

2020

**Florida Best Practice Recommendations for
Women of Reproductive Age
with Serious Mental Illness and
Comorbid Substance Use Disorders**



UNIVERSITY of
SOUTH FLORIDA

College of Behavioral & Community Sciences

Florida Medicaid Drug Therapy
Management Program for Behavioral Health



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For treatment of mood disorders in pregnant and postpartum women, visit **floridamedicaidmentalhealth.org** and see Treatment of Mood Disorders During Pregnancy.

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Introduction, Purpose, and Process for Creating the Recommendations

INTRODUCTION

The National Institute of Mental Health (NIMH) reports the prevalence of women with serious mental illness (SMI) in the United States is approximately 4% (NIMH, 2015), and the National Survey on Drug Use and Health found that in 2014, close to 7.9 million adults in the United States had both a behavioral health and substance use disorder (SAMHSA, 2015). Pregnant women with mental health disorders are at risk of having relapsing symptoms if untreated during pregnancy (Massachusetts General Hospital Center for Women's Health, 2019). Women with serious mental illness are equally likely as women without serious mental illness to have children; yet, they are more likely to experience pregnancy complications (e.g., gestational diabetes, pre-eclampsia), negative birth outcomes (e.g. pre-term birth, low birth weight infants), and substance use disorders (e.g., alcohol use, cannabis use). Although there are multiple health risks associated with SMI and substance use, only 7.9% of people with dual diagnoses of SMI and substance use received treatment for both conditions, and 53.7% of people received no treatment of all (NIDA). Between 2014 and 2018, over 4,000 babies were born to mothers enrolled in Florida Medicaid who had chronic opioid use disorders but did not receive medication assisted treatment with methadone or buprenorphine during pregnancy. Given the potential health risks to both the mother and child, timely, integrated mental health care is essential to improving pregnancy and neonatal outcomes.

PURPOSE

The purpose of the **2020 Florida Best Practice Recommendations for Women of Reproductive Age with Serious Mental Illness and Comorbid Substance Use Disorders** is to provide a guide to clinicians who treat women that are pregnant or of childbearing age with behavioral health diagnoses. These recommendations also address some contraceptive options such as use of long-acting contraceptives in women of childbearing age.

PROCESS FOR CREATING THE RECOMMENDATIONS

The Florida Medicaid Drug Therapy Management Program for Behavioral Health brought together a diverse array of local and national experts to revise and update the *2019 Florida Best Practice Recommendations for Women with Serious Mental Illness and Comorbid Substance Use Disorders*. This year's group of experts, known as the Florida Expert Panel, was composed of nationally recognized experts, academicians, treatment providers to women of childbearing age, substance abuse specialists, and primary care providers.

The 2020 Florida Expert Panel met virtually on April 11, 2020 to review and update the previous version of the Florida Best Practice Recommendations, which was published after the last consensus meeting in 2019. After a thorough literature review, the panel discussed recommendations, proposed revisions, and reached a consensus about whether or not to adopt a particular set of recommendations. Thus, the final product is a result of an in-depth review of the literature, with an emphasis on the highest level of clinical evidence (e.g., randomized controlled trials, systematic reviews) and expert consensus on the strength of the evidence. The names of the meeting attendees and meeting presentations are available on the Program website at <http://floridamedicaidmentalhealth.org>. Financial disclosures are available upon request.

<http://floridamedicaidmentalhealth.org>

Organization and Disclaimer

ORGANIZATION

The **2020 Florida Best Practice Recommendations for Women of Reproductive Age with Serious Mental Illness and Comorbid Substance Use Disorders** are based on a thorough review of the literature and consensus by the expert panel when evidence is lacking.

A description of the guideline process and assignment of levels of recommendations were recently published and are adapted here to explain the bases for each Level:

- Level 1 is initial treatment for which there is established efficacy and relative safety for the treatment recommendations (based on replicated, large randomized controlled trials).
- Level 2 is considered if Level 1 is ineffective and/or not well tolerated. Compared to Level 1, the data on treatment efficacy and/or safety in Level 2 are less robust (based on smaller randomized controlled trials, smaller effect sizes, etc.).
- Level 3 is considered if Levels 1 and 2 are ineffective and/or not well tolerated. Treatments at this level have more limited efficacy data and/or more tolerability limitations than Levels 1 and 2.
- Level 4 is considered if Levels 1 through 3 are ineffective and/or not well tolerated; however, the treatments are not empirically supported at this time and are listed because of expert opinion and/or use in clinical practice.

Note that in many cases, the available evidence is cited and recommendations are provided without specific levels as there often a lack of robust evidence to separate recommendations into levels.

When appropriate, the recommendations are organized by levels of treatment, beginning with Level 0, which involves a thorough clinical assessment. Subsequent levels (Levels 1,2,3, etc.) are based on the strength of the scientific evidence and expert panel consensus.

DISCLAIMER

These recommendations are intended as a guide; as always, the clinician and patient partnership prevails in the choice of treatment. For treatment of any particular condition, the clinician is advised to start with psychosocial interventions or interventions with the most evidence and best benefit-to-risk ratio.

Proper use, adaptation, modifications, or decisions to disregard these or other guidelines, in whole or in part, are entirely the responsibility of the clinician who uses these guidelines. *The authors and expert panel members bear no responsibility for treatment decisions and outcomes based on the use of these guidelines.*

Principles of Practice

Table 1.

Pre-Screening and Screening Tools for Substance Use Disorders	
NIAAA/NIDA Pre-Screening Questions	<p>“How many times in the past year have you had 4 or more drinks in a day?” (NIAAA)</p> <p>“How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?” (NIDA)</p>
Drug Abuse Screening Test (DAST-10)	The DAST-10 is a 10-item yes/no self-report questionnaire used to screen for substance use disorders other than alcohol use disorder in older youth and adults.
5Ps Prenatal Substance Abuse Screen for Alcohol and Drugs (5Ps)	The 5Ps is a 5-question screening tool that asks questions related to substance use by women’s <i>parents, peers, partner</i> , during pregnancy, and in her past. Responses to these questions can be useful in evaluating the need for a more complete assessment and possible referral for substance use treatment.

Note: For recommended screening tools for specific substance use disorders, refer to the appropriate sections in these guidelines.

Level 0 - Screening, Brief Intervention, and Collaborative/Integrated Care

- ◆ Comprehensive assessment, including history, physical, appropriate laboratory evaluations, and assessment of fetal health. Refer to Appendices A and B on pages 51-53.
- ◆ Use of validated screening tools is recommended.
- ◆ Screen for mental health and substance use concurrently at initial visit and during each trimester. Discuss legal ramifications of a positive substance use screen without admission of use.
- ◆ Screen for tobacco and alcohol use.
- ◆ Provide brief intervention. Refer to Appendix A on page 51. For those with a positive screen, refer to a specialist.

Notes:

- *Women who are pregnant or plan to breastfeed should be advised of potential risks of substance use on themselves and their babies.*
- *Effort should be made to facilitate client engagement and care integration.*

Level 1 - Evidence-Based Psychosocial Intervention with a Qualified Therapist

See Table 4 on page 11 for evidence-based psychosocial interventions for substance use disorders.

- ◆ Monitor response to treatment using reliable and valid measures of changes in the target symptoms.
- ◆ In mild cases, psychosocial treatments, including peer intervention, are recommended as the initial step.
- ◆ In moderate to severe cases, a higher level of intervention may be appropriate as the initial step. Weigh the risks and benefits of treatment to the mother and, if pregnant or breastfeeding, to the fetus or infant.
- ◆ Consider initiating contraceptive counseling during pregnancy and post-partum period.

There are no strong studies for treatment of behavioral health conditions with medication in pregnancy or during lactation.

Principles of Practice (continued)

Level 2 - Reassessment

If psychosocial interventions have failed, carefully weigh the risks and benefits of initiating treatment with medications to maintain symptom control and/or abstinence from substance use. Consider referral to experienced outpatient substance use treatment specialists in cases of severe substance use.

Notes:

- Effort should be made to collaborate with all care providers (e.g., primary care, psychiatry, OB-GYN, case workers) to ensure integrated care.
- Prior to initiating any intervention (e.g., psychosocial, medication), assess the risks/benefits of treatment to the mother and fetus/infant.
- Individuals should be educated about the risks and benefits of treatment, including review of boxed warnings.
- Target educational interventions to the condition with consideration of potential effects to the fetus or infant.
- Written informed consent should be obtained from the parents/legal guardian if appropriate (e.g., the individual legally able to consent to medical interventions) and documented in the chart.

If a decision is made to initiate medication after careful consideration of the risks and benefits:

- ◆ Continue evidence-based psychosocial treatment during treatment with medication.
- ◆ Use monotherapy. Start low, go slow.
- ◆ Use the lowest effective dose to minimize potential adverse effects to the mother and if pregnant or breastfeeding, to the fetus/infant.
- ◆ Monitor for suicidality.
- ◆ Monitor for adverse effects of medications on both mother and child.
 - ◇ Closely monitor for pregnancy complications.
 - ◇ Closely monitor fetal or infant health status (e.g. with fetal heart monitoring or biophysical profile).
 - ◇ Closely monitor for adverse effects to fetus/infant if pregnant or breastfeeding.
- ◆ Use of a single medication at a higher dose is preferred over multiple medications. It is also preferable to use medications with fewer active metabolites, higher protein binding, and fewer interactions with other medications (ACOG Guidelines on Psychiatric Medication Use During Pregnancy and Lactation, 2007).

Reproductive Health Planning: Options for Pregnancy Prevention

ORAL CONTRACEPTIVES

Oral contraceptive (OC) pills (i.e., birth control pills) are the most commonly used method of birth control among women ages 15-44 years at 28% (Jones et al, 2012). Yet, OCs (combined and progestin-only pills) are considerably less effective than long-acting reversible contraceptive methods such as implants, levonorgestrel intrauterine systems (IUS) or intrauterine devices (IUDs). OCs have a 9% failure rate compared to less than one percent (1%) for implants and IUDs (CDC, 2017).

ALTERNATIVES TO ORAL CONTRACEPTIVES

Hormonal alternatives to oral contraceptives include the transdermal patch and the vaginal ring.

Table 2.

Alternatives to Oral Contraceptives: Transdermal Patch and Vaginal Ring			
Name	Dose	Notes	Failure Rate (%)
Vaginal Ring			
Ethinyl estradiol and etonorgestrel (NuvaRing®)	0.12 mg/day	Insert vaginally and leave in for 3 weeks and removed for one week.	9%
Adolescents and Adults			
Ethinyl estradiol and norelgestromin (active form of noreestimate) [Ortho-Evra®]	Ethinyl estradiol: 35 mcg/day Norelgestromin: 200 mcg/day	Apply weekly for three weeks, then week 4 is patch free.	9%

Reproductive Health Planning: Options for Pregnancy Prevention (*continued*)

LONG-ACTING REVERSIBLE CONTRACEPTIVES (LARCS)

Long-acting reversible contraceptives (LARCs) are recommended to reduce rates of unintended pregnancies due to their high effectiveness rates. The American College of Obstetricians and Gynecologists (ACOG) considers implants, levonorgestrel intrauterine systems (IUS) or intrauterine devices (IUDs), and copper IUDs, long-acting reversible contraceptives (LARCs). The National Institute for Health and Care Excellence (NICE) guidelines also include progestogen-only injections as LARCs. Implants and IUDs have effectiveness rates similar to tubal ligation at less than one pregnancy per 100 women per year (ACOG, WHO).

