



Pregnancy-Related Issues in the Management of Addictions

**Problematic Substance Use
in Pregnancy
55th ASA Banff Alberta**

Conflict of Interest Disclosure

- ❑ Financial support for this workshop was provided by Public Health Agency of Canada
- ❑ Funding for the PRIMA Pocket Reference was provided by the Lawson Foundation and Health Canada
- ❑ No commercial sponsorship has been received to support this program



Objectives



- ❑ Define an approach to care for problematic substance use in pregnancy (PSUP)
- ❑ Describe prenatal care in the context of substance use treatment
- ❑ Describe the effects of common substances
- ❑ Describe care at delivery and postpartum
- ❑ Review resources regarding substance use in pregnancy
- ❑ Discuss the diagnosis of Fetal Alcohol Spectrum Disorder

Approach to Care - Principles



- ❑ Woman-centered, nonjudgmental care is crucial
- ❑ Establishing rapport is the single most important aspect of the initial encounter
- ❑ Disclosure of use should be seen as positive
- ❑ The antenatal period is often a time when women are ready to change
- ❑ Address the woman's needs and withdrawal symptoms before moving on

Try not to fix everything!!!

Approach to Care-Principles (2)



- ❑ Prior relationships with health care providers have often been negative
- ❑ There is a high percentage of survivors of sexual abuse among women with PSUP - sensitive interviewing is required (defer pelvic exam unless required)
- ❑ Work to establish trust through communication
- ❑ Ensure she is safe to leave - increased risk for intimate partner violence
- ❑ Meet her needs as she identifies them (i.e., food, shelter, etc.)

(cont'd)



Approach to Care-Principles (3)

- **Watch for nonverbal cues**
 - Is she feeling vulnerable?
 - Is she in withdrawal?
 - Does she understand what you are saying?
 - Does she appear hungry?
 - Does she require clothing or shelter?
 - Does she have a mental health problem?

Remember that the appearance of belligerence or anger may signify fear, pain or withdrawal!



Identify Key Issues at First Visit

- ❑ Explore whether she is in withdrawal
- ❑ Enquire about acute and chronic medical conditions
- ❑ Ask about medications & OTC and herbal products
- ❑ Ask if she is safe and has adequate nutrition
- ❑ FIFE:
 - What does she **feel** about her substance use?
 - What are her **ideas** about how she started using?
 - How is she **functioning**?
 - What are her **expectations** about provider involvement?
- ❑ Plan for follow-up soon after initial encounter

**It is better to do less than more at the first visit
so that she will come back!**



Comprehensive Assessment

This comprehensive history may be completed over several visits:

- ❑ Complete drug history: name of drug, amount, frequency, duration, route(s), last use, needle sharing or injection drug use (IDU)
- ❑ History of withdrawal symptoms
- ❑ Consequences of drug use
- ❑ Previous treatment: programs, mutual aid groups
- ❑ Medical history: HIV, Hepatitis B & C, STIs
- ❑ Obstetrical history: GxPy, LMP, cycle regularity
- ❑ Social History: partner, living children

(cont'd)

Comprehensive Assessment



Further issues to identify after the establishment of a therapeutic relationship:

- ❑ Psychiatric history: eating disorders, mood disorders
- ❑ Social history: family situation (partner, # of children), housing & nutrition, legal (current charges & court dates), finances, domestic violence & child abuse (safety)
- ❑ Family history: substance use, psychiatric disorders, genetic and congenital disorders
- ❑ Sexual abuse history: very common among substance using women so use sensitive interviewing techniques

(cont'd)

Comprehensive Assessment



- ❑ **Consider screening for intimate partner violence**

- ALPHA (Antenatal Psychosocial Health Assessment)

- Three key questions:

- ❑ Have you ever experienced abuse?
- ❑ Are you or have you ever been afraid of your partner?
- ❑ Are you safe?

