

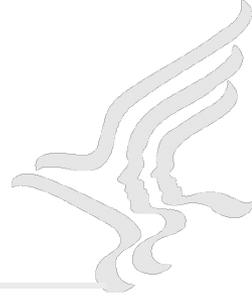
Module 12: MAT During Pregnancy

TIP Chapter 13

- Examine common medical and obstetrical complications for pregnant patients in MAT
- Discuss strategies for methadone dosage and maintenance in pregnant patients
- Investigate issues of postpartum treatment
- Study use of buprenorphine in pregnant patients
- Learn about integrated, comprehensive services for pregnant patients
- Identify nutritional issues for pregnant patients

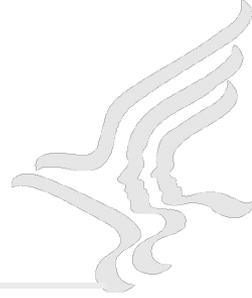


Methadone Maintenance as Standard of Care



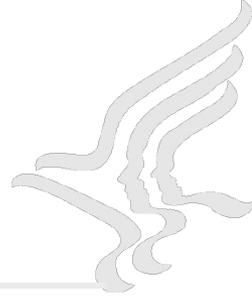
- Methadone has been accepted since the late 1970s to treat opioid addiction during pregnancy.
- In 1998, an NIH consensus panel recommended methadone maintenance as standard of care for pregnant women with opioid addiction.
- Methadone is currently the only opioid medication approved by FDA for MAT in pregnant patients who are addicted to opioids.

Methadone Maintenance as Standard of Care



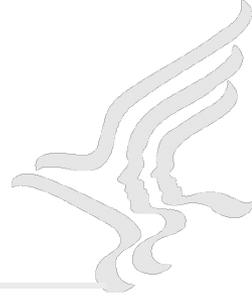
- Effective medical maintenance treatment with methadone has the same benefits for pregnant patients as for patients in general.
- Methadone reduces fluctuations in maternal serum opioid levels and protects the fetus from repeated withdrawal episodes.

Diagnosing Opioid Addiction in Pregnant Patients



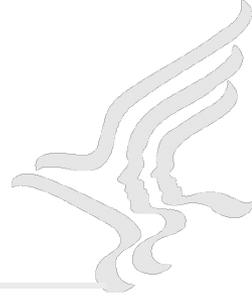
- Many women confuse amenorrhea with infertility.
- Methadone normalizes endocrine function; it is possible to become unintentionally pregnant early in MAT.
- Women who are opioid addicted may not acknowledge pregnancy or may misinterpret pregnancy signs for withdrawal symptoms.
- Pregnant women may sometimes increase their use of illicit opioids to alleviate these symptoms.
- Increased use of illicit opioids does not alleviate perceived withdrawal symptoms; instead, it exposes the fetus to increased opioid serum levels.

Diagnosing Opioid Addiction in Pregnant Patients



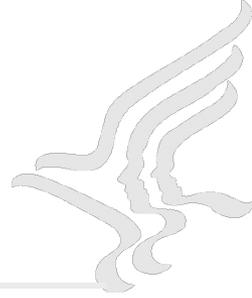
- Medical and substance use histories
- Physical examinations
- Drug test reports
- Observed signs or symptoms of withdrawal
- Evidence of diseases associated with drug use
- Poor attendance for prenatal care
- Unexplained fetal growth abnormalities

Diagnosing Opioid Addiction in Pregnant Patients



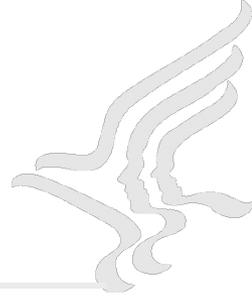
- Using an opioid antagonist to diagnose addiction in pregnant women is ***absolutely contraindicated.***
- Inducing even mild withdrawal can cause adverse fetal effects.

Common Medical Complications



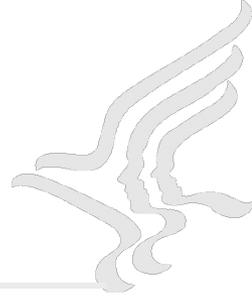
- Pregnant women who abuse substances have a greater-than-normal risk of medical complications.
- Programs should monitor regularly for signs of problems.
- Prescribed medications other than methadone should be monitored for compliance with usage directions and for adverse effects.