ACOG guidelines indicate that LARCs “should be offered as first-line contraceptive methods and encouraged as options for most women.” Furthermore ACOG Committee Opinion #670 “encourages prenatal counseling of the most effective options for postpartum contraception: IUDs and the implant.” Women should be counseled about convenience and effectiveness of immediate postpartum LARC as well as benefits of reducing unintended pregnancy and lengthening inter-pregnancy intervals (ACOG, 2016).

Table 3.

Long-Acting Reversible Contraceptives (LARCs)			
Name	Dose	Notes	Failure Rate (%)
Implants			
Etonorgestrel (Implanon® or Nexplanon®)	Release rate varies over time for up to 3 years	Implanted subdermally just beneath skin at the inner side of non-dominant arm	0.05%
Injections			
Medroxyprogesterone acetate (Depo-Provera CI®)	150 mg intramuscular (IM) injection	Intramuscular (IM) injection in the gluteal or deltoid muscle every 3 months (13 weeks)	6%
Medroxyprogesterone acetate (Depo-subQ Provera 104®)	104 mg Subcutaneous (SC) injections	Subcutaneous (SC) injections into anterior thigh or abdomen, once every 3 months (12-14 weeks)	6%
Intrauterine devices (IUDs)			
Copper IUD (ParaGard T380A®)	Non-hormonal	May remain in place for 10 years	0.8%
Levonorgestrel (Liletta®)	14.7 mcg/day average dose over 5 years	Must be removed by end of fifth year	0.6%
Levonorgestrel (Mirena®)	20 mcg/day for up to 5 years	Must be removed by end of fifth year	0.3%
Levonorgestrel (Skyla®)	14 mcg/day for up to 3 years	Must be removed by end of third year	0.9% cumulative over 5 years
Levonorgestrel (Kyleena®)	Average dose of 9 mcg/day for up to 5 years	Must be removed by end of fifth year	<1%

Social Determinants of Health

Healthy People 2020 defines the social determinants of health as the social factors and physical health conditions of the environment in which people are born, live, learn, play, work, and age. Social determinants of health are increasingly recognized as contributing to disparities in outcomes between different populations. Social determinants of health should be assessed and reported given their contribution to disparate health outcomes.

Social determinants of health are categorized into five main domains. These domains and examples are:

- Neighborhood and built environment: Access to foods that support healthy eating patterns; crime and violence; quality of housing; environmental conditions
- Health and healthcare: Access to primary care services; health literacy
- Social and community context: Discrimination, incarceration, civic participation
- Education: Early childhood education and development; high school graduation; enrollment in higher education; language and literacy
- Economic Stability: employment status; food insecurity; housing instability; socioeconomic status (e.g., poverty)

Refer to the *Florida Best Practice Psychotherapeutic Medication Guidelines for Adults* for a summary on the social determinants of mental health available at <http://floridamedicaidmentalhealth.org>.

POTENTIAL BARRIERS TO EFFECTIVE TREATMENT

There are many potential barriers to effective treatment for individuals with mental illness. It may be helpful for clinicians to be aware of the most common barriers, assess for them, and ensure that they are addressed in treatment plans.

For a list of potential barriers to effective treatment, refer to the *2020 Monitoring Physical Health and Side-Effects of Psychotherapeutic Medications in Adults and Children: An Integrated Approach* available at <http://floridamedicaidmentalhealth.org>.

To help providers better address social determinants of health, the USF Florida Medicaid Drug Therapy Management Program has collaborated with Aunt Bertha, a web-based site that allows searches by zip code for information on reduced-cost or free resources in areas relating to healthcare, housing, food, and transportation. For more information and to access the web-based resource guide, visit <http://floridamedicaidmentalhealth.org>.

Evidence-Based Psychosocial Interventions for Substance Use Disorders

Table 4.

Evidence-Based Psychosocial Interventions for Substance Use Disorders	
Intervention	Description
Motivational Enhancement Therapy (MET)/ Motivational Interviewing (MI)	<ul style="list-style-type: none"> ◆ Time-limited, evidence-based variation of motivational interviewing ◆ Provides feedback about attitudes and behaviors ◆ Focuses on motivation to change based on feedback
Cognitive Behavioral Therapy (CBT)	<ul style="list-style-type: none"> ◆ Focuses on developing skills to cope with problematic substance use
Mutual Help Groups [e.g., 12-step facilitation, Alcoholics Anonymous (AA)]	<ul style="list-style-type: none"> ◆ Involve individuals with a common experience or problem (e.g., alcohol use disorders) who come together to share experiences and provide help/support to one another
Community Reinforcement	<ul style="list-style-type: none"> ◆ Involves extensive support through social and family networks and work experiences
Contingency Management (CM)	<ul style="list-style-type: none"> ◆ Based on theory that substance use disorders develop through operant conditioning (behavior is controlled or shaped by its consequences)
Coping-Skills Training (CST)	<ul style="list-style-type: none"> ◆ Teaches variety of methods to deal with urges caused by cues that trigger substance use cravings
Cue Exposure Therapy (CET)	<ul style="list-style-type: none"> ◆ Based on classical learning theory model – environmental cues associated with problem behavior (e.g., substance use) can lead to responses that may result in relapse
<ul style="list-style-type: none"> ◆ Psychodynamic therapy, interpersonal therapy, couples therapy, and family therapy may also be helpful. For more information visit http://floridamedicaidmentalhealth.org. 	

Breastfeeding and Substance Use: General Considerations

Breastfeeding has proven benefits for both the infant and child. However, use of illicit substances and misuse of prescribed medications can have adverse effects on the breastfed infant.

WOMEN SHOULD BE SUPPORTED IN THE DECISION TO BREASTFEED THEIR INFANTS IF:

- Engaged in substance use treatment
- Have provided consent to discuss progress in treatment and plans for post-partum treatment
- Counselors can endorse achievement and maintenance of sobriety prenatally
- Abstinence from substance use/misuse has been maintained for 90 days prior to delivery.
- Sobriety has been maintained in an outpatient setting.
- Women have negative maternal urine toxicology screens at delivery except for prescribed medications.
- Women have received consistent prenatal care.
- There is no contraindication to breastfeeding (e.g., HIV or use of medications contraindicated during breastfeeding).
 - ◆ Note: Women on opioid medication-assisted therapy should be encouraged to breastfeed. There is limited evidence on the safety of buprenorphine in breastfed infants, but some recent studies indicate potential advantages of buprenorphine over methadone. See section on Opioid Use Disorders on pages 30-37.

WOMEN REQUIRE CAREFUL EVALUATION FOR SUITABILITY TO BREASTFEED IF:

- Relapse to illicit substance use or licit substance misuse 30 to 90 days prior to delivery but maintained abstinence within 30 days prior to delivery.
- Have concomitant use of prescription medications. Evaluate safety of prescription medications in breastfed infants and weigh risks/benefits of breastfeeding.
- Were engaged in prenatal care and/or substance use treatment during or after the second trimester.
- Attained sobriety only in an inpatient setting.

WOMEN SHOULD BE STRONGLY DISCOURAGED FROM BREASTFEEDING IF:

- Have established breastfeeding and subsequently relapse to illicit drug or alcohol use. There are a lack of pharmacokinetic data for most drugs of abuse in recently postpartum women to recommend a safe interval after use when breastfeeding after relapse can be re-established for specific drugs of abuse.

Adapted from Academy of Breastfeeding Medicine, Protocol #21 (2014).

Dual Diagnosis

DEFINITION: TERMINOLOGY

Dual diagnosis refers to individuals who experience mental illness and substance use problems simultaneously. Dual diagnosis symptoms range from mild depression to symptoms of bipolar disorder becoming more severe due to substance use during periods of mania. According to the National Institute of Mental Health, one-third of all people with mental illness and one-half of all people with severe mental illness experience substance use problems (NAMI, 2013).

CONSEQUENCES OF PRENATAL DEPRESSION AND ANXIETY

- Gestational hypertension and pre-eclampsia
- Preterm birth
- Low birth weight
- Operative delivery and Neonatal Intensive Care Unit (NICU) Admission
- Adverse neurodevelopmental effects

DUAL DIAGNOSIS: TREATMENT CONSIDERATIONS

Treatment of women with dual diagnoses involves integrated care for both the specific behavioral health conditions and substance use disorders. Treatment options depend on the severity of illness and include inpatient detoxification, inpatient rehabilitation, evidence-based therapy for both the behavioral health condition and substance use disorder, medication management for the behavioral health condition and/or substance use disorder as indicated, and self-help groups. Refer to the *Florida Best Practice Psychotherapeutic Medication Guidelines for Adults* and the *Florida Best Practice Psychotherapeutic Medication Guidelines for Children and Adolescents* for evidence-based treatment of behavioral health conditions available at

<http://floridamedicaidmentalhealth.org>.

- Maternal Effects of Antidepressant Use During Pregnancy
 - ◆ **Tricyclic antidepressants:** Data are limited on the use of tricyclic antidepressants during pregnancy.
 - ◆ **SSRIs/SNRIs:** While there have been some documented risks such as spontaneous abortion and pre-term births associated with SSRI and SNRI use during pregnancy, these risks must be weighed against complications associated with untreated depression during pregnancy (e.g., pre-eclampsia, eclampsia). Recent meta-analyses indicate that the risk of fetal and congenital malformations associated with antidepressant intake during pregnancy are small (Dubovicky et al., 2017).
 - ◆ **SSRIs**
 - ◇ **Fetal Effects:** The data on the link between SSRI use in pregnancy and the risk of Autism Spectrum Disorder (ASD) is controversial. If it exists, it is considered to be minimally elevated from the risk at baseline. SSRIs have been linked with

Dual Diagnosis (*continued*)

multiple congenital defects, in particular, cardiac defects but the evidence remains inconclusive. Reassuringly, a recent, large cohort study did not find a significant association once the findings adjusted for the effects of depression (Huybrechts et al., 2014). In terms of specific SSRIs, except paroxetine, which has most consistently been associated with increased risk of heart defects, data are mixed (Kaplan et al., 2019).

- There are significant limitations and poor methodology in the birth defects literature pertaining to SSRIs. These include lack of replication, use of retrospective data, confounders, and small sample sizes. There are few studies, which have inconsistently reported associations of SSRI use during pregnancy with malformations in the offspring.
- For more information, visit the website *MothertoBaby* at <https://mothertobaby.org/>. *MothertoBaby* is a service provided by the nonprofit Organization of Teratology Information Specialists (OTIS), an organization that provides evidence-based information to mothers, healthcare professionals, and the public about medication exposure during pregnancy and while breastfeeding.

◇ Neonatal Effects:

- **Neonatal Adaptation Syndrome:** respiratory distress, low APGAR scores, jaundice, hypoglycemia, convulsions, heart rate variability, REM changes, jitteriness, serotonergic symptoms.
- **Persistent Pulmonary Hypertension (PPHN):** potential increased risk of PPHN associated with maternal SSRI use in pregnancy but the absolute risk is expected to be low (Huybrechts et al., 2015; Grigoriadis et al., 2014).
- **Low birth weight**

◆ Mood Stabilizers

- ◇ **Lithium:** First-trimester exposure to lithium is associated with highest risk of Ebstein's anomaly (van der Lugt et al., 2012). Important to monitor drug levels frequently towards end of the pregnancy as fluid shifts and increase in renal clearance might need dose adjustment (Poels et al., 2018).
- ◇ **Divalproex/Valproic acid:** Avoid use in women of reproductive age, if possible. Associated with neural tube defects, craniofacial defects, cardiovascular malformations, hypospadias, and limb malformations (Hill et al., 2010).
- ◇ **Lamotrigine:** emerging data on its tolerability, safety in pregnancy, and preference to many other mood stabilizers (Clark and Wisner, 2018).

