

# Introducing Foster Families to Substance Use Disorders in Pregnancy

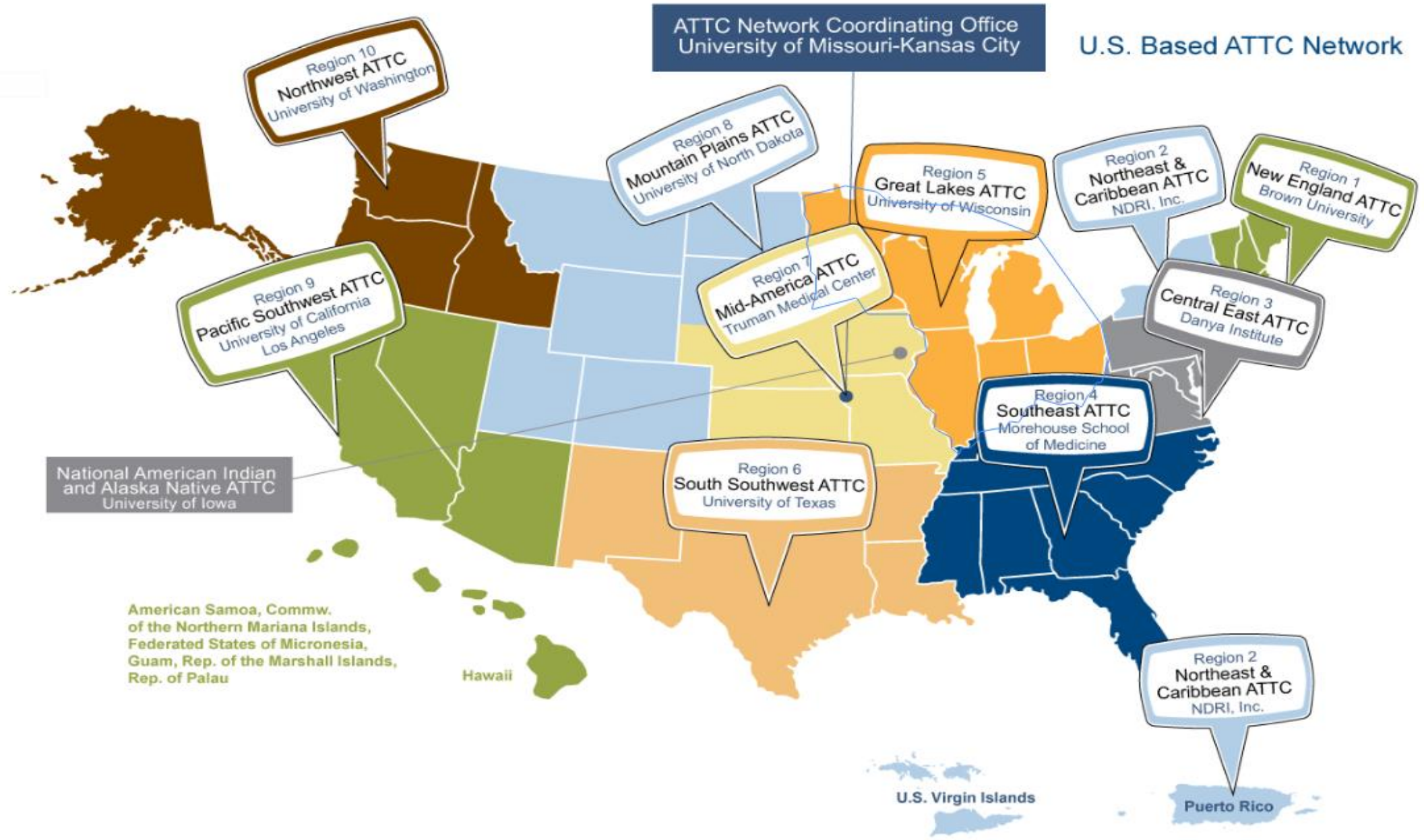
Maridee Shogren DNP, CNM

Region 8: Mountain Plains ATTC

# The Addiction Technology Transfer Center Network: Region 8: Mountain Plains ATTC

- ATTC serves the United States through 10 regional offices and the Ukraine, Southeast Asia, Africa and Vietnam
- Funded by U.S. Department of Health and Human Service (DHHS) Substance Abuse and Mental Health Service Administration (SAMHSA)
- Region 8:
  - Housed at UND-NPCBR-suite 220
  - Partners with University of Nevada-Reno's Center for the Application of Substance Abuse Technologies (CASAT)
  - Serves six states: CO, ND, MT, SD, WY, UT
    - Especially responsive to rural needs

# U.S. Based ATTC Network

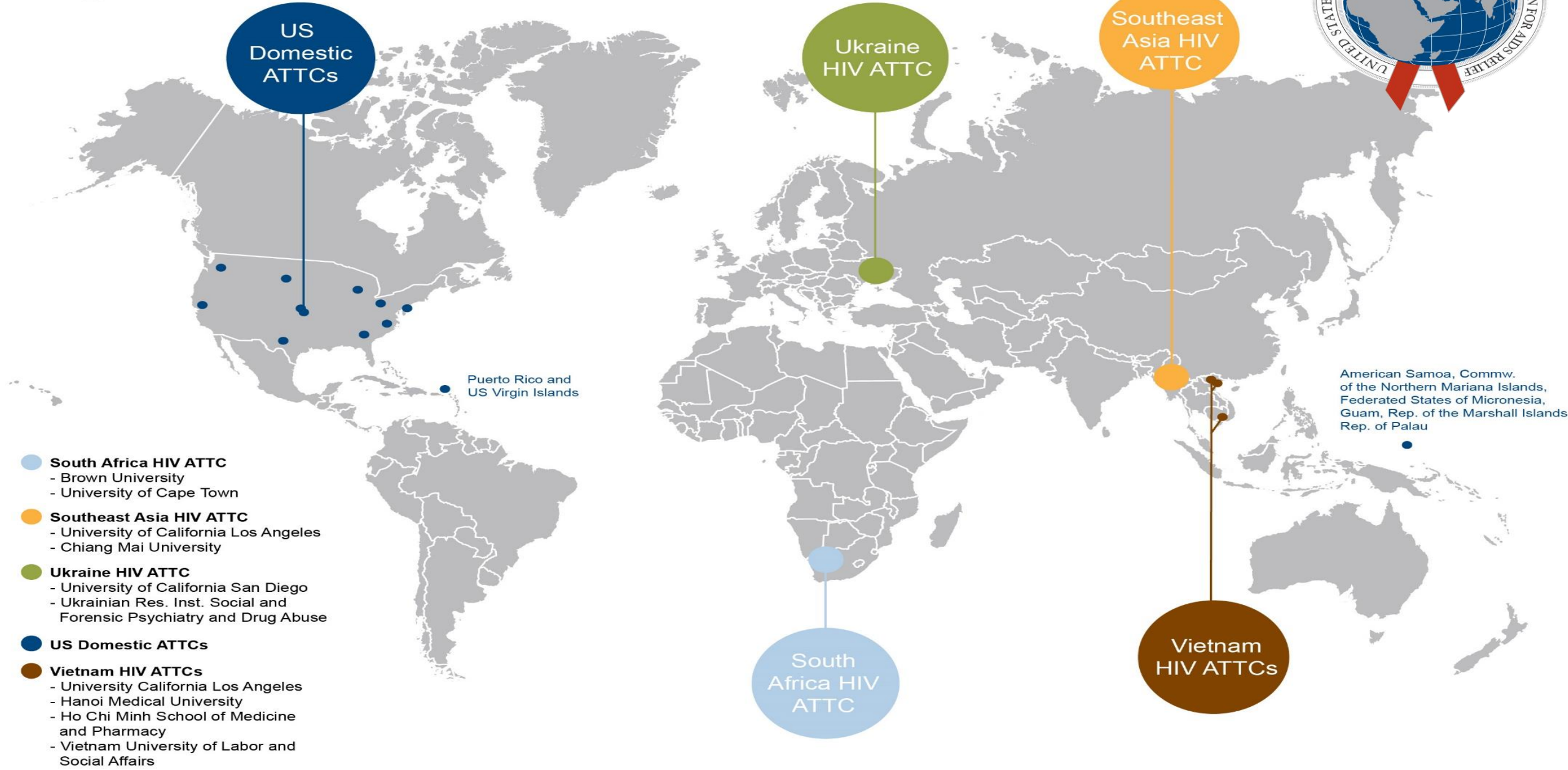




# ATTC

Addiction Technology Transfer Center Network  
Funded by Substance Abuse and Mental Health Services Administration

