Screening, brief intervention, and referral to treatment for opioid and other substance use during infertility treatment

Tricia E. Wright, M.D., M.S.

Department of Obstetrics, Gynecology and Women's Health, and Department of Psychiatry, John A. Burns School of Medicine, University of Hawaii, Honolulu, Hawaii

Opioid use and misuse have reached epidemic proportions in the United States, especially in women of childbearing age, some of whom seek infertility treatments. Substance use is much more common than many of the conditions routinely screened for during the preconception period, and it can have devastating consequences for the woman and her family. Substance use can worsen infertility, complicate pregnancy, increase medical problems, and lead to psychosocial difficulties for the woman and her family. The reproductive endocrinologist thus has an ethical and medical duty to screen for substance use, provide initial counseling, and refer to specialized treatment as needed. This article provides an overview of screening, brief intervention, and referral to treatment (SBIRT), a public health approach shown to be effective in ameliorating the harms of substance use. (Fertil Steril® 2017;108:214–21. ©2017 by American Society for Reproductive Medicine.)
Key Words: Assessment, alcohol use, infertility, opioid use disorders, SBIRT, tobacco use

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Substance use is common in women of childbearing age. Approximately 55% of women drink alcoholic beverages, 23% smoke cigarettes, and 10% use either illicit drugs or prescription drugs without a prescription (1). Although most women are able to quit or cut back harmful substances during pregnancy and pregnancy attempts, many are unwilling or unable to stop. National survey data indicate that during pregnancy, 10% of women drink alcohol (4% binge, i.e., have five or more alcoholic drinks on the same occasion on at least 1 day in the past 30 days.), 15% smoke cigarettes, and 5% use an illicit substance (1). This makes substance use as or more common than many conditions routinely screened for and assessed during preconception and prenatal care, such as rubella, cystic fibrosis, diabetes, thyroid disease, anemia, postpartum depression, or preeclampsia. Moreover, substance use during pregnancy is both costly and harmful. Substance use during pregnancy is associated with poor pregnancy outcomes, including preterm birth, low birth weight, birth defects, developmental delays, miscarriage, and neonatal abstinence syndrome (NAS) (2). Long-term effects on the mother and infant include medical, legal, familial, and social problems, some of which are lifelong and costly (2, 3). The United States is currently in the midst of an epidemic of opioid use, overdose deaths (4), and NAS (5). Because of increased opioid prescribing by physicians, many women have developed an opioid use disorder (6). These women are often seen by reproductive endocrinologists for infertility and chronic pain.

Few data are available describing the incidence of substance use and substance use disorders (SUDs) in women undergoing infertility treatments, but it has been shown that women with infertility are at higher risk of developing alcohol use disorders (7) and likely opioid use disorders as well. This is logical given that many of the risk factors for substance use are more common in women with infertility, including depression (8, 9), anxiety (10), older age, and higher education levels (11).

In addition, several addictions increase the risk of infertility, including tobacco use, alcohol misuse, marijuana use, and opioid use and misuse. Tobacco use by women has been shown to delay conception by a year or more (12) and doubles the risk of infertility as well as decreases ovarian reserve (13). Alcohol use disorders are associated with a broad spectrum of

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Reprint requests: Tricia E. Wright, M.D., M.S., Department of Obstetrics, Gynecology and Women's Health, and Department of Psychiatry, 1319 Punahou Street, Suite 824, John A. Burns School of Medicine, University of Hawaii, Honolulu, Hawaii 96816 (E-mail: tewright@hawaii.edu).

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reproductive disorders, including amenorrhea, anovulation, luteal phase dysfunction, hyperprolactinemia, increased risk of spontaneous miscarriage, and impaired fetal growth and development (i.e., fetal alcohol syndrome) (10). Marijuana has been shown to increase menstrual irregularity as well as decrease oocyte retrieval (14). Opioids have a direct effect on the hypothalamic-pituitary axis, thus increasing the incidence of oligomenorrhea and irregular menses (15). Not only are women with SUDs seen more often by reproductive endocrinologists, they are also more likely to have worse outcomes from infertility treatments than women without SUDs.