ALPHA: <http://dfcm19.med.utoronto.ca/research/alpha>

(cont'd)



Comprehensive Assessment

Child Protection Concerns

- ❑ Remember - *there is no legal obligation to report the unborn child*
- ❑ Not all women will require child protection services – some will require support services
- ❑ Be honest about your legal obligation to inform child protection services once the baby is born
- ❑ Identify any risks to children that may be living with woman - will need to clarify disposition of all living children
- ❑ Encourage voluntary self-reporting

Physical Examination



- ❑ Unless clear medical emergency can defer detailed medical exam
- ❑ Vital signs, fetal heart rate and mother's weight are key components at each encounter
- ❑ Defer pelvic exam until rapport has been established (possible history of sexual abuse will require sensitivity during exam)
- ❑ Obstetrical exam - FHR, Symphysis fundal height, bimanual exam
- ❑ Target exam to reflect / detect substance use
 - Skin for injection sites, cellulitis, cuts, bruises; nasal passages
 - Cardiac exam: murmur
 - Abdominal exam: enlarged liver



Screening for Infections

Screen as required for:

- ❑ Hepatitis B with HbsAg and Antibody levels
- ❑ Hepatitis C antibody testing
- ❑ Syphilis
- ❑ HIV (requires informed consent to perform test)
- ❑ Mantoux (need to ascertain her previous status)
- ❑ Chlamydia and gonorrhea
- ❑ Retest as exposure dictates due to window periods for conversion

Investigations



- ❑ Bloodwork: Quantitative Serum B-hcg, routine prenatal bloodwork, liver enzymes, Hepatitis B and C serology and HIV (with consent)
- ❑ Urine: routine and microscopy, culture and sensitivity
- ❑ Ultrasound: for dates (if uncertain) and morphology
- ❑ Consider drug toxicology testing (with consent), as needed

Urine Drug Testing (Toxicology)



- ❑ If urine drug screening is required by protection services, it must be with maternal consent
- ❑ If there has been maternal drug use, and there are medical concerns for the neonate and mother is unable or unwilling to give consent, then drug screens on neonate may be taken without consent
- ❑ Remember to also rule out sepsis, hypoglycemia and hypocalcemia when suspecting drug withdrawal due to unstable neonatal status
- ❑ **Note: An unexpected positive result merits confirmatory testing!** (same sample if possible)

(cont'd)

UDS - Toxicology



Voluntary urine testing

PROS: agreement provides medical information for caregiver and suggests co-operation with medical care

- ❑ Negative urine toxicology reports can show abstinence has been achieved and is helpful in interviews with child protection agencies
- ❑ Valuable for monitoring treatment progress and enhancing motivation
- ❑ Necessary in some centers if considering methadone maintenance therapy

CONS: coercion can set up adversarial relationship between woman and care provider - *open communication is critical component*



Management of Withdrawal

- ❑ Drug withdrawal can potentially cause miscarriage in T1, premature labour in T3, adverse fetal effects including fetal distress
- ❑ If a woman wishes to withdraw from Methadone or opiates, T2 (12-28 weeks GA) may be safest time for taper
- ❑ The woman should be aware of her increased opiate needs during pregnancy, and risk of relapse with taper
- ❑ Treatment is based on specific substance(s) used by woman so enquire about polydrug use (very common)
- ❑ Medical detoxification recommended for opiates, benzodiazepines and alcohol

OVERVIEW OF STRATEGIES

ASK

- Quantity & frequency

ADVISE

- Stopping or reducing substance
- Risks

ASSIST

- Brief intervention
- Information, referrals and follow-up

LEVEL 1*: SCREENING FOR ALCOHOL USE – Open-ended questions



- ❑ Ask “When was the last time you had a drink?”
- ❑ Ask “Do you ever enjoy a drink or two?”
- ❑ Ask “Do you sometimes drink beer, wine or other alcoholic beverages?”
- ❑ Ask “Do you ever use alcohol?”
- ❑ Ask “ In the past month or two, have you ever enjoyed a drink or two?”
- ❑ If the woman indicates she does not consume alcohol, then positive reinforcement of her lifestyle choice is beneficial.
- ❑ * Levels of assessment taken from the SOGC/FASD Consensus Report, 2008

