MEDICATION-ASSISTED TREATMENT IN INTEGRATED CARE SETTINGS

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Outline

- **Introduction**
  - Importance of Both Knowledge and Perspective
- **Part 1 – Knowledge**
  - Biology of Addiction
  - Medication-Assisted Treatment (MAT)
- **Part 2 – Perspective**
  - Discussion: How provider perspectives influence patient choice
- **Part 3 – Summary and Q&A**

Imagine…

You have been 5 years abstinence from all drugs and alcohol after decades of relapse and turmoil with friends and family. As a result of these experiences, you've worked hard to become a certified substance use disorder (SUD) counselor in order to help others who are struggling with similar addictions.

While attending a conference, you learn about a new treatment option for SUDs that has been demonstrated to:

- Increase abstinence and treatment retention rates by up to 25%
- Increase treatment engagement rates by up to 30%

As a SUD Treatment Provider, What Would You Do?

A. Steer your clients toward the treatment approach that worked for you – as opposed to this new treatment – reasoning that what worked for you should work for them as well.

B. Research this new treatment intervention so that you're able to tell your clients about its potential benefits in order to better allow them to make informed decisions about their care, and give them access to every available tool and advancement in the field of addiction treatment.

The Power (and Crutch) of Personal Experience

- A majority of SUD treatment providers are in recovery themselves, and thus have personal / lived experience.

- Personal / lived experience in SUD treatment is POWERFUL, and can be an immensely effective treatment tool by allowing us to connect with our clients in ways that are more difficult for others without these experiences.

- However, personal / lived experience can also be limiting if we allow it to be our primary treatment perspective, and if we overly rely on it to anticipate the needs of others and subsequently guide our treatment approach because:
  - SUDs are among the most complex health conditions to treat → condition involving the most complex organ of the body (brain) with complex bio-psycho-social-spiritual origins.
  - Everyone and every situation is different.
  - It can be very difficult to know what we don't know.
  - Human nature often leads us to avoid things we don't understand, and we are all experts in our own personal experiences.

Bottom-line → There is more than one path to recovery, and its important for providers to understand how our personal perspectives influence how we talk to our clients about their treatment decisions.

Framing Today's Two Key Focuses

1) **Knowledge and Education**
   - What the science tells us about addiction and MAT

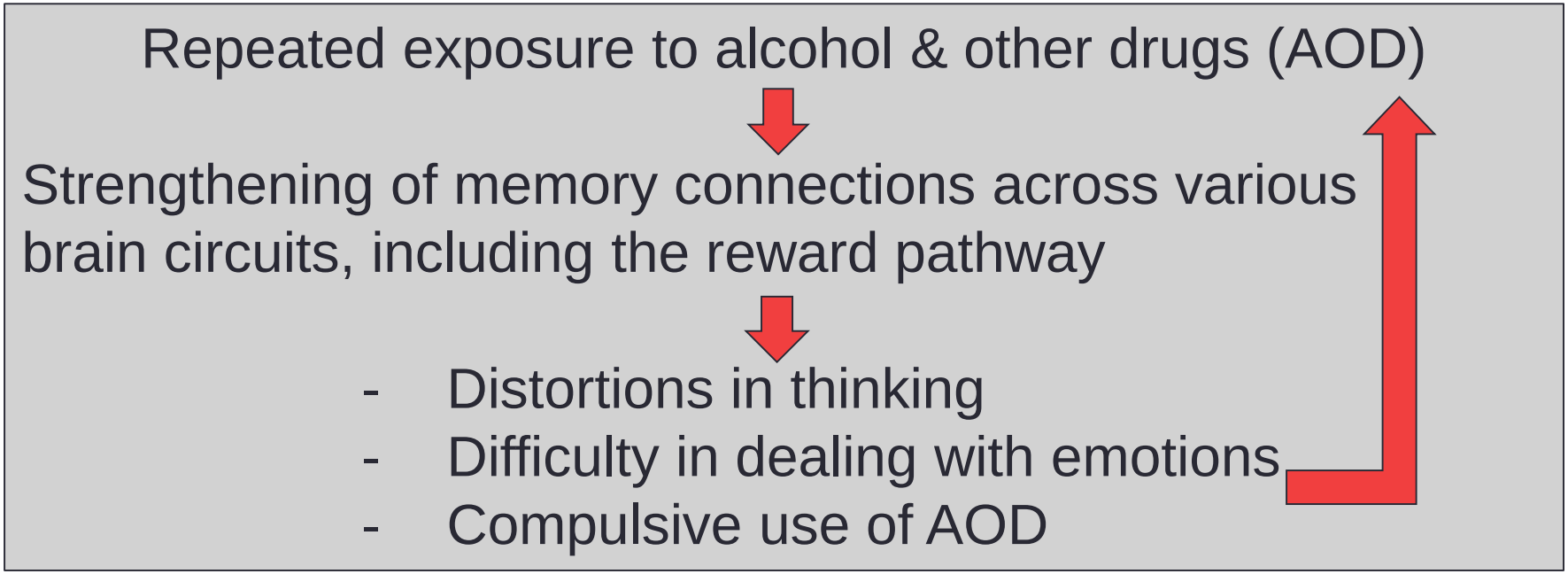
2) **Perspective**
   - Self-reflection about how our personal perspectives influence the care we provide our SUD clients will directly impact the quality of that care

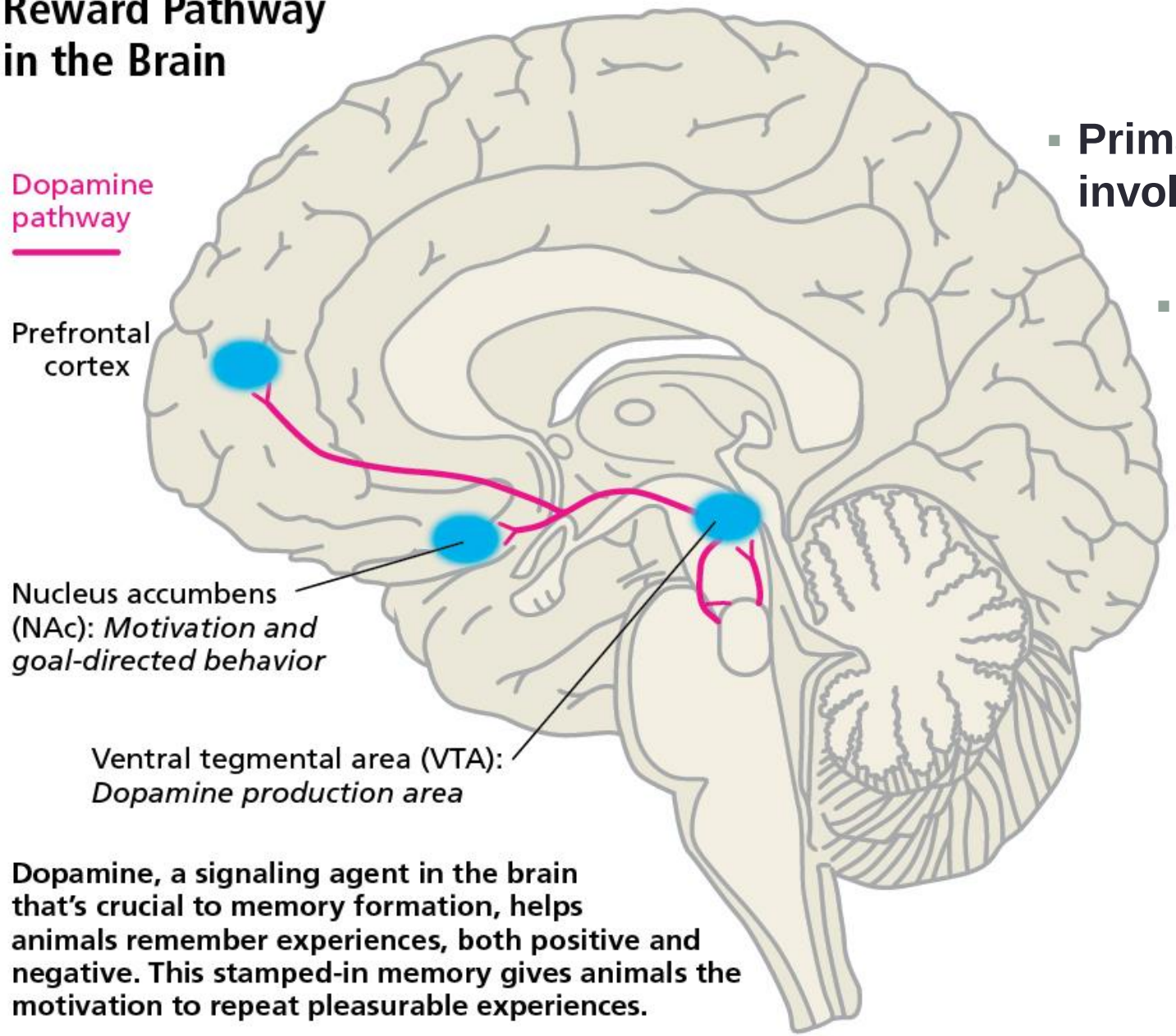
Knowledge + Perspective = Necessary Ingredients for High-Quality, Patient-Centered SUD Care

Part 1: Knowledge

Substance Use Disorders (SUD)

- SUDs are **treatable brain conditions** with **bio-psycho-social-spiritual origins** that commonly exhibit a **chronic and relapsing course**.