As women are more likely to be prescribed opioids for chronic pain (16, 17), have a greater incidence of chronic pain conditions such as fibromyalgia, chronic pelvic pain, and migraine headaches (17), and require more opioids for the treatment of pain (16), many women with infertility will be using opioids, either by prescription or illicitly. One study showed that 10% of women had been prescribed an opioid pain reliever during the prenatal period (18). Currently in the United States on average 21,000 women per month (0.9%) use opioids during pregnancy (19). Opioid use during pregnancy is associated with preterm birth, poor prenatal care, and neonatal opioid withdrawal syndrome (NOWS) also known as NAS (2, 19). As NOWS incidence is at epidemic proportions (5), clearly prevention of opioid-exposed pregnancies is of utmost importance in stanching this epidemic.

Given that, by definition, pregnancies conceived with infertility treatments are planned, preconception counseling should include screening for substance use. Providers of infertility treatments have an ethical obligation to screen for and provide referral to treatment of couples who may not provide a healthy home environment for the children created by artificial means (20). Parents with substance use disorders are more likely to have child welfare involvement for maltreatment and neglect as well as family disruption. Though substance use in of itself should not be construed as child abuse (21), the risk for child abuse is 2 to 13 times higher for children when one or both parents have SUDs (22).

Substance use disorders are a chronic relapsing condition similar to diabetes, hypertension, or asthma. Just as infertility providers would ask about these conditions and refer to treatment to ensure the mother is at optimum health before infertility treatments, the infertility provider should screen for substance use, counsel on safe and unsafe use, and refer to treatment if needed. This article provides a practical approach to screening for harmful substance use that may interfere with fertility, prove harmful to the developing fetus, and prove detrimental to the family unit if not treated. In addition, the article educates infertility providers in screening, brief intervention, and referral to treatment (SBIRT), a public-health approach to substance use that has been shown to decrease harmful substance use and improve pregnancy outcomes (23, 24).

SCREENING

Screening for substance use should be universal, as SUDs occur in every socioeconomic class and racial and ethnic group, and, as mentioned earlier, may be even more common among women seeking infertility treatments. Moreover, screening based on "risk factors" such as late entry to prenatal care or prior poor birth outcome potentially leads to missed cases and can exacerbate stigma and stereotype (25). Universal screening is recommended by many professional organizations, including the American Society for Reproductive Medicine (ASRM) (20), American College of Obstetricians and Gynecologists (ACOG) (21), the American Academy of Pediatrics (AAP) (26), the American Medical Association (AMA) (27), and the U.S. Centers for Disease Control and Prevention (CDC) (28). Screening for tobacco use, at-risk drinking, illicit drug use, and prescription drug misuse should occur at the initial consultation visit as well as periodically during the course of infertility treatment, especially after failed courses of treatment.

Most of the studies looking at screening have focused on using instruments, such as TWEAK (T = tolerance, W = worried, E = eye-opener, A = amnesia, K = cut down) (29) or T-ACE (T = tolerance, A = annoyed, C = cut down, E = eye-opener) (30). These instruments have the advantage of being validated, and most are fairly sensitive though they only screen for alcohol (and only heavy alcohol use). The CAGE (31) questionnaire (C = cut down, A = annoyed, G = guilt, E = eye opener) that most were taught in medical school has not been validated in pregnant women. The Alcohol Use Disorders Identification Test (AUDIT-C) is a short, three-question test that can be used to screen for alcohol use with a cutoff of 0 for pregnant women and ≥ 3 for nonpregnant women (32) (Fig. 1).

The 4Ps screener (33) (Table 1) and modifications (34) have been extensively studied in pregnancy and have the advantage of being able to be added into an intake form, such as the ACOG intake form, in an innocuous and often effective way (as will be discussed in the section on assessment). It also screens for other substances besides alcohol. This initial screening can be done by anyone in the practice, with follow-up evaluation by the provider.

The barriers to implementing instrument-based screening include patient discomfort and lack of literacy, staff resistance due to time pressures, and organizational issues such as lack of administrative support (35). Integration into the practice's flow can be eased by incorporating screening tools into the electronic medical record systems (EMR) or by using a computer-based approached, which may diffuse the discomfort women feel in disclosing a behavior about which they are embarrassed, but this has not been compared with clinician-administered screening in pregnant women (36). All positive screens require follow-up evaluation by the provider.

To counteract some of the institutional barriers to instrument-based screening, Wright et al. (23) recommended using three open-ended questions regarding use of tobacco, alcohol, and other drugs (the NIDA Quick Screen) (29): "In the past year how many times have you drunk more than 4 alcoholic drinks per day? Used tobacco? Taken illegal drugs or prescription drugs for non-medical reasons?" Again, this can be easily incorporated into the initial intake paperwork; just as a provider would go over a patient's relevant health history, this can be reviewed and positive answers explored in more detail. Women are also more likely to report lifetime use or use before their pregnancy attempts than they are to disclose use during pregnancy because of the risks and stigma involved.

