On the case...

# Collaborative care in a rural setting for a pregnant woman with heroin addiction

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How can a nurse practitioner help a young woman addicted to heroin safely carry her pregnancy to term and deliver a healthy infant?

AT, a 23-year-old woman, presents to the obstetrician's office in her rural hometown. As a nurse practitioner (NP) enters the examination room, AT cries out to her, "I can't lose another baby!"

Three weeks previously, after learning that she was pregnant, AT voluntarily admitted herself to an inpatient treatment program at a regional medical center located 50 miles from her home. AT had been injecting heroin daily for the past 1.5 years. At the inpatient treatment program, AT insisted on undergoing detoxification from heroin because she knew that she would not be able to keep appointments for maintenance medication management. She underwent medicated detoxification over 2.5 days. After a 5-day stay, she was discharged from the medical center and instructed to follow up with counseling services nearer to her home.

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At the office visit, AT acknowledges to the NP that she has thought about heroin every minute since her discharge from the inpatient treatment program, and that her boyfriend, with whom she lives, is still using heroin. She admits that she has relapsed twice since the discharge, taking a hydrocodone/acetaminophen tablet one time and injecting methamphetamine one time. The NP wonders how she can best help AT safely carry her pregnancy to term and deliver a healthy infant.

## How common is heroin addiction today?

Most heroin addictions begin with prescription opioid abuse. In 2010, approximately 210 million prescriptions were written for opioids in the United States.[1] Twenty percent of the U.S. population have admitted using prescription opioids for nonmedical reasons. Opioid users who become addicted to the drugs but can no longer get them legally may turn to heroin because it is less costly on the black market.[1] In 2013, more than 500,000 persons in this country admitted using heroin, an increase of 100% since 2006.[1]

Heroin has infiltrated small rural areas as well as urban areas because

of its easy availability and relatively low cost.[1-5] In fact, data indicate that heroin use has increased significantly in recent years among rural adolescents and young adults, with a report from the National Institute on Drug Abuse and the CDC describing a shift in heroin use from urban to rural areas.[6-8]

The demographics of heroin users are changing in other ways. Nowadays, a typical user may be a woman in a high income bracket living in a suburban area with private health insurance or she may be a woman living in poverty in a rural or urban area.[1,5,8] In 2012, 34% of persons receiving treatment for heroin addiction in the U.S. were women.[2,9] Women fortunate enough to be treated for heroin addiction will likely undergo psychological counseling, with or without maintenance therapy with an opioid agonist.[2,9-11] By contrast, many women living in rural areas have limited access to treatment.[7]

## How can an NP providing care in a rural community meet the needs of AT?

The NP reviews AT's health history, including her recent hospitalization information. She asks AT if they can have an honest conversation about her heroin use and her life situation so that they can plan for the best care for her and the fetus.

AT has complex health and social problems that have led to and complicated her current situation. Her health history includes depression and anxiety. She was the victim of a sexual assault at age 14. Her parents were both heavy drinkers, and her three siblings have addictions to alcohol, drugs, or both. At age 20, AT was prescribed hydrocodone/acetaminophen after a back injury and became addicted to the opioid, which eventually led to her heroin use. She has had many failed attempts to quit using heroin on her own. As a result, AT has not been able to get or keep a job. She has no home or car and has been charged with two felony possessions in the past year. The year before, the Division of Family Services removed her two children from her care because of her addiction—prompting her outcry to the NP about her fear of losing another child.

A typical heroin user may be a woman living in poverty in a rural area with limited access to treatment.

When she learned she was pregnant with her third child, AT and her boyfriend were homeless. It was only after AT's detoxification and hospital stay that her boyfriend's mother agreed to let them stay with her as long as they both remained drug free. Her boyfriend, who is the father of her other two children as well, can hold odd jobs, but he spends most of his income on drugs.

AT's initial physical examination and routine prenatal laboratory test findings are all normal. Test results for HIV, hepatitis C, chlamydia, gonorrhea, and syphilis are negative. AT completed the hepatitis B vaccination series with her previous pregnancy. A urine drug screen is negative. Ultrasonography (USG) confirms that she is at 10 weeks' gestation.

The NP tells AT about an outpatient treatment program at the local hospital that provides free transportation to and from visits. AT agrees to be evaluated at the program and to consider maintenance therapy. An appointment is made for the next day. The NP also describes the healthcare providers (HCPs) who will be important team members in AT's care. She will receive chemical dependency counseling, other mental health counseling, and management of her maintenance medication dosage at the outpatient treatment program. The NP will collaborate with the obstetrician at the office to provide her prenatal care and will consult regularly with maternal–fetal healthcare specialists at the regional medical center where she was previously hospitalized. AT provides written consent for all healthcare team members to have access to her electronic health record so that her care can be coordinated.