- **Primary brain circuit involved in addiction.**
- **Drugs/alcohol act on the same reward pathways as other pleasurable activities.**
  - **Eating**
  - **Sex**
  - **Exercise**

Dopamine

- Dopamine (DA) is the neurotransmitter that's most responsible for pleasure by activating the reward pathway, and is implicated in drug cravings and euphoria.

- In a typical day, the brain produces 50 ng/dl of DA per day, and about 100 ng/dl on a REALLY good day.

- Comparatively, substances of abuse result in excessive DA production and release:
  - Tobacco → 450 ng/dl
  - Marijuana → 650 ng/dl
  - Heroin → 975 ng/dl
  - Methamphetamine → 1100 ng/dl (> 20x normal DA release!)

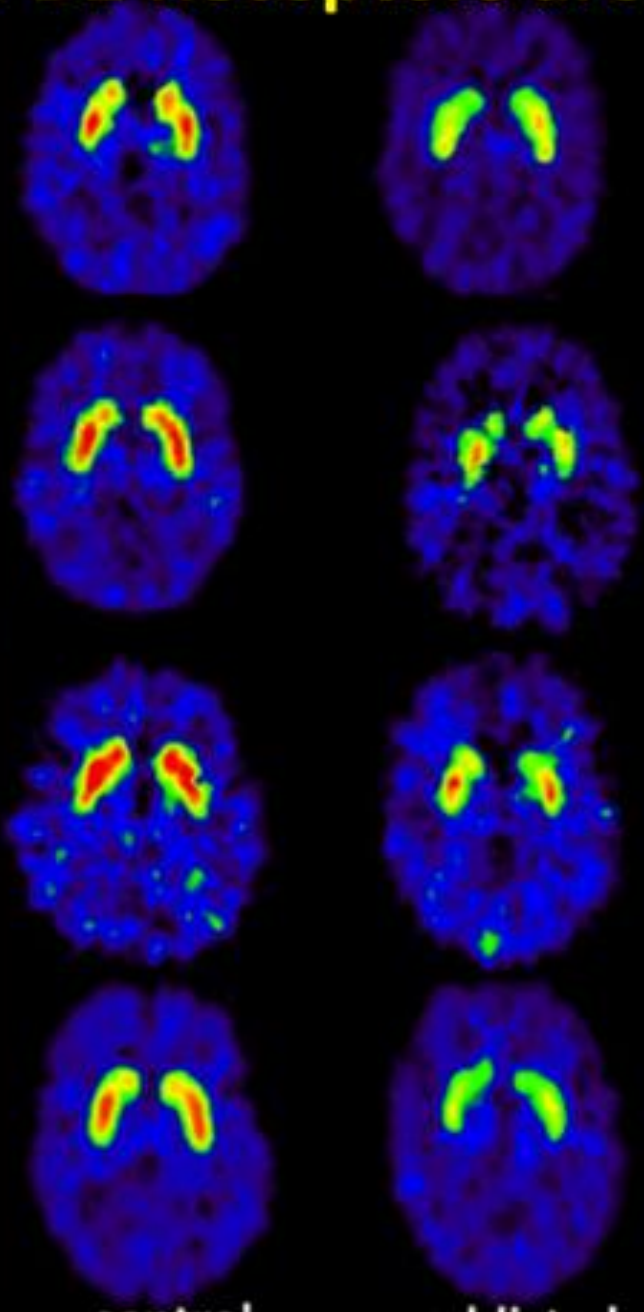
Impact of Drugs on Dopamine

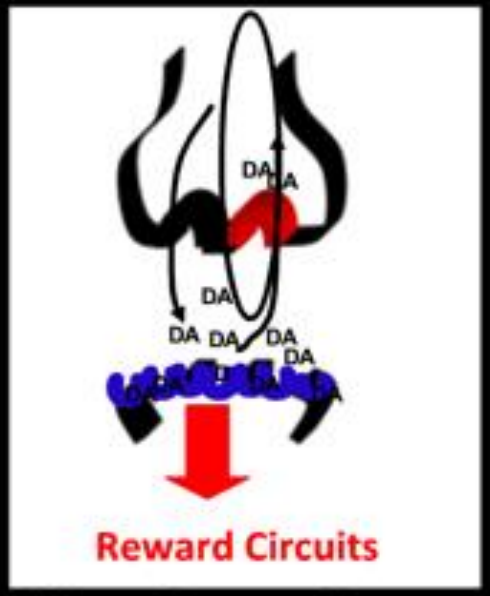
- Drugs of abuse can lead to lasting changes to brain chemistry, particularly involving DA.

- SUD leads to an over-release of DA - the brain becomes accustomed to these unnaturally elevated DA levels and its equilibrium is shifted.
  - Higher and higher levels of DA are needed to experience pleasure (tolerance) → patients often continue using substances to addressed their perceived deficit in dopamine availability

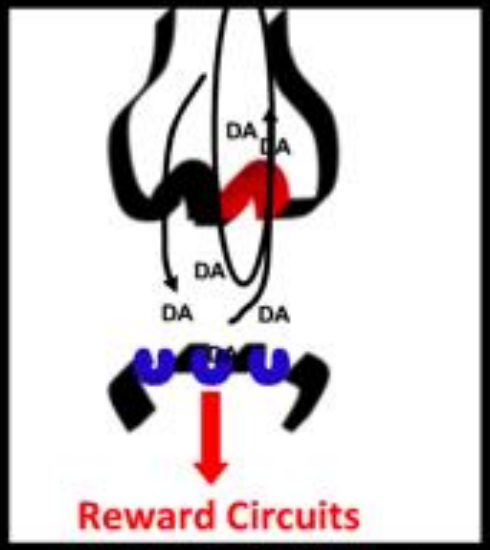
- Brain wants to maintain homeostasis
  - Over time, the brain senses these high DA levels and begins producing less DA in response, which leads to an overall deficiency of DA in the brain.

