Substance Use Screening and Biologic Testing in Pregnant People and Their Newborns at Texas Children's Hospital Pavilion for Women

October 2025 (Replaces October 2023)
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This guideline has been updated to include gender inclusive language

Highlights

- All pregnant patients should have universal **verbal** screening using the DAST tool on admission or during a WAC visit.
- Universal urine drug screening is **NOT** recommended and should only be performed with the patient's permission for specific indications.

- Consult Social Work if the birthing parent admits to use of illicit substances during the pregnancy and/or for positive urine toxicology results confirmed on mass spectrometry and/or positive meconium testing results

Purpose of guideline

To standardize substance use screening and targeted biologic testing for all pregnant people during an obstetric admission using best practices, while eliminating racial and ethnic disparities. The guideline also provides recommendations to avoid stigmatizing language and appropriate alternatives (Table 1). For details on diagnosis and management of substance use disorder (SUD), refer to the Baylor College of Medicine Substance Use Disorder in Pregnancy Perinatal Guideline.

Table 1. Terminology of Substance Use and Addiction: Stigmatizing and Preferred Language[11]

Stigmatizing Language	Preferred Language
Substance abuse	Substance use or misuse, substance use disorder
Abuser, addict, alcoholic	Person with a substance use disorder
Smoker	Person with cannabis or tobacco or nicotine use disorder
Addicted baby	Neonate with neonatal abstinence syndrome or with in utero exposure to [named substance]
Clean or sober	Abstinent, in remission, toxicology "negative" for [substance]
Dirty	Using [substance], toxicology "positive" for [substance]
Drug of choice, habit	Substance of use
Getting or being high	Intoxicated, under the influence of [substance]
Shooting up	Intravenous drug use, injection drug use
Replacement or substitution treatment for opioid use disorder, opioid replacement, medication-assisted treatment	Medications for opioid use disorder, medications for addiction treatment
Relapse	Return to use, symptom recurrence

Definitions: screening vs testing[1]

- **Screening:** Screening is used on a population level to determine who is at high risk for a disease. Ideally, it should take place only when interventions are available to prevent or treat the disease state. Given that substance use in pregnancy is common, that the consequences of substance misuse are substantial, and that treatment interventions are available, screening pregnant people for drug and alcohol use is warranted. **In this document, we refer to screening as a universally administered questionnaire designed to ascertain who is at high risk for having a substance use disorder in pregnancy.**

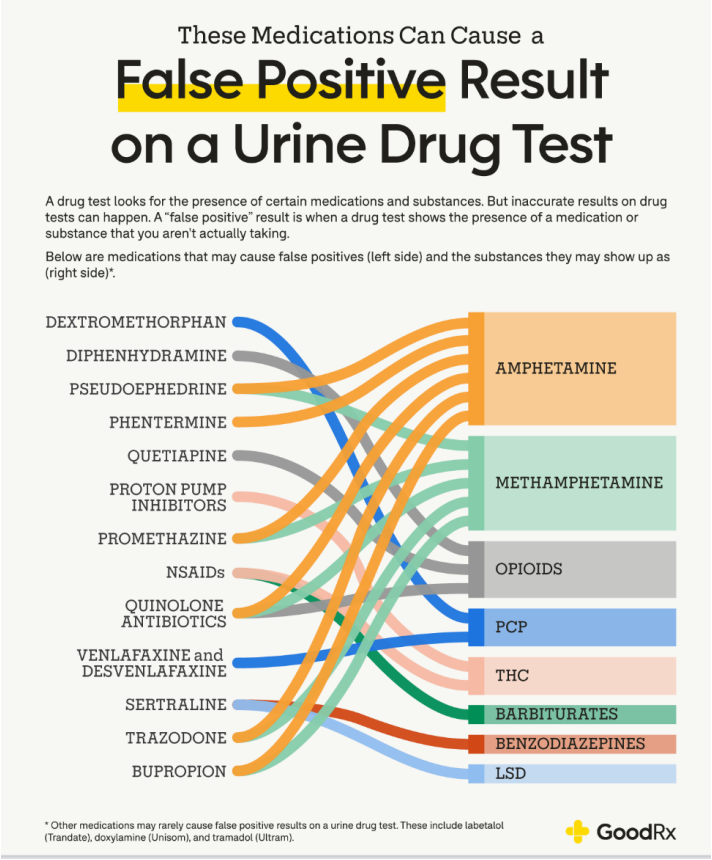
- **Testing:** In this document, biologic testing of urine or meconium is discussed as a test and not as a screening technique. A biologic test may be useful only in selected clinical scenarios in which the results would guide medical management. **Universal biologic testing to *screen* pregnant people is not recommended**. **The "urine drug test (UDS)/"drugs of abuse screen" ("LABTOXDS" in Epic) offered at TCH for adults and infants is appropriate for *screening* only. Positive results should be confirmed by sending the sample for confirmatory *testing* by tandem mass spectrometry to rule out a false positive finding. This confirmatory testing is a send-out test and takes 3-5 days to receive results.**

