DISCLAIMER

- This session was conducted for members of county-based teams in CA that are working to expand access to Medications for Addiction Treatment in jails and drug courts. The project is funded through California's Department of Health Care Services (DHCS) with State Opioid Response funding from SAMHSA. The content is being made available to all interested parties. Please note this content has not been professionally edited and the session was conducted using Zoom.
- In the case of any security issues that may occur, this session will immediately end. A separate email will be sent to all participants with further instruction.
- Any data and information collected through polls and chats will only be used to inform future webinar/learning collaborative topics and to provide DHCS with evaluation results.

Welcome!

Thank you for joining us

Please read through the following prior to the webinar starting.

- **Ensure your audio is linked to your Zoom participant ID.**
  - If you joined the audio by computer microphone and speaker, then you're all set.
  - If you joined the audio with a phone and did not enter your unique participant ID then enter **# <your participant ID> #** on your phone now. *Note: Your unique participant ID can be found by clicking on the lower left corner of your Zoom screen where it says 'Join Audio' and your Participant ID will appear.*
  - Please also mute your computer speaker (no sound is coming out through your computer speaker)
- **You will join the webinar muted.** Time permitting, we will take questions and can unmute you. Please use the "Raise your hand" feature.
- **Locate the chat box.** On the bottom middle of your screen, click on the chat icon. This will open the "Zoom Group Chat" pane on the right side of your screen. You will see messages throughout the webinar on there. When prompted by the presenters, type in your answers or questions there.

HEALTH MANAGEMENT ASSOCIATES

Adolescent Substance Use Disorder (SUD) – Medication Assisted Treatment (MAT) 101

May 18, 2022

WELCOME AND INTRODUCTION

INTRODUCTION

Scott Haga, MPAS, PA-C
Senior Consultant
Health Management Associates

Helen DuPlessis, MD, MPH
Principal
Health Management Associates

AGENDA

- The Neurobiology of Substance Use Disorder: A Chronic Disease
- About Youth and Opioids and Stimulants
- MAT and Youth
- Considerations for Pregnant Teens
- Youth Relevant Harm Reduction
- Minor Consent Laws and Other Special Considerations
- Next Steps

LEARNING OBJECTIVES

- At the end of the webinar, participants will be able to:
  - Describe the basic neuroscience of addiction with particular emphasis on the role of dopamine
  - Explain why Substance Use Disorder (SUD) is a chronic medical condition
  - Compare relevant differences in brain development and function in adults and adolescents and how that predisposes adolescents to use substances
  - List three medications that are FDA approved for the treatment of OUD
  - List at least two constraints adolescents face in accessing MAT
  - List three important considerations for MAT use among pregnant and parenting teens
  - Describe three ways to make harm reduction more accessible to adolescents

OPIOID RELATED DEATHS AMONG YOUTH INCREASING AT A RATE MORE RAPID THAN ADULT DEATHS

Opioid-Related Overdose Deaths, 2018

	Total	Percent of Deaths	Rate per 100,000 population
10 to 14 yr old	1	0.0%	0.04
15 to 19 yr old	53	2.2%	2.08
20 to 24 yr old	176	7.2%	6.49
10 to 24 yr old	230	9.5%	
All ages	2428	100.0%	5.82

Source: California Department of Public Health - Injury and Violence Prevention using CDPH Center for Health Statistics and Informatics Vital Statistics - Multiple Cause of Death and California Comprehensive Death Files

Opioid-Related Overdose Deaths, 2020 preliminary

	Total	Percent of Deaths	Rate per 100,000 population
10 to 14 yr old	12	0.2%	0.48
15 to 19 yr old	257	4.8%	10.14
20 to 24 yr old	580	10.8%	22.00
10 to 24 yr old	849	15.8%	
All ages	5563	100.0%	

Source: adapted from California Department of Public Health - Injury and Violence Prevention using CDPH Center for Health Statistics and Informatics Vital Statistics - Multiple Cause of Death and California Comprehensive Death Files

Source: https://skylab.cdph.ca.gov/ODdash/

CHATTER FALL

Please respond to following prompt by typing into the chat box

What is something you would like to know more about regarding the treatment of SUD in teens?

Type your response and
don’t click enter.

NEUROBIOLOGY OF ADDICTION AND SUBSTANCE USE DISORDERS (SUD) AS A CHRONIC DISEASE

TIME FOR A POLL…

POLL

Which of the following do you think is the primary contributor to substance use disorders?