Dopamine D2 Receptors are Lower in Addiction





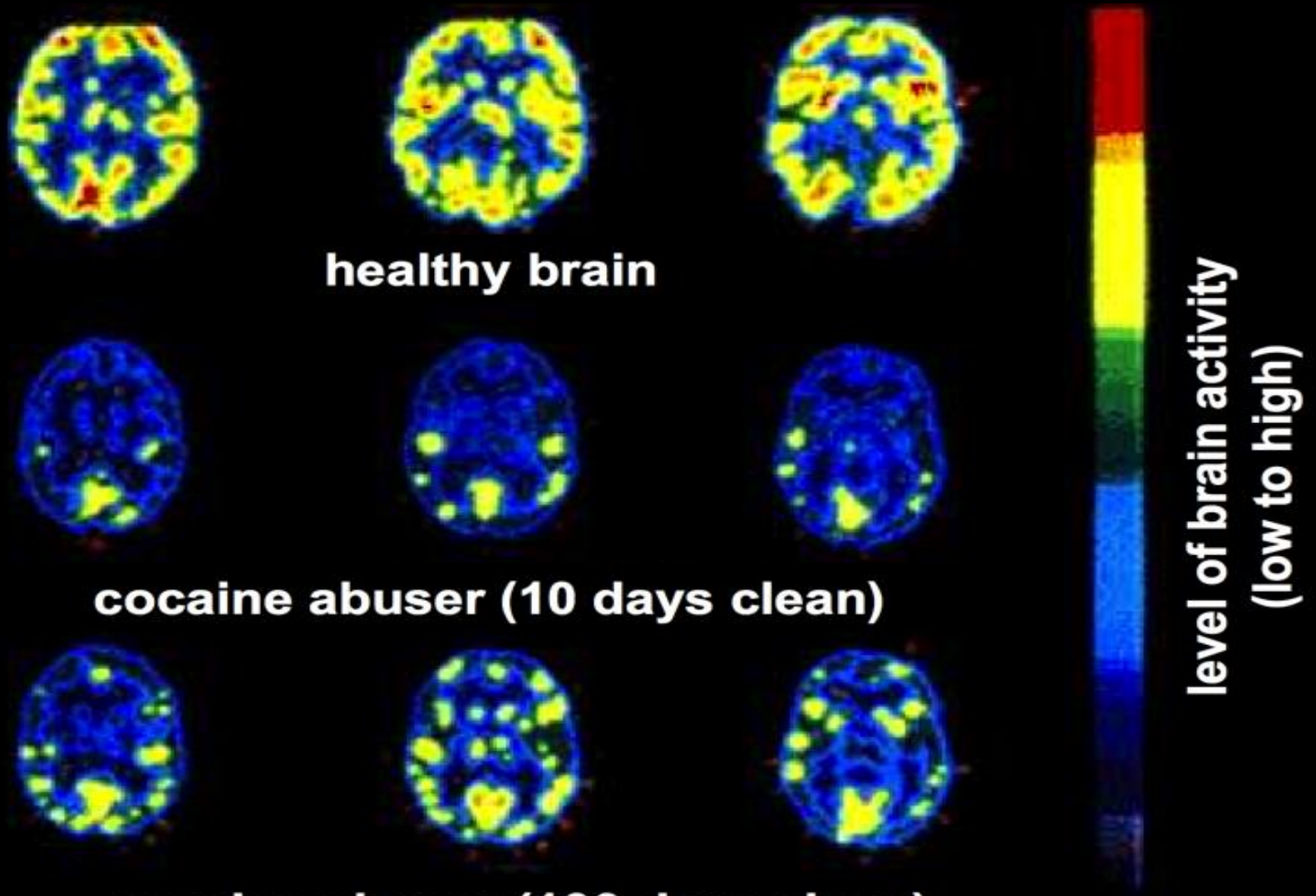
Non-Drug Abuser



Drug Abuser

Source: NIDA

Biology of Recovery



National Institute on Drug Abuse, 2002

Medication-Assisted Treatment (MAT)

- MAT is the use of pharmacological interventions (aka: medications) in combination with counseling and behavioral therapies to address the biomedical aspects of addiction and provide a comprehensive and whole-person approach to SUD treatment.

Role of MAT in SUD Treatment

- Complex problems generally require multifaceted solutions.

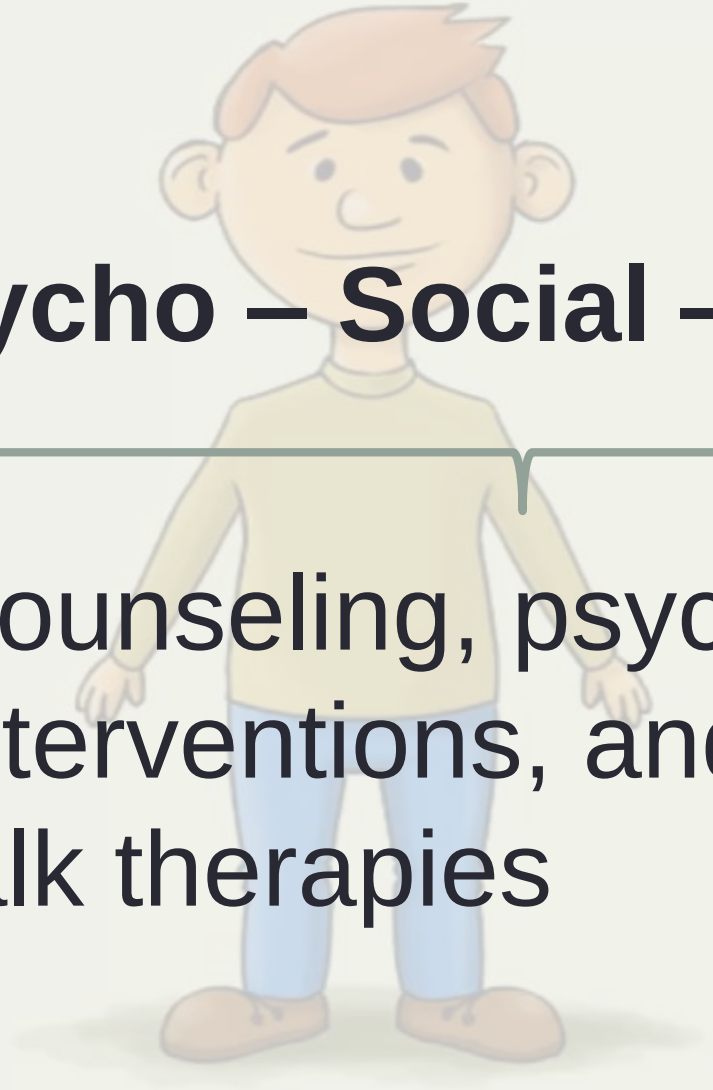
- Best practice for the treatment of most chronic conditions, such as addictions, require both pharmacologic and behavioral/lifestyle interventions:
  - Diabetes, Hypertension, etc. → meds + lifestyle/behavioral counseling (diet, exercise, talk therapy, etc.)
  - Addiction → meds + counseling/therapy

► MAT stabilizes reward pathways and loosens the unnatural & physical grip drugs have on the brain to allow psychosocial interventions and the natural recovery process to work.

MAT & Psychosocial Interventions

- Research has consistently demonstrated that when treating SUDs, a <u>combination of medication and behavioral therapies is more effective than either intervention alone</u>.

Whole Person Addiction Care



Bio – Psycho – Social – Spiritual

MAT

Counseling, psychosocial interventions, and other talk therapies

FDA-Approved MAT

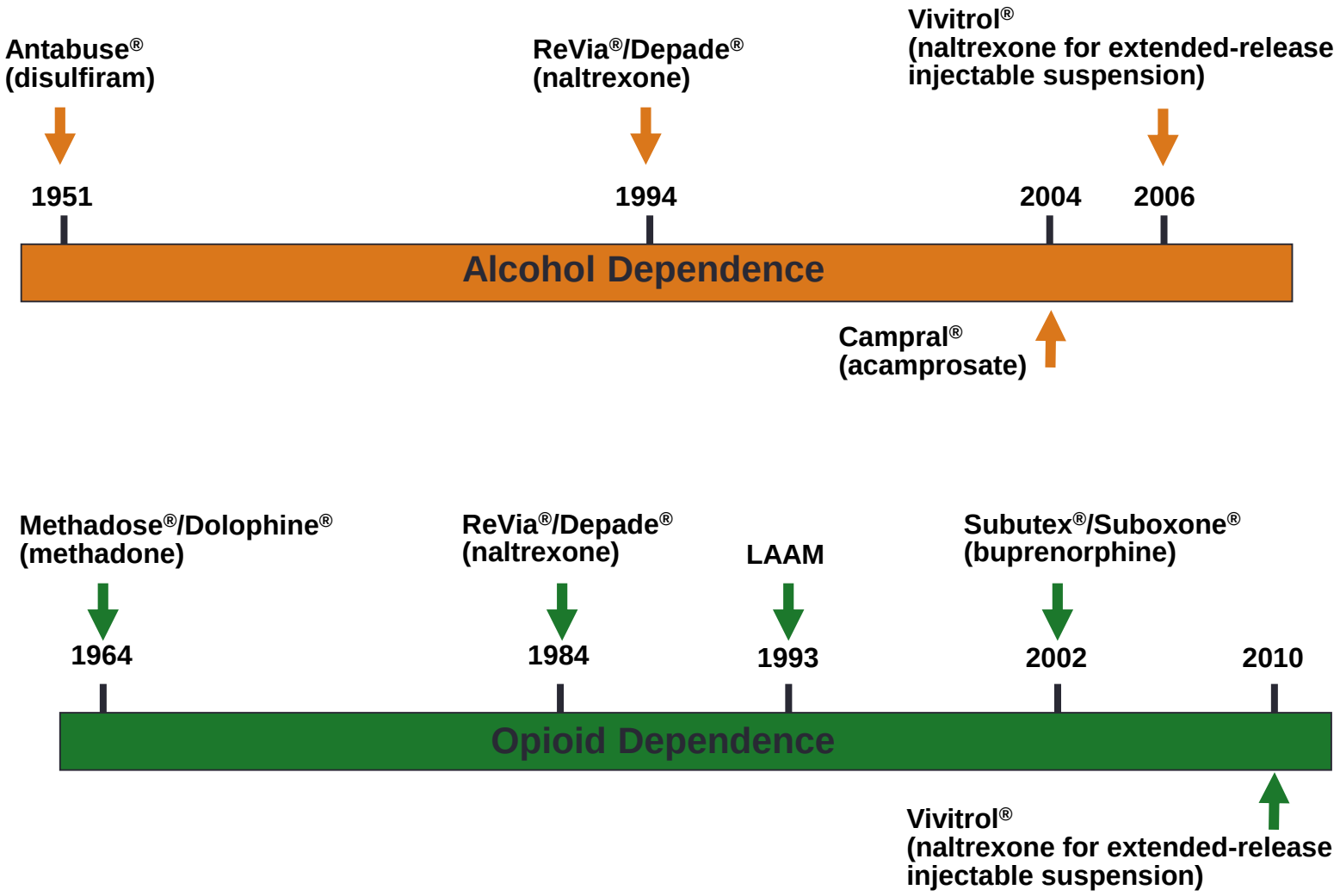
- **Opioid use disorder**
  - Methadone
  - Buprenorphine (aka: Suboxone = buprenorphine + naloxone)
  - Naltrexone (oral, long-acting injectable)

