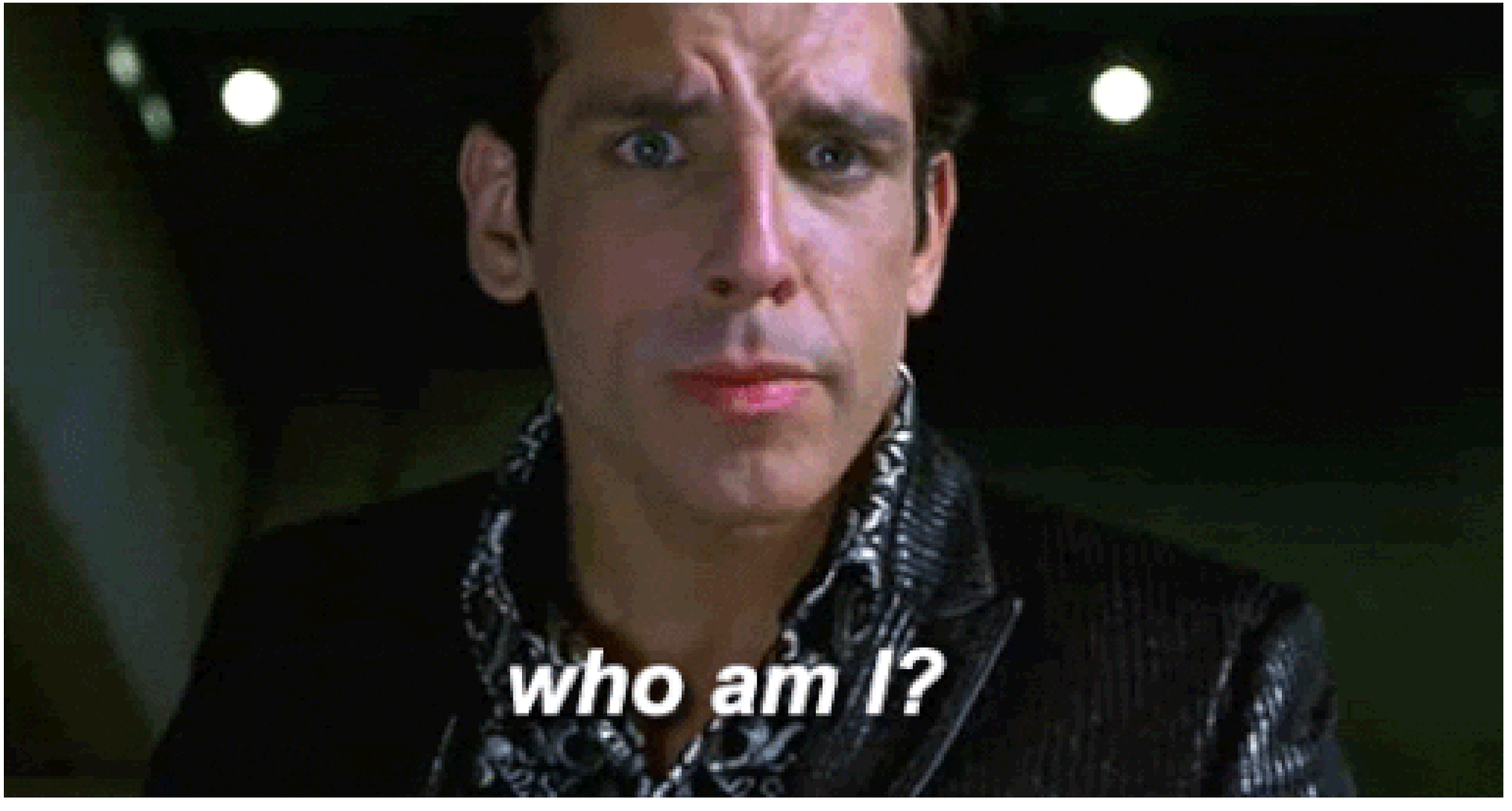
Opioids, opiates in pregnancy (OOPS) – impact of the opidemic on pregnant women

HEALTH
UNIVERSITY OF UTAH

Marcela Smid, MD
Maternal Fetal Medicine

DISCLOSURE

No financial disclosure


who am I?

CLINICAL DIRECTOR OF UNIVERSITY OF UTAH'S SUPERAD CLINIC – (SUBSTANCE USE & PREGNANCY: RECOVERY, ADDICTION AND DEPENDENCE)

- **Specialty prenatal care** for women with substance use disorders
- Co-located services:
  - MFM including ultrasound
  - Addiction fellows
  - MAT with buprenorphine/suboxone
  - Addiction peer support
  - Case management from health plan
  - Resource management
  - Social work
  - On-site child care
  - **NOT a methadone clinic**

  - **Motto: "beg borrow and steal for services"**

REMEMBER THESE THREE THINGS

- Opioid use and opioid use disorder among pregnant women is **common.**
- Opioid use disorder is a **chronic treatable medical condition** of the **brain** with the most important outcome being prevention of maternal death.
- Person-centered language is critical (women with an addiction)

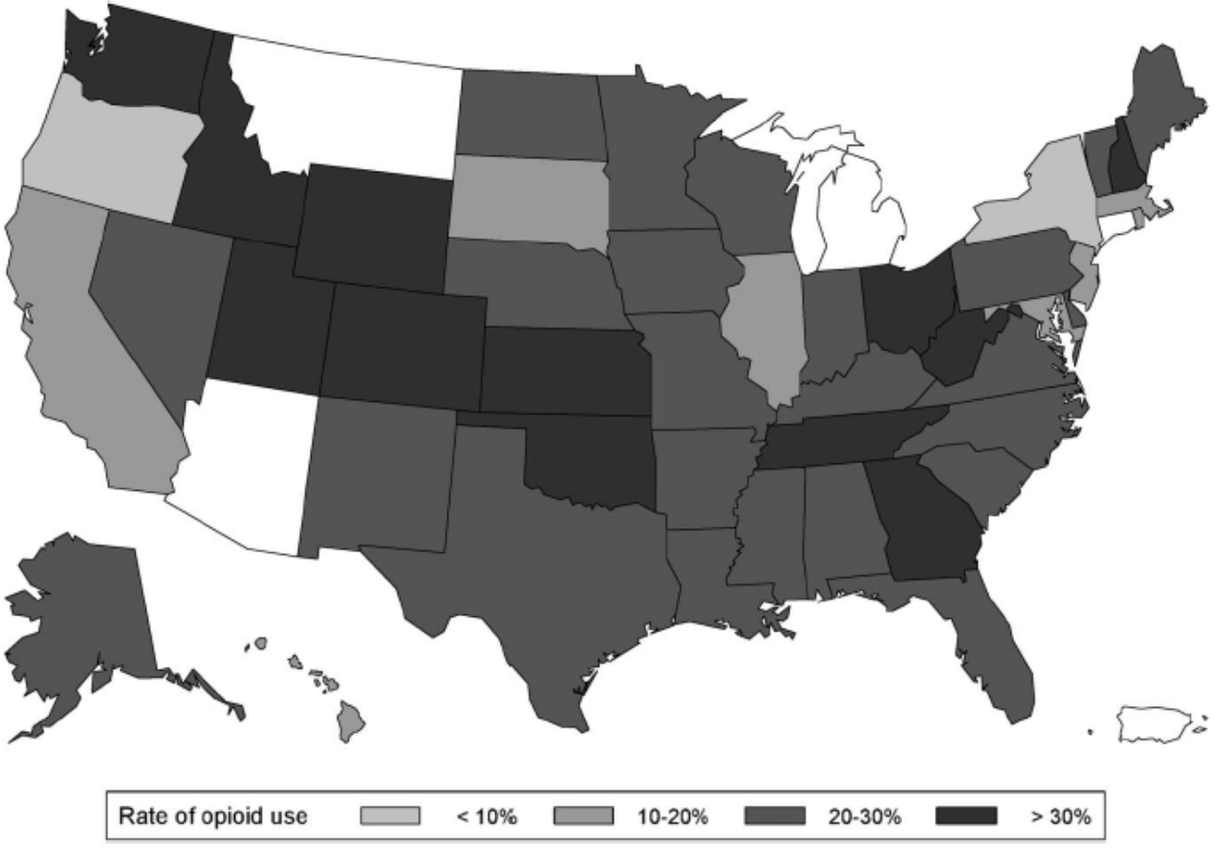


Fig. 1. Regional variation in the rates of prescription opioid dispensing during pregnancy, Medicaid 2000–2007. Arizona, Michigan, Montana, Connecticut, and Puerto Rico (*white*) are not represented in the cohort because of incomplete claims information.

Desai. Prescription Opioid Use Trend in Pregnancy. Obstet Gynecol 2014.

