Management of substance use and substance use disorders in pregnancy and postpartum period

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Overview

- Substance use in pregnancy and its consequences
- Governing principles of treatment and care in pregnancy and postpartum period
- Prevention of substance use in pregnancy
- Management of substance use and substance use disorders in pregnancy and postpartum period
- Breastfeeding and maternal substance use
- Management of infants exposed to alcohol and other psychoactive substances

Introductory statements

- Use of alcohol and other psychoactive substances during pregnancy and postpartum period is common and can lead to multiple problems for both mother and child (no “safe” use)
- Comprehensive health care for pregnant and breastfeeding women with substance use disorders should include services and interventions focused on substance use
- Pregnancy may be an opportunity for women, their partners and other people living in their household to change their patterns of alcohol and other substance use.

Substance use in pregnancy and its consequences

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Epidemiology of alcohol and other substance use during pregnancy

- Estimated 9.8% of women in the world used alcohol during pregnancy (Popova et al, 2018)
- Estimated prevalence of maternal prenatal tobacco smoking varies from 1.2% in Southeast Asia and Western Pacific regions to 5.9% in Americas and 8.1% in Europe (Lange, Probst et al, 2018)
- Cannabis is the most commonly used psychoactive drug (illicit in most jurisdictions) by pregnant women with prevalence rates around 4.5%, but with a tendency to increase (from 3.4% to 7%) in US from 2002/2003 to 2016/2017 (Roncero et al, 2020; Volkow et al, 2019).

Health consequences of substance use during pregnancy

- Woman's health
- Course of pregnancy and delivery (e.g., miscarriage, premature birth, increased risk of complications in delivery, perinatal mortality)
- Fetus and newborn (e.g., decreased fetal growth, low birth weight, Neonatal Withdrawal/Abstinence Syndrome (NWS/NAS) /opioids, BDZs, alcohol/)
- Post-delivery child development and health (e.g., Fetal Alcohol Spectrum Disorders (FASD), impaired neurocognitive development, ADHD, lifetime risk of substance use and SUD).

Fetal Alcohol Syndrome – Only the tip of the iceberg

- Fetal alcohol syndrome (FAS)
- Partial FAS (pFAS)
- Alcohol related birth defects (ARBD)
- Alcohol related neuro-developmental disorders (ARND)
- Neurobehavioral disorder associated with prenatal alcohol exposure (ND-PAE)

Fetal Alcohol Spectrum Disorders

Prenatal cannabis exposure and mental health burden in childhood and adolescence

- The Adolescent Brain Cognitive Development (ABCD) Study demonstrated increased psychopathology during middle childhood and early adolescence (11-12 years old) following prenatal cannabis exposure (PCE) (Paul et al, 2021; Baranger et al, 2022)

- There is an alarming increasing trend in prevalence of cannabis use during pregnancy documented in several countries (Corsi et al, 2019; Luke, Hutcheon, Kendall, 2019; SAMHSA, 2020).

Factors influencing health impact of prenatal substance use

- Class of a psychoactive substance
- Pattern of use (intensity, dose, duration, frequency)
  - Substance Use Disorders (SUD) before pregnancy
- Way of administration (injecting of particular importance…)
- Comorbid mental health and other conditions (influencing patterns of use, associated BDZ and opioid prescription)
- Context of substance use (legal and cultural frameworks, strong disapproval leading to violence, exposure to “cues”/triggers…)
- Associated factors (lifestyle, diet, maternal stress, antenatal care,

Governing principles of treatment and care for SU and SUD in pregnancy and postpartum period

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Overarching Principles (WHO, 2014)

- Prioritizing prevention
  - Preventing, reducing and ceasing the use of alcohol and drugs during pregnancy and in the postpartum period are essential components in optimizing the health and well-being of women and their children

- Safeguarding against discrimination and stigmatization
  - Prevention and treatment interventions should be provided to pregnant and breastfeeding women in ways that prevent stigmatization, discrimination, marginalization, and promote family, community and social support as well as social inclusion by fostering strong links with available childcare, employment, education, housing and relevant services.

Principles of treatment and care for women with SUD in pregnancy and the postpartum period (WHO, 2014)

- Ensuring access to prevention and treatment services
  - All pregnant women and their families affected by SUD should have access to affordable prevention and treatment services and interventions delivered with a special attention to confidentiality, national legislation and international human rights standards; women should not be excluded from accessing health care because of their substance use

- Respecting patient autonomy
  - The autonomy of pregnant and breastfeeding women should always be respected; women with SUD need to be fully informed about the risks and benefits, for themselves and for their fetuses or infants, of available treatment options, when making decisions about their health care.