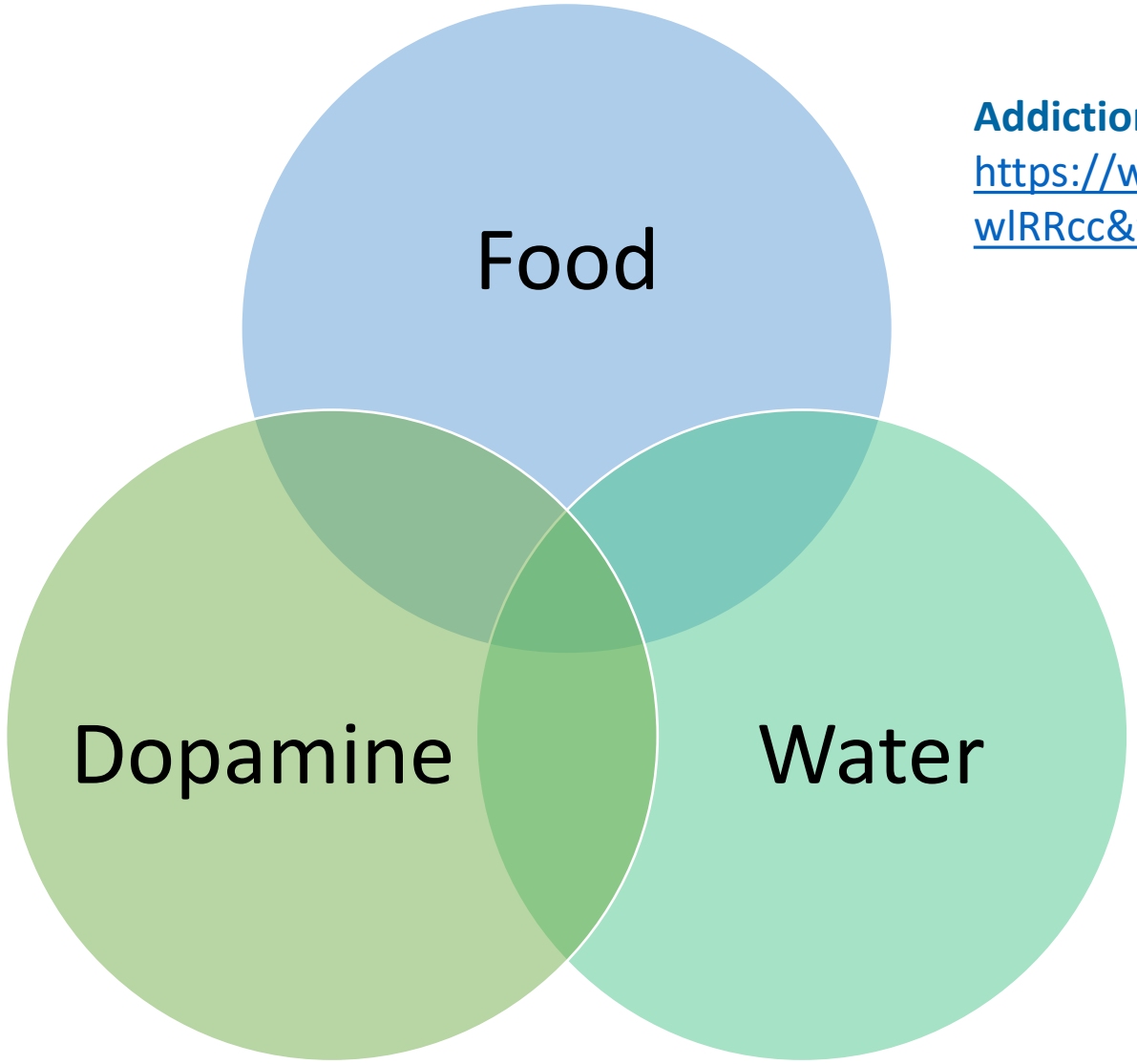
A. Personal choice and behaviors

B. Impact of trauma and other adverse life events

C. Action of neurochemicals in the brain

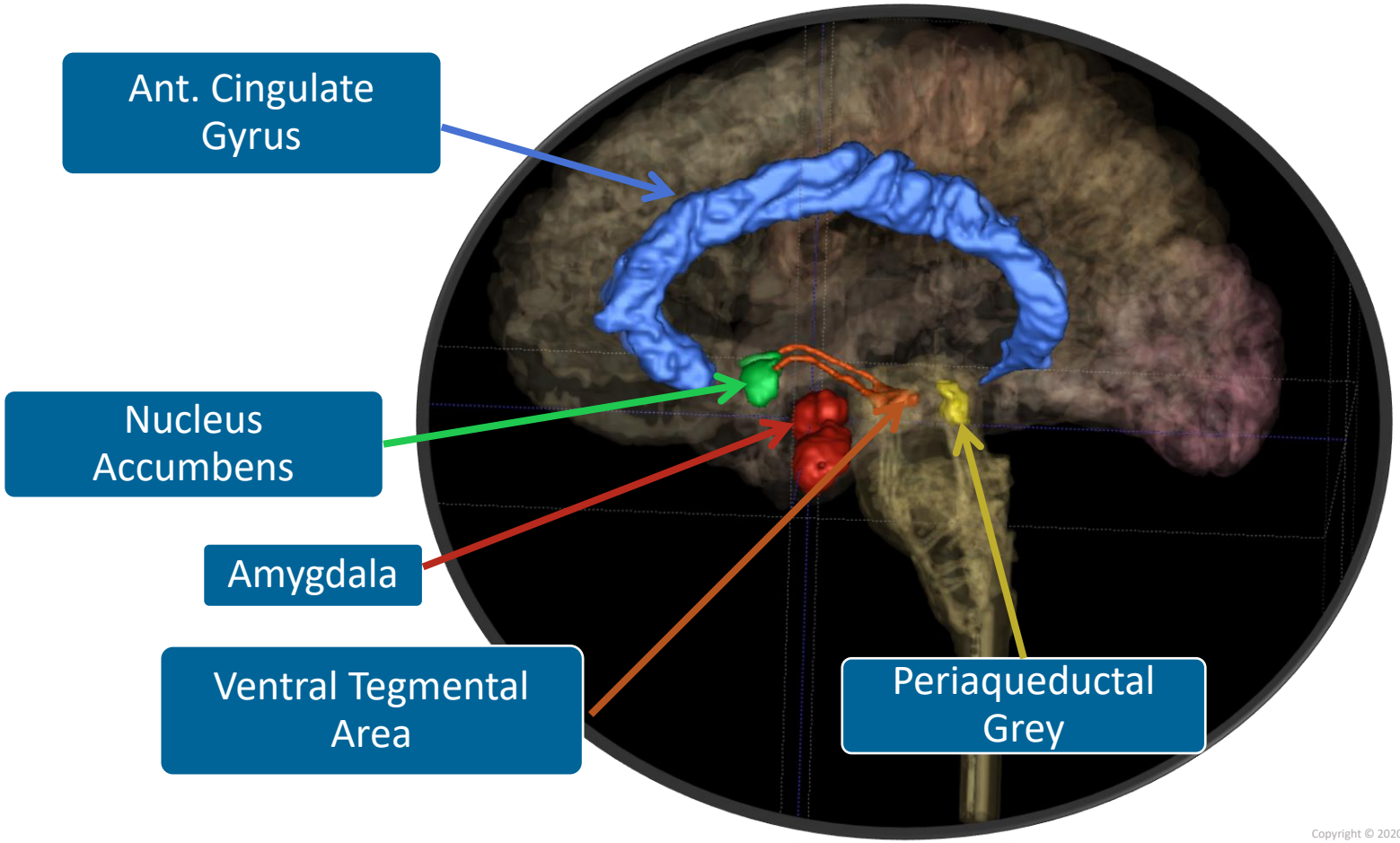
D. I haven't decided yet

BASIC MECHANISM OF HOW SUD AFFECTS THE BRAIN

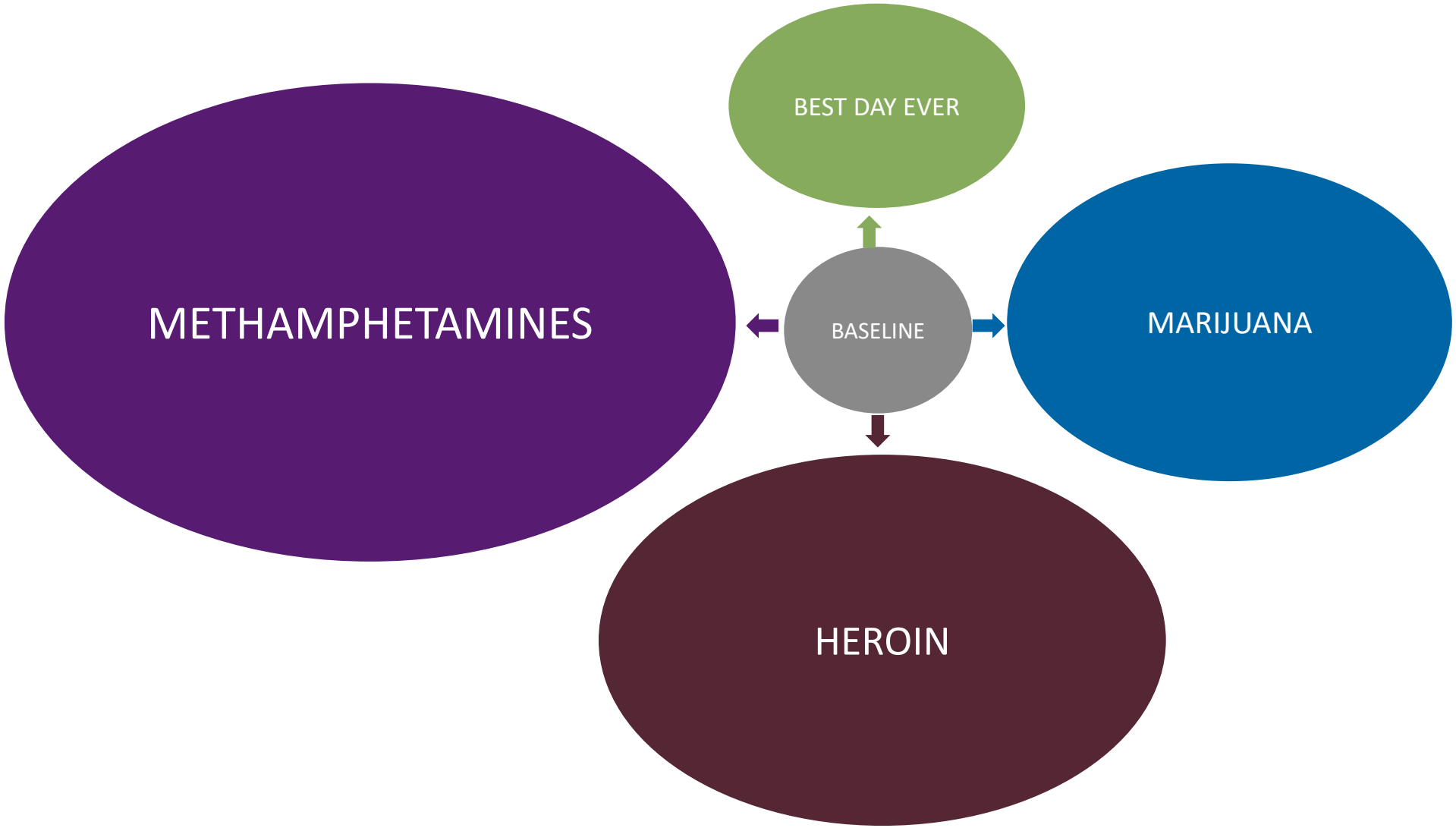


Addiction Neuroscience 101 Video:
https://www.youtube.com/watch?v=bwZcPwlRRcc&t=266s

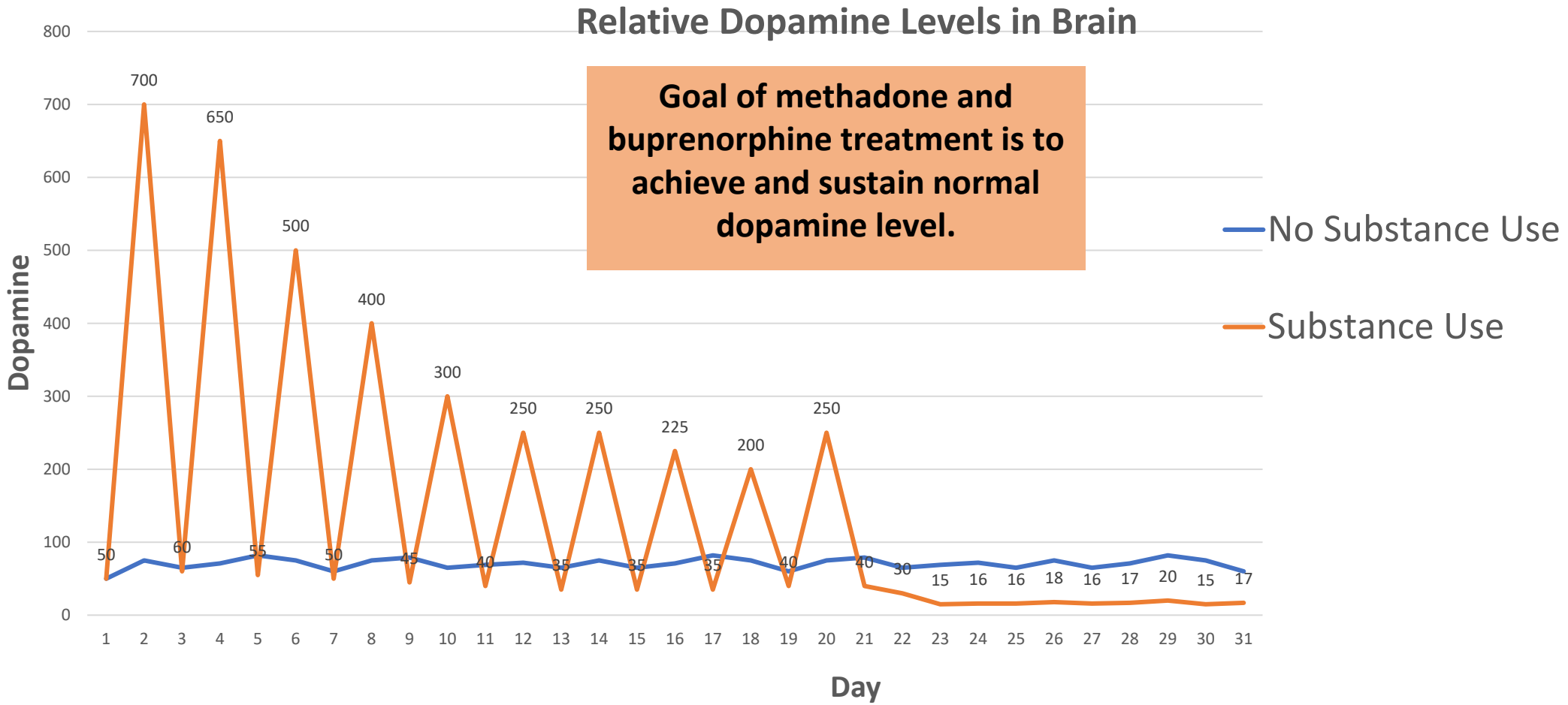
ADDICTION 101: NEUROBIOLOGY OF ADDICTION



