



CLINICAL PRACTICE GUIDELINE

WANDAS

This document should be read in conjunction with the [Disclaimer](#)

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Referral

AOD using women are given priority for early booking to the antenatal clinic.

The WANDAS Clinical Midwifery Consultant reviews all referrals and decides on an individual basis when the first booking visit is made.

- An early booking is beneficial as AOD using pregnant women are less likely to engage in early or regular ante partum care. This enables first or second trimester screening, ultrasounds, antenatal blood tests, and allows referral to Drug and Alcohol treatment options to be arranged.
- WANDAS does not accept referrals after 36/40 weeks gestation.

Criteria for Referral

- Current and significant AOD use.
- Abstinent from AOD, but still requiring support from specialist team / services.
- Imprisoned pregnant women

Types of Referral

Self-Referral

Antenatal women can self-refer directly to the WANDAS Clinical Midwifery Consultant.

Internal Hospital Referrals

A consultation request referral on the MR035 is sent to the WANDAS Clinical Midwifery Consultant regarding timing of the first clinic appointment.

Inpatient referrals may be made directly to the WANDAS Clinical Midwifery Consultant. Information on the referral should include the type of AOD use and any relevant psychosocial history. Please discuss all referrals with the woman.

External Referrals

External referrals may be sent from Drug and Alcohol related services, prison health centres, and other health services or hospitals.

When an external hospital referral is sent to the Patient-flow Coordinator they will liaise with the WANDAS Clinical Midwifery Consultant regarding the timing of the first clinic appointment.

If an external referral is made to the WANDAS Clinical Midwifery Consultant directly, they will advise the Patient-flow Coordinator when an appointment is required.

The Booking Visit

1. Women attending WANDAS require routine antenatal care. See [Clinical Guideline, Initial Visit](#).
Additionally, specific detailed information about medical, physical, psychiatric, social, drug and alcohol use history is required for women attending WANDAS.
2. Women attending the booking visit at WANDAS should be provided with additional verbal and/or written information regarding:
 - drug and alcohol effects and management in pregnancy
 - psychosocial support and community support groups
 - nutrition and dietary requirements
 - maternal and fetal health surveillance
 - blood borne viruses and follow-up management
3. Admit women to hospital who present for the **first time** in the third trimester, in labour, or who have a high risk pregnancy and who have had no or inadequate antenatal care. This allows a comprehensive assessment and management plan to be formulated by the WANDAS team prior to the woman leaving the hospital.¹
4. Discharge planning and documentation should commence at the first visit.
5. Women should be advised of the proposed **minimum 5 day postnatal stay**.
6. Consent should always be obtained from the woman prior to referral to community drug and alcohol related services.
7. Women attending WANDAS should not be discharged from hospital prior to discussion with the WANDAS Clinical Midwifery Consultant, Obstetric Consultant and the Social Worker.

Steps	Additional Information
<p>Initial Assessment and Triage</p> <ul style="list-style-type: none"> • Conduct the booking visit as for all pregnant women attending KEMH. • See Clinical Guidelines, Initial visit. <p>Following initial assessment the WANDAS team may decide the woman can be referred to:</p> <ul style="list-style-type: none"> • another obstetric team • shared care with another hospital 	<p>Women using alcohol and other drugs are more likely to attend the first antenatal visit later in their pregnancy compared with other women.²</p> <p>Poor or late attendance may be due to an unplanned pregnancy, previous poor experiences with health services, life-style issues and concerns with confidentiality.³ Fear of social services involvement leading to apprehension of children, and referrals to the Department of Child Protection and Family Support(CPFS) contribute to a woman's reluctance to seek health care.</p>

<p>Medical History and Physical Assessment</p> <ul style="list-style-type: none"> • Observe and document self harm markings, signs of Alcohol and other drug use (AOD) and it's effect and symptoms of withdrawal. • Document dietary and nutritional status. Note any physical signs of nutritional deficiency. • Arrange a physical assessment by the medical officer as required. <p>For women with a history of a blood borne virus</p> <ul style="list-style-type: none"> • Repeat screening if the woman is at continued risk of infection and has no current status result. • Hepatitis C positive – if no current results arrange testing for Hepatitis C RNA status and liver function tests (LFT). • If the woman is RNA positive arrange referral to Royal Perth Hospital Hepatology Clinic if no previous referral has been arranged by the GP or other health provider. • Provide counselling and written information as required. • Discuss breastfeeding issues. 	<p>Physical signs may include puncture marks, cellulitis, phlebitis, skin abscesses, erosion/irritation around the nose/septum, or a rash and irritation around the nose or mouth.⁴</p> <p>Signs of withdrawal may include sweating, tremors, agitation, and disturbances of coordination or gait.⁴</p> <p>A poor social environment, access to good nutrition, and hygiene issues can impact on health.⁵</p> <p>Women may have had limited contact with medical care previously and physical signs or medical history may indicate need for detailed assessment.</p> <p>Inform women who are hepatitis B positive of the management of the neonate after birth. See Clinical Guideline Neonatal Hepatitis B Vaccine, and Clinical Guideline, Neonatal Hepatitis B Immunoglobulin.</p> <p>Hepatitis C positive women – refer to Clinical Guideline, Hepatitis C in Pregnancy for detailed management.</p> <p>Hepatitis B positive women – refer to Clinical Guideline, Hepatitis B Protocol for detailed management.</p>
<p>Past Obstetric History</p> <p>Discuss and note:</p> <ul style="list-style-type: none"> • alcohol and other drug use in a previous pregnancy • current residential status of children • partner of previous children – is he the same partner as for previous 	