FIGURE 1

AUDIT-C Questionnaire

Patient Name _____ Date of Visit _____

1. How often do you have a drink containing alcohol?

- ❑ a. Never
- ❑ b. Monthly or less
- ❑ c. 2-4 times a month
- ❑ d. 2-3 times a week
- ❑ e. 4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day?

- ❑ a. 1 or 2
- ❑ b. 3 or 4
- ❑ c. 5 or 6
- ❑ d. 7 to 9
- ❑ e. 10 or more

3. How often do you have six or more drinks on one occasion?

- ❑ a. Never
- ❑ b. Less than monthly
- ❑ c. Monthly
- ❑ d. Weekly
- ❑ e. Daily or almost daily

Scoring is done a=0, b=1, c=2, d=3, e=4
Positive score for women is ≥3 (sensitivity 0.66 and specificity 0.94) (32) and for pregnant women ≥0

AUDIT-C is available for use in the public domain.

Alcohol Use Disorders Identification Test (AUDIT-C) questionnaire (available for use in the public domain).

Wright. SBIRT and infertility. Fertil Steril 2017.

Regardless of which method is used or how the screening is delivered, it is essential that conversations around substance use be nonjudgmental. Substance use should be discussed in the same manner as all lifestyle issues that can affect fertility, such as diet and exercise. Prefacing screening with statements such as "I ask all my patients about substance use" can help normalize the enquiry and increase the patient's comfort with disclosure. The process of screening is only the first step in a conversation with the patient that may lead to treatment referral or provision of other treatment resources. For example, in women undergoing infertility treatment, asking "How have infertility treatments affected your drinking behavior?" may illicit a more honest response, especially if the woman is comfortable with her provider.

Urine drug testing is a common practice for many obstetricians and family practice physicians during pregnancy. It does have the advantage of detecting use in cases where the woman does not disclose her use and may help in diagnosing NAS/NOWS. Toxicology testing is a useful adjunct for individuals in SUD treatment (30) and also is useful at the time of delivery (28) in cases of pregnancy complications, where knowing the substance used informs the management decisions. Toxicology testing of pregnant women also has a number of limitations and negative consequences, so it should never be done without the woman's knowledge or consent.

TABLE 1

The 4Ps for substance use in pregnancy.

1. Have you ever used drugs or alcohol during Pregnancy?
2. Have you had a problem with drugs or alcohol in the Past?
3. Does your Partner have a problem with drugs or alcohol?
4. Do you consider one of your Parents to be an addict or alcoholic?

Note: Adapted from Ewing 1990 (33). Modifications of the 4Ps screener are available, such as the 5Ps (adding smoking and/or peers) and the 4P's Plus (34), which is copyrighted and requires a yearly fee to use.

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It certainly could be offered to women undergoing infertility treatment, as diagnosing and treating SUD prenatally may avoid the negative consequences of antenatal testing.

For example, urine drug testing during pregnancy greatly increases the risk of legal or child welfare involvement, particularly in states with mandated reporting requirements that include mention of drug use during pregnancy. This places physicians in a difficult ethical position, and it raises the likelihood that women will fail to disclose potential health risks to their obstetric provider or avoid recommended medical care (37). Further, the reporting of drug use during pregnancy to child welfare—which is made more likely or is even mandated as a result of positive toxicology—is strongly biased against racial and ethnic minorities (25), even after concerted efforts to prevent such bias (31). A positive toxicology test also shows evidence of use but does not provide any information about the nature or extent of that use; similarly, a negative test does not rule out substance use, which is often sporadic (32). Additionally, the consequences of false-positive results can be devastating for the woman and her family.

Finally, the use of toxicologic testing for illicit drugs encourages a focus on substances such as cocaine, opiates, and marijuana that is not justified by their prevalence or the risk that they pose. Other substances such as tobacco and alcohol pose as much or more risk (33) and are far more prevalent (1); similarly, other risk factors such as depression or violence exposure present significant, unique risks that should be acknowledged—and are not amenable to toxicology testing.