## International ATTC Network



US Domestic ATTCs

Ukraine HIV ATTC

Southeast Asia HIV ATTC

South Africa HIV ATTC

Vietnam HIV ATTCs

- South Africa HIV ATTC**
  - Brown University
  - University of Cape Town
- Southeast Asia HIV ATTC**
  - University of California Los Angeles
  - Chiang Mai University
- Ukraine HIV ATTC**
  - University of California San Diego
  - Ukrainian Res. Inst. Social and Forensic Psychiatry and Drug Abuse
- US Domestic ATTCs**
- Vietnam HIV ATTCs**
  - University California Los Angeles
  - Hanoi Medical University
  - Ho Chi Minh School of Medicine and Pharmacy
  - Vietnam University of Labor and Social Affairs

Puerto Rico and US Virgin Islands

American Samoa, Commw. of the Northern Mariana Islands, Federated States of Micronesia, Guam, Rep. of the Marshall Islands, Rep. of Palau

## Goals of the ATTC

- Utilizes an array of technology strategies to **accelerate diffusion** of innovations regarding substance abuse treatment and recovery.
- **Prepares** addiction treatment providers and pre-professionals to use evidence based practices in their current and future practice.
- Accelerate the **adoption and implementation** of promising addiction treatment and recovery-oriented practices and services—offers training and technical assistance for providers using technology.
- **Heighten the awareness, knowledge, and skills** of the workforce to address the needs of people with substance use or other behavioral health disorders.
- **Fosters regional and national alliances** among culturally diverse practitioners, researchers, policy makers, funders, and the recovery community.
- **Improve treatment and recovery services in the region** for people with addictive behaviors.
- **Advances culturally and linguistically competent services.**

# Objectives

- At the end of the presentation
  - Participants will identify at least three potential consequences of maternal substance use disorder.
  - Participants will identify at least three common symptoms of Neonatal Abstinence Syndrome
  - Participants will recognize the need for a multidisciplinary approach to caring for substance exposed mothers and infants.

# General Facts

- In 2017:

**Among those with a substance use disorder:**

**3 IN 8 (36.4%)** struggled with illicit drugs

**3 IN 4 (75.2%)** struggled with alcohol use

**1 IN 9 (11.5%)** struggled with illicit drugs and alcohol

7.6% (18.7 million) people 18y+ had a Substance Use Disorder (SUD)

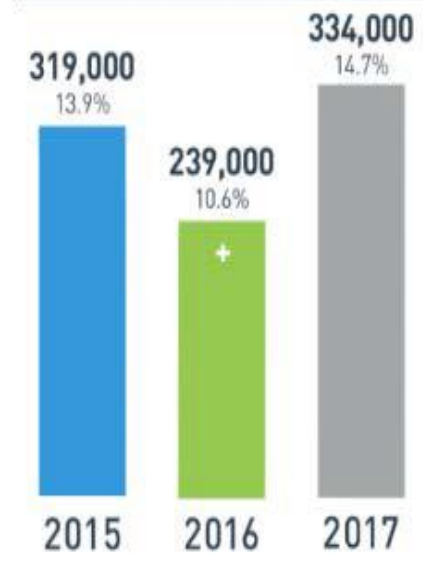
Some of the most significant increases in SUD were in women and in particular, pregnant women

# SAMHSA, 2017 NSDUH Report: Substance Use in Past Month Among Pregnant Women

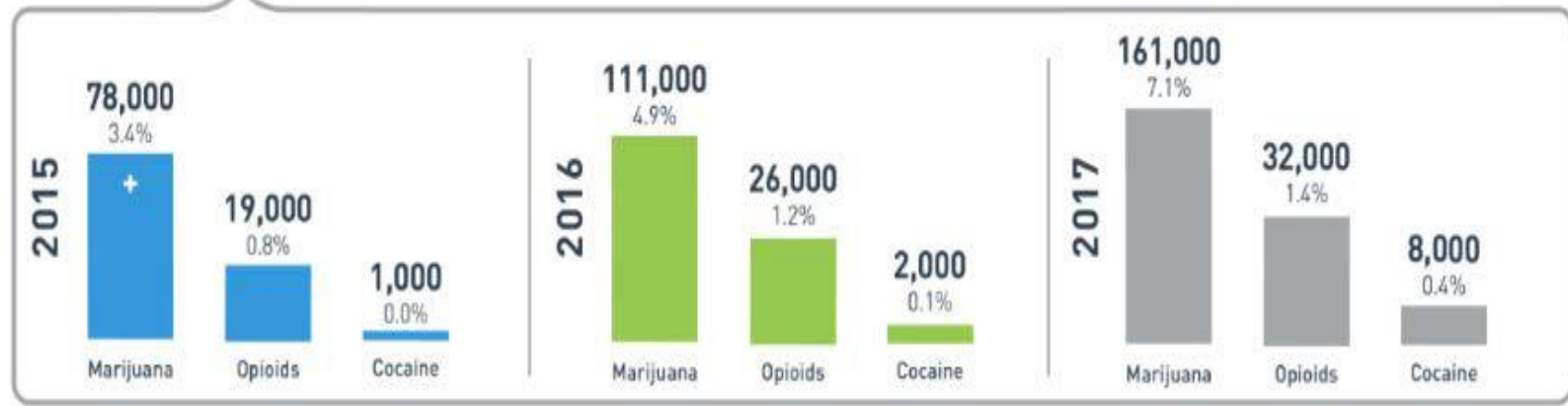
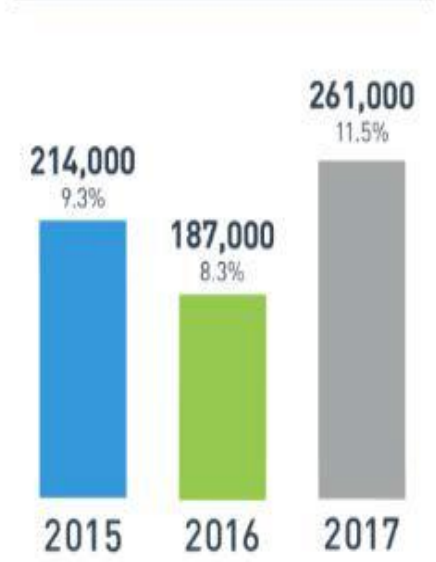
## ILLCIT DRUGS