Level 2*: SCREENING FOR ALCOHOL USE - QUESTIONNAIRES



- Ask “How much alcohol do you drink?”
- Ask about quantity and frequency (Q/F) and binge episodes
- Follow-up with brief alcohol screening questionnaires developed to detect periconception at-risk drinking (defined as >1 ounce of absolute alcohol per day or ≥ 2 drinks per day)
- **T-ACE** has been validated for use during pregnancy
- * Levels of assessment taken from the SOGC/FASD Consensus Report, 2008

SCREENING: T-ACE



Adapted from CAGE questionnaire:

- ❑ **T**: how many drinks does it take to make you feel high? (**tolerance**)
- ❑ **A**: have you ever been **annoyed** at criticism of your drinking/drug use?
- ❑ **C**: have you ever felt the need to **cut down** on your drinking/drug use?
- ❑ **E**: have you ever had an **eye-opener**? (withdrawal)

T-ACE: SCORING



- ❑ Score 1 for each positive response for A, C, E (annoyed, cut-down, eye-opener)
- ❑ Tolerance question: score 2 if it takes 3 or more drinks to feel high or experience intoxicating effects
- ❑ Score of 2 or more indicates problem drinking

Note: More sensitive than CAGE for detecting at-risk drinking in pregnant women

SAFE LIMITS OF ALCOHOL



- ❑ Dose-response relationship between the amount of prenatal alcohol consumed and the extent of damage in the infant
- ❑ There is NO safe timing for alcohol use during pregnancy
- ❑ There is NO confirmed safe limit for alcohol use in pregnancy
- ❑ Binge drinking is especially risky for fetus
- ❑ Therefore, no alcohol is the safest choice!

SOCIAL ALCOHOL USE PRIOR TO PREGNANCY

- ❑ Women who consumed small amounts of alcohol before they knew they were pregnant can be reassured that the **risk** to their baby is **minimal** if they abstain from further alcohol consumption
- ❑ A systematic review of the effects of prenatal exposure to low levels of alcohol (Henderson et al.) indicated no significant effects on **physical** development either pre- or postnatally
- ❑ A meta-analysis of the research (Testa et al) on the effects of prenatal exposure to low levels of alcohol indicated **significant** effects on **mental functioning** at 12 months of age
- ❑ Therefore, **abstaining** from alcohol use is the only responsible approach
- ❑ Advise **folic acid** use throughout the pregnancy

Intervention: At-risk Drinkers

- ❑ Encourage woman to set drinking goal - abstinence is best but not always possible
 - If non-abstinent goal set, view as harm reduction
- ❑ Self-monitoring (drinking diary)
- ❑ Lab monitoring
- ❑ Avoid HALT (Hungry, Anxious/Angry, Lonely, Tired)-link alcohol use to mood
- ❑ Tips for pacing drinking:
 - 1/hour
 - Alternate alcohol/non-alcohol
 - Sip not gulp
 - 20 minute time out
- ❑ Regular follow-up

RISKS OF HEAVY PRENATAL ALCOHOL USE



- ❑ Alcohol passes through placenta & fetus has limited ability to metabolize alcohol
- ❑ Alcohol is known teratogen → can damage developing fetal cells, umbilical cord & placenta
- ❑ Prenatal exposure to alcohol results in:
 1. Increased risk of spontaneous abortion and stillbirth
 2. Increased risk of FASD (fetal alcohol spectrum disorder) -umbrella term encompassing various effects of alcohol on the developing fetus

FASD:

- F= Fetal: changes in normal development in utero
- A= Alcohol: teratogen causes cell/process changes and damage
- S= Spectrum: damage present from mild to severe
- D= Disorder: difficulty/inability to function or adapt as expected across a lifespan

ASSISTING WITH Alcohol Dependence



If the pregnant woman indicates high-risk drinking:

