

Substances & Pregnancy

What do we know?

What do we do?



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Pretest question 1

- Of the following substances, which has the lowest percent of women who abstain during pregnancy among women who report “risky use” before pregnancy?
- Alcohol
- Cannabis
- Cocaine
- Tobacco

Pretest question 2

- Reporting of substance *use* is *not* mandatory (True/False)

Welcome and Your Presenter



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Introduction

- Substance use during pregnancy is common
 - Women are at highest risk for developing substance use disorder (SUD) during reproductive years
- Associated with adverse maternal and fetal outcomes
- Associated with childhood environmental risk
- Associated with developmental issues in childhood
 - Tobacco & alcohol, particularly (maybe meth)
- Pregnancy + SUD creates tension for care providers in addressing needs of mother and unborn fetus

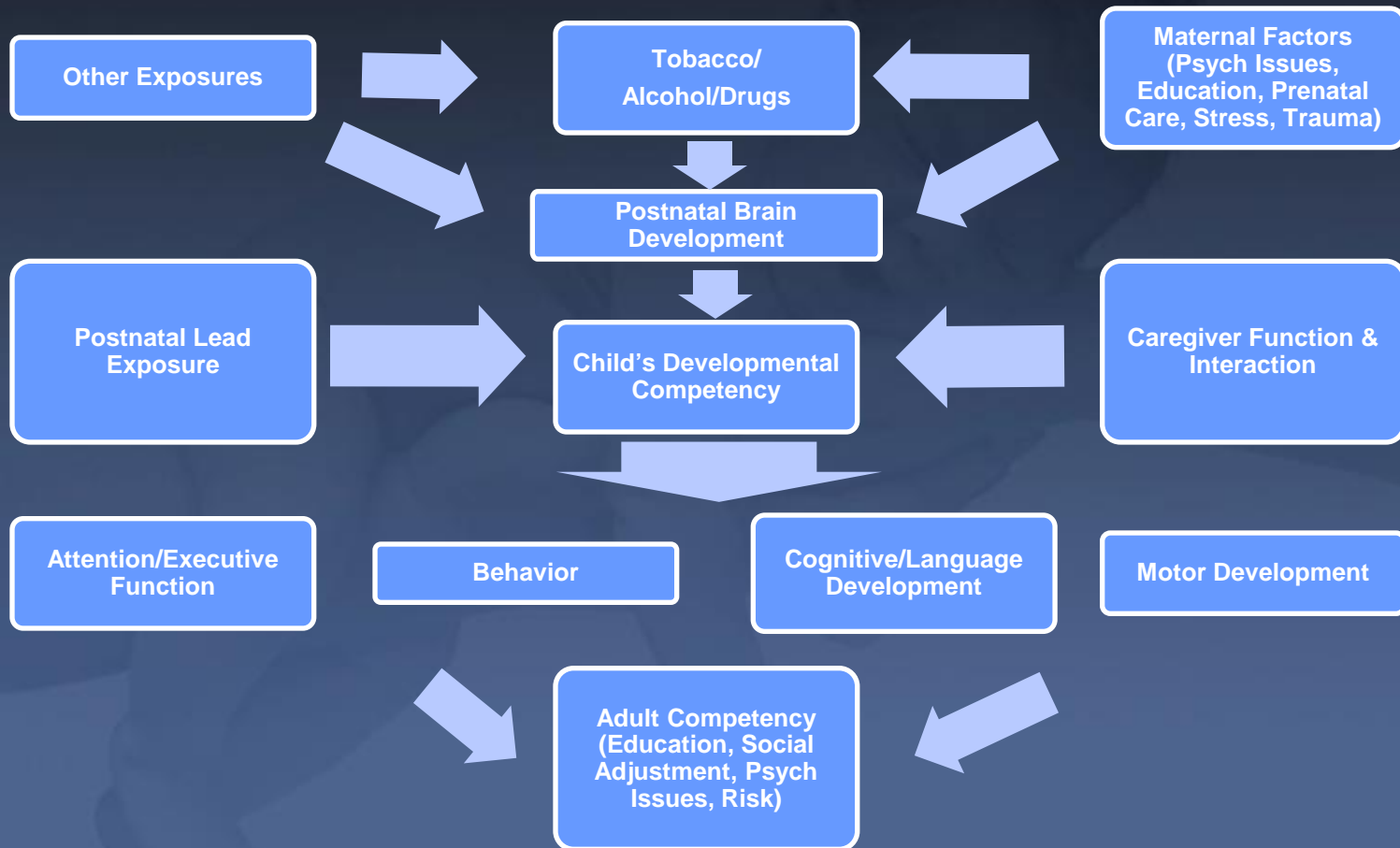
Training Objectives

- Conceptualize pathways for drug-environment effects on developing fetus and child
- Discuss particular substances and associated neonatal and childhood outcomes
- Discuss evidence-based screening/assessment and treatment
- Discuss ethical, policy issues

Confounding: Key Issue in Observational Studies



What Problems do Drugs “Cause?”





**So what DO we
know. . . .**

Tobacco

- Placental abruption
- Intrauterine death
- Decreased birth weight
- Preterm labor/delivery
- ↓ breastfeeding
- ↑ risk of SIDS
- Hyperactivity
- Anti-social behavior, conduct disorder
- Learning disabilities, ↓ IQ

Pineless et al 2014. Am J Epi

Quesada et al 2012. J Matern Fetal Neonatal Med