<p>children?</p> <ul style="list-style-type: none"> ask the partner if he has other children and their residential status 	
<p>Current Pregnancy</p> <p>Ultrasound</p> <p>Ultrasound assessment is individualised according to gestation and fetal well-being. Scans may need to be organised for:</p> <ul style="list-style-type: none"> Gestational dating First trimester screening Anatomy scan Fetal growth and well-being <p>Screening for Fetal Anomalies</p> <p>Offer first or second trimester screening when a women presents during the appropriate gestation</p> <p>Pap Smear</p> <p>Pap smears should be offered to all women attending WANDAS at the booking appointment.</p> <p>Blood Tests</p> <p>Arrange testing as appropriate for:</p> <ul style="list-style-type: none"> RNA status and LFTs if Hepatitis C positive Iron studies Vitamin D level status Vitamin B12 and folate levels Gamma Glutamyl Transpeptidase (Gamma GT) for women with alcohol use. <p>Drug and Alcohol Screening</p> <ul style="list-style-type: none"> Complete the Drug and Alcohol Assessment form MR220.02 Ask women about their previous and current history of drug and alcohol use noting: <ul style="list-style-type: none"> type and amount of drugs or alcohol use¹ frequency of use pattern of use 	<p>Women with alcohol and other drug use related problems may not access women's health screening services, and pregnancy provides an opportunistic time for screening.</p> <p>Liver disease and cirrhosis place stress on the mother and baby.¹</p>

<ul style="list-style-type: none"> ○ access route ● Document any previous drug and alcohol management noting: <ul style="list-style-type: none"> ○ Key worker / case manager ○ Any other agencies involved ● Document any prescribed opiate replacement therapies .Include <ul style="list-style-type: none"> ○ Which agency / GP prescribes the replacement therapy ○ Which chemist / agency supplies the replacement therapy ○ The name of the key worker / case manager ● Refer the woman to drug and alcohol treatment agencies or support programmes. <p>Nutritional Advice</p> <ul style="list-style-type: none"> ● Assess the woman's weight ● Offer nutritional support services from the Dietician ● Refer the woman to the Dietician for <ul style="list-style-type: none"> ○ High or low pre pregnancy weight ○ Low maternal weight gain ○ Iron deficiency ○ Poor appetite ○ Signs of poor nutritional status ○ GDM referral 	<p>Consent from the woman is essential prior to a referral being arranged.</p> <p>Women using alcohol and other drugs may have poor nutritional habits, general self-neglect, and substandard living conditions.⁸</p> <p>Alcohol use can lead to increased vitamin B requirements and decreased absorption and utilisation of folate.⁹</p> <p>Women with hepatitis C will require dietary advice to:</p> <ul style="list-style-type: none"> ● relieve symptoms of chronic infection ● provide nutrients for liver regeneration <p>reduce risk for hepatic stenosis from being overweight or obese.</p>
<p>Oral Health</p> <p>Provide dental care advice about:</p> <ul style="list-style-type: none"> ● oral hygiene care ● how to access dental care during work hours and in emergency circumstances. 	<p>Poor nutritional intake associated with alcohol and other drug may lead to periodontal disease.¹⁰</p>

<p>Social Assessment</p> <ul style="list-style-type: none"> • Inform the woman about role of the Social Worker attending WANDAS, and their continued role during the woman's pregnancy. • All women attending WANDAS shall have assessment by the social worker at the booking visit. 	<p>Child protection agencies are notified when it is considered there is a risk to the fetus or infant.¹</p> <p>See WNHS Policy Child Protection</p>
<p>Psychosocial Assessment</p> <ul style="list-style-type: none"> • Assess the woman's mental health history and current status. • Inform the woman about the role of Psychological Services at KEMH • Perform Family and Domestic Violence Screening. 	<p>See Clinical Guideline Screening for Family Domestic Violence</p> <p>Women with alcohol and other drug use and their children are reported to have higher rates of exposure to domestic and sexual violence.¹¹</p>
<p>Parent Education</p> <p>Additional information should be given about:</p> <ul style="list-style-type: none"> • WANDAS • the role of the Neonatal Abstinence Score chart • effects of alcohol and other drug use on the pregnancy, fetus and neonate • breastfeeding and alcohol and other drug use • blood borne viruses (if applicable) • extended hospital stay of 5 days postpartum • safe injecting practices to reduce harm to women at risk for continuing use of intravenous drugs. • contact details for any support agencies the family may need to access • management and frequency of ongoing antenatal care. • provide the woman with the following leaflets: <ul style="list-style-type: none"> ○ Women and Newborn Drug 	<p>Alcohol and other drug use is associated with increased risk of ante partum haemorrhage, placental abruption, stillbirth, neonatal death, small for gestational age, and prolonged stays for neonates in special care nursery.¹²</p>

<p><u>and Alcohol Service (WANDAS)</u></p> <ul style="list-style-type: none"> ○ Neonatal Abstinence Syndrome ○ ‘Safety Plan in the Event of Alcohol or Drug Use’. 	
<p>Management Plan</p> <p>The following additional information is required on the MR004 Medical Special Instruction Sheet:</p> <ul style="list-style-type: none"> ● Type of alcohol and other drug use ● Management during the pregnancy, labour and postnatal period ● Complete the management plan by 32 weeks gestation whenever possible; amendments can be adjusted as necessary 	
<p>On admission and before discharge notify:</p> <ul style="list-style-type: none"> ● WANDAS Clinical Midwifery Consultant ● WANDAS Obstetric Consultant or registrar ● Social Worker 	

Subsequent Visits

Steps	Additional Information
<p>1. Frequency of follow-up visits</p> <p>2 - 4 weekly until 36 weeks then weekly until birth</p>	<p>Note: the decision regarding adjusting the routine schedule of antenatal visits may be individualised only after discussion with the WANDAS medical consultant and the CMC. This may result in more or less frequency of visits according to the woman’s individual situation.</p>
<p>2. Drug and Alcohol Assessment</p> <ul style="list-style-type: none"> ● Assess and document drug and alcohol use at each visit on the MR220.02 	<p>The dosage of methadone or buprenorphine should be individualised according to symptoms of withdrawal, craving, and side effects. Higher doses may be required in pregnancy due to physiological changes.¹</p>