■ Treatment Effects during Breastfeeding

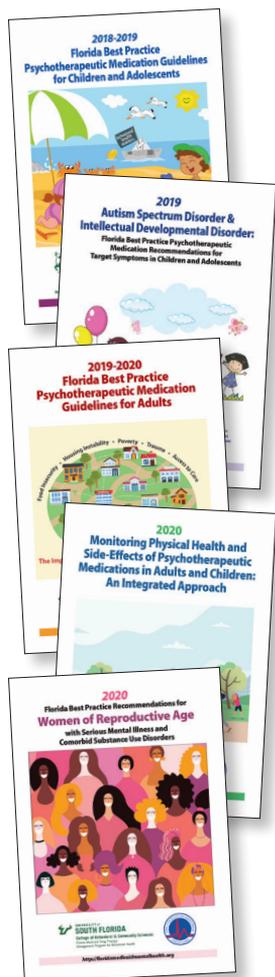
- ◆ **SSRIs:** Mothers taking an SSRI during pregnancy and postpartum may have more difficulty breastfeeding and may need additional breastfeeding support. Breastfed infants exposed to an SSRI during the third trimester of pregnancy have a lower risk

Dual Diagnosis (continued)

of poor neonatal adaptation than formula-fed infants. Occasional mild side effects such as insomnia, restlessness, and increased crying have been reported in breastfed infants of mothers on SSRIs (LactMed, 2020).

◆ Mood Stabilizers

- ◇ **Lithium:** Cases of lithium intoxication and increases in TSH levels have been reported in neonates exposed to lithium through breastfeeding.
- ◇ **Divalproex/Valproic acid:** Theoretical increased risk of valproic acid-induced hepatotoxicity. One possible case of thrombocytopenia reported from valproic acid exposure through breastmilk (LactMed, 2020).



Florida Medicaid Drug Therapy Management Program for Behavioral Health

Working with Medicaid health plans and providers to:

- Improve behavioral health prescribing practices
- Improve patient adherence to medication
- Reduce clinical risks and medication side effects
- Improve behavioral and physical health outcomes

The following treatment guidelines are available on our website at floridamedicaidmentalhealth.org.

- Best Practice Psychotherapeutic Medication Guidelines for Children and Adolescents
- Autism Spectrum Disorder & Intellectual Developmental Disorder: Psychotherapeutic Medication Recommendations for Target Symptoms in Children and Adolescents
- Best Practice Psychotherapeutic Medication Guidelines for Adults
- Monitoring Physical Health and Side-Effects of Psychotherapeutic Medications in Adults and Children: An Integrated Approach
- Best Practice Recommendations for Women of Reproductive Age with Severe Mental Illness and Comorbid Substance Use Disorders

The **Florida Pediatric Psychiatry Hotline** is a free service that provides consultation about medication management for behavioral health.

Florida Pediatric Psychiatry Hotline
1-866-487-9507

For more information, visit us at floridamedicaidmentalhealth.org

Management of Smoking Cessation During Pregnancy

Screening, comprehensive assessment and prenatal care by multidisciplinary team, and brief intervention. *See Principles of Practice.*

EVIDENCE-BASED PSYCHOSOCIAL INTERVENTION WITH A QUALIFIED THERAPIST

Evidence-based interventions include a combination of behavioral therapeutic approaches, telephone support, and self-help material.

Note: One method has not been proven more effective than another method; most interventions involve a combination of psychosocial treatments.

- Evidence suggests that adding a psychosocial mood management intervention to standard smoking cessation programs can increase long-term cessation rates in smokers with current and past depression compared with standard intervention alone.
- Recommend abstinence from cigarette smoking, tobacco, and nicotine use.

See Table 4 on page 11 for evidence-based psychosocial interventions for substance use disorders.

■ Five A's of Smoking Cessation (AHRQ, 2012)

1. **Ask** the individual about smoking status at the first prenatal visit and subsequent visits. The woman should choose the statement that best describes smoking status:
 - A. I have never smoked LESS THAN 100 cigarettes in my lifetime.
 - B. I stopped smoking BEFORE I found out I was pregnant, and I am not smoking now.
 - C. I stopped smoking AFTER I found out I was pregnant, and I am not smoking now.
 - D. I smoke some now, but I have cut down on the number of cigarettes I smoke SINCE I found out I was pregnant.
 - E. I smoke regularly now, about the same as BEFORE I found out I was pregnant.
 - ◆ If the answer given is (b) or (c), reinforce the decision to quit, congratulate on success in quitting, and encourage remaining smoke-free.
 - ◆ If the answer given is (d) or (e), document smoking status and proceed to the steps below.
2. **Advise** the individual who smokes to cease smoking by providing evidence about the risks of continued use to the individual and fetus or infant.
3. **Assess** the individual's willingness to attempt to quit smoking. Motivational techniques should be utilized.
4. **Assist** the individual interested in quitting by providing pregnancy-specific self-help smoking cessation materials. Encourage importance of a smoke-free space at home and seeking out a "quitting buddy" (e.g., former smoker or non-smoker). Encourage talking about the quitting process. Refer resources such as smoker's quit line, 1-800-QUIT NOW, for ongoing counseling and support.
5. **Arrange** follow-up visits to track the individual's attempt to quit smoking. For current and former smokers, monitor and record smoking status throughout pregnancy. Congratulate and support success, reinforce steps taken towards quitting, and advise those still considering a cessation attempt at follow-up visits.

Management of Smoking Cessation During Pregnancy (continued)

CONSIDER NICOTINE REPLACEMENT THERAPY IF BENEFITS OUTWEIGH RISKS

There is insufficient evidence for the effects of pharmacological interventions (e.g., nicotine replacement therapy, bupropion) on the fetus or infant to recommend use of these methods for smoking cessation in pregnant or lactating women based on evidence alone.

Based on clinical consensus, cigarette smoking exposes the fetus to more potentially harmful chemicals than nicotine alone; therefore, if abstinence is not possible, consider nicotine replacement therapy (e.g., gum, patch).

BUPROPION MONOTHERAPY IF UNABLE TO TOLERATE NICOTINE REPLACEMENT THERAPY

There are limited data on bupropion use during pregnancy.

Not Recommended: Varenicline

Alcohol Use and Pregnancy

Box 1.

Definitions of Alcohol Use and Prenatal Alcohol Exposure

Alcohol use:

- ◆ **One standard drink equals 15 mL of pure ethanol:** 12 ounces of beer or wine cooler, 5 ounces of table wine, 8 to 9 ounces of malt liquor, or 1.5 ounces of 80-proof spirits.
- ◆ **Binge drinking in women:** Ingestion of 4 or more drinks per occasion to account for physiologic gender-related differences affecting alcohol absorption (NIAAA).
- ◆ **At-risk or “heavy” drinking women:** More than 3 drinks on any day or 7 drinks per week (NIAAA).
- ◆ **Moderate drinking in women:** 1 drink per day (but less than 7 drinks per week).
- ◆ **Excessive alcohol consumption:** Binge drinking, heavy drinking, any drinking by pregnant women or any drinking in individuals under 21 years old.

Definition of prenatal alcohol exposure:

- ◆ ≥ 6 drinks per week for ≥ 2 weeks during pregnancy
- ◆ ≥ 3 drinks per occasion on ≥ 2 occasions during pregnancy
- ◆ Documentation of alcohol-related social or legal problems (e.g., driving under the influence of alcohol, DUI) before or during the index pregnancy
- ◆ Documentation of intoxication during pregnancy by blood, breath, or urine alcohol content testing
- ◆ Positive testing with established alcohol-exposure biomarker(s) during pregnancy or at birth (e.g., analysis of fatty acid ethyl esters, phosphatidylethanol, and/or ethyl glucuronide in maternal hair, fingernails, urine, or blood or in the placenta or meconium)
- ◆ Increased prenatal risk associated with drinking during pregnancy as assessed by validated screening tool (e.g., T-ACE or AUDIT)

Notes:

All states have set a blood alcohol concentration (BAC) of 0.08% as the legal limit for driving under the influence (DUI) or driving while impaired (DWI).

No amount of alcohol use during pregnancy is considered safe.

Alcohol Use and Pregnancy (*continued*)

Box 2.

Alcohol Intoxication and Withdrawal

Alcohol Intoxication and Withdrawal

- ◆ ***Signs and symptoms of alcohol intoxication*** range from slight euphoria (BAC of 0.020-0.039%) to coma and possible death due to respiratory arrest (BAC \geq 0.040%). These effects may occur at lower BACs depending on the individual.
- ◆ ***Signs and symptoms of alcohol withdrawal*** include fatigue, headache, insomnia, irritability or excitability, palpitations, tremors, sweats, or delirium tremens.
- ◆ ***Delirium tremens (DTs) is a potentially life-threatening condition that occurs after abruptly reducing or abstaining from alcohol after years of heavy drinking.*** Symptoms of delirium tremens occur 48 to 96 hours after the last drink but may occur up to 7 to 10 days after the last drink. Seizures, most often generalized tonic-clonic seizures, occur with or without other symptoms of delirium tremens and occur most commonly within the first 12 to 48 hours after the last drink.

No amount of alcohol use during pregnancy is considered safe.

Management of Alcohol Use During Pregnancy

PRE-SCREENING, SCREENING, BRIEF INTERVENTION, AND COLLABORATIVE/INTEGRATED CARE

Comprehensive assessment of mother and baby's health status. Refer to *Principles of Practice*.

The T-ACE, TWEAK, and AUDIT-C are screening instruments with high specificity and sensitivity that can be used to identify at-risk alcohol consumption.

- For prenatal visits, the T-ACE a simple four-item screening instrument specifically for assessing prenatal alcohol consumption. The T-ACE is a valuable and efficient tool for identifying a range of alcohol use, including pre-pregnancy risk drinking (defined as more than two drinks per day), and lifetime diagnoses based on the Diagnostic and Statistical Manual of Mental Disorders (DSM). A score of 2 points or greater on the T-ACE is a positive screen.
- The CIWA-Ar and SAWS scales are used to assess alcohol withdrawal symptoms. The CIWA-Ar is recommended to assess alcohol withdrawal symptoms because of its well-documented reliability, validity and reproducibility, and ease of use in a range of clinical settings.

Rule out alternative diagnoses. Perform testing, including lumbar puncture and cranial computed tomography (CT) as indicated to rule out medical causes of presenting symptoms.

Note: Infection (e.g., meningitis), trauma (e.g., intracranial hemorrhage), metabolic abnormalities, drug overdose, liver failure, and gastrointestinal bleeding can mimic and/or coexist with alcohol withdrawal.

Management of Alcohol Use During Pregnancy (continued)

Table 5.