Principles of treatment and care for women with SUD in pregnancy and the postpartum period (WHO, 2014; WHO, 2016)

- Providing comprehensive care
  - Services for pregnant and breastfeeding women with SUD should have a level of comprehensiveness that matches the complexity and multifaceted nature of SUD and their antecedents

- Providing social support services
  - All mothers with harmful substance use and young children should be offered any social support services that are available, including additional postnatal visits, parental training, and child care during medical visits.

Prevention of substance use in pregnancy

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Prevention policies and interventions

- Prevention strategies and interventions can be presented as bi-dimensional: (a) across the prevention continuum (primary-secondary-tertiary); (b) across population groups (universal-selective-indicative)

- Universal population-based strategies
  - legal frameworks, regulations, addressing commercial determinants such as marketing and advertisements, developmental and informational strategies). Health warnings. Marketing to women.

- Selective and indicative prevention approaches (children and adolescents, families, people with individual vulnerabilities…)
  - Pregnant and breastfeeding women.

WHO recommendations on prevention and management of substance use in women who are of child-bearing age, pregnant, or breastfeeding (WHO, 2014; 2016)

- Health-care providers should ask all pregnant women about their use of alcohol and other substances (past and present) as early as possible in the pregnancy and at every antenatal visit
  - Asking at every visit is important as some women are more likely to report sensitive information only after a trusting relationship has been solidly established
  - Pregnant women should be advised of the potential health risks to themselves and to their babies posed by alcohol and drug use
  - Validated screening instruments for alcohol and other substance use and use disorders are available (WHO ASSIST, 4P's Plus, HSQ, PIP, SURP-P, AUDIT, CAGE, NET, SMAST, TQDH, T-ACE, TWEAK)
  - Health-care providers should be prepared to intervene or refer all pregnant women who are identified as using alcohol and/or drugs (past and present).

Prevention and management of alcohol use in women who are of child-bearing age, pregnant, or breastfeeding in non-specialized settings (WHO, 2016, 2022)

- Advise and support women who are pregnant or considering becoming pregnant to avoid alcohol completely
- Inform women that consuming even small amounts of alcohol early in pregnancy can harm the developing fetus, and that larger amounts of alcohol can result in a syndrome of severe developmental problems (Fetal Alcohol Syndrome – FAS)
- Given the benefits of exclusive breastfeeding (particularly in the first 6 months), if mothers continue to drink alcohol, they should be advised to limit their alcohol consumption, and to minimize the alcohol content of their breast milk, such as by breastfeeding before drinking alcohol and not again until after blood levels fall to zero (allowing approximately 2 hours for each drink consumed (10 g of ethanol), i.e. 4 hours if two drinks are consumed), or by using expressed breast milk.

Prevention and management of drug use in women who are of child-bearing age, pregnant, or breastfeeding in non-specialized settings (WHO, 2016; 2022)

- Inquire about the woman's menstrual cycle and inform her that substance use can interfere with the menstrual cycle, sometimes creating the false impression that pregnancy is not possible
- Advise women who are pregnant to stop using all illicit drugs. Pregnant opioid dependent women should generally be advised to take an opioid agonist such as methadone (in the context of opioid agonist maintenance treatment)
- Advise and support breastfeeding mothers not to use any illicit drug.

WHO recommendations on prevention and management of substance use in women who are of child-bearing age, pregnant, or breastfeeding (WHO, 2014; 2016) (continued)

- Health-care providers should offer a brief intervention to all pregnant women using alcohol or drugs
  - Brief intervention is a structured therapy of short duration (typically 5–30 minutes) offered with the aim of assisting an individual to cease or reduce the use of a psychoactive substance. It is designed in particular for general practitioners and other primary health-care workers.
  - Health-care providers should be given appropriate training and resource materials.
  - The brief intervention should be individualized, and include feedback and advice on ceasing or reducing alcohol and other substance use during pregnancy. There may need to be follow-up with the patient, with the possibility of referral to treatment for those patients who are unable to reduce or eliminate such use.
  - The approach/attitude of health-care providers is an important contributor to the effectiveness of brief interventions.

Management of substance use disorders in pregnancy and postpartum period

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WHO recommendations on prevention and management of substance use in women who are of child-bearing age, pregnant, or breastfeeding (WHO, 2014; 2016) (continued)

- Health-care providers managing pregnant or postpartum women with alcohol or other substance use disorders should offer comprehensive assessment and individualized care
  - A comprehensive assessment of women using alcohol or drugs in pregnancy and the postpartum period includes an assessment of patterns of substance use, medical or psychiatric comorbidity, family context, as well as social problems
  - Individualized care involves selecting appropriate psychosocial interventions of different intensity based on the particular needs of the pregnant women and the resources available. Psychosocial interventions include a number of psychological treatments and social supports, ranging from lesser to higher intensity. The psychosocial treatment and support referred to in this recommendation is a more intensive set of interventions typically delivered by people with specific training in the management of substance use disorders, and usually includes repeated contact with the patient. The kinds of specific psychological techniques considered in this category include cognitive behavioural therapy, contingency management and motivational interviewing/enhancement. The kinds of social support referred to in this recommendation include assistance with accommodation, vocational training, parenting training, life-skills training, legal advice, home-visiting and outreach.