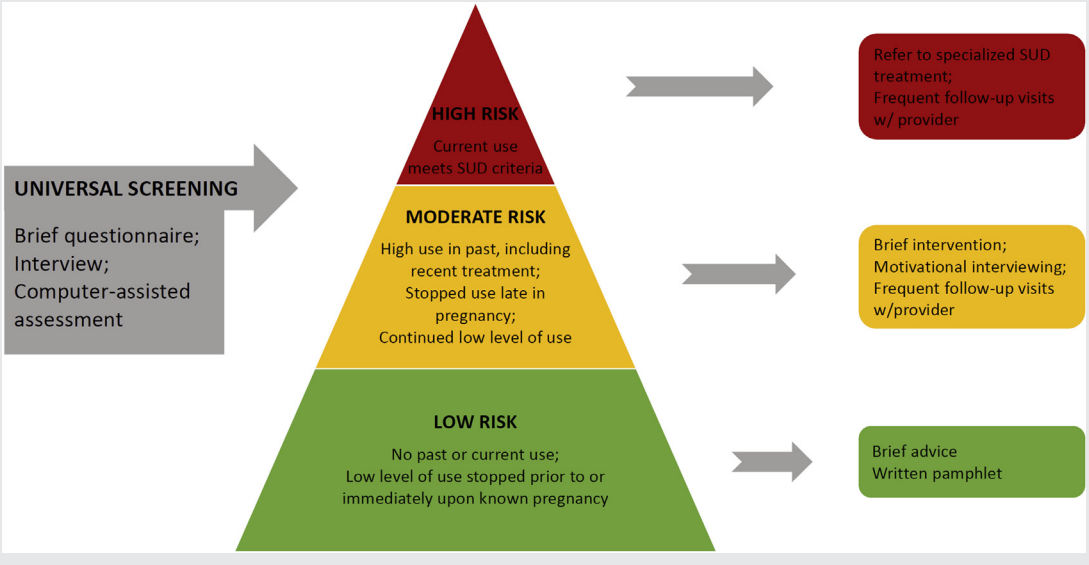
If drug testing is used, a discussion of all substances and medications taken is mandatory as it will allow the clinician to order the correct test(s). Many substances, including synthetic opioids such as oxycodone, fentanyl, buprenorphine, and some benzodiazepines (34), are not routinely captured by standard urine tests; if these drugs are suspected, the tests must be ordered separately. In addition, regular urine drug screens do not pick up alcohol use, and tests for alcohol metabolites such as ethyl glucuronide (ET-G) and ethyl sulfate (ET-S) are not routine. For these reasons, urine drug testing is not recommended as a primary means to screen women for drug use, but it can be a useful adjunct in diagnosis if used with consent.

Clinicians who do use urine drug testing should ensure that all positive drug tests are followed by confirmatory testing by mass spectrometry. The health care provider should be aware of the potential for false-positive and false-negative results of urine toxicology for drug use, the typical urine drug metabolite detection times, and the legal and social consequences of a positive test result. It is incumbent on the health care provider, as part of the procedure in obtaining consent before testing, to provide information about the nature and purpose of the test to the patient and how the results will guide management (32).

The overarching purpose of screening for substance use is to stratify patients into zones of risk given their pattern of use. Wright et al. (23) developed a risk pyramid for pregnant women, as shown in Figure 2. This model can be adapted to the preconception phase, and SBIRT also can be adapted to the preconception visit. The majority of women will fall into the low-risk zone (i.e., no past use of tobacco, alcohol, or other drugs, or low levels of substance use that will stop once they are trying to become pregnant) and will need only brief advice/reinforcement.

Moderate-risk women are those who have used high quantities of (any) substances in the past (including those who have been recently treated for SUDs), those who have stopped or moderated use during past pregnancy attempts, and those with continued sporadic, low-level use. The

FIGURE 2



Risk pyramid for assessment of substance use during pregnancy. SUD = substance use disorder.

Wright. SBIRT and infertility. Fertil Steril 2017.

moderate risk women are those who have been shown to benefit the most from brief intervention. Only about 4% to 5% of women will fall into the high-risk zone of those who will continue to use alcohol or illicit drugs during pregnancy (23). Women in the high-risk zone meet criteria for SUD. Before pregnancy, a diagnosis of SUD depends on other criteria, which will be discussed on the section on assessment. Although these women can benefit from a brief intervention, most need referral to specialized addiction treatment. Figure 3 illustrates the flow of SBIRT in clinical practice.

