

# Best Practices for Prenatal Substance Use Screening

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Elizabeth E. Krans, MD, MSc

Assistant Professor of Obstetrics, Gynecology and Reproductive Sciences

Magee-Womens Research Institute

University of Pittsburgh

## RECOGNITION & PREVENTION

*Every provider/clinical setting*

- Assess all pregnant women for SUDs.
  - Utilize validated screening tools to identify drug and alcohol use.
  - Incorporate a screening, brief intervention and referral to treatment (SBIRT) approach in the maternity care setting.
  - Ensure screening for polysubstance use among women with OUD.
- Screen and evaluate all pregnant women with OUD for commonly occurring co-morbidities.
  - Ensure the ability to screen for infectious disease (e.g. HIV, Hepatitis and sexually transmitted infections (STIs)).
  - Ensure the ability to screen for psychiatric disorders, physical and sexual violence.
  - Provide resources and interventions for smoking cessation.
- Match treatment response to each woman's stage of recovery and/or readiness to change.

# When should I screen?

- Substance use screening should occur with pregnancy identification
  - First prenatal care visit
  - ED evaluations, urgent care centers, primary care settings
- Recurrent screening should occur with ongoing or new concerns for substance use during pregnancy



# Who and how should I screen?

- **Screening versus testing**
- Universal screening for substance use using validated tools is recommended during pregnancy by all major professional organizations (i.e. ACOG, SMFM, ASAM)
- Selective screening based on “risk factors” perpetuates discrimination and is subject to provider biases
- Universal biologic testing (i.e. UDS) is not recommended during pregnancy and should **not** be used as sole assessment of substance use

# Limitations of biologic testing

- Short detection window
  - Limitations associated with the half-life of substances and metabolic clearance rates
  - No standardization what cutoffs should be used for assays
- Does not capture binge, intermittent or alcohol use
- False negative results - fentanyl, carfentanil, rohypnol, ketamine, MDMA
- False positive results – poppy seeds, pseudoephedrine



	Drug class	Detection window	Confirmation cut-off
URINE	Cocaine (COC)	2–4 Days	300 ng/mL
	Marijuana (THC)	15–30 Days	50 ng/mL
	Opiates (OPI)	2–4 Days	2000 ng/mL
	Amphetamines (AMP)	2–4 Days	1000 ng/mL
	Methamphetamines (mAMP)	3–5 Days	1000 ng/mL
	Phencyclidine (PCP)	7–14 Days	25 ng/mL
	Benzodiazepines (BZO)	3–7 Days	300 ng/mL
	Barbiturates (BAR)	4–7 Days	300 ng/mL
	Methadone (MTD)	3–5 Days	300 ng/mL
	Tricyclic antidepressants (TCA)		1000 ng/mL
	Oxycodone	2–4 Days	100 ng/mL
	Propoxyphene	1–2 Days	300 ng/mL
Buprenorphine (BUP; Suboxone, Subutex)	2–3 Days	10 ng/mL	

# Biologic testing

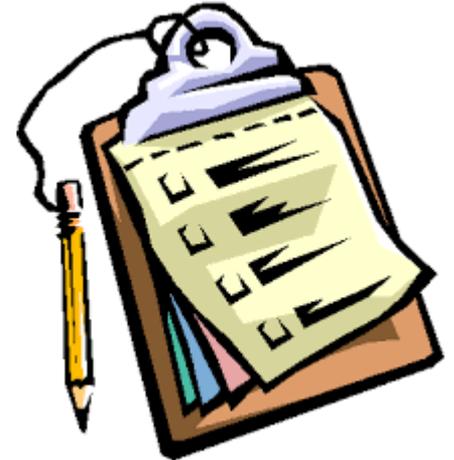
- Specific criteria for biologic testing should be established to avoid profiling or discrimination
- Consent is absolutely necessary to obtain
  - Exceptions for obtunded or unconscious patients
- Possible criteria for biologic testing
  - Limited or absent prenatal care
  - Signs/symptoms of drug use (intoxication, track marks)
  - Unexplained cellulitis/endocarditis
  - Evaluation for patients in SUD treatment programs
  - At delivery for patients with identified substance use in pregnancy
  - Obstetric complications associated with substance use (abruption)