WHO recommendations on management of substance dependence in pregnant women

- Health-care providers should, at the earliest opportunity, advise pregnant women dependent on alcohol or drugs to cease their alcohol or drug use and offer, or refer to, detoxification services under medical supervision where necessary and applicable
  - Pregnant women dependent on alcohol or drugs who agree to undergo detoxification should be offered the supported withdrawal from substance use in an inpatient or hospital facility, if medically indicated
  - Detoxification can be undertaken at any stage in pregnancy, but at no stage should antagonists (such as naloxone, or naltrexone – in the case of opioid withdrawal) be used to accelerate the detoxification process
  - Equal attention should be paid to the health of mother and fetus during detoxification and treatment adjusted accordingly
  - The exceptions to this recommendation are opioid and benzodiazepine dependenc.e

Pharmacotherapy for relapse prevention in alcohol-dependent pregnant women

- No evidence was found on the use of medications for relapse prevention for alcohol dependence in pregnancy (acamprosate, disulfiram, nalmefene, naltrexone) (WHO, 2014)

- Given that the safety and efficacy of medications for the treatment of alcohol dependence has not been established in pregnancy, an individual risk benefit analysis should be conducted for each woman (WHO, 2014)
  - Pregnant patients with alcohol dependence should be offered psychosocial interventions

- Acamprosate and naltrexone use in pregnant women do not appear to be associated with substantial risks of congenital malformations or other serious consequences, and the question is raised about appropriateness of using these medicines for management of alcohol dependence in pregnancy (Kelty et al, 2021)

WHO recommendations on management of alcohol withdrawal syndrome in pregnant women

- Pregnant women who develop withdrawal symptoms following the cessation of alcohol consumption should be managed with the short-term use of a long-acting benzodiazepine.
  - Alcohol withdrawal can be a severe and even life-threatening condition, provoking seizures and delirium
  - Inpatient care should be considered in the withdrawal management of pregnant women with alcohol dependence
  - Management of alcohol withdrawal usually also includes administration of thiamine
  - Alcohol withdrawal management may be facilitated by the use of an alcohol-withdrawal scale such as the CIWA-Ar.

WHO recommendations on management of opioid dependence in pregnant women

- Pregnant women dependent on opioids should be encouraged to use opioid maintenance treatment whenever available rather than to attempt opioid detoxification
  - Opioid maintenance treatment in this context refers to either methadone maintenance treatment or buprenorphine maintenance treatment
  - Pregnant patients with opioid dependence who wish to undergo detoxification should be advised that relapse to opioid use is more likely following medication-assisted withdrawal than while undertaking opioid maintenance treatment
  - Such medication-assisted withdrawal from opioids should be attempted only in an inpatient unit, using a gradual reduction in methadone or buprenorphine doses. Inpatient care should also be considered for the initiation and optimization of maintenance treatment
  - Psychosocial treatment should be an integral component of such treatment
  - Pregnant women who fail to complete medication-assisted withdrawal should be offered opioid agonist pharmacotherapy.

WHO recommendations on management of opioid dependence in pregnant women (continued)

- Pregnant patients with opioid dependence should be advised to continue or commence opioid maintenance therapy with either methadone or buprenorphine
  - Methadone and buprenorphine have similar efficacy in the management of opioid dependence
  - While methadone may result in better maternal retention in treatment, buprenorphine may result in milder NAS, less preterm delivery and higher birthweight
  - Combining psychosocial interventions with pharmacotherapy has been shown to be superior to pharmacotherapy alone.

WHO recommendations on management of benzodiazepine dependence in pregnant women

- Pregnant women with benzodiazepine dependence should undergo a gradual dose reduction, using long-acting benzodiazepines
  - Long-acting benzodiazepines should only be used for as short a time as is medically feasible in managing benzodiazepine withdrawal
  - Psychosocial interventions should be offered throughout the period of benzodiazepine withdrawal
  - Inpatient care should be considered in the withdrawal management of pregnant women with benzodiazepine dependence.

WHO recommendations on management of stimulant dependence and withdrawal syndrome in pregnant women

- Pharmacotherapy is not recommended for routine treatment of dependence on amphetamine-type stimulants in pregnant patients

- In withdrawal management for pregnant women with stimulant dependence, psychopharmacological medications may be useful to assist with symptoms of psychiatric disorders but are not routinely required
  - Except for the management of acute intoxication, withdrawal management in amphetamine-type stimulants (ATS) dependence or cocaine dependence does not include psychopharmacological medications as a primary approach to treatment in pregnant patients. There is no evidence that medication-assisted withdrawal would benefit pregnant women with these respective disorders
  - Inpatient care should be considered in the withdrawal management of pregnant women with stimulant dependence.