National 22%
Utah 42%
Idaho 36%
New Hampshire 34%
Wyoming 34%
Tennessee 34%

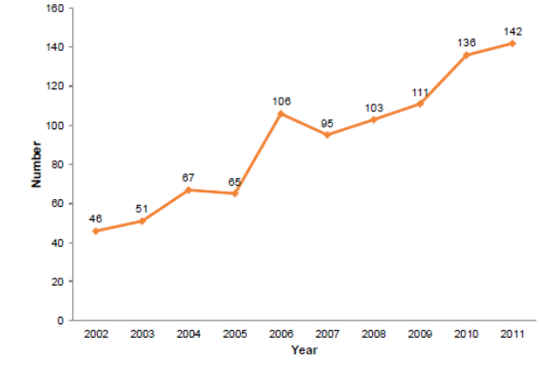
1. Abdominal pain (49%)
2. Lower back pain (33%)
3. Headaches (13%)
4. Joint pain (11%)
5. Migraine (8%)

PREGNANCY AND OPIOID USE

- 2010 National Survey on Drug Use and Health: 4.4% of pregnant women reported illicit drug use in last 4 days
- Utah: **5% of neonates** are positive for drugs, most are opioids (Buchi et al, 2013)

Complicated Pregnancies or Births due to a Mother's Drug Dependence

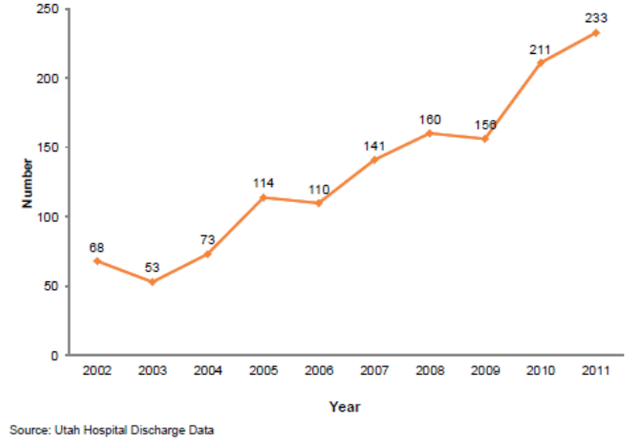
Figure 1. Number of hospital discharges as a result of complicated pregnancies or births due to a mother's drug dependence, Utah, 2002–2011



Source: Utah Hospital Discharge Data

Newborns with Neonatal Abstinence Syndrome

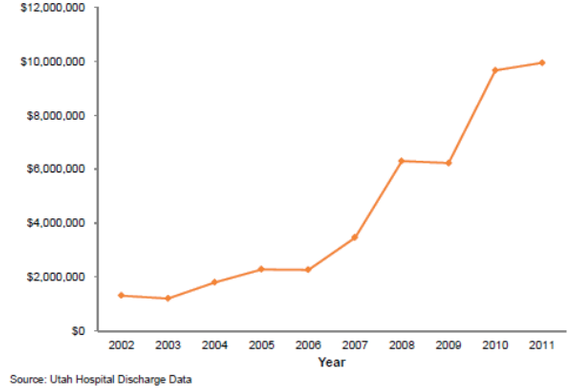
Figure 2. Number of newborns (birth to 28 days) with NAS, Utah, 2002–2011



Source: Utah Hospital Discharge Data

Charges for Newborns with Neonatal Abstinence Syndrome

Figure 3. Charges for newborns (birth to 28 days) with NAS, Utah, 2002–2011



Source: Utah Hospital Discharge Data

DEFINITIONS (THIS IS IMPORTANT)

- **Use** – Sporadic consumption without adverse consequences
- **Misuse** – Use of medications for non-prescription uses
- **Tolerance** - physiologic adaptation & diminished response to substance after repeated uses
- **Physical Dependence** – State of adaptation manifested by a class-specific withdrawal syndrome produced by abrupt cessation or rapid dose reduction of the substance, or by administration of an antagonist
- **Psychological Dependence** – Subjective sense of a need for a specific psychoactive substance, either for its positive effects or to avoid negative effects associated with its abstinence

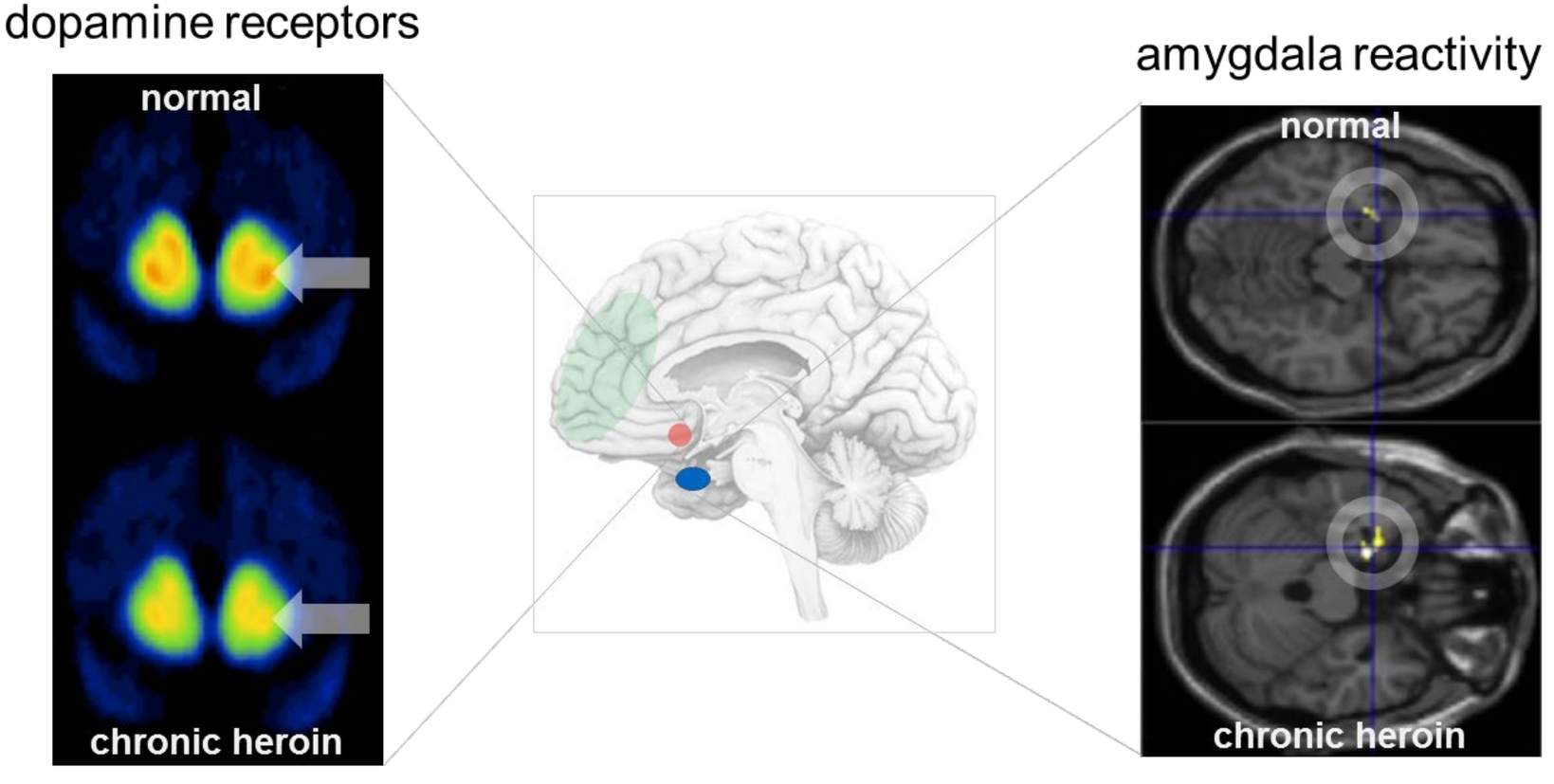
Society for Maternal·Fetal Medicine

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS
COMMITTEE OPINION

ASAM American Society of Addiction Medicine

DEFINITIONS (REALLY IMPORTANT)

- **Addiction** – A primary, chronic disease of brain reward, motivation, memory, and related circuitry.



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OPIOID USE DISORDER

Table 1. Diagnostic Criteria for an Opioid-Use Disorder.*

Use of an opioid in increased amounts or longer than intended
Persistent wish or unsuccessful effort to cut down or control opioid use
Excessive time spent to obtain, use, or recover from opioid use
Strong desire or urge to use an opioid
Interference of opioid use with important obligations
Continued opioid use despite resulting interpersonal problems, social problems (e.g., interference with work), or both
Elimination or reduction of important activities because of opioid use
Use of an opioid in physically hazardous situations (e.g., while driving)
Continued opioid use despite resulting physical problems, psychological problems, or both
Need for increased doses of an opioid for effects, diminished effect per dose, or both†
Withdrawal when dose of an opioid is decreased, use of drug to relieve withdrawal, or both†

* If two or three items cluster together in the same 12 months, the disorder is mild; if four or five items cluster, the disorder is moderate; and if six or more items cluster, the disorder is severe. Criteria are from the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition.[8]

† If the opioid is taken only as prescribed, this item does not count toward a diagnosis of an opioid-use disorder.