1. Assess level of motivation and readiness to change drinking behaviour & severity of dependence
2. Offer intervention(s) (e.g., medical detoxification) depending on stage of change and level of alcohol dependence
3. Advise to reduce drinking, if unable to stop – harm reduction
4. Arrange referral to appropriate programs/services
5. Deal with barriers to attending treatment (e.g., family-increased risk if spouse also drinks heavily)

ALCOHOL WITHDRAWAL ⁽¹⁾



- ❑ Alcohol withdrawal in pregnancy requires medical detoxification
- ❑ Symptoms may begin within 6-12 hours of the last drink and may include autonomic hyperactivity, sweating, nausea, vomiting, tremors, anxiety and seizures(2-3 days)
- ❑ Most signs and symptoms resolve by 72 hours
- ❑ Medical care should consist of inpatient admission to monitor vital signs and fetal well-being.

ALCOHOL WITHDRAWAL (2)



- ❑ Folic acid 5mg once daily
- ❑ Thiamine 100mg IM x 1 day then po x 3 days
- ❑ Benzodiazepine protocol to treat withdrawal symptoms as follows: lorazepam 1-2mg po or sl every two to four hours according to withdrawal severity
- ❑ Medication can be stopped once symptoms decrease – no tapering of lorazepam is required
- ❑ If in labour and intoxicated, be sure to watch for withdrawal and ensure pediatric support for newborn

Treatment: What works?

- AA
 - Long-term, immediate access, convenient, provides social network and support
- Counselling by *any* care provider
 - Success depends on therapeutic relationship, not on special qualifications
- Anti-alcohol medications
 - Disulfiram contraindicated in pregnancy
 - Limited information on naltrexone & acamprosate but safer than alcohol

Relapse Prevention

- ❑ Ask about drinking at six week post partum visit
- ❑ Recognize important anniversaries
- ❑ Encourage aftercare, AA
- ❑ Ask about social network, mood, urges to drink
- ❑ Watch for signs of relapse
 - Non-compliance, mood change, etc.

Alcohol and Breastfeeding

- ❑ Alcohol: with moderate, occasional alcohol use: delay nursing for 1 - 2 hours per drink to minimize infant exposure; heavy alcohol consumption should be avoided while breastfeeding because infant detoxifies the alcohol at half the rate of an adult
- ❑ For specific info re alcohol, weight of mother and time delay before feeding, consult Best Start Resources (www.beststart.org) or contact Motherrisk

Effects of Smoking in Pregnancy

- ❑ Increased risk of miscarriage
- ❑ Increased risk of vaginal bleeding (placental abruption and placenta previa) and premature delivery
- ❑ Increased risk of lower birth weight baby (150-200g less)
- ❑ Increased risk of sudden infant death syndrome (SIDS), asthma, bronchitis & pneumonia, ear infections in children

Screening For Tobacco Use In Pregnancy

- ❑ Ask “How many cigarettes do you smoke?”
- ❑ If negative response, assess for second hand smoke exposure – ask “Does anyone smoke around you or your children?”
- ❑ If positive response, assess readiness to change – ask “How do you feel about quitting smoking?”
- ❑ Advise that stopping or reducing nicotine use is best for the fetus (harm reduction)
- ❑ Assist by providing options for smoking cessation

Nicotine Replacement Therapy



- ❑ NRT: better than smoking because the other noxious by-products of smoking are eliminated
- ❑ However, controlled trials have not found benefit from NRT in pregnancy, perhaps because of altered metabolism
- ❑ Animal studies suggest that it may be a neural teratogen, adversely affecting fetal neurodevelopment
- ❑ Therefore NRT should only be considered only if cessation attempts without medication have failed (withdrawal symptoms - peak at 3 to 4 days and last one week - irritability, restlessness, anxiety, insomnia, fatigue , poor concentration)
- ❑ It should be used in a low dose and for a short time period
- ❑ Patch - 7mg /14 mg 21 mg patches available (1 ppd equivalent to 20 mg nicotine) Remember to take off patch at night to reduce fetal nicotine exposure
- ❑ Gum - 2 to 4 mg (maximum 14 mg per day) start with gum first

Medication for smoking cessation



- ❑ Bupropion/Zyban doubles the one-year success rate after cessation for smokers
- ❑ Efficacy in pregnancy still needs to be established but preliminary research indicates bupropion is safe in pregnancy
(Chun-Fai-Chan B, Koren G, Fayez I, Kalra S, Voyer-Lavigne S, Boshier A, Shakir S, Einarson A. (2005). Pregnancy outcome of women exposed to bupropion during pregnancy: A prospective comparative study. Am J Obstet Gynecol. Mar;192(3):932-6.)
- ❑ Some contraindications (seizures, eating disorders, MAOI inhibitors, Alcohol Dependency)
- ❑ Varenicline is a new drug- not indicated in pregnant or breastfeeding women or for those with history of depression

Smoking and breastfeeding

- ❑ Heavy smoking may decrease breast milk production (up to 1/3 decrease in quantity and quality) .
- ❑ Cigarette smoking should be minimized while breastfeeding because nicotine and its metabolites are found in breast milk.
- ❑ Nicotine replacement therapy is an option in breastfeeding.

Risk of smoking and
breastfeeding



Risk of NOT breastfeeding
and offering artificial infant
formula

Marijuana



- ❑ No studies have established safe limits in pregnancy
- ❑ No significant neonatal effects
- ❑ Heavy users may be at risk for preterm delivery
- ❑ Possible neurobehavioural effects in neonate (increased jitteriness, increased tremors)
- ❑ Possible long-term effects described in children exposed in utero

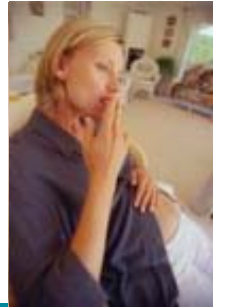
cont'd

Marijuana (2)



- ❑ No specific therapy for withdrawal
- ❑ Dependence managed by encouraging decrease in amount used if unable to abstain from marijuana use (harm reduction)
- ❑ Marijuana is transferred into breast milk and abstinence is encouraged
- ❑ Metabolites of marijuana can last in urine for up to 30 days after latest use

Cocaine and Other Stimulants



- ❑ Possibly teratogenic renal tract abnormalities (conflicting evidence in the literature)
- ❑ Increased rate of obstetrical complications
 - Spontaneous abortion
 - Placental abruption, placenta previa
 - Premature rupture of membranes
 - Preterm labour
 - Low birth rate
 - Cerebral hemorrhage in utero

cont'd

Cocaine and Other Stimulants (2)



- ❑ Can stop use safely during pregnancy
- ❑ No specific therapy for withdrawal – care is supportive
- ❑ The chief symptom of cocaine and amphetamine withdrawal is drug craving
- ❑ Can initially use short-acting benzodiazepines for anxiety and craving but avoid long term use as this drug can lead to addiction
- ❑ Cocaine metabolites can remain in urine for up to 3 days

Cocaine and Other Stimulants (3)



- ❑ If mother intoxicated at time of delivery , the neonate may have mild nervous system effects (poor feeding and sleepiness) and will need close monitoring
- ❑ Cuddling by mother and rooming has been shown to reduce neonatal symptoms
- ❑ Avoid breastfeeding within three days of use (pump and discard) due to transfer into breastmilk
- ❑ Long-term effects have been reported in literature (not definitive)
 - Language delays (expressive and verbal comprehension)
 - Behavioural problems at school

RISKS OF OPIOID DEPENDENCE

- ❑ Opioid withdrawal can trigger uterine contractions leading to an increased risk of **spontaneous abortion (miscarriage)** in the first trimester, **premature labour** in the third trimester
- ❑ Maternal complications include **pre-eclampsia** (pregnancy related high blood pressure) and **antenatal bleeding**
- ❑ Heroin can lead to intrauterine growth restriction and lower birth weight often due to the drug itself and poor nutrition

Opiates and Methadone



- ❑ Women can take medically required opiates during pregnancy without being considered dependent
- ❑ Offer Methadone Maintenance Therapy (MMT)
- ❑ Methadone maintained pregnancies have improved outcomes
- ❑ Methadone dose should be maintained during labour - if not available, morphine can be used to avoid withdrawal
- ❑ Some women will need a reduction in methadone dose postpartum due to decreased weight and altered metabolism

METHADONE MAINTENANCE THERAPY: Initiation

- ❑ Present standard of care for opioid dependence in pregnancy is methadone maintenance treatment (MTT)
- ❑ Methadone is a long-acting opioid with a half-life of 24- to-36 hours
- ❑ Can be initiated in hospital or in an outpatient setting
- ❑ Women on methadone are less likely to experience withdrawal symptoms and drug cravings
- ❑ Methadone-maintained pregnancies have reduced obstetrical complications and improved outcomes (some increased strabismus in infant)
- ❑ Buprenorphine is becoming another option for the future

METHADONE TAPERING

- ❑ Some women want to decrease their dose so their baby won't experience withdrawal
- ❑ Taper slowly; fast withdrawal may precipitate labour (10 % per week or less)
- ❑ Preliminary studies of methadone tapering during pregnancy documented no adverse outcomes
- ❑ Some women require a dose increase in pregnancy – offer a pregnancy test if a patient stable on MMT requires an increased dose
- ❑ Reduce methadone dose post partum but do not stop for at least six months to avoid risk of depression from quick discontinuation

NON-STRESS TESTING & METHADONE

- ❑ Fetus may have decreased movement in utero for two to four hours after a methadone dose
- ❑ It is important to repeat testing after the peak level of methadone has been reached
- ❑ Consider weekly from 32 weeks if there are obstetrical indications for doing the test
- ❑ Methadone leads to decreased beat-to-beat variability, decreased fetal movements and suppresses FHR accelerations (higher incidence on non-reactive NST and longer interval to achieve reactive NST)

Opiates, Methadone and Breastfeeding



- ❑ Methadone enters breast milk in very small quantities
- ❑ Safe to breastfeed on methadone regardless of dose
- ❑ Neonates should be observed at least 4-5 days for signs of withdrawal
- ❑ Ensure close follow-up of mother and baby
- ❑ Inform mother NOT to give her own methadone to the infant

Labour and Delivery Issues



- ❑ Adequate analgesia: opioid-dependent women may require larger doses of analgesics → will not worsen addiction
- ❑ Avoid a fetal scalp clip to prevent transmission of Hep B/C & HIV
- ❑ Injection drug users may have poor IV access → planned IV access is recommended in case of emergency

Postpartum Issues in hospital



- ❑ Babies should room in with mothers to encourage attachment and good parenting
- ❑ Women may room in even if there is a planned removal of infant (to promote bonding and resilience)
- ❑ If baby needs to go nursery, parents should accompany and be encouraged to hold and cuddle infant 24/7 if they wish
- ❑ Encourage breastfeeding and regular visits with infant
- ❑ Frequent f/u visits for mom & baby to assess coping skills and neonatal growth
- ❑ If Urine Drug Screens(UDS) for infant are medically needed, better to obtain consent from the mother

Post Discharge Community Care



- ❑ Assess social support, ensure community supports in place before discharge
- ❑ Ensure safety, food, shelter, baby supplies
- ❑ Regular ongoing support by stable team of caregivers is best predictor of good outcome-monitor mood
- ❑ Link parents to community supports and parenting resources
- ❑ Work with Child Protection Services as required

Conclusion



- ❑ Woman-centered, nonjudgmental care needed
- ❑ Know the substances commonly used in your community
- ❑ Treat substance use when woman is ready for treatment
- ❑ Consider Harm Reduction if abstinence is not possible initially

Resources ⁽¹⁾



- ❑ Pregnancy-related issues the management of addictions (PRIMA): www.addictionpregnancy.ca
- ❑ Best Start: www.beststart.org
- ❑ PREGNETS: www.pregnets.org
- ❑ Smokers' Helpline Alberta 1-866-332-2322
- ❑ Project CREATE: www.addictionmedicine.ca
- ❑ Motherisk: www.motherisk.org