Useful Initial Screening Tools for Alcohol Use Disorders	
Screening Tool	Description
AUDIT-C Questionnaire	The AUDIT-C is 3-item alcohol screen to help identify individuals who are at risk for alcohol use disorders. Each question has 5 answer choices that are scored from 0-4 points. The total score on the AUDIT-C ranges from 0 to 12 points. The higher the score, the more likely it is that the individual's alcohol consumption is affecting their safety.
CRAFFT Questionnaire (Adolescents)	<p>The CRAFFT screening tool asks 6 questions to screen adolescents for high risk alcohol consumption and use of other substances:</p> <ul style="list-style-type: none"> ◆ C – Car – “Have you ever ridden in a car driven by someone (including yourself) who was “high” or had been using alcohol or drugs?” ◆ R – Relax – “Do you ever use alcohol or drugs to relax, feel better about yourself, or fit in?” ◆ A – Alone – “Do you ever use alcohol/drugs while you are by yourself, alone?” ◆ F – Forget – “Do you ever forget things you did while using alcohol or drugs?” ◆ F – Friends – “Do your family or friends ever tell you that you should cut down on your drinking or drug use?” ◆ T – Trouble – “Have you gotten into trouble while you were using alcohol or drugs?”
T-ACE (Tolerance, Annoyed, Cut down, Eye-opener) Questionnaire	<p>The T-ACE questionnaire is a 4-item questionnaire that asks the following:</p> <ul style="list-style-type: none"> ◆ T – Tolerance – “How many drinks does it take to make you feel high?” ◆ A – Annoyance – “Have people annoyed you by criticizing your drinking?” ◆ C – Cut Down – “Have you felt you should cut down on your drinking?” ◆ E – Eye Opener – “Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?”

Management of Alcohol Use During Pregnancy (continued)

Table 5. (continued)

Useful Initial Screening Tools for Alcohol Use Disorders	
Screening Tool	Description
TWEAK Questionnaire	<p>The TWEAK is a five-item questionnaire to screen for risky drinking behavior during pregnancy. The acronym stands for the questions below:</p> <ul style="list-style-type: none"> ◆ T – Tolerance – “How many drinks can you hold?” ◆ W – Worried – “Have close friends or relatives worried or complained about your drinking in the past year?” ◆ E – Eye Opener – “Do you sometimes take a drink in the morning when you first get up?” ◆ A – Amnesia (blackouts) – “Has a friend or family member ever told you about things you said or did while you were drinking that you could not remember?” ◆ K – K/Cut Down – “Do you sometimes feel the need to cut down on your drinking?”

Table 6.

Rating Scales to Assess Severity of Alcohol Withdrawal Symptoms	
Rating Scale	Description
Clinical Institute Withdrawal Assessment for Alcohol Scale-Revised (CIWA-Ar)	<p>The CIWA-Ar is a self-report scale that measures 10 symptoms. Symptom categories are agitation, anxiety, and auditory disturbances, clouding of sensorium, headache, nausea/vomiting, paroxysmal sweats, tactile disturbances, tremor and visual disturbances.</p> <p>Scores range from 0 to 7 in each category. Scores of less than 8 indicate minimal to mild withdrawal. Scores of 8 to 15 indicate moderate withdrawal and scores of 15 or more indicate severe withdrawal. High scores, in addition to indicating severe withdrawal, are also predictive of development of seizures and delirium.</p>
Short Alcohol Withdrawal Scale (SAWS)	<p>The SAWS is a 10-item self-report scale that asks individuals to report on symptoms of anxiety, confusion, restlessness, misery, problems with memory, tremor, nausea, pounding heart, sleep disturbance, and sweating on a scale of 0-3 (none to severe) within the past 24 hours.</p> <p>The SAWS can be used to determine severity of alcohol withdrawal symptoms at first clinical presentation and in a variety of clinical settings.</p>

Management of Alcohol Use During Pregnancy (*continued*)

IF NO PHYSICAL DEPENDENCE, INITIATE PSYCHOSOCIAL INTERVENTIONS

Evidence-based psychosocial treatments found to be effective in treating alcohol use disorders include:

- Motivational enhancement therapy (MET)
- Cognitive behavioral therapy (CBT)
- Other behavioral therapies such as community reinforcement and contingency management
- 12-step facilitation (e.g., Alcoholics Anonymous)
- Psychodynamic therapy/Interpersonal therapy, and
- Marital and family therapies

See Table 4 on page 11.

Note: Data do not show that one mode of behavioral intervention is superior to others in pregnant women with alcohol use disorders.

- Monitor response to treatment using reliable and valid measures of changes in the target symptoms.

Women identified to have heavy drinking patterns and who are unlikely to reduce their consumption should be referred to professional alcohol use treatment programs.

For at-risk (“heavy”) or chronic alcohol use, residential or intensive outpatient treatment may be appropriate prior to office-based care depending on the duration and severity use.

IF PHYSICAL DEPENDENCE IS PRESENT, LORAZEPAM + FOLIC ACID SUPPLEMENTATION ARE RECOMMENDED FOR ACUTE ALCOHOL DETOXIFICATION

If physical dependence is present (e.g., signs/symptoms of alcohol withdrawal), initiate slow detoxification on an inpatient setting or at a substance use treatment facility in a quiet, protected environment using CIWA-Ar protocol with obstetrical (OB) support for a viable fetus and fetal heart tone monitoring in a non-viable fetus. Note that there are no studies of benzodiazepine use for alcohol detoxification during pregnancy. Recommendation is based on clinical consensus alone.

MEDICATION MANAGEMENT IF BENEFITS OUTWEIGH RISKS

The safety and efficacy of medication management for long-term abstinence from alcohol has also not been well-established in pregnancy. In individuals who are not pregnant, naltrexone has been shown to decrease heavy drinking to 83% of the placebo group and decrease total drinking days by about 4% (Rösner S, et al., 2010). There are no studies on the effects of naltrexone on pregnancy or the developing human fetus.

Disulfiram (Antabuse®) is contraindicated during pregnancy. Disulfiram has been associated with serious birth defects, including club-foot, VACTERL syndrome (a pattern of congenital anomalies) and phocomelia of the lower extremities.

Management of Alcohol Use During Pregnancy (continued)

Table 7.

Clinical Consensus on Medications Used to Maintain Abstinence for Alcohol Use Disorders in Pregnancy*			
Medication	Mechanism of Action	Dosing Recommendations	Notes
Naltrexone (Revia®)	Mu opioid receptor antagonist	50 mg/day orally starting 4-7 days after last drink; may begin at 25 mg by mouth one time daily for first 3-5 day to minimize adverse effects	Contraindicated in patients receiving long-term opioid therapy. Contraindicated in acute hepatitis or liver failure. Monitor liver dysfunction.

*Based on clinical consensus only. Data on the use of naltrexone during pregnancy are limited to animals. There are no studies on the effects of naltrexone on the human fetus.

NOT RECOMMENDED

- Barbiturates (e.g., phenobarbital)
- Topiramate
- Disulfiram

Notes:

- Randomized controlled trials have shown that brief intervention is more effective than no intervention at all for alcohol use disorders, and is often as effective as more extensive intervention.
- Benefits of brief intervention include decreased alcohol consumption, decreased risk of alcohol-exposed pregnancy, higher rates of abstinence, and improvement in fetal and new born outcomes.
- Maternal cessation of alcohol intake at any point during pregnancy is beneficial; children born to women who stop drinking late in gestation have better outcomes than those who continue to drink throughout pregnancy.
- Pregnant women experiencing alcohol withdrawal may be uniquely vulnerable to the effects of alcohol withdrawal.
- There are limited data on the effects of acute alcohol withdrawal during pregnancy.

Management of Alcohol Use During Pregnancy (*continued*)

POTENTIAL ADVERSE EFFECTS OF ALCOHOL CONSUMPTION DURING PREGNANCY

- Increased risk of miscarriage, preterm delivery, babies that are small-for-gestational age or have low birthweight
- Higher risk of stillbirth and infant mortality
- Effects on the fetus and infant include Fetal Alcohol Spectrum Disorders (FASD) and neurocognitive impairments
- Increased risk of mood disorders in childhood

ALCOHOL CONSUMPTION AND BREASTFEEDING

- Women who consume an occasional single alcoholic beverage (as defined by a standard drink) should be advised to wait 3 to 4 hours (i.e., until alcohol clears from the maternal blood) before breastfeeding so that the infant's exposure to alcohol is negligible.
- The American College of Obstetricians and Gynecologists (ACOG) recommends that there is no need to pump and discard the breastmilk other than to maintain milk flow and prevent breast engorgement.
- Alcohol levels in breastmilk will decrease as blood alcohol levels decrease; pumping and discarding breastmilk does not affect alcohol levels in breastmilk (ACOG, Committee Opinion 496, 2011; reaffirmed 2013).

Fetal Alcohol Spectrum Disorders

Table 8.

Fetal Alcohol Spectrum Disorders	
Diagnosis	Brief Diagnostic Criteria (American Academy of Pediatrics, 2016)
Fetal Alcohol Syndrome (FAS) with or without documented prenatal alcohol exposure	<ul style="list-style-type: none"> ◆ Documented maternal alcohol exposure ◆ Characteristic pattern of 2 or more minor facial abnormalities (e.g., short palpebral fissures, smooth philtrum, thin upper vermillion lip border) ◆ Prenatal and/or postnatal growth deficiency: height and/or weight \leq10th percentile ◆ Deficient brain growth, abnormal morphogenesis, or abnormal neurophysiology ◆ Neurobehavioral impairment with or without cognitive impairment <p>Other features often associated with fetal alcohol syndrome include abnormal facial features such as maxillary hypoplasia, cleft palate or micrognathia.</p>
Partial Fetal Alcohol Syndrome with or without documented prenatal alcohol exposure	<p><i>With documented maternal alcohol exposure</i></p> <ul style="list-style-type: none"> ◆ Minor facial abnormalities as noted for fetal alcohol syndrome ◆ Neurobehavioral impairment as noted for fetal alcohol syndrome <p><i>Without documented prenatal alcohol exposure</i></p> <ul style="list-style-type: none"> ◆ Minor facial abnormalities as noted for fetal alcohol syndrome ◆ Growth deficiency or deficient brain growth, abnormal morphogenesis, or abnormal neurophysiology ◆ Neurobehavioral impairment with or without cognitive impairment
Alcohol-Related Birth Defects (ARBD)	<ul style="list-style-type: none"> ◆ Documented prenatal alcohol exposure ◆ One or more major cardiac, skeletal, renal, ocular, or otic malformations demonstrated to be the result of prenatal alcohol exposure
Alcohol-Related Neurodevelopmental Disorder (ARND)	<ul style="list-style-type: none"> ◆ Documented prenatal alcohol exposure ◆ Neurobehavioral impairment <p><i>*Note: diagnosis not definitive in children <3 years old</i></p>

USF/Aunt Bertha Comprehensive Web-Based Florida Resource Guide

<https://floridamedicaidmentalhealth.auntbertha.com/>

About

- The USF Florida Medicaid Drug Therapy Management Program for Behavioral Health has collaborated with Aunt Bertha to create a free, web-based search tool for behavioral and physical health services and community resources.
- Resources include health, housing, food banks, transportation, and other services.

How to Search for Local Resources

- After entering a local zip code, providers can search by category or keyword.

Search for behavioral and physical health services and community resources including housing, food banks, and transportation.



Zip

Enter zip code of interest here and click "search"

- Click the specific category of interest (e.g., food, housing, transit, health) to view available resources, or enter a keyword to narrow the search.