## TOBACCO PRODUCTS



## ALCOHOL

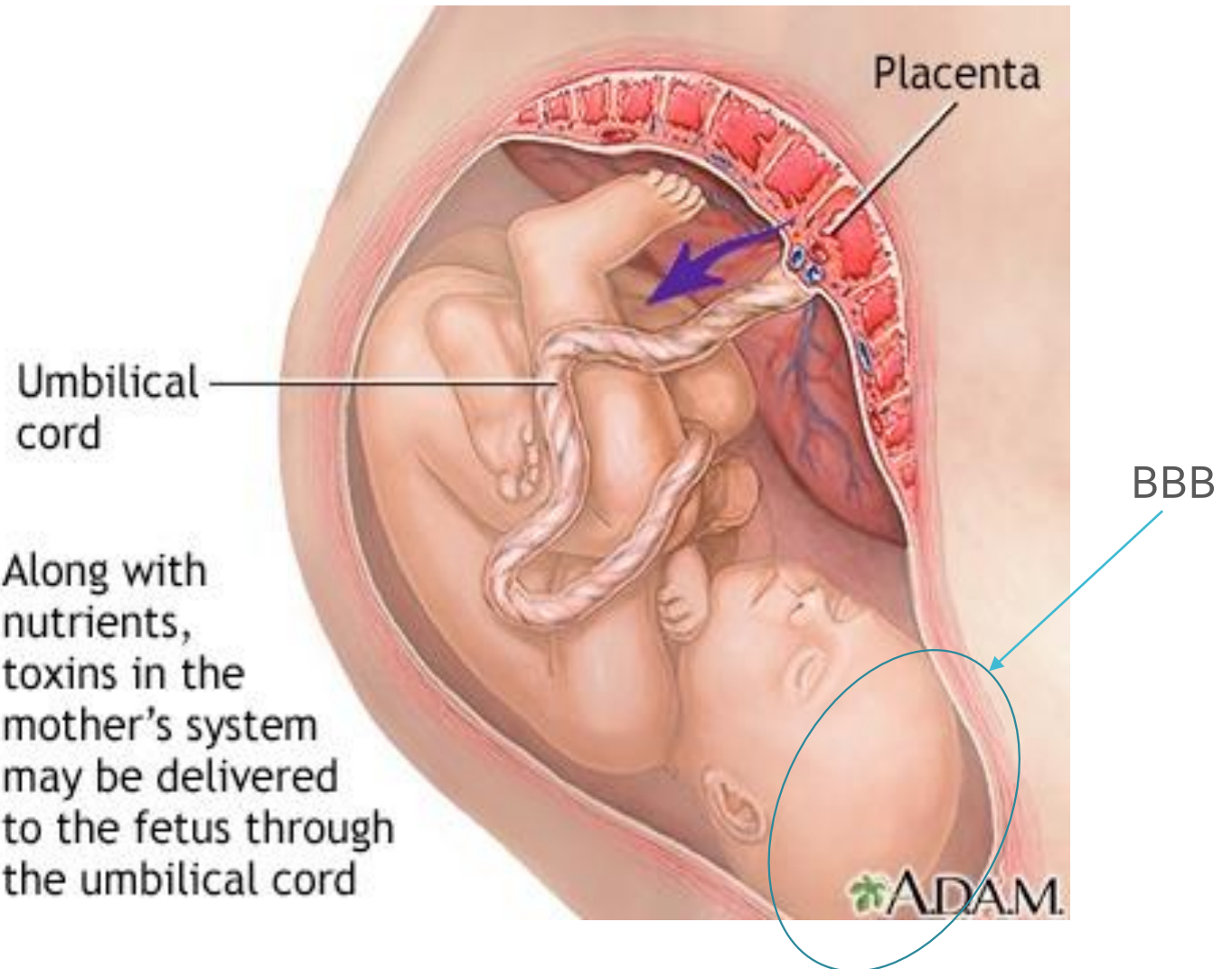


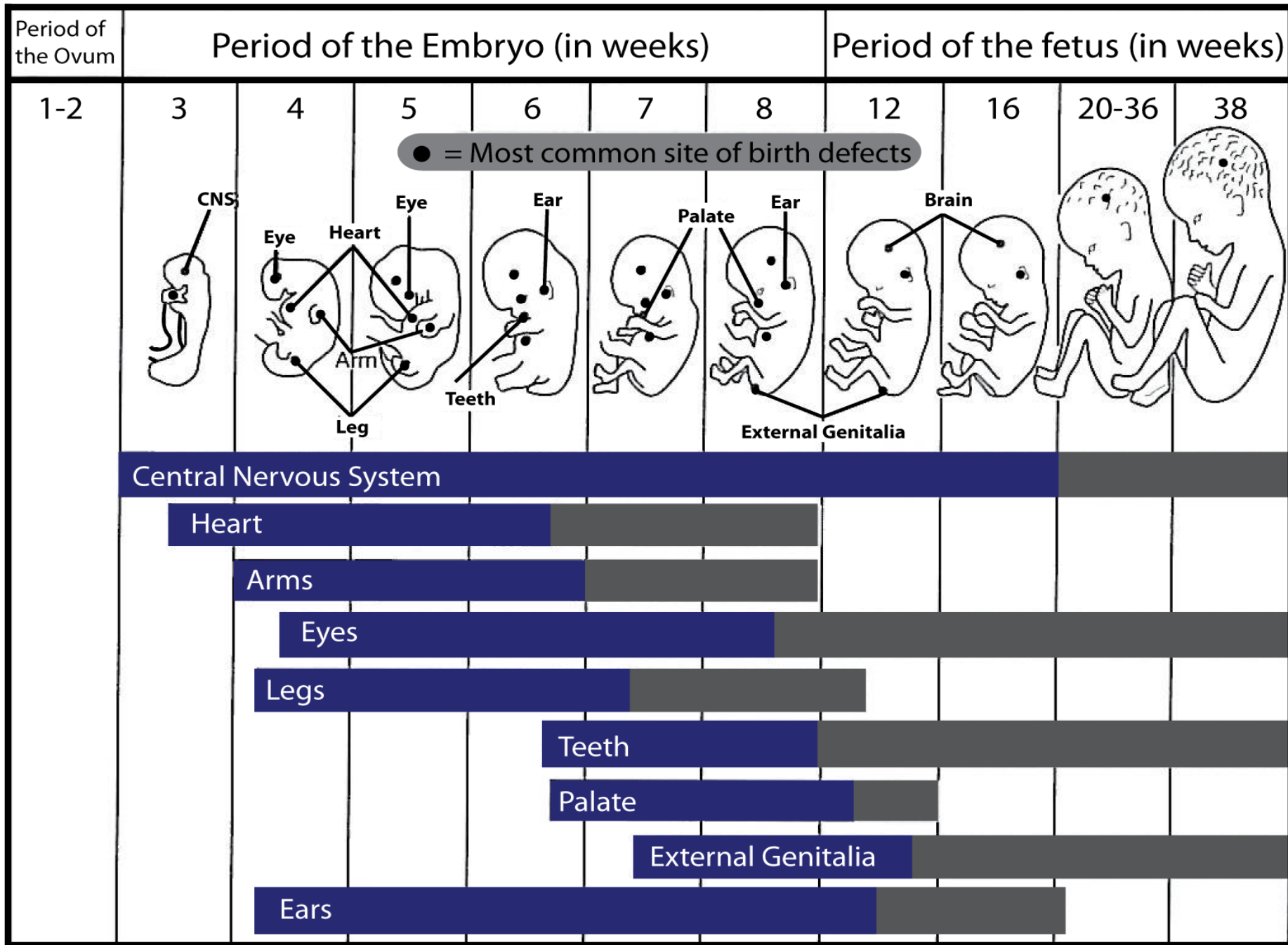


# Consequences of Substance Use in Pregnancy

- Substance use in pregnancy connected to many complications/negative health outcomes for BOTH mom and baby
  - Indirectly linked to
    - Lack of nutrition (mom and fetus/infant)
    - Domestic violence (mom and fetus/infant)
    - Increased risk of mental illness/infection
- Any substance has potential to cross over to the fetus
  - may impact growth
  - cause alterations in brain organization
  - trigger placental insufficiency

# Maternal / Fetal transfer of Licit and Illicit Drugs





National Organization on Fetal Alcohol Syndrome (NOFAS). (2004; adapted from Moore, 1993).

# Things to Think About

- Prescription drug misuse does not by itself indicate child abuse or neglect nor prove inadequate parenting.
- Reporting requirements actively put women and their pregnancies at risk by deterring women from seeking prenatal care.
- Women may not trust their health care providers to protect them from legal penalties or loss of custody of their children, and therefore are likely to avoid, delay, or emotionally disengage from needed prenatal care and drug treatment.
  - Leads to missed screening opportunities, education, intervention and referral to treatment

# Alcohol

- Alcohol readily passes into fetal blood
  - Once in fetal blood, alcohol reaches concentrations similar to mom
  - Fetus has limited ability to metabolize alcohol, mostly because liver is immature and lacks enzymes to do so, alcohol passed back to mom for metabolism
    - **This takes time! Alcohol levels may remain higher in embryo for longer periods of time which increases risk of harm**

# Neuro- morphological Birth Defects

- No area of the fetal brain is resistant to the effects of alcohol exposure
  - Alcohol can lead to deficits in attention, intellectual function, reading, learning, verbal memory, and executive and psychosocial functioning
  - Preterm delivery
  - Craniofacial abnormalities
  - Impaired motor development
  - Growth deficiencies

# Cigarette Smoking: Tobacco / Nicotine



# Cigarette Smoking: Tobacco / Nicotine

- Fetus is exposed to over 4000 compounds through cigarette smoking
  - ~ 30 compounds linked to adverse outcomes
  - Nicotine
    - Believed to decrease the amount of oxygen that is available to the fetus (hypoxia)
      - Low Birth Weight
      - Growth deficiencies
      - Prematurity
    - Increased risk of SIDS
    - Potential for placenta to detach from the uterus prior to birth
    - Possible association with oral facial clefts
    - 1.8-2.8x greater risk of stillbirth
      - Even passive exposure linked to a 2.1x greater risk of stillbirth