## How is heroin addiction treated during pregnancy?

Chronic heroin use during pregnancy is associated with spontaneous abortion, placental insufficiency, intrauterine growth restriction, premature labor and/or birth, chorioamnionitis, preeclampsia, abruption placentae, oligohydramnios, premature rupture of membranes, intrauterine death, higher rates of cesarean sections, postpartum hemorrhage, and longer hospital stays. Newborns are at risk for neonatal abstinence syndrome (NAS).[12-14]

Opioid-assisted maintenance therapy (OAMT), the standard treatment for heroin addiction during pregnancy, can reduce the risks for obstetric and neonatal complications.[15] In addition, the use of OAMT during pregnancy can prevent complications of illicit opioid use, narcotic withdrawal, and relapse;

encourage prenatal care and drug treatment; reduce criminal activity; and avoid risks to the patient of associating with a drug culture.[15,16]

Methadone, a full opioid agonist, is the most commonly used medication for OAMT during pregnancy. Methadone maintenance must be prescribed and dispensed on a daily basis by an addiction treatment specialist in a registered methadone treatment program. Buprenorphine, a partial opioid agonist, is another option for treatment during pregnancy. Buprenorphine may be prescribed in an office setting by a physician or NP who has undergone specific credentialing and in accordance with federal and state regulations. Advantages of treatment with buprenorphine over methadone include lower risk of overdose, ability to have outpatient treatment without required daily visits to a treatment program, and evidence of less severe NAS.[15,16] Disadvantages include higher discontinuation rates, risks for sharing or selling the drug, and lack of long-term data on the effects of the medication on children exposed to it *in utero*.[15,16]

Medication dosages may need to be adjusted during pregnancy to avoid withdrawal symptoms that can cause fetal stress and may lead to maternal heroin use relapse. This need is especially true in the third trimester, when the woman may have a more rapid metabolism.[15,16]

## How does the NP manage AT's ongoing care?

The NP sees AT every 2 weeks over the next 6 weeks to establish rapport, offer support, and evaluate concerns. The NP consults with maternal–fetal healthcare specialists at the regional medical center to discuss a plan to monitor fetal well-being throughout the pregnancy. A USG schedule is established to evaluate fetal anatomy at 19 weeks and then every 6 weeks in the third trimester to monitor fetal growth.

AT and her addiction specialist decide that buprenorphine is an appropriate maintenance medication for her. AT attends individual and group counseling sessions at the outpatient treatment program 5 days a week and sees the addiction specialist weekly for her buprenorphine prescription for the first month of her treatment. The psychiatrist at the treatment center evaluates AT for depression and anxiety and prescribes sertraline to treat depression and quetiapine to aid sleeping. Over time, AT is able to reduce her counseling sessions to 3 days a week and her appointments for buprenorphine prescription to once monthly.

After the first few weeks of frequent visits, AT sees the NP every 4 weeks until 26 weeks' gestation, every 2 weeks until 36 weeks' gestation, and then weekly. The USG at 19 weeks shows normal fetal anatomy and growth. USGs at 28 and 34 weeks show fetal growth within normal limits. All routine laboratory test results are normal.

The NP and obstetrician discuss birthing plans with AT. She decides to remain on buprenorphine through labor and delivery, with a planned epidural for pain management. The pediatrician is available to oversee management of any NAS in the newborn. The maternal–fetal healthcare specialists at the regional medical center remain available for consultation.

At 38 weeks' gestation, AT has an uncomplicated labor and vaginal birth of a baby girl weighing 6 lb 15 oz. Although breastfeeding is encouraged, AT decides to bottle feed. A social worker from the division of family services approves AT to take her baby home. AT and her daughter are discharged after 48 hours to stay with her boyfriend at his mother's home. She decides she will use an intrauterine contraceptive so that she can continue to get her life in order without worrying about another pregnancy.

## Should AT be encouraged to breastfeed?

Breastfeeding is encouraged for mothers receiving OAMT as long as they abstain from the use of illicit substances.[15,17] Breastfeeding supports mother–infant bonding and may reduce the severity and duration of NAS symptoms.[18,19] Minimal levels of methadone or buprenorphine are found in breast milk, regardless of the maternal dosage.[15,16] Both medications are considered safe during breastfeeding.[15]

The safety of illicit substances during breastfeeding is not possible to determine. Maintaining open lines of communication between the mother and her HCPs is essential so that she feels comfortable letting them know if she does relapse. If relapse does occur, the mother should be provided with assistance to transition to bottle feeding and guidance on how to taper milk production to prevent mastitis.[17]

## Reflection

Although AT was successful in stopping heroin and staying drug free for most of her pregnancy, she admitted having two occasions of illegal drug use during treatment. Her boyfriend initiated treatment, but he stopped after 2 weeks and started using heroin again. AT moved into a shelter for homeless pregnant women for a month, until her boyfriend returned to treatment. The motivation to have a healthy baby she could keep and easy access to a treatment center near home were vital to AT's success.

## Implications for NPs

Nurse practitioners providing care for reproductive-aged women may encounter some with heroin addiction, including during a pregnancy. NPs need to screen all women for alcohol and drug abuse at least annually and all pregnant women early in pregnancy. A nonjudgmental and supportive approach is important. Goals for pregnant women are to encourage regular prenatal care and drug treatment that includes OAMT and counseling. A collaborative approach includes prenatal care providers, addiction treatment specialists, mental health professionals, maternal–fetal healthcare specialists, and neonatal specialists. Using this collaborative approach, NPs in rural health settings can safely manage the care of pregnant women with heroin or opioid addiction.

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### Web resource

A. npwomenshealthcare.com/author-guidlines/