Zip or keyword or program

Select Language ▼

FOOD HOUSING GOODS TRANSIT HEALTH MONEY CARE EDUCATION

Type the keyword or name of the program here, or search by a different zip code.

- Click on the program of interest to view information such as services provided, location, hours, and contact information about that program.



For any questions, email sabrinasingh@usf.edu.

Visit <http://floridamedicaidmentalhealth.org> for more information.

Sedative-Hypnotic Use and Pregnancy

BENZODIAZEPINES

All classes of benzodiazepines cross the placenta. Data on the use of benzodiazepines in pregnant and breastfeeding women are limited.

Prenatal exposure to diazepam increases the absolute risk of oral cleft by 0.01% (from 6 to 7 per 10,000 infants). Some studies have reported increased risk of facial and cardiac malformations with chlordiazepoxide and cardiac malformations with diazepam exposure, but study results have been inconsistent (Belantuono, 2013).

Maternal use of benzodiazepines before delivery has also been associated with floppy infant syndrome and neonatal abstinence syndrome, particularly with late third-trimester exposure.

Late third-trimester exposure to benzodiazepines has been associated with neonatal withdrawal symptoms, including hypertonia, decreased suck reflex, apneic spells, cyanosis, and impaired response to cold stress. Withdrawal syndromes may persist for several months after delivery in infants whose mothers received alprazolam, chlordiazepoxide, or diazepam.

Use of estazolam, flurazepam, quazepam, temazepam, and triazolam are not recommended in pregnant women. If prescribed, benzodiazepines with a short or medium half-life (e.g., lorazepam) at the lowest effective dose are recommended with caution if the benefits outweigh the risks of treatment; however, cases of neonatal sedation and respiratory depression have also been reported (Belantuono, 2013).

■ Treatment of Benzodiazepine Withdrawal During Pregnancy

- ◆ Individualized, gradual taper over several weeks with clonazepam with fetal monitoring (twice daily fetal heart tones) on an inpatient unit or substance use detoxification facility is recommended (based on clinical consensus).

■ Effects of Benzodiazepine Use on the Fetus/Infant

- ◆ **Floppy Infant Syndrome:** Symptoms include hypotonia (floppy appearance of muscles), lethargy, sucking difficulty, feeble cry, hypothermia, low APGAR scores and respiratory depression, particularly in infants of mothers who received high doses of diazepam (>30 mg) during labor (Harding and Timko, 2008).
- ◆ **Neonatal Abstinence Syndrome (NAS):** Exposure to high-dose benzodiazepines in utero has been associated with withdrawal symptoms such as irritability and restlessness, apnea, cyanosis, lethargy and hypo or hypertonia in the newborn. Symptoms of benzodiazepine withdrawal also include tremor, diarrhea, and vomiting. To avoid neonatal abstinence syndrome, it is recommended to gradually taper benzodiazepines during the last months of pregnancy, or sooner, if possible (Harding and Timko, 2008).

■ Eszopiclone, Zaleplon, Zolpidem

- ◆ There are a lack of well-controlled human studies with sedative hypnotic agents such as eszopiclone, zaleplon, and zolpidem.
- ◆ Some evidence of withdrawal symptoms and neonatal flaccidity have been found with these agents.

Sedative-Hypnotic Use and Breastfeeding

BENZODIAZEPINES

Benzodiazepines are excreted in breastmilk to varying degrees. Case reports have found that nursing infants of mothers taking diazepam or chlordiazepoxide had symptoms of lethargy, weight loss, and floppy infant syndrome. Literature reviews have recommended avoiding use of benzodiazepines in nursing women. If the benefits outweigh the risks and benzodiazepines are prescribed to nursing women, the recommendation is to forgo breastfeeding.

ESZOPICLONE, ZALEPLON, ZOLPIDEM

Extreme caution is advised with use of hypnotics in breastfeeding mothers, as there are limited data on the levels of zolpidem and zaleplon in breastmilk, no data on the levels of eszopiclone in breast milk, and no data on the effects of zolpidem, zaleplon, or eszopiclone in breastfed infants.



Treatment guidelines are available on our Program website: floridamedicaidmentalhealth.org

- Best Practice Recommendations for Women of Reproductive Age with Severe Mental Illness and Comorbid Substance Use Disorders
- Monitoring Physical Health and Side-Effects of Psychotherapeutic Medications in Adults and Children: An Integrated Approach
- Best Practice Psychotherapeutic Medication Guidelines for Adults
- Autism Spectrum Disorder & Intellectual Developmental Disorder: Psychotherapeutic Medication Recommendations for Target Symptoms in Children and Adolescents
- Best Practice Psychotherapeutic Medication Guidelines for Children and Adolescents

If you would like hard copies of the guidelines, please email sabrinasingh@usf.edu

Opioid Use Disorders and Pregnancy

Table 9.

Opioid Categories and Examples		
Type of opioid	How Derived	Examples
Natural opioid (opiate)	Alkaloid derived from plants such as opium poppy	Morphine, codeine
Semi-synthetic	Created in labs from natural opioids	Heroin, hydrocodone, hydromorphone, oxycodone, buprenorphine
Fully synthetic	Completely man-made	Fentanyl, levorphanol, meperidine, methadone, tramadol

SIGNS AND SYMPTOMS OF OPIOID INTOXICATION AND WITHDRAWAL

- **Opioid intoxication:** Euphoria commonly followed by apathy, dysphoria, psychomotor agitation or retardation and impaired judgment during or shortly after opioid use. Pupillary constriction and one or more of the following: drowsiness/coma, slurred speech, and impairment in attention or memory.
- **Opioid withdrawal:** Signs/symptoms include dysphoric mood, nausea/vomiting, muscle aches, lacrimation or rhinorrhea, pupillary dilation, piloerection or sweating, diarrhea, yawning, fever, or insomnia.

Management of Opioid Use Disorders During Pregnancy

SCREENING, BRIEF INTERVENTION, AND COLLABORATIVE/INTEGRATED CARE

Comprehensive assessment of mother and baby's health status, including screening for maternal social determinants of health. Refer to *Principles of Practice*.

Rule out alternative diagnoses.

Counseling and testing for HIV, hepatitis B and C, and liver function are suggested. Hepatitis A and B vaccinations are recommended for those with negative serology.

Note: At each level, coordinate care between all care providers (e.g., obstetrician, psychiatrist, addiction medication specialist).

■ Useful tools for screening of opioid withdrawal:

- ◆ Objective Opioid Withdrawal Scale (OOWS). The Objective Opioid Withdrawal Scale (OOWS) relies on observation by the clinician and is useful when documenting the objectively measurable symptoms of opioid withdrawal.
- ◆ Subjective Opioid Withdrawal Scale (SOWS). The Subjective Opioid Withdrawal Scale (SOWS) relies on the patient's rating of opioid withdrawal on a 16-item scale.
- ◆ Clinical Opiate Withdrawal Scale (COWS). The Clinical Opiate Withdrawal Scale is an 11-item, clinician-rated assessment tool. It is used clinically to follow course of withdrawal and effectiveness of medication treatment. It is a symptom triggered withdrawal rating scale, utilizing subjective and objective symptoms.

EVIDENCE-BASED PSYCHOSOCIAL INTERVENTION WITH A QUALIFIED THERAPIST IF NO EVIDENCE OF CHRONIC, REPETITIVE SUBSTANCE USE OR PHYSICAL DEPENDENCE ON OPIOIDS.

- Monitor response to evidence-based psychosocial treatments using reliable and valid measures of changes in the target symptoms.
- If pregnant and physically dependent on opioids, see below.

MONOTHERAPY WITH EITHER BUPRENORPHINE (WITHOUT NALOXONE) OR METHADONE IN CONJUNCTION WITH PSYCHOSOCIAL TREATMENT IF PREGNANT AND PHYSICALLY DEPENDENT ON OPIOIDS.

Medication-assisted therapy (buprenorphine or methadone) is recommended over abstinence for individuals with severe, chronic opioid use due to potential adverse effects of opioid withdrawal such as increased risk of abortion and preterm birth, and potential risk of relapse.

Based on clinical consensus, buprenorphine is preferred over methadone due to evidence of improved neonatal outcomes with buprenorphine [e.g., milder neonatal abstinence syndrome (NAS), shorter duration of NAS treatment, higher average birth weights with buprenorphine treatment compared with methadone treatment].

Psychosocial treatments that may be effective in concurrently with methadone or buprenorphine monotherapy include cognitive behavioral therapy, contingency management, relapse prevention, and motivational interviewing. See Table 4 on page 11 for evidence-based therapies used in treatment of substance use disorders.

Management of Opioid Use Disorders During Pregnancy (continued)

IF NO ACCESS TO MEDICATION-ASSISTED THERAPY WITH BUPRENORPHINE (WITHOUT NALOXONE) OR METHADONE, CONTINUE WITH CURRENT OPIOID REGIMEN TO PREVENT FETAL WITHDRAWAL

Recommendation based on expert consensus alone.

■ **Not Recommended**

- ◆ Long-acting naltrexone (Vivitrol)
- ◆ Buprenorphine/naloxone combination
- ◆ Partial opioid agonists

Methadone versus Buprenorphine for Medication-Assisted Therapy

Table 10.

Medication-Assisted Therapy with Long-Acting Opioids: Methadone versus Buprenorphine*		
	Methadone	Buprenorphine
Mechanism	Full mu receptor agonist	Partial mu receptor agonist
Use	More effective for severe dependence	Used for mild to moderate dependence
Half life	24 to 36 hours	36 to 48 hours
Route	Oral	Sublingual
Dosing	Daily dose	Daily to 3 times per week
Accessibility	Opioid treatment program	Physician's office or opioid treatment program
Abuse potential	More abuse potential Less risk of injection misuse with oral liquid	Less abuse potential Risk of injection misuse with sublingual tablet preparation
Overdose risk	No protective overdose factors	Ceiling effect limits risk of overdose
Withdrawal	Moderate to severe, prolonged withdrawal	Mild withdrawal symptoms
Common side effects	Cardiac dysrhythmia, hypotension, diaphoresis, constipation, nausea, vomiting, dizziness, sedation	Headache, nausea, sweating, rhinitis, constipation
Use in pregnancy	Current standard of care in pregnancy	Combination buprenorphine/naloxone not recommended in pregnancy; use methadone or buprenorphine alone

*Adapted from Whelan P and Remski K (2012). Buprenorphine vs methadone treatment: A review of evidence in both developed and developing worlds. *Journal of Neurosciences in Rural Practice*. Volume 3, Issue 1, p. 45-50., and Choo C (2009). Medications used in opioid maintenance treatment: *US Pharm*, 34(11): 40-53. Available at: <https://www.uspharmacist.com/article/medications-used-in-opioid-maintenance-treatment>.

Notes:

- Substitution treatment refers to transitioning opioid-dependent individuals to pharmacological management with an opioid agonist such as methadone, given in safe doses that are sufficient to prevent symptoms of withdrawal and reduce or eliminate drug cravings.
- Drug withdrawal treatment refers to slowly weaning the opioid agent until withdrawn completely.
- Research has shown that withdrawal management is inferior in effectiveness to pharmacotherapy with opioid agonists. Withdrawal management increases the risk of relapse without concurrent benefit to mother or fetus.

Medications Used to Treat Opioid Withdrawal in Pregnancy

Table 11.