Common Medical Complications



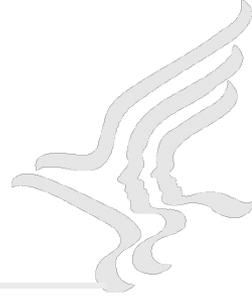
- Chronic substance use in pregnancy can cause medical complications, including infections.
- Infections can be profoundly harmful to both women and their fetuses if unrecognized and untreated during gestation.
- Hepatitis B and C, bacterial endocarditis, septicemia, tetanus, cellulitis, and STDs are especially frequent.

Common Medical Complications: Hepatitis B



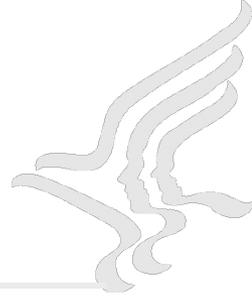
- Rate of perinatal transmission of HBV ranges from 70 to more than 90%, especially if the mother had active infection in the third trimester or within 5 weeks postpartum.
- If a new mother's antigen is positive for hepatitis B, the neonate should receive both hepatitis B vaccine and hepatitis B immune globulin.
- Rate of perinatal transmission of HCV is lower than that of HBV.

Common Medical Complications: Hepatitis C



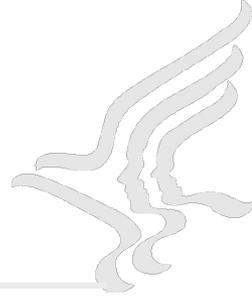
- Pregnant women who inject drugs are at high risk for HCV and should be screened for anti-HCV antibody.
- They should receive HCV RNA testing if an anti-HCV antibody test is positive.
- Infants whose mothers have hepatitis C should receive HCV RNA testing along with antibody testing for HCV.
- HCV can be transmitted vertically from mother to fetus.
- Breast-feeding and vaginal delivery do not increase the risk of neonatal HCV infection significantly.
- Available treatments to prevent vertical transmission are limited because of the risk of fetal toxicity.

Common Medical Complications: HIV/AIDS



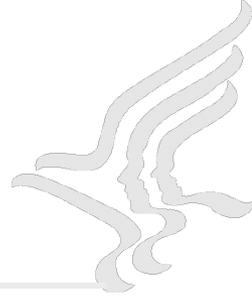
- Pregnant women who are opioid addicted and HIV positive present a unique treatment problem.
- In early 1990s, perinatal HIV transmission rates were 16 to 25%.
- After the implementation of new guidelines, transmission rates dropped to 5 to 6%.

Common Medical Complications: HIV/AIDS



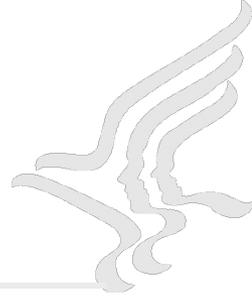
- Recent rates are below 2% when antenatal antiretroviral drugs (or AZT) are combined with cesarean section.
- AZT prophylaxis reduces risk of perinatal HIV infection, but monotherapy often is inadequate to treat a mother's HIV.
- Combination antiretroviral therapy is now the standard of care.

Common Medical Complications: HIV/AIDS



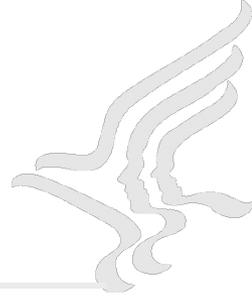
- Pregnancy has no effect on HIV progression.
- No increases found in birth defects or fetal malformation related to HIV infection.
- Women who are opioid addicted and HIV infected should receive additional counseling and support during postpartum period.
- Breast-feeding by HIV-infected women has been associated with an increased risk of HIV transmission and should be discouraged.

Common Obstetrical Complications



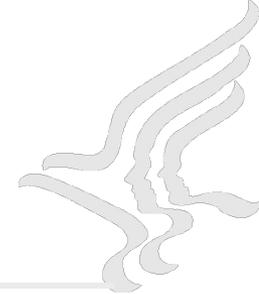
- The rates of obstetrical complications in pregnant women who are opioid addicted are the same as the increased rates in all women who lack prenatal care.
- When obstetrical complications are confirmed, standard treatments, including use of medications to arrest preterm labor, can be initiated safely.

Methadone Treatment



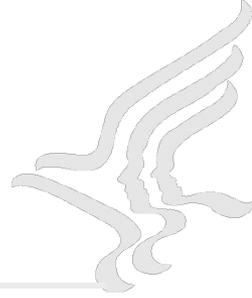
- Pharmacology of methadone in pregnant women has been evaluated thoroughly.
- As pregnancy progresses, the same methadone dosage produces lower blood methadone levels because of increased fluid volume, a larger tissue reservoir for methadone, and altered opioid metabolism in both the placenta and the fetus.