FYI

- Interesting fact: When women used **BOTH** Alcohol and Nicotine in the pregnancy:
  - 20.4% also used Marijuana
  - 9.5% also used Cocaine
- Women who did **NOT** use Alcohol or Nicotine
  - 0.2% used Marijuana
  - 0.1% used Cocaine
- Alcohol and Nicotine **CO-USE** is a marker for other drug use

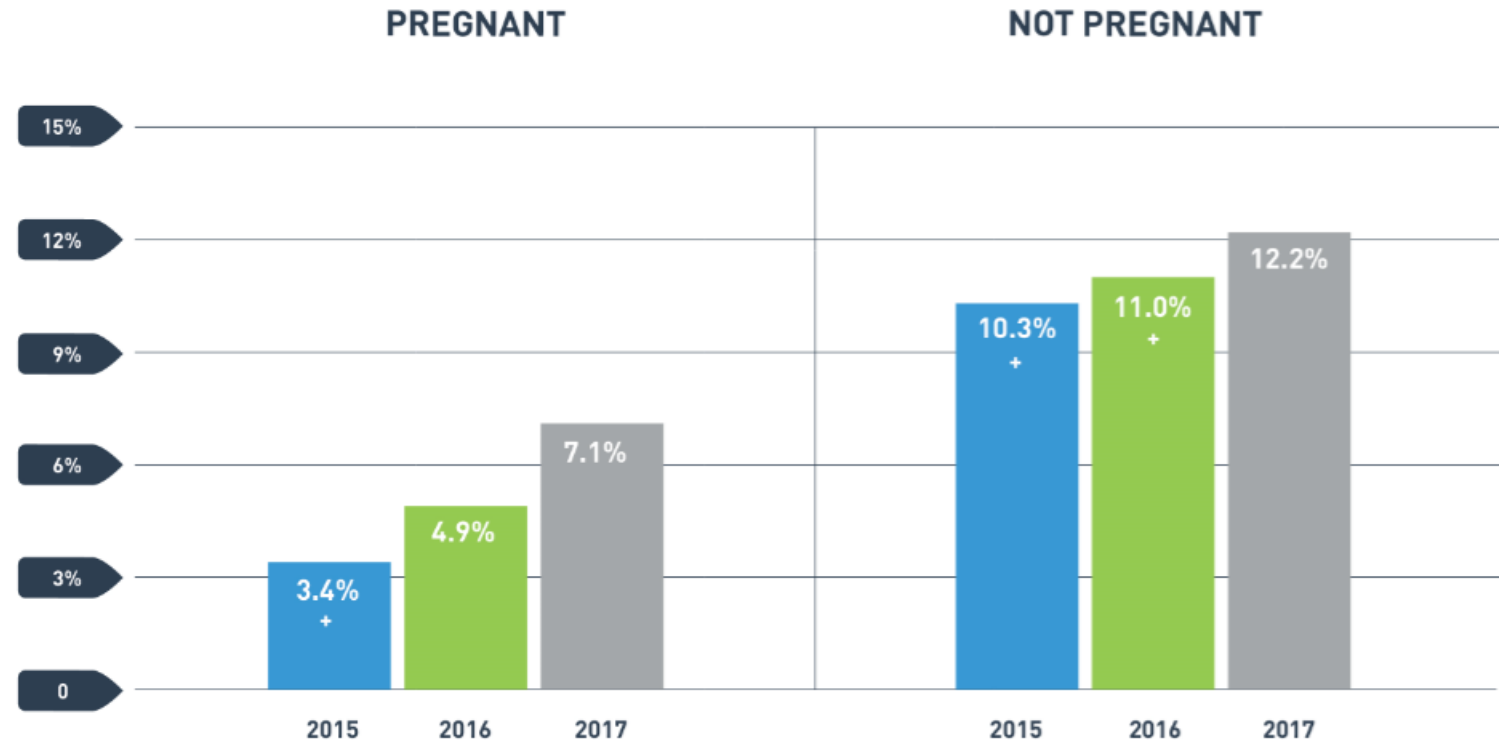
# Cannabis



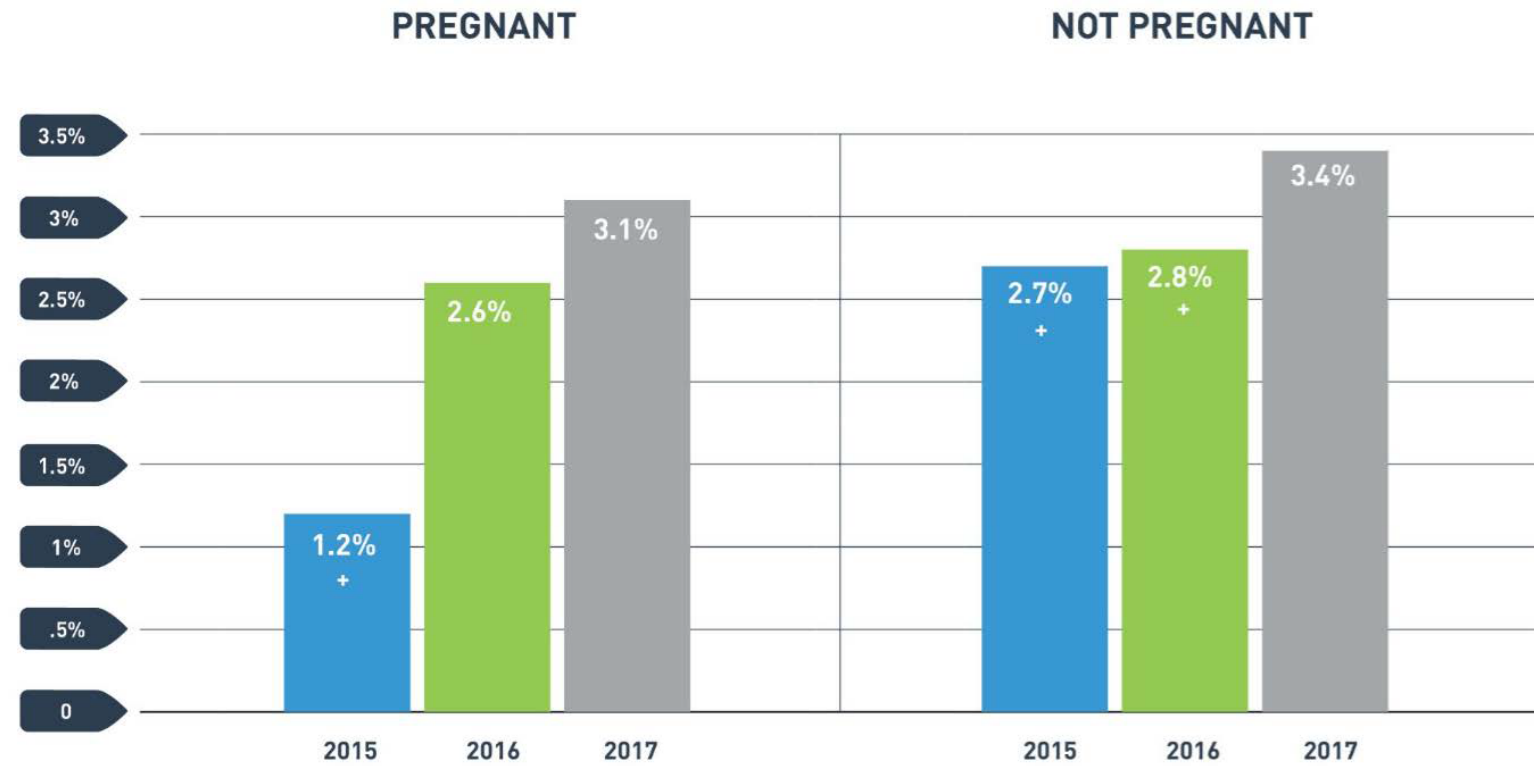
A total of 34 states, District of Columbia, Guam, Puerto Rico and US Virgin Islands have approved a comprehensive, publicly available medical marijuana/cannabis programs.