Medications Used for Opioid Withdrawal			
Medication	Mechanism of Action	Dosing Recommendations	Notes
Buprenorphine ^o	Partial mu opioid receptor agonist	2 to 16 mg/day	Neonatal withdrawal is noted when used in pregnant patients. Neonatal abstinence syndrome is less severe with buprenorphine compared to methadone.
Clonidine*	Alpha-2 adrenergic agonist	0.1 to 0.3 mg every 6 to 8 hours Max dose: 1.2 mg/day	Hypotensive effects limit dose.
Methadone ^{o,†}	Mu opioid receptor agonist	Start taper at 20 to 30 mg/day up to a max of 60 to 120 mg/day	Monitor for QT prolongation and other arrhythmias. Neonatal withdrawal is noted when used in pregnant patients. Neonatal abstinence syndrome is less severe with buprenorphine compared to methadone.

Notes:

^oMethadone and buprenorphine (i.e., buprenorphine without naloxone) have the most evidence for use in pregnant women who are physically dependent on opioids.

[†]Methadone dosing during pregnancy requires adjustment in the second and third trimesters due to increased metabolism and circulating blood volume. Therefore, increased or split methadone dosing is suggested as pregnancy progresses.

* Clonidine is not FDA-approved for opioid withdrawal. However, clonidine is recommended off-label in the British Association of Psychopharmacology (2012) guidelines and in the American Psychiatric Association Substance Use Treatment guidelines (2010) for treatment of opioid withdrawal. Other drugs in the same class such as guanfacine may also be used off-label to treat opioid withdrawal symptoms.

Medications Used to Treat Opioid Withdrawal in Pregnancy (continued)

OPIOID ANTAGONIST USE IN PREGNANCY

■ Naltrexone

- ◆ It is appropriate to discontinue use of naltrexone if a woman becomes pregnant as long as the individual receiving treatment and clinician agree that the risk of relapse is low. If the individual receiving treatment is very concerned about relapse and wishes to remain on naltrexone, it is important to advise her of the associated risks of staying on naltrexone.

■ Naloxone

- ◆ Naloxone should only be used in case of maternal overdose to save the mother's life. Naloxone or naltrexone may induce withdrawal, which may precipitate preterm labor or fetal distress.

OPIOID PAIN MANAGEMENT AND TREATMENT PLANNING

Treatment of chronic, non-cancer related pain should begin with non-pharmacological interventions. If pharmacological interventions are necessary, non-narcotic medications should be tried first if the benefits outweigh risks. Special considerations are needed when treating pain in the context of opioid use disorder. Pregnant women with opioid use disorder are more likely to seek prenatal care late in pregnancy, miss appointments, experience poor weight gain, or exhibit signs of withdrawal or intoxication. Opioid agonists such as methadone and buprenorphine are the recommended treatments for medication-assisted therapy.

Opioid Use During Pregnancy: Potential Pregnancy-Related Complications

Opioid use during pregnancy is associated with increased risk of low birth-weight, respiratory issues, third trimester bleeding, toxemia, and mortality. Opioid exposure during pregnancy has also been associated with multiple complications, including preeclampsia, miscarriage, premature delivery, fetal growth restriction, fetal death, postnatal growth deficiency, microcephaly, neurobehavioral issues, and sudden infant death syndrome (SIDS).

It is difficult to ascertain whether these problems are due to opioid use, withdrawal, or co-occurring use of other drugs. Other factors that may contribute to obstetric complications include concomitant maternal medical, nutritional, and psychosocial issues, as well as comorbid psychiatric conditions or treatments.

EFFECTS OF OPIOIDS ON FETUS AND INFANT

■ Neonatal Abstinence Syndrome (NAS)

- ◆ It is estimated that 45% to 94% of infants exposed in-utero can be affected by NAS, which is characterized by hyperactivity of the central and autonomic nervous systems. Signs and symptoms of NAS may include irritability, feeding difficulties, tremors, hypertonia, emesis, loose stools, seizures, and respiratory distress.
- ◆ The appearance of NAS symptoms correspond with the half-life and duration of action of the opioid used. Treatment of NAS is considered adequate if the infant has rhythmic feeding and sleep cycles, as well as optimal weight gain.

■ Neurobehavioral Disorder Associated with Prenatal Opioid Exposure

- ◆ Data on long-term outcomes of infants with in-utero exposure to opioids are mixed. Earlier research studies have not found significant differences in the cognitive development of children up to 5 years old exposed to methadone in-utero compared to control groups (ACOG, 2012). More recent studies have found that in-utero exposure to methadone is associated with difficulties with inhibitory control and possible sustaining attention in children (Monnelly, 2018).

Opioid Agonist Treatment and Breastfeeding

OPIOID AGONIST TREATMENT AND BREASTFEEDING

- Mothers receiving methadone or buprenorphine for treatment of opioid use disorders are encouraged to breastfeed. Additional precautions are warranted for women with concomitant medical or substance use disorders (Kapman and Jarvis, 2015).
- There is some evidence of benefit in breastfeeding for women who are enrolled in methadone programs. Benefits include improved mother-infant bonding and positive effects on NAS.
- One study examining buprenorphine in breastfeeding found that the level of buprenorphine metabolites secreted in breastmilk are so low that they pose little risk to the breastfeeding infant (LactMed, 2020).

Florida Pediatric Psychiatry Hotline 1-866-487-9507

The Florida Pediatric Psychiatry Hotline is a program operated by the University of South Florida Division of Child and Adolescent Psychiatry in the Department of Pediatrics at the Rothman Center for Neuropsychiatry in St. Petersburg, Florida. The program enables primary care clinicians to get assistance for any child under their care through timely telephonic consultation with board certified child and adolescent psychiatrists at the Rothman Center for Neuropsychiatry.

Key information about the Florida Pediatric Consultation Hotline

The service is:

- Free
- Mostly related to consultation about medication management.
- Duration of the call is limited to a maximum of 20 minutes per telephone consultation.
- A trained administrative person schedules appointment times for the child psychiatrist to connect with the primary care clinician. Most calls will be answered within 1 to 4 hours.
- Information shared is limited to the patient's age, gender, weight, and other information that might be relevant to a discussion of medications. No patient names or other unique identifying information will be shared during the consultation.
- The calls will be answered on non-holiday weekdays between 8:30 am and 4:30 pm.



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Other Stimulant Use and Pregnancy

CAFFEINE

- Studies on the effects of caffeine on pregnancy and birth outcomes are mixed.
- **Caffeine and breastfeeding**
 - ◆ Caffeine appears in breastmilk rapidly after ingestion by the mother, with peak caffeine levels reported approximately 1 hour after a dose (LactMed, 2019).
 - ◆ Mothers with caffeine intakes equivalent to 10 or more cups of coffee per day have reported cases of infants with symptoms of fussiness, jitteriness, and poor sleep patterns.

COCAINE

- Cocaine use during pregnancy is associated with maternal migraines and seizures, premature rupture of membranes, preterm labor, placental abruption, hypertensive crises and spontaneous miscarriage (Forray, 2016).
- Neonates can experience cocaine intoxication and withdrawal. Signs and symptoms of intoxication may occur at much lower concentrations in tolerant newborns than in tolerant adults.
- There is no clear medication therapy for cocaine withdrawal or maintenance of abstinence from cocaine use. Evidence-based treatments for cocaine use in pregnancy include cognitive behavioral therapy (CBT), motivational interviewing (MI), and contingency management (CM). Monitor for suicidality when individuals are going through withdrawal and after withdrawal (Forray, 2016).
- There is no consensus regarding effects of prenatal cocaine exposure on long-term growth or achievement. Long-term effects on behavior and subtle effects on language have been documented with prenatal cocaine exposure (Behnke, 2013).
- **Cocaine use and breastfeeding**
 - ◆ Serious adverse reactions have been reported in newborn infants exposed to cocaine through breastmilk (LactMed, 2018).
 - ◆ Women who have used cocaine should be advised not to breastfeed unless they have a negative maternal urine toxicology screen at delivery, have been abstinent for at least 90 days, are in a substance abuse treatment program and plan to continue the program post-partum, have approval of their substance abuse counselor, are engaged and compliant in prenatal care, and have no other contraindications to breastfeeding (LactMed, 2018).

Other Stimulant Use and Pregnancy (*continued*)

METHAMPHETAMINE

- Methamphetamine use has been associated with higher risk of preterm delivery, low Apgar scores, placental abruption, cardiac and structural neurological abnormalities, and neonatal mortality (Shah et al., 2012; Good et al., 2010).
- There is also evidence that suggests increased risk of SIDS with in-utero methamphetamine exposure, even in babies who are not premature.
- Breastfeeding is not recommended in mothers who are actively abusing methamphetamine.

DEXTROAMPHETAMINE

- A large cohort study of 50,282 women found that therapeutic use of amphetamine in pregnancy showed no increased risk of congenital malformations (Milkovich and van der Berg, 1977; Golub et al., 2005).
- However, amphetamine abuse is associated with effects similar to cocaine, including low birth weight, premature births, and neonatal mortality, thought to be related to fetal vasoconstriction from in-utero exposure (Plessinger and Woods, 1993).
- Newborns exposed to amphetamines in-utero may also have structural neurological abnormalities, and can have jitteriness and trouble sleeping or eating after birth (Golub et al., 2005).
- Intrauterine growth retardation, small-for-gestational age babies, and gestational hypertension have been reported with prescribed doses (Golub et al., 2005).
- The effect of dextroamphetamine in the milk on neurological development of the infant is not well studied.

METHYLPHENIDATE

- Studies on methylphenidate are limited.
- One study found that methylphenidate abuse has been associated with premature birth, intrauterine growth retardation, and neonatal withdrawal syndrome (Forray, 2016).
- Limited evidence indicates that in prescribed doses for medical indications, methylphenidate levels in milk are low and may not have adverse effects on nursing infants.
- The effects of neurological development from methylphenidate exposure through breastmilk are not well studied (LactMed, 2019).

Cannabis (Marijuana) Use and Pregnancy

EFFECTS OF FETAL EXPOSURE TO CANNABIS DURING PREGNANCY

Cannabis use during pregnancy can lead to preterm labor, low birth-weight, small-for-gestational age babies, and admission to the neonatal intensive care unit. Adverse consequences of cannabis exposure during fetal and child development include decreased attention, decreased executive function, and poor academic achievement. Animal studies show that in-utero exposure to exogenous cannabinoids may cause impaired cognition and increased sensitivity to drugs of abuse. Studies in humans are limited (Ross et al, 2015). Use of marijuana (cannabis) and cannabis-containing products is not recommended during pregnancy.

CANNABIS USE AND BREASTFEEDING

Active compounds of marijuana (e.g. tetrahydrocannabinol) are excreted in breastmilk in small quantities. Marijuana may have effects on infant nervous system development. Mothers who use marijuana should be encouraged to reduce or abstain from marijuana use and minimize infant exposure to marijuana smoke (LactMed, 2019).

Summary Table: Substance Use— Signs/Symptoms of Intoxication and Withdrawal and Effects of Prenatal Exposure

Table 12.