Methadone Treatment



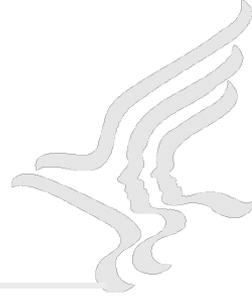
- Women often experience symptoms of withdrawal in later stages of pregnancy.
- Dosage increases are required to maintain blood levels of methadone and avoid withdrawal symptoms.
- Daily dose can be increased and administered singly or split into twice-daily doses.

Methadone Treatment



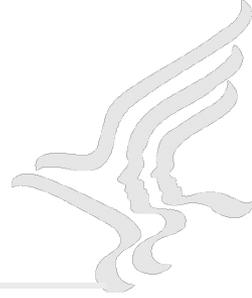
- Treatment providers have based dosing on the need to reduce NAS.
- This low-dose approach has been contradicted by recent studies.
- Higher dosages have been associated with increased weight gain, decreased illegal drug use, and improved compliance with prenatal care.
- Reduced methadone dosages may result in continued substance use and increase risks to both expectant mothers and their fetuses.

Methadone Treatment: Induction and Stabilization



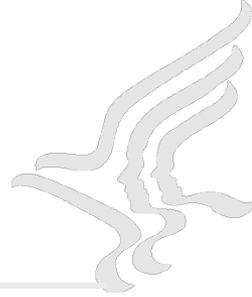
- Women who received methadone before pregnancy should be maintained initially at prepregnancy dosage.
- Pregnant women who were not maintained on methadone should be either inducted in an outpatient setting or admitted to a hospital.
- Most patients are stabilized within 48 to 72 hours.

Methadone Treatment: Managing Polysubstance Use



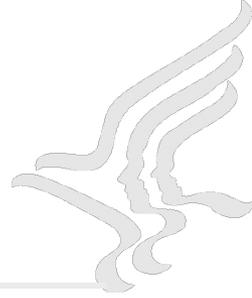
- Monitoring patients for their use of substances during perinatal care is essential.
- Polysubstance use is a special concern during pregnancy because of adverse effects and the serious maternal and fetal health risks from continued substance use and lack of adequate prenatal care.

Management of Acute Opioid Overdose in Pregnancy



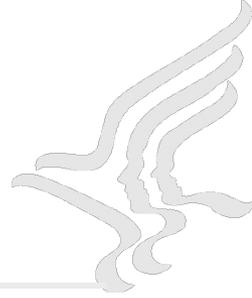
- Opioid overdose in pregnancy threatens pregnant women and their fetuses.
- Naloxone should be given to pregnant patients only as a last resort.
- Special care is needed to avoid acute opioid withdrawal, which can harm the fetus.

Managing Withdrawal From Methadone



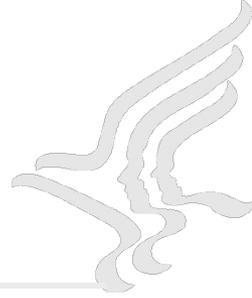
- MSW is not recommended for pregnant women.
- Appropriate MSW patients:
 - Live where methadone maintenance is unavailable
 - Have been stable in MAT and request MSW before delivery
 - Refuse to be maintained on methadone
 - Plan to undergo MSW through a structured treatment program

Managing Withdrawal From Methadone



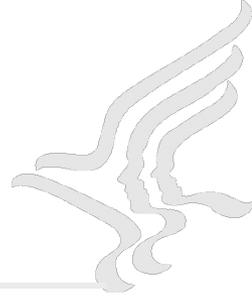
- Withdraw from methadone only under supervision by physician experienced in perinatal addiction treatment.
- Patients should receive fetal monitoring.
- MSW usually is conducted in second trimester; danger of miscarriage may increase in first trimester; and danger of premature delivery or fetal death may increase in third trimester.

Managing Withdrawal From Methadone



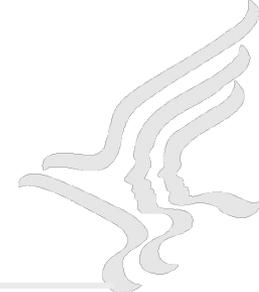
- Fetal movement should be monitored twice daily in outpatient MSW.
- Stress tests should be performed at least twice weekly.
- MSW should be discontinued if it causes fetal stress or threatens to cause preterm labor.

