	

Diagnosing bacterial vaginosis in women with symptoms

Amsel's criteria: thin white-grey homogenous discharge, pH greater than 4.5, release of 'fishy odour' on adding alkali, clue cells present on direct microscopy

Nugent's criteria: Gram-stained vaginal smear to identify proportions of bacterial morphotypes with a score of greater than six indicating bacterial vaginosis)

Follow-up

When is treatment appropriate?

Early treatment (before 20 weeks pregnancy) of proven bacterial vaginosis may be beneficial for women with a previous preterm birth.

Practice summary

When: In the antenatal period

Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander health worker; multicultural health worker

- ☐ **Document and follow-up:** If a woman is tested for bacterial vaginosis, note the results in her record.

Have a system in place so that women who test positive are given information about treatments.

Thyroid dysfunction (see Guideline Chapter 46)

Recommendation	Evidence-based recommendation
Do not routinely test pregnant women for thyroid dysfunction.	

Who is at risk of thyroid dysfunction?

Women at high risk	Other risk factors
History of thyroid dysfunction Symptoms or signs of thyroid dysfunction Presence of a goitre Known thyroid antibody positivity	Age >30 years History of type 1 diabetes or other autoimmune disorders History of pregnancy loss, preterm birth or infertility History of head or neck radiation or prior thyroid surgery Family history of autoimmune thyroid disease or thyroid dysfunction Body mass index ≥40 kg/m^2 Use of amiodarone or lithium Recent administration of iodinated radiologic contrast Two or more prior pregnancies Residing in area of moderate to severe iodine deficiency

Consensus-based recommendation
Recommend thyroid testing to pregnant women who are at increased risk of thyroid dysfunction.

Testing thyroid function and interpreting results

Thyroid function is initially assessed through testing of thyroid-stimulating hormone (TSH)
Ideally testing should take place as early as possible after 6 weeks gestation
Pregnancy-specific reference ranges that take into account gestational age and fetal number should be used
TSH and free thyroxine values differ according to the laboratory method used to perform testing

Practice summary

When: A woman has symptoms or risk factors for thyroid dysfunction

Who: Midwife; GP; specialist obstetrician; Aboriginal and Torres Strait Islander health practitioner; Aboriginal and Torres Strait Islander health worker; multicultural health worker; endocrinologist

- **Discuss the reasons for thyroid function testing:** Explain that it is important to check a woman's thyroid hormone levels because of the effects that thyroid problems can have on the pregnancy and the baby.
- **Use pregnancy specific ranges**: If interpreting thyroid function test results, use pregnancy-specific reference ranges appropriate to the method used by the laboratory, that take into account gestational age and fetal number.
- **Take a holistic approach**: While iodine fortification of bread in Australia means that women will likely enter pregnancy with adequate iodine intake, supplementation (150 micrograms a day) is still recommended during pregnancy and breastfeeding. Women who have recently arrived in Australia may have previous exposure to inadequate or excessive iodine, depending on their country of origin.
- **Document and follow-up:** If a woman's thyroid function is tested, tell her the results and note them in her antenatal record. Also, note whether thyroid dysfunction is newly diagnosed or was previously treated. Have a follow-up system in place to facilitate timely referral and treatment.

Vitamin D status (see Guideline Chapter 47)

Recommendation	Evidence-based recommendation
Do not routinely recommend testing for vitamin D status to pregnant women in the absence of a specific indication.	

Who is at risk of suboptimal vitamin D levels?

Women with darker skin phototype

Risk increases with increasing body mass index

Risk is dependent on season (ie exposure to sunlight)

Under MBS item 66833, testing for investigation of vitamin D status (in the absence of conditions or abnormal test results associated with vitamin status) is available for a person who has deeply pigmented skin, or chronic and severe lack of sun exposure for cultural, medical, occupational or residential reasons.

Follow-up

Consensus-based recommendation

If testing is performed, only recommend vitamin D supplementation for women with vitamin D levels lower than 50 nmol/L.

Practice summary

When: In the antenatal period

Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander health worker; multicultural health worker; pharmacist

- ☐ **Take a holistic approach**: Give women advice on the risks and benefits of sun exposure and the dietary sources of vitamin D (dairy products, eggs and fish), taking cultural considerations into account.
- ☐ **Document and follow-up:** If a woman's vitamin D status is tested, note the results in her record. Have a system in place so that women with vitamin D levels lower that 50 nmol/L are given ongoing follow-up and information about supplementation.

Human papilloma virus (see Guideline Chapter 48)

Consensus-based recommendation

Offer women cervical screening as specified by the National Cervical Screening Program.

Testing for human papilloma virus infection

Human papilloma virus testing of cervical samples and liquid-based cytology testing on samples testing positive

Practice summary

When: Early antenatal visit, if the woman has not had a cervical screen in the recommended time period

Who: Midwife; GP; obstetrician; Aboriginal and Torres Strait Islander health practitioner; Aboriginal and Torres Strait Islander health worker; multicultural health worker; sexual health worker, women's health provider

- **Discuss the reasons for cervical testing:** Explain that 5-yearly cervical screening tests are recommended for sexually active women to detect human papilloma virus infection, as persistent infection can cause cervical abnormalities.
- **Provide advice to women with a positive result:** Explain that the test is not diagnostic.
- **Take a holistic approach**: Provide advice to assist women in accessing services (eg pathology services that bulk bill). Explain that inclusion on the National Cancer Screening Register is confidential and automatic (unless a woman requests otherwise) and that reminders are sent to women who are overdue for testing.
- **Document results and referrals:** If a woman has a cervical screening test, tell her the results and note them in her antenatal record. Also document inclusion on the national registry and any follow-up required.