<http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>

# Marijuana Use Among Women by Pregnancy Status, (NSDUH, 2017)



Daily or  
Almost Daily  
Marijuana Use  
among  
Women by  
Pregnancy  
Status  
(NSDUH, 2017)



# Cannabis

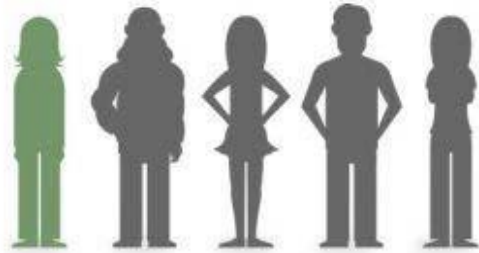
- THC is main chemical compound in marijuana
  - May alter fetal oxygenation
    - Produces 5x amount of carbon monoxide (when smoked)
    - Chronic exposure vs episodic exposure may be different as well as potency of the product
      - Concentrations of THC have risen over past several years

# Cannabis

- Expectant mothers might use for
  - Nausea and vomiting of pregnancy
  - Weight gain (increase appetite)
  - Depression/Stress/Anxiety
  - General discomforts of pregnancy
  - Fun
  - Insomnia
- Marijuana use in pregnancy associated with
  - Increased risk of dysfunctional labor
  - Labor that progresses very rapidly
  - Meconium stained amniotic fluid (fetus poops in amniotic fluid before being born)

# Cannabis

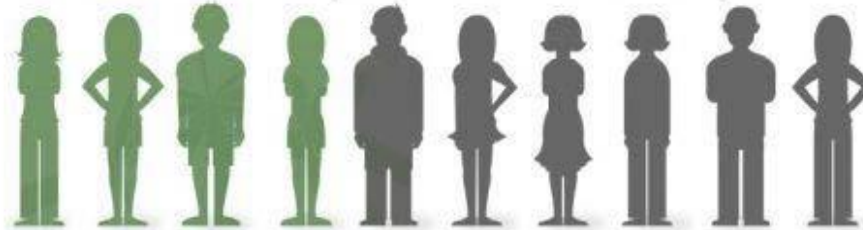
## Pregnancy and pot use



**21%** of Americans think it's OK for a pregnant woman to use pot for nausea or pain

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Among Americans who use marijuana regularly, **40%** think it's OK for a pregnant woman to use pot for nausea or pain



Graphic: Yahoo News/Getty Images

Source: Yahoo News/Marist Poll April 2017

Cocaine





# Cocaine

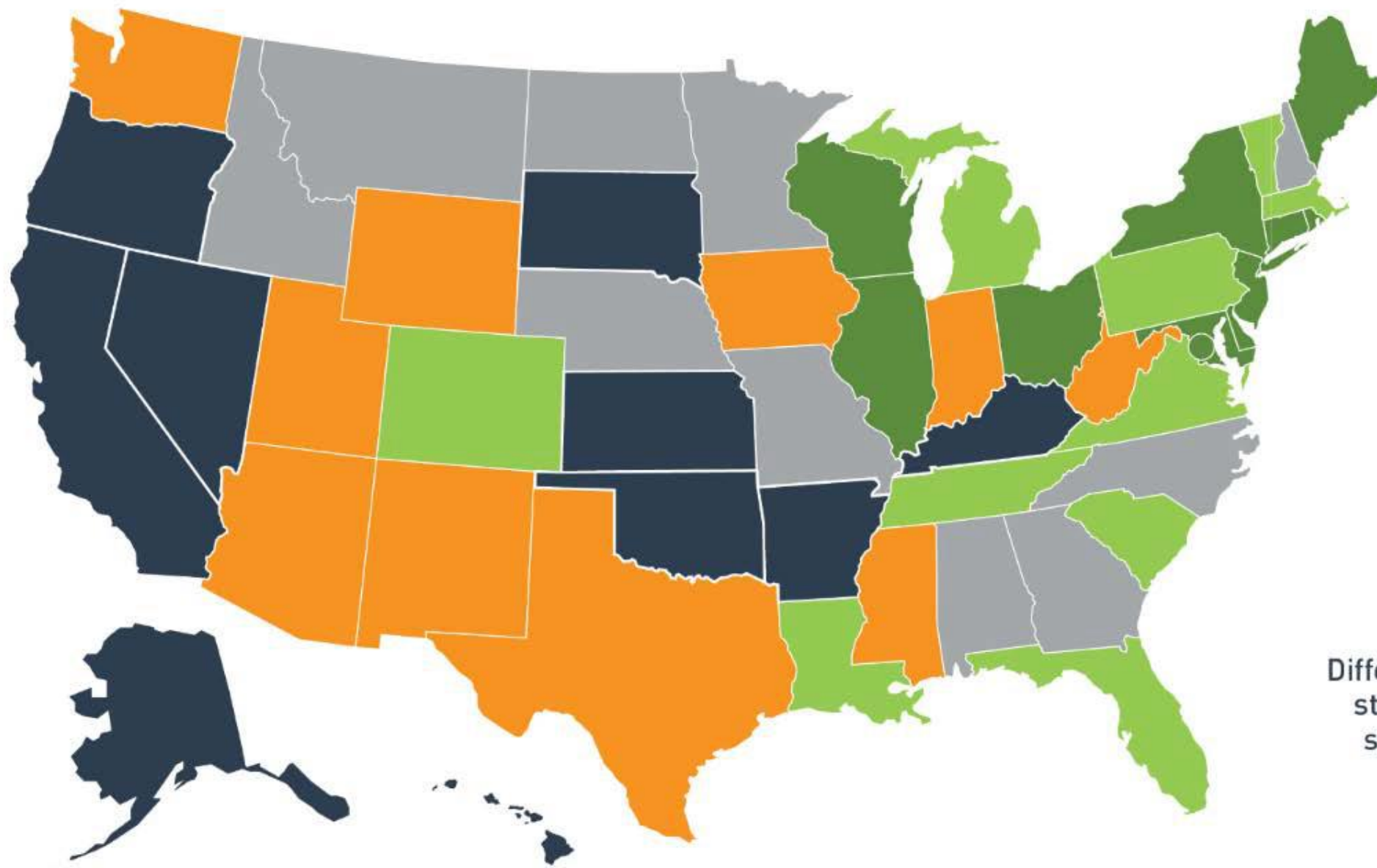
- Cocaine:
  - Causes constriction of vessels and decreases blood flow to the fetus
  - Affects areas of brain that regulate attention and executive functioning:
    - Arousal
    - Memory
    - Impulsivity
  - Preterm delivery
  - Growth deficiencies
  - Cause placenta to detach from uterus before birth
  - No PHYSICAL abnormalities to date

# Methamphetamine mines (MA)



# Methamphetamine (MA)

- The only illegal drug that can be easily made from legally obtained ingredients
  - Smoked, snorted, injected, oral or anal use
    - Smoking/injecting=few minute rush
    - Snorting (in 3-5 mins) or oral (15-20 mins)=euphoria
    - All methods lead to increased wakefulness and energy, decreased appetite
- MA seems to have been overshadowed by Opioid Epidemic, but...



Percentages of  
People Aged  
12 or Older

- 1.06–1.41
- 0.67–1.05
- 0.51–0.66
- 0.26–0.50
- 0.03–0.25

Differences in colors across  
states does not indicate  
significant differences  
in estimates.