Summary of Substances of Abuse and Effects of Prenatal Exposure			
Substance	Signs/Symptoms of Intoxication	Signs/Symptoms of Withdrawal	Effects of Exposure During Pregnancy
Cannabis-containing substances (e.g., marijuana, hashish)	Euphoria, heightened perception (visual, auditory, taste), increased blood pressure and heart rate, red eyes, difficulty concentrating, decreased coordination, increased appetite, slow reaction time, paranoid thinking.	Anxiety, depression, irritability, appetite loss, nausea, headache, chills, restlessness.	Animal studies show that in-utero exposure to exogenous cannabinoids may cause impaired cognition and increased sensitivity to drugs of abuse.
Sedative-hypnotics or anxiolytics (e.g. alprazolam, lorazepam, eszopiclone, zaleplon, zolpidem)	Slurred speech, incoordination, unsteady gait, nystagmus, impairment in cognition (e.g., attention, memory, stupor or coma).	Autonomic hyperactivity (e.g., sweating or pulse greater than 100 bpm), hand tremor, insomnia, nausea, vomiting; transient visual, tactile, or auditory hallucinations or illusions; psychomotor agitation, anxiety, grand mal seizures.	Neonatal withdrawal, neonatal flaccidity, respiratory depression. Benzodiazepines: Increased risk of facial clefts and possible increased risk of cardiac malformations with diazepam. Possible increased risks of facial and cardiac malformations with chlordiazepoxide.
Stimulants (e.g., cocaine, methamphetamine)	Feeling of exhilaration, increased alertness, restlessness, increased energy, aggression, rambling speech, dilated pupils, delusions/hallucinations, irritability, nausea/vomiting, weight loss, changes in heart rate and blood pressure, insomnia, paranoia, impaired judgment.	Fatigue, depression, sleep disturbances.	Cocaine use during pregnancy is associated with maternal migraines and seizures, premature rupture of membranes, preterm labor, placental abruption, hypertensive crises, and spontaneous miscarriage. Neurotoxic effects of methamphetamine use during pregnancy may be more severe than the effects of cocaine.

Summary Table: Substance Use— Signs/Symptoms of Intoxication and Withdrawal and Effects of Prenatal Exposure (*continued*)

Table 12 (*continued*).

Summary of Substances of Abuse and Effects of Prenatal Exposure			
Substance	Signs/Symptoms of Intoxication	Signs/Symptoms of Withdrawal	Effects of Exposure During Pregnancy
Hallucinogens [e.g., lysergic acid (LSD), phencyclidine (PCP)]	LSD – hallucinations, synesthesias, impulsivity, rapid heart rate and blood pressure, tremors, flashbacks. PCP – feeling of being separated from body and surroundings, hallucinations, problems with coordination, aggression, lack of pain sensation, increased blood pressure and heart rate, problem with memory, involuntary eye movements, seizures/ coma.	Fatigue, irritability, reduced ability to experience pleasure.	LSD exposure in-utero has been linked to limb defects, megacolon, sacral myelomeningocele, heart defects (e.g. Tetralogy of Fallot, AV malformations), and hydrocephalus in infants born to mothers who used LSD during pregnancy. PCP exposure in utero has been linked to premature birth, respiratory distress, slowed mental and motor development, and abnormal attachment behavior.
Inhalants (e.g., benzene, petroleum ether, xylene, toluene)	Brief euphoria, decreased inhibition, dizziness, nausea/ vomiting, involuntary eye movements, irregular heartbeat, tremors, rash around nose and mouth.	Nausea, excessive sweating, muscle cramps, agitation, tremors, convulsions, hallucinations.	Premature birth, miscarriage, chromosome damage, and delayed skull growth after birth.

Postpartum Psychosis

Postpartum psychosis is a rare condition that occurs in approximately 1 to 2 out of every 1,000 deliveries. Research suggests that of women who develop postpartum psychosis, there is approximately a 5% suicide rate and 4% infanticide rate associated with the condition. Postpartum psychosis may present as isolated psychotic symptoms limited to the postpartum period or may be a manifestation of other underlying mood disorders such as bipolar disorder or major depressive disorder.

Postpartum psychosis is considered to be an emergent condition requiring hospitalization.

Level 0 - Comprehensive Assessment

- ◆ Comprehensive mental health and physical assessment
- ◆ Obtain history of symptoms, especially over the past few weeks prior to presentation.
- ◆ Obtain sleep history.
- ◆ Obtain metabolic workup, including renal and thyroid function tests.
- ◆ **Evaluate for suicide/infanticide**
- ◆ Identify mood lability, atypical cognitive symptoms, and psychosis.
- ◆ Identify waxing and waning symptoms and mood lability.

Level 1 - Initial Treatment

- ◆ Hospitalize. Separate the mother and the baby.
- ◆ Initiate medication regimen to address mood lability, and psychotic symptoms, and sleep restoration simultaneously.
 - ◇ Lithium Carbonate: dose until mood is stabilized and serum levels are appropriate.
 - If lithium carbonate is not indicated, consider valproate.
 - If a different non-antipsychotic mood stabilizer has previously demonstrated efficacy for post-partum psychosis, use that medication.
 - ◇ Second Generation (Atypical) Antipsychotic
 - ◇ Benzodiazepines to restore sleep cycle (give nightly, then switch to as needed once sleep cycle is restored)
 - ◇ Breastfeeding must be avoided in order to prevent sleep disruption and to ensure infant safety.
- ◆ Consider electroconvulsive therapy (ECT) if suicidal or catatonic.

Postpartum Psychosis (Continued)

	<p>Level 2 - If Level 1 is not well-tolerated or ineffective</p> <ul style="list-style-type: none">◆ Non-Antipsychotic Mood Stabilizer<ul style="list-style-type: none">◇ Lithium if not used in Level 1◇ Switch to a different non-antipsychotic mood stabilizer.<ul style="list-style-type: none">• Valproate in acute phase but switch to a different mood stabilizer for maintenance in childbearing women to avoid congenital fetal effects in unplanned pregnancy.• Continue treatment for 9 months to one year. <p>Caution: Valproate and carbamazepine are associated with major malformations (e.g., neural tube defects), and neurodevelopmental disorders. Lithium is associated with cardiac malformations (Ebstein’s anomaly) in the first trimester.</p> <ul style="list-style-type: none">◆ Antipsychotic<ul style="list-style-type: none">◇ Optimize dose of atypical antipsychotic◇ If not tolerated switch to a different atypical antipsychotic.
	<p>Level 3 - If Level 2 is not well-tolerated or ineffective</p> <ul style="list-style-type: none">◆ Consider ECT, if symptoms warrant or Levels 1 and 2 are not effective.

Management of Pregnant Women with Obesity and Serious Mental Illness

Begin with the lowest level for most effective treatment. Care should be integrated between primary care, obstetricians, and psychiatrists, nutritionists, physical therapists, and all other providers. Refer to *Principles of Practice*.

PRE-CONCEPTION

- Pre-conception counseling and treatment is the necessary first step in prompting change in the obese woman of reproductive age.
- In the SMI population, consider medications with lower metabolic risk.
- Overall, a discussion regarding risks of obesity while pregnant should be discussed in depth with the patient (this includes risks of spontaneous abortion, maternal/fetal/neonatal complications, as well as delivery and postpartum complications). It is important to note that the reduction in weight that is necessary to help modify risk factors cannot take place during pregnancy due to the high risk to the fetus. Initiate discussion about contraceptive options.
- Encouraging a pre-pregnancy body mass index (BMI) of less than 25 to 30 kg/m² is suggested.

Refer to physical health monitoring recommendations for metabolic monitoring guidelines available at <http://floridamedicaidmentalhealth.org>.

DURING PREGNANCY

- Recommended total weight gain during pregnancy for overweight or obese women:
 - ◆ 15-25 lbs for overweight pregnant women
 - ◆ 11-20 lbs for obese pregnant women
- Recommend frequent monitoring of serum glucose levels.
- Nonsurgical weight loss options include diet, exercise and behavior modification.
- Dietary recommendations include a diet high in fiber, lean protein, and complex carbohydrates (low-glycemic index foods), and limiting foods that are high in simple sugars and saturated fats.
- An initial appointment with a nutritionist is recommended.
- Regular, low-impact aerobic exercise for 30 minutes per day is recommended. Exercise that uses large skeletal muscles is necessary (such as walking or swimming).
- Start high-dose folic acid supplementation of 5 mg daily (due to increased risk of neural tube defects in this population).
- Refer individuals with obesity and serious mental illness to a high-risk obstetrician.
- Obese women during pregnancy should be made aware by the healthcare provider of all of the increased risks there are to mother and fetus due to increased BMI.

Management of Pregnant Women with Obesity and Serious Mental Illness (*continued*)

- Monitor dietary options, as above.
- A nutritionist should be consulted and intermittent appointments throughout the pregnancy should be utilized.
- Regular, low-impact aerobic exercise for 30 minutes per day should be followed.
- Weight loss medications should not be utilized during pregnancy.
- Evaluate extremely obese patients (Obesity Class III) with an echocardiogram (ECHO) during first trimester.
- Evaluate early for gestational diabetes shortly before the second trimester.

Notes:

- Although very little research is done on the topic, a study performed using oral metformin as a weight loss intervention in pregnancy showed no overall benefits to mother or fetus and therefore shows insufficient evidence for this purpose.
- Make sure the appropriately sized cuff is being used for blood-pressure measurements.

If weight continues to increase past recommended weight gain during pregnancy:

- ◆ Continue dietary options.
- ◆ Continue coordination of care. Add more frequent follow-up appointments with a nutritionist. Consider home appointments for easier follow-up.
- ◆ Continue low-impact exercise and add in a PT (physical therapy) consult for further collaboration.
- ◆ Evaluate maternal risk for pre-eclampsia. If major risk factors exist such as obesity, hypertension, maternal age ≥ 40 years, family history of preeclampsia, then add low-dose aspirin (81 mg daily) at 12 weeks' gestation.
- ◆ Recommend glucose screening at each appointment.
- ◆ Due to maternal body habitus, a referral to a specialist may be needed for anatomic ultrasound around the 20 weeks' gestation.

Resources

SUBSTANCE USE AND MENTAL HEALTH

- American College of Obstetricians and Gynecologists. Tobacco, Alcohol, and Substance Abuse FAQs. <https://www.acog.org/patient-resources/faqs/pregnancy/tobacco-alcohol-drugs-and-pregnancy>
- American College of Obstetricians and Gynecologists. Opioid abuse, dependence, and addiction in pregnancy. Committee Opinion No. 524. *Obstet Gynecol* 2012;119:1070–6.
- American Society of Addiction Medicine. Substance Use, Misuse, and Use Disorders During and Following Pregnancy, with an Emphasis on Opioids. <http://www.asam.org/advocacy/find-a-policy-statement/view-policy-statement/public-policy-statements/2017/01/19/substance-use-misuse-and-use-disorders-during-and-following-pregnancy-with-an-emphasis-on-opioids>
- Centers for Disease Control and Prevention. Guideline for Prescribing Opioids for Chronic Pain. <https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm>
- National Institute on Drug Abuse. Medical Consequences of Drug Abuse: Prenatal Effects. <https://www.drugabuse.gov/publications/health-consequences-drug-misuse/prenatal-effects>
- National Institute of Mental Health. Substance Use and Mental Health. <https://www.nimh.nih.gov/health/topics/substance-use-and-mental-health/index.shtml>
- Substance Abuse and Mental Health Services Administration. Substance Use Disorders. <https://www.samhsa.gov/disorders/substance-use>
- U.S. Department of Health and Human Services. Substance Abuse and Mental Health Services Administration. Medications to Treat Opioid Use During Pregnancy – An info sheet for providers. <https://store.samhsa.gov/product/medications-to-treat-opioid-use-during-pregnancy-an-info-sheet-for-providers/SMA19-5094-IS>

LONG-ACTING REVERSIBLE CONTRACEPTIVES

- American College of Obstetrics and Gynecology. <https://www.acog.org/programs/long-acting-reversible-contraception-larc>
- American College of Obstetricians and Gynecologists, District II. Dispelling Long-Acting Reversible Contraception (LARC) Myths & Misconceptions Fact Sheet. <https://pcainitiative.acog.org/wp-content/uploads/17LARCFactSheet4.pdf>
- MDedge ObGyn. Your teenage patient and contraception: Think “long acting” first. *OBG Manag.* 2015 September; 27(9): 22-24, 26-29. <https://www.mdedge.com/obgyn/article/102325/contraception/your-teenage-patient-and-contraception-think-long-acting-first/page/0/1>.