Salihu et al 2007. Early Human Dev

Ratner et al 1999. Birth

Alcohol

- Preterm delivery
- Growth deficiencies
- Craniofacial abnormalities
- Intellectual disability
- Attention deficits
- Hyperactivity
- Impaired motor development
- Speech/language deficits

O'Leary et al 2009. BJOG

Fox et al 2017. MMWR

Fugelstad et al 2015. Child Neuropsych

Cannabis

- Findings conflict
- Adverse effects most frequently observed with other co-morbid substance use & w/ heavy use
- Fetal growth effects (?)
- Preterm labor
- No congenital anomalies
- Subtle withdrawal (autonomic, state regulation)
- Heavy use (≥ 1 joint/d) associated w/ subtle academic deficits (reading, spelling), but no impact on IQ
- Adolescent depression (?)

Hayatbakhsh et al 2012. *Pediatr Res*

Fergusson et al 2002. *BJOG*

Goldschmidt et al 2004. *Neurotox & Teratol*

Stimulants

- Cocaine
 - ↓ placental blood flow → abruption, preterm labor/delivery, IUGR
 - No physical abnormalities
 - Mild behavioral issues (?)
 - Subtle attentional deficits, impulsivity
 - Likely ameliorated by appropriate care/environment
- Methamphetamine
 - Limited knowledge/studies
 - Low birth wt, increased stress, decreased achievement
- Amphetamines for ADHD → no known effects

Gouin et al 2011. Am J Ob/Gyn

Frank et al 2001. JAMA

Mansoor et al 2012. J Dev Behav Pediatr

Dyk et al 2014. J Popul Ther Clin Pharmacol

Gorman et al 2014. Am J Ob/Gyn

Opioids

- Complications primarily related to withdrawal, other substance use (esp tobacco), and associated environmental factors
- Agonist therapy (methadone, buprenorphine) reduces complications
- No physical deformities
- Possible cognitive/behavioral issues
 - verbal, arithmetic, reading abilities (age 3)