Current Recommendations

The current guidance from the American Society of Addiction Medicine (ASAM), American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal Fetal Medicine (SMFM) includes universal screening of all pregnant individuals with a validated screening tool. Individuals who screen positive should be offered evidence-based treatment and intervention as necessary. Universal biologic testing, however, is not currently recommended given the shortcomings associated with biologic tests. Biologic drug

testing results can be associated with false positive results requiring confirmatory testing as well as false negative results or positive results stemming from iatrogenic administration of medications (Figure 1). Use of biologic testing is further limited by the half-life of the substances, with the ability to detect some substances for only a short period of time in the small subset of substances that are tested. **If biologic testing is planned, it should only be performed with the patient's consent and if the outcome of the result is pertinent to the medical management of the patient given the ramifications of positive testing depending on local legislature.[1,2] Despite these recommendations, inequitable screening without informed consent is a common practice.[3]**

Figure 1. Medication Causes of False Positive Urine Drug Screening



https://www.goodrx.com/drugs/side-effects/these-medications-can-cause-a-false-positive-on-drug-tests

Racial Disparities

All pregnant individuals are at risk for substance use disorders,[4] yet racial and ethnic disparities in screening have been demonstrated.[5-7] Non-Hispanic Black individuals are disproportionately more likely to undergo urine toxicology screening than their counterparts, making up one-third of those screened despite only encompassing 16% of the population.[7] Black and Hispanic individuals are also almost five times more likely to undergo toxicology testing for an indication outside of reported drug use.[6] Despite the recommendations for universal screening, young, less educated, non-Hispanic Black, publicly insured individuals receiving adequate prenatal care are more likely to be screened for substance use than their counterparts.[5] In those who have been identified as having substance use in pregnancy, Black individuals are more likely than White or Hispanic individuals to have referrals placed for Child Protective Services (CPS).[8] Strategies to reduce inequities in screening are pertinent to reduce health care disparities.[9]

Historical and clinical factors associated with positive urine toxicology on labor and delivery[10]

In a clinical cohort study of all people admitted to a labor and delivery unit at an ethnically and racially diverse safety net hospital over a 5-year period (2010–2014), all patients underwent historical and clinical risk assessment and people perceived to be at increased risk of illicit drug use and who consented to testing had urine toxicology performed. A detailed chart review on all people with a positive test during this 5-year period was conducted and compared to all people with a negative test in 2014 (83 people who tested positive for illicit drugs [9.8% of all people tested] were compared to the 179 people who tested negative in 2014). The authors identified the following associations:

- Historical and demographic factors associated with a positive test included:
    - **Historical drug use was the factor most strongly associated with a positive test.**
    - Single relationship status
    - Lack of employment
    - Lack of high school education
    - Nulliparity
    - History of a prior sexually transmitted or blood-borne infection
    - No prenatal care (defined as 0 prenatal visits; scant prenatal care was defined as ≤5 prenatal visits)
    - Unintended outborn delivery
    - Child out of custody or history of CPS case
    - Concurrent tobacco or alcohol use