# Limitations of screening questionnaires

- Provider limitations
  - Concerns that patients will be “insulted”
  - Limited time to screen in a busy practice setting
- Patient limitations
  - Underreporting, especially during pregnancy
  - Concerns related to legal consequences and child custody issues
  - Stigma or concerns about provider attitudes with disclosure
- Questionnaire limitations
  - Reliability and clinical utility of most tools in pregnancy is limited
  - Most women reduce substance use in pregnancy
  - Screens for actual vs past use may be more appropriate
  - Gold standard screens primarily focus on alcohol vs opioid use

# Screening tools in pregnancy

- 6 screening tools have been evaluated in pregnancy
- 4Ps Plus/5 Ps
- Substance Use Risk Profile – Pregnancy
- CRAFFT
- NIDA Quick Screen
- Wayne Indirect Drug Use Screener
- DAST-10



# 4 Ps and 5 Ps

- 4 Ps Plus: 5 questions, copyrighted and available for a fee
- 5 Ps: 5 questions available for use without a fee
- In pregnancy, results compared to clinical interview among 228 pregnant women.
  - 78% had a (+) 4Ps and (+) clinical interview
  - Has not been validated with biologic testing
- Sensitivity – 87%, specificity – 76%

# 5 Ps Prenatal Substance Abuse Screen

1. Did any of your *Parents* have problems with alcohol or drug use?  
 No  Yes
2. Do any of your friends (*Peers*) have problems with alcohol or drug use?  
 No  Yes
3. Does your *Partner* have a problem with alcohol or drug use?  
 No  Yes
4. Before you were pregnant did you have problems with alcohol or drug use? (*Past*)  
 No  Yes
5. In the past month, did you drink beer, wine or liquor, or use other drugs? (*Pregnancy*)  
 No  Yes

# 5 Ps follow-up questions

\*Women who screen high risk for substance use should be assessed for opioid use\*

1. *Have you used any opioids, narcotics or pain medications in the last year? Were they prescribed or unprescribed? Have you used any other drugs or unprescribed medications in the last year?*
2. *Patients with positive answers who have used unprescribed opioids in pregnancy or on prescribed opioids for longer than a month need the referral protocol to link them to services and MAT if indicated.*

# Substance use risk profile - pregnancy

- 3 questions
- Tested in 1610 pregnant women and cross-validated in a separate sample of 1704 pregnant women
- Alcohol use: sensitivity – 48%, specificity – 85%
- Marijuana use: sensitivity – 68%, specificity – 86%

# Substance use risk profile - pregnancy

- Have you ever smoked marijuana?
- In the month before you knew you were pregnant, how many beers, how much wine, or how much liquor did you drink?
- Have you ever believed that you needed to cut down on your drug (including the nonmedical use of prescription medications) or alcohol use?

# NIDA Quick Screen

- 4 questions that ask directly about the frequency of substance use
- Individual questions have been validated separately in primary care settings
- Sensitivity – 79.7%, specificity – 82.8%

<b>Quick Screen Question:</b>	<b>Never</b>	<b>Once or Twice</b>	<b>Monthly</b>	<b>Weekly</b>	<b>Daily or Almost Daily</b>
<b><u>In the past year</u>, how often have you used the following?</b>					
<b>Alcohol</b> <ul style="list-style-type: none"><li>• For men, 5 or more drinks a day</li><li>• For women, 4 or more drinks a day</li></ul>					
<b>Tobacco Products</b>					
<b>Prescription Drugs for Non-Medical Reasons</b>					
<b>Illegal Drugs</b>					

# NIDA-Modified ASSIST

Q1. In your <u>LIFETIME</u> , which of the following substances have you ever used?	Yes	No
a. Cannabis (marijuana, pot, grass, hash, etc.)		
b. Cocaine (coke, crack, etc.)		
c. Prescription stimulants (Ritalin, Concerta, Dexedrine, Adderall, diet pills, etc.)		
d. Methamphetamine (speed, crystal meth, ice, etc.)		
e. Inhalants (nitrous oxide, glue, gas, paint thinner, etc.)		
f. Sedatives or sleeping pills (Valium, Serepax, Ativan, Xanax, Librium, Rohypnol, GHB, etc.)		
g. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, ecstasy, etc.)		
h. Street opioids (heroin, opium, etc.)		
i. Prescription opioids (fentanyl, oxycodone [OxyContin, Percocet], hydrocodone [Vicodin], methadone, buprenorphine, etc.) <ul style="list-style-type: none"> <li>• Please record <b>nonmedical use only</b>: <i>Non-medical use refers to using a substance either not prescribed to the patient or used in ways or amounts not prescribed by their doctor.</i></li> </ul>		
j. Other – specify:		

