SUBSTANCE ABUSE IN PREGNANCY

BACKGROUND

Pregnant women who misuse prescribed and non-prescribed medications/substances in pregnancy are at an increased risk of experiencing pregnancy complications. Pregnant women with substance abuse disorders are less likely to seek prenatal care, and they have higher rates of infectious diseases such as HIV, hepatitis, and sexually transmitted infections.[1] Concurrent risk factors such as smoking, poor nutrition, stress and socio-economic deprivation are also common.[2] Substance misuse is a chronic health condition that affects the individual, their whānau/family and has many wider social implications.

The misuse of opiates in pregnancy is of particular significance because of the increased risk to the mother and her unborn child. Illicit opioid use in pregnancy is associated with maternal and fetal acquisition of blood-borne viruses, preterm labour and birth, intrauterine growth restriction, pre-eclampsia, placental abruption, passage of meconium, and intrauterine fetal death.[3] In addition, opioid withdrawal can lead to miscarriage in the first trimester, or preterm labour if it occurs in the third trimester.[2] Opioid substitution treatment (OST), with methadone or buprenorphine, has been found to reduce illicit drug use, improve maternal engagement in antenatal care and improve neonatal birth weight.[3] Therefore it is advisable for women using opiates in pregnancy to engage with an opiate substitution treatment (OST) programme, and not undertake controlled or uncontrolled withdrawal.

In New Zealand, both methadone and buprenorphine are used for treatment of opioid dependence. Methadone is classed as a Pregnancy Category 'C' medication, secondary to the risk of neonatal abstinence syndrome and respiratory depression in the neonate. Clinical experience and safety data in the use of buprenorphine in pregnancy have recently increased considerably and no significant concerns have been raised, therefore the use of buprenorphine is cautiously supported.[3] In general, the benefits of OST far outweigh the risks associated with continued illicit drug use[2,4] and both methadone and buprenorphine (without naloxone) have been found to improve maternal and fetal outcomes with similar efficacy.[3]

ASSOCIATED DOCUMENTS

Volume 12 Fluid and Medication Management – Prescribing, Supply and Administration of Methadone and Buprenorphine/Naloxone (Suboxone®)

MANAGEMENT

- All pregnant women should be screened for drug use at their first antenatal visit and at least once during each trimester. This should cover prescribed medications (including opiate replacement), over the counter medicines, alcohol, tobacco and other non-prescribed substances including cannabis, opiates benzodiazepines, and amphetamine type substances.
- If drug misuse is identified at any time in pregnancy, an urgent referral to Alcohol and Other Drug Central Coordination Service should be completed. ***Appendix referral info.***
- If opiate dependence is diagnosed, pregnant women are eligible for priority entry onto OST.[3]
- Smoking cessation counselling should be offered as a first-line intervention for pregnant smokers – Nicotine replacement therapy can be considered if counselling is not successful.I[1,5]

CLINIC MANAGEMENT

Women with a history of any substance misuse (except the sole use of tobacco), including those on OST, should be referred to the OG3 High risk Antenatal Clinic (ANC). This clinic is run in conjunction with the Ngā Taonga Pēpi clinic at Christchurch Women's' Hospital (CWH). (Appendix Section 88 Referral Guidelines)

- This clinic provides a multi-disciplinary approach with involvement of:
  - Obstetrician (patient's should see the SMO or Registrar)
  - Ngā Taonga Pēpi midwife
  - Social work
  - Dietician
  - CORS (Christchurch Opioid Recovery Service) medical officer or psychiatrist
  - Ngā Taonga Pēpi case manager

Women who have opted to be on the Methadone in Pregnancy Program attend fortnightly clinics where they meet with their CORS caseworker, CORS psych registrar (for prescribing purposes), Maori Health Worker, Social worker, dietician and coordinating midwife.

Antenatal clinics to be organised to coincide with the women's fortnightly Ngā Taonga Pēpi program schedule.

Women who decline clinic referral should be offered social work input in the community.

SCHEDULE OF CLINIC APPOINTMENTS

First trimester

Ideally, the first clinic appointment should take place in the first trimester. The following should be addressed at this time:

- A full medical history and examination needs to be obtained and risk factors assessed. Consider medical sequalae of drug misuse (endocarditis, valvular pathology, glomerulonephritis/renal dysfunction, cirrhosis, cellulitis, osteomyelitis, lung pathology secondary to granulomata from IVDU). This would be a good point to identify difficult IV access also! Refer to physicians as appropriate.

- Offer HIV testing if not already completed. Refer to Management of HIV Infected Women (GLM0033) guideline as relevant.
- Offer a sexually transmitted infection (STI) screen and a cervical smear if due.
- Recommend an ultrasound scan to assess gestational age or due date.
- Discuss first and/or second trimester screening.
- Ensure appropriate referrals are actioned for maternal support throughout the pregnancy. Screen for legal, financial and relationship issues. It is important that this addresses abuse and safety concerns.
- Consider dietician review for malnutrition.
- Screen for concurrent mental health problems. Refer to additional psychiatric services as necessary
- Involvement of a partner/support person and whānau throughout the pregnancy is important, however full informed consent for disclosure must be obtained.
- In the setting of prescribed medication misuse, or opiate replacement, collateral history from the GP, pharmacy or other prescriber are required to confirm medication dosing and dispensing arrangements.
- Screen for domestic violence/safety at home.