ADDICTION 101 – COMPARATIVE DOPAMINE PRODUCTION

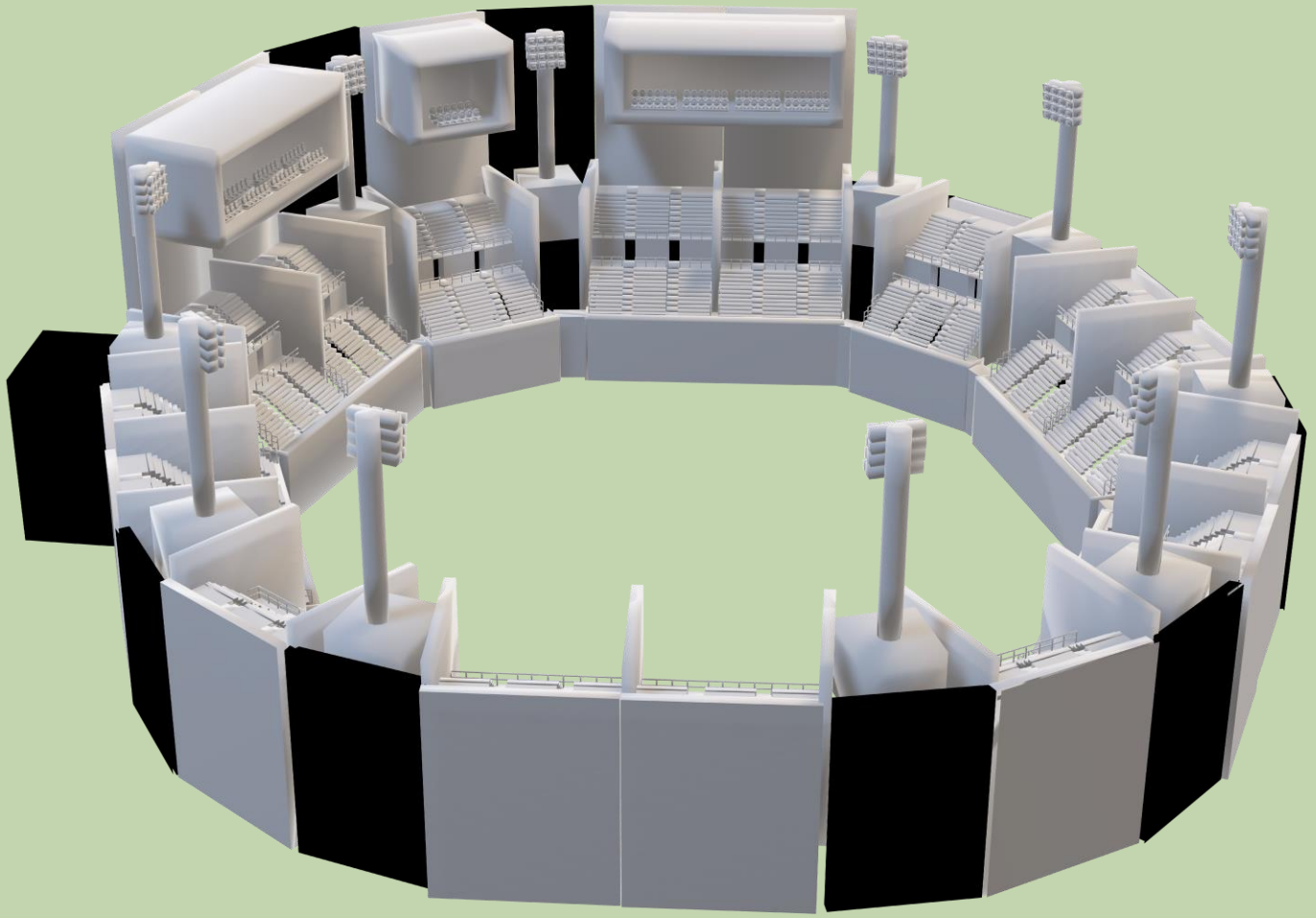


BASIC MECHANISM OF HOW SUBSTANCES AFFECT THE BRAIN:
DOPAMINE PRODUCTION OVER TIME

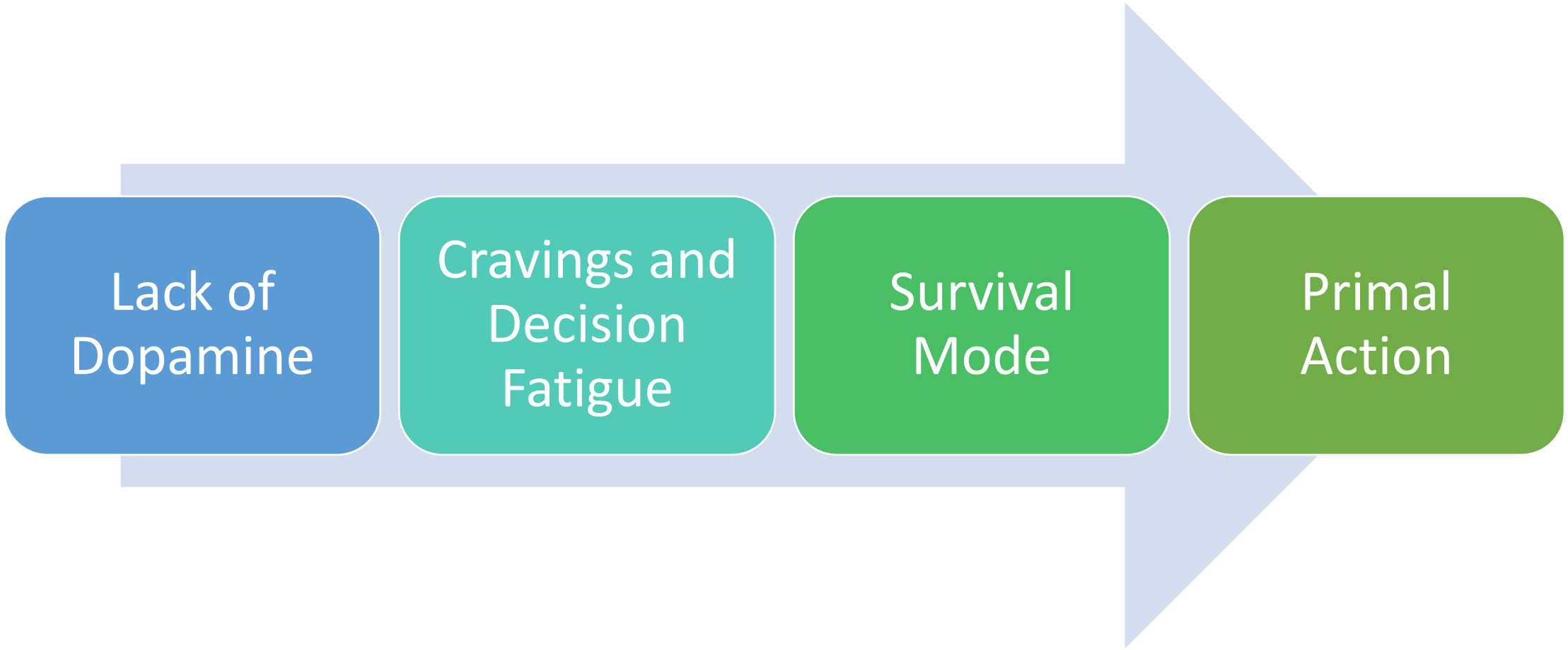


HEALTH MANAGEMENT ASSOCIATES DHCS

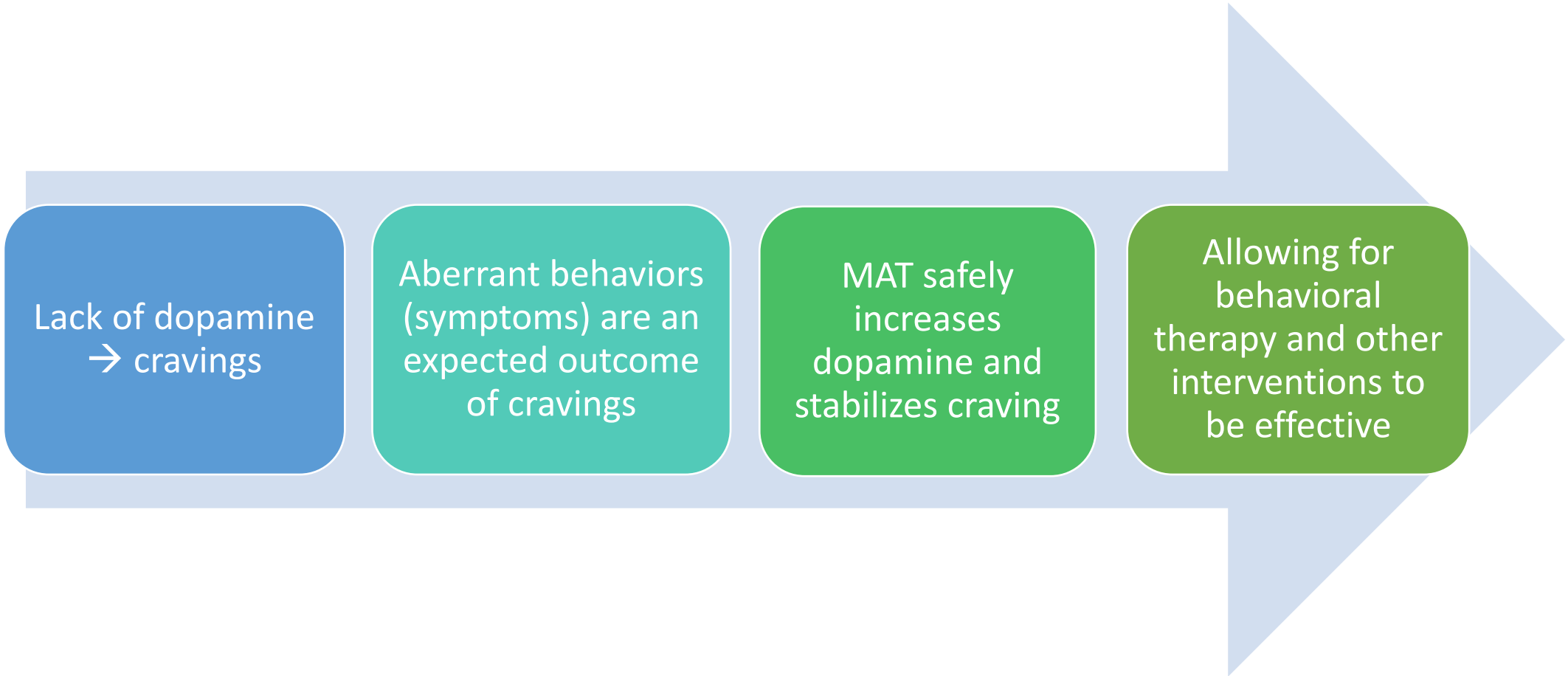
BASIC MECHANISM OF HOW SUBSTANCES AFFECT THE BRAIN:
INTENSITY OF CRAVINGS



UNDERSTANDING ADDICTION TO INFORM TREATMENT



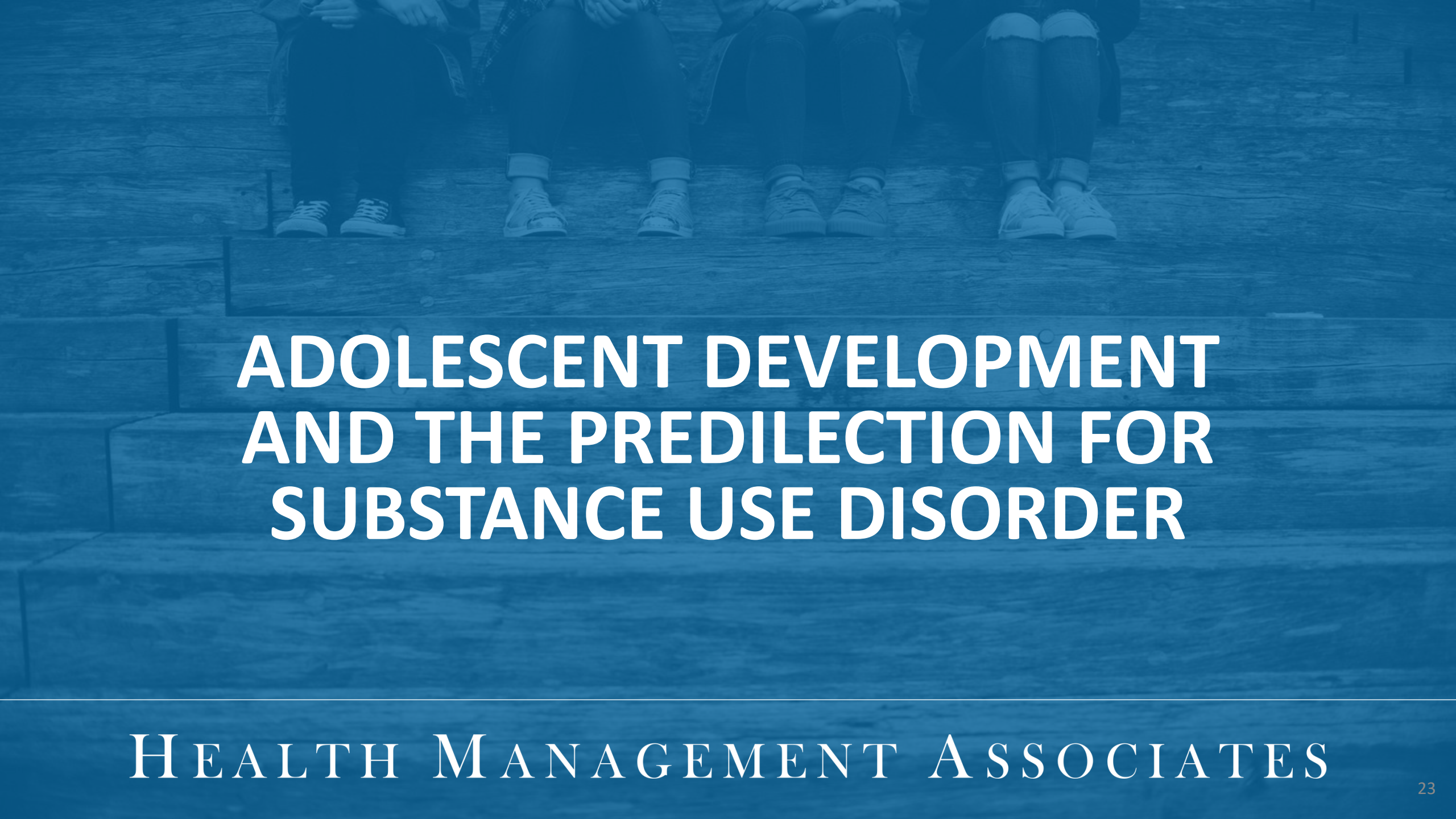
ADDICTION 101: TREATMENT



DSM-5: DIAGNOSIS OF OUD

TABLE 1 **Summarized DSM-5 diagnostic categories and criteria for opioid use disorder**

Category	Criteria
Impaired control	• Opioids used in larger amounts or for longer than intended • Unsuccessful efforts or desire to cut back or control opioid use • Excessive amount of time spent obtaining, using, or recovering from opioids • Craving to use opioids
Social impairment	• Failure to fulfill major role obligations at work, school, or home as a result of recurrent opioid use • Persistent or recurrent social or interpersonal problems that are exacerbated by opioids or continued use of opioids despite these problems • Reduced or given up important social, occupational, or recreational activities because of opioid use
Risky use	• Opioid use in physically hazardous situations • Continued opioid use despite knowledge of persistent physical or psychological problem that is likely caused by opioid use
Pharmacological properties	• Tolerance as demonstrated by increased amounts of opioids needed to achieve desired effect; diminished effect with continued use of the same amount • Withdrawal as demonstrated by symptoms of opioid withdrawal syndrome; opioids taken to relieve or avoid withdrawal



ADOLESCENT DEVELOPMENT AND THE PREDILECTION FOR SUBSTANCE USE DISORDER

YOUTH AND THE OPIOID EPIDEMIC

"Substance use accounts for the vast majority of life-years lost due to disease, disability and premature death among those aged 15-24 and is arguably the most important modifiable health risk behavior impacting adolescents."