<ul style="list-style-type: none"> • Assess for side-effects of prescribed medications at each visit. • All women attending WANDAS should be assessed by a Drug and Alcohol midwife. Include the partner in the assessment at each visit where possible. 	<p>In the third trimester physiological changes of pregnancy^{2,3} and placental metabolism changing the pharmacokinetic profile³ may effect methadone requirements, therefore dosage may need to be increased. Split dosing may be an option to reduce peak and trough differences.^{2,3}</p> <p>When methadone causes nausea and vomiting women should be advised to sip doses slowly.²</p>
<p>3. Social Assessment</p> <p>At each visit assess whether review by the social worker is required.</p>	<p>The social worker attending the clinic liaises with the WANDAS CMC to communicate which women they would like to see during their antenatal visits. However, assessment at each visit may indicate contact is required at the current time.</p>
<p>4. Psychological Assessment</p> <ul style="list-style-type: none"> • Monitor at each visit. Refer for Psychiatric review at the visit as required. • Repeat the Edinburgh Postnatal Depression Score at approximately 32 weeks gestation. Anxiety Scale to be reviewed at 32 weeks. • Repeat the FDV screening in the third trimester 	<p>A Consultation Request MR035 must also be written.</p> <p>Women may deny FDV initially, however may disclose abuse at a subsequent visit when they feel more comfortable with the staff.⁴</p>
<p>5. Nutritional Assessment</p> <p>At each visit assess the woman's nutritional status and refer to the dietician as required.</p>	<p>A Consultation Request MR035 must be written if dietician review is required.</p> <p>Women attending WANDAS may be more open to nutritional support once they have greater stability with social, psychosocial, and drug and/or alcohol issues.</p>

<p>6. Maternal Assessment</p> <ul style="list-style-type: none"> • Routine obstetric assessment should be conducted at each visit. • Assess general health each visit • Order repeat tests early in the third trimester if required: • For women presenting with an STI: <ul style="list-style-type: none"> ○ Complete the Health Department Notification Disease form 	<p>See Clinical Guideline Subsequent Visits.</p> <p>Following routine antenatal assessment additional maternal and fetal surveillance may be required for women with alcohol and other drug use.</p>
<p>6. Fetal Surveillance</p> <ul style="list-style-type: none"> • Arrange ultrasound for fetal growth and well-being at 28 to 34 weeks gestation if women are: <ul style="list-style-type: none"> ○ presenting with current alcohol and other drug use ○ presenting with a clinically small for gestational age fetus. • Arrange electronic fetal heart rate monitoring as indicated. 	<p>Discuss management with the WANDAS medical consultant if a woman has any signs of growth restriction or has concerns for fetal well-being. Frequency and timing of ultrasound surveillance will be adjusted accordingly.</p> <p>There is an increased risk of restricted fetal growth in women who are drug and alcohol users.⁶ The fetus is at risk also for low birth weight, small head circumference, prematurity and other developmental complications.¹</p> <p>A reactive CTG is less likely if the woman has had methadone¹, benzodiazepines or buprenorphine within 1-2 hours of the monitoring.</p>
<p>7. Anaesthetic Referral</p> <p>Arrange an early pregnancy referral for women with:</p> <ul style="list-style-type: none"> • opiate replacement therapy • unresolved pain issues • risk for difficult intravenous access⁶ • complex medical issues • high risk for caesarean section • anaesthetic risk factors • concerns about pain relief management 	<p>Early referral is recommended as women presenting with current alcohol and other drug use may be less likely to seek regular antenatal care.³</p> <p>Alcohol and other drug using women have a much higher incidence of receiving inadequate post-operative pain relief.³</p> <p>Some intravenous drug using women have damaged veins making venous access difficult. Assessment for use of a central venous line may be required.^{3, 6}</p>
<p>8. Additional Parent Education</p> <ul style="list-style-type: none"> • Provide written and verbal information about risks associated with Sudden Infant Death Syndrome (SIDS) and safe 	

<p>sleeping practices.</p> <ul style="list-style-type: none"> • Provide women with the 'Safety Plan in the Event of Alcohol or Drug Use' brochure. • Encourage women to attend hospital early in labour. • Repeat advice at each visit about situations where contact with the hospital between antenatal visits is required. • Discuss community support groups <p>Breastfeeding</p> <p>Advise women of alcohol and other drug risks</p> <p>Contraception</p> <ul style="list-style-type: none"> • Initiate discussion about available contraceptive measures. • Offer the woman a follow up appointment at KEMH family Planning Clinic • Inform women that insertion of Implanon may be done in the postnatal period prior to discharge home. <p>Discharge</p> <ul style="list-style-type: none"> • Inform the woman they will stay in hospital 5 days postpartum. 	<p>This brochure supplies written information women can take home about reducing risks in the home for the baby. It provides additional advice for women with a history of drug or alcohol use to assist home transition and infant care. Early presentation minimises the need for women to self-medicate and allows monitoring of drug use.⁶</p> <p>Discuss the risks and benefits of breast feeding and or formula feeding.</p>
<p>9. Management of a Woman not Attending their Antenatal Clinic Appointment</p> <ul style="list-style-type: none"> • Contact the woman by phone to assess the reason for not attending and any problems with the pregnancy or other issues. • Inform the woman of the date and time of the next appointment and inform her that a mailed appointment will be sent. Document the details of the conversation in the medical record. • If the woman is unable to be contacted inform <ul style="list-style-type: none"> ○ The social worker <p>If a woman frequently fails to attend</p>	

<p>appointments contact</p> <ul style="list-style-type: none"> ○ WANDAS CMC and Consultant ○ GP ○ Local hospital ○ Social worker ○ Next of kin is recorded local contact 	<p>Continue to attempt to contact the woman at each missed appointment even if she persistently does not attend. Consider faxing a letter to a chemist if she is receiving prescribed medication which they may pass on to her.⁸</p> <p>A woman may present unbooked to a local hospital. They may then liaise with the WANDAS CMC to obtain current medical, obstetric and psychosocial history allowing appropriate management to be initiated.</p>
<p>10. Documentation</p> <ul style="list-style-type: none"> • Document any changes to the management plan on the MR004 at each visit. • Document ongoing management tasks on the 'Women and Newborn Drug and Alcohol Service Checklist' MR220.02 at each visit 	<p>Aim to have the management plan for the woman completed by 32 weeks gestation, adding adjustments as required.</p> <p>Provides documentation of checklist of completion of management in pregnancy to ensure optimal care is given.</p>

Labour: incarcerated Women Presenting in Early or Spurious Labour

1. All incarcerated women who present in possible labour shall be assessed as per Clinical Guideline Labour: Assessment on Presentation
2. The woman should be admitted overnight for ongoing observation rather than returning her to the correctional facility, as there is no access to midwifery care at correctional facilities overnight and the women are locked in their cell and report that it may take time for their bell to be answered. Arranging ambulance transfers and appropriate escorts can also take considerable time. It may be safer to induce rather than send back to the correctional facility.
3. The woman shall have consultant review before being discharged from KEMH.
4. See Department of Corrective Service Policy Directive No 44 Escorting and Supervision of Pregnant or Postnatal Prisoners for information regarding the responsibilities of Department of Corrective Services Escorts.