# Methamphetamine (MA)

- Potential maternal complications:
  - Heart arrhythmias
  - High blood pressure
  - Seizures
  - Hyperthermia
  - Increased sexual activity

# Methamphetamine

## mines

- Chronic use can lead to:
  - Anxiety
  - Insomnia
    - Women more likely to experience hypersomnia related to withdrawal
  - Confusion / Memory loss
  - Weight loss
  - Dental problems “Meth mouth”
    - Higher rate of problems in women
  - Depression
  - Violent behavior
  - Hepatitis
  - Sexually transmitted infection risk is higher in women using amphetamine type stimulants
    - Hypersexuality physiological effect occurs
  - Psychotic symptoms may persist months or years after stopping and may recur
    - Paranoia, hallucinations, delusions

# Methamphetamine use in Pregnancy

- May increase fetal blood pressure and decrease oxygenation
- In addition to typical poor maternal nutrition, increased blood pressure can lead to restriction of nutrients/oxygen to fetus
  - Growth deficiencies
  - Low Birth Weight
  - Preterm labor and delivery
  - Placenta detaches from uterus before birth
  - Fetal death
- Stopping MA at any time during pregnancy improves birth outcomes

# Newborn and Childhood Effects

- MA exposed newborns typically do not exhibit withdrawal symptoms that require pharmacological intervention
  - Do note a disorganized state, poor movement, stress
    - Typically resolved in 1 month of birth
- Abnormal behavioral and changes in cognitive function in children up to 7.5 years of age have been observed
  - Increased anxiety, emotional problems, aggressive behaviors, inhibitory control / ADHD symptoms
- A healthy postnatal environment is felt to be a critical factor for decreasing these methamphetamine-induced changes in function



# Opioids



Image Retrieved from <http://www.healthline.com/health-news/opioids-problems-for-chronic-pain-patients>

# Opioid Use Disorder

- Basic definition: Pattern of opioid use characterized by tolerance, craving, inability to control use and continued use despite adverse consequences
- Opioids include:
  - Morphine
  - Hydrocodone
  - Oxycodone
  - Heroin
  - Fentanyl
  - Codeine

# Maternal Effects

- Opioids diminish intensity of pain
- Cause a sense of euphoria
- Can cause respiratory depression, overdose, death, infection at injection site, Hepatitis B/C, HIV and dependence
- When abused in pregnancy:
  - 6x more risk for OB complications
    - 3<sup>rd</sup> trimester bleeding, placenta detaching before birth, preterm labor, passage of meconium
    - Often see a lack of prenatal care
  - Co-Occurring conditions:
    - Depression (30%)/Post Partum Depression(40%)
    - History of trauma
    - Stress disorder/anxiety
    - Other substance use/abuse
    - Increased risk for hepatitis and HIV

# Fetal Effects

- Opioids
  - Decrease brain growth
  - Linked to cognitive impairment and academic underachievement (verbal, arithmetic, reading abilities)
  - May be connected to overall growth defects
    - Low Birth weight
  - Fetal distress
  - No clear physical anomalies
  - Complications are primarily related to withdrawal
    - **\*Neonatal Abstinence Syndrome**

## Potential Effects of Substance Use Disorder in Pregnancy

Drug	Concerning Causative Impact	Physical Impact	Neurological Impact	Other Impact	Effects Noted at Birth
<b>Alcohol</b>	Alters growth and development, Changes brain structure so left and right don't connect properly	Fetal Alcohol Syndrome: Facial abnormalities like the vertical groove between the nose and lip is smooth, thin upper lip, small palpebral fissure (opening between eyelids)	Attention problems, cognitive delays, reading, learning deficits, poor memory and executive functioning	Preterm labor, Low birth weight, increased risk for miscarriage, stillbirth	Sleep problems, poor sucking patterns, irritability, tremors, may be more difficult to console
<b>Cigarettes</b>	Blood vessels constrict, reduces blood and oxygen flow to baby	Possible link to oral / facial clefts, increased risk childhood respiratory illnesses	Possible impulsivity, attention problems	Preterm labor, low birth weight, smaller size, increased risk for stillbirth, SIDS	Poorer self-regulation, may be more difficult to console
<b>Cannabis</b>	Exposure to carbon monoxide, reduces blood and oxygen flow to baby	Unknown at this time, but do see low birth weight, 2-3x increased risk of stillbirth	Possible impulsivity, attention problems, cognition delays	Preterm or very rapid labor, passes meconium in amniotic fluid	Increased startles, tremors, poor feeding, poor muscle tone, sleep problems
<b>Cocaine</b>	Reduces blood and oxygen flow to baby	Unknown at this time, may change brain structure	Subtle attention deficits, memory problems, impulsivity, learning problems	Preterm labor, small size, placenta detaches before birth, miscarriage	Tremors, high-pitched cry, irritability, excessive sucking
<b>Meth-amphetamines</b>	Reduces blood and oxygen flow to baby	Unknown at this time, possible decreased head circumference and length, heart and brain abnormalities	Increased anxiety, emotional problems, aggressive behaviors, inhibitory control, ADHD-like symptoms up to 7.5 years of age	Preterm labor, low birth weight and small size, placenta detaches before birth, fetal death	Disorganized state, <b>NAS</b> may present/less often needs pharmacologic intervention
<b>Opioids</b>	Reduces blood and oxygen flow to baby	Unknown at this time, possible overall growth deficits, hearing loss	Cognitive impairment, academic under-achievement in verbal, arithmetic, reading ability	Preterm labor, placenta detaches before birth, low birth weight, meconium in amniotic fluid, LBW	<b>NAS</b> often needing pharmacologic management

**NAS:** Neonatal Abstinence Syndrome. The broad, specific term given to the withdrawal presentation in a newborn that can occur after exposure to opioids and other drugs during pregnancy

# Treatment During Pregnancy

- Several Barriers to Accessing Treatment in Pregnancy:
  - Stigma
  - Lack of access to gender-specific care
  - Limited child-care availability at treatment facilities
  - Few providers with OB **AND** addiction treatment expertise
  - Fear of criminal or child welfare consequences

# Medication Assisted Treatment (MAT) During Pregnancy

- MAT linked to prevention of opioid withdrawal symptoms, may reduce relapse risk, improve adherence to prenatal care and reduce risk of OB complications
  - MAT is the medical standard of care for OUD: **This should NOT be altered by pregnancy!**
- Goals:
  - Manage / prevent withdrawal
  - Reduce cravings
  - Provide opioid blockade (prevent euphoria from illicit use)
  - Increase adherence to prenatal care
  - Improve maternal nutrition
  - Improve infant birth weight
  - **CONTINUE** treatment and addiction support PP

# Medication Assisted Treatment During Pregnancy

- **Methadone**
  - Dispensed in single, daily doses (may be an access barrier) through registered opioid treatment programs
- **Buprenorphine (Subutex)**
  - Approved for treatment in an office-based setting
  - Linked to fewer drug interactions than methadone
  - POSSIBLY less severe NAS, shorter hospital stay
    - 89% less morphine needed to treat NAS
    - 43% shorter hospital stay
    - 58% shorter duration of NAS treatment (2010 RTC) (Saia et al, 2016)
- **Buprenorphine and Naloxone (Suboxone)**
  - Approved for treatment in an office-based setting



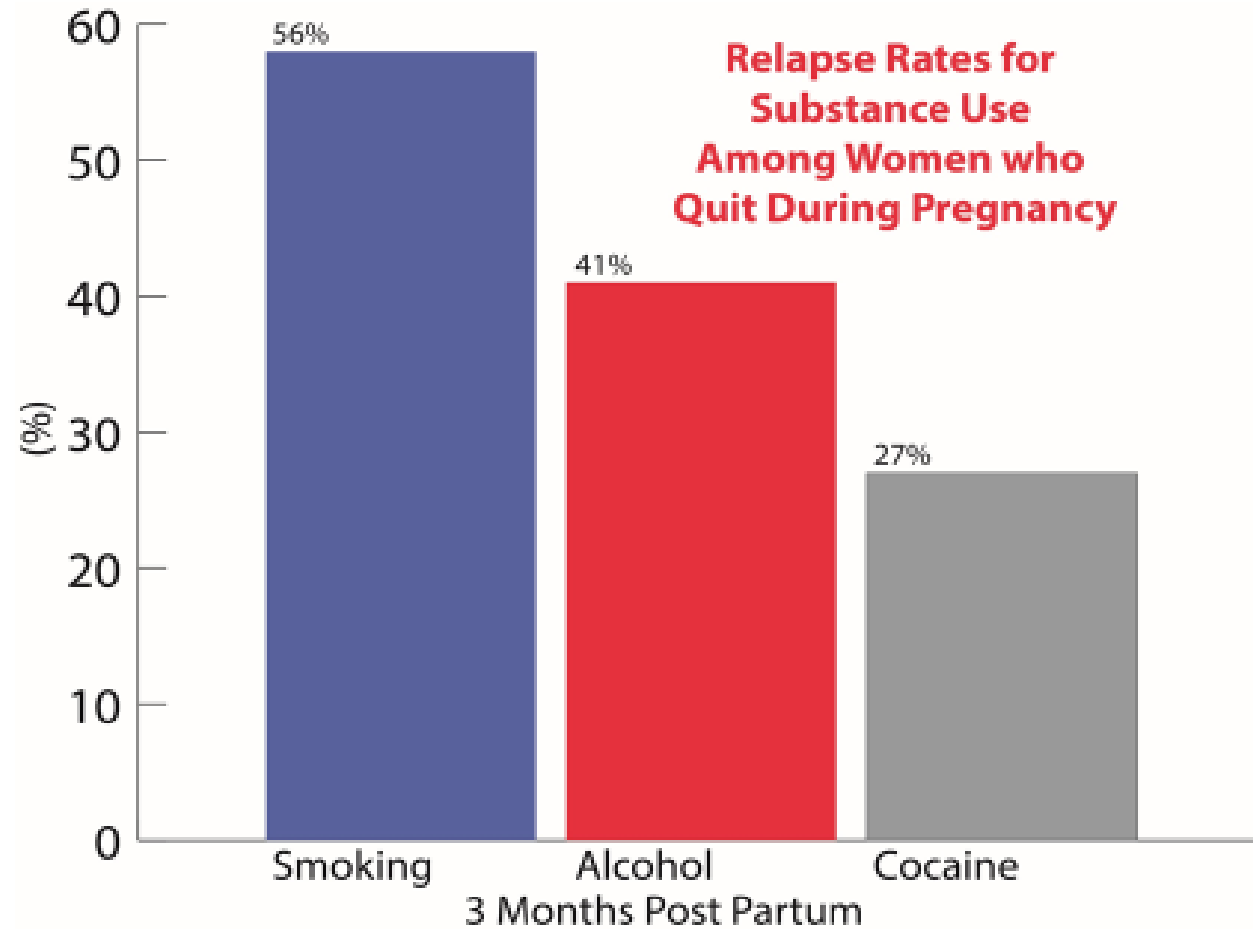
# Substance Exposed Mothers in PP Recovery: MAT