    *Naloxone (used for overdose prevention, not maintenance treatment)

- **Alcohol use disorder**
  - Naltrexone (oral & long-acting injectable)
  - Disulfiram
  - Acamprosate

- **Tobacco use disorder**
  - Buproprion
  - Varenicline

MAT FDA-Approval Timeline

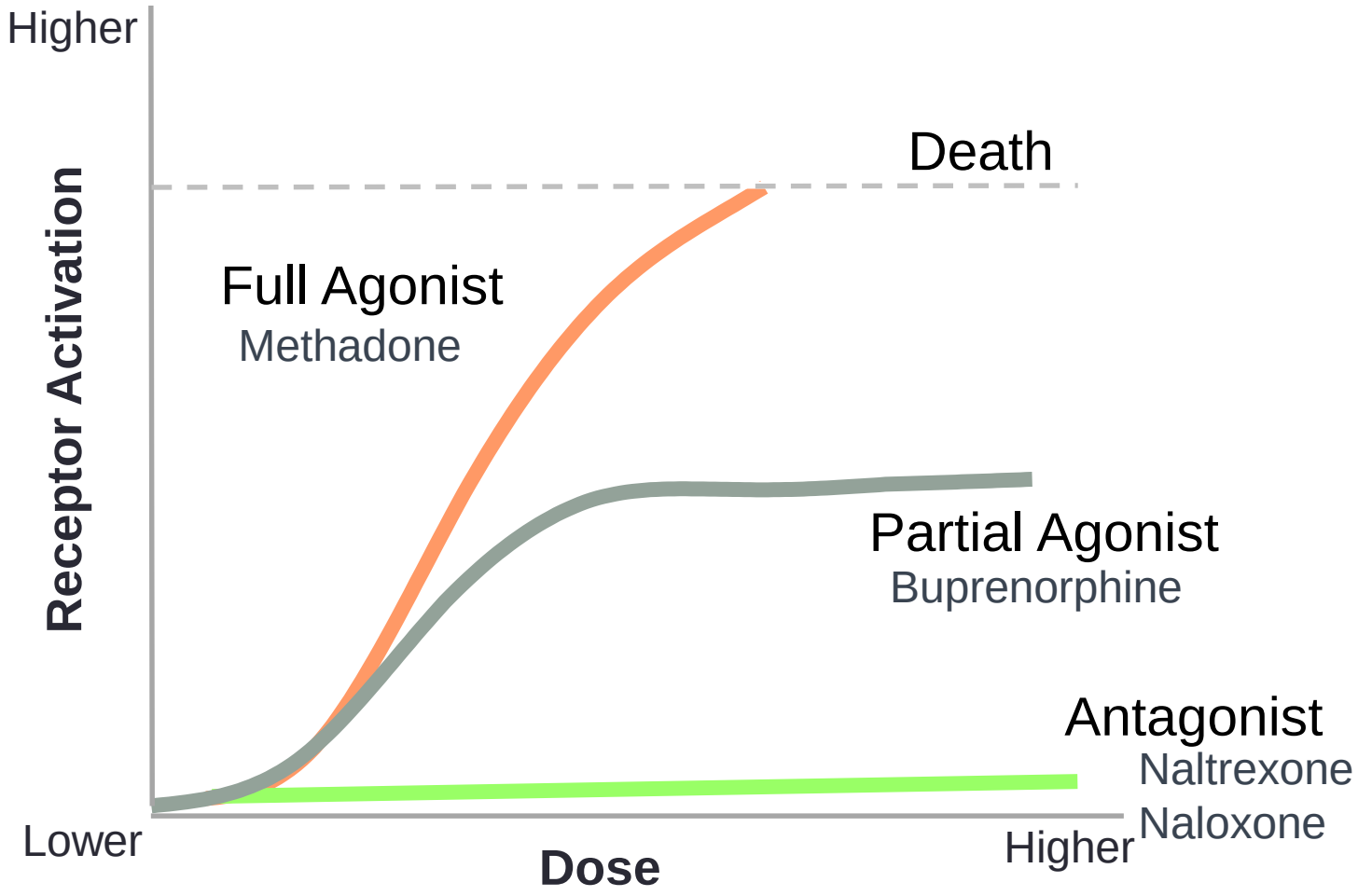


Source: NAADAC; https://myaccucare.com/resources/webinars/materials/slides/webinar-2011-01-20.ppt

When to Start MAT

- Research supports the fact that **MAT definitively improves the percentage of people who sustain their recovery during the first 6 months of treatment.**