BRIEF INTERVENTION

Women who do not use substances or those who use at low-levels and report cessation of all substance use during pregnancy attempts are considered to be in the low-risk group. For this group, brief advice can be given. The simplest form of such intervention is reinforcement to remain abstinent (e.g., "That's great you do not use drugs or alcohol, as drug use has been shown to interfere with getting pregnant and can cause problems with your baby when you do get pregnant, and there is no safe amount of alcohol use in pregnancy") (35). Providing written handouts to all women can reach the women who are afraid to disclose use but may be at risk and need treatment.

Women who screen positive for any substance use and fall into the moderate-risk group should receive a brief intervention. This type of intervention is a patient-centered form of counseling using the principles of motivational interviewing to effect behavioral change.

Motivational interviewing was first described by Miller in 1990 (36) and has been adapted to various interventions in health care settings (37). The purpose of motivational interviewing is not to "cure the patient" but to instill in her a desire to change by pointing out discrepancies between her current behavior and her future goals. This is facilitated in infertility treatment because women who strongly desire pregnancy will often go to great lengths to achieve that goal. They desire a healthy pregnancy and a healthy baby. The principles of motivational interviewing include using an empathetic counseling style, asking open-ended questions, developing rapport and trust, expressing empathy, and rolling with resistance. The motivational interview must be nonjudgmental, and it works best if the patient adopts the motivation and develops a plan to change her behavior (36).

For the provider, an effective brief intervention consists of three tasks: [1] provide feedback of personal responsibility (e.g., "As your doctor, I recommend you stop smoking cigarettes for your health and to improve your chances of getting pregnant, but it's your decision on what you want to do"); [2] listen and understand a patient's motivation for using one or more substances (e.g., "I hear that you use pills to deal with the pain of your pregnancy losses"); and [3] explore other options to address patient's motivation for substance use (e.g., "Are there other ways you deal with stress in a more healthy way?"). The provider's objective is not to warn the patient—strong warning statements are often met with resistance from the patient. For example, stating that "Your alcohol use could be causing recurrent miscarriages" can be countered with "My mother drank with all of us during pregnancy. She had nine kids, and we're all fine."

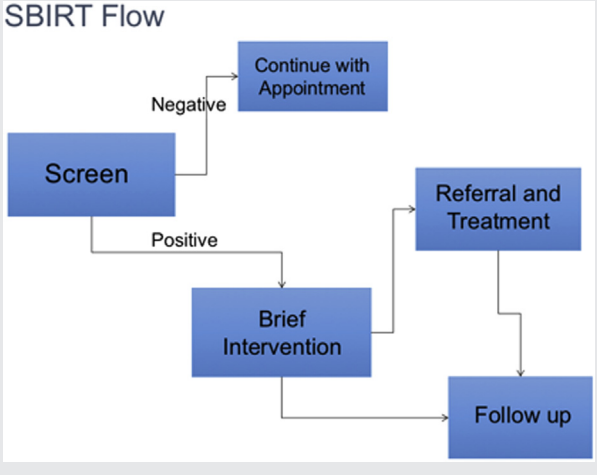
Resistance is a sign that the provider has pushed too hard. "Rolling with resistance" is a technique to redirect the conversation to a less threatening area. For example, "I'm not saying that your alcohol is causing your miscarriages, but as your doctor, I'm concerned that when you get pregnant, your baby may be affected by your drinking. Babies who are exposed to alcohol in the womb can have lifelong medical and psychological problems." Being judgmental, finger wagging, shaming, and/or using sarcasm are not effective ways of motivating people to implement behavioral changes. Finding a "hook" or reason for which the patient would like to change their harmful behavior is more effective (e.g., "How were your periods before you started using oxycodone, were they regular?").

Infertility providers often have a built-in hook, but they should not assume these are the only reasons why women would want to quit substance use. One technique used often to discover this "hook" is to ask open-ended questions (e.g., "What do you like about …?" or "What don't you like about …?") followed by summary statements (e.g., "I hear that you smoke cigarettes to calm you down, but you don't like how much they cost and how they make you smell [i.e., reflecting the patient's own words], and you're worried they could be interfering with your infertility treatments"). Examples of language that can be used in a brief intervention are illustrated in Table 2.

The brief intervention can be followed with an oral or written "contract" in which the patient states what she plans on doing to reach readiness, abstinence, or interim goals toward eliminating substance use and the provider arranges for follow-up visits. This way, the patient remains responsible for her treatment and outcome, not the provider.