- Every effort should be made to avoid discontinuation of MAT immediately PP at the request of the patient's family, social services provider, parole or probation officer, or judge
  - MAT should be discontinued ONLY when in the best interest of mother and infant (SAMHSA, 2018)
    - Important to consider waiting until infant sleeps through night and breastfeeding is completed and the dyad has multiple indicators of life stability
  - If and when mother chooses to discontinue MAT, taper is a must
    - Safety plan in place for relapse

# Relapse

- The longer a PP mother continues on OUD pharmacotherapy, the lower her risk of return to substance use when she eventually chooses to taper (SAMHSA, 2018)
- If she abstained from smoking, alcohol use and other substances during pregnancy, she is also at risk for relapse

# Postpartum Relapse



Data for the United States based on the B-DAG online analysis system of the National Surveys on Drug Use and Health, 2002-2011.

# Substance Exposed Mothers in PP Recovery: Breastfeeding

- All substances have potential to pass into breastmilk
  - Breastfeeding is **NOT** contraindicated with moderate alcohol use or with smoking
  - Breastfeeding while using cannabis, cocaine, methamphetamines, opioids **IS** contraindicated
- **HOWEVER...** Breastfeeding on MAT can be encouraged **IF**
  - Mom is stable on MAT
    - **Methadone / buprenorphine found in low concentrations in breastmilk**
  - Is not using illicit drugs (also need to discuss current alcohol use)
  - Has no other contraindications
  - Is **NOT** HIV+

# Substance Exposed Mothers in PP Recovery: Breastfeeding

- Breastfeeding on MAT may
  - Decrease severity of NAS
  - Lessen need for pharmacotherapy for infant
    - Shorten hospital stay for infant
  - Contribute to maternal/infant attachment
    - **Enhances maternal confidence and encourages active maternal participation in the management of the infant**
  - Facilitate **skin-to-skin contact**
  - **Reinforce sobriety**
- Breastfeeding **DOES** provide immunity to infant (Forray, 2016)
- One last word about skin to skin....not just for breastfeeding moms
  - **Skin to skin contact with any feeding and snuggling WILL promote bonding AND is great for newborn development!**

# Emotional Needs

- “A woman’s ability to complete the important tasks of bonding and caring for her new infant-or in the case of a stillbirth or other loss, the task of grieving-are affected to a significant degree by her physical well-being.” (Varney, 2015)
- Physical well-being can influence her risk of
  - PPD
  - PTSD
  - Other perinatal mood disorders
- In addition to physical recovery, women must redefine
  - Sense of self and self-care
    - Body image
    - Intimate relationships
    - Infant bonding
  - Family

# Baby Blues vs. Postpartum Depression

- **Baby Blues**

- Most common mood change
- Occurs in between 50-75% of new mothers
- Crying, anxiety, emotional lability, irritability and fatigue peak within 2-5 days of onset
  - Typically doesn't interfere with functioning
- Typically resolves spontaneously in 10-14 days
- Counsel to seek further evaluation if not resolved by 2 weeks PP

- **Postpartum Depression**

- Major depressive disorder
- Affects ALL cultures, ages, incomes, races, ethnicities
- 1 in 7 women will develop
- Peak onset is in 2<sup>nd</sup> month PP
  - Risk remains for up to 1 yr following birth
- Risk Factors
  - Previous personal/family history
  - Stressful life events during pregnancy
  - Low support
  - LES
  - Unplanned pregnancy
  - Thyroid dysfunction

# PPD vs SUD ...or is she just TIRED?

## Symptoms of PPD

- Depressed mood or severe mood swings.
- Excessive crying.
- Difficulty bonding with your baby.
- Withdrawing from family and friends.
- Loss of appetite or eating much more than usual.
- Insomnia or sleeping too much.
- Overwhelming fatigue or loss of energy
- Slowed thinking
- Neglected appearance
- Physical aches/pains