Levy S. Youth and the Opioid Epidemic. *Pediatrics.* 2019

WHAT WE KNOW ABOUT TRENDS IN SUBSTANCE USE AMONG ADOLESCENTS

Individuals are most likely to begin using drugs during adolescence and young adulthood

- By the 12th grade, 70% of students have tried alcohol, half will have taken an illegal drug, 40% will have smoked a cigarette, AND 20% will have used a prescription drug for NONMEDICAL reasons (NYRBS, 2019)

Fortunately, most adolescents who do experiment do NOT develop an addiction or other SUD

But, SUD among youth part of other risky behaviors

SOURCE: AAP Medical Home Project portal

RISK FACTORS

- Adverse Childhood Events (ACE) predispose to SUD
  - 75% of those with OUD have history of ACEs (CTIPP, 2017)
  - Having >3 ACEs is associated with earlier onset use, greater prevalence IV drug use, greater overdose rate (Hughes et al, 2017)
  - Risk of SUD increases with number of ACEs (dose-response)
- 15.2% of people who start drinking by age 14 will eventually develop alcohol use disorder or dependence vs. 2.1 % of those WHO WAIT until they are 21 years or older
- 25% of those who begin abusing Rx drugs at 13 years or YOUNGER develop a SUD some time in their lives
- 13% of those with a SUD started using marijuana by the time they were 14 years (Gray and Squeglia, 2018)

WE CAN'T TREATE WHAT WE DON'T FIND: VALIDATED SCREENING TOOLS

+ Screening tools are validated for use in specific populations including youth
+ Screening for co-morbid conditions and suicide is also critical

General Population	Pregnant Women	Youth
+ National Institute for Drug Addiction (NIDA) – Quick Screen + Tobacco, Alcohol, Prescription, and other Substances (TAPS) + AUDIT (Alcohol only) + *Patient History Questionnaire (PHQ-9)* + *General Anxiety Disorder (GAD-7)* + *PTSD Checklist (PCL-5)* + *Columbia Suicide Severity Rating Scale (C-CCRS)*	+ NIDA – Quick Screen* + 4 P's plus (license fee) + Substance Use Risk Profile – Pregnancy (SURP) + CRAFFT – for 12 -26 yo women (Car, Relax, Alone, Forget, Friend/Family, Trouble) + *Perinatal Mood and Anxiety Disorder (PMAD) – Edinburgh, PHQ-9*	+ Brief Screener for Alcohol, Tobacco and other Drugs (BSTAD) (12-17yo) + Screening to Brief Intervention (S2BI) (12-17yo) + Problem oriented screening instrument for Teens (POSIT) + CRAFFT* + *PHQ-9-adapted, Center for Epidemiologic Studies Depression Scale (CESDS)*

DEFINITIONS AND LEVEL SETTING

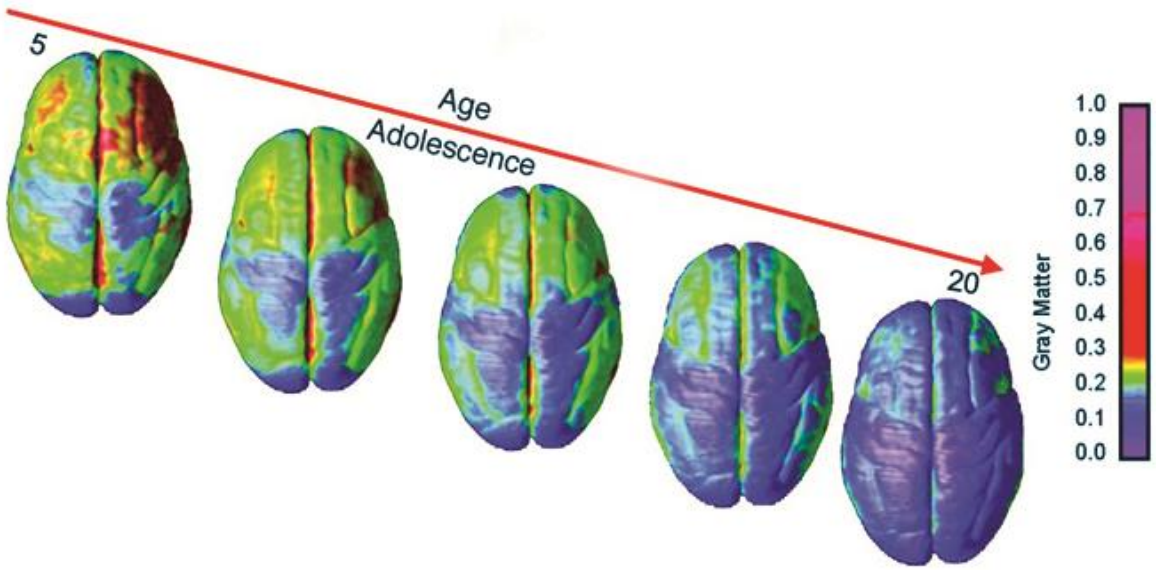
DEFINITIONS AND LEVEL-SETTING: THERE ARE MEANINGFUL DIFFERENCE IN THE POPULATIONS

	Ages in years	General Developmental Considerations	Practical and Legal Considerations
Adolescence	12 thru 17 years: Sexuality	Moving to independence Ethics and Self-direction	Future Interests - Cognitive development Physical Changes

• Early adolescence	10* thru 13	• Physical changes – worries about being normal
		• Mood swings
		• Limit testing
		• Sense of invulnerability
		• Close relationships gain importance (searching outside of family)
			• Familial Context
			  • Financial dependent
			  • Health coverage dependent
			  • Emotional evolution
			• Must be enrolled in school
			• Minor Consent laws in some states (unable to consent for treatment with MAT)
			• *Emancipation is the exception not the rule*

• Mid-Adolescence	15 thru 16	• Strong peer attachment • Concerns about appearance and sexual appeal • Interest in ideals, role models, moral reasoning • Asserting independence → deeper conflicts • Risk-taking	
• Late Adolescence	17 thru 18	• Mainly independent decision-making • Ability to delay gratification • Defining realistic adult role in society and family • Capable of insight, self-regulation of self-esteem • Realization of vulnerability and limitations	
Emerging Adults	18 thru 25	Do I have a role and place in this world?	Legal age for most decision-making

ADOLESCENT BRAIN DEVELOPMENT: ALL GAS AND NO BRAKES



Copyright (2004) National Academy of Sciences, USA Gogtay et al (2004). P Nat Acad Sci. 101(21):8174-8179

- Mid-brain areas are highly active during adolescence
  - Reward, motivation, moods/emotions, addiction
  - Dopamine-mediated (largely)
- Pre-frontal cortex develops much later (20s-30s)
- Brain in transition is “pruning” to develop greater efficiency and specificity (resilience)
- Pubertal hormones are implicated in development of areas of the brain that drive risk-taking

MORE ON THE ADOLESCENT BRAIN: SO, WHAT DOES THAT MEAN? (1 OF 2)

- Adolescents are more likely to:
  - Act on impulse
  - Misread or misinterpret social cues
  - Get into accidents
  - Engage in risky behaviors (binging)
- Adolescents are less likely to:
  - Think before they act
  - Pause to consider consequences
  - Change their dangerous or inappropriate behaviors

SOURCE: KQED.org

MORE ON THE ADOLESCENT BRAIN: SO, WHAT DOES THAT MEAN? (2 OF 2)

- Use of cognitive regulatory strategies improves if provided appropriate scaffolding; increases from childhood to adolescence (peaks at ~17 years)
- Additional differences in brain function
  - Decision-making in adolescents activates midbrain regions almost exclusively (vs. balance of mid and frontal areas in adult brains)
  - Intoxication* results in unchanged performance speed but poor task accomplishment (animal and human studies)
  - Adolescents more quickly and seamlessly integrate new information and behavioral adjustment than adults

SOURCE: KQED.org

PERCEPTIONS OF RISK AMONG ADOLESCENTS

- *Adolescents underestimate their level of intoxication with alcohol (and probably other substances)
- Perception of risk increases with age
  - Studies shows this is true for heroin, other opioids and cocaine use
  - Perception of risk of tobacco use has been very stable over time with a dip in recent years
  - Marijuana is an exception probably due to legalization
- Perception of risk doesn't always correspond with reduced use

SAMHSA (2019). Key Substance use and Mental health indicators in the US. Results from the *2018 National Survey on Drug Use and Health.*

A FEW REMINDERS ABOUT DOPAMINE AND ITS UNIQUE EFFECTS IN ADOLESCENTS

- Dopamine is a neurotransmitter involved in critical life and health sustaining activities
  - Brain messages about motivation, rewards, emotions, decision-making and addiction
  - Substance use results in unusually high levels of dopamine release in the (mid)brain
  - The body's natural protection mechanisms modulate dopamine release and may result in dopamine depletion after long term or intense substance use
  - In an adolescent's brain, the dopamine systems are re-organizing
- Younger people are already struggling with impulse control because of immature brain structure and pathways
- Dysregulation of dopamine and the midbrain systems are the root cause of the chronic disease known as SUD

PROMISING LONGITUDINAL RESEACH ON THE ADOLESCENT BRAIN

- The Adolescent Brain Cognitive development (ABCD) study Collaborative Research on Addiction at NIH (CRAN) - Longitudinal study of 10,000 youth from 10 -38 years across 21 sites (began in 2015)
- National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA)-following over 800 youth across 5 sites for 10 years
- Understand the developmental trajectories and how those area affected by biopsychosocial, environmental and genetic factors, as well as exposure to substances; understand the impact of changing state and local policies on youth drug use and related health and development

OTHER CONSIDERATIONS: HARM REDUCTION IN ADOLESCENTS

OBSTACLES TO EFFECTIVE HARM REDUCTION FOR YOUNG ADULT USERS

Stigma and Denial

Fear of law enforcement

Lack of Youth-friendly services

Disconnection from networks traditionally reached by harm reduction services

Lack of knowledge about safer injecting practices, harm reduction and HIV programs in their communities

KEY STRATEGIES FOR EFFECTIVE HARM REDUCTION FOR YOUNG ADULTS

- ***Must be contextually relevant and responsive***
  - Distribution of harm reduction materials and education using social networks and digital media.
  - Venue-based interventions (distribution of harm reduction materials in clubs, bars, music events in which youth prescription opioid use may occur) should be considered.
  - Peer-based naloxone training and distribution, and drug user-led programs to provide safer injection education are two examples of effective drug user "intravention".
  - Can the US embrace "differentiated normalization?"