Minozzi et al 2013. Cochrane Database

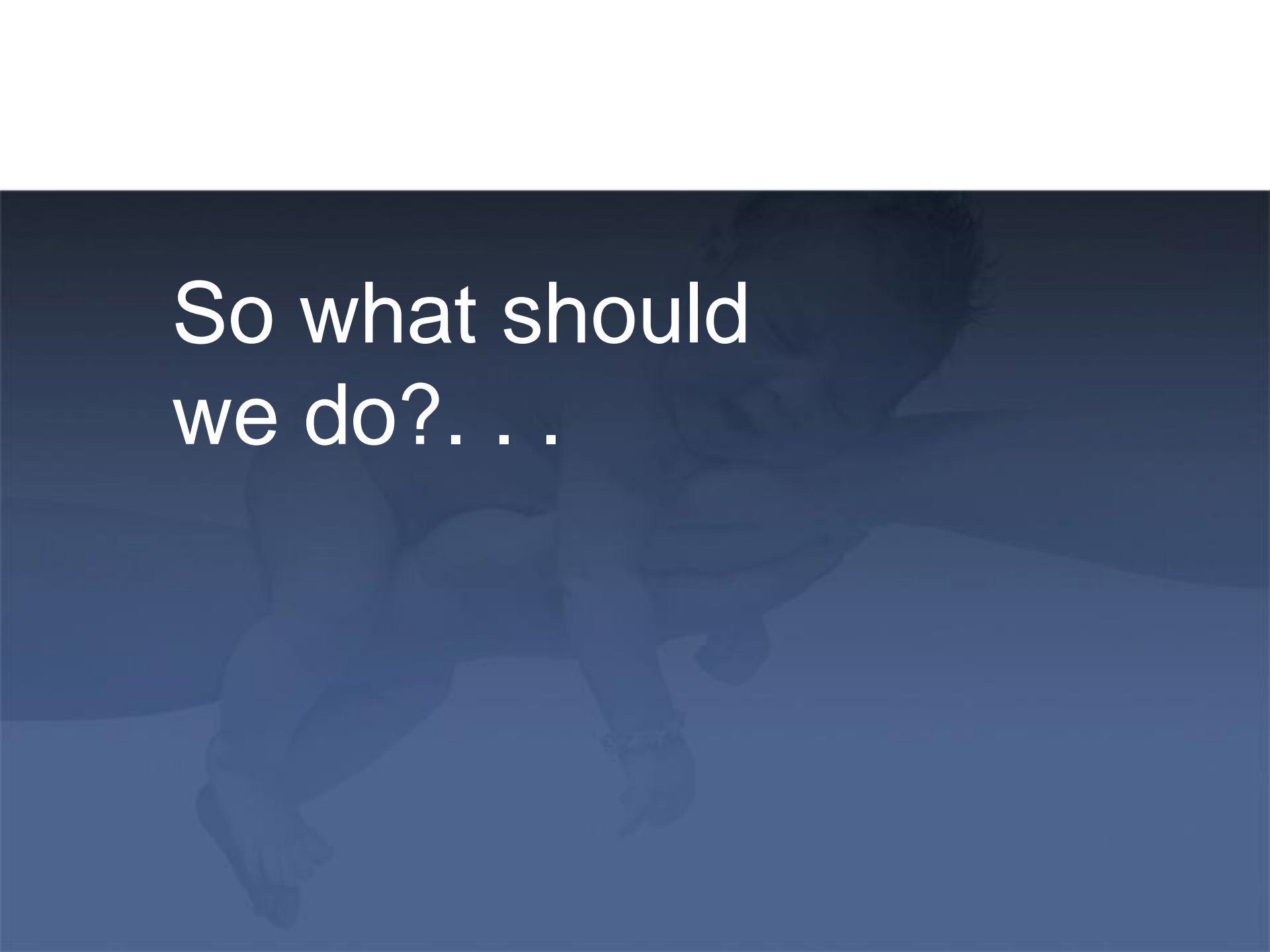
Patrick et al 2012. JAMA

Yazdy et al 2013. Ob/Gyn

Opioids

- Neonatal Abstinence Syndrome
 - Not clearly related to “dose”
 - Onset 48-72 hr & some symptoms last weeks
 - Features
 - Excessive cry/irritability
 - Erratic sleep
 - Startle
 - Tremor
 - Increased tone
 - Yawning
 - Vomiting
 - Sneezing
 - Poor feeding
 - Seizure

So what should
we do? . . .