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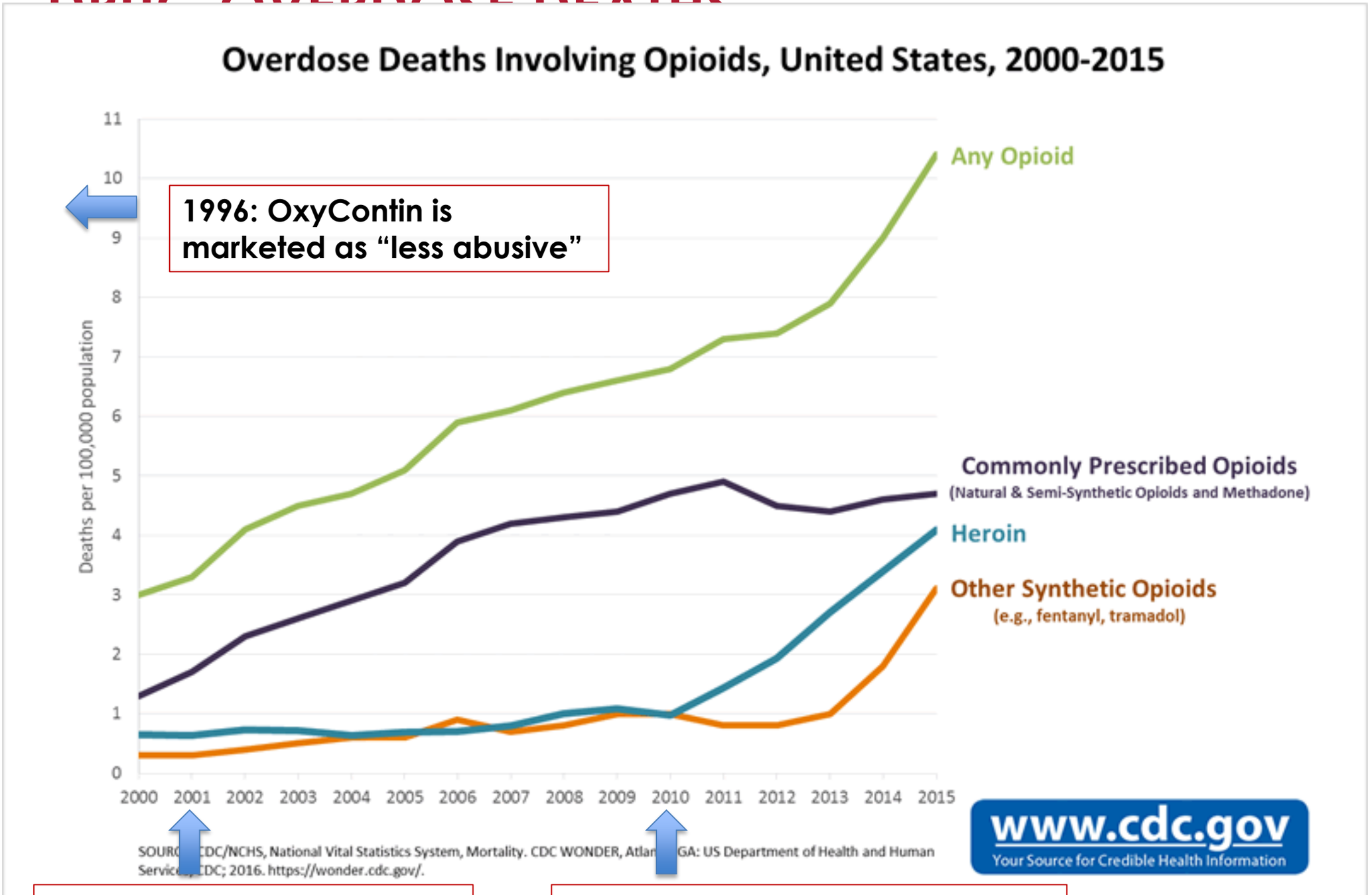
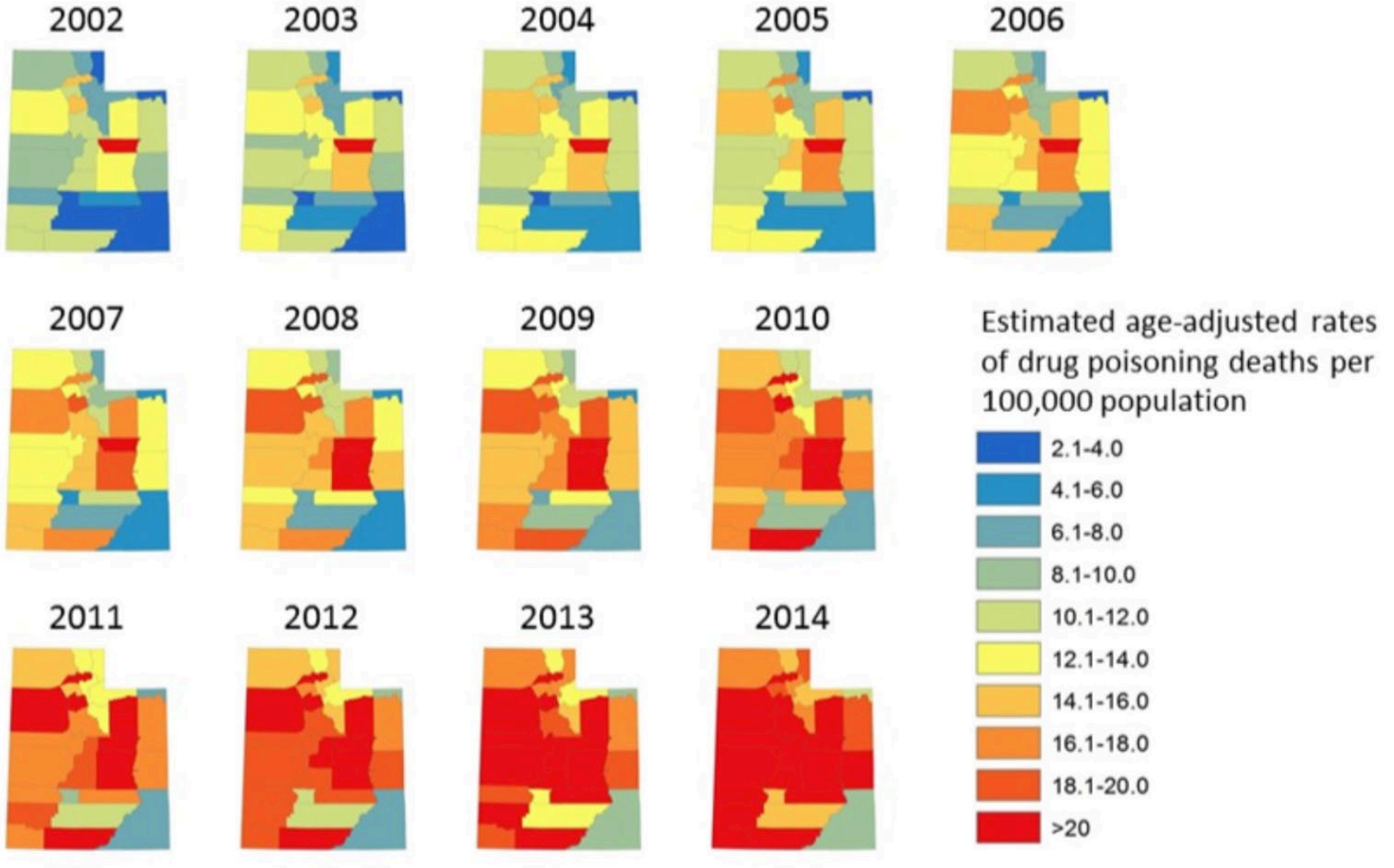
INFANTS CANNOT HAVE AN ADDICTION