Second trimester

- A clinic appointment should be arranged after the anatomy ultrasound. At this time, consider the need for specialised cardiac imaging if risk factors exist
- An appointment should be arranged for 28/40 weeks with a growth scan. Routine antenatal 28/40 weeks blood tests should be recommended and an MSU should be performed. Triple swabs (for bacterial vaginosis, chlamydia and gonorrhoea) should be offered. Consider repeat serology if there are ongoing risk factors for Hepatitis B, Hepatitis C, HIV or syphilis.
- Discuss plans for postpartum contraception.

Third trimester

- Clinic appointments are recommended at 32, 36 and 41 weeks gestation.
- Routine growth ultrasounds should be completed at 32 and 36 weeks gestation given the increased risk of intrauterine growth restriction. Scans should ideally be scheduled the same day as the clinic appointment.
- Discuss plans for labour at each clinic appointment.
- Arrange an anaesthetic review in early third trimester to discuss analgesia in labour and the post-partum period. It is important to reassess and discuss venous access issues.

At each antenatal clinic visit it is important to undertake an ongoing assessment of risk factors, as these may change throughout the pregnancy. This will include:

- Compliance with care and counselling.
- Maternal and fetal wellbeing.
- Drug, alcohol and tobacco use, including that of the partner or other people in the same household or social sphere.
- Mental health
- Withdrawal symptoms or intoxication.
- Social factors such as support, safety, housing and financial needs.

- Discharge planning will be an ongoing issue that needs to be regularly addressed, and updated in the patient's written care plan.
- Plans for contraception should be made.

ANTENATAL ADMISSIONS

- Pregnant women with a history of drug misuse should be assessed as per normal clinical routine if they present antenatally.
- In addition to this, assessment for signs of intoxication or withdrawal should be completed.
- Regular opiates should be continued; however clinicians should be aware that if oral opiates are required for analgesia, then dose adjustment will be required. Contact the Acute Pain Management Service (APMS) for assistance if required.
- It is important to avoid substance withdrawal in pregnancy and women on OST should have their regular treatment continued.
- On admission, for prescribing of correct methadone dose and to organise cancellation of community prescriptions contact:

Weekdays	Christchurch Opioid Recovery Service (CORS) 0800 and 1700 hours	(03) 335 4350
After-hours	Kennedy Detoxification Centre	(03) 339 1139

- **Vomiting in pregnancy:** If a woman on OST presents with vomiting in pregnancy, care should be taken with the use of anti-emetics. Lifestyle advice should be utilised in the first instance. Prescribers should be aware that the efficacy of metoclopramide may be reduced for women on OST, cyclizine may be misused and ondansetron is associated with prolonged QT interval.[3] The majority of a methadone dose is absorbed within the first twenty minutes, and sublingual absorption of buprenorphine is not affected by vomiting.[3] If vomiting occurs within half an hour of consumption of dose, then a half dose replacement may be given but **only** after approval by CORS.

LABOUR AND BIRTH

- Discussion around the plan for labour and birth should occur throughout pregnancy.
- There is no additional indication for induction of labour and this should only be planned for usual obstetric indications. If induction of labour is planned, aim for it to be timed early in the week so that the appropriate staff are available to monitor the infant.
- NICU should be informed of the women in labour or when an Induction of Labour (IOL) is planned.
- The on-call anaesthetic team should be informed of the admission, especially as intravenous access may be an issue
- When a woman on OST presents in labour, it is important to ensure that her treatment is continued safely. Contact:

Weekdays	Christchurch Opioid Recovery Service (CORS) 0800 and 1700 hours	(03) 335 4350
After-hours	Kennedy Detoxification Centre	(03) 339 1139

- The usual dose of opioid should be given as close to the usual time as possible.
- All forms of analgesia should be offered in labour. Methadone and Buprenorphine at their usual maintenance doses will not relieve the pain of labour and additional analgesia should be used in

conjunction with these. In fact, these patients are opioid tolerant and may require more opioid analgesia than non-opioid tolerant patients.

- Intra-muscular opiates are less likely to be effective for opiate tolerant patients.
- Nitrous oxide and epidural analgesia should be considered with their usual precautions. Some women may be concerned about the risk of relapse of illicit opioid use after use of opioid analgesics. Patients should be reassured that there is no evidence that analgesic use of opioids leads to relapse of illicit drug use.[6]
- In labour, the use of electronic fetal heart monitoring should be guided by usual obstetric indications.
- Ensure that disease status (Hepatitis B and C, HSV and HIV) is reviewed prior to using invasive testing, such as fetal scalp electrode and fetal blood sampling. HIV/ Hep B and C is a relative contraindication but HSV a caution.
- If caesarean section is required, consider placing wound catheters intraoperatively to assist with postoperative pain relief.