Given that brief interventions are for patients with moderate-risk substance use, closer follow-up (generally

FIGURE 3



Flow chart of screening, brief intervention, and referral to treatment (SBIRT) in practice.

Wright. SBIRT and infertility. Fertil Steril 2017.

TABLE 2

Components of a brief interview for a reproductive endocrinologist.

Component	Example
Raise subject	"Thank you for answering my questions—is it OK with you if we talk about your answers?" "Can you tell me more about your past/current drinking or drug use? What does a typical week look like?"
Provide feedback	"Sometimes patients who give similar answers are using harmful amounts of alcohol or drugs." "We know that drinking more than 7 drinks a week or more than 3 on any occasion decreases fertility rates and increases the risk of health problems in women."
Enhance motivation	"What do you like and what are you concerned about when it comes to your substance use?" "On a scale of 0–10, how ready are you to avoid drinking/using altogether? Why that number and not a ____ [lower number]?"
Negotiate plan	Summarize conversation. Then: "What steps do you think you can take to reach your goal of being as healthy as possible before getting pregnant?" "Can we check in about this next visit when you come in for your follicle check?"

Note: Modified from SBIRTOregon.org (38).

Wright. SBIRT and infertility. Fertil Steril 2017.

every 2 weeks) is recommended. These follow-up visits can be incorporated into fertility assessment and treatment, as would any other medical condition. Patients who are unable to make any behavioral change or whose use increases during the course of treatment should be referred for specialized addiction treatment.

To help physicians implement SBIRT systems, the Oregon Health and Science University, with funding from the Substance Abuse and Mental Health Services Administration, developed an online portal (www.sbirtoregon.org) (38) that provides many excellent online resources, including pocket cards and sample language that can be downloaded.

CONTINUED ASSESSMENT

Universal screening for SUDS will identify many but not all women with problematic substance use (39). Women fail to disclose use because of fear, stigma, and denial. In addition, women with advanced SUDs have spent years hiding and denying their addictions to protect their use. In many cases, even their families are unaware of the extent of their use (40). The infertility provider should thus be prepared to assess women who have screened positive for use and those who have not, and should have a high index of suspicion in women with unexplained psychological and medical findings that could arise from a SUD. Universal screening should continue to be used throughout treatment, especially after treatment failures, using the same nonjudgmental techniques as mentioned earlier. Ongoing education on the effects of drugs and alcohol should be provided to infertility patients.

ASSESSMENT OF OPIOID USE

Women with legitimate opioid prescriptions for pain are likely to be identified during the initial screening as they are likely to disclose their use. Asking about these prescriptions and counseling about the effects of opioids on the menstrual cycle and infertility treatment can be an initial first step in assessment. Many infertility providers are well-versed in the treatment of chronic pelvic pain and are in an ideal situation to provide alternatives to opioids for the treatment of pain. Women should be counseled on the risks of opioid use during pregnancy, including the risk of NAS/NOWS (41). Some women with chronic pain disorders refractory to other pain management techniques may choose to remain on opioids during pregnancy with little harm, especially if the overall doses are low (42). Other women will wish to wean off before pregnancy and should be referred to a pain management program familiar with opioid weaning.

PROBLEMATIC PRESCRIPTION DRUG USE

For many years now, prescribers were encouraged to prescribe opioids in high doses for the treatment of chronic pain, being told they were safe and effective. Unfortunately, this has been shown not to be the case; as physicians, we are at a crossroads regarding these patients (43). As the CDC guidelines (44) from 2016 delineate, we are being advised on more appropriate opioid prescribing.

Up to 23% of patients being treated with opioids for chronic pain do develop an opioid use disorder (OUD) (45). Women taking opioids for chronic pain could be considered to have an OUD if they regularly take more than prescribed or use them in an aberrant manner. Other markers of OUD are using prescriptions not prescribed for her, or if opioids are interfering with her roles at work, home, or school (46). This assessment is not always easy and cannot often be done in a single or short series of visits. The infertility provider's role should be to continue to provide education on the risks associated with opioid use and the role high-dose opioids may play in infertility, then refer the patient to behavioral health or addiction medicine when warranted by behavioral or medical signs.

Women who do not disclose use can often be identified by the Prescription Drug Monitoring Programs (PDMP) that are present in 49 states. Physicians should register for this program and should check on any patient receiving opioids as well as patients at risk for other prescription drug use—such as women with anxiety disorders who may use or misuse benzodiazepine.