DRUG OVERDOSE DEATHS

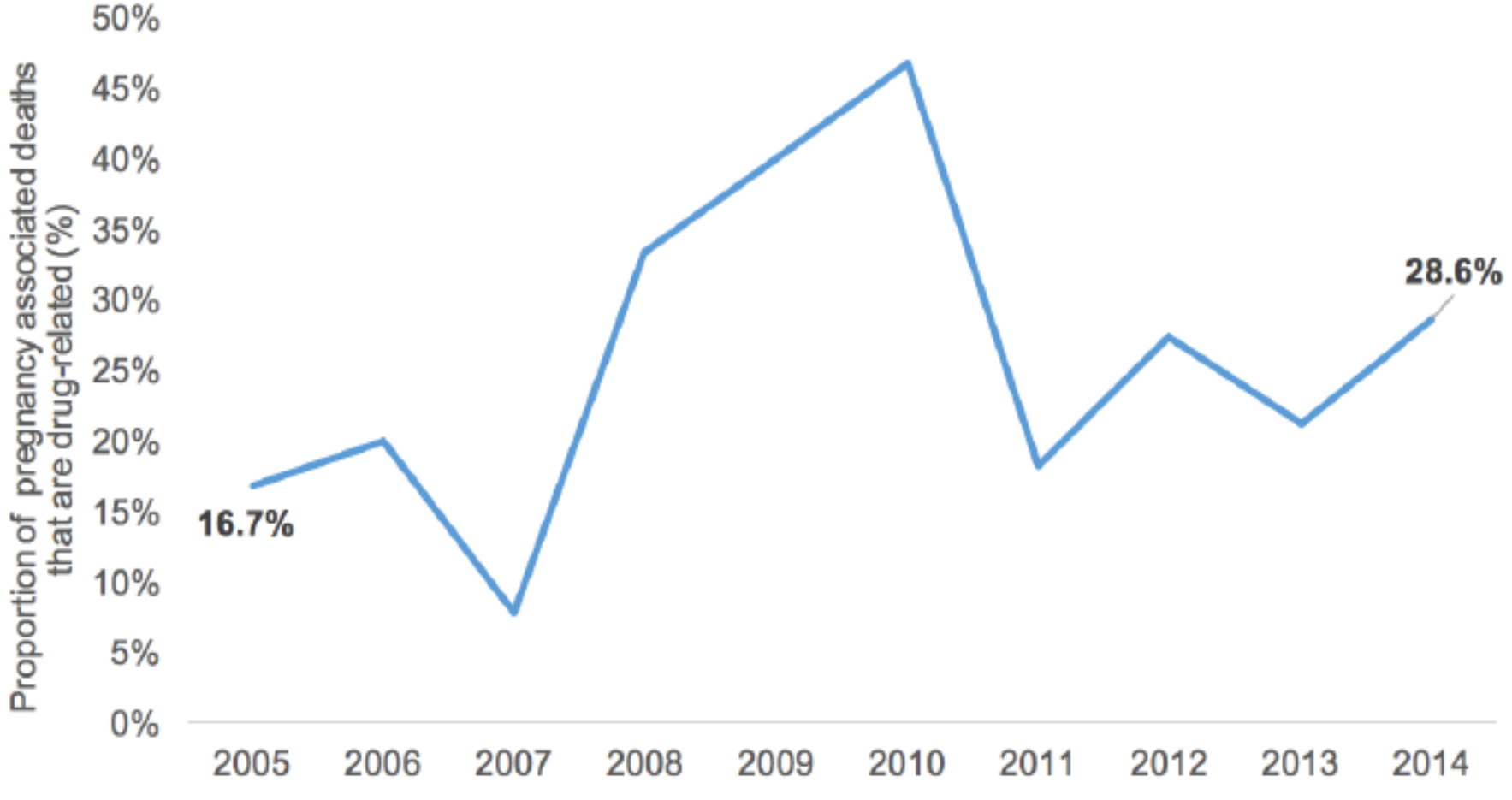


UTAH DRUG RELATED DEATHS

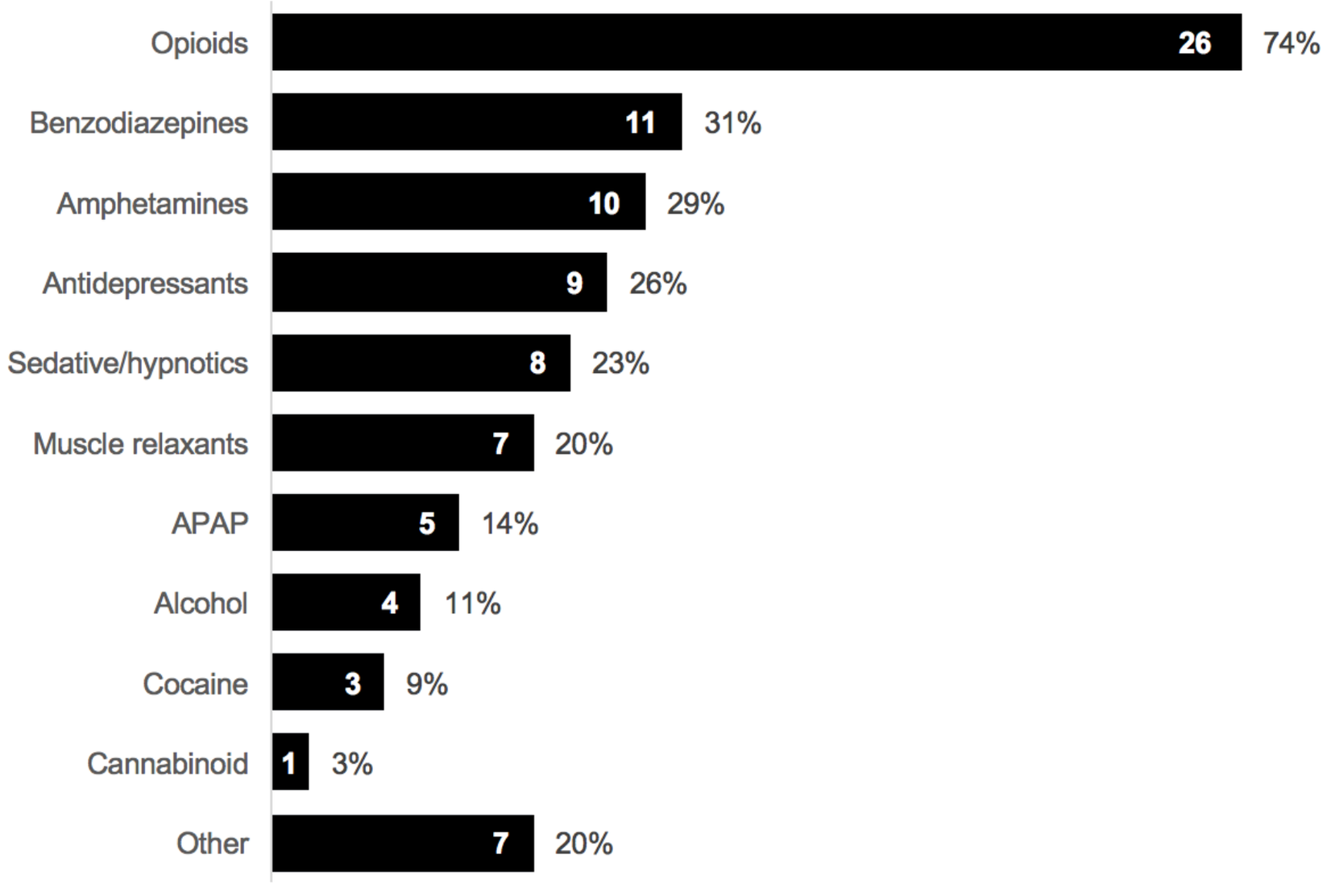


ate of Drug Poisoning Deaths per 100,000 Population by County, Utah 2002-2014 (age-adjusted); (CDC and UTDOH, 2016)

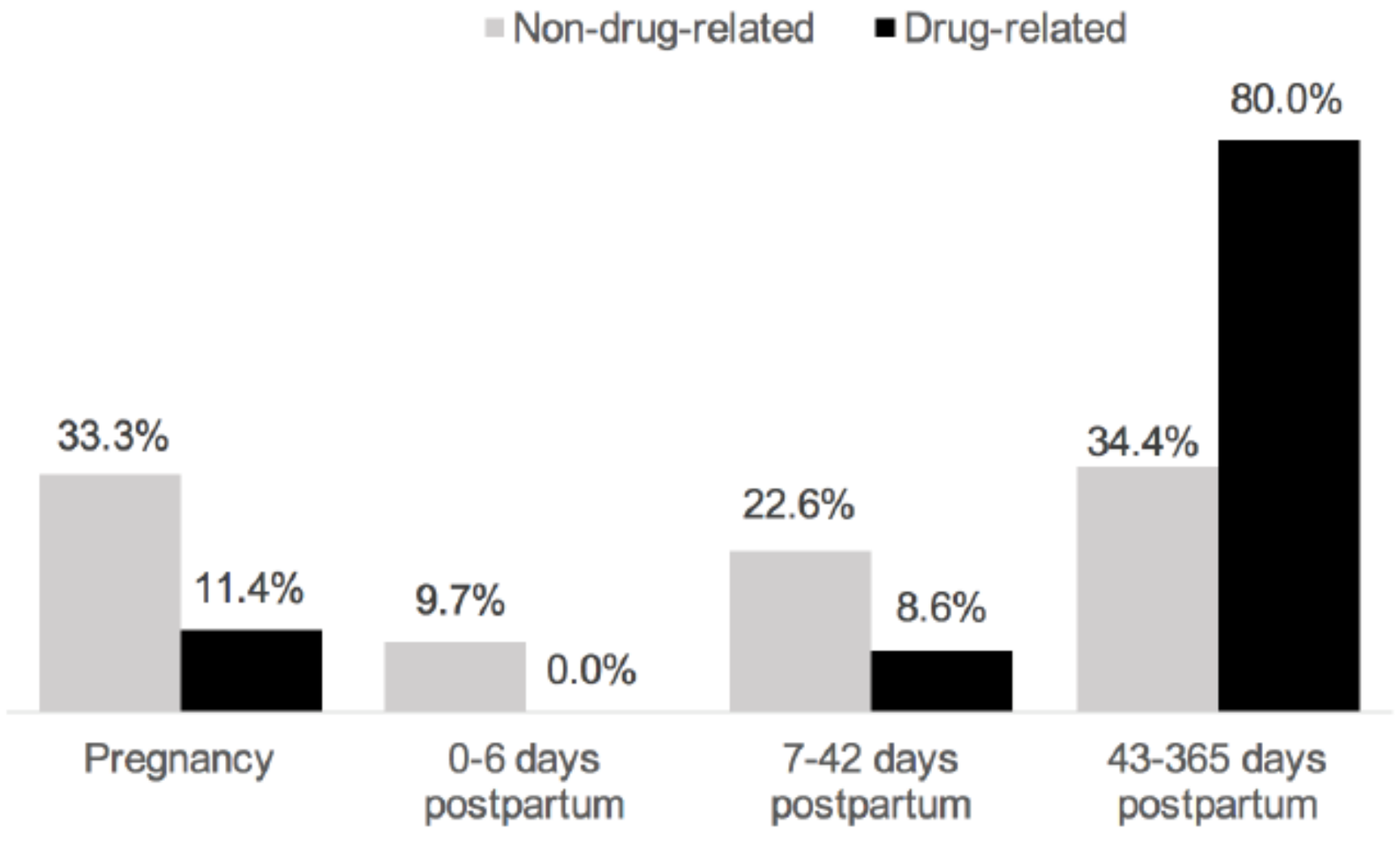
PREGNANCY AND DRUG RELATED DEATHS



PREGNANCY AND DRUG RELATED DEATHS



PREGNANCY AND DRUG RELATED DEATHS



GUIDELINES FOR CARE OF PREGNANT WOMEN

Opioid Use in Pregnancy, Neonatal Abstinence Syndrome, and Childhood Outcomes

Executive Summary of a Joint Workshop by the Eunice Kennedy Shriver *National Institute of Child Health and Human Development, American College of Obstetricians and Gynecologists, American Academy of Pediatrics, Society for Maternal-Fetal Medicine, Centers for Disease Control and Prevention, and the March of Dimes Foundation*