- Clinical risk factors:
    - Maternal medical complications, such as placental abruption and history of stillbirth, **were not** associated with a positive test
    - Obstetrical complications, like preterm labor, were associated with a **negative** test

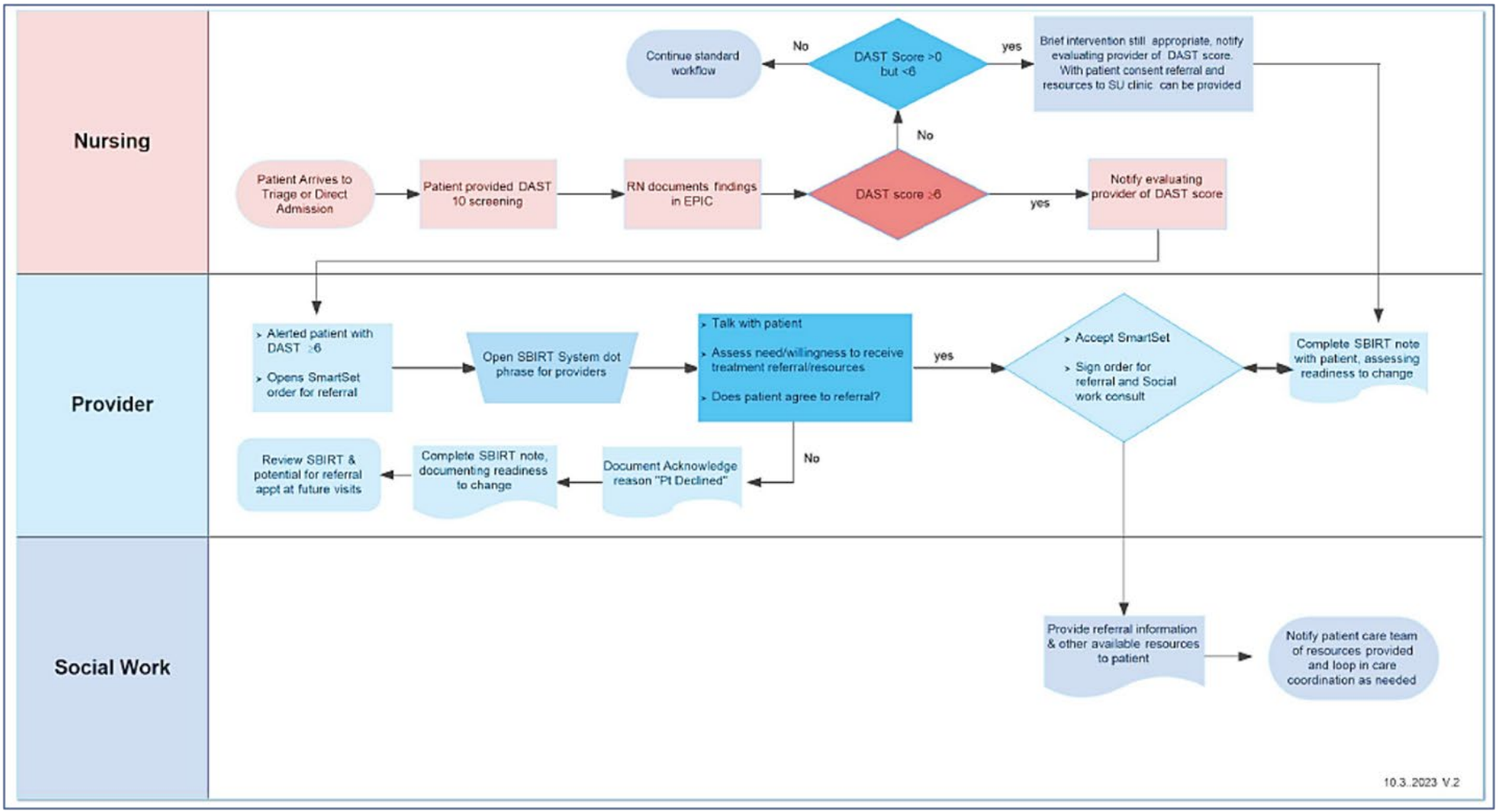
Universal Verbal Screening

- ☐ The screening tool utilized at PFW in the Women's Assessment Center (WAC) is the Drug Addiction Screening Tool (DAST).
- ☐ DAST should be performed for all patients who present to WAC or as a direct admission.
    - ✓ The WAC nurse will administer a paper screening tool at intake to assess for substance use/misuse and enter the results in Epic.
    - ✓ The WAC nurse will inform the provider of the results of screening.

Follow up of Positive Verbal Screening (Figure 2)

- ☐ If a patient has a DAST score ≥6, they are at risk for complications from substance use and the provider should do a brief intervention and referral to treatment (SBIRT = screening, brief intervention, referral to treatment).
- ☐ If a patient has a DAST score <6 but screens positive to substance use or misuse during the pregnancy, it is still appropriate for the provider to do a brief intervention and consider referral to treatment.

Figure 2. *Management recommendations for nurses and providers based on DAST results*



Urine Toxicology

Obstetric Patients

Indications for ordering urine toxicology

- ☐ Altered mental status, including loss of consciousness, evidence of intoxication, slurred speech, not otherwise explained
- ☐ Recent physical evidence of injection use (e.g. “track marks”)
- ☐ Unexplained soft tissue infections or endocarditis
- ☐ As part of the treatment of a patient receiving medication assisted therapy (MAT) and/or enrolled in a substance use treatment program during pregnancy, to evaluate for any continued separate use of opioids or other substances
- ☐ A patient identified as having used illicit drugs or inappropriately used prescription medications at any point in the pregnancy
- ☐ No prenatal care, defined as patients with zero (0) prenatal care visits.