Breastfeeding and maternal substance use

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WHO recommendations on breastfeeding and maternal substance use

- Mothers with substance use disorders should be encouraged to breastfeed unless the risks clearly outweigh the benefits

- Breastfeeding women using alcohol or drugs should be advised and supported to cease alcohol or drug use; however, substance use is not necessarily a contraindication to breastfeeding
  - A risk assessment should take into account the risks of exposure to alcohol and drugs in breast milk, HIV status, the specific pattern of substance use in each case, the availability of safe and affordable breast milk substitutes, as well as access to clean water, sterilizing equipment, and the age of the infant/child. Heavy daily alcohol consumption, such as in alcohol dependence, would constitute high risk to the infant, for example, and in the presence of safe breast milk alternatives, it would be preferable not to breastfeed.
  - The message to breastfeeding women who have used alcohol and drugs to cease using alcohol and drugs while breastfeeding should be given in such a way that it does not undermine the potential benefits of breastfeeding
  - It is possible to reduce the risk of exposure through breastfeeding by altering the timing of breastfeeding, or by the use of temporary alternatives, such as stored (frozen) breast milk or breast milk substitutes where they are available and can be safely used.

WHO recommendations on breastfeeding and maternal substance use (continued)

- Skin-to-skin contact is important regardless of feeding choice and needs to be actively encouraged for a mother with a substance use disorder who is able to respond to her baby's needs

- Mothers who are stable on opioid maintenance treatment with either methadone or buprenorphine should be encouraged to breastfeed unless the risks clearly outweigh the benefits
  - Women prescribed opioids such as methadone and buprenorphine and wishing to stop breastfeeding may wean their children off breast milk gradually to reduce the risk of developing withdrawal symptoms.

Management of infants exposed to alcohol and other psychoactive substances

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WHO recommendations on management of infants prenatally exposed to alcohol or sedatives

- If an infant has signs of a neonatal withdrawal syndrome due to withdrawal from sedatives or alcohol or the substance the infant was exposed to is unknown, then phenobarbital may be a preferable initial treatment option
  - Infants with signs of a neonatal withdrawal syndrome in the absence of known maternal opioid use should be fully assessed for possible benzodiazepine, sedative, or alcohol exposure.

- All infants born to women with alcohol use disorders should be assessed for signs of fetal alcohol syndrome
  - Signs of fetal alcohol syndrome (FAS) include growth impairment, dysmorphic facial features (short palpebral fissures, smooth or flattened philtrum, thin upper lip) and central nervous system abnormalities, including microcephaly. When assessing such infants the following information should be recorded: (a) birthweight and length; (b) head circumference; (c) dysmorphic facial features; (d) gestation; (e) prenatal exposure to alcohol.
  - Follow-up of infants with signs of FAS should be provided.

WHO recommendations on management of infants prenatally exposed to opioids

- Health-care facilities providing obstetric care should have a protocol in place for identifying, assessing, monitoring and intervening, using non-pharmacological and pharmacological methods, for neonates prenatally exposed to opioids.
  - Evidence of a dose-response relationship between opioid maintenance treatment and neonatal withdrawal syndrome has been inconsistent, which implies that all infants should be assessed
  - Infants exposed to opioids during pregnancy should remain in the hospital at least 4–7 days following birth and be monitored for neonatal withdrawal symptoms using a validated assessment instrument, which should be first administered 2 hours after birth and then every 4 hours thereafter
  - Infants with signs of a neonatal withdrawal syndrome in the absence of known maternal opioid use should be fully assessed for possible benzodiazepine, sedative, or alcohol exposure.

WHO recommendations on management of infants prenatally exposed to opioids (continued)

- An opioid should be used as initial treatment for an infant with neonatal opioid withdrawal syndrome if required
  - Prolonged treatment of neonatal opioid withdrawal syndrome with opioids is generally not necessary and aiming for shorter treatment is preferable.
  - Phenobarbital can be considered as an additional therapy if there has been concurrent use of other drugs in pregnancy, particularly benzodiazepines, and if symptoms of neonatal opioid withdrawal are not adequately suppressed by an opioid alone. If opioids are unavailable, phenobarbital can be used as an alternative therapy.
  - Infants with signs of a neonatal withdrawal syndrome in the absence of known maternal opioid use should be fully assessed for possible benzodiazepine, sedative or alcohol exposure.

- 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.

Thank you

Further information :

https://www.who.int/teams/mental-health-and-substance-use/alcohol-drugs-and-addictive-behaviours

https://www.who.int/health-topics/alcohol

https://www.who.int/health-topics/drugs-psychoactive#tab=tab_1