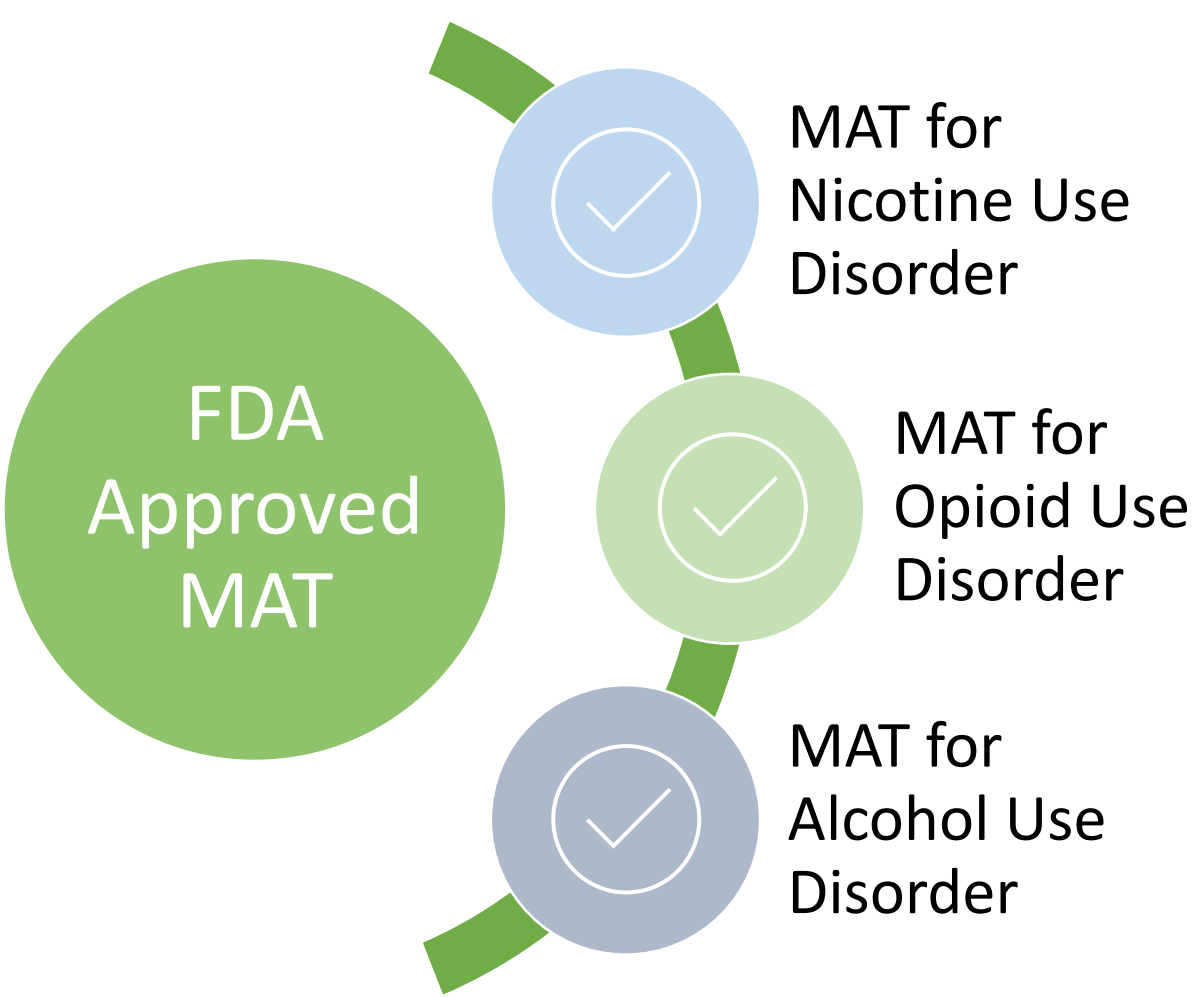
Https://www.goslow.org/

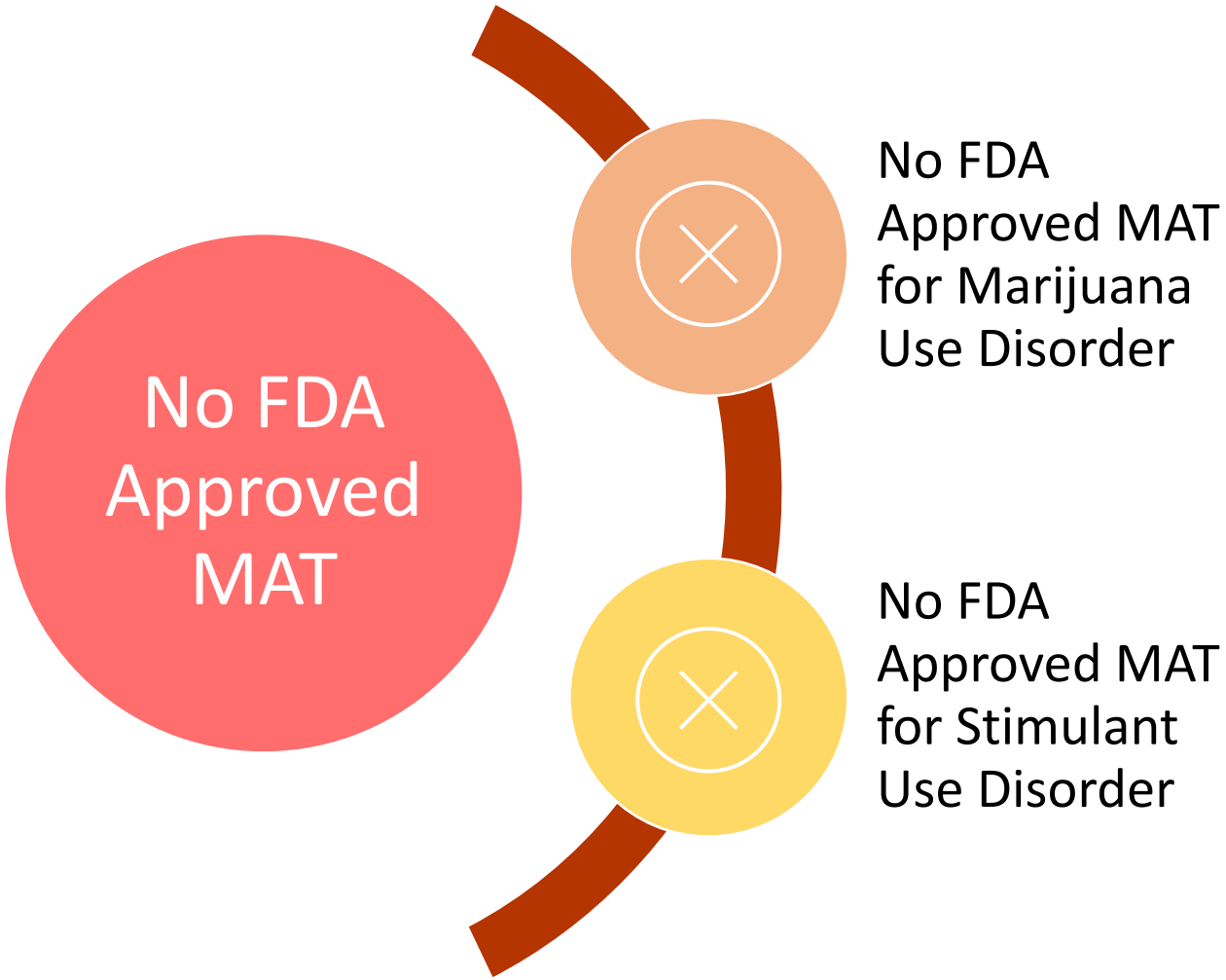
NALOXONE OVERVIEW: OVERDOSE REVERSAL AGENT AS HARM REDUCTION

- Mu opioid antagonist used for opioid overdose (OD) reversal
- Shorter half-life & more rapid onset of action than naltrexone
- High affinity, competitive binding & displaces full agonists
- Intranasal or intramuscular by bystander
- May require more than one dose
  - Opioids have longer half-life than naloxone
  - Fentanyl contamination may require higher dose for reversal
- Parental consent required (considered psychotropic medication)
- CA Assembly Bill 2760- Naloxone prescribing
  - >90mg Morphine Milliequivalents
  - Opioids + benzodiazepines
  - Increased risk of OD: History of OD or SUD
  - Minor consent challenges

MEDICATIONS FOR ADDICTION TREATMENT AND YOUTH

FDA APPROVED MEDICATIONS FOR SUD





MAT AND ADOLESCENTS

Treatment of adolescents with OUD with MAT is recommended by:

- American Society of Addiction Medicine
- American Academy of Pediatrics
- Society for Adolescent Health and Medicine
  - *"All adolescents and young adults (AYAs) with opioid use disorder (OUD) should be offered medication for OUD as a critical component of an integrated treatment approach that includes pharmacologic and nonpharmacologic strategies."*

WHY IS MAT FOR OUD IMPORTANT?

Treat Withdrawal: Prevent Overdose

Symptoms include Muscle pain, dilated pupils, nausea, diarrhea, abdominal cramping, piloerection

- Lasts 3-7 days
- Using methadone or buprenorphine is recommended over abrupt cessation due to risk of relapse, overdose (OD) & death

Address Dopamine Depletion

Reward/motivation pathway

- Depletion persists for months-years after people stop using
- Treated with methadone or buprenorphine

Treat OUD

Abstinence based treatment results in 85% relapse within 1 year vs. 40-60% on MAT

Achieve Results

Retention in treatment

- Decreases opioid use
- Reduces cravings
- Reduces overdose
- Reduces complications IVDU and other risky behaviors
- Reduces criminal behavior

Sources:
Mattick, RP & Hall W (1996) Lancet 347: 8994, 97-100.
Lobmaier, P et al. (2008) Cochrane Systematic Review.
Kakko et al. (2003) Lancet 361(9358),662-8.
ASAM, (2020) National Practice Guidelines for the Treatment of OUD.
Mattick, RP, et al. (2009) Cochrane Systematic Review.
Krupitsky et al. (2011) Lancet 377, 1506-13.
Rich, JD, et al. (2015) Lancet

FDA APPROVED MAT FOR OUD

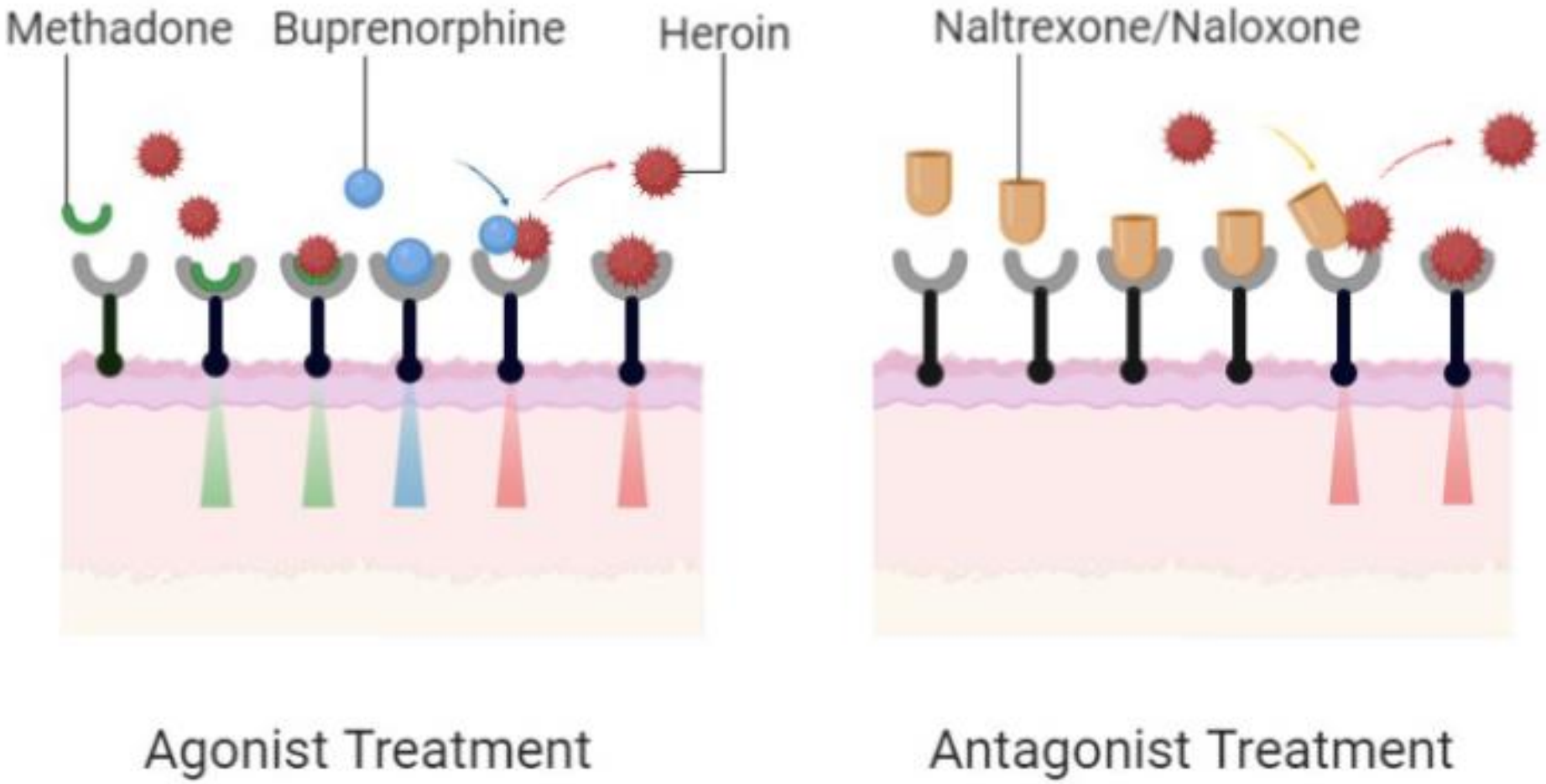
Agonist Treatment:

- Methadone- approved for cough in 1940s, for OUD 1972
- Buprenorphine-approved in 1981 for pain; oral approved for OUD 2002, patch, implants & injection later

Antagonist Treatment:

- Naltrexone- oral approved 1984; injectable 2006 AUD, 2010 OUD

FDA APPROVED MEDICATIONS FOR OUD AND OPIOID REVERSAL AGENT: MU OPIOID RECEPTOR BINDING



METHADONE: GENERAL FEDERAL REGULATIONS

Delivered initially via observed dosing

Once patient is stable and after 6 weeks, adults can be given take-home doses (varies by state and current PHE)

Highly monitored in a Narcotics or Opioid Treatment Program setting (NTP/OTP)

Many requirements for treating patients

HEALTH MANAGEMENT ASSOCIATES DHCS

METHADONE: WHAT AND FOR WHOM?

- Mu agonist without a “ceiling effect”
- Reaching a therapeutic dose (60-120mg) takes time
  - <60 mg/d is not therapeutic
  - Increased frequency and daily dose required during pregnancy
- Several significant drug-drug interactions
- Despite having the “best outcomes,” it has the highest level of stigma
- **Use in minors requires parental/guardian consent and “two documented unsuccessful attempts at short term detoxification or drug free treatment” – 42 CFR§ 8.12.e.2**

Patients with a more severe OUD (> 1 year or persons who inject drugs)

Patients who would benefit from the services available in an OTP environment

Patients who were not successful with other MAT for OUD

BUPRENORPHINE: GENERAL REGULATIONS

Approved in the 1981 for pain via an injectable form

Approved in 2002 for use in maintenance treatment for OUD

DEA X-Waiver update: Federal Register 4/28/21

- To prescribe buprenorphine for OUD to ≤30 patients
  - Send Notice of Intent to SAMHSA
  - SAMHSA approves request & notifies DEA
  - DEA issues X-waiver
- To prescribe to ≥30
  - Complete 8 /24 h training
  - Apply for, get approval for & receive x waiver
  - Provide or refer for counseling & ancillary services
- Qualified practitioners can apply to have prescription limit increased to 100 in first year

BUPRENORPHINE: WHAT AND FOR WHOM?

- Partial Mu agonist with ceiling effect
  - Available alone or in combination w/naloxone
  - Different formulations (SL and buccal pill/film, implant, injectable)
  - Combination formulation averts diversion
- Greater binding affinity than most full agonists
  - Start buprenorphine when client in mild-moderate withdrawal (to avoid causing precipitated withdrawal)
- Many ways to do initiation (protocols needed)
  - <8 mg/d is not therapeutic (typical dose is 16 mg/d)
  - Dosing adjustments required during pregnancy
- Fewer drug-drug interactions than methadone
- **Use in minors requires parental/guardian consent (all settings) and two prior detox attempts (at least, in NTPs)**

Positive DSM-5 with a score of 2 or greater

Patient wants agonist treatment

Has coverage or can afford medication

NALTREXONE: WHAT AND FOR WHOM?

- Mu opioid antagonist with high, competitive binding affinity
- Does NOT treat withdrawal or underlying dopamine depletion
- Client must be opioid free 5-7 days before starting
- More readily accepted in criminal justice and “abstinence-only” communities
- Evidence of decreased mortality is limited *
- **Legal interpretation considers this a psychotropic medication - requires parental consent**

Source: Larochelle, et al. Medication for opioid use disorder after nonfatal opioid overdose and association with mortality. A cohort study. Annals of Internal Medicine. 169:3 (2018) 137-45.

Patients with a high degree of motivation (dopamine)

Patients who had poor results with methadone or buprenorphine

Can be useful as “back-up” after discontinuation of methadone or buprenorphine

NALTREXONE: GENERAL REGULATIONS

No Federal regulations inhibit the use

Some payer restrictions make it difficult to obtain the long-acting injectable form

Multiple formulations:

- Pills at 25mg and 50 mg (50-100 mg for AUD)
- Long acting injectable 380mg (28-30 days)
- Implantable beads: lasts 6 months (0.9 ng/ml formulation contains 3.5 ng/nl of 6-beta-Naltrexol)

WHAT WE KNOW ABOUT ACCESS TO MAT IN ADOLESCENTS

- Few published longitudinal studies about MAT for adolescents (pre-2018 data): Treatment outcomes are not as good as for adults, BUT:
  - Most viewed MAT as detoxification or short-term treatment
  - Often used subtherapeutic doses (<8 mg)
- The most current National Survey on Drug Use and Health indicates that only 8.3% of the ~1,000,000 youth 12-17 years who needed treatment for AUD or SUD actually received it
  - Less that 2.4% of adolescents and emerging adults (vs. 26.3% of adults) in treatment for heroin use and 4% of those in treatment for prescription drug use (vs. 12% of adults) received MAT
  - Black and Hispanic youth are less likely to receive treatment than white youth
- Retrospective cohort study (2001 – 2014) revealed about 26% of those diagnosed with OUD received MAT (the use of MAT increased 10-fold from 2002 to 2009, then dropped from 2009-2014 despite rise in diagnoses of OUD)
  - Females, Black and Hispanic patients and those <16 years were less likely to receive MAT
- Anecdotal evidence that MAT abuse potential is higher in adolescents
- There are significant logistical issues: parental consent, requirements for treatment failures, transportation, inadequate access

WHAT WE KNOW ABOUT EFFECTIVENESS OF MAT AND OTHER SUD TREATMENT IN ADOLESCENCE

- Need to acknowledge differences in youth and adults
  - Different neurodevelopmental concerns (puberty, cognitive skills, sense of self, social landscape)
  - Different addiction trajectory (more polysubstance, substitution and binging than adults) →need to consider different treatment outcomes
- Studies have likely not been reporting outcomes across all substance types
- American Academy of Pediatrics released a policy statement in 2016 calling for the **accessibility and use of pharmacotherapy for the youth with OUD**

American Academy of Pediatrics Committee on Substance Use and Prevention. Medication-assisted treatment of adolescents with opioid use disorders. Pediatrics. 2016;138(3):e20161893
Article can be accessed here

- Engagement in treatment significantly higher with MAT
- Median retention in care among youths who received timely MAT is much greater than for those receiving only behavioral health
  - Buprenorphine 123 days
  - Naltrexone 150 days
  - Methadone 324 days
  - Behavioral health only 64 days

SOURCE: Hadland, S. E., et al. JAMA Pediatr, 172(11), 1029-1037. 2018

ADOLESCENTS AND MAT: "EVIDENCE" AND CONSIDERATIONS

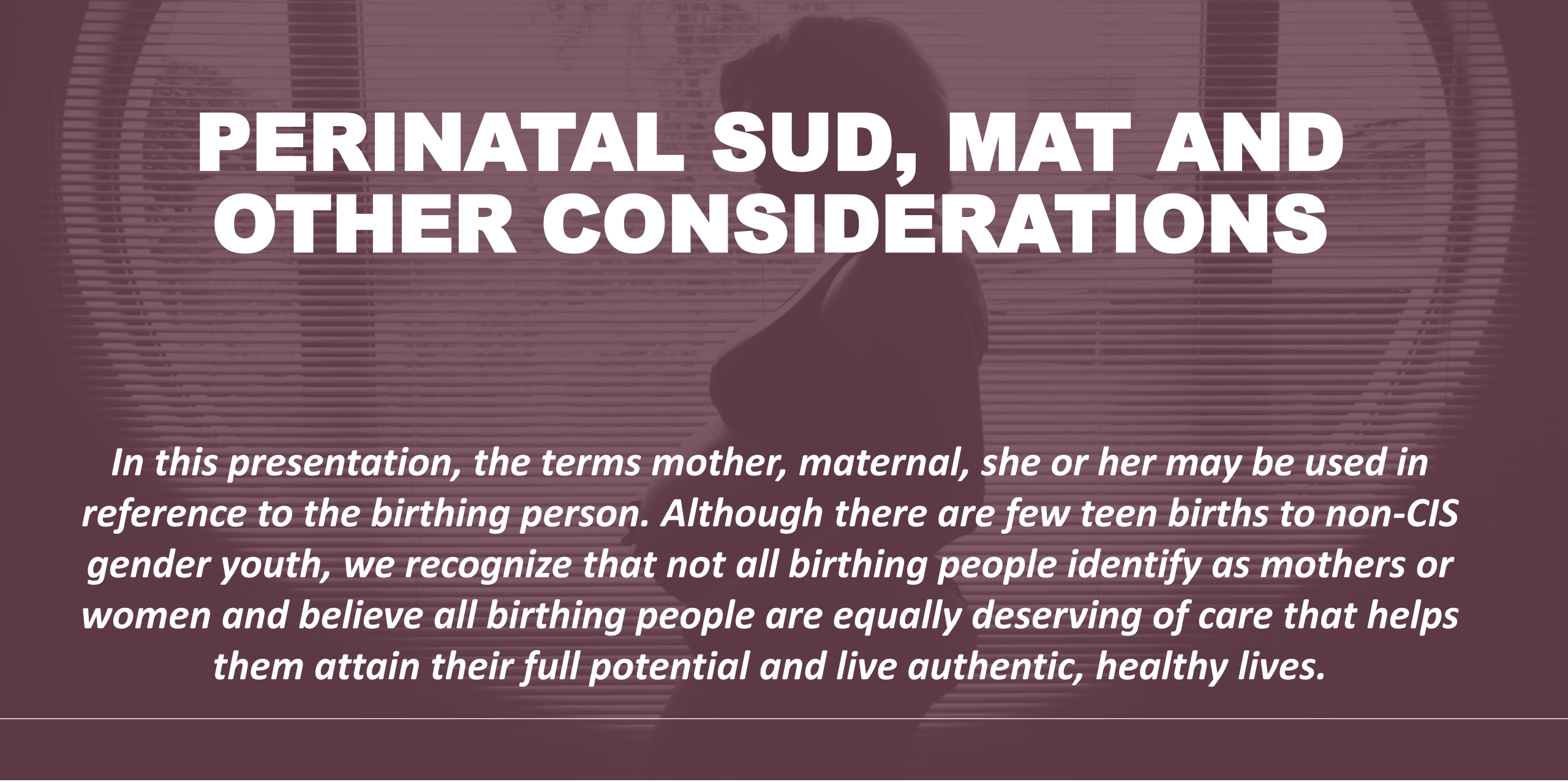
MEDICATION	LEVEL OF EVIDENCE (mostly for adults)	CONSIDERATIONS
Methadone	High	• **Limited access under 18 years** • **Requires parental consent and two prior detox treatment failures** • Same heavy regulations/requirements • Overdose potential exists in teens as in adults (mixing with other sedatives)
Buprenorphine	High	• **Approved for use in ≥ 16 years** • **Requires parental consent (all settings) and two prior detox treatment attempts (at least, in NTPs)** • Can be prescribed in primary care office • No evidence for limiting duration of treatment • Proven safety • Adjunct psycho-social treatment is encouraged • Recent revised guidelines facilitate obtaining X-waiver
XR-Naltrexone	Moderate-high	• **Use in pediatric patients with Autism and Crohn's disease with good safety profile** • Potential hepatotoxic risk (general) • Extended release is well-tolerated and increased adherence

MORE…

- **Behavioral Health treatment is a vital adjunct**
- Motivational Interviewing or Enhancement approaches should be used
  - MI/MET are brief evidence-based (meaning well researched), treatments used to draw out change talk and strengthen one's motivation for change.
  - Motivational Enhancement Therapy (MET) consists of an initial assessment battery session, followed by two to four individual treatment sessions with a therapist using MI principles and techniques.