    - ✓ Prenatal care received at non-TCH sites, including those outside of the United States, should be counted as prenatal care, even if documentation is not available for review
    - ✓ This does not include birthing patients who endorse inability to receive prenatal care due to recent immigration or barriers to access.

Urine collection and Epic ordering for pregnant parent

- ☐ Obtain verbal consent from patient to send urine drug screen (UDS).
    - ✓ If patient declines, UDS is not ordered and the pediatricians are notified by the provider that the patient met criteria for testing but did not consent. This should also be documented in the medical record.
    - ✓ If patient is unable to be consented due to incapacitation that could be related to substance misuse, UDS should be sent and reason documented in the medical record.
    - ✓ Patients who have a UDS and test positive should be informed of the results by a managing provider and informed that social work will be consulted. They should be informed that this is only a presumptive positive and that confirmatory testing will be performed.
- ☐ Ensure documentation of the following in the medical record (smartphrase .PFWUDS):
    - ✓ Patient provided verbal consent for urine toxicology
    - ✓ If applicable, illicit substance used and most recent date of use
    - ✓ Medications patient is currently taking (prescribed or over the counter) that could result in a false positive (Figure 1)
    - ✓ Reason for the UDS
    - ✓ Avoid use of stigmatizing language (Table 1)
- ☐ Collect urine sample prior to administration of medications that may result in a false positive (Figure 1)
- ☐ Avoid testing birthing parent after delivery due to risk of positive substances from medications administered during the L&D process (e.g. IV narcotics for pain, ephedrine after epidural, benzodiazepines in the operating room). Exceptions may include patients who deliver rapidly after admission and urine specimen was unable to be collected prior to delivery.
- ☐ Order LABTOXDS in Epic. This order has been added to order sets for WAC, L&D, antepartum, and scheduled Cesareans and will require you to select the indication for ordering.