Care during Labour and Birth

Key Points

1. Notify the WANDAS team when any woman who is involved in alcohol and other drug use or on a treatment programme is admitted:
 - WANDAS Clinical Midwifery Consultant (CMC) – page 3425 (or 3544) / mobile 0414892753 during office hours or the following morning if a woman is admitted after hours.
 - Obstetric Registrar for WANDAS – page 3207 – who will contact the consultant
 - Social Work Department – extension 2777
 - Psychiatric Registrar – extension 1521
2. Women should be advised to come to hospital **early** in labour
3. Management of a woman on an opioid treatment program:
 - See [Clinical Guideline Pharmacy: Medication Safety: Management of Community Programme for Opioid Pharmacotherapy Patients in the Hospital Setting \(C-POP\)](#).
 - **Before writing any prescriptions for opiate substitution therapy the patients' usual dispensing pharmacy should be contacted to check the time the last dose was dispensed, the current dose and inform them that the woman is an inpatient and will be having her treatment in hospital.**
4. An up-to-date written plan of management is documented in the woman's medical record on the MR004. Aim to have a formulated plan documented by 32 weeks gestation.
5. All women who have alcohol and other drug use or have received opioid pharmacotherapy during their pregnancy should be advised as early as possible that their expected postnatal stay will be 5 days or more as required to allow assessment of NAS. See Neonatal Clinical Guidelines Section 17 Neonatal Abstinence Syndrome.
6. Induction of labour should be booked where possible early in the week. This allows maximum accessibility with the WANDAS team.

Unbooked Women Presenting to Labour and Birth Suite

1. Notify the WANDAS team – during normal office hours or the following morning if after hours.
2. Take a detailed alcohol and other drug use and psychosocial history. Document on the MR220.02 'Women and Newborn Drug and Alcohol Service Antenatal Checklist'.
3. Consider admitting any unbooked woman who has not regularly attended antenatal appointments if she presents to Labour and Birth Suite. This provides the WANDAS team an opportunity to assess the woman, organise antenatal tests, and implement a management plan for her pregnancy.

4. If an unbooked woman is admitted under the obstetric team of the day (and it is not the WANDAS team), the consultant should discuss transfer of care with the WANDAS Medical Consultant and the CMC who will decide on suitability of transfer of care. If not suitable to transfer care liaison with the WANDAS team will provide management advice.
5. The woman needs to agree to transfer her care. If she declines the neonate may only be discharged with paediatric consultant approval, social work involvement, and discussion with the WANDAS CMC.

Anaesthetic implications and assessment

Note: Refer to the table at the end of this guideline for information on individual drug and alcohol effects and implications for intrapartum care.

Unbooked women

Obtain a detailed history of substance use and consider **early** anaesthetic review if the woman has:

- potential intravenous access difficulties
- a medical or drug/alcohol history that warrants closer monitoring
- unstable or recent drug/alcohol use which poses anaesthesia or analgesia risks

Booked women

Consider **early** anaesthetic consultation if the woman has:

- not been reviewed by an anaesthetist in the antenatal period
- potential intravenous access difficulties
- requires pain relief management.
- unstable or recent drug/alcohol use which poses anaesthesia or analgesia risks

Women with Chronic Hepatitis C

Consider coagulation studies prior to regional analgesia if liver function tests have not been recently done. Thrombocytopenia and prolongation of prothrombin time are features of chronic hepatitis C¹.

Management for women presenting with drug/alcohol withdrawal or recent drug/alcohol use

All women presenting with drug or alcohol withdrawal or recent use should be commenced on the appropriate documentation charts:

- Benzodiazepine Withdrawal Chart MR223.01
- Amphetamine Withdrawal Chart MR 223.02
- Alcohol Withdrawal Chart MR223.03
- Cannabis Withdrawal Chart MR223.04
- Opioid Withdrawal Chart MR223.05

Induction of labour

Induction of labour may occur for obstetric indications.² Social reasons for induction of labour may be indicated e.g. remoteness or transport issues², and psychosocial reasons.

Arrange induction of labour early in the week if possible – this allows medical, midwifery and allied health services expertise to be available.²

Elective Caesarean Section

Pain Relief

- Organise early anaesthetic review in labour to assess intravenous access, risk factors for anaesthetics, and requirement for regional analgesia.
- Offer all forms of pain relief, including non-pharmacological methods.²
- Analgesic requirements may be increased for women with a history of substance use.²
- Intractable pain should be investigated for pathological causes.²

Women on a Methadone program

1. The dose of Methadone should be given on time and not be omitted.
2. Arrange for medical/anaesthetist review of analgesic requirements if the analgesia is ineffective. Pethidine and other opioids may be less effective due to opioid tolerance.²
3. Assess pain as a separate issue – Methadone will not relieve labour pain.²

Women on a Buprenorphine program

1. The dose of Buprenorphine should be given on time and not be omitted.
2. Regional analgesia may be an appropriate option for pain relief.²
3. Arrange for review of requirement if the analgesia is ineffective. Pethidine and other opioids may be less effective due to opioid tolerance.²

Fetal Heart Rate Monitoring in labour

NOTE: continuous fetal heart rate monitoring is applied according to KEMH guidelines. However, if a women presents unbooked with a history of drug or alcohol use, has had current /recent drug or alcohol use, or presents with any risk factors for fetal wellbeing then continuous monitoring should be applied.