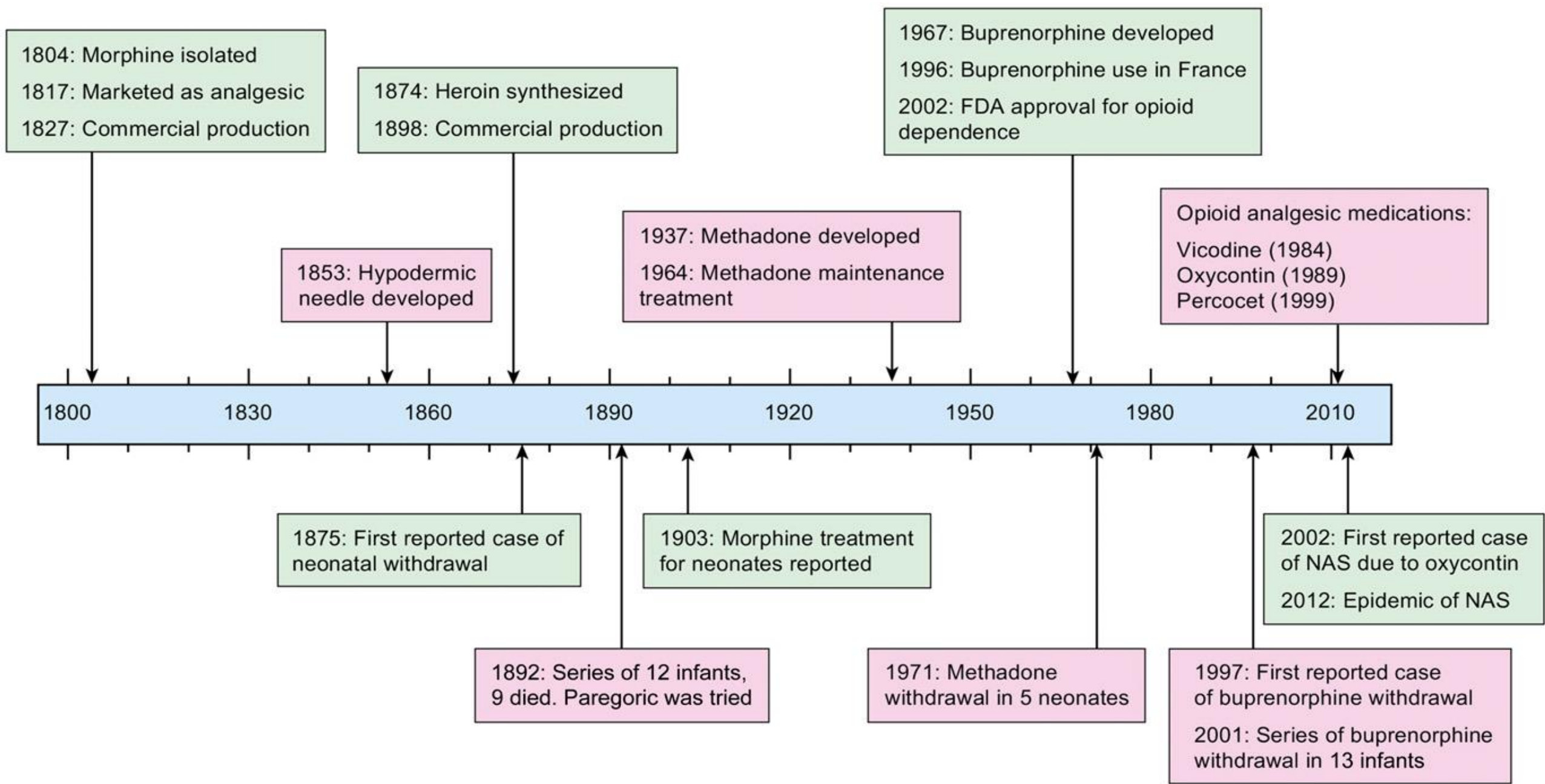
## Symptoms of Substance Use

- Problems at school or work — frequently missing school or work, a sudden disinterest
- Physical health issues — lack of energy and motivation
- Neglected appearance — lack of interest in clothing, grooming or looks
- Changes in behavior
- Red eyes
- Increased appetite or weight loss
- Decreased mental sharpness/drowsiness
- Insomnia



# Neonatal Abstinence Syndrome

- **Neonatal Abstinence Syndrome (NAS)** (Klaman et al, 2017)
  - Broad non-specific term assigned to withdrawal presentation in NB
    - One NAS affected infant born every 15 minutes in US in 2014! (Ko, 2016; CDC, 2019)
    - Increased 433% nationally during 2004-2014
    - 120 babies born in ND, 2013 with NAS (ND Task Force on Substance Exposed Newborns, 2016)
    - THIS IS NOT NEW!!



Time line of NAS. FDA, Food and Drug Administration.

# Neonatal Abstinence Syndrome

- Infants are typically exposed to multiple substances (Klaman, 2017)
  - NAS is NOT limited to opioids
  - NAS may be secondary to morphine, heroin, methadone, buprenorphine, prescription opioids, antidepressants, anxiolytics...(Kocherlakota, 2014)
- Not clearly related to “dose”
- Affects about 45-94% of infants exposed in utero(ACOG, 2017;Forray, 2016)
- Rarely fatal (Kocherlakota, 2014)
- This is an **EXPECTED** and **TREATABLE** condition due to prenatal opioid exposure

# NAS Symptoms

- Identifiable signs and symptoms typically occur 48-72 hours post-birth (may be up to 96 hours)\*
  - Present as constellation of neurologic, GI, musculoskeletal disturbances
  - Highly variable and severe
    - Neonatal withdrawal is more complex than adult secondary to immature neurological development
  - 50-80% of NAS infants will require pharmacologic intervention
- Average length of hospital stay NAS: Risen from 13 days in 2004 to 19 days in 2013 (Raffaelli et al, 2017)
  - May be up to 23 days+ if pharmacologic treatment is required

# Substance Specific Withdrawal

**TABLE 1** Onset, Duration, and Frequency of NAS Caused by Various Substances

Drug	Onset, h	Frequency, %	Duration, d
<b>Opioids</b>			
Heroin	24–48	40–80 <sup>27</sup>	8–10
Methadone	48–72	13–94 <sup>37</sup>	Up to 30 or more
Buprenorphine	36–60	22–67 <sup>46,48</sup>	Up to 28 or more
Prescription opioid medications	36–72	5–20 <sup>56,60</sup>	10–30
<b>Nonopioids</b>			
SSRIs	24–48	20–30 <sup>64</sup>	2–6
TCAs	24–48	20–50 <sup>64</sup>	2–6
Methamphetamines	24	2–49 <sup>101</sup>	7–10
Inhalants	24–48	48 <sup>70</sup>	2–7

# NAS Symptoms

- Yawning
- Sneezing
- Irritability
- Excessive cry/High-pitched cry
- Poor/erratic sleep
- Uncoordinated sucking reflexes>poor feeding
- Fever
- Rapid breathing
- Increased heart rate
- Seizures
- Sweating/Temperature instability
- Startle
- Tremors / trembling
- Diarrhea
- Poor feeding / Slow weight gain
- Vomiting
- Blotchy skin coloring

# Newborn Assessment of Withdrawal

- **Finnegan Neonatal Abstinence Scoring Tool**
  - Used for opioid and nonopioid withdrawal assessment
  - Started within 24 hours of birth and performed every 3-4 hours

# Newborn Assessment of Withdrawal

- Non-pharmacologic approach is **INITIAL** treatment option for NAS
  - Environmental measures
    - Quiet, low lights
    - Avoidance of waking sleeping infants
    - Free from external excitatory stimulus
    - Gentle handling
    - Kangaroo care
    - Careful swaddling
    - Individualized developmental care
    - Non-nutritive suckling
    - Rooming-in if stable
    - Small, frequent feedings with high calorie formula
    - **ACTIVE MATERNAL PARTICIPATION IS THE BEST NONPHARMACOLOGIC CARE!**
- Pharmacologic treatment is required if no improvement or infant develops severe withdrawal



# Infant Discharge from NICU

- Multidisciplinary approach is a **MUST**
  - **This includes parental participation!**
- Infants are typically discharged when
  - Clinically stable (feeding well, sleeping, gaining weight)
  - Low Finnegan score
  - No or minimal medical support
    - i.e. most NICUs will not discharge infant on morphine
- Prolonged clinical follow-up needed to identify short/long-term outcomes
  - Initial NAS may be short but intense and last for 1 to 2 weeks
  - **BUT** this may be followed by a long chronic and relapsing course that includes hyperirritability, sleep disturbances, hyperphagia, and other neurologic and autonomic signs that last for a few weeks to a few months (Kocherlakota, 2014)

# Infant Follow-Up Care After Hospital Discharge

## Typical NB Visit Schedule

AGE <sup>1</sup>	INFANCY							
	Prenatal <sup>2</sup>	Newborn <sup>2</sup>	3-5 d <sup>4</sup>	By 1 mo	2 mo	4 mo	6 mo	9 mo
<b>HISTORY</b>								
Initial/Interval	●	●	●	●	●	●	●	●
<b>MEASUREMENTS</b>								
Length/Height and Weight		●	●	●	●	●	●	●
Head Circumference		●	●	●	●	●	●	●
Weight for Length		●	●	●	●	●	●	●
Body Mass Index <sup>5</sup>								
Blood Pressure <sup>6</sup>		★	★	★	★	★	★	★
<b>SENSORY SCREENING</b>								
Vision <sup>7</sup>		★	★	★	★	★	★	★
Hearing		● <sup>8</sup>	● <sup>9</sup> →		★	★	★	
<b>DEVELOPMENTAL/BEHAVIORAL HEALTH</b>								
Developmental Screening <sup>11</sup>								●
Autism Spectrum Disorder Screening <sup>12</sup>								
Developmental Surveillance		●	●	●	●	●	●	
Psychosocial/Behavioral Assessment <sup>13</sup>		●	●	●	●	●	●	●
Tobacco, Alcohol, or Drug Use Assessment <sup>14</sup>								
Depression Screening <sup>15</sup>								
Maternal Depression Screening <sup>16</sup>				●	●	●	●	

## NAS Infant Visits

- In addition to the typical NB schedule, Post-NAS infants:
  - Will be routinely be evaluated for hearing loss and any seizure activity
  - Will have PT & OT evaluations at 6,12 & 18 months
  - Will be referred to Right Tracks
  - Will continuously be evaluated for developmental delays
  - Ongoing evaluation for psycho-social concerns

YOU are  
Important !

- Increasing our understanding of and foundational knowledge about substance use disorders is essential to changing how we care for mothers, babies and families
- **THANKYOU** for being such an important part of our interprofessional team!

# References Available Upon Request

- For questions please contact:  
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