- Five Principles of Motivational Interviewing
  - Express empathy through reflective listening.
  - Develop discrepancy between clients' goals or values and their current behavior.
  - Avoid argument and direct confrontation.
  - Adjust to client resistance rather than opposing it directly.
  - Support self-efficacy and optimism.

- **Family Engagement Framework-**ALL involved with an adolescent with SUD need a recipe to proceed



PERINATAL SUD, MAT AND OTHER CONSIDERATIONS

In this presentation, the terms mother, maternal, she or her may be used in reference to the birthing person. Although there are few teen births to non-CIS gender youth, we recognize that not all birthing people identify as mothers or women and believe all birthing people are equally deserving of care that helps them attain their full potential and live authentic, healthy lives.

ABOUT PREGNANT TEENS AND SUD

- The teen pregnancy rate in the United States continues to decline (from 1988-2018), but the overall rate (17.4/1000 youth 15-19 yo) is significantly above other developed countries
- Teens who become pregnant report more substance use prior to the pregnancy than non-pregnant teens
- Pregnant teens in SUD treatment have higher rates of methamphetamine use (16.9% vs 8.4%) and marijuana use (72.9% vs. 70.2%) and less alcohol use (45.7% vs. 58.5%) than non-pregnant teens
- Pregnant women, including teens, are less likely to use opioids for pain control during pregnancy than non-pregnant women, but the reported rate (31.89%) underscores the need for screening in the population

MAT DURING PREGNANCY

- Detoxification during pregnancy results in higher risk of relapse (59-90%), overdose, death
- Methadone and Buprenorphine are the standard of care
  - Safe for use during pregnancy
  - MAT tapering during pregnancy or immediate post-partum period is contraindicated
  - Doses may need to be adjusted upward during pregnancy

MAT	OD Deaths	Retention in Treatment	Pregnancy Outcomes	NAS
Detox/ Withdrawal				
Methadone				
Buprenorphine (Mono)				
Buprenorphine /Naloxone				
Naltrexone				

- MAT should not be considered replacement therapy
  - For persons with OUD, it treats the dysregulation that defines OUD as a chronic disease
  - Pain management in the peripartum period for women with OUD or on MAT should be coordinated with the medical team

WHAT ABOUT BREASTFEEDING, SUD AND MAT?

BENEFITS OF BREASTFEEDING: MOM'S SECOND GREATEST GIFT

GENERAL BENEFITS

- Reduced respiratory infections and otitis media
- Reduced gastrointestinal infections
- Lowered risk of sudden infant death syndrome
- Protection against allergic disease
- Reduced risk of Celiac disease, inflammatory bowel disease
- Lower incidence of obesity, diabetes (types 1 and 2)
- Better neurodevelopmental outcomes

BENEFITS TO WOMEN AND IN PERINATAL SUD

- Reduced risk of breast and ovarian cancer
- Improved maternal-infant bonding
- Reduced risk of child abuse
- Breastfed infants less likely to require pharmacological intervention for NAS
- Reduced symptoms of NAS
- Shorter length of stay for NAS
- Shorter duration of pharmacologic treatment when needed for NAS

FACTORS RELEVANT TO BREASTFEEDING DECISIONS: SHARED MEDICAL DECISION-MAKING

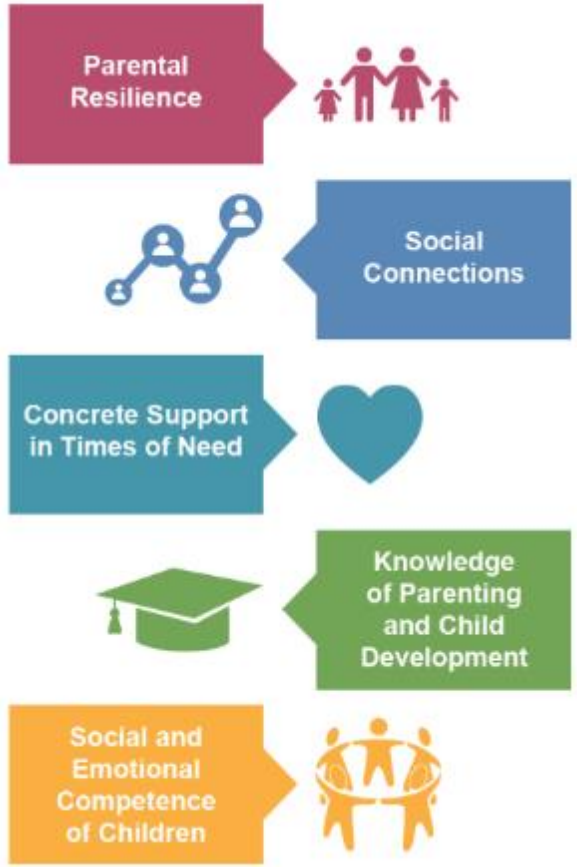
Relevant Factors	Specific Conditions	
Medical Contraindications	**Mother** • Communicable diseases • Some psychotropic medications	**Infant** • Genetic conditions affecting metabolism • Mechanical (e.g., neurologic, severe cleft lip and palate)
Maternal conditions: Expressed milk only (avoid close contact)	• Communicable through close contact (respiratory)	
Maternal Conditions: Pump and Dump	• Communicable through bloodborne contact	
Special situations: Tailored recommendations	• Women with SUD NOT stable in treatment • Heavy alcohol consumption or AUD • Cannabis use (controversial)	

MOUD is NOT a contraindication to breastfeeding

Women don't want to hurt their babies

SUPPORTIVE STRATEGIES AND POST-DISCHARGE CARE FOR PREGNANT MOMS

- Find or build stable, experienced recovery program opportunities for teen moms
  - Address and support basic parenting
  - Use trauma informed approaches for teens
  - Growth, skills development to address stigma and build confidence
- Formulate (shared) prenatal care plan that addresses all phases of pregnancy and breastfeeding (on MOUD)
- Ensure health services for mom (including ongoing MOUD and therapy)
- Medical and neuro-developmental monitoring for Baby
  - Monitoring for additional symptoms
  - Basic health care supervision for infants
- Protective Factors for Parenting



Picture from Children's Home Society, Concept from Center for the Study of Social Policy.

HAVING A PLAN OF SAFE CARE IS VITAL- EVEN FOR TEEN MOMS

The ideal Plan of Safe Care addresses mom's and baby's needs, is multidisciplinary, shared and reinforced

SPECIAL ISSUES FOR CONSENT TO ADDICTION TREATMENT FOR YOUTH

HEALTH MANAGEMENT ASSOCIATES

MINOR CONSENT LAWS

- The state of CA allows minors **over 12 years of age** to consent for the following services without parental consent:
  - **Drug or alcohol abuse treatment**
  - Outpatient mental health services/shelter services
  - Prevention, diagnosis and treatment of STIs
  - Diagnosis and treatment of other communicable diseases
  - Intimate partner violence
  - HIV/AIDS prevention, testing, and treatment
- The state of CA allows minors of **any age** to consent for the following services without parental consent:
  - Prevention and treatment of pregnancy
  - Sexual assault services, and medical care for rape*
  - Contraception including abortion
- Minors **may not**:
  - Consent to "Replacement narcotic abuse treatment"
  - Refuse medical care and counseling for a drug or alcohol related problem **when** the minor's parent consents to that treatment

SOURCE : Unsplash

Source: 1) 2018 National Center for Youth Law, revised: Nov. 2018. Available at www.teenhealthlaw.org.; 2) http://publichealth.lacounty.gov/dhsp/Providers/toolkit2.pdf

CONSENT FOR MINORS TO USE MEDICATIONS FOR ADDICTION TREATMENT

"Psychotropic Medications or psychotropic drugs are those medications prescribed to affect the central nervous system to treat psychiatric disorders or illnesses. They may include, but are not limited to, anxiolytic agents, antidepressants, mood stabilizers, antipsychotic medications, anti-Parkinson agents, hypnotics, medications for dementia, and psychostimulants." – *CA Welfare and Institutions Code 369.5(d)*

Source: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=369.5.&lawCode=WIC

MINORS HAVE RESTRICTED ACCESS TO MEDICATIONS FOR ADDICTION TREATMENT

- The CA Departments of Health Care and Social Services consider buprenorphine, methadone and naltrexone to be psychotropic medications
- Consequently, most minors must have their parent's or legal guardian's consent to be treated with MAT
- Consent for MAT for children/youth in foster care depends on custody status
  - For minors in temporary foster care, or who have not yet removed from parental custody:
    - Consent of the parent/guardian is still required to begin treatment
    - Consent may be given by the social worker only after notice has been given to the parent/guardian. If the parent/guardian objects, psychotropic medications require order of the court.
  - For minors, who are dependents and have been removed from the home, consent may be obtained from either:
    - The social worker, if the court has authorized the social worker to consent for care
    - The Court, based, only on the written recommendations from a health care provider
    - The parent/guardian, only if there is a specific court order delegating that authority to the parent

Source: NCYL. FAQ about Minor Consent for SUD Services in California. https://cshca-wpengine.netdna-ssl.com/wp-content/uploads/2020/12/NCYL-SUD-Minor-Consent-FAQ.pdf

MINOR CONSENT LAWS: PRIVACY AND RELEASE OF INFORMATION

- When a state law allows minors to give consent for their own drug or alcohol abuse treatment, federal law generally prohibits providers from disclosing any information related to that treatment without the minor's written consent
- Consequently, with limited exceptions, the privacy, access and confidentiality laws protecting others in SUD treatment apply to adolescents who have applied for and are receiving SUD treatment
  - HIPAA:
    - Passed in mid-1990s, updates in 2009 and 2013
    - Defines "covered entities" and "business associates"
    - "General" rule which healthcare operates to ensure data privacy/security
  - 42 CFR part 2:
    - Enacted in early 1970s (No "HIPAA" at that time)
    - Ensure individuals seeking treatment for SUD would not be retaliated against

Source: https://www.hhs.gov/about/news/2019/08/22/hhs-42-cfr-part-2-proposed-rule-fact-sheet.html

SHARING INFORMATION ABOUT ADOLESCENTS IN SUD TREATMENT

- In general, the teen's consent is required to disclose information that would identify this individual in SUD treatment
  - Information required on a valid consent form is the same as for adults (nine criteria for 42 CFR part 2)
  - That includes parents, teachers, and law enforcement (even with a routine subpoena signed by a judge)
  - EXCEPTION: When the **parent/guardian** seeks care for a drug- or alcohol-related problem of a minor (CA Family code section 6929)
- Consent is even required to disclose information about SUD treatment of youth in the Juvenile Justice System (JJS)
  - Rules about the length of time consent is valid for youth in JJS depend on:
    - "Substantial Change in Status"
    - Whether juvenile is receiving treatment in lieu of prosecution

SUMMARY

There is a huge need for OUD (and all SUD) services for adolescents

Adolescent brain development predisposes them to risky behaviors including substance use

Medications for Addiction Treatment / Medications for Opioid Use Disorder (MAT/MOUD) should be made available to all adolescents who need it, including pregnant teens

Adolescents can legally consent to most treatment for SUD, but MAY NOT consent to treatment with “replacement narcotic abuse treatment” (i.e., buprenorphine or methadone) and must have “two detox treatment failures” to qualify for methadone

We can create a continuum of youth-specific and relevant services for this population that consider:
- Different use patterns and practices among adolescents
- Treatment and harm reduction approaches that exploit effective use of social media, venues when they use and peer-delivered messages

POINTS TO REMEMBER

CHATTERFALL

Think about an adolescent you know who has struggled with addiction.