MAT for Opioid Use Disorders: How they Work



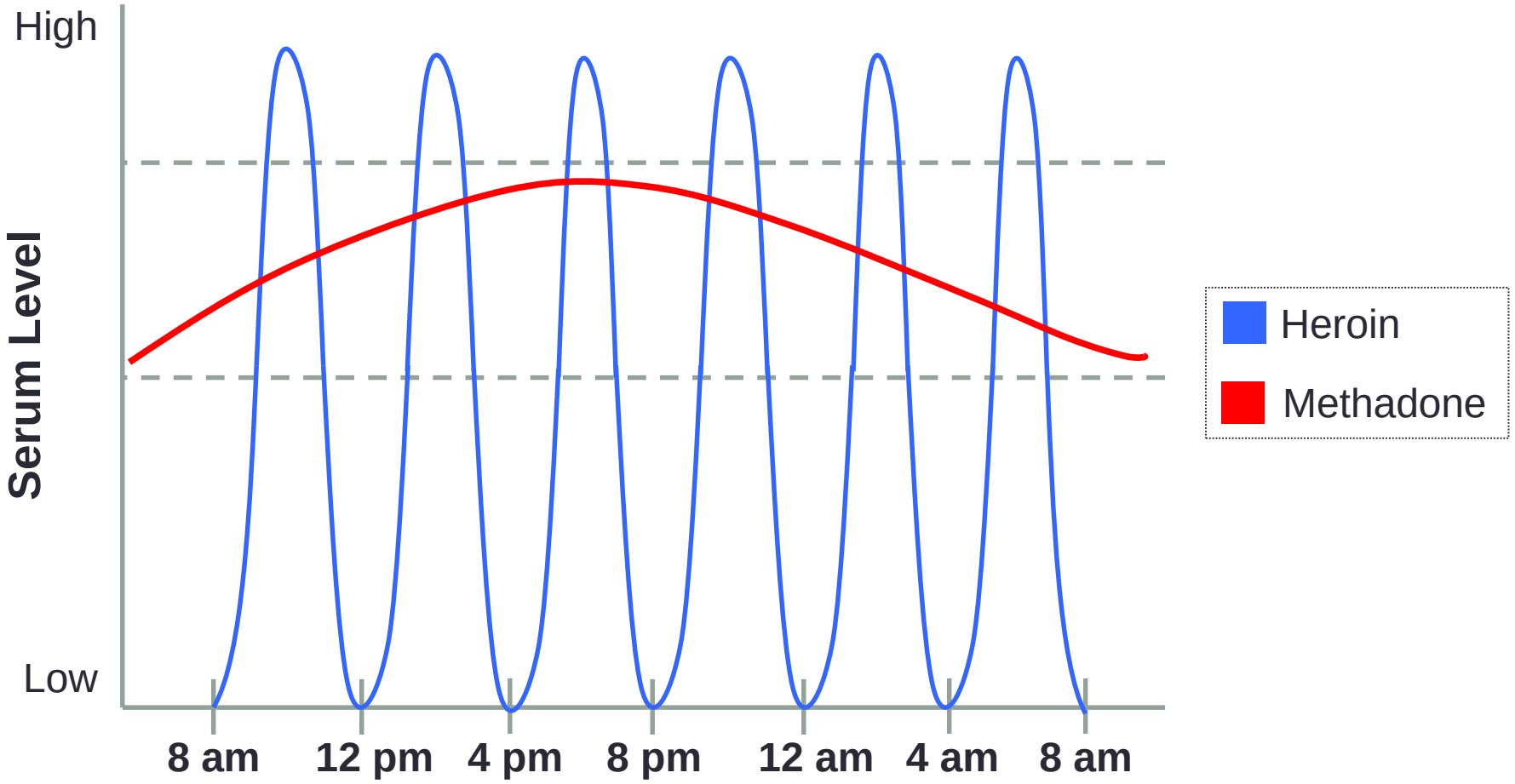
Methadone

- Mechanism → Full mu opioid receptor agonist; binds receptor and exerts full activation
  - **Long-acting and slower onset of action → less euphoria than other opioids**
  - Alleviates withdrawal and cravings

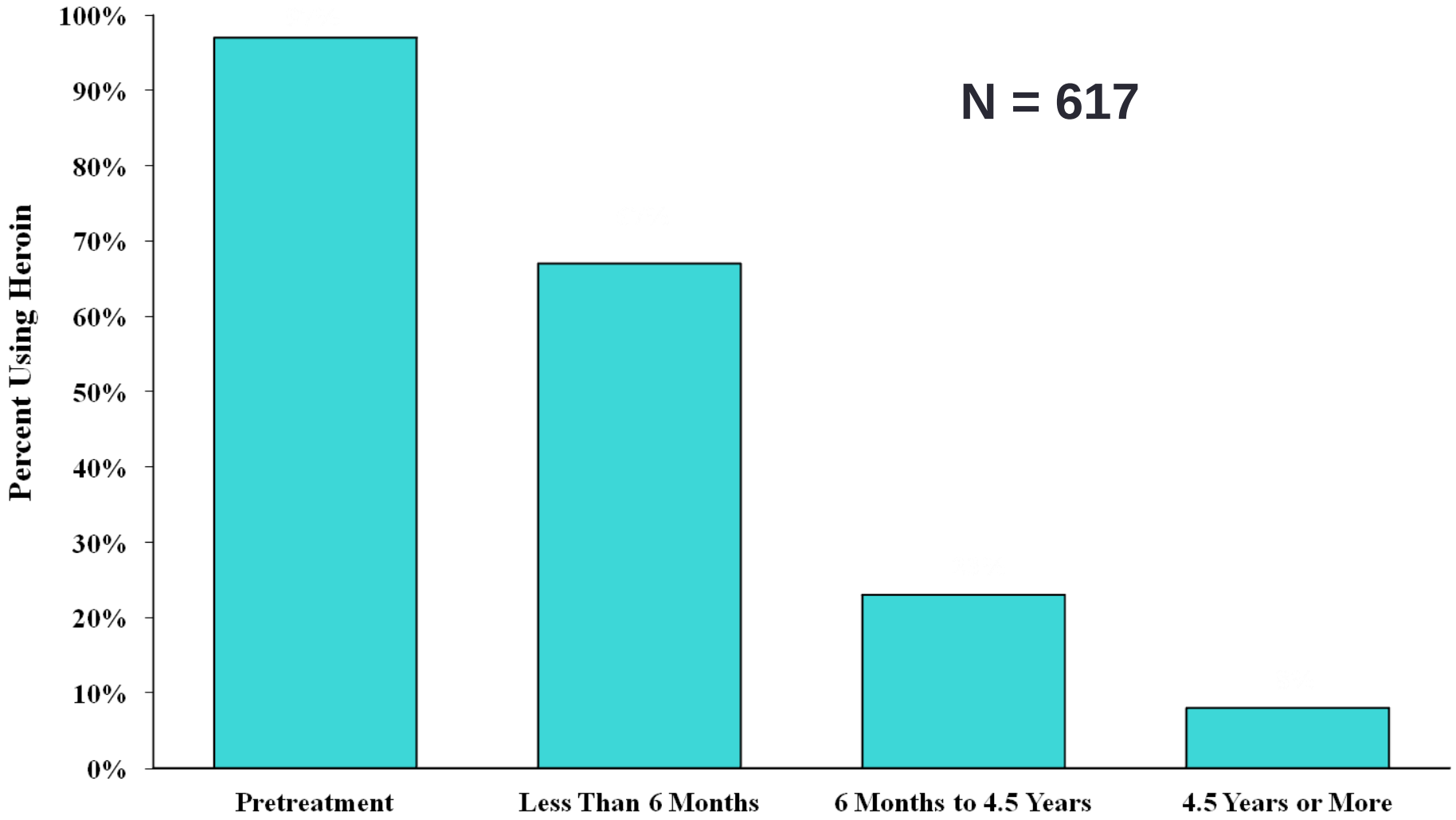
- Indications → Opioid withdrawal management & maintenance treatment
  - Efficacy: Maintenance > withdrawal management only
  - **Length of methadone treatment is a very individual decision depending on patient preference and clinical need/situation → no "ideal" or recommended treatment period**

- Must be prescribed in an Opioid Treatment Program (OTP) setting if used for addiction treatment (if used for pain, may be prescribed in other healthcare settings)

Advantage of Methadone - Stability



Reduction of Heroin Use by Length of Stay in Methadone Maintenance Treatment (MMT)



Ball, JC & Ross A The Effectiveness of Methadone Maintenace Treatment, Springer-Verlag, New York, 1991

Methadone: The Evidence

- In 204 prison inmates given methadone + counseling vs. counseling alone
  - Methadone group had 50% reduction in inmates who tested (+) for opioids after 1 year.
  - Treatment retention after 1 year:
    - 33% of methadone + counseling group still in treatment.
    - 0 clients from counseling only group still in treatment.

Bottom-line summary of the evidence for methadone:
- ↓ relapse and opioid use
- ↑ treatment retention
- ↑ health outcomes

Kinlock, T.W., Gordon, M.S., Schwartz, R.P., Fitgerald, T.T., & O'Grady, K.E. (2009). A Randomized Clinical Trial of Methadone Maintenance for Prisoners: Results at Twelve-Months Post-Release. Journal of Substance Abuse Treatment, 37(3), 277-285.

Buprenorphine

- Mechanism → Partial mu opioid receptor agonist; binds receptor and exerts partial activation
  - Blocks euphoric effect of opioids, alleviates withdrawal and cravings
    - **Strong affinity for mu opioid receptors → will outcompete and displace heroin and other opioids from mu receptors to block their effects, while providing partial agonist activity**
    - **Must dose buprenorphine when client is abstinent or in mild - moderate withdrawal, otherwise buprenorphine will precipitate opioid withdrawal given it is only a partial agonist.**
    - Slow to dissociate from receptors → long-acting, less frequent dosing

- Indications → Opioid withdrawal management & maintenance treatment
  - Efficacy: Maintenance > withdrawal management only
  - No "ideal" or recommended treatment period; very individual decision depending on patient preference and clinical need/situation

- **"Ceiling" effect → dose-dependent effects up to a plateau, at which point further increases in dosage don't exert additional effects**
  - Safer in an overdose due to reduced respiratory and CNS depression, and less risk for diversion

Buprenorphine: The Evidence

- Over 25 years of research and clinical trials on buprenorphine, including over 5,000 patients.