If a patient is going to be tested, this should be done immediately upon admission to a labor and delivery setting and not after they have been treated with any medication that could cause a positive test result. If the pediatrics team requests testing of a birthing parent because the baby is showing signs of withdrawal, it is preferable to test the baby; the birthing parent may test positive because of pain medication received at delivery or postpartum.[1]

Follow up of positive UDS

- ☐ Because of the high risk of false positives, birthing parents who test positive should have “confirmatory testing” via mass-spectrometry.
    - ✓ If there is a presumptive positive on any of the classes of drugs that are tested on the screen, then order the LABMISC and place a comment in the notes to send the specimen to ARUP: test

code 92186-Urine Drug screen with confirmation (this is a specific tandem mass spectrometry test). Order test as soon as possible since the urine specimen will only be kept in the lab for 24 hours; after that, it is discarded
    - ✓ The confirmatory urine drug test(s) is a send-out test that takes 3-5 days to result
- ☐ Consult Social Work if the birthing parent admits to use of illicit substances during the pregnancy and/or for positive urine toxicology results confirmed on mass spectrometry (see Box 4 for additional details)

Newborn Patients (Urine and/or Meconium)

Indications for ordering urine and/or meconium toxicology on newborn

- ☐ Newborn exhibits symptoms consistent with intoxication or withdrawal
- ☐ Birthing parent met criteria for testing (see below) and/or tested positive at delivery admission or at a recent hospital or clinic visit.

Urine and/or meconium collection and Epic ordering for newborn

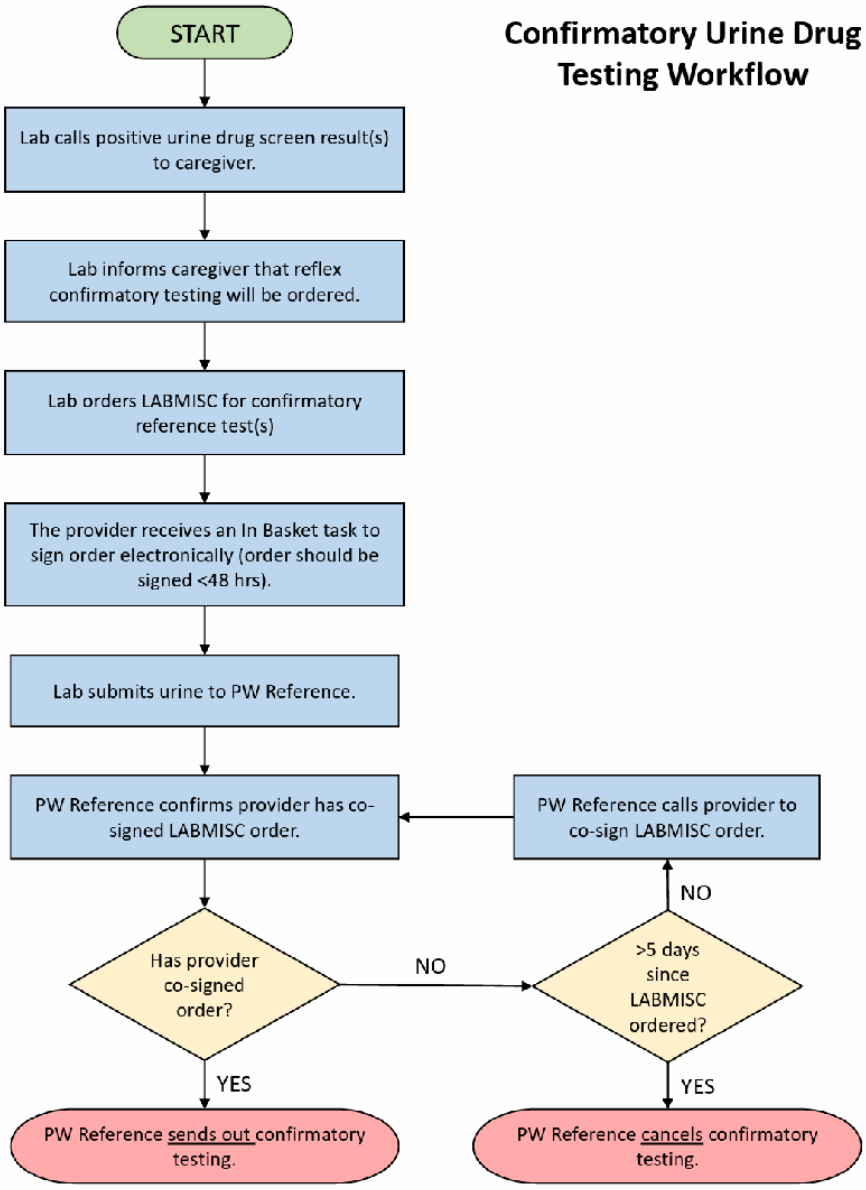
- ☐ Ensure documentation of the following in the medical record (can use smartphrase ".NEOUDS"):
    - ✓ Birthing parent informed of plan to send urine and/or meconium toxicology on newborn and reason for testing
    - ✓ Medications birthing parent is currently taking (prescribed or over the counter) and/or was administered during the admission that could result in a false positive (Figure 1). Common medications administered during labor and delivery include:
        - ✓ Ephedrine
        - ✓ Phenylephrine
        - ✓ Neuraxial analgesia/anesthesia (epidural, spinal, combined spinal-epidural [CSE])
        - ✓ IV narcotics (fentanyl)
        - ✓ Benzodiazepines
    - ✓ Reason for the urine and/or meconium toxicology
    - ✓ Avoid use of stigmatizing language (Table 1)
- ☐ Order LABTOXDS for urine (this is a screening test)
- ☐ Order LABMEC for meconium
    - ✓ Test: Drugs of Abuse Screen, Meconium (3004583 LABMEC)
    - ✓ Synonyms: 3004583 ARUP LABMEC