# CRAFFT

- 6 question screening tool for adolescent substance use

<b>Part B</b>	<b>No</b>	<b>Yes</b>
1. Have you ever ridden in a <b>CAR</b> driven by someone (including yourself) who was “high” or had been using alcohol or drugs?	<input type="checkbox"/>	<input type="checkbox"/>
2. Do you ever use alcohol or drugs to <b>RELAX</b> , feel better about yourself, or fit in?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do you ever use alcohol or drugs while you are by yourself, or <b>ALONE</b> ?	<input type="checkbox"/>	<input type="checkbox"/>
4. Do you ever <b>FORGET</b> things you did while using alcohol or drugs?	<input type="checkbox"/>	<input type="checkbox"/>
5. Do your <b>FAMILY</b> or <b>FRIENDS</b> ever tell you that you should cut down on your drinking or drug use?	<input type="checkbox"/>	<input type="checkbox"/>
6. Have you ever gotten into <b>TROUBLE</b> while you were using alcohol or drugs?	<input type="checkbox"/>	<input type="checkbox"/>

# Wayne Indirect Drug Use Screener

- 7 question screener developed specifically for use in perinatal populations

## *WIDUS Items*

#	Item
1	I am currently married
2	In the past year, I have been bothered by pain in my teeth or mouth
3	I have smoked 100 cigarettes in my entire life
4	There have been times in my life, for at least two weeks straight, where I felt like everything was an effort
5	Most of my friends smoke cigarettes
6	I get mad easily and feel a need to off some steam
7	I often have trouble sleeping

# Accuracy of five self-report screening instruments for substance use in pregnancy

Steven J. Ondersma<sup>1</sup> , Grace Chang<sup>2</sup>, Tiffany Blake-Lamb<sup>3</sup>, Kathryn Gilstad-Hayden<sup>4</sup>, John Orav<sup>5</sup>, Jessica R. Beatty<sup>1</sup>, Gregory L. Goyert<sup>6</sup> & Kimberly A. Yonkers<sup>4,7</sup>

- 1,220 racially, ethnically and socioeconomically diverse pregnant women completed 5 screening instruments
- Screen results were compared to a reference standard of 30-day calendar recall or UDS
- 26.3% of pregnant women had a positive UDS/recall (1.2% opioids)

	Sensitivity	Specificity	PPV	NPV
5 Ps	<b>0.80</b>	0.37	0.20	0.90
SURP-P	0.49	0.66	0.22	0.87
NIDA Quick Screen	0.27	<b>0.99</b>	<b>0.84</b>	0.88
CRAFFT	0.34	0.77	0.22	0.86
Wayne IDUS	0.63	0.78	0.36	<b>0.91</b>