RISK FACTORS FOR SUD

One benefit of using the 4Ps or 5Ps for screening is the conversation prompted by the last two questions (47):

3. Does your Partner have a problem with drugs or alcohol?

4. Do you consider one of your Parents to be an addict or alcoholic?

Family and partners are not only risk factors for SUD but also good ways to initiate the conversation, as women are

often much more comfortable discussing the behaviors of others than their own. This conversation can serve to build rapport if done nonjudgmentally, which can lead to more disclosures in the future. In addition, her partner is directly relevant to the treatment of infertility, as SUD in men can also interfere with fertility (48).

Other markers of SUD that are more common in women with infertility and chronic pain are a history of childhood physical or sexual abuse, intimate partner violence, depression, anxiety, posttraumatic stress disorder, eating disorders, sleep disorders, memory problems, and difficulty concentrating (49, 50). Behavioral warning signs of SUD include isolation, loss of friendships, distance from family members, and lack of interest or participation in hobbies or recreational activities. Activities leading to legal problems are red flags for drug and alcohol use, including violent behavior, assaults, a history of driving under the influence, child custody problems, or theft, as well as obvious arrests for drug possession or trafficking. Frequent falls, injuries, or accidents are additional warning signs.

PHYSICAL SIGNS OF DRUG AND ALCOHOL USE

The signs and symptoms of drug or alcohol use include alcohol on the breath, ascites, an enlarged liver, nasal ulcers or a perforated septum, obesity or cachexia, abnormal gait, tremor, slurred speech, change in pupil size, blackouts, accidental overdoses, other liver or gastrointestinal problems, conjunctival injection (bloodshot eyes), hyperphagia or anorexia, elevated blood pressure, tachycardia, chest pain, transient ischemic attacks, restlessness, sweating, and tremor—from withdrawal or stimulant intoxication (51).

With the growing opioid epidemic, parenteral heroin use has become more common, regardless of socioeconomic class (52). So assessments should include a thorough examination of the skin, which may reveal needle marks, track marks, signs of acute or chronic inflammation, evidence of "skin popping" or intradermal injection, cellulitis, and abscesses (53). Parenteral use also increases the risk of coexisting HIV, hepatitis B and C, bacterial endocarditis, and osteomyelitis. Histamine release from opioids causes itching and scratching, which can cause excoriation.

Opioid use causes miosis (pupillary constriction), and withdrawal causes mydriasis (pupillary dilation). Excessive opioid use causes sedation, but mild intoxication can produce euphoria and talkativeness (54). These periods of good mood and activity may be difficult for a clinician to recognize as an opioid effect. Opioid withdrawal symptoms also include anxiety, restlessness, irritability, yawning, rhinorrhea, lacrimation, nausea, vomiting, sweating, chills, and gooseflesh (piloerection).

REFERRAL TO TREATMENT

Only a minority of patients will screen into the high-risk category and require specialty treatment for substance use. These women are likely to meet criteria for having a SUD. It is not the responsibility of the infertility provider to deliver specialty treatment, but his or her knowledge of appropriate referral resources is essential. Many infertility clinics work closely with mental health providers, and those providers should be familiar with signs of SUD and treatment resources. Good contacts for local specialty treatment services include state and local health departments, insurance preferred provider listings, and national Web sites such as the Substance Abuse and Mental Health Services Administration's treatment locator (www.findtreatment.samhsa.gov). The referral should be made via a "warm handoff"—that is, via direct communication between the infertility provider or mental health provider and the SUD treatment site.

Communication is key for the continued care of the patient in specialty substance use treatment. All patients should sign HIPAA waivers such that clinical information can be shared. The infertility provider can use brief interventions to support the SUD treatment progress during assessment and treatment, as some studies have shown increased effect with increased dosages: better treatment outcomes with more motivational interview sessions (55).

CONCLUSION

Substance use disorders among women seeking infertility treatment are more common than many of the conditions routinely screened for, and they are arguably more harmful to the patient, her incipient pregnancy, and the family unit. Substance use can also be a factor causing infertility. Infertility treatment is a very stressful time, and treatment for infertility can increase depression and anxiety, which in turn may increase the risk of developing a SUD. Screening for SUDs should be incorporated into infertility practices; brief interventions can be performed as part of routine counseling. A referral to SUD treatment should be accomplished before the initiation of infertility treatments, the same as for any other mental health or medical condition.

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