Screening

- Recommended by Institute of Medicine, ACOG, AAP, but not by US Preventive Services Task Force
- Rates of current screening & follow up of positive screens are low
 - Alcohol 61%
 - Illicit drug use 7%
- Challenge to providers, patients, and system
 - Stigma, training, access to resources

Consumption
Heavy

Use Disorder

Consequences
Severe



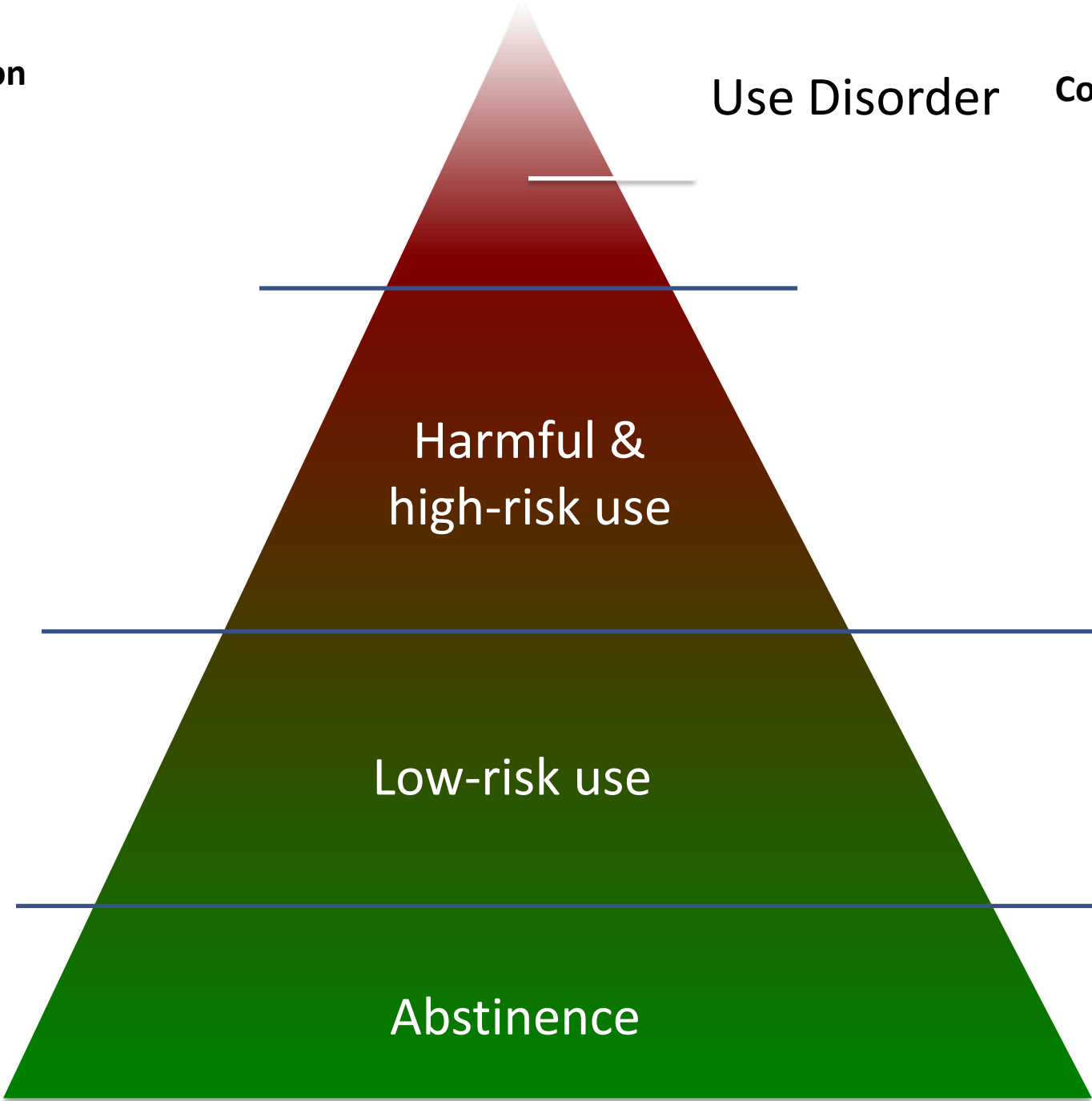
Harmful &
high-risk use

Low-risk use

Abstinence

None

None



T-ACE

- (T) Tolerance: How many drinks before you feel high? (≥ 3 is positive)
- (A) Annoyed: Have you been annoyed by people criticizing your drinking?
- (C) Cut down: Have you felt you need to cut down on your drinking?
- (E) Eye opener: Have you had a drink in AM to calm nerves?
 - 2+ = positive