Infant UDS results reflect drug exposure within a few days prior to delivery, whereas meconium reflects exposure after 20 weeks of gestation. Recent studies indicate that even intrathecal narcotics administered during labor with regional anesthesia lead to positive maternal and infant drug screens; therefore the hospital-administered medications need to be taken into account.

Follow up of positive urine toxicology test

- ☐ Because of the high risk of false positives, newborns who test positive should have confirmatory testing via mass-spectrometry.
- ☐ If there is a presumptive positive on any of the classes of drugs that are tested on the screen, then order the LABMISC and place a comment in the notes to send the specimen to ARUP: test code 92186-Urine Drug screen with confirmation (this is a specific mass spectrometry test). Refer to Figure 3.
    - ✓ Order the test as soon as possible since the urine specimen is discarded after 24 hours.
    - ✓ The mass spectrometry confirmatory test is a send-out laboratory test that takes 3-5 days to result.

Figure 3. Workflow to Confirm UDS Results



Social Work Consults and CPS Reporting for Positive Urine Toxicology or Admitted Use During Pregnancy

Consult Social Work if the birthing parent admits to use of illicit substances during the pregnancy and/or for positive urine toxicology results confirmed on mass spectrometry and/or positive meconium testing results.

Before consulting Social Work, the medical provider should complete the following:

- ☐ Confirmatory testing has resulted as positive or has been requested (i.e. urine or meconium)
- ☐ **Inpatient**: Review mother's MAR and home medications to determine if medications taken at home and/or given during the admission or delivery could have caused the results
- ☐ **Outpatient**: Review mother's home medications to determine if there is a valid prescription and/or over the counter medication that could have caused the results
- ☐ **Verbal admission of drug use**: If yes, are there children in the home?