- Effectiveness of buprenorphine has been compared to:
  - Placebo (Johnson et al. 1995; Ling et al. 1998; Kakko et al. 2003)
  - Methadone (Johnson et al. 1992; Strain et al. 1994a, 1994b; Ling et al. 1996; Schottenfield et al. 1997; Fischer et al. 1999)
  - Methadone and LAAM (Johnson et al. 2000)

Bottom-line summary of the evidence for buprenorphine:

- ↑ health outcomes
- ↑ treatment retention
- ↓ illicit opioid use
- ↓ neonatal abstinence syndrome (compared to methadone)

Naltrexone

- Mechanism → **Potent, full antagonist at various opioid receptor sites**
  - **Blocks euphoric effects of opioids and alcohol, and decreases risk of impulsive use**
  - Endogenous opioids are involved in dopamine release and the reinforcing effects of alcohol and possibly cravings
  - **Naltrexone is NOT an opioid and NOT addictive** (Schedule 0)

- Indications → Maintenance relapse prevention treatment for opioid & alcohol use disorders
  - Typically duration of treatment with naltrexone is 3-6 months, but there is no “ideal” or recommended treatment period; very individual decision depending on patient preference and clinical need/situation

- Oral and long-acting injectable formulation (Vivitrol) available
  - **Long-acting injectable formulation recommended due to improved compliance and reduced variability in medication blood levels, which results in less side effects for some**

Naltrexone: The Evidence

- Cochrane systematic review involving 13 randomized controlled trials and 1158 participants with opioid use disorders[1]
  - Naltrexone vs Placebo vs Psychotherapy alone

Summary of the evidence for naltrexone for OPIOIDS:
- ↑ abstinence & treatment retention

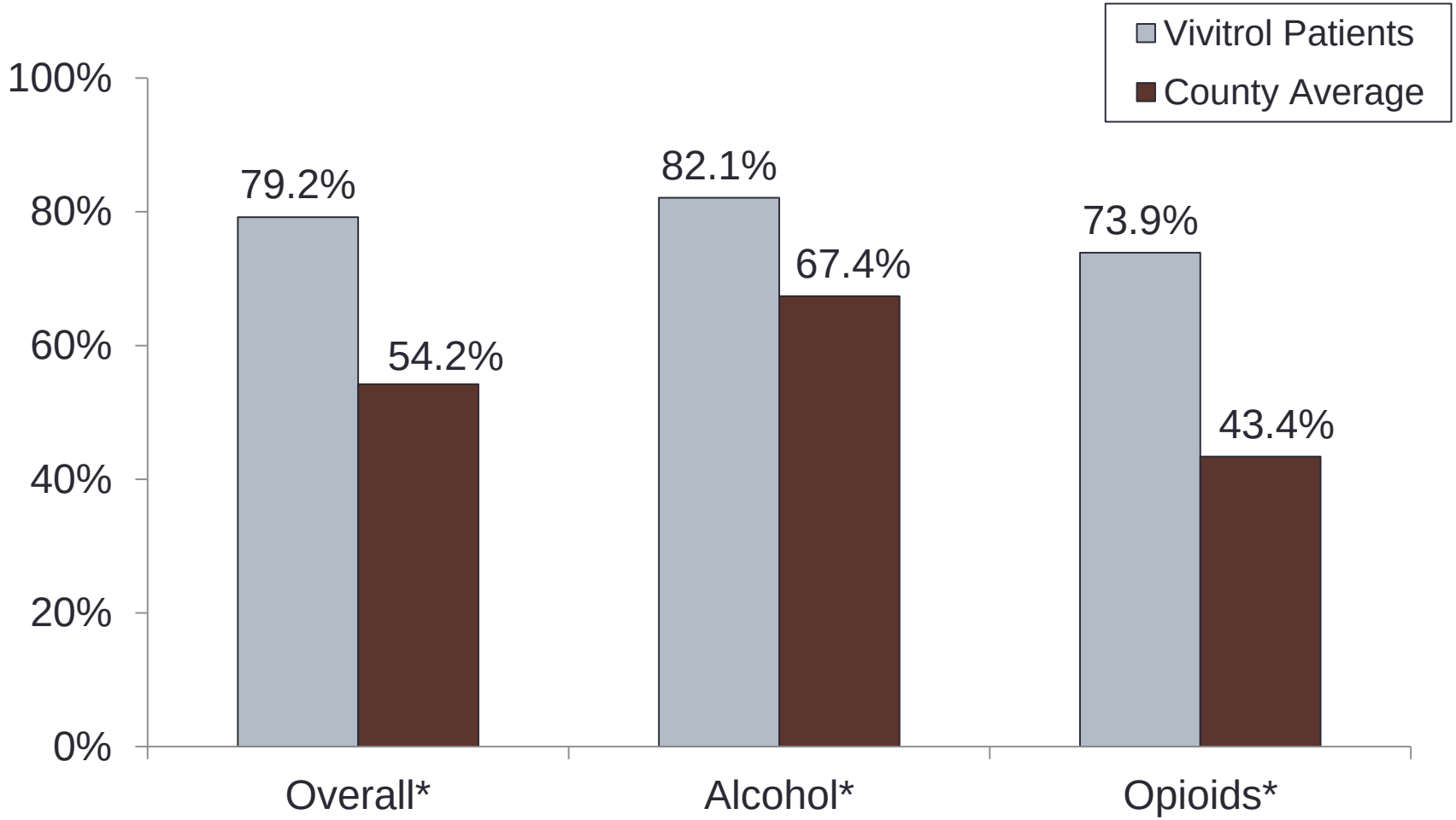
- Cochrane systematic review involving 50 randomized controlled trials and 8000 participants with alcohol use disorders[2]
  - Naltrexone vs Placebo

Summary of the evidence for naltrexone for ALCOHOL:
- ↓ heavy drinking, drinking days, & amount of alcohol consumption

1) Minozzi, S., Amato, L., Davoli, M., Kirchmayer, U., Verster, A. Oral Naltrexone Maintenance Treatment for Opioid Dependence. Cochrane Database of Systematic Reviews, 2011, Issue 4.
2) Rosner, S., Hackl-Herrwerth, A., Leucht, S., Vecchi, S., Srisurapanont, M., Soyka, M. Opioid Antagonists for Alcohol Dependence. Cochrane Database of Systematic Reviews, 2010, Issue 12.

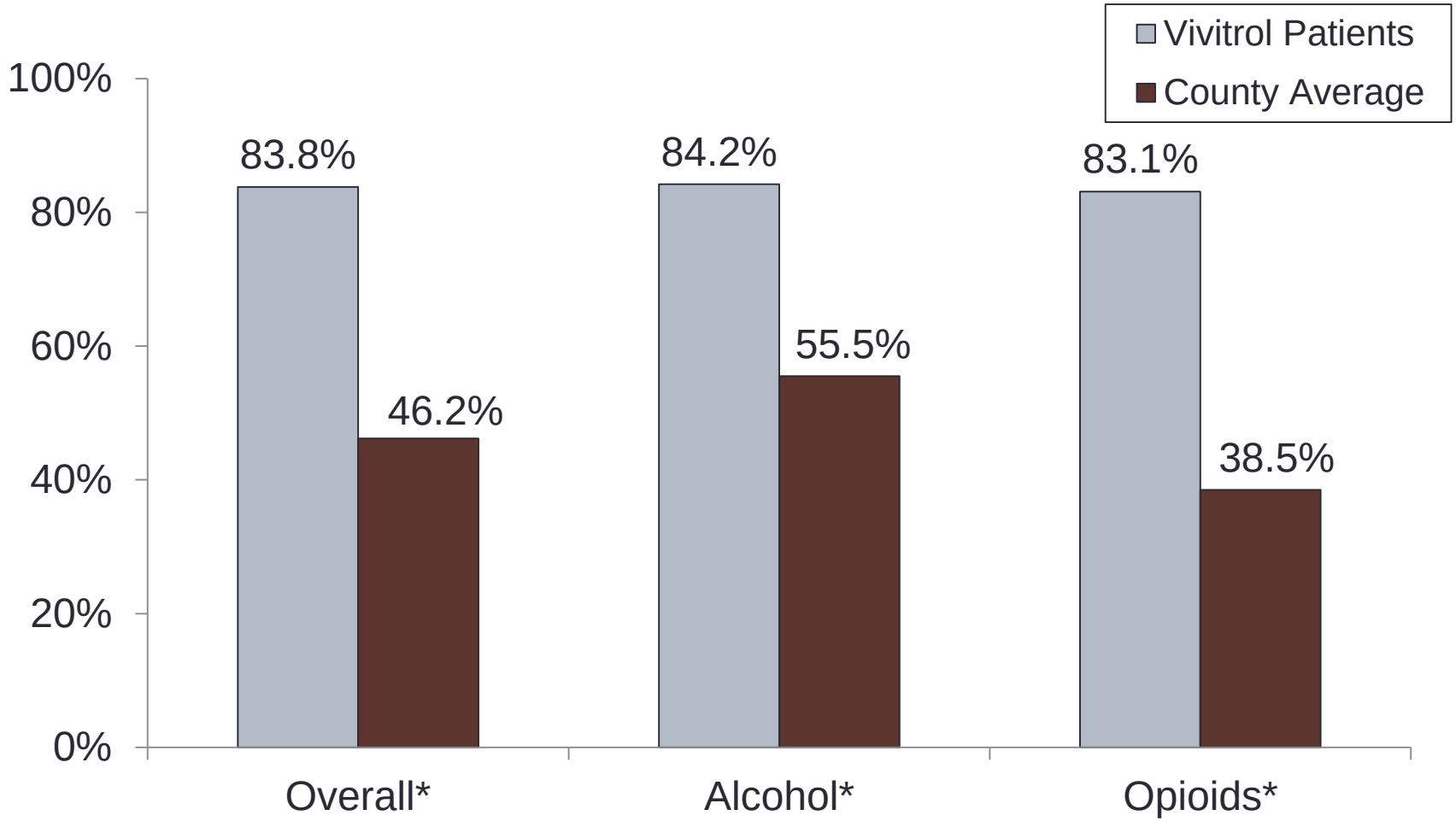
Experiences with Vivitrol Pilot Project in Los Angeles County

Los Angeles: Higher Abstinence Rates among Vivitrol CJ Clients



** Statistically significant at p < . 05*

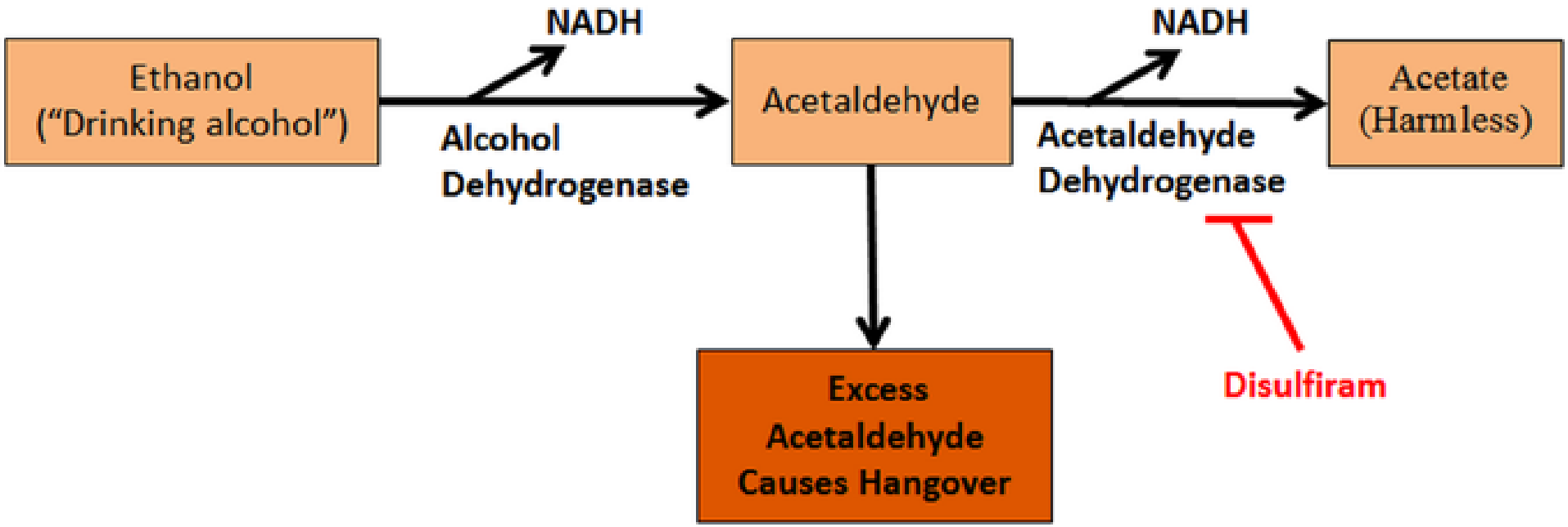
Los Angeles: Higher Treatment Completion Rates among Vivitrol CJ Clients



** Statistically significant at p < . 05*

Disulfiram (Antabuse)

- Mechanism → Blocks acetaldehyde dehydrogenase, causing an excess build up of acetaldehyde, which causes unpleasant physical effects after drinking (flushing, nausea, vomiting, etc.)



Disulfiram (cont'd)

- Indication → Alcohol use disorder
- **"Aversion therapy" to discourage drinking by causing unpleasant physical effects after drinking** (flushing, nausea, vomiting, etc.)
- **Poor compliance**
- Must be abstinent from alcohol for > 12 hrs before dose

Disulfiram: The Evidence

- Meta-analysis including 22 studies
  - Disulfiram was effective when compared with controls, but only in open-label studies and not blind studies[1]
- Systematic review of 11 randomized controlled trials with 1530 participants[2]

Bottom-line summary of the evidence for disulfiram:
- **+/-** effects on short-term abstinence, days until relapse, and # of drinking days
- Unclear long-term effectiveness

- **Overall:**
  - Disulfiram can be useful, particularly those who are motivated, but not for everyone
  - Generally: Naltrexone > Disulfiram

1) Skinner, M.D., Lahmek, P., Pham, H., Aubin, H.J. (2014). Disulfiram Efficacy in the Treatment of Alcohol Dependence: A Meta-Analysis. PLoS ONE 9(2): e87366.
2) Jorgensen, C.H., Pedersen, B., & Tonnesen, H (2011). The Efficacy of Disulfiram for the Treatment of Alcohol Use Disorder. Alcoholism: Clinical and Experimental Research, 35: 1749-1758.

Acamprosate

- Mechanism → **Incompletely understood, believed to stabilize interaction between glutamate and GABA, and inhibit NMDA receptors**
  - Minimizes protracted alcohol withdrawal symptom
  - Anti-craving

- Indications → Alcohol use disorder

Acamprosate: The Evidence

- **Cochrane systematic review of 24 randomized controlled trials, including 6915 participants[1]**
  - Compared to placebo, Acamprosate:
    - ↑ cumulative abstinence duration
    - ↓ risk of any drinking
- **Meta-analysis of 19 published and 1 unpublished randomized control trial[2]**
  - Compared to placebo, Acamprosate group had ↑ in continuous abstinence rate and treatment retention
- **COMBINE study** → Acamprosate no more effective than placebo.

Bottom-line summary of the evidence for acamprosate:
- Mixed evidence compared to placebo

1) Rosner, S., Hackl-Herrwerth, A., Leucht, S., Lehert, P., Vecchi, S., Soyka, M. Acamprosate for Alcohol Dependence. Cochrane Database of Systematic Reviews, 2010, Issue 9.
2) Mann, K., Lehert, P., Morgan, M.Y. (2004). The Efficacy of Acamprosate in the Maintenance of Abstinence in Alcohol-Dependent Individuals: Results of a Meta-Analysis. Alcoholism: Clinical and Experimental Research, 28(1): 51-63.
3) Anton, R.F., et al. (2006). Combined Pharmacotherapies and Behavioral Interventions for Alcohol Dependence: The COMBINE Study: A Randomized Controlled Trial. JAMA, 295(17): 2003-2017.

Naloxone

- Mechanism → Potent, full opioid receptor antagonist
- Indications → Opioid overdose prevention
  - Naloxone is not typically categorized as MAT
- **Naloxone is to opioid overdoses what epinephrine is to anaphylactic shock → LIFESAVING**
- Intra-nasal and injectable formulations.
- As the potency of opioids that are misused evolve (e.g., fentanyl, carfentanil), higher doses and multiple doses of naloxone will be necessary.

