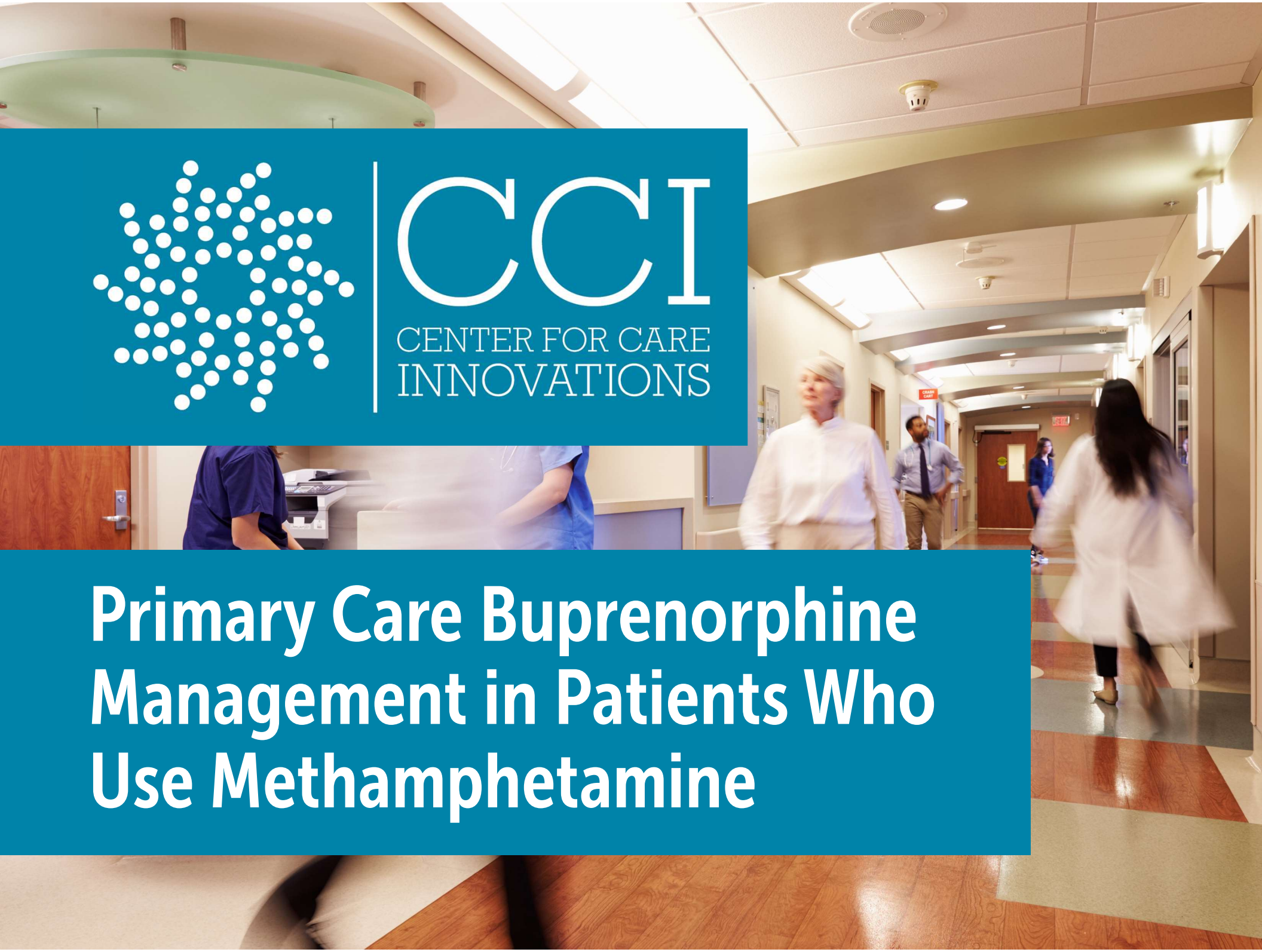

CCI
CENTER FOR CARE INNOVATIONS

Primary Care Buprenorphine Management in Patients Who Use Methamphetamine

Webinar Reminders

1. Everyone is muted.
    - Press *6 to unmute and *6 to re-mute yourself.
2. Remember to chat in questions!
3. Webinar is being recorded and will be sent out via email.

Addiction Treatment Starts Here: Core Program Team

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Primary Care Buprenorphine Management in Patients Who Use Methamphetamine

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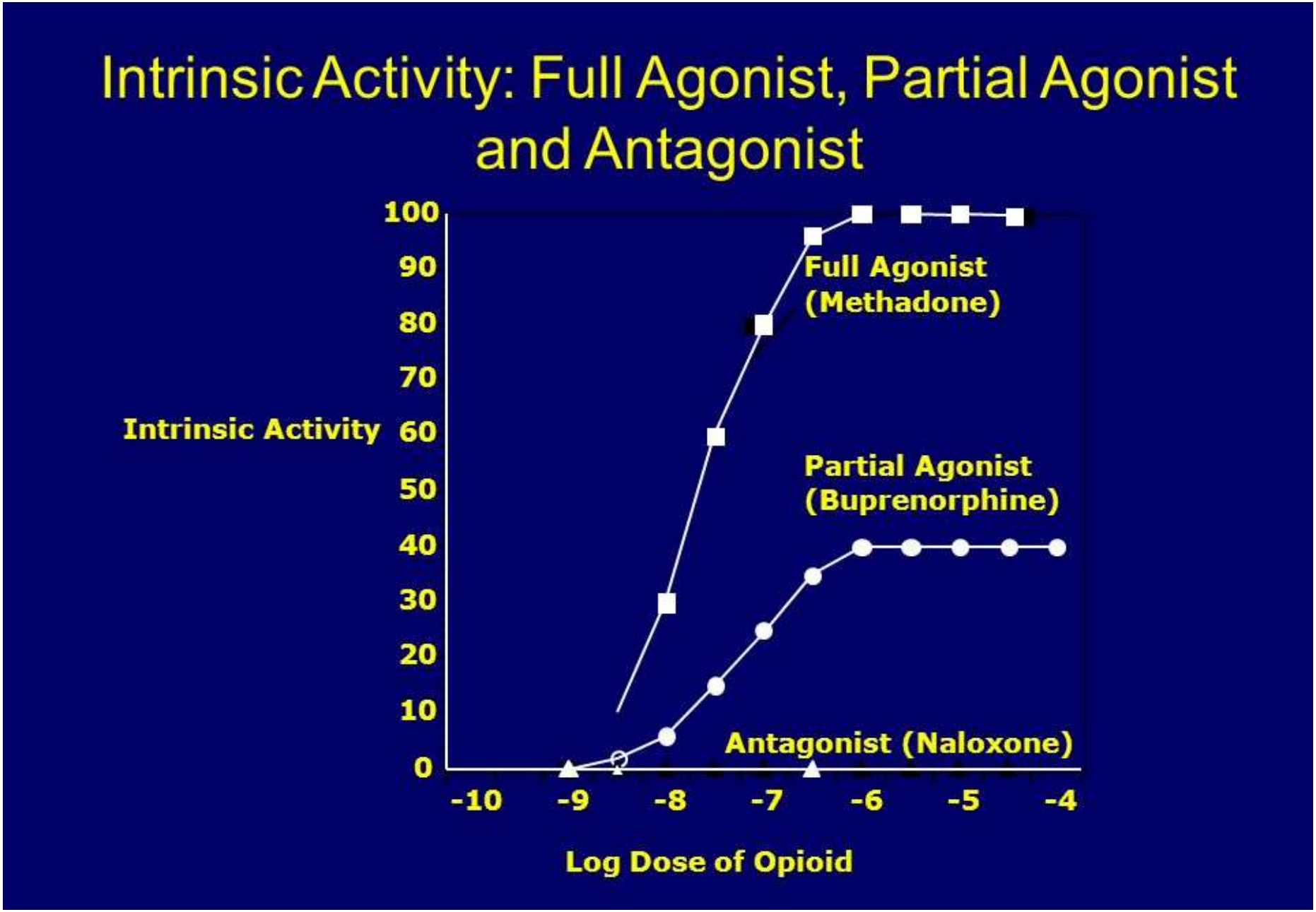
Brian Hurley, M.D., M.B.A., DFASAM

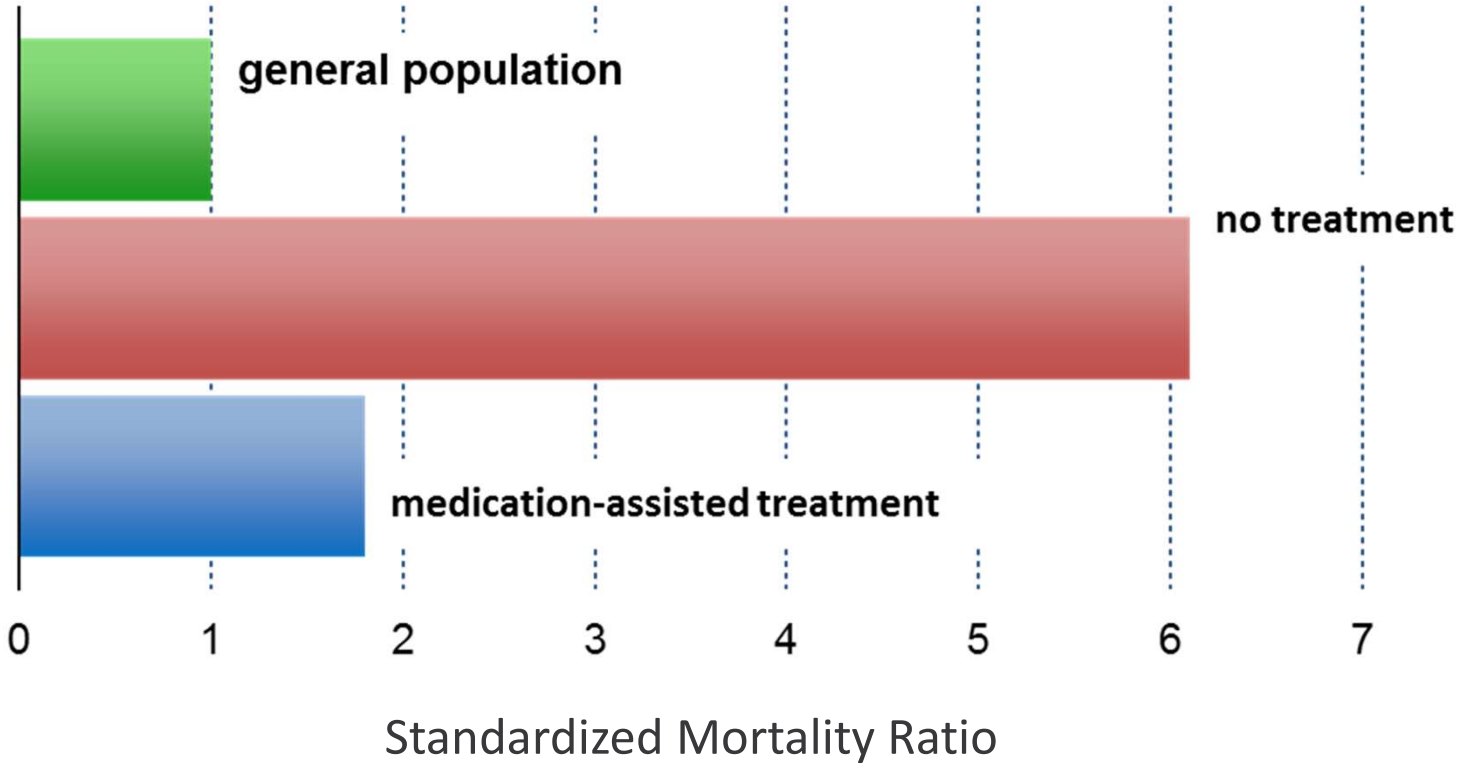
No disclosures



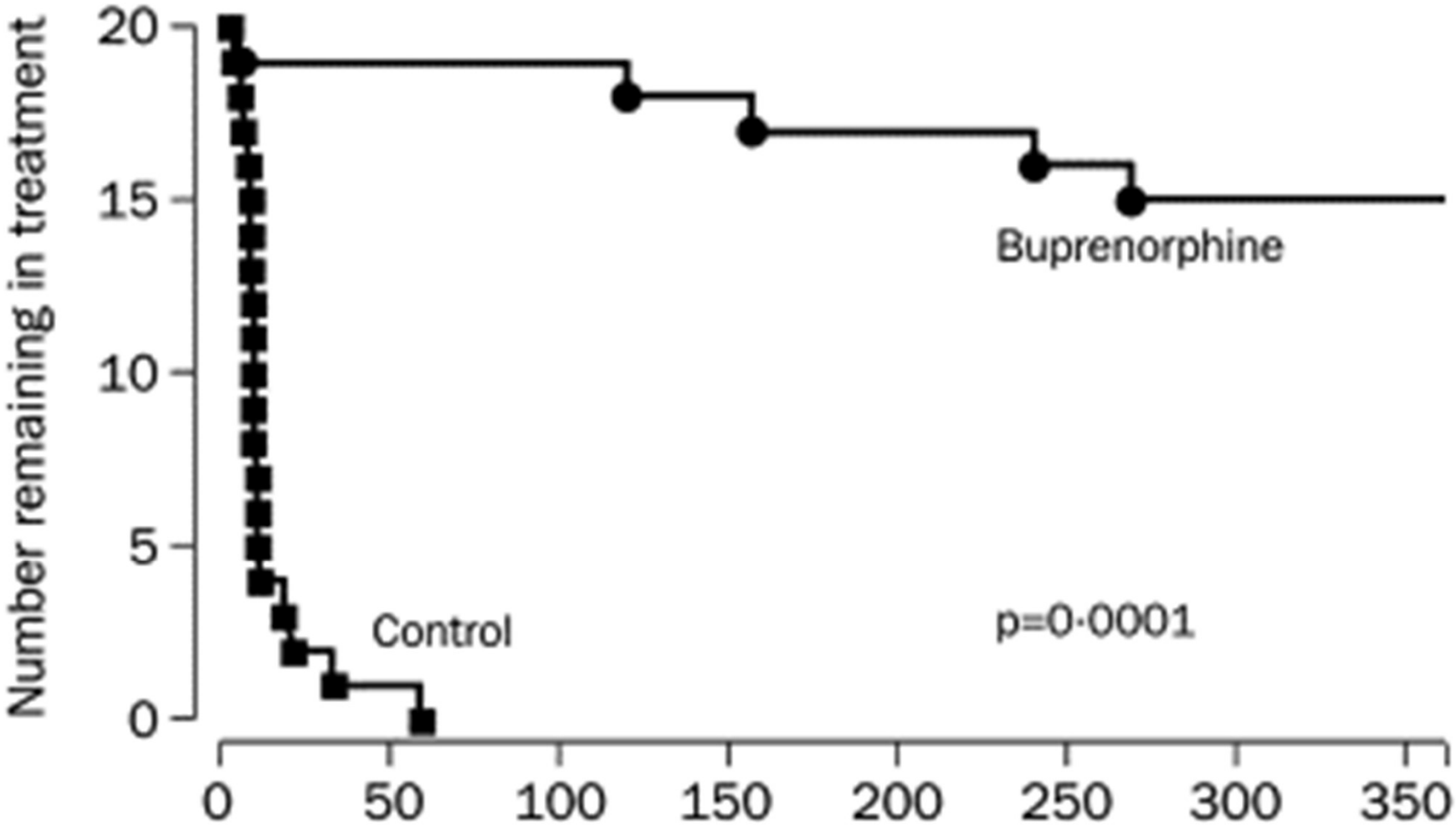
Reynard Pierce. Opioids: Basics of Addiction; Treatment with Agonists, Partial Agonists, and Antagonists Treatment Training Volume C: Module 2 – Updated. Source: http://slideplayer.com/slide/7062916/

Benefits of MAT: Decreased Mortality

Death rates:

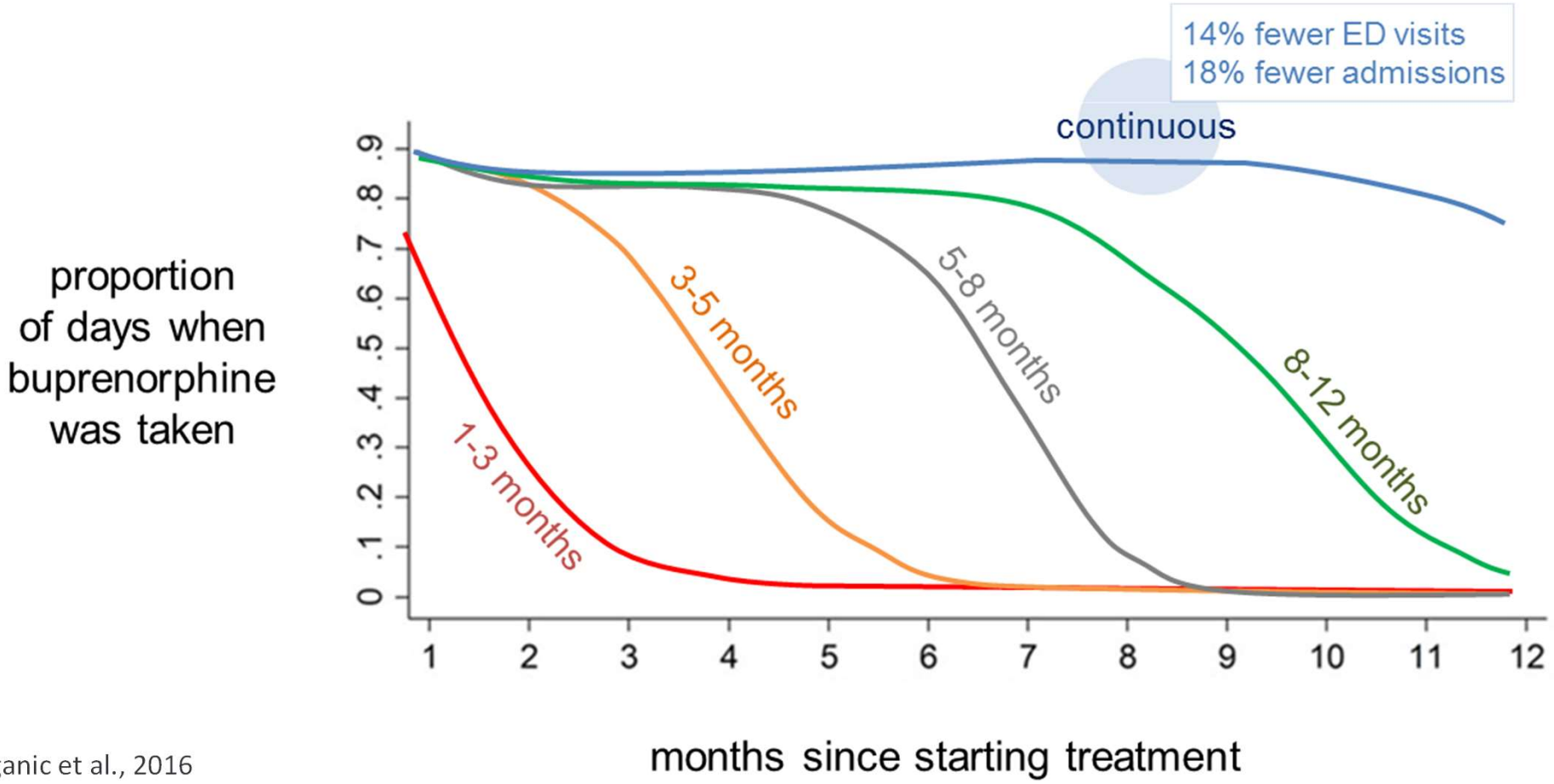


Dupouy et al., 2017
Evans et al., 2015
Sordo et al., 2017

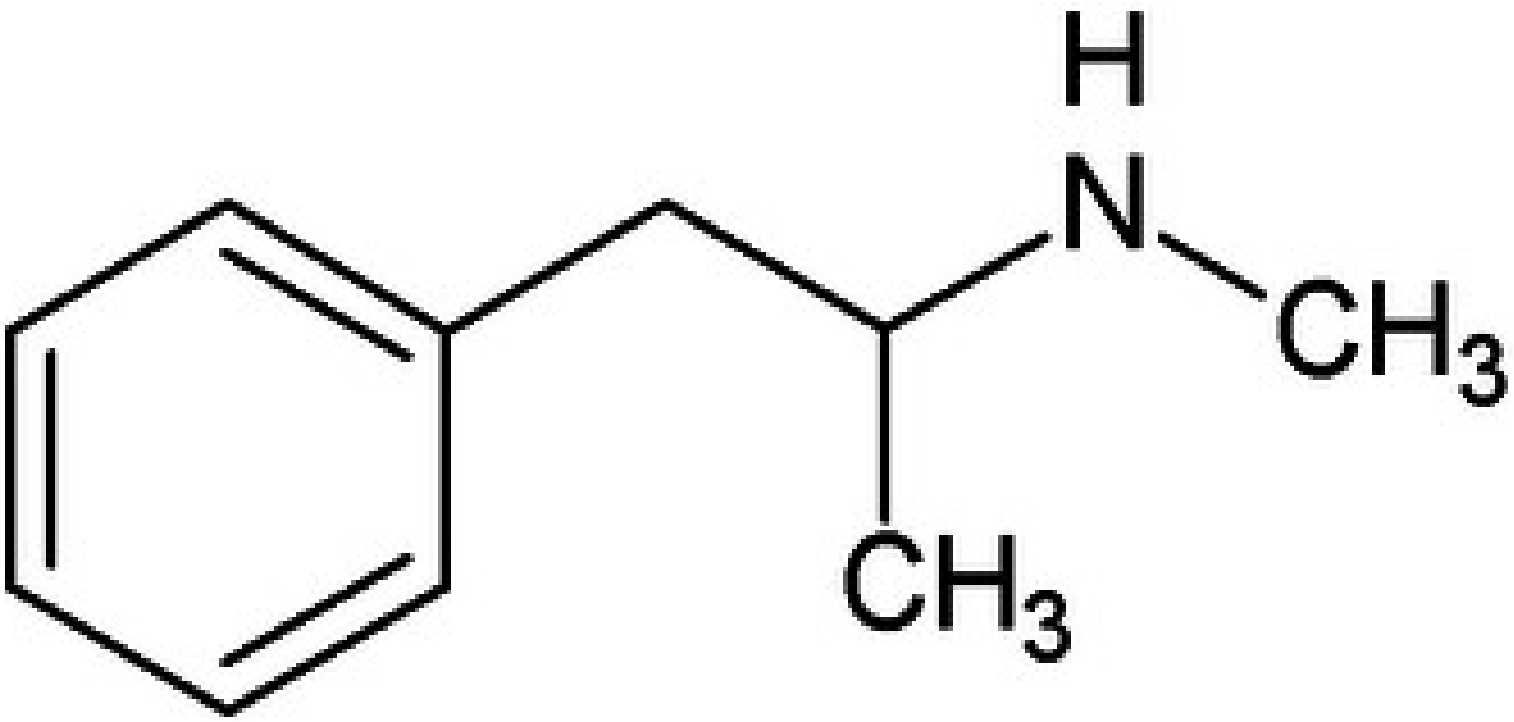


Kakko, J., Svanborg, K. D., Kreek, M. J., & Heilig, M. (2003). 1-year retention and social function after buprenorphine-assisted relapse prevention treatment for heroin dependence in Sweden: a randomised, placebo-controlled trial. *The Lancet*, *361*(9358), 662-668.

Optimal Duration of MAT



Lo-Ciganic et al., 2016


H
N
CH3
CH3

History of Methamphetamine

- Synthesized in 1887
- In 1930's meth was marketed over the counter for nasal congestion
- In 1937, available by prescription in pill form
- Used in WWII to keep the troops going
- In 1950's Dexedrine and Methedrine were used by truck drivers, students and athletes non-medically

Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico. biology.unm.edu/toolson/biotox/methamphetamine.ppt

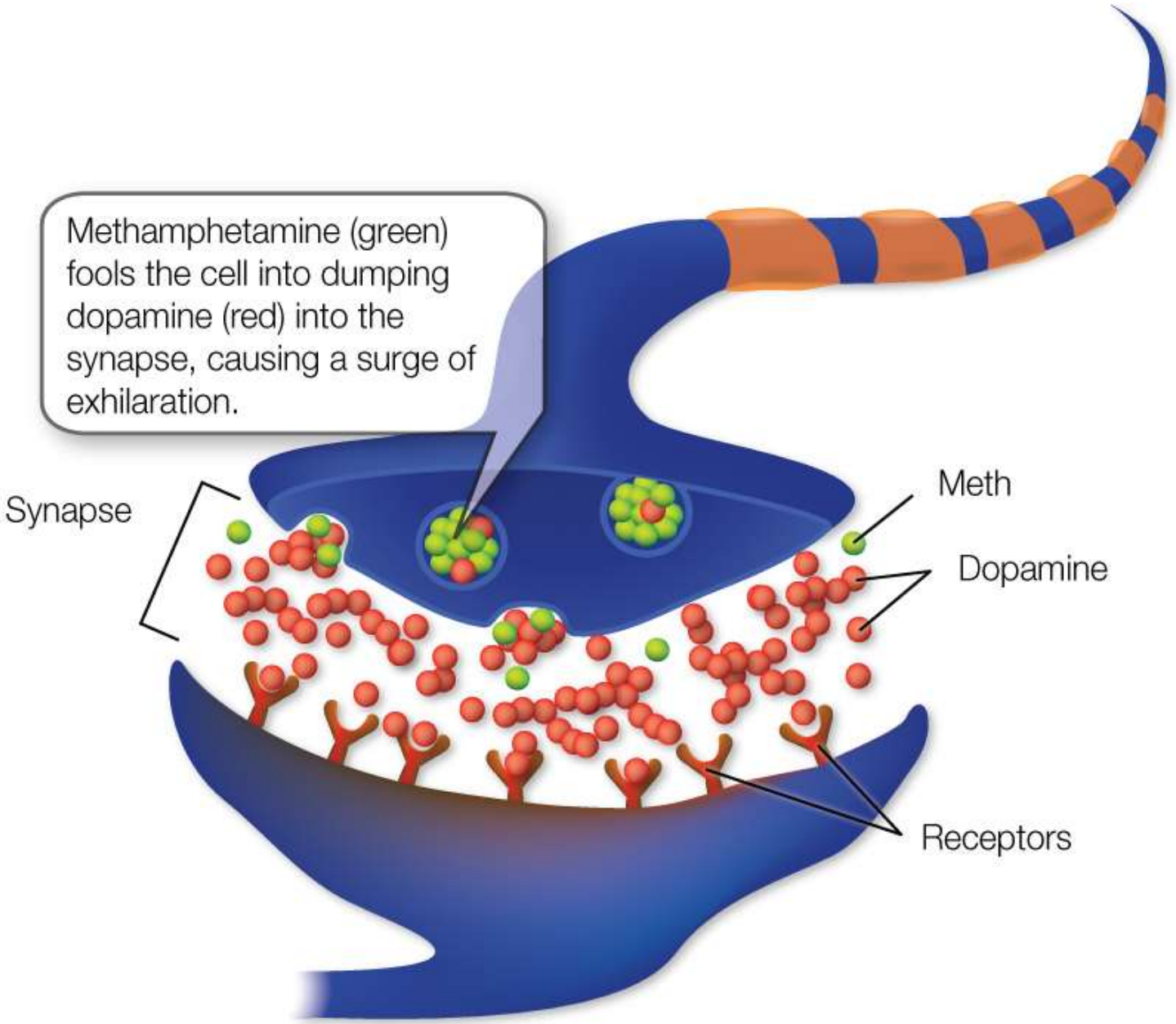
History of Methamphetamine

- Widely prescribed in the 1950's and 60's for depression and obesity
- 1970 – Controlled Substance Act was passed severely restricting the legal production of the injectable drug
- Schedule I and II drug under federal regulations, meaning it has a high potential for abuse and dependence

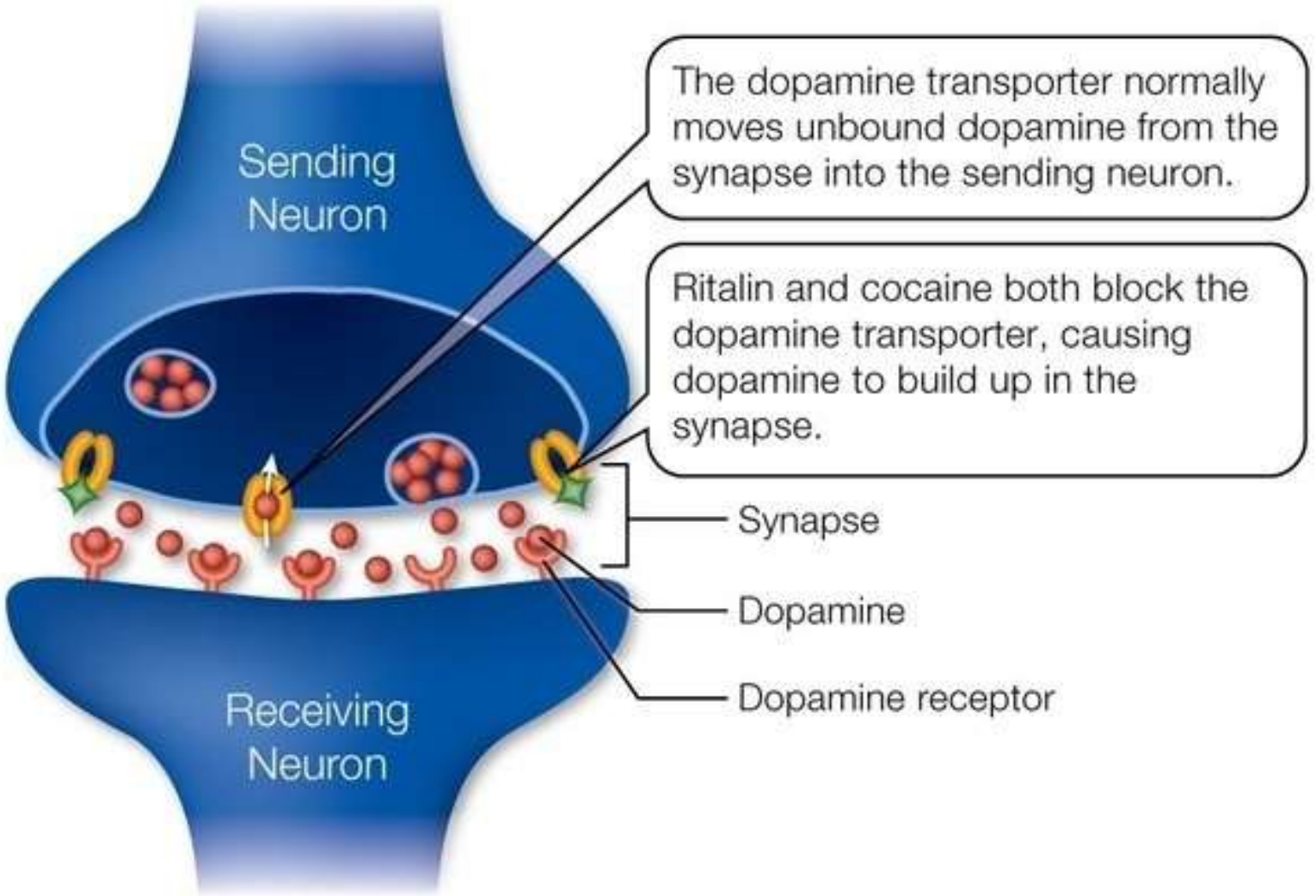
Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico. biology.unm.edu/toolson/biotox/methamphetamine.ppt

Methamphetamine Mechanisms

- Interferes with monoamine reuptake and promoting release at the nerve endings = ↑ extracellular monoamine neurotransmitters



Slide Credit:
University of Utah
https://learn.genetics.utah.edu/content/addiction/brainchange/



Slide Crec
University of Utah
https://learn.genetics.utah.edu/content/addiction/brainchange/

Methods of Use

- Methamphetamine is a central nervous system stimulant can be snorted, smoked, or injected
- Smoking causes the strongest effect

Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico. biology.unm.edu/toolson/biotox/methamphetamine.ppt

Methods of Use

- Can be combined with heroin into a “meth speedball"
- “Biker's coffee" a combination of methamphetamine and coffee
- Smoked out of glass pipes or in aluminum foil heated by flame

Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico. biology.unm.edu/toolson/biotox/methamphetamine.ppt

Effects of the High

- The high experience lasts from four to sixteen hours
- As the high begins to wear off, the methamphetamine user enters a stage called "tweaking," in which he or she is prone to violence, delusions, and paranoia

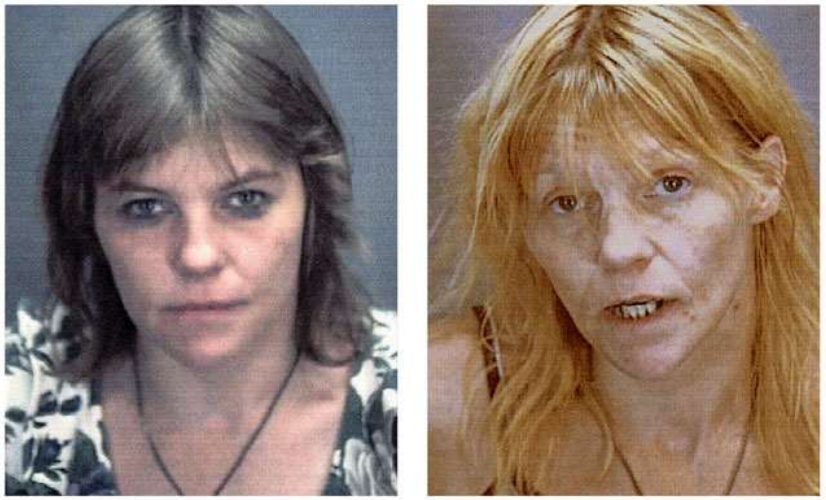
Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico. biology.unm.edu/toolson/biotox/methamphetamine.ppt

Effects of the High

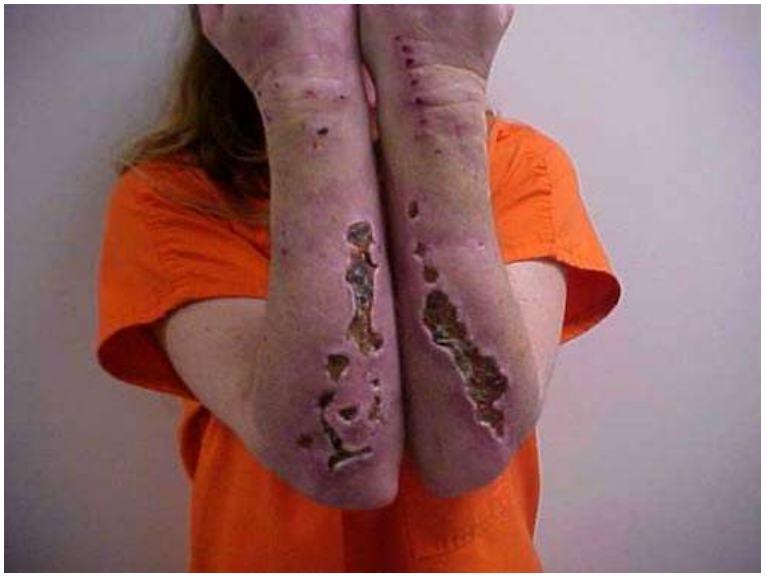
- euphoria
- hyperexcitability
- extreme nervousness
- accelerated heartbeat
- increased blood pressure
- vasoconstriction
- pupil dilation
- hyperglycemia
- formication – 'crank bugs', the user hallucinates bugs crawling on their skin and try to scratch them off causing open sores
- sweating
- dizziness
- fatigue
- restlessness
- insomnia
- