Module 3

Special Populations: Co-Occurring Disorders, Women and Young People

1. Co-occurring psychiatric and substance use disorders
2. Women: substance use disorders and treatment issues
3. Young people: substance use disorders and treatment issues
Workshop 2

Women: SUD and treatment issues
At the end of this workshop you will be able to:

► Explain the differences between men and women affected by SUD, and the barriers women face when accessing treatment

► Identify key issues when managing SUD in pregnant women, as well as the risks for the foetus

► Understand different options for the management of opioid dependence in women

► Explain the difficulties children of drug users may face
Substance misuse among women
Women-specific treatment

- Vulnerabilities
- Treatment issues
- Pregnancy
Let's think!

In what ways are men and women different?
How women are different

► In most countries of the world, circumstances of women’s lives are very different from those of men.

► This is also reflected in their experience of substance use problems.
How women are different

► More often than men, women have been introduced to substances and continue to use substances with their spouses or partners, who may also be physically or sexually abusive

► Women’s substance use problems are more stigmatised and less likely to be acknowledged than men’s
How women are different

► Women who are parents, usually have primary responsibility for childcare, as well as other household responsibilities. However, few treatment services provide childcare, and in some cultures it is very difficult for women to leave their homes and family responsibilities to seek treatment.

► Cultural taboos and stigma mean that women’s substance use problems are often not acknowledged by themselves, their families or helping professionals who could support them in seeking treatment.
Women have more severe problems

- Women have more severe problems at treatment entry than men.
- Many have experienced trauma & use substances to cope with these experiences.
- They are more likely to have mental health problems, e.g., anxiety, depression or PTSD than men.
- Women also have fewer resources in terms of education, employment and finances.
- At the same time, most treatment programmes have been designed with men in mind and do not take into account gender differences.
Substance use among women: Prevalence
Gender imbalance in drug treatment and care
World Drug Report 2016
Illicit drug use

Illicit drug use in the past-year, by gender

World Drug Report 2014
Gender difference in substance of abuse

Men are more likely than women to use drugs such as opiates and cannabis.

The gender gap shrinks when data on the misuse of pharmaceuticals are considered.

In five recently surveyed countries (Australia, USA, Spain, Afghanistan & Pakistan), the illicit use of drugs is more common among men than women, but the non-medical use of pharmaceutical drugs is nearly equivalent, if not higher among women.

Nearly half the women with past-year drug use had used pharmaceuticals, compared with only one third of men.
Women and drug-related offences

Number of women arrested for drug-related offences increased, but the proportion of women in drug-related cases decreased.

*World Drug Report 2016*
Drug use disorders among women

Women are a minority among drug users with:

► Own drug use patterns
► Own vulnerabilities and needs
  – violence
  – stigma
  – drug use in the family
  – sustainability of continuum of care
  – access to treatment
Variation in pattern of use even between countries of same region (2010)
Women substance users spend more than two thirds of their individual income on substances for personal use.
Prevalence of substance use among women: Global trend

► Convergence in rates of use of some illicit substances among young men & young women and ↑ rates of the use among women in general in some European countries

► Increase in substance use among Asian women & ↑ involvement of women IDU in sex work in many Asian countries

► The intersection of injecting drug use, sex work and unsafe sexual practices has become a significant factor in the ↑ risk of HIV among women, particularly in Asia, Eastern Europe and North America
Recently, the traditionally higher prevalence of substance use among men compared to women has narrowed.

There is a trend for older women, i.e., those > 40, towards increasing levels of alcohol consumption.
Substance use while pregnant and breastfeeding

Use of substances during pregnancy can affect both the mother and the baby:

- Increased risk of miscarriage
- Cause migraines
- Cause seizures
- Increased blood pressure for the mother
- Neonatal abstinence syndrome (NAS) in baby
Vulnerability to effect of substance: Gender difference
Heightened brain response to cigarette cues among women
Vulnerability to substance effects: Gender difference

The same level of consumption of a psychoactive drug will have a greater impact on females than males because of their:

- lower body weight
- a higher fat-to-fluid ratio resulting in less dilution of the drug
- variable responses to drugs because of menstrual hormonal fluctuations

Result:

- women become more easily intoxicated
- women sustain tissue damage at lower doses
Vulnerability to effect of alcohol: Gender difference

► Liver Damage:
  – women more likely to develop alcoholic hepatitis

► Heart Disease:
  – women more susceptible to alcohol related heart disease

► Breast Cancer:
  – 10 %higher chance in women who consume about one drink per day
  – risk increase by another 10 percent for every extra drink per day
Identifying negative consequences of drug use

**Intoxication**
- lower tolerance
- severe physical reactions
- overdose
- victimisation
- falls
- drunk driving
- unsafe sex
- accidents and injury

**Regular/Excessive Use**
- organ damage at lower dose
- organ damage at lessor duration
- conception difficulties
- pregnancy – risk to the foetus
- work
- relationships
- finances
- child-rearing

**Dependence**
- family and societal censure
- child welfare intervention
- marginalisation
- reluctance to seek help
- overdose potential
- rapid deterioration in health
Why can it be difficult to detect SUD in female patients?
Gender differences in treatment

► Women less likely to enter treatment
  – Socio-cultural: stigma, lack of partner/family support
  – Socioeconomic: child care, pregnancy, fears about child custody

► Children are a big motivator to enter treatment or avoid it

► Availability of appropriate treatment for co-occurring disorders is important
Gender differences

► Few differences in retention, outcome or relapse rates
► If there are differences, women have better outcomes
► Show greater improvement in other domains (e.g., medical), shorter relapse episodes, more likely to seek help following a relapse
‘Red Flags’ suggestive of high-risk substance use

- Family history of high-risk drug use
- Chaotic lifestyle
- Repeated injuries, emergency department visits
- Partner who is abusive and/or uses drugs in a high-risk manner
- Lack of antenatal care, missed appointments, non-compliance
‘Red Flags’ suggestive of high-risk substance use

- Intoxication or drowsiness during visit
- Requests for opioids or benzodiazepines, STDs, HIV, HBV, HCV
- Mental health issues
- Previous pre-term delivery, foetal demise or placental abruption
- Previous child with foetal Alcohol Syndrome (FAS) or Neonatal Abstinence Syndrome (NAS)
Barriers for treatment

- Lack of child care
- Lack of transportation
- Lack of insurance or other financial resources
# Barriers for treatment

## External barriers

- Male-oriented treatment models
- Partners
- Involvement with substance abusing
- Lack of diagnosis or misdiagnosis

## Internal barriers

- High levels of shame and guilt
- Fear of leaving or losing children
- Low self-esteem
- Lack of information about services
Key services to improve outcomes for women

- Child care
- Social services
- Prenatal care
- Supplemental services addressing women-focused topics (e.g., trauma history)
- Mental health services
- Transportation
- Women-only groups
Treatment issues

► Women perceive that the costs associated with treatment are greater, compared to men
  – social/family censure
  – financial
  – separation from children

► Many women who present to SUD treatment have been physically, sexually or emotionally abused at some time

► Women have reported feeling vulnerable or have experienced sexual harassment in mixed-sex programs. This may lead to premature ending of treatment.
Treatment issues

- Women-only treatment services may be of value with some populations of women, especially where abuse and violence are common.
- Mixed-sex programs may be appropriate where policies & protocols supporting the specific needs of women have been adopted.
- Child-care arrangements may be required before some women will agree to enter treatment.
- Holistic treatments offering conventional and/or complementary therapies may be preferred.
- Female health professionals may be preferred.
Treatment culture

- Female role models at all levels of hierarchy
- Positive male role models available
- Forthright feedback but not aggressive confrontation
- Monitor the intensity, especially for women who are more disturbed
- Sexual boundary issues
Interventions oriented towards women are associated with:

- greater progress towards goals during treatment
- higher rates of abstinence during treatment than for women in conventional mixed-sex treatment

Women are more likely to present to female-only treatments and to complete treatment if:

- they have dependent children
- they are lesbian
- their mothers experienced an substance use-related problem
- they have suffered sexual abuse
Mixed gender programmes

► Most consistent difference: provision of services related to pregnancy and parenting
  – parenting classes
  – children’s activities
  – pediatric, prenatal, post-partum services

► Also more likely to assist with housing, transportation, job training, practical skills training
Women-only vs mixed gender programmes

Women-only groups

► Foster greater interaction, emotional and behavioral expression
► More variability in interpersonal style
► Women in mixed groups engage in a more restrictive type of behaviour; men show wider variability (and interrupt women more)
Let’s reflect!

Think of the treatment programmes in your centre/community and share your experience with colleagues:

► How many women are there in your treatment programme/centre?

► How does your programme/centre respond to women’s needs? What services for women do you provide?

► What is there to improve and how can it be done?
Where are we so far?

► Why address women differently in treatment of drug use disorders?
► Why it can be difficult to detect substance use problems in women?
► What barriers for treatment exist for women?
► What female-oriented treatment should be like?
► What are the benefits of women-only treatment programmes?
Special considerations
High-risk or dependent patterns of psychoactive drug use can affect female fertility causing:

- Disruption of hypothalamic-pituitary-gonadal axis (alcohol and heroin)
- Menstrual irregularities, ovulatory failure, early menopause (alcohol)
- Amenorrhoea (heroin, amphetamines, cocaine)
- Increased risk of sexually transmitted disease (which affects fertility)
SUD and sexual behaviors

- Risk-taking behaviour while intoxicated
  - unprotected sex may lead to pregnancy and/or STIs

- Drug use causes irregular menstrual cycles, but can still conceive
  - may not realize she is pregnant for several months
Pregnant women and women with dependent children tend to engage in treatment longer than other women

Women who are dependent on SUD may experience difficulty conceiving

Lower fertility can occur for those women with dependent patterns of psychoactive drug use
Co-morbidity in women

➤ Women with SUD problems commonly experience anxiety and/or depression
  – more likely than males with SUD problems to experience a combination of anxiety and depression

➤ Concurrent benzodiazepine and alcohol dependence presents additional treatment challenges, e.g., consider:
  – pharmacotherapy options
  – risk of substitution of dependence
  – graduated reduction/withdrawal
Co-morbidity in women

- Younger women who are drug-dependent are increasingly likely to be polydrug users.

- Association between eating disorders (particularly bulimia) and high-risk alcohol use:
  - the eating disorder usually predates the alcohol problem
  - drinking temporarily suppresses stress, shame, & anxiety associated with the eating disorder
  - cognitive-behavioural treatment for eating disorders and SUD problems is similar, so there is an opportunity for dual intervention
Substance use in pregnancy
Adulteration

- White powder
-Varies dealer to dealer & batch to batch
-“Buyer beware”
-Common adulterants  
  - sugar, condensed milk  
  - OTC or Rx meds
-User doesn’t know what is in the drug she bought
Prevalence of substance use in pregnant women

In the USA, according to the 2009 National Survey on Drug Use and Health:

► 4.5% of pregnant women (15 to 44 yrs.) had recently used illicit drugs (e.g., marijuana, cocaine, hallucinogens, heroin, methamphetamines and prescription drugs)

► 11.9% women reported binge or heavy drinking in the first trimester

► 15.3% reported recent tobacco use
Alcohol and pregnancy

► No proven “safe” limit in pregnancy
► Binge drinking especially detrimental to foetus
► Any drinking during pregnancy, puts foetus at risk for learning, behavioral problems & abnormal facial features
► May increase the risk for preterm labor
► Alcohol has been found in breast milk
A good time for change...

- Pregnancy is a strong motivator for women to change their SA behaviours. Many pregnant women will wish to cease risky levels of drug use to protect their baby.
- Most pregnant women will respond to offers of treatment.
- If the patient is dependent, advise ongoing care or drug titration/maintenance, as rapid drug cessation (and the resulting withdrawal) may pose a significant risk to the foetus.
Opportunistic engagement

When contact with pregnant women who engage in high-risk SUD use is limited or inconsistent:

► Be flexible
► Derive maximum benefit from each contact
► Do not judge or make the mother feel (more) guilty
► Be clear about the dangers, but express hope (use examples of success for similar patients)
► Be patient! Most pregnant women do eventually engage in treatment
Staff who could make clients feel…

► cared for
► respected
► understood

...played a key role in client retention.
Reducing health and social consequences is a priority

Look for opportunities to:

► Educate women about their greater susceptibility to substances and related effects
► Provide information regarding drug interactions
► Engage patients in discussions about strategies to reduce substances intake and frequency of use
► Routinely undertake physical assessment
► Provide regular health check-ups and discuss lifestyle issues
Alerting the ‘mother-to-be’

► Take care not to over- or understate potential for substances-related foetal damage
  – because of the high prevalence of binge drinking among women, many fear the occurrence of possible foetal damage during first trimester
  – if the patient has high-risk or dependent patterns of use, she may fear her children will be removed from her care

► Provide accurate information

► The precise “dose-damage threshold” by stage of pregnancy for many drugs is unknown (most information relates to alcohol & tobacco)
Assessment of ‘mothers-to-be’

Assess for factors that may be associated with high-risk patterns of substance use:

► Pharmacotherapy options
► Poor nutrition
► Inadequate/poor/unsafe accommodations or environment
► Presence of blood-borne viruses (BBV)
► High-risk sex
► Risk or likelihood of sharing injection equipment
► Social isolation & mental health issues
► Relationship stress/violence
Assessment of ‘mothers-to-be’

► Access possible sources of information on the patient’s drug use and lifestyle to determine her risks (be aware of confidentiality)

► Determine:
  - Quantities and types of substances used
  - Frequency/patterns of use
  - Route(s) of administration
  - Concurrent drug use (including over-the-counter and “herbal” preparations)
Antenatal shared care

- Dependent drug use in the mother requires coordinated shared care, ideally with specialist involvement:
  - Obstetrician
  - Neonatologist
  - Addiction medical specialist with expertise in pregnancy

- Antenatal care is essential
Antenatal shared care

► Involve relevant support organisations
► Consider counselling to terminate the pregnancy when the woman is concerned about damage having already occurred and/or is HIV-positive
► Consider benefits of withdrawal treatment or pharmacotherapy maintenance regimes if she is dependent
► Involve specialist SUD treatment centres
Effects on foetus
The ’drug vulnerable’ foetus

Almost all drugs used in a high-risk manner by the mother may result in:

- increased risk of miscarriage, premature labour, still birth
- foetal distress
- reduced birth size/weight and associated slow growth
- developmental delays

Dependent drug use in a mother may result in Neonatal Abstinence Syndrome (NAS) (withdrawal shortly after birth)
Risk for the foetus: Smoking

Nicotine

► Crosses placenta and is found in breast milk
► Restricts placental blood flow with reduced oxygenation
► Higher quantities of cigarettes smoked are associated with lower birth weight

Smoking

► Inhibits foetal breathing, leading to increased risk of SIDS, stillbirth, perinatal death
► Higher incidence of respiratory infections, asthma, middle ear infections in babies
Smoking during pregnancy associated with a range of adverse outcomes for the foetus, new-born, and the individual as he/she develops.

CO2 and nicotine from tobacco smoke may interfere with foetal oxygen supply – and because nicotine readily crosses the placenta, it can reach concentrations in the foetus that are much higher than maternal levels.
Risk for the foetus: Nicotine smoking

- Nicotine concentrates in foetal blood, amniotic fluid, and breast milk, exposing both foetuses and infants to toxic effects.

- The adverse effects of smoking during pregnancy can include increased risk for stillbirth, infant mortality, Sudden Infant Death Syndrome, preterm birth, respiratory problems, slowed foetal growth and low birth weight – an important risk factor for later developmental delay.

- Low birth weight has been shown to be dose-dependent, which means the more a woman smokes during pregnancy, the more infant birth weight decreases.
Risk for the foetus: Nicotine smoking

- Smoking during pregnancy can affect cognition and is associated with behavioral problems.
- Smoking > a pack/day nearly doubles the risk of the child becoming addicted to tobacco if he/she starts smoking.
- Even 2nd hand exposure to cigarette smoke can cause problems.
- Strong associations have been found between 2nd hand smoke, ↓ birth weight & premature birth.
- Exposure during the postnatal period associated with several physical health outcomes e.g. SIDS, resp. illnesses, ear infections, cavities, ↑ medical visits & hospitalizations.
Cannabis use during pregnancy has been found to result in a shorter gestational period and decreased maternal weight gain.

Tremors and altered visual responsiveness has been reported in newborns of heavier cannabis users.
Risk for the foetus: Cocaine, marijuana, and other illicit drugs

- Use of illicit drugs in pregnancy, associated with a variety of adverse effects
- Effects subtle, range from ↓ birth weight to developmental deficits affecting behaviour and cognition which can affect success in school
- Leads to e.g., ↓ attention, language, learning skills, behavioural problems, in children exposed to cocaine and marijuana
- Methamphetamine exposure associated with ↓ foetal growth, ↓ arousal, ↓ quality of movement in infants
- Heroin use in pregnancy associated with ↓ birth weight, but impact of prescription opiate abuse on pregnancy is not well understood
The first few weeks after conception present the greatest risk to the foetus, as alcohol enters the foetus’ bloodstream.

High peak blood alcohol levels (i.e., drinking to intoxication) are particularly dangerous for the foetus.

High-risk patterns of drinking during pregnancy may result in: spontaneous abortion, cardiac malformation, stillbirth, intrauterine growth retardation.

Foetal death has been associated with high intake (> 42 standard drinks per week) throughout pregnancy.
Risk for the foetus: Alcohol
Foetal Alcohol Syndrome (FAS)

Occurs in 1/1,000 live births

Features:

► Characteristic facial malformations (e.g., flat midface, small head, thin upper lip, small eyes, short upturned nose, prominent epicanthic folds, low-set ears etc.)

► Prenatal and postnatal growth retardation (e.g., underweight, small body length, lack catch-up growth)

► Central nervous system dysfunction (e.g., mental retardation, short attention span, developmental delays, long-term learning difficulties, behavioural problems)
FAS diagnosis

1. Prenatal or postnatal growth retardation
2. Brain dysfunction (intellectual retardation, poor muscle tone, irritability)
3. Facial dysmorphology
   - microcephaly
   - microphthalmia (smallness of the eye)
   - thin upper lip
Risk for the foetus: Alcohol
Foetal Alcohol Effects (FAE)

Occurs in 1 in 100, when some but not all features of FAS are described.

Symptoms include:

► Low birth weight
► Behavioural difficulties
► Learning difficulties
Risk for the foetus: Alcohol

Abstinence is preferred during pregnancy. While there is no evidence that consumption of \( \leq 1 \) standard drink per day results in harm to the foetus, there is no established safe consumption limit.
Risk for the foetus: Heroin

- Unclear whether general effects to the foetus are a result of heroin use per se or poor nutrition/health/lifestyle factors.

- Opiate use may contribute to many obstetrical complications, e.g.:
  - placental abruption / spontaneous abortion
  - intrauterine growth retardation or death (with low birthweight)
  - premature labour

- Risk of transmission of HIV/HCV through unsafe using or sexual practices.
Possible neonatal effects of heroin

- Low birth weight
- Meconium aspiration (foetal stress)
- STDs
- Neonatal withdrawal syndrome (60-80%)
- Delayed effects, 4-6mos (jittery)
- No effect
Foetal and neonatal difficulties associated with maternal cocaine use

- Foetal difficulties associated with use during pregnancy
- Placental abruption
- Intrauterine growth retardation
- Spontaneous abortion
- Pre-eclampsia
- Pulmonary edema
- Seizures
- Cardiac arrhythmias

- Congenital physical anomalies affecting mostly the ocular and urogenital systems
- Neonatal difficulties associated with heavy use near term, such as neonatal intoxication, with symptoms including:
  - irritability
  - hypertonia
  - sleep and appetite disturbances
Risk for the foetus: Benzodiazepines

Use in pregnancy may result in:

► Congenital facial (e.g., cleft lip/palate), urinary tract or neurological malformations
► Neonatal Abstinence Syndrome (particularly if used in conjunction with other drugs)

High doses before delivery may cause:

► Respiratory depression, sedation
► Hypotonia (floppy baby syndrome)
► Hyperthermia
► Poor feeding
May be an association between low birth weight and > 5–6 cups of coffee/tea, > 6 cans of cola per day

Irregular foetal heart rate late in late pregnancy

Neonatal Abstinence Syndrome (NAS) has been observed in relation to high caffeine levels in the mother
Risk for the foetus:
Solvents and other volatile substances

► Reduced oxygen levels to the foetal brain
► Effects can be similar to foetal Alcohol Syndrome
► Neonatal renal problems
► Decreased body weight
► Damage to reproductive cells reducing future conception & pregnancy
► Possibly fatal to mother and baby at high doses
Risk for the foetus: Amphetamines

- Psychostimulants increase the risk of:
  - maternal hypertension
  - placental abruption and haemorrhage

- Effects will vary considerably depending on:
  - gestational period in which use occurs
  - frequency, amount, concurrent drug use
  - individual differences in metabolism
Stimulants: Effects on foetus

- Preterm labor
- Spontaneous abortion
- Placental abruption
- Foetal hypertension
Effect on neonate. Neonatal abstinence syndrome
High incidence of NAS from prenatal exposure to heroin or methadone, but also results from dependent patterns of alcohol, benzodiazepine and various other substances.
# Drugs and Neonatal Withdrawal

## TABLE 2 Maternal Nonnarcotic Drugs That Cause Neonatal Psychomotor Behavior Consistent With Withdrawal

<table>
<thead>
<tr>
<th>Drug</th>
<th>Signs</th>
<th>Onset of Signs</th>
<th>Duration of Signs (^a)</th>
<th>Ref. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>Hyperactivity, crying, irritability, poor suck, tremors, seizures; onset of signs at birth, poor sleeping pattern, hyperphagia, diaphoresis</td>
<td>3–12 h</td>
<td>18 mo</td>
<td>14,15</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>Irritability, severe tremors, hyperacausis, excessive crying, vasomotor instability, diarrhea, restlessness, increased tone, hyperphagia, vomiting, disturbed sleep; onset first 24 h of life or as late as 10–14 d of age</td>
<td>1–14 d</td>
<td>4–6 mo with prescription</td>
<td>12,13</td>
</tr>
<tr>
<td>Caffeine</td>
<td>Jitteriness, vomiting, bradycardia, tachypnea</td>
<td>At birth</td>
<td>1–7 d</td>
<td>161</td>
</tr>
<tr>
<td>Chlordiazepoxide</td>
<td>Irritability, tremors; signs may start at 21 d</td>
<td>Days–weeks</td>
<td>9 mo; 11/2 mo with prescription</td>
<td>11</td>
</tr>
<tr>
<td>Clomipramine</td>
<td>Hypothermia, cyanosis, tremors; onset 12 h of age</td>
<td>Days–weeks</td>
<td>4 d with prescription</td>
<td>182</td>
</tr>
<tr>
<td>Diazepam</td>
<td>Hypotonia, poor suck, hypothermia, apnea, hypertonia, hyperreflexia, tremors, vomiting, hyperactivity, tachypnea (mother receiving multiple drug therapy)</td>
<td>Hours–weeks</td>
<td>8 mo; 10–66 d with prescription</td>
<td>10</td>
</tr>
<tr>
<td>Ethchlorvynol</td>
<td>Lethargy, jitteriness, hyperphagia, irritability, poor suck, hypotonia (mother receiving multiple drug therapy)</td>
<td>Possibly 10 d with prescription</td>
<td></td>
<td>183</td>
</tr>
<tr>
<td>Glutethimide</td>
<td>Increased tone, tremors, opisthotonos, high-pitched cry, hyperactivity, irritability, colic</td>
<td>6 mo</td>
<td></td>
<td>184</td>
</tr>
<tr>
<td>Hydroxyzine</td>
<td>Tremors, irritability, hyperactivity, jitteriness, shrill cry, myoclonic jerks, hypotonia, increased respiratory and heart rates, feeding problems, clonic movements (mother receiving multiple drug therapy)</td>
<td>5 wk with prescription</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Meprobamate</td>
<td>Irritability, tremors, poor sleep patterns, abdominal pain</td>
<td>Hours–days</td>
<td>9 mo; 3 mo with prescription</td>
<td>185</td>
</tr>
<tr>
<td>SSRIs</td>
<td>Crying, irritability, tremors, poor suck, feeding difficulty, hypertonia, tachypnea, sleep disturbance, hypoglycemia, seizures</td>
<td>Hours–days</td>
<td>1–4 wk</td>
<td>31–33,35</td>
</tr>
</tbody>
</table>

\(^a\) Prescription indicates the infant was treated with pharmacologic agents, and the natural course of the signs may have been shortened.
## Time to onset of neonatal withdrawal signs

<table>
<thead>
<tr>
<th>Drug</th>
<th>Time</th>
</tr>
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<tbody>
<tr>
<td>Alcohol</td>
<td>3 to 12 h</td>
</tr>
<tr>
<td>Barbituate</td>
<td>1 to 14 days</td>
</tr>
<tr>
<td>Diazepam</td>
<td>Hours to weeks</td>
</tr>
<tr>
<td>Heroin</td>
<td>24 h - 7 days</td>
</tr>
<tr>
<td>Methadone</td>
<td>24 to 72 h</td>
</tr>
</tbody>
</table>
Neonatal Abstinence Syndrome

- Characterized by
  - hyperactivity, irritable
  - hypertonia
  - difficulty/excessive sucking
  - high-pitched cries

- Begins 3 h to 12 day after delivery, depending on drugs used by mother
Neonatal withdrawal (NAS, NWS) with MMT

- Predictable, usually within 72 hours of birth
- Monitor for spasms/seizures
- May have trouble gaining weight at first
- Normal development after first year
- Not dose-related, split dose may be helpful
Treatment of NAS

- Initial treatment is supportive: frequent feeding, IV fluids
- Assess regularly for symptoms and failure to thrive
- Pharmacotherapy: usually opioids, occasionally sedative-hypnotic (phenobarbital)
Where are we so far?

► What are some special considerations about women misusing substances?
► What are the priorities when treating a pregnant woman?
► What risk for foetus do different drugs cause?
► What is a Neonatal Abstinence Syndrome?
Break
Management of SUD in pregnancy
Management of alcohol withdrawal in pregnancy

- Detox with Benzodiazepines, preferably in an inpatient setting, under specialist supervision
- Chlordiazepoxide or Diazepam can be used
- No relapse prevention medication has been evaluated in pregnancy
- The British National Formulary: avoid Acamprosate in pregnancy & avoid Disulfiram in the first trimester. Naltrexone may be used if ‘benefit outweighs risk’
- In the USA, advice is to avoid all these unless ‘potential benefit outweighs risks’
Pregnancy and smoking cessation

- Psychosocial interventions should be offered since they are effective
- Offer NRT after risk-benefit analysis if other interventions have failed
- NRT may present some risk to the foetus, but this may be less harmful to the foetus than smoking during pregnancy
Management of opioid dependence in pregnancy: Methadone
Methadone and pregnancy

- Improvement in outcomes overall over heroin
- Foetal growth more normal than with heroin
- Perinatal mortality less than with heroin
- NAS predictable and at least 45% need treatment
- Breastfeeding OK
Pregnant women and MMT

- Admission is expedited
- Monitoring requirements intensified
- Education about NAS, and about avoiding withdrawal during pregnancy
- Education about other substances
Talking with pregnant patients about MMT

- Fear about methadone
- Dose-related issues
- CPS, legal issues
- Views about pregnancy
- Parenting
- Polysubstance abuse
What is a good outcome for MMT in pregnancy?

- Maternal abstinence during pregnancy, with steady blood levels of methadone
- Regular prenatal visits with clinician who knows about MMT and Methadone
- Attention to surrogate markers of foetal withdrawal (increased motion, maternal craving or withdrawal)
- Baby stays at least 5 days, NAS controlled
- Mother continues MMT after delivery, dose may decrease, may breastfeed
Methadone and pregnancy

- Standard of care for opioid-dependent pregnant women
- Medical withdrawal not recommended
  - high relapse rates
  - risks to foetus
- Pregnancy is a high priority, so more rapid entry into programs
- Maternal benefits not offset by harm to newborn
Methadone and pregnancy

- Stabilization of mother and foetus: medical and social
- Improved maternal health and nutrition
- Better participation
  - prenatal care
  - addiction treatment
- Prepare for arrival of baby
- Reduces stress on foetus
  - reduces fluctuations in maternal opioid level
- Avoids adulterants
- Improves growth of foetus & new-born
- Reduces obstetrical complications
Beneficial effects

- Enhanced recovery
- Reduced mortality
  - 70% reduction
  - Overdose
  - Trauma
  - Homicide
  - Medical illnesses

- Improved health
  - Medical
  - Psychiatric

- Improved psychosocial functioning
  - Employment
  - Criminal activity
  - Family responsibilities
Methadone and pregnancy

- Decreases practice of high-risk behaviours
  - Injection drug use
    - HCV, HBV, HIV, etc.
  - Prostitution
    - risk of STDs
    - violence
- Reduces obstetric complications
  - Preterm labor (30-40% with opioids)
Methadone and pregnancy

- Daily dose over 60mg is most effective
- Higher dose in 3rd trimester
  - larger plasma volume
  - increased tissue binding
  - enhanced methadone metabolism
  - increased methadone clearance
- Split dosing ideal, but not always possible
MMT in pregnancy: Evidence

► MMT shows better birth outcomes & ↑ regular antenatal care visits for women maintained on methadone than for those not in treatment

► MMT has been shown to retain ↑ proportion of pregnant women in treatment than briefer abstinence-focused interventions

► Enhancing MMT with ↑ antenatal care and relapse prevention groups can lead to further improvements in treatment engagement, fewer positive urine screen results and higher birth weights
Management of opioid dependence in pregnancy: Buprenorphine
Buprenorphine in pregnancy

Buprenorphine shows considerable potential as a treatment for opioid-dependent pregnant women, and may be associated with a low incidence of neonatal abstinence syndrome.

(Fischer et al., 2000)
There is increasing experience with use of buprenorphine during pregnancy and increasing evidence for its effectiveness in maternal and foetal outcomes.

In 2006, a prospective study* concluded that perinatal outcomes were similar for methadone and buprenorphine.
In 2008, a Cochrane review found maintenance with buprenorphine and Methadone had similar outcomes in:
- Maternal treatment drop-out rates
- Use of heroin
- APGAR scores
- NAS

In 2008, a study concluded that buprenorphine was associated with lower levels of NAS and ↑birth weight.

In 2010 the MOTHER study, an international multicentre RCT involving 176 pregnant women, found treatment with buprenorphine lead to less severe NAS requiring less medication and shorter stays in hospital.
Buprenorphine in pregnancy: Special considerations

Summary of product characteristics of Buprenorphine (August 2012):

► Insufficient data for safety of buprenorphine in pregnancy

► NAS and respiratory suppression have been reported in new born after treatment of the mothers in the last part of the pregnancy

► Buprenorphine should only be used in pregnancy if the benefits outweigh the possible risk

► At the end of pregnancy, if high doses given, neonatal monitoring should be considered
British National Formulary recommendations

► When women stabilised on methadone or buprenorphine becomes pregnant, therapy should be continued

► Buprenorphine is not licenced for use in pregnancy (but not contraindicated)
Dealing with other drug use

- In general, all drug use is reduced on methadone maintenance

- May escalate other drug use when heroin not effective
  - Cocaine
  - Alcohol
  - Sedatives (benzodiazepines)

- Intensify counseling, reaffirm goals for all drug abstinence
Management of opioid dependence in pregnancy: Evidence based recommendation

- Buprenorphine combined with Naloxone is contraindicated in pregnancy
- Methadone and buprenorphine maintenance treatment improves maternal and foetal outcomes, and substitution treatment should be offered to pregnant opioid-dependent women
Management of opioid dependence in pregnancy: Evidence based recommendation

► The choice of medication should be based on individual need and preference following full assessment, and the dose of methadone prescribed should be that which maintains clinical stability

► Buprenorphine may be associated with less NAS

► Detoxification should be avoided in the first trimester, is preferred in the second and only with caution in third trimester
Management of cocaine / stimulant dependence in pregnancy

► No one drug has been found to be unequivocally effective

► Withdrawal symptoms that emerge on abrupt cessation of cocaine during pregnancy may be reduced with short-term use of benzodiazepines or antipsychotics

► Unlike with opioids, there is no safe drug for substitute prescribing during pregnancy
Management of cocaine / stimulant dependence in pregnancy

Treatment is often a combination of symptomatic interventions during the withdrawal phase and psychosocial interventions, and there has been very little systematic research into the effectiveness of this approach in pregnant women.

A similar approach should be adopted in managing the use of other psychostimulant drugs such as amphetamines and methylenedioxymethamphetamine (MDMA, ecstasy), where the evidence base is also limited.
Management of benzodiazepine dependence in pregnancy

► Sudden cessation of benzodiazepine use can lead to maternal convulsions & should be avoided
► The aim is usually to identify a mutually agreeable and realistic goal, be it low-dose ‘maintenance,’ gradual reduction or detoxification
► For women using high doses of benzodiazepine alone, without any significant psychosocial or medical complications, gradual reduction and detoxification in the community are recommended
► Women who are taking short or medium-acting benzodiazepines (e.g. lorazepam, oxazepam) should be transferred to an equivalent dose of diazepam and the dose gradually reduced to zero
Management of benzodiazepine dependence in pregnancy

- High doses of benzodiazepine in combination with other drugs, or those who have complicating medical, psychiatric or psychosocial problems, are best managed in hospital.

- With long-acting benzodiazepines, symptoms of withdrawal may not be manifest for the first 5–7 days and post-withdrawal problems such as sleep disturbance may take several weeks to resolve.

- Pharmacological treatment is best supplemented with individual supportive psychotherapy, anxiety management and other supportive measures.
Substance use in pregnancy: Summary

- Drug use behaviors may increase risk for unplanned pregnancy
- Adulterants also harm mother and foetus
- Methadone maintenance is treatment of choice for opioid-addicted pregnant women with increasing evidence base for safety and efficacy of Buprenorphine
- Often must increase dose in 3rd trimester
- Breastfeeding is encouraged
- Support for mother is essential
- Anticipate and educate to prevent relapse
Substance misuse in women: Breastfeeding
Breastfeeding

► Encouraged
  – promote bonding
  – optimal nutrition
  – passive immunity

► Contraindications
  – active substance abuse
  – HIV +

► Methadone dose not important consideration
Drug use and breastfeeding

► Most substances of misuse are lipid soluble and hence are excreted in significant amounts in breast milk and easily cross the blood-brain barrier of the infant. This exposes the newborn child to a range of adverse effects, including intoxication and withdrawal.

► It is generally accepted that women who are well stabilized on reasonably low doses of prescribed drugs may breast-feed their babies, as the potential benefits far outweigh the risks.

► Breastfeeding is not thought to be a significant route of transmission of hepatitis B or C.
Drug use and breastfeeding

- It is preferable to avoid breastfeeding a baby for 1-2 h after taking any street drug or medication, as this is the time of highest plasma drug concentration.

- Mothers should be taught about signs and symptoms of intoxication and withdrawal in the baby and should seek medical advice if any doubts arise. Breastfeeding should not be abruptly discontinued, as this can precipitate withdrawal symptoms, and gradual weaning with slow introduction of alternative semi-solid foods should be instituted.
Contraindications for breastfeeding

Breastfeeding is not advisable if the woman is:

► Using multiple substances in large quantities
► Using in a very inconsistent manner
► Injecting drugs
► Using cocaine, crack or large doses of amphetamines
► HIV positive
Parenting skills

► Education
  – breastfeeding
  – umbilical cord care
  – approach for ‘fussy’ infant
  – age-appropriate discipline for other children

► Prevent frustration that leads to relapse
Children & SUD

Young children don’t have to use drugs themselves to be affected

► Child neglect & abuse
► Loss of family structure
► Inappropriate role models
► Impair intellectual, social, & ethical behaviour
Potential impact of parental drug use on children’s welfare

- Impaired judgment, coordination and consciousness can affect a parent’s ability to care for and supervise young children
- Drug-induced disinhibition can lead to aggressive behaviour, including domestic violence
- Withdrawal from certain drugs can cause irritability and mood disturbance
- Unemployment, poverty and criminality may impair family functioning
Potential impact of parental drug use on children’s welfare

► Drug use can become a higher priority for the parent than buying basic essentials for the family
► Reduced parental vigilance may leave children vulnerable to abuse by visitors to the home
► The presence in the home of drugs and/or injecting equipment puts children at risk
Potential difficulties faced by the children of drug users: Summary

- Inadequate parenting or supervision
- Separation
- Poverty
- Physical and emotional abuse or neglect
- Poor education
- Exposure to criminal behaviour
- Social isolation
Drug-dependent parents may have experienced psychological, sexual, or emotional abuse as children. They may in turn inflict similar treatment on their children.

Discharge planning meeting should involve health/welfare personnel & the family.

Management plans should be agreed upon and documented.

Where specific risk factors are identified, statutory child protection agencies must be notified.

- inform the patient of your statutory obligations
Relapse prevention
Relapse issues for women

- Untreated psychiatric disorders, especially depression and trauma sequelae (PTSD)
- Relationship problems
- Underestimating the stress of reunification or ongoing parenting
- Isolation, poor social support
- High level of burden
Relapse prevention for women

Women with alcohol dependence:

- Tend to drink at home and/or alone more often than men (males are more likely to engage in dependent patterns of drinking in social settings)

- Tend to report feelings of powerlessness and distress about life events prior to drinking episodes, and to a greater extent than their male counterparts

- Are more likely to live with a male who is alcohol-dependent (than the converse)
Relapse prevention in women

► Social supports are a vital factor in preventing relapse. Relapse prevention may need to address issues such as:

► Loneliness

► Low self-esteem or perceptions of self-efficacy

► Guilt

► Depression

► Difficulties in social and family relationships (including children)
Let’s think!

Case study

Think of ways to respond to the following situation:

Janis is a 17-year-old apprentice hairdresser. She presents requesting testing for hepatitis C. In a discussion of risk factors, she admits to occasionally using heroin.
Where are we so far?

► How to address pregnant women who are in MMT programme?
► What does evidence say about MMT in pregnancy?
► How to approach the treatment Neonatal Abstinence Syndrome?
► How can parental drug use influence children’s welfare?
► What key aspects should be addressed to prevent relapse in women?
Engaging women in treatment

Pregnant & Postpartum Women & Their Infants Programme (U.S. Govt.): Recommendation on engaging women

Few Key Points from the recommendation

► Women-only programmes
► Early detection in primary-care settings
► Integrated rather than fragmented services
► Early recognition of comorbidity
► Address cultural traditions: e.g., home detoxification
► Address culturally sanctioned substances e.g. alcohol
► Approaches to reduce health and social consequences
► Respectful service philosophy
► Continued support/after care: e.g., family-role changes
► Practical care: family planning, nutrition, babysitting costs
SUD in women: Summary

- There is a lack of research-based information on women’s substance use (SU).
- Women are less likely than men to use illicit substances such as opioids and cocaine, but more likely to use pharmaceutical substances.
- Among young people here is some evidence of convergence in rates of illicit SU.
- Gender differences in acute & chronic effects of some substances, e.g., women become dependent more quickly & women who are IDUs engage in more HIV risk behaviours & overall have higher mortality rates than men.
- SU in pregnancy may cause early delivery, small babies & other substance-specific effects.
Women seeking treatment are more likely to be younger with fewer resources related to education, employment and income, have children living with them and live with a spouse or partner who is using substances.

Women with SUD are more likely than men to have experienced trauma and to have higher rates of concurrent psychiatric problems.

Women are underrepresented in substance abuse treatment.

Improved outcomes for women participating in treatment specifically designed to meet their needs.
Respectful service philosophy, which addresses women’s shame and guilt, loss of control over their lives and their mistrust of the systems scrutinizing them, by providing an environment that is non-judgmental and promotes mutual respect and empowerment and builds on women’s strengths is key to effective treatment.
Questions
Why the situation with women is different compared to men when it comes to substance misuse?

Can you give some examples of barriers for treatment for women?

What are effective ways of engaging women in treatment?

How can opioid dependence in women be managed?

What kind of difficulties children of drug users may face?
Thank you for your time!
End of workshop 2