Methadone treatment affects intrapartum fetal heart rate patterns by reducing variability, baseline, and proportion of accelerations.^{3, 4}

Avoid doing a non-urgent cardiotocograph (CTG) within one to two hours of a woman receiving her maintenance dose of Methadone – a reactive trace is unlikely to be achieved.⁵

If a woman is taking Methadone the CTG may be non- reactive, therefore additional surveillance such as a biophysical profile may be beneficial.³

Management of Mother and Baby after Birth

1. Normal routine postpartum care. See Clinical Guidelines, O&M: Postnatal Care.
2. Ensure opioid replacement therapy is ordered and given at the normal time.
3. Commence the Neonatal Abstinence Syndrome (NAS) scoring chart, MR495, when the infant is two hours old to provide a baseline. Refer to Neonatal Clinical Guidelines Neonatal abstinence syndrome.
4. Commence education of supportive measures the parent/s may use to assist with an infant experiencing NAS. See Neonatal Clinical Guidelines Appendix Neonatal Abstinence Syndrome.

Substances and Implications during Labour and Birth

SUBSTANCE	EFFECTS	PRACTICE IMPLICATIONS
Alcohol	<p>Chronic alcohol use may cause liver disease, poor nutrition, coagulopathy, pancreatitis, cardiomyopathy, oesophageal varices and altered drug metabolism.⁶</p> <p>Acute withdrawal causes increased risk for nausea and vomiting, tachycardia, arrhythmias, hypertension, delirium, hallucinations, confusion, seizures, and cardiac failure.⁶</p> <p>Heavy alcohol use, or binge drinking can lead to Fetal Alcohol Syndrome causing prenatal and postnatal growth restriction, central nervous system abnormalities (CNS), and craniofacial abnormalities.⁷</p>	<ul style="list-style-type: none"> • Commence an Alcohol Withdrawal Chart MR223.03 • Liver function tests should be done if no recent blood results are available. • Prior to insertion of regional analgesia or anaesthesia ensure no coagulopathy, neuropathy, or infections.⁶ • There is increased risk of aspiration due to increased gastric acid secretions and decreased protective airway reflexes.⁶ Provide airway protection if a woman presents with acute intoxication.⁸ Arrange early anaesthetic assessment. • Consider the use of pharmacological prophylaxis if the woman is at risk for aspiration and nausea and vomiting.⁶ • Perform a blood sugar level with heavy alcohol use due to association with poor nutrition.⁸ • Continuously monitor the

		fetal heart rate if the mother presents intoxicated.
Amphetamines	<p>Causes stimulation of the CNS.⁹</p> <p>Possibility for increased risk of congenital¹⁰ malformations Cardiac anomalies, cleft lip and palate, biliary atresia, intrauterine growth retardation (IUGR), fetal death and cerebral haemorrhage have been noted.⁸</p> <p>Acute ingestion can cause hypertension, tachycardia, arrhythmias, dilated pupils, hyperflexion, fever, proteinuria, agitation and confusion.^{6, 8}</p> <p>Side-effects include hypertension, myocardial ischaemia, cardiac arrhythmias and stroke.⁶</p>	<ul style="list-style-type: none"> • Commence the Amphetamine Withdrawal Chart MR223.02 • Psychedelic effects of 'ecstasy' may interfere with safe insertion of regional blocks.⁶ • May cause placental abruption and fetal distress^{6, 8, 9.} • Associated with premature birth, decreased birth weight and head circumference¹⁰ • Seizures in presence of hypertension and proteinuria can be mistaken for eclampsia.^{6, 8} • Thermoregulatory disturbances may occur following toxicity.⁶ Arrange immediate medical examination and tests if toxicity is suspected e.g. liver and renal function, electrocardiogram, and possible X-rays. Women who have altered conscious levels should have blood sugar levels checked. Monitor fluid intake if dehydration is a risk.¹¹ • Ketamine should be avoided due to the catecholamine-related effects e.g. hypertension and tachycardia².

<p>Benzodiazepines</p>	<p>Act on the CNS to produce sedative and hypnotic effects, reduction of anxiety, anticonvulsive effects, and skeletal muscle relaxant.¹²</p> <p>Diffuses readily across the placenta to the fetus. Risk for fetal malformation is greatest between 2 to 8 weeks gestation.¹²</p>	<ul style="list-style-type: none"> Commence the Benzodiazepine Withdrawal Chart MR223.01.
<p>Cocaine</p>	<p>Produces prolonged adrenergic stimulation by blocking presynaptic uptake of sympathomimetic neurotransmitters including noradrenalin, serotonin and dopamine resulting in a euphoric effect.^{6,9}</p> <p>Cardiac complications such as hypertension, hypotension, tachycardia, myocardial ischaemia and infarctions. Arrhythmias can occur even from a small dose.^{6,14}</p> <p>Increased maternal risk for placental abruption, uterine rupture, preterm labour, hepatic rupture, cerebral infarction, and death. It can cause seizures, fevers, hyperflexia, dilated pupils, proteinuria and oedema.⁶</p>	<ul style="list-style-type: none"> Pregnancy enhances cardiac sensitivity to cocaine.⁶ Thrombocytopenia can occur.^{6,14} Regional analgesia and anaesthesia may be contraindicated. A full blood picture and clotting studies should be performed prior to insertion and the anaesthetist informed of the result.⁶ Liver and renal function tests will make the distinction between cocaine use and pre-eclampsia or eclampsia.⁶ It is recommended that blood pressure be controlled with medications prior to induction of labour or anaesthesia.^{6,14}
<p>Cocaine (continued)</p>	<p>Anxiety, restlessness, irritability, confusion may occur.¹⁴ Women having regional analgesia may show combative behaviour and altered pain perception.^{6,14}</p> <p>Exposure in utero can effect embryonic and fetal development causing congenital abnormalities such as brain malformation and cardiovascular abnormalities.⁷</p> <p>Cocaine crosses the placenta causing</p>	<p>Ketamine should be avoided or used with caution.^{6,14}</p> <p>Monitor the fetal heart rate continuously in labour.</p>

