

# Challenges in Perinatal Drug Testing

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## CLINICAL VIGNETTE

A pregnant individual presents in preterm labor. She had an early-pregnancy ultrasonogram but no subsequent care. Per hospital protocol, the obstetrician orders urine toxicology screening but does not explicitly discuss this with the patient. The patient receives multiple doses of fentanyl for labor analgesia. The drug test reveals “positive opiates,” and the obstetrician is unsure whether this is consistent with intrapartum fentanyl. Based on positive opiate urine screening, the social worker contacts Child Protective Services (CPS) for suspected prenatal opioid use. After being informed of the CPS referral, the patient reports heroin use and asks, “Is my baby going to get taken away?” Substance use disorder (SUD) criteria or treatment were not addressed.

This vignette highlights a common scenario in perinatal drug testing<sup>1–4</sup> and its pitfalls, including lack of clinician knowledge about drug testing and its medical, legal, and ethical considerations. We challenge the common practices for perinatal drug testing and review American College of Obstetricians and Gynecologists’ (ACOG) recommendations for assessing perinatal substance use. We question routine use of maternal drug testing without an explicit plan for how and why it will be used to improve perinatal outcomes.

## THE CONUNDRUM

Common situations for perinatal drug testing:<sup>5</sup>

See related editorial on page 150.

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- Positive verbal screening or self-reported drug use history
- Inadequate prenatal care
- Antepartum complications (eg, severe-range blood pressures, placental abruption)
- Fetal or neonatal complications (eg, intrauterine growth restriction, neonatal abstinence syndrome)
- Mental status
- Universal drug testing in areas of high prevalence
- Monitoring SUD treatment
- Harm reduction

Clinicians should note that there are no “standard-of-care” indications for maternal drug testing and that testing is largely based on clinical experience.<sup>3</sup>

## THE DATA

### How Did This Practice Get Started?

Perinatal drug testing became common during the mid-1980s with the emergence of the “crack baby” panic and “The War on Drugs.”<sup>6</sup> In response to government and media focus on substance-exposed newborns, the U.S. health care system began widespread perinatal drug testing. Historically and present-day, women from urban areas with low incomes who are not White are disproportionately tested,<sup>6,7</sup> although these demographics are not more associated with substance use.<sup>5,8,9</sup> Despite this ongoing bias, there are no standardized guidelines. The American College of Obstetricians and Gynecologists recommends perinatal drug testing in accordance with state laws and with explicit informed consent.<sup>3</sup> Some hospitals have employed universal perinatal drug testing<sup>10</sup> or predesignated risk factor–based testing<sup>11</sup> and have reported success in identifying at-risk dyads. More commonly, however, there are no policies, leaving testing decisions to the clinician. Newborn urine, cord segment, and meconium tests may also be used to assess in-utero exposure,<sup>12</sup> but discussion of these tests is beyond the scope of this article.

In 2019, 12.6% of pregnant individuals reported past-month illicit substance or alcohol use.<sup>13</sup> However, substance use and SUD are not synonymous.



Substance use disorders are chronic diseases with complicated interplay between genetic, physiologic, and environmental factors.<sup>14</sup> Substance use disorder is a nuanced diagnosis requiring multiple criteria, including unsuccessful efforts to quit; inordinate time involving use; negligence of responsibilities; use in dangerous situations; loss of activities or important relationships as a result of use; physical, psychological, or social problems related to use; withdrawal; and tolerance.<sup>15</sup> Substance use disorder is not diagnosed by a positive drug screening test result. In our vignette, the patient should be screened using a validated screening tool for substance use (ie, 4Ps, NIDA, or CRAFFT), per ACOG guidelines.<sup>16</sup> If screening is positive, the obstetrician should review SUD criteria to determine the diagnosis and discuss that treatment is associated with improved maternal and infant outcomes.<sup>16</sup> Immediate initiation of medication for opioid use disorder (methadone, buprenorphine) should be considered.<sup>16</sup>

### How Are Urine Toxicology Tests Used?

Many clinicians order urine drug tests as a result of hospital or personal policy. However, drug test interpretation requires expertise, and clinicians often misinterpret drug screening and confirmatory tests.<sup>17,18</sup> There are two types of urine toxicology tests: immunoassay screening tests and confirmatory liquid or gas chromatography–mass spectrometry tests. Screening tests are inexpensive and quick but have frequent false-positive results, which vary by substance and test. Immunoassay screening results are dependent on the test's concentration of specific antibody or the concentration of cross-reactive substances in a patient's urine.<sup>19</sup> Confirmatory tests are more specific. In our vignette, the hospitalist is not aware that opiate screening immunoassays do not detect fentanyl, a synthetic opioid,<sup>20</sup> or that investigation of "positive opiates" screening results requires patient-focused assessment of substance use and confirmatory testing if patient-reported use differs from the screening results.