MEDICATION EFFECTS AND BREASTFEEDING

- National Institute of Health. LactMed: A Toxnet Database. <https://www.ncbi.nlm.nih.gov/books/NBK501922/>

Note: Above resources and website links were updated at the time of publication.

List of Abbreviations

- AA: Alcoholics Anonymous
- ACOG: American College of Obstetricians and Gynecologists
- AHCA: Agency for Healthcare Administration
- AHRQ: Agency for Healthcare Research and Quality
- APA: American Psychiatric Association
- APGAR: Appearance, Pulse Rate, Reflex irritability, Activity, Respiratory effort (scoring system for newborn health)
- ARBD: Alcohol-Related Birth Defects
- ARND: Alcohol-Related Neurodevelopmental Disorder
- AUDIT: Alcohol Use Disorders Identification Test
- BAC: Blood Alcohol Concentration
- BCT: Behavioral Couples Therapy
- BNI: Brief Negotiated Interview (brief interview screening method)
- bpm: beats per minute
- CAGE: Cut down, Annoyed, Guilty Feelings, Eye-Opener (alcohol screening questionnaire)
- CBC: Complete Blood Count
- CBT: Cognitive Behavioral Therapy
- CDC: Centers for Disease Control and Prevention
- CET: Cue Exposure Therapy
- CWA-Ar: Clinical Institute Withdrawal Assessment for Alcohol Scale-Revised
- CM: Contingency Management
- CMHCs: Community Mental Health Centers
- CMP: Comprehensive Metabolic Panel
- COWS: Clinical Opiate Withdrawal Scale
- CRAFFT: Car, Relax, Alone, Forget, Friends, Trouble (alcohol screening questionnaire)
- CST: Coping Skills Training
- CT: Computed Tomography
- DAST-10: Drug Abuse Screening Test
- DSM-5: Diagnostic and Statistical Manual, 5th edition
- DTs: Delirium Tremens
- DUI: Driving Under the Influence (of Alcohol)
- DWI: Driving While Impaired
- ED: Emergency Department
- FAS: Fetal Alcohol Syndrome

List of Abbreviations (*continued*)

FASD: Fetal Alcohol Spectrum Disorders

FDA: U.S. Food and Drug Administration

FLO: Feedback, listening, information, options/goal-setting (brief intervention model for substance use)

FRAMES: feedback, responsibility, advice to change, menu of alternative goals/strategies, empathetic counseling, self-efficacy (brief intervention screening model for substance use)

HIV: Human Immunodeficiency Virus

IM: Intramuscular

IQ: Intelligence Quotient

IUD: Intrauterine Device

IUS: Intrauterine Systems

LARC: Long-Acting Reversible Contraceptive

LSD: Lysergic Acid Diethylamide

MAT: Medication-Assisted Therapy

NICE: National Institute for Health and Care Excellence

mcg/day: micrograms per day

mcg/kg/day: micrograms per kilogram per day

mcg/L: micrograms per liter

MET: Motivational Enhancement Therapy

MI: Motivational Interviewing

mg: milligrams

mg/day: milligrams per day

mL: milliliters

mL/day: milliliters per day

NAMI: National Alliance on Mental Illness

NAS: Neonatal Abstinence Syndrome

NIAAA: National Institute on Alcohol Abuse and Alcoholism

NICU: Neonatal Intensive Care Unit

NIDA: National Institute on Drug Abuse

NIMH: National Institute of Mental Health

NRT: Nicotine Replacement Therapy

NSAIDs: Non-Steroidal Anti-Inflammatory Drugs

OB: Obstetrics

OB-GYN: Obstetrician-Gynecologist

List of Abbreviations (*continued*)

OCs: Oral Contraceptives

OOWS: Objective Opioid Withdrawal Scale

PCP: Phencyclidine

REM: Rapid Eye Movement

RPT: Relapse Prevention Therapy

SAMHSA: Substance Abuse and Mental Health Services Administration

SAWS: Short Alcohol Withdrawal Scale

SC: Subcutaneous

SD: Standard Deviation

SIDS: Sudden Infant Death Syndrome

SMI: Serious Mental Illness

SNRIs: Serotonin/Norepinephrine Reuptake Inhibitor

SOWS: Subjective Opioid Withdrawal Scale

SSRI: Selective Serotonin Reuptake Inhibitor

T-ACE: Tolerance, Annoyance, Cut Down, Eye-Opener (alcohol screening questionnaire)

TCAs: Tricyclic Antidepressants

TSH: Thyroid Stimulating Hormone

TWEAK: Tolerance, Worried, Eye opener, Amnesia, K/Cut down (alcohol screening questionnaire)

UDS: Urine Drug Screen

USPSTF: U.S. Preventive Services Task Force

VACTERL syndrome: A disorder that affects many body systems. VACTERL stands for vertebral defects, anal atresia, cardiac defects, trachea-esophageal fistula, renal anomalies, and limb abnormalities.

WHO: World Health Organization

Appendix A: SAMHSA Brief Intervention Models

Table 13.

SAMHSA Brief Intervention Models	
Brief Intervention Model	Description and Link
Brief Negotiated Interview and Active Referral to Treatment: Provider Training Algorithm	Flowchart created by Boston University School of Public Health; includes brief screening questions to ask during brief intervention. https://www.bu.edu/bniart/files/2012/04/Adult-BNI-Alg_English-Spanish-4.17.12.pdf
Brief Negotiated Interview (BNI) Guide	List of potential questions and responses providers may use during brief intervention. http://contentmanager.med.uvm.edu/docs/bni_algorithm_adolescent_version/vchip-documents/bni_algorithm_adolescent_version.pdf?sfvrsn=2
FLO Model	The FLO model involves providing feedback, listening and eliciting information, and exploring options/goal-setting to change substance use behaviors. http://hospitalsbirt.webs.com/FLO%20by%20Dunn%20and%20Field.pdf
FRAMES Model*	The FRAMES Model involves six components: F – Feedback of personal risk (e.g., drinking that contributes to medical comorbidities such as hypertension) R – Responsibility of the individual A – Advice to change M – Menu of alternative goals/strategies to reduce drinking/substance use E – Empathetic counseling S – Self-efficacy: Encourage Optimism that goals can be achieved http://lib.adai.washington.edu/dbtw-wpd/exec/dbtwpub.dll?BU=http%3A//lib.adai.washington.edu/ebpsearch.htm&TN=EBP&QY=Find+AccessNo=5&RF=Full+Display&DF=Full+Display&NP=3&RL=1&DL=0&XC=/dbtw-wpd/exec/dbtwpub.dll&AC=QBE_QUERY&CS=0

*Not available in the public domain.

Reference: SAMHSA. <http://www.integration.samhsa.gov/clinical-practice/sbirt/brief-interventions>.

Note: Above website links were updated at the time of publication.

Appendix B: Components of Comprehensive Assessment and Brief Intervention

A COMPREHENSIVE ASSESSMENT INCLUDES:

- A full range of psychiatric symptoms and disorders as well as impairment from these symptoms and disorders. Refer to the *Florida Best Practice Psychotherapeutic Medication Guidelines for Adults* available on floridamedicaidmentalhealth.org.
- Risk assessment for substance use, misuse, and overdose.
- Suicide risk assessment.
- A full medical history.
- A relevant medical work up, physical examination and nutritional status evaluation.
- Family history, which includes past and current history of psychiatric illnesses, substance use and treatment history of parents, siblings and other relatives.
- Assessment of family structure and functioning.
- Assessment of environmental risk factors and stressors including history of abuse (physical, sexual) or neglect, traumatic life events, domestic violence, economic instability, etc.
- Use of screening tools to assess for and monitor co-morbid psychiatric symptoms with higher risk for substance use (e.g., depression).
- Use of collateral sources of information as appropriate (e.g., family members).
- Evaluation of the health of the fetus or infant.

PHYSICAL EXAMINATION

- Physical exam should include identifying physical signs of intoxication or withdrawal.

Note: Pregnant women with substance use disorders and severe mental illness may have more limited access to care. Pregnant women with substance use disorders may be more likely to seek care late in pregnancy, miss appointments, experience poor weight gain, or exhibit signs of withdrawal or intoxication.

LABORATORY TESTS

- Routine prenatal laboratory tests should be performed.
- Urine drug tests may be used to detect or confirm suspected substance use. These tests should be done with patient's consent and in compliance with state laws.
- Counsel and test for HIV, hepatitis B and C, and liver function as indicated based on clinical history and physical examination (e.g., in cases of intravenous illicit opioid use).

Appendix B: Components of Comprehensive Assessment and Brief Intervention (*continued*)

COMPREHENSIVE PRENATAL CARE INCLUDES:

- Assembling a multidisciplinary team of healthcare and social service providers.
- Scheduling frequent prenatal visits to monitor fetal and maternal health status and providing education.
- Evaluation of fetal health status by a trained professional throughout gestation.
- Referral for early ultrasound to confirm gestational age and establish an accurate baseline for tracking fetal growth/development.
- Monitoring for pregnancy complications (e.g. growth restriction, maternal withdrawal, third trimester bleeding) and referral for prenatal follow-up with OB-GYN.
- Communicating between providers (e.g. informing the pediatrician of the possibility of neonatal withdrawal).

BRIEF INTERVENTION INCLUDES:

- Population-specific, evidence-based motivational techniques to assess readiness to abstain from substance use and encouragement of positive lifestyle changes. The goal of brief intervention is to help individuals abstain from use of substances that are potentially harmful to the fetus.
- Education about the effects of substance use or misuse on the individual and, if pregnant or breastfeeding, on the fetus or infant.
- Education about the risks and benefits of continuing or discontinuing psychotherapeutic medications and/or medications for treatment of substance use (e.g., methadone or buprenorphine medication-assisted therapy for opioid use disorders) on the mother and fetus or infant.
- Addressing anxiety related to substance use disclosure and potential legal issues.

ADDITIONAL CONSIDERATIONS IN TREATMENT PLANNING:

- Abnormal laboratory results
- Absence of support network
- Acute illness
- Poorly controlled medical comorbidities (e.g., diabetes mellitus, chronic obstructive pulmonary disease)
- Serious mental illness (e.g., suicidal ideation, psychosis)
- Alcohol use: severe alcohol withdrawal symptoms, high risk of delirium tremens, history of alcohol withdrawal seizure
- Urine drug screen positive for multiple substances

<http://floridamedicaidmentalhealth.org>

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