↑ Treatment Retention

↑ Employment

↑ Abstinence

↓ Alcohol consumption

↓ Relapses

Demonstrated Benefits of MAT for Opioids/Alcohol

↓ Criminal Activity

↑ Functioning

↓ Total drinking days

↓ Opioid Overdose Risk

Necessary Pivotal Changes in the Addiction Field

- **No longer simply "social model" vs. "medical model," or "abstinence-based model" vs. "harm reduction model"** → field must adopt a more inclusive perspective and tone to reflect the bio-psycho-social-spiritual nature of SUDs, and achieve the goal of mainstreaming addiction care into the rest of the health care system.

- **Redefining "abstinence"** → Abstinence in the addiction field can no longer be defined as abstinence from drugs/alcohol and FDA-approved medications to treat addiction.
  - Inappropriate to equate drugs/alcohol with FDA-approved addiction medications → results in inappropriate stigma against MAT, resulting in a barrier to this evidence-based intervention.

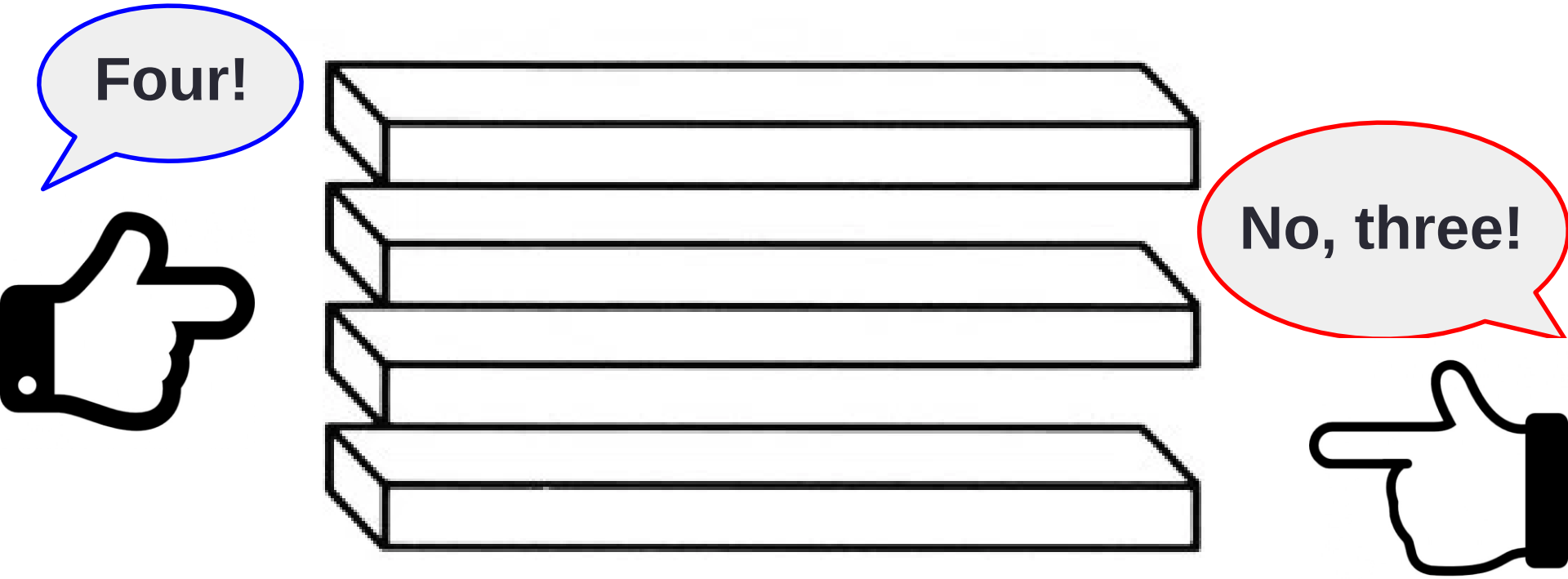
- **MAT is an essential component of SUD treatment and in many ways its greatest untapped resource – NOT a philosophical or ideological issue.**

NOT Providing MAT – Malpractice?

- **Osheroff vs. Chestnut Lodge**
  - In 1979, Dr. Raphael Osheroff was treated for severe depression and anxiety with psychodynamic psychotherapy alone, although treatment staff at Chestnut Lodge were aware there was evidence supporting the use of psychiatric medications. At that time, many therapists believed that psychiatric medications would only mask the symptoms and not allow them to address the root of the problem.
  - Dr. Osheroff's condition worsened; eventually lost medical license and family.
  - Referred to another treatment facility that started psychiatric medications; condition improved shortly thereafter.
  - A lawsuit was filed, claiming that Chestnut Lodge committed malpractice by treating his severe conditions with psychotherapy alone despite the fact that proven medications were available at the time.
  - Dr. Osheroff won an arbitration hearing prior to the lawsuit eventually settling out of court in 1987.
  - This landmark case had a significant impact on how mental health practitioners viewed the use of medications in the treatment of mental disorders moving forward.

- **Addiction field will need to consider the potential liability in not providing clients necessary information and options to allow them to make informed decisions and benefit from treatment advances.**

Part 2: Perspective



MAT: What do you think?

Medication is not a part of treatment.

1) Medications are used for many conditions, including addiction.

2) Medical decisions made by medical providers.

3) Decisions about using medications are based on an individualized assessment.

Medications are drugs, and you cannot be sober if you are taking anything.

1) Millions use medications (e.g., bupropion, varenicline, nicotine patches) to quit smoking
2) Physical dependence and addiction are not the same.
3) The goal of SUD treatment is to assist clients leading a normal, functional life.
4) Pharmacotherapies are effective.

Alcoholics Anonymous (AA) & Narcotics Anonymous (NA) do not support the use of medications.

1) AA/NA literature and founding members did not speak or write against using medications. AA/NA endorses participants to use medicines as prescribed.

2) Some AA/NA meetings hold negative opinions about MAT. It is important to educate clients taking MAT about how to participate in meetings.

Provider Perspectives

Client and Peer Perspectives

Summary

- **Addiction is a bio-psycho-social-spiritual condition**
- **MAT is the use of medications for the treatment of addiction, in combination with counseling and psychosocial interventions**
- **MAT is evidence-based**
- **SUD providers empower clients to make informed treatment decisions.**

- **If we do not discuss MAT with our clients, we are providing sub-standard addiction care**
- **Discouragement of the use of FDA-approved addiction medications is contrary to the science of effective SUD treatment; MAT should be discussed as a treatment option for all patients for whom it may be appropriate and helpful.**
- **SELF-REFLECTION is critical to ensure effective interactions with clients.**

Resources for Medication-Assisted Treatment

- **Case Consultation Support**
  - UCSF Clinician Consultation Center for Substance Use
    - Substance use warmline: 855-300-3595
    - http://nccc.ucsf.edu/clinical-resources/substance-use-resources/
  - Providers' Clinical Support System
    - National training and mentorship project to give prescribers the tools to be able to prescribe MAT (http://pcssmat.org/)

- **Buprenorphine Training Resources**
  - http://www.samhsa.gov/medication-assisted-treatment/training-resources/buprenorphine-physician-training

- **MAT Guidelines / Protocols**
  - SUMMIT: Procedures for Medication-Assisted Treatment of Alcohol and Opioid Dependence in Primary Care (RAND)
    - http://nebula.wsimg.com/1735e46ce18607113746f30247f3faad?AccessKeyId=5647EEC704480FB09069&disposition=0&alloworigin=1

Resources for Medication-Assisted Treatment (cont'd)

- **MAT Guidelines / Protocols (cont'd)**
  - The ASAM National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use
    - http://www.asam.org/docs/default-source/practice-support/guidelines-and-consensus-docs/asam-national-practice-guideline-supplement.pdf?sfvrsn=16
    - http://pcssmat.org/wp-content/uploads/2016/03/PCSS_MAT-Kampman-Guideline-final1.pdf
  - Medication for the Treatment of Alcohol Use Disorder: A Brief Guide (SAMHSA)
    - http://store.samhsa.gov/shin/content/SMA15-4907/SMA15-4907.pdf
  - Recovery Within Reach: Medication-Assisted Treatment of Opioid Addiction Comes to Primary Care (CHCF)
    - http://www.chcf.org/~/media/MEDIA%20LIBRARY%20Files/PDF/PDF%20R/PDF%20RecoveryReachMAT.pdf
  - Safe Med LA: LA County's Prescription Drug Abuse Coalition (www.SafeMedLA.org)

For More Information…

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