Postpartum Treatment of Mothers in MAT



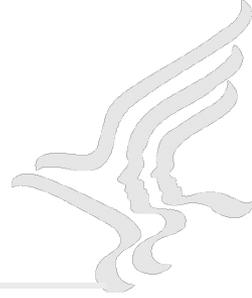
- Current treatment practices include continuing methadone after delivery at dosages similar to those before pregnancy.
- For women who began methadone maintenance during pregnancy, continue treatment at approximately half the dosage received in the third trimester.
- No empirical data support these approaches; any decrease should be based on signs of overmedication, withdrawal symptoms, or patient blood plasma levels.

Breast-Feeding



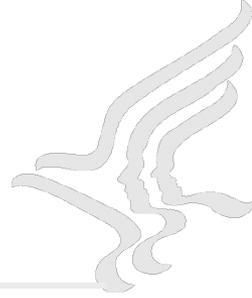
- Mothers maintained on methadone can breast-feed if they are not HIV positive, are not abusing substances, and do not have a disease or infection in which breast-feeding is contraindicated.
- Hepatitis C is no longer considered a contraindication for breast-feeding.
- Studies have found minimal transmission of methadone in breast milk regardless of maternal dose.

Effects on Neonatal Outcome: NAS



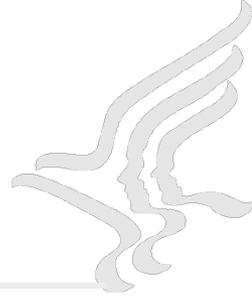
- Infants prenatally exposed to opioids have a high incidence of NAS.
- NAS is characterized by hyperactivity of central and autonomic nervous systems, reflected in changes in gastrointestinal tract and respiratory system.
- NAS babies often suck frantically on fists or thumbs but may have extreme difficulty feeding.
- Withdrawal symptoms begin minutes or hours after birth to 2 weeks later; most appear within 72 hours.
- Preterm infants have milder symptoms and delayed onset.

Effects on Neonatal Outcome: NAS



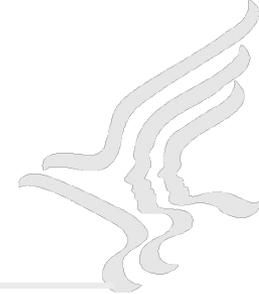
- Many factors influence NAS onset:
 - Types of substances used by mothers
 - Timing and dosage of methadone before delivery
 - Characteristics of labor
 - Type/amount of anesthesia or analgesic during labor
 - Infant maturity and nutrition
 - Metabolic rate of the infant's liver
 - Presence of intrinsic disease in infants

Perinatal Outcomes



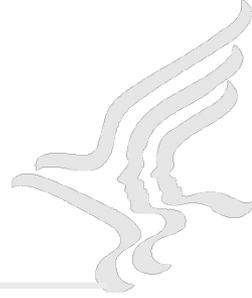
- Some studies found reduced fetal mortality and greater birth weights for infants of women maintained on methadone whereas others found no differences.
- Researchers investigating neurobehavioral characteristics in newborns undergoing opioid withdrawal consistently found differences in behavior between these infants and infants born to women not opioid addicted.
- These infants are frequently difficult to nurture, causing poor mother–infant bonding.

Use of Buprenorphine During Pregnancy



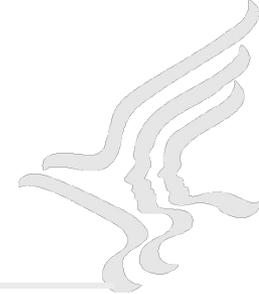
- Buprenorphine may be used in pregnant patients under certain circumstances.
- Consensus panel recommends buprenorphine be used only when physician believes potential benefits justify risks.
- Such patients may continue on buprenorphine with careful monitoring.

Use of Buprenorphine During Pregnancy



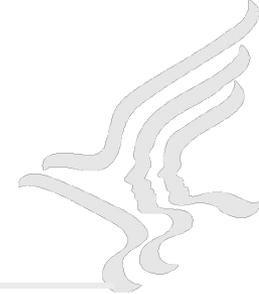
- Potential candidates for buprenorphine include:
 - Women who are opioid addicted but cannot tolerate methadone
 - Those for whom program compliance has been difficult
 - Those who are adamant about avoiding methadone