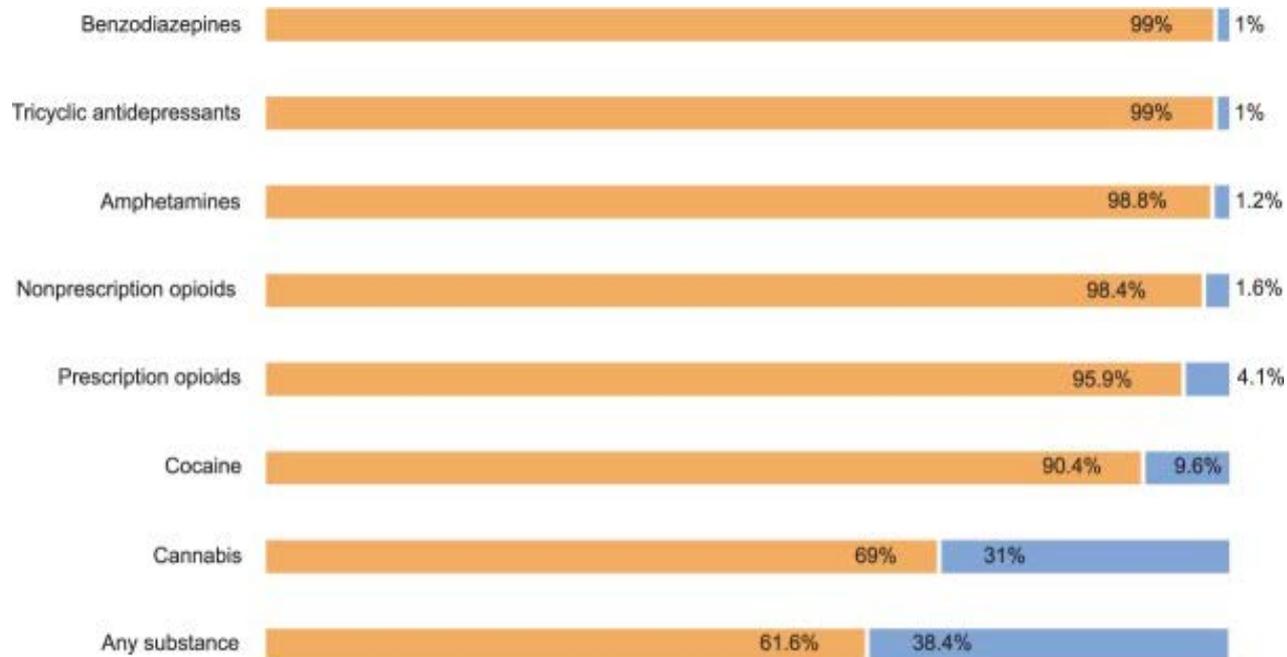
# Conclusions

- Differences in accuracy varied between screeners according to race/ethnicity, study site and insurance
- None of the tested measures exceeded an AUC=0.70
  - Often interpreted as the cut-off between 'poor' and 'fair' accuracy
- Lack of an data regarding how to incorporate an effective screening tool into clinical workflows
- “Until screeners are identified that can improve on direct, face-valid questions, the NIDA Quick Screen which briefly asks about self-reported use – appears to be the best approach to take.”

# Accuracy of Three Screening Tools for Prenatal Substance Use

*Victoria H. Coleman-Cowger, PhD, Emmanuel A. Oga, MD, MPH, Erica N. Peters, PhD, Kathleen E. Trocin, MPH, Bartosz Koszowski, PharmD, PhD, and Katrina Mark, MD*

- 500 racially, ethnically and socioeconomically diverse pregnant women completed 3 screening instrument
- Screen results were compared to urine and hair (90-d) samples
- 38.4% of pregnant women had a positive urine/hair (5% opioids)



# Comparing screening tools in pregnancy

## Coleman-Cowger et al.

	Sensitivity	Specificity	PPV	NPV
4 Ps Plus	<b>0.90</b>	0.30	0.44	0.83
NIDA Quick Screen	0.80	<b>0.83</b>	<b>0.74</b>	<b>0.87</b>
SURP-P	<b>0.92</b>	0.22	0.42	0.83

## Ondersma et al.

	Sensitivity	Specificity	PPV	NPV
5 Ps	<b>0.80</b>	0.37	0.20	<b>0.90</b>
NIDA Quick Screen	0.27	<b>0.99</b>	<b>0.84</b>	0.88
SURP-P	0.49	0.66	0.22	0.87

# Conclusions

- Differences in sensitivity were also seen by race.
- Neither biologic test measured alcohol use.
- “SURP-P and 4Ps Plus performed similarly (high sensitivity and negative predictive values) making them the more ideal screening test.”

# How do we incorporate screening into clinical practice?



# SBIRT

- Screening, Brief Intervention and Referral to Treatment
- Screening – assess the patient for risky substance use behaviors using a standardized screening tools.
- Brief intervention – following a positive screen, providers engage patients in a short conversation, providing feedback and advice.
- Referral to Treatment – a provider refers the patient to therapy or additional treatment whose screening indicates a need for additional services.

# The role of screening, brief intervention, and referral to treatment in the perinatal period

Tricia E. Wright, MD, MS; Mishka Terplan, MD, MPH; Steven J. Ondersma, PhD; Cheryl Boyce, PhD; Kimberly Yonkers, MD; Grace Chang, MD, MPH; Andreea A. Creanga, MD PhD