TWEAK

- (T) Tolerance (2)
- (W) Worry: Have others worried about your drinking? (2)
- (E) Eye opener
- (A) Amnesia: Have you blacked out when drinking?
- (K) “Kut” down
 - 2+ = positive

Screens for Other Drugs

- Not particularly sensitive
- CAGE-AID
 - Cut down
 - Annoyed
 - Guilty
 - Eye opener
- DAST-10
- 4 P's Plus (parents, partner, past, pregnancy--# cigarettes, how many drinks in month prior to pregnancy)

Assessment by a Clinician

- Clinical interview
 - Substances
 - History
 - Consequences
 - Co-morbidity
 - Readiness to change
 - Environment

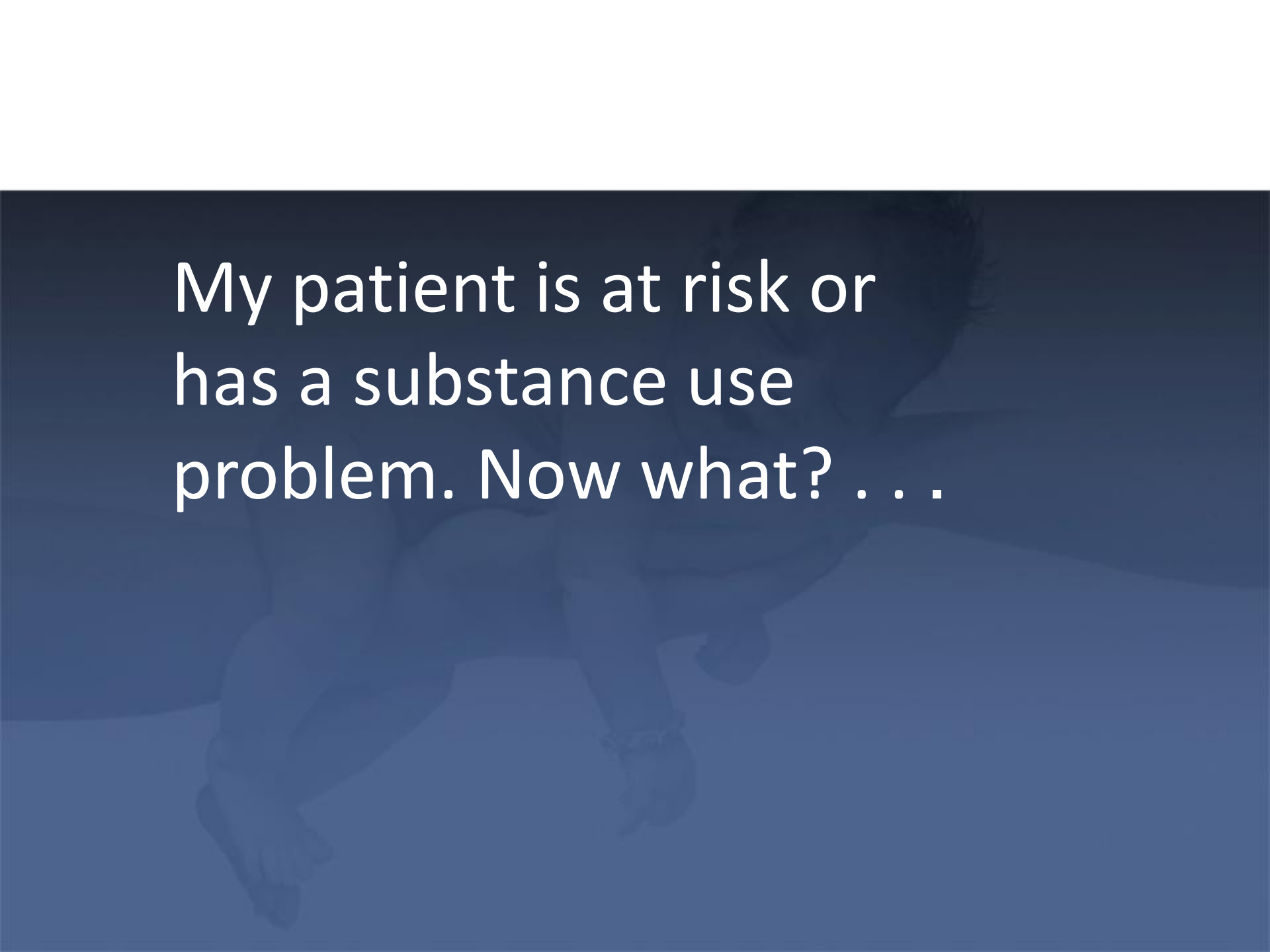
DSM-5 Substance Use Disorder

- Tolerance
 - Withdrawal
- } Physical Dependence ≠ Use Disorder
- Larger amts/longer periods than intended
 - Persistent desire/failed attempts to quit/control use
 - Much time obtaining/using/recovering
 - Important activities sacrificed
 - Continued use despite known adverse effects
 - Failure to fulfill major obligations
 - Recurrent hazardous use
 - Craving
 - Ongoing use despite interpersonal problems

2-3 = mild

4-5 = moderate

≥ 6 = severe



My patient is at risk or
has a substance use
problem. Now what? . . .

The Good News. . .

- In women with preconception risky or problem use, many are able to abstain during pregnancy
 - Alcohol 96%
 - Cannabis 78%
 - Cocaine 73%
 - Tobacco 32%
- High rates of relapse post-partum

Treatment: Tobacco

- Behavioral
 - Tobacco quit line
 - Plan formulation
- Pharmacotherapy
 - Nicotine replacement therapy (NRT) (D??)
 - Bupropion (C)
 - Varenicline (C)
- Quitting at any time reduces complication risk

At-Risk Use: Brief Interventions

- Willing to commit to change
 - Help set goals
 - Agree on plan
 - Provide educational materials
- Not willing to commit
 - Restate concern
 - Encourage reflection
 - Address barriers
 - Reaffirm willingness to help
- Maintain engagement in prenatal care!!!

Treatment: Use Disorders

- Alcohol
 - Behavioral
 - Pharmacotherapy
 - Withdrawal/detox
 - Anti-craving/cessation
 - Acamprosate (C)
 - Naltrexone (C)
 - Disulfiram (C)

Treatment

- Opioids
 - Behavioral