*Uma M. Reddy, MD, MPH, Jonathan M. Davis, MD, Zhaoxia Ren, MD, PhD, and Michael F. Greene, MD, for the Opioid Use in Pregnancy, Neonatal Abstinence Syndrome, and Childhood Outcomes Workshop Invited Speakers**

PATIENT SAFETY BUNDLE

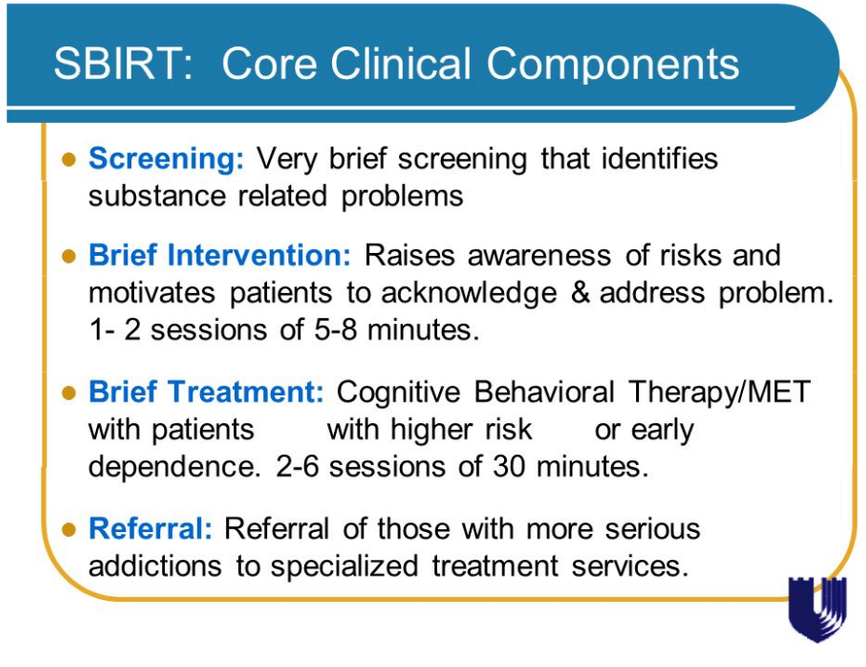
Obstetric Care for Women with Opioid Use Disorder

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

COMMITTEE OPINION

SBIRT – SCREENING, BRIEF INTERVENTION, REFERRAL TO TREATMENT

- **EVERY** pregnant woman prenatally and throughout pregnancy
  - ACOG
  - SMFM
  - ASAM
- **Utah HB 175** – REQUIRED training of physicians within nine years



PREGNANCY VALIDATED SCREENING

Original Research

Opioid Knowledge and Prescribing Practices Among Obstetrician–Gynecologists

Annetta M. Madsen, MD, Lauren M. Stark, MPP, Phinnara Has, MS, Jenna B. Emerson, MD, Jay Schulkin, PhD, and Kristen A. Matteson, MD, MPH

- 22% report typically screening for opioid dependence

UNIVERSAL SCREENING

- **Not based on "risk factors"**
- 4 Ps
- NIDA Quick Screen
- CRAFFT (<26 year olds)

NIDA *Quick Screen* Question: In the past year, how often have you used the following?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Alcohol • For men, 5 or more drinks a day • For women, 4 or more drinks a day					
Tobacco Products					
Prescription Drugs for Non-Medical Reasons					
Illegal Drugs					

4 P's for Substance Abuse

1. Have you ever used drugs or alcohol during **P**regnancy?
2. Have you had a problem with drugs or alcohol in the **P**ast?
3. Does your **P**artner have a problem with drugs or alcohol?
4. Do you consider one of your **P**arents to be an addict or alcoholic?

Ewing H. Medical Director, Born Free Project. Contra Casta County, 111 Allen Street, Martinez, CA 94553. Phone: (510) 646-1165.

TABLE 5 The CRAFFT questions

Two or more "Yes" answers suggest high risk of a serious substance-use problem or a substance-use disorder.

C Have you ever ridden in a **Car** driven by someone who was high or had been using drugs or alcohol?

R Do you ever use alcohol or drugs to **Relax**, feel better about yourself, or fit in?

A Do you ever use drugs or alcohol when you are **Alone**?

F Do you **Forget** things you did while using drugs or alcohol?

F Do your family and **Friends** ever tell you that you should cut down your drinking or drug use?

T Have you ever gotten into **Trouble** while using drugs or alcohol?

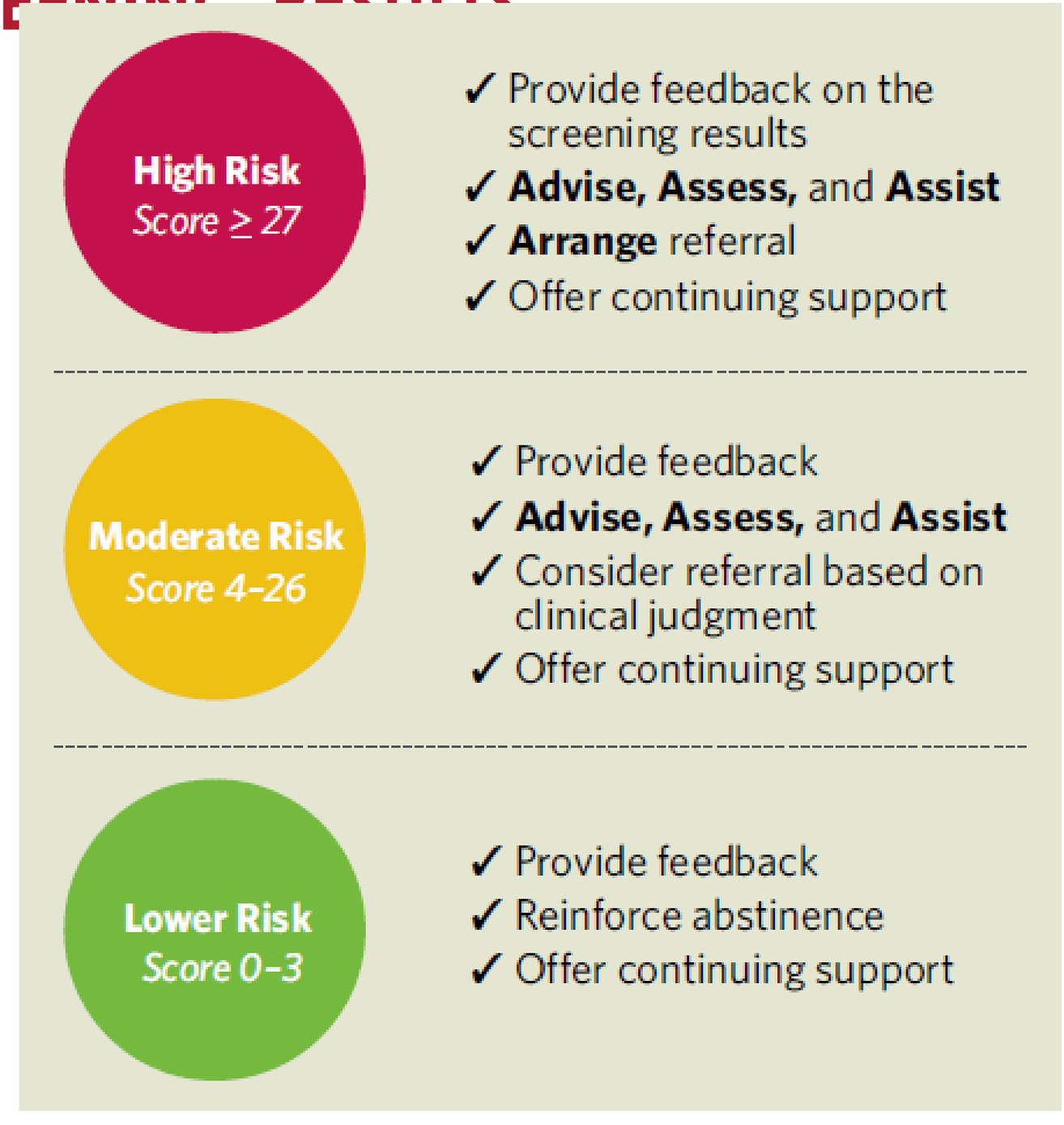
Abbreviation: CRAFFT, Car, Relax, Alone, Forget, Friends, Trouble.
Knight JR, et al.[23]

PREGNANCY VALIDATED SCREENING

NIDA *Quick Screen* Question: <u>In the past year</u>, how often have you used the following?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
Alcohol • For men, 5 or more drinks a day • For women, 4 or more drinks a day					
Tobacco Products					
Prescription Drugs for Non-Medical Reasons					
Illegal Drugs					

- If the patient says **"NO"** for all drugs in the Quick Screen, reinforce abstinence. **Screening is complete.**
- If the patient says **"Yes"** to **one or more days of heavy drinking**, *patient is an at-risk drinker*. Please see NIAAA website "How to Help Patients Who Drink Too Much: A Clinical Approach" http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm, for information to **Assess, Advise, Assist, and Arrange** help for at risk drinkers or patients with alcohol use disorders
- If patient says **"Yes"** to **use of tobacco**: *Any* current tobacco use places a patient at risk. Advise *all tobacco users to quit*. For more information on smoking cessation, please see "Helping Smokers Quit: A Guide for Clinicians" http://www.ahrq.gov/clinic/tobacco/clinhlpsmksqt.htm
- If the patient says **"Yes"** to **use of illegal drugs or prescription drugs for non-medical reasons**, proceed to **Question 1** of the NIDA-Modified ASSIST.