	vasoconstriction which may lead to uteroplacental insufficiency, acidosis and fetal hypoxia. ⁸	
Hallucinogens	<p>Oral ingestion causes auditory, visual and tactile hallucinations.¹⁴</p> <p>Activates the sympathetic nervous system which may cause hypertension and tachycardia, increasing body temperature and dilate the pupils.¹⁴</p> <p>Hyperthermia may increase maternal and fetal oxygen consumption, which could lead to fetal brain damage.¹⁴</p> <p>Overdose results in respiratory depression, seizures and coma.¹⁴</p> <p>Water intoxication can lead to severe hyponatraemia and cerebral oedema.¹⁴</p>	<ul style="list-style-type: none"> • Risk of premature labour and birth, meconium stained amniotic fluid, and neonatal abstinence syndrome.¹⁴ • Hyperthermia and excess water intake – commence fluid balance chart and monitor fluid intake. Monitor electrolytes.¹⁴ • Hypertension, proteinuria and seizures can mimic pre-eclampsia. Liver and renal function tests, and urine toxicology screening can differentiate.¹⁴
Marijuana (Cannabis)	<p>The major chemical in cannabis causes release of dopamine leading to feelings of euphoria.¹⁵</p> <p>Moderate doses may cause tachycardia and increased cardiac output.¹⁴</p> <p>High doses may lead to hypotension and bradycardia.¹⁴</p>	<ul style="list-style-type: none"> • Commence the Cannabis Withdrawal Chart MR223.04 • Chronic use may reduce uteroplacental perfusion leading to intrauterine growth restriction.¹⁵ • Some research indicates increased risk of labour complications.¹⁵

SUBSTANCE	EFFECTS	PRACTICE IMPLICATIONS
<i>Marijuana (Cannabis)</i>		<ul style="list-style-type: none"> • May potentiate anaesthetic drugs affecting blood pressure and heart rate.¹⁴ • May cause impaired lung function when inhaled.¹⁴ Thorough airway assessment prior to anaesthesia may be required.⁶ • Acute ingestion – caution with use of drugs that increase the heart rate may be required.¹⁴ • Avoid drugs which increase the heart rate e.g. ketamine, pancuronium, atropine and adrenaline.⁶
<i>Methamphetamines (Ice)</i>	<p>Note: also refer to section on amphetamines for effects and practice implications.</p> <p>Chemically related to amphetamines but the effect is more potent, longer lasting and more harmful to the CNS.¹⁶</p> <p>Brain structure and chemistry changes cause damage to the brain neurons¹⁷.</p> <p>Increased release of the neurotransmitter dopamine stimulates mood and body movement.¹⁶</p> <p>Short term effects include: increased activity and wakefulness, increased respirations, euphoria, rapid/irregular heartbeat, hypermia¹⁸.</p> <p>Long term effects include mood disturbances, psychosis, aggressive or violent behaviour, memory loss and severe dental problems.¹⁶</p> <p>Knowledge of effects on pregnancy is limited.¹⁶</p>	<ul style="list-style-type: none"> • Commence the Amphetamine Withdrawal Chart MR223.02 • If displaying early behavioural or psychiatric symptoms ensure medical/psychiatric and security personnel are advised and safety issues are addressed. • Limited studies have shown increased rates of premature birth, placental abruption, fetal growth restriction, and fetal heart and brain abnormalities.¹⁶ • Ketamine should be avoided if possible because of the catecholamine-related effects e.g. hypertension and tachycardia.² • May mimic pre-eclampsia. Liver and renal function tests should be performed.⁶

SUBSTANCE	EFFECTS	PRACTICE IMPLICATIONS
Methadone	<p>Will exhibit withdrawal symptoms if missed or not given on time.</p> <p>Withdrawal symptoms may mimic labour.</p> <p>Vomiting from labour effect may cause Methadone dose not to be absorbed.</p>	<ul style="list-style-type: none"> • Administer Methadone on time. • Women presenting in labour should also be assessed to ensure no withdrawal symptoms. • If a women vomits within 20 minutes of administration of Methadone repeat dosage of Methadone is probably required. Discuss immediately with the Registrar on duty. Observe the women for signs of over dosage if a repeated dose is given. • If a woman presents and advises staff she has not had her Methadone dose, the pharmacy should be contacted to verify this information. This ensures the women has not already dosed.
Opioids	<p>Withdrawal symptoms include restlessness, insomnia, tachycardia, tachypnoea and hypertension.¹⁴</p> <p>Increased risk of acute or chronic infections.¹⁴</p> <p>Withdrawal may result in fetal distress and neonatal opioid withdrawal.¹⁴</p> <p>Changes in opioid receptors lead to increased tolerance to analgesic drugs e.g. Pethidine.²</p>	<ul style="list-style-type: none"> • Commence the Opioid Withdrawal Chart MR223.05 • The daily dose of Methadone should be given while the woman is in labour or postoperatively.⁶ • Avoid opioid antagonists.^{6, 14} • Observe the woman for any signs of infections. • Regional analgesia can be given safely, but there is an increased tendency for hypotension.¹⁴ Prior to insertion ensure there are no haemodynamic instability, coagulopathy, sepsis or other contraindications.⁶

SUBSTANCE	EFFECTS	PRACTICE IMPLICATIONS
Opioids (continued)		<ul style="list-style-type: none"> • Use may lead to difficulties with intravenous access. Arrange early anaesthetic review as central venous line may be required.⁶ • Chronic use may lead to cross tolerance to anaesthetic drugs,¹⁴ while acute use may require reduced anaesthetic drugs.⁶
Solvents	<p>Effects include cardiac arrhythmia's, pulmonary complications, liver toxicity, cerebral and pulmonary oedema.¹⁴</p> <p>Associated with increased risk of pre term birth, prenatal mortality and growth restriction.¹⁴</p>	<ul style="list-style-type: none"> • Increased risk for development of cardiac arrhythmia's.¹⁴ • Potential for myocardial infarction and labile blood pressures.¹⁴ • A neurological examination should be performed prior to regional analgesia or anaesthesia to assess for sensory or motor deficits.⁶
Subutex	<p>Will display signs of withdrawal if not given on time.</p>	<ul style="list-style-type: none"> • Ensure dosage is not missed and is given on time. • Given sublingually. It should be coarsely grounded to allow slow absorption and decrease risk of vomiting. It can take up to 40 minutes to dissolve therefore limit unnecessary conversation with the patient during this time to allow absorption.