 - Opioid agonist therapy (OAT)
 - Methadone (C)
 - Buprenorphine (C)
 - Other medication—naltrexone (C)

Treatment

- Stimulants
 - Behavioral
 - Contingency management
 - Cognitive behavioral therapy
 - Pharmacotherapy. . .

Other Treatment Issues

- Other substance use
- Related medical issues (e.g. HIV)
- Mental health
 - Depression/anxiety
 - Trauma history/PTSD
- Home environment/support network

A woman with dark hair, wearing a dark, sleeveless dress, is sitting on a light-colored sofa. She is looking down and to her right with a thoughtful or concerned expression. The background is a plain, light-colored wall. The overall scene is dimly lit, with the woman's face and dress being the primary focus.

When do I report? . . .

Legal & Policy Issues

- Legal substances (tobacco, alcohol) may cause more harm than many illegal (cocaine, cannabis)
- Unintended adverse consequences of punitive and mandatory reporting policies (e.g. reluctance to seek prenatal care)

Legal & Policy Issues

- 23 states and DC consider substance use during pregnancy to be child abuse under child welfare (civil, not criminal) statutes
- Incarceration doesn't affect drug use rates
- Reporting requirements in this setting create adversarial relationship b/t pt and MD
 - Deters women from seeking prenatal care

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Conclusions

- Substance use and associated environment has potentially long-term negative impacts
 - Evidence for many substance-attributable harms is unclear
- Legal substances present as much (or more) potential for significant harm to developing fetus
- Engaging patient in process of positive change **and continued prenatal care is critical**

Wrap Up and Reminders

Upcoming Events

February 15: 1-2:30PM ET: Conversations with the Division

Other behavioral health webinars and resources:

<http://healthystartepic.org/training-and-events/alcohol-and-substance-exposed-pregnancy-prevention/>

EPIC Center website: <http://www.healthystartepic.org>

- Includes all recorded webinars, transcripts, slide presentations, evidence based practice inventory