NIDA SCREENING RESULTS



SBIRT BILLING

Payer	Code	Description	Fee Schedule
Commercial Insurance, Medicaid	99408	Alcohol and/or substance abuse structured screening and brief intervention services; 15 to 30min	$33.41
Commercial Insurance, Medicaid	99409	Alcohol and/or substance abuse structured screening and brief intervention services; greater than 30min	$65.51
Medicare	G0396	Alcohol and/or substance abuse structured screening and brief intervention services; 15 to 30min	$29.42
Medicare	G0397	Alcohol and/or substance abuse structured screening and brief intervention services; greater than 30min	$57.69
Medicare	G0442	Prevention: Screening for alcohol misuse in adults including pregnant women once per year. No coinsurance; no deductible for patient http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Reduce-Alcohol-Misuse-ICN907798.pdf	$17.33
Medicare	G0443	Prevention: Up to four, 15 minute, brief face-to-face behavioral counseling interventions per year for individuals, including pregnant women, who screen positive for alcohol misuse; No coinsurance; no deductible for patient http://www.cms.hhs.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=249	$25.14
Medicaid	H0049	Alcohol and/or drug screening (code not widely used)	$24.00
Medicaid	H0050	Alcohol and/or drug service, brief intervention, per 15 min (code not widely used)	$48.00

DICTION OF ADDICTION (MOST IMPORTANT)

THE QUESTION

- “Is my baby going to get taken away?”

UTAH LAWS

As Of September 1, 2017 | **State Laws And Policies**

GUTTMACHER INSTITUTE

GUTTMACHER CENTER FOR POPULATION RESEARCH INNOVATION AND DISSEMINATION

Substance Use During Pregnancy

State Policies On Substance Use During Pregnancy

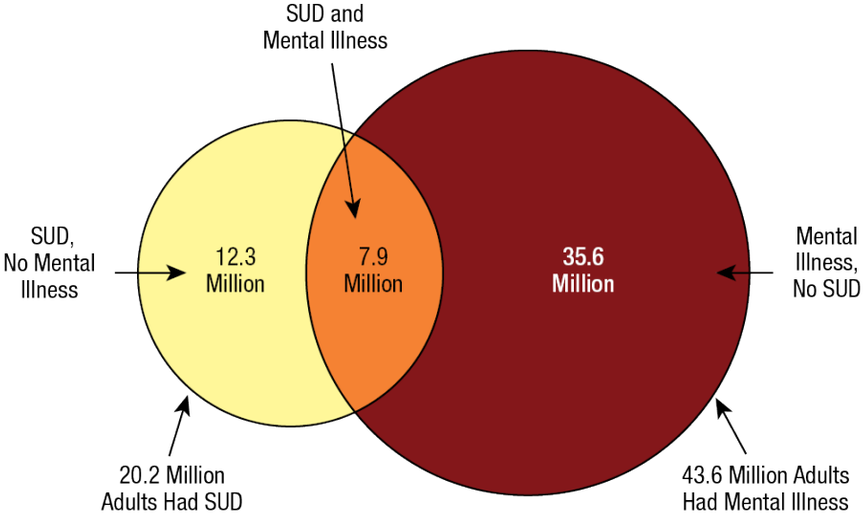
STATE	SUBSTANCE USE DURING PREGNANCY CONSIDERED:		WHEN DRUG USE SUSPECTED, STATE REQUIRES:		DRUG TREATMENT FOR PREGNANT WOMEN		
	Child Abuse	Grounds For Civil Commitment	Reporting	Testing	Targeted Program Created	Pregnant Women Given Priority Access In General Programs	Pregnant Women Protected From Discrimination In Publicly Funded Programs
Utah	X		X			X	

	FY16	FY17	FY18
Total Fetal Exposure and Addiction Cases	678	828	955
Number of Supported Fetal Exposure and Addiction Cases	481	604	676

Outcomes of Supported FE/FA Cases	FY16	FY17	FY18
Voluntary In-Home Services	47	61	51
Court-Ordered In-Home Services	85	93	85
Foster Care	152	191	171
No Ongoing DCFS Services	197	259	369

EVIDENCE (OR EXPERT) BASED PREGNANCY CARE

- **Pharmacotherapy**
- **Additional screening**
  - Domestic violence
  - Screening for depression, overdose and suicide
- **Hepatitis C screening**
- HIV PCR (not just antibody) if active drug use
- **Urine toxicology**
  - Tell her you are doing it and why!
- **Targeted ultrasound**
  - *Possible* increase in cardiac defects, ONTD and gastroschisis

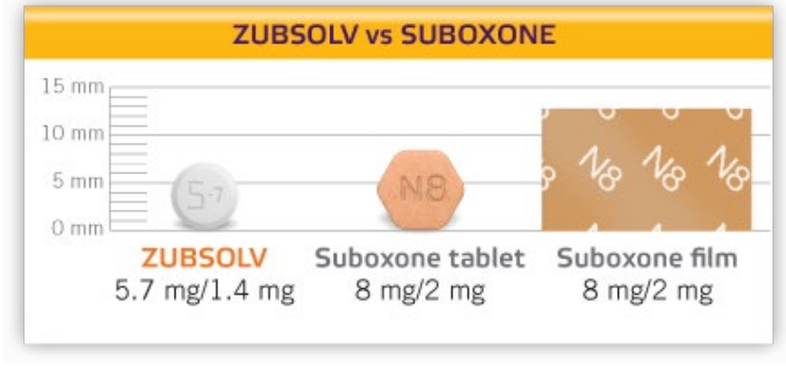


OUD AS CHRONIC MEDICAL CONDITION

– Similar to diabetes management in pregnancy

METHADONE VERSUS BUPRENORPHINE

Buprenorphine (Mono-Product)	Methadone
▪ Same efficacy as methadone ▪ Same rates of adverse events as methadone ▪ Lower risk of overdose ▪ Fewer drug interactions ▪ Less frequent NAS and milder abstinence symptoms in neonates ▪ Significantly decreased morphine dose required ▪ Significantly shorter hospital stay ▪ Significantly shorter duration of treatment	▪ More structure – better for patients in unstable situations ▪ Decreased risk of diversion ▪ More long-term data on outcomes



BENEFITS OF MAT: DECREASED MORTALITY

Drugs in Pregnancy: *Review*

Opioid Detoxification During Pregnancy

A Systematic Review

Mishka Terplan, MD, MPH, Hollis J. Laird, MPH, Dennis J. Hand, PhD, Tricia E. Wright, MD, MS, Ashish Premkumar, MD, Caitlin E. Martin, MD, MPH, Marjorie C. Meyer, MD, Hendrée E. Jones, PhD, and Elizabeth E. Krans, MD, MSc