Reflecting on what you have heard so far today, has your thinking about their behavior related to SUD or treatment changed?

If yes, please type a brief sentence about how your thinking may have changed.

TIME FOR A POLL…

POLL

Do you know a young person who has received MAT for OUD?

A. Yes
B. No

If you answered yes in the previous poll, from your perspective, is/was this treatment helpful for them?

A. Yes
B. No
C. N/A (I do not know a youth who has received MAT for OUD)

QUESTIONS?

POLLING QUESTIONS

1. Overall, today's webinar was:
   A. Very useful
   B. Somewhat useful
   C. Not very useful
   D. Not useful at all

2. The material presented today was:
   A. At the right level
   B. Too basic
   C. Too detailed

HEALTH MANAGEMENT ASSOCIATES

REFERENCES

REFERENCES

- American Academy of Pediatrics Committee on Substance Use and Prevention. Medication-assisted treatment of adolescents with opioid use disorders. Pediatrics. 2016;138(3):e20161893
- Adolescent Rain and Cognitive development (ABCD) study https://www.drugabuse.gov/drug-topics/adolescent-brain/longitudinal-study-adolescent-brain-cognitive-development-abcd-study
- American Academy of Child and Adolescent Psychiatry https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/The-Teen-Brain-Behavior-Problem-Solving-and-Decision-Making-095.aspx
- Camenga DR, Colon-Rivera HA, Muvvala SB. Medications for Maintenance Treatment of Opioid Use Disorder in Adolescents: A Narrative Review and Assessment of Clinical Benefits and Potential Risks. J Stud Alcohol Drugs. 2019 Jul;80(4):393-402.
- Feder KA, Krawczyk N, Saloner B. Medication-assisted treatment for adolescents in specialty treatment for opioid use disorder. J Adolesc Health. 2017;60(6):747–750
- Finch AJ, Jurinsky J, Anderson BM. Recovery and Youth: An Integrative Review. Alcohol Res. 2020 Dec 17;40(3):06. doi: 10.35946/arcr.v40.3.06. PMID: 33344101; PMCID: PMC7732345.
- Hadland SE, Wharam JF, Schuster MA, Zhang F, Samet JH, Larochelle MR. Trends in Receipt of Buprenorphine and Naltrexone for Opioid Use Disorder Among Adolescents and Young Adults, 2001-2014. JAMA Pediatr. 2017 Aug 1;171(8):747-755
- Levy S. Youth and the Opioid Epidemic. Pediatrics. 2019;143(2):e20182752
- Levy S, Mountain-Ray S, Reynolds J, Mendes SJ, Bromberg J. A novel approach to treating adolescents with opioid use disorder in pediatric primary care. Subst Abus. 2018;39(2):173-181
- Marshall BD, Green TC, Yedinak JL, Hadland SE. Harm reduction for young people who use prescription opioids extra-medically: Obstacles and opportunities. Int J Drug Policy. 2016 May;31:25-31. doi: 10.1016/j.drugpo.2016.01.022. Epub 2016 Feb 4. PMID: 26919826; PMCID: PMC4975034.
- Martin JA, Hamilton BE, Osterman MJK, Driscoll AK. Births: final data for 2018. Natl Vital Stat Rep. 2019;68(13):1–47.
- Meier et al. (2012). Persistent cannabis users show neuropsychological decline from childhood to midlife. P Nat Acad Sci 109(40):E2657–E2664.

REFERENCES

- National Center for Youth Law. Frequently Asked Questions about Minor Consent for Substance Use Disorder Services in California. https://cshca-wpengine.netdna-ssl.com/wp-content/uploads/2020/12/NCYL-SUD-Minor-Consent-FAQ.pdf
- National Center for Youth Law. Consent to Treatment for Minors in Foster Care – By Custody and Placement. http://teenhealthlaw.org/wp-content/uploads/2021/09/Dep-Custody-Consent-chart2021.pdf
- Salas-Wright CP, Vaughn MG, Ugalde J, Todic J. Substance use and teen pregnancy in the United States: evidence from the NSDUH 2002-2012. Addict Behav. 2015 Jun;45:218-25. doi: 10.1016/j.addbeh.2015.01.039. Epub 2015 Feb 13. PMID: 25706068; PMCID: PMC4374013.
- Silvers JA, Squeglia LM, Rømer Thomsen K, Hudson KA, Feldstein Ewing SW. Hunting for What Works: Adolescents in Addiction Treatment. Alcohol Clin Exp Res. 2019 Apr;43(4):578-592 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6443447/pdf/nihms-1012243.pdf
- St Marie B, Coleman L, Vignato JA, Arndt S, Segre LS. Use and Misuse of Opioid Pain Medications by Pregnant and Nonpregnant Women. Pain Manag Nurs. 2020;21(1):90-93. doi:10.1016/j.pmn.2019.05.002
- California Departments of Social Services and California Department of Health Care Services. Foster Care Quality Improvement Project: Guidelines for the Use of Psychotropic Medications with Children and Youth in Foster Care. https://www.courts.ca.gov/documents/BTB24-1G-12.pdf
- Reproductive Health Equity Project website provides information about minor consent laws in California. Separate resources are targeted to youth, providers caregivers and child welfare. http://fosterreprohealth.org/know-the-law-2/

REFERENCES

HARM REDUCTION

- Bagley, Sarah M., et al. "Integrating substance use care into primary care for adolescents and young adults: Lessons learned." Journal of Substance Abuse Treatment 129 (2021): 108376.
- Brandon D.L. Marshall1,*, Traci C. Green2,3, Jesse L. Yedinak1, and Scott E. Hadland. Harm reduction for young people who use prescription opioids extra-medically: Obstacles and opportunities
- Hadland, S. E., et al. "Evidence-Based Treatment of Young Adults With Substance Use Disorders." Pediatrics 147.Suppl 2 (2021): S204-S214.
- Hadland, S. E., et al. “Receipt of Timely Addiction Treatment and Association of Early Medication Treatment With Retention in Care Among Youths With Opioid Use Disorder.” JAMA Pediatr, 172(11), 1029-1037. doi:10.1001/jamapediatrics.2018.2143
- Jenkins, E.K., Slemon, A. & Haines-Saah, R.J. Developing harm reduction in the context of youth substance use: insights from a multi-site qualitative analysis of young people’s harm minimization strategies. Harm Reduct J 14, 53 (2017). https://doi.org/10.1186/s12954-017-0180-zKimmel, Simeon D., et al. "Principles of harm reduction for young people who use drugs." Pediatrics 147.Supplement 2 (2021): S240-S248.
- Linton, Sabriya L., et al. "“People Don’t Just Start Shooting Heroin on Their 18th Birthday”: A Qualitative Study of Community Stakeholders’ Perspectives on Adolescent Opioid Use and Opportunities for Intervention in Baltimore, Maryland." Prevention Science 22.5 (2021): 621-632.
- https://www.goslow.org/
- https://harmreduction.org/

REFERENCES FOR MEDICATION SECTION

- ASAM, (2020) National Practice Guidelines for the Treatment of OUD.
- Mattick, RP, et al. (2009) Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. Cochrane Systematic Review
- Mattick, RP, et al. (2014) Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. Cochrane Systematic Review
- Lobmaier, P et al. (2008) Sustained-Release Naltrexone For Opioid Dependence. Cochrane Systematic Review
- Larochelle, et al. Medication for opioid use disorder after nonfatal opioid overdose and association with mortality. A cohort study. Annals of Internal Medicine. 169:3 (2018) 137-45
- Schwartz et al., “Opioid Agonist Treatments”
- Judith I. Tsui et al., “Association of Opioid Agonist Therapy With Lower Incidence of Hepatitis C Virus Infection in Young Adult Injection Drug Users,” JAMA Internal Medicine 174, no. 12 (2014): 1974–81, http://archinte.jamanetwork.com/article.aspx?articleid=1918926
- Metzger DS et al., “Human Immunodeficiency Virus Seroconversion Among Intravenous Drug Users In- and Out-of-Treatment: An 18-Month Prospective Follow-Up,” Journal of Acquired Immune Deficiency Syndromes 6, no. 9 (1993): 1049–56, http://www.ncbi.nlm.nih.gov/pubmed/8340896
- Healthresearchfunding.org(2019) https://healthresearchfunding.org/

REFERENCES FOR MEDICATION ADDICTION TREATMENT (MAT)

- Principals of Drug Addiction Treatment: A Research Based Guide." National Institute on Drug Abuse. Ed. NIDA International Program
- Treatment Research Institute (TRI), Ed. "Cost Utilization Outcomes of Opioid Dependence Treatment" American Journal of Managed Care 2011
- Krupitsky, et. al. Injectable extended-release naltrexone for opioid dependence: a double-blind placebo controlled, multicenter randomized trial. 2011; Lancet 377: 1506-13.
- Kakko et al. 1-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden: a randomized, placebo-controlled trial. Lancet (2003) 361(9358):662-8
- Rich, JD, et al. Continuation versus forced withdrawal on incarceration in a combined US prison and jail: a randomized, open-label trial. Lancet (2015) 386 (9991): 350-359
- www.druginserts.com
- SAMHSA Tip 63 Medications for Opioids Use Disorder

REFERENCES FOR MEDICATION ADDICTION TREATMENT (MAT)

- National Academies of Sciences, Engineering, and Medicine. (2019). Medications for opioid use disorder save lives. Washington, DC: The National Academies Press.
- Nosyk, B., Sun, H., Evans, E., Marsh, D. C., Anglin, M. D., Hser, Y. I. et al. (2012). Defining dosing pattern characteristics of successful tapers following methadone maintenance treatment: Results from a population-based retrospective cohort study. Addiction, 107, 1621-1629.
- Substance Abuse and Mental Health Services Administration. (2018). Medications for opioid use disorder: Treatment improvement protocol (TIP 63) for healthcare and addiction professionals, policy makers, patients and families. (Rep. No. HHS Publication No. SMA 18-5063). Bethesda, MD: Author.
- Substance Abuse and Mental Health Services Administration and Office of the Surgeon General. (2018). Facing addiction in America: The Surgeon General's spotlight on opioids. Washington, DC: US Department of Health and Human Services.
- Substance Abuse and Mental Health Services Administration: Use of Medication-Assisted Treatment for Opioid Use Disorder in Criminal Justice Settings. HHS Publication No. PEP19-MATUSECJS Rockville, MD: National Mental Health and Substance Use Policy Laboratory. Substance Abuse and Mental Health Services Administration, 2019.