Use of Buprenorphine During Pregnancy



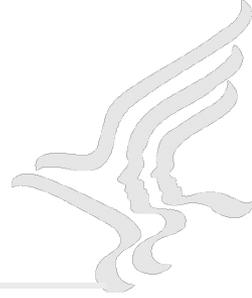
- Patient's medical record should clearly document that the patient:
 - Has refused methadone maintenance treatment or such services are unavailable
 - Has been informed of risks of using buprenorphine, which has not been thoroughly studied in pregnancy
 - Understands these risks

Use of Buprenorphine During Pregnancy



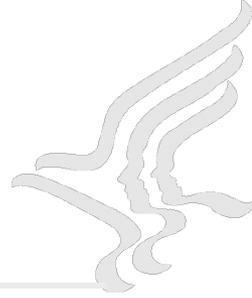
- When treating pregnant patients, providers should use buprenorphine monotherapy tablets (Subutex[®]).
- Patients already maintained on buprenorphine-naloxone combination tablets, who become pregnant, can be transferred directly to buprenorphine monotherapy tablets.

Buprenorphine Effects on NAS



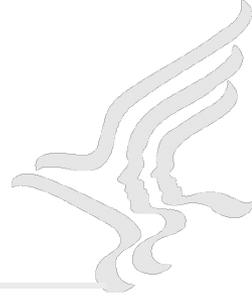
- Infants born to women receiving methadone or comprehensive prenatal care plus buprenorphine had improved birth outcomes.
- Buprenorphine-associated NAS can appear within 12 hours and last as long as 10 weeks.
- Buprenorphine-associated NAS is less intense than that associated with methadone.

Breast-Feeding During Buprenorphine Treatment



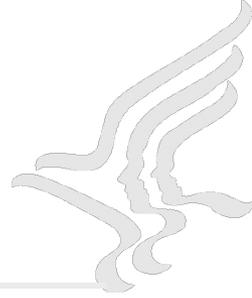
- Research indicates that only small amounts of buprenorphine pass into breast milk.
- These data are inconsistent with product labeling, which advises against breast-feeding.
- Women maintained on buprenorphine are encouraged to breast-feed.

Integrated, Comprehensive Services



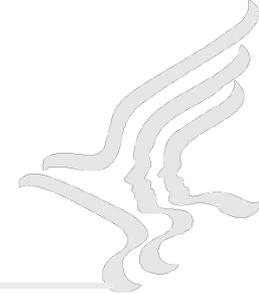
- Comprehensive treatment services address physiological and psychological effects of substance use and psychosocial factors.
- Services should eliminate substance use, develop personal resources, improve family and interpersonal relationships, eliminate socially destructive behavior, and help new parents cope.
- Integrated services should be woman centered and directly address traumatic events.

Psychosocial Barriers



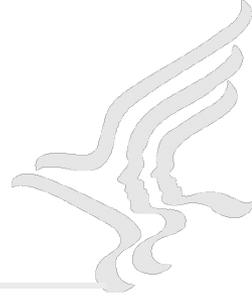
- Women addicted to opioids typically face financial, social, and psychological difficulties that affect options and treatment progress.
- Histories of negative experiences with the legal system or children's protective services and guilt and shame, coupled with low self-esteem and self-efficacy, produce difficult behaviors.
- Care should be provided in a gender-specific, nonpunitive, nonjudgmental, nurturing manner, with attention to patient's fears and cultural beliefs.

Contingency Management Treatment Strategies



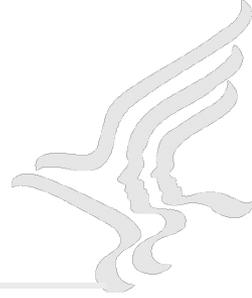
- Contingency management strategies effectively treat a range of substance use disorders.
- Voucher-based reinforcement therapy increases abstinence and strengthens behaviors.
- Positive-contingency rewards can improve pregnancy outcomes.
- Many pregnant women who receive MAT discontinue treatment prematurely.
- For pregnant women, escalating reinforcement procedures decrease substance use and increase outpatient attendance.

Nutrition Assessment, Counseling, and Assistance



- People with substance use disorders often are poorly nourished.
- Other lifestyle factors associated with substance use disorders, including poverty, poor eating and exercise habits, lack of concern about nutrition and health, and diets restricted by physiological conditions, play a significant role.

Nutrition Assessment, Counseling, and Assistance



- Pregnant patients in MAT should receive:
 - An assessment of nutritional status, eating habits, and weight
 - Education on appropriate diet and weight
 - Counseling
 - Supplemental nutrients when nutritional needs cannot be met by diet changes
 - Information and referral to food assistance programs