Clinicians may not be aware of the legal and social effects of a positive drug test result. In 23 states, maternal drug use is considered child abuse.<sup>21</sup> Maternal drug tests have been grounds for legal cases pitting maternal against presumed fetal rights. A 2001 Supreme Court case, *Ferguson v City of Charleston*, evaluated a hospital's policy of drug testing pregnant patients without consent.<sup>22</sup> Drug test results were given to the police, who prosecuted patients for child abuse. Though the Court ruled that this was a violation of the Fourth Amendment, similar issues still

exist today.<sup>23</sup> Multiple professional organizations, including ACOG, the Society for Maternal-Fetal Medicine, the American Academy of Pediatrics, and the American Society of Addiction Medicine, recommend obtaining consent before ordering perinatal drug testing.<sup>3,16,24</sup> This recommendation is intended to minimize stigmatization and promote therapeutic patient–clinician relationships. Omitting consent before drug testing undermines patient autonomy and is antithetical to a harm-reduction approach.<sup>3,16,24</sup> In our vignette, hospital policy should clearly state how urine drug testing will be used and require explicit patient consent before any testing. The patient has a constitutional right to decline drug testing, irrespective of her substance use history.

Regardless of use frequency, a positive drug test result during pregnancy can result in criminal persecution, commitment to treatment programs, and assignment of guardianship or foster care for a patient's children. Legal and social proceedings are complex and vary by state and circumstance. Furthermore, families of color are more likely to be affected by CPS referrals triggered by a positive urine drug test result.<sup>9,25,26</sup> These implicit biases highlight continued efforts toward equal care in obstetrics. In our vignette, the hospital team focuses primarily on fetal exposure and CPS referral. This attitude leads many patients with substance use to avoid pregnancy care.<sup>27–30</sup> Coordinated care team efforts should assess both maternal and infant well-being<sup>16</sup> and work to develop a Plan of Safe Care. Since 2016, the Comprehensive Addiction and Recovery Act has required that infants affected by withdrawal symptoms from prenatal substance exposure and caregivers receive a Plan of Safe Care and that services be identified for the caregivers of these infants.<sup>31</sup> Resources are available to guide care teams in implementing this federal mandate in patient-centered and compassionate ways.<sup>31</sup>

### Is There An Alternative?

Despite punitive risks in some states, pregnancy can be an opportunity for patients with substance use to obtain help. Pregnancy offers a prolonged period of potential frequent health care encounters focusing on harm reduction and substance use treatment.<sup>32</sup> The American College of Obstetricians and Gynecologists, the Society for Maternal-Fetal Medicine, the American Academy of Pediatrics, and the American Society of Addiction Medicine recommend universal verbal drug screening at every initial prenatal visit,<sup>3,16,24</sup> although there are no national guidelines for follow-up of a positive verbal screening result. Currently, 25 states require physicians to report



suspected or self-disclosed drug use, but only eight states require drug testing after a positive verbal screening result.<sup>21</sup> Patients should be made aware of the legal ramifications of a positive verbal drug screening result.

Prenatal urine toxicology testing directs care of patients with known substance use. Regular drug testing in these individuals assesses treatment adherence and can guide harm reduction. Harm reductions range from social services referral for food insecurities and legal counsel to enrollment in needle-exchange programs.<sup>33</sup> Drug testing can also inform clinicians and patients about polysubstance use and drug contamination with other substances, notably fentanyl. Fentanyl is a potent opioid with high overdose potential, accounting for 51.5% of 2019 U.S. drug overdose deaths.<sup>34</sup> Its detection in a patient's source of opioids or amphetamines can be lifesaving.

## THE BOTTOM LINE

There are few scenarios in which routine drug testing is clinically indicated. As with any other testing, clinicians should have clear and transparent plans for how testing will inform management. Perinatal drug testing always requires explicit patient consent. Before ordering a drug test, clinicians must consider the possibility of false-positive urine toxicology immunoassays, the high rate of test misinterpretation, the enormous social and legal implications of a positive test result, and potential patient loss of trust. Returning to our vignette, performing drug testing without consent is a violation of patient rights. Clinicians should question drug testing for pregnant patients and perform testing only with a transparent plan for how the results will be used to guide care and, ultimately, maximize maternal and infant health.

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