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Postnatal Management

Additional Postnatal Care

- In addition to routine postpartum care women with AOD use issues will require extra education and support from medical/midwifery personnel, allied health groups, and community support groups associated with drug and alcohol use.
See Clinical Guidelines, Obstetrics & Midwifery: Postnatal Care (Routine).
- Refer all WANDAS women or women with AOD use issues to the Specialist Child Health Nurse during their postpartum hospital stay.

Opioid Pharmacotherapy

- Refer to [Clinical Guidelines Management of Community Programme for Opioid Pharmacotherapy](#).

NB: Before writing any prescriptions for opiate substitution therapy the patients' usual dispensing pharmacy should be contacted to check the time the last dose was dispensed, the current dose and inform them that the woman is an inpatient and will be having her treatment in hospital.

Neonatal Care

Neonatal Abstinence Syndrome

Commence a MR495 NAS scoring system chart within **two** hours of birth to provide a baseline set of observations. Once commenced it is continued for five days.

For instructions of how to use the NAS scoring system refer to:

[Neonatology Clinical Guideline Neonatal Abstinence Syndrome](#).

Breastfeeding and Alcohol and other Drug Use

1. Alcohol or other drugs and medications not listed below should be checked with:
 - The KEMH pharmacy.
 - On the Intranet via KEMH library electronic service and access sites such as:
 - [LactMed database](#)
 - [Micromedex](#) database
 - [Breastfeeding - Breastfeeding Guideline for Substance Using Mothers: Quick Compatibility Guide](#).¹
2. Encourage skin-to-skin contact for all mothers (also for women who choose not to breastfeed)².
3. Make nutritional food choices using [The Australian Guidelines to Healthy Eating](#).
4. Advise women who are breastfeeding and plan recreational drug or alcohol use to:
 - ensure a responsible adult is available to supervise the baby during this period
 - breastfeed prior to alcohol and other drug use

- consider expressing breast milk prior to alcohol and other drug use- ensuring availability of breast milk for the next feed
- know when to express and discard breast milk, and how long before breastfeeding can be resumed.

SUBSTANCE	EFFECT ON BREASTMILK / INFANT	RECOMMENDATION / ADVICE
Alcohol (Ethanol)	<p>Delays the let-down reflex and may reduce milk supply.¹</p> <p>Ethanol can increase odour and change taste of milk.³</p> <p>Can lead to maternal sedation, and lead to irritability, sedation, and weak sucking in infants.³</p> <p>Beer has been reported to stimulate prolactin levels and milk supply.³</p> <p>Long term effect of daily alcohol use is unclear.⁴</p>	<ul style="list-style-type: none"> • Avoid breastfeeding if intoxicated. • Women ingesting moderate amounts of alcohol can generally return to breastfeeding as soon as they feel neurologically normal.³ • Chronic or heavy users of alcohol should avoid breastfeeding.³ • Advise women who intend to ingest alcohol while breastfeeding to: <ul style="list-style-type: none"> ➤ breastfeed prior to alcohol ingestion.¹ ➤ avoid breastfeeding for 3-4 hours after having the last drink of alcohol.³ ➤ ensure a responsible adult is supervising the baby.
Amphetamines	<p>May interfere with milk production.⁵</p> <p>May pose risk to the breastfed infant or breast milk, but benefits from breastfeeding may be acceptable despite risk to the infant.³</p> <p>Relevant published information is unavailable regarding safety of breastfeeding with amphetamine use.⁵</p>	<p>Avoid the use of amphetamines while breastfeeding.</p> <p>If a women decides to use amphetamines while breastfeeding advise her to:</p> <ul style="list-style-type: none"> • ensure a responsible adult is available to supervise the baby • breastfeed prior to use • breast pump and discard milk for 24 hours.^{1,6} If the woman has expressed and stored milk prior to using this can be given to the baby, otherwise artificial milk is required during this period. • prepare artificial feeds prior to substance use.

SUBSTANCE	EFFECT ON BREASTMILK / INFANT	RECOMMENDATION / ADVICE
Methamphetamines	See section on Amphetamines.	
Benzodiazepines	<p><i>Temazepam</i> – low levels is found in breast milk, however has a relatively short half-life and would not be expected to cause adverse effects.⁷</p> <p><i>Diazepam</i> –repeated doses will accumulate in breast milk. The long half-life means timing breastfeeds has no or little benefit in reducing exposure. If given as a single sedative dose e.g. prior to surgery then breastfeeding may resume at the next due feed.⁸</p> <p><i>Oxazepam</i> – low levels are found in breast milk. It is not expected to cause adverse effects in breastfed infants with normal maternal doses.⁹</p> <p><i>Lorazepam</i> - low levels are found in breast milk. It is not expected to cause adverse effects in breastfed infants with normal maternal doses.¹⁰</p>	<ul style="list-style-type: none"> • The benefits of breastfeeding must be weighed against the risks.¹¹ • Inform the woman benzodiazepines should not be stopped abruptly. Supervised gradual withdrawal is advised should she wish to stop use.¹¹ • Advise women using short-acting benzodiazepines to avoid breastfeeding immediately after taking as it may cause drowsiness for the mother and infant.¹¹ • <i>Temazepam</i> – advise taking the bedtime dose after the infants last feed for a older infant who is sleeping through the night.⁷ • <i>Diazepam</i> – avoid breastfeeding a neonate or preterm infant for 6-8 hours after a dose.⁸
SUBSTANCE	EFFECT ON BREASTMILK / INFANT	RECOMMENDATION / ADVICE
Buprenorphine	<p><i>Buprenorphine has a low oral bioavailability and infant exposure is only 1/5 to 1/10 of the total amount ingested by the mother. 12 Low serum and urine concentrations are found in breastfed infants. 13</i></p>	<ul style="list-style-type: none"> • Monitor the infant for drowsiness, adequate weight gain, and developmental milestones.¹³ • Refer immediately for medical assessment if the infant shows any signs of increased sleepiness, difficulty in breastfeeding, breathing difficulties, or limpness.¹³ • Advise slow weaning¹ under medical supervision if a women decides to cease use of buprenorphine.
Cannabis	<p><i>Small to moderate amounts are secreted into breastmilk, with significant absorption and metabolism in babies. 1</i></p> <p><i>Infants receive an 8-fold accumulation in breast milk compared to maternal plasma</i></p>	<ul style="list-style-type: none"> • Cannabis use for breastfeeding mothers should be avoided as impairs their judgement and childcare abilities.^{6, 14} • Can cause sedation in infants. If women chose to smoke