TABLE 2

## Components of brief interview (modified<sup>41</sup>)

Raise subject	<ul style="list-style-type: none"><li>• “Thank you for answering my questions—is it ok with you if we talk about your answers?”</li><li>• “Can you tell me more about your past/current drinking or drug use? What does a typical week look like?”</li></ul>
Provide feedback	<ul style="list-style-type: none"><li>• “Sometimes patients who give similar answers are continuing to use drugs or alcohol during their pregnancy.”</li><li>• “I recommend all my pregnant patients not to use any alcohol or drugs, because of risk to you and to your baby.”</li></ul>
Enhance motivation	<ul style="list-style-type: none"><li>• “What do you like and what are you concerned about when it comes to your substance use?”</li><li>• “On a scale of 0–10, how ready are you to avoid drinking/using altogether? Why that number and not a ____ (lower number)?”</li></ul>
Negotiate plan	<ul style="list-style-type: none"><li>• Summarize conversation. Then: “What steps do you think you can take to reach your goal of having a healthy pregnancy and baby?”</li><li>• “Can we schedule a date to check in about this next time?”</li></ul>

Wright. SBIRT in pregnancy. *Am J Obstet Gynecol* 2016.

# SBIRT clinical example

- <https://youtu.be/KIaCo3zw1PM>

# SBIRT reimbursement

Reimbursement for screening and brief intervention is available through commercial insurance CPT codes, Medicare G codes and Medicaid HCPCS codes.

Payer	Code	Description	Fee Schedule
<b>Commercial Insurance</b>	CPT 99408	Alcohol and/or substance abuse structured screening and brief intervention services; 15 to 30 minutes	\$33.41
	CPT 99409	Alcohol and/or substance abuse structured screening and brief intervention services; greater than 30 minutes	\$65.51
<b>Medicare</b>	G0396	Alcohol and/or substance abuse structured screening and brief intervention services; 15 to 30 minutes	\$29.42
	G0397	Alcohol and/or substance abuse structured screening and brief intervention services; greater than 30 minutes	\$57.69
<b>Medicaid</b>	H0049	Alcohol and/or drug screening	\$24.00
	H0050	Alcohol and/or drug service, brief intervention, per 15 minutes	\$48.00

Billing information provided courtesy of the Substance Abuse & Mental Health Services Administration:  
<http://www.samhsa.gov/prevention/SBIRT/coding.aspx>

# Substance use vs substance use disorder

Opioids are often taken in larger amounts or over a longer period of time than intended.
There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
Craving, or a strong desire to use opioids.
Recurrent opioid use resulting in failure to fulfill major role obligations at work, school or home.
Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
Important social, occupational or recreational activities are given up or reduced because of opioid use.
Recurrent opioid use in situations in which it is physically hazardous
Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by opioids.
*Tolerance, as defined by either of the following: (a) a need for markedly increased amounts of opioids to achieve intoxication or desired effect (b) markedly diminished effect with continued use of the same amount of an opioid
*Withdrawal, as manifested by either of the following: (a) the characteristic opioid withdrawal syndrome (b) the same (or a closely related) substance are taken to relieve or avoid withdrawal symptoms

# Screening for risk beyond substance use

- Substance use
- Psychiatric disorders (anxiety/depression/PTSD)
- Intimate partner violence
- Resource availability/social support



1. Are there people that you can depend on for support during and after your pregnancy?	Yes	No
2. In the past year have you had 4 or more drinks in a day?	Yes	No
3. In the past year have you used an illegal drug or used a prescription medication for no medical reason?	Yes	No
4. Do you currently smoke or use any form of tobacco?	Yes	No
5. Are you in a relationship where you have been hit, slapped, kicked, physically hurt or threatened by someone?	Yes	No
6. In the past month have you had repeated, disturbing memories, thoughts or images of a stressful experience from the past or felt upset when reminded of a stressful event from the past?	Yes	No
7. Over the past 2 weeks, how often have you had little interest or pleasure in doing things?	(1) Never. (2) Several days. (2) More than half of the days. (3) Nearly every day.	
8. Over the past 2 weeks, how often have you felt down, depressed or hopeless?	(1) Never. (2) Several days. (3) More than half of the days. (4) Nearly every day.	

# Conclusions

- We have a responsibility to screen all pregnant women for substance use during pregnancy
- Selection of a screening tool is only the beginning of a larger clinical process which involves
  - The development of clinical pathways to ensure consistency in screening (EMR, staff vs physician administration)
  - A patient-provider discussion regarding screening results
  - Establishing trust and a therapeutic relationship
  - Follow-up with the patient to reassess ongoing or recurrent use
  - Developing referral mechanisms to link patients to treatment in a timely fashion

# Questions?