POSTPARTUM

Care of the infant

- Opioid and sedative-dependent women should remain as an inpatient for at least five days post-partum to monitor the infant for Neonatal Substance Withdrawal (NSW). NSW occurs in 60-80% of babies of women on OST (rates for methadone and buprenorphine are similar), and it is difficult to predict.[3]
- Infants at **risk** of withdrawal should be admitted to Maternity and have NEWS scores done 4-hourly. See NSW in Neonatal Clinical Resource – Maternity (Ref.2403289).
- Infants should be monitored for signs of withdrawal, which usually start within 48 hours of birth but can be delayed up to 7-14 days.
- For those exposed to opiates, transfer to NICU after 24 hours for signs of withdrawal to be completed every four hours using Eat Sleep Console / ESC tool.
- Naloxone should **never be given** as it can cause dramatic onset of withdrawal symptoms (including seizures).[7]
- If the baby has respiratory depression at birth and maternal narcotics are suspected to be the cause, **it is much safer to support respiration. Expert paediatric care should already be present to provide this.**
- Antenatal maternal serology for Hepatitis B results should be available at the time of birth. If the mother is HBs Ag positive the appropriate management of the infant is a high priority. If maternal hepatitis B carrier is unknown, the HBIG/hepatitis B vaccine protocol should begin
- Non-pharmacological interventions including low lights, quiet environments, swaddling and skin-to-skin contact should be used with all neonates prenatally exposed to alcohol and drugs.[8]
- Adequate analgesia may be difficult to manage in the setting of opiate tolerance and increased doses will be required. The Acute Pain Management Service should be involved if necessary.

Care of the woman

- Opioid dependent patients need higher doses of opioids to manage acute pain after caesarean section.
- If OST is required to be delivered to the woman's home address, then CORS require a **minimum of 48 hours'** notice for this to be arranged.
- Contraception should be discussed and, if required, long-term contraception can ideally be commenced prior to discharge from CWH.
- On discharge CORS needs to be informed by the discharging midwife to arrange on-going prescription of methadone in the community.

BREASTFEEDING

- Breastfeeding should be encouraged for mothers on OST and may reduce the risk of NAS.[3] The level of methadone in a mother's breastmilk is low and does not affect the infant's blood level. Lactation consultants can assist with breastfeeding advice in the setting of other drug use.

OTHER SUBSTANCES

Smoking/Nicotine

Nicotine smoking in pregnancy is associated with significant perinatal morbidity and mortality. It is associated with spontaneous pregnancy loss, placental abruption, preterm premature rupture of membranes (PPROM), placenta praevia, preterm labour and birth, low birth weight, and ectopic pregnancy.[9] Smoking in the home is associated with sudden unexplained death in infancy (SUDI), asthma, otitis media and lower respiratory tract infections. All women and their families should be encouraged to cease smoking as per Te Whatu Ora Waitaha policy. Nicotine replacement therapy is appropriate and safe to use in pregnancy.

Marijuana

Marijuana is the most commonly used illicit substance. There is evidence that Marijuana increases the risk of spontaneous preterm birth independent of cigarette smoking status and socio-economic status.[12] Evidence also suggests that women who continue to use marijuana at 20 weeks gestation are five times more likely to deliver preterm than those who do not, and the rate of early spontaneous preterm birth is higher amongst women who continue to use marijuana at 20 weeks gestation.[12] There are associations with long term cognitive impact in the children such as problem-solving difficulties and deficits in learning and memory.[10]

Alcohol

There is no known safe amount of alcohol consumption in pregnancy, so abstinence is advised.[11] Alcohol consumption is associated with fetal alcohol spectrum disorder and increased risk of stillbirth.

Benzodiazepines

Benzodiazepines can be used relatively safely as PRN medication for short term relief of severe anxiety; panic disorder resistant to antidepressant therapy; insomnia (short term use), acute behavioural disturbance, symptoms of post-traumatic stress disorder. Long term use/addiction (or abuse)

avoidance is recommended. Tapering or stopping benzodiazepines (particularly long-acting or when taken regularly) close to term may be appropriate for some women to reduce the risk of Neonatal Abstinence.

There is breastmilk transfer with breast feeding and withdrawal for neonates exposed to benzodiazepines in utero.

See Advice for Health Professionals Caring for Pregnant Women Taking Psychotropic Medicines and Infants Exposed to Psychotropic Medicines in Utero and While Breastfeeding

Methamphetamine

Methamphetamine is neurotoxic to the developing fetus. There is not a large body of evidence of its affects in pregnancy, but it may be associated with IUGR.[10]

SGA, preterm labour, neonatal and childhood neurodevelopment abnormalities can cause hypertension, headache seizures – may mimic PET. https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Methamphetamine-Abuse-in-Women-of-Reproductive-Age

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