Taper does **NOT decrease NAS** and increase **relapse risk**

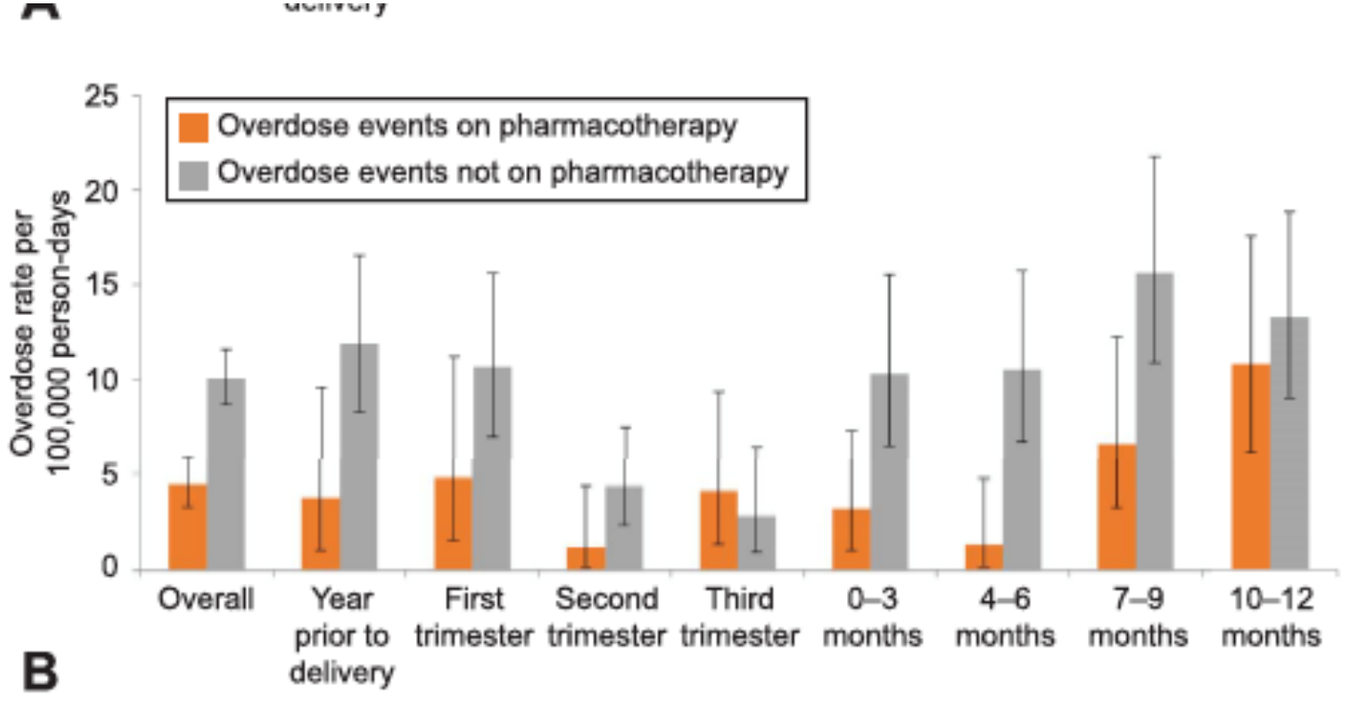


Fig. 2. Opioid overdose rates among pregnant and parenting women with evidence of opioid use disorder in year before delivery (n=4,154). All overdose events (**A**), stratified by receipt of pharmacotherapy during the month of the overdose event (**B**). *Error bars* represent 95% CIs. First trimester defined as 0–12 weeks of gestation, second trimester defined as 13–28 weeks of gestation, and third trimester defined as 29 weeks of gestation or greater.

Schiff. Prenatal and Postpartum Overdose. Obstet Gynecol 2018.

NAS/NOWS

- **Neonatal abstinence syndrome** – group of problems seen in neonates after prenatal drug exposure characterized by hyperactivity of central and autonomic nervous system
  - **Neonatal opioid withdrawal syndrome**

Drug	Onset, hours	Incidence	Duration, days
Heroin	24-48	40-80%	8-10
Methadone	48-72	13-94%	Up to 30 or more
Buprenorphine	36-60	22-67%	Up to 28 or more
Prescription opioids	36-72	5-20%	10-30

Adapted from Kocherlakota, P *Pediatrics* 2014; 134(2):e547-561.

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The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS
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CLINICAL OPIOID WITHDRAWAL SCALE

TABLE 7

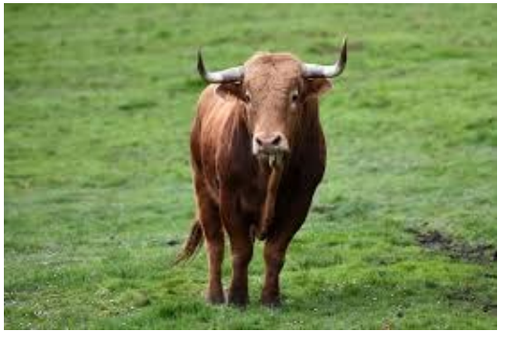
COWS

Symptoms	*Scores*	*Examples*
Resting pulse rate	0-4	0=80 or less; 1= 81-100; 2=101-120; 4=120 or greater
Sweating	0-4	0=none; 4=sweat streaming from face
Restlessness	0-5	0=sits still; 5=unable to sit still (even for a few seconds)
Pupil size	0-5	0=normal; 5=dilated (only iris rim visible)
Bone or joint aches	0-4	0=none; 4=severe discomfort
Runny nose or tearing	0-4	0=none; 4=constant
GI upset	0-5	0=none; 5=multiple episodes of vomiting or diarrhea
Tremor	0-4	0=none; 4=gross tremor
Yawning	0-4	0=none; 4=yawning several times/minute
Anxiety & Irritibility	0-4	0=none; 4=severe, precluding participation
Gooseflesh skin	0-5	0=smooth; 5=prominent piloerection

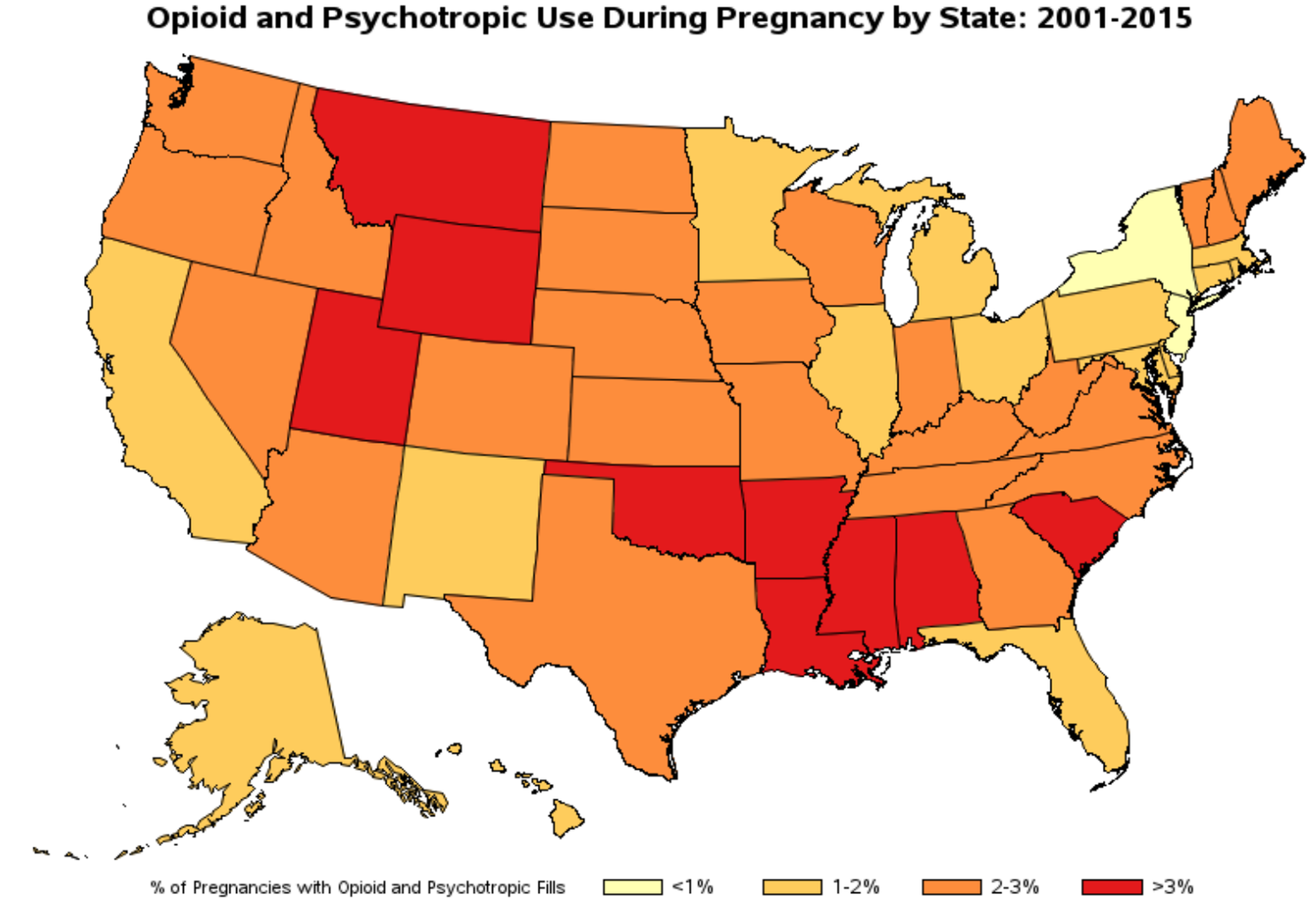
COWS=Clinical Opiate Withdrawal Scale; GI=gastrointestinal.

Score: 5-12 mild; 13-24=moderate; 25-36=severe.

Baron D, Garbely J, Boyd RL. *Primary Psychiatry.* Vol 16, No 9. 2009.