Once a Social Work consult is received, the social worker will complete the following:

- ☐ Speak with the provider to confirm that the review of the mother's record has been completed and/or confirmatory tests have been received or requested.
- ☐ Complete/update a psychosocial assessment.
- ☐ Discuss their findings and identified risk/safety concerns with the provider to develop a plan of care and next steps.
- ☐ Discuss concerns and resources with the patient and continue to provide support.
- ☐ Inform patient of requirement to report to child welfare (CPS).
- ☐ Provide Family CARE Portfolio ("plan of safe care") and other resources to help the birthing parent prepare for a child welfare visit.
- ☐ Report risk/safety concerns to CPS via Statewide Intake, per TCH policy.*

Reasons Social Workers would submit a report to CPS include, but are not limited to*

- ☐ Pregnant parent admits to use of illicit substances and/or misuse of prescription medications during the pregnancy and is the primary caregiver of minor children.
- ☐ Confirmed positive drug test results for mother and/or newborn and home and hospital medications have been ruled out as a contributing factor.
- ☐ Presence of a non-patient primary caregiver of the newborn in the hospital setting with concerns of active drug use and/or intoxication (e.g. confusion, slurred speech, unsteady gait).

report will be made during pregnancy if there are minor children in the home

Appendix

Epic Smartphrases

Smart phrase for birthing parent (.PFWUDS):

Based on current practice guidelines, a urine drug screen is recommended for the following reason:

- ☐ Altered mental status
- ☐ Physical evidence of injection use
- ☐ Unexplained soft tissue infections or endocarditis
- ☐ Patient is in a substance use disorder (SUD) treatment program and/or receiving medication assisted therapy for SUD
- ☐ Use of illicit drugs or misuse of prescription medications during the pregnancy
    - If this is selected, document substance(s) used and date of last use
- ☐ No prenatal care
- ☐ Other

The patient's prescription and over the counter medications were reviewed, and include the following medication(s) that may result in a false positive UDS (select all that apply):

- ☐ Diphenhydramine (Benadryl)
- ☐ Doxylamine (Unisom)
- ☐ Promethazine (Phenergan)
- ☐ Dextromethorphan (Robitussin)
- ☐ Pseudoephedrine (Sudafed)
- ☐ Labetalol
- ☐ Sertraline (Zoloft)
- ☐ Bupropion (Wellbutrin)
- ☐ Proton pump inhibitors
- ☐ Prescription opiates
- ☐ NSAIDs
- ☐ Other

The patient was informed of the recommendation for urine drug screen and the reason for testing as well as the potential implications and

- ☐ Verbally consents to urine drug screen. The patient was informed that the newborn will be tested as well for substance exposure.
- ☐ Verbally declines urine drug screen. The patient was informed that the newborn will be tested for substance exposure.
- ☐ Is unable to provide consent at this time.

Smart phrase for newborn (.NEOUDS):

Based on current practice guidelines, a urine drug screen and/or meconium of the newborn is recommended for the following reason:

- ☐ Newborn exhibiting symptoms consistent with intoxication or withdrawal

- ☐ Birthing parent met criteria for testing:
    - Altered mental status
    - Physical evidence of injection use
    - Unexplained soft tissue infections or endocarditis
    - Patient is in a substance use disorder (SUD) treatment program and/or receiving medication assisted therapy for SUD
    - Use of illicit drugs or misuse of prescription medications during the pregnancy
    - No prenatal care
    - Other

- ☐ Birthing parent has positive urine drug test on admission or from recent hospital/clinic visit

The birthing patient's prescriptions, over the counter medications, and medications administered since admission were reviewed, and include the following medication(s) that may result in a false positive UDS (select all that apply):

- ☐ IV narcotic during labor (e.g. fentanyl)
- ☐ Phenylephrine
- ☐ Benzodiazepines
- ☐ Epidural, spinal, or combined spinal-epidural (CSE)
- ☐ General anesthesia
- ☐ Diphenhydramine (Benadryl)
- ☐ Doxylamine (Unisom)
- ☐ Promethazine (Phenergan)
- ☐ Dextromethorphan (Robitussin)
- ☐ Pseudoephedrine (Sudafed)
- ☐ Labetalol
- ☐ Sertraline (Zoloft)
- ☐ Bupropion (Wellbutrin)
- ☐ Proton pump inhibitors
- ☐ Prescription opiates
- ☐ NSAIDs
- ☐ Other

The birthing parent was informed of the plan to send urine and/or meconium toxicology on the newborn and the reason for testing as well as the potential implications.

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