SUBSTANCE	EFFECT ON BREASTMILK / INFANT	RECOMMENDATION / ADVICE
	<p><i>levels with chronic use, although significant side-effects are not shown.³</i></p> <p><i>Breastfeeding with cannabis use is not recommended by some authors³, while others advocate potential risks should be weighed up against benefits noting that there is insufficient evidence to make an evidence based recommendation.⁶</i></p>	<p>cannabis advise them to smoking only after feeding, and to avoid smoking in the vicinity of the infant.¹</p>
Cocaine		<ul style="list-style-type: none"> •
Heroin / other Opioids	<p><i>Prolonged use of narcotics can produce neonatal abstinence syndrome in neonates when ceased.</i></p>	<ul style="list-style-type: none"> • or Women continuing to use short acting opioids should not breastfeed.⁶ • If a mother has used heroin observe the infant for sedation, tremors, restlessness, vomiting and poor feeding. Seek medical assistance immediately if symptoms occur.³ • If a mother elects to use heroin while breastfeeding advise them to: <ul style="list-style-type: none"> ➤ ensure a responsible adult is available to supervise the infant.⁶ ➤ breastfeed prior to use ➤ express and discard milk for 24 hours. If a woman has expressed and stored milk prior to use this can be given to the infant.⁶ ➤ prepare artificial feeds prior to use.⁶
Inhalants	<p><i>Check effect of individual inhalants with KEMH pharmacy, or the above mentioned databases which can be accessed via KEHM library intranet site. Lactation risk is dependent of the components of the inhalant.</i></p>	<ul style="list-style-type: none"> • Solvents generally have short half lives, but many pass readily into breastmilk.¹ • Avoid breastfeeding if the mother is intoxicated.¹ • If a mother intends to use solvents: <ul style="list-style-type: none"> ➤ encourage her to arrange a responsible adult to be available to supervise the baby⁶ ➤ breastfeed prior to

SUBSTANCE	EFFECT ON BREASTMILK / INFANT	RECOMMENDATION / ADVICE
		<p>using⁶</p> <ul style="list-style-type: none"> ➤ arrange artificial feed replacement prior to use⁶
Methadone	<p><i>Most studies indicate only small amounts of methadone pass into breast milk. The amount in milk is insufficient to prevent NAS.^{3, 15}</i></p> <p><i>Research is unavailable about the long term effects on infants receiving small amounts of methadone from breastmilk.¹⁶</i></p>	<ul style="list-style-type: none"> • Women on methadone maintenance are suitable to breastfeed.^{3, 11} • Advise women not to abruptly cease methadone treatment while breastfeeding as it can result in NAS.³ • Inform the mother to seek urgent medical advice if the infant shows signs of NAS.
Naltrexone	<p><i>Limited data indicates naltrexone is minimally excreted in breastmilk.¹⁷</i></p>	<ul style="list-style-type: none"> • Breastfeeding considered safe.³ Mothers should be informed studies however are limited. • If naltrexone is required by the mother, breastfeeding can continue.¹⁷

Planning for Discharge

If a mother or father wish to take their baby home and medical concerns exist for the safety of the neonate refer to the [Neonatal Clinical Care Guidelines Section 19 Discharge Against Medical Advice](#) for management.

The WANDAS CMC and the hospital Nurse Manager should be informed as soon as possible.

Additional Parenting Advice

Neonatal Abstinence Syndrome

1. Refer to the [Neonatal Clinical Care Guidelines Section 17 Neonatal Abstinence Syndrome](#).
2. Provide the [WANDAS](#) booklet to all parents.
3. Advise the woman/parents about the signs of NAS. Inform parents to seek immediate medical consultation should signs develop.
4. Discuss supportive measures a woman can use to calm and settle her baby. Information for this is provided in the:
 - WANDAS booklet

[WANDAS 'Safety Plan in the Event of Alcohol or Drug Use' pamphlet](#)

Breastfeeding and infant feeding

1. Discuss feeding management strategies should the mother participate in drug or alcohol use.
2. Provide the mother with the WANDAS pamphlet '[Safety Plan in the Event of Alcohol or Drug Use](#)'.
3. Supply women with verbal and written information about expressing breast milk, hiring and purchasing of expressing equipment.
4. Offer a demonstration about preparation of artificial feeds even if the woman intends to breast feed. This provides her with education should she need to temporarily replace breastfeeding due to drug or alcohol use, or for psychosocial reasons.

Provide written and verbal information about Hepatitis C and breastfeeding. See information about Hepatitis C, breastfeeding, and neonatal management in the [Neonatology Clinical Care Guideline Septic Screening and Management](#)

Prevention of Sudden Infant Death Syndrome

1. Emphasise preventative measures and safe sleeping practices – drug and alcohol use (especially opiates) increases the risk for SIDS.¹⁸
2. See:
 - Clinical Guidelines Obstetrics & Midwifery: Neonatal Care: Bed-Sharing / Co-sleeping
 - Clinical Guidelines Obstetrics & Midwifery: Neonatal Care: Strategies to Reduce Sudden Infant Death Syndrome (SIDS).
3. Provide parents with the written pamphlet 'SIDS AND KIDS SAFE SLEEPING'.

Community Organisations


1. The social worker links the woman with community groups that assist women and families involved in drug or alcohol use, and those involved in opioid replacement therapy.
2. Parents should be informed of telephone services that may provide assistance .e.g. Parent Drug Information Services and Alcohol and Drug Information Service.
3. The WANDAS team will arrange referral to the appropriate drug and alcohol services as required or requested for postnatal follow-up.

Unbooked postnatal women with alcohol and other drug use

Women who have not been attending WANDAS shall remain under their allocated obstetric team. The WANDAS should be contacted to provide guidance and advice. An unbooked postnatal woman will not transfer to the WANDAS team.

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