POLYPHARMACY



Program: /mnt/files/projects/marketscanccae/opioidPregnancy/programs/analysis/tables.sas
Run on the full dataset by vpate on 06JUL18

POLYPHARMACY AND NAS

Risk of neonatal drug withdrawal after intrauterine co-exposure to opioids and psychotropic medications: cohort study

Krista F Huybrechts,[1] Brian T Bateman,[1,2] Rishi J Desai,[1] Sonia Hernandez-Diaz,[3] Kathryn Rough,[1,3] Helen Mogun,[1] Leslie S Kerzner,[4] Jonathan M Davis,[5] Megan Stover,[6] Devan Bartels,[7] Jennifer Cottral,[7] Elisabetta Patorno[1]

Table 2 | Absolute risk of neonatal drug withdrawal (neonatal abstinence syndrome) after intrauterine exposure to both opioids and psychotropic medications versus opioids alone. Medicaid Analytic eXtract, 2000-10

	Opioids + psychotropic medications		Opioids alone	
	Cases/total	Risk (/100) (95% CI)	Cases/total	Risk (/100) (95% CI)
Antidepressants	495/14 183	3.49 (3.19 to 3.79)	1743/173 841	1.00 (0.96 to 1.05)
Antipsychotics	67/993	6.75 (5.19 to 8.31)	2481/199 151	1.25 (1.20 to 1.29)
Benzodiazepines	413/5361	7.70 (6.99 to 8.42)	1989/191 863	1.04 (0.99 to 1.08)
Gabapentin	57/501	11.38 (8.60 to 14.16)	2509/200 204	1.25 (1.20 to 1.30)
Z drugs	229/10 105	2.27 (1.98 to 2.56)	2286/188 216	1.21 (1.17 to 1.26)
1 psychotropic*	612/16 524	3.70 (3.42 to 4.00)	1423/168 086	0.85 (0.80 to 0.89)
≥2 psychotropics*	172/1737	9.90 (8.56 to 11.37)	1423/168 086	0.85 (0.80 to 0.89)

*Antidepressants, benzodiazepines, gabapentin.

KRATOM

Kratom is illegal in red states.
Kratom is legal in green states.

NALOXONE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A LIFE
UTAH

INTRAPARTUM MANAGEMENT

- **<u>Awareness is key</u>**
- Continue MAT
  - **MAT is NOT analgesia**
- **More analgesia** during labor than non opioid-dependent patients
  - Giving opioids does not "cause relapse."
  - Withholding is more likely to cause relapse.
- **Neuraxial anesthesia** is appropriate as needed
- **Avoid opioid antagonists**
  - butorphanol, nalbuphine, pentazocine which can precipitate withdrawal
- **Pediatric staff** should be available

ROOMING IN

JAMA Pediatrics | Original Investigation

Association of Rooming-in With Outcomes for Neonatal Abstinence Syndrome

A Systematic Review and Meta-analysis

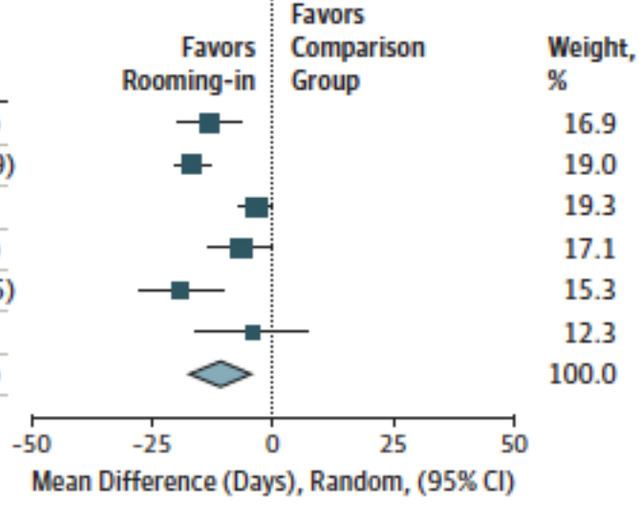
Kathryn Dee L. MacMillan, MD; Cassandra P. Rendon, BA, BS; Kanak Verma, MPH; Natalie Riblet, MD, MPH; David B. Washer, MBA, MPH; Alison Volpe Holmes, MD, MPH

Figure 3. Rooming-in vs Usual Care on Length of Stay

A Meta-analysis

Source	Rooming-in Mean	Rooming-in SD	Rooming-in Total	Comparison Group Mean	Comparison Group SD	Comparison Group Total	Mean Difference (Days), Random, (95% CI)	Weight, %
Abrahams et al,[7] 2007	11.8	9.1	32	24.7	22.2	74	-12.90 (-18.86 to -6.94)	16.9
Grossman et al,[19] 2017	5.9	1.9	44	22.4	10.8	55	-16.50 (-19.41 to -13.59)	19.0
Holmes et al,[18] 2016	6.7	4.2	48	10	7.5	54	-3.30 (-5.63 to -0.97)	19.3
Hünseler et al,[24] 2013	36.6	10.2	24	42.8	15.3	53	-6.20 (-12.00 to -0.40)	17.1
McKnight et al,[22] 2016	5	17.8	20	24	2.2	24	-19.00 (-26.85 to -11.15)	15.3
Saiki et al,[23] 2010	15.9	21.4	18	19.8	17.9	42	-3.90 (-15.17 to 7.37)	12.3
Total (95% CI)			186			302	-10.41 (-16.84 to -3.98)	100.0

Heterogeneity: $\tau^2 = 54.31$; $I^2 = 91\%$
Test for overall effect $z = 3.17$; $P = .002$



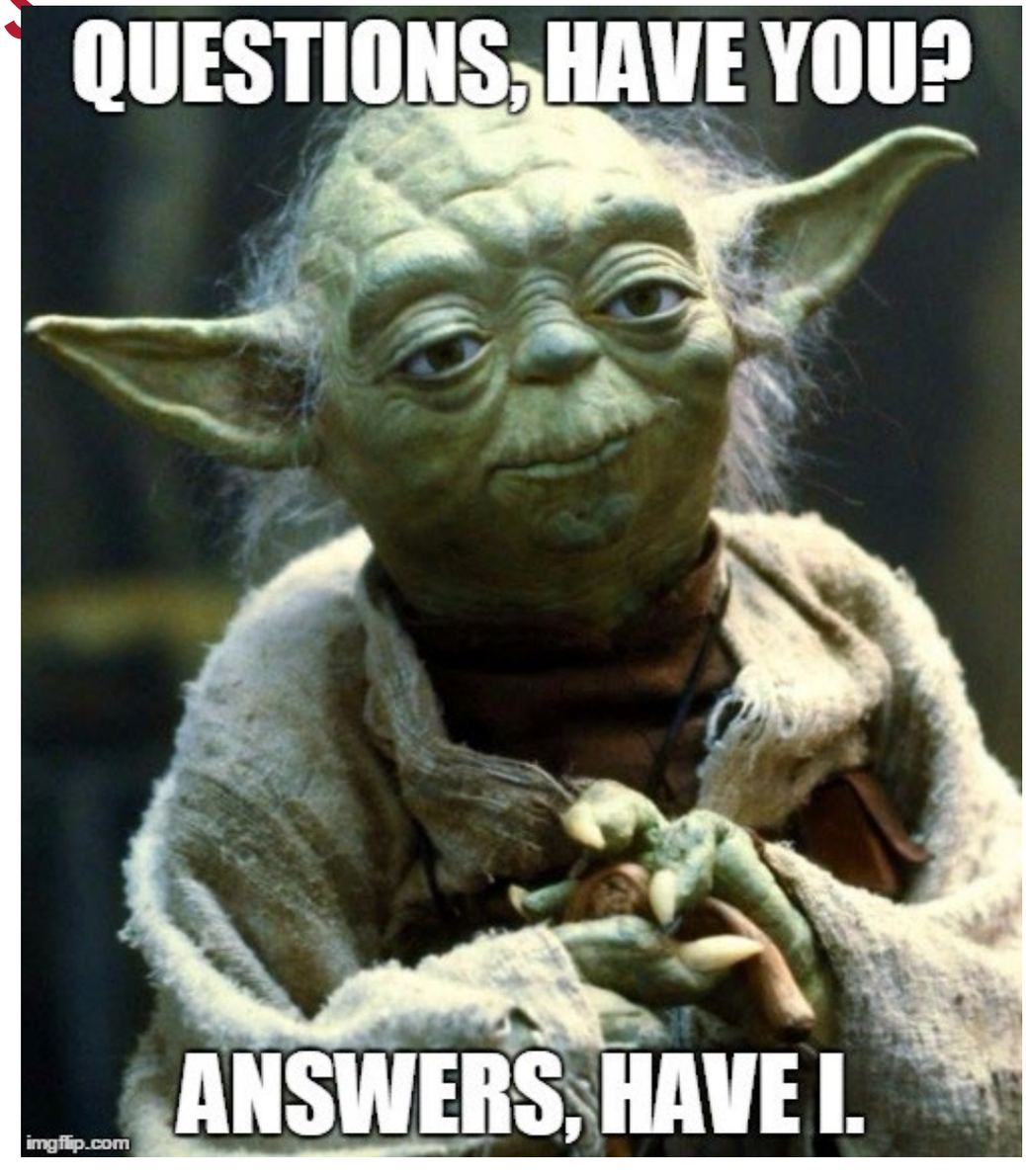
POSTPARTUM MANAGEMENT

- **Pain plan**
  - **Ideally discussed PRIOR to delivery**
  - Shared decision making model
  - Opioid free multimodal protocol
  - Close follow up PP (1-2 weeks max)
- **Breastfeeding**
  - ENCOURAGE
  - Contraindication - + HIV, ACTIVE USE or active TB
  - Hepatitis B and C NOT a contraindication
- **Contraception**
  - LARC preferred
  - **Reproductive justice framework**

SUMMING IT UP

- Addiction hijacks the brain. Pregnancy can hijack it back.
- Opioid use disorder is a **chronic treatable medical condition** and NOWS is a treatable limited condition.
- Postpartum period is the most critical time for maternal relapse.
- **Your words** are therapy. Remind women that they are a person first.

QUESTIONS



Well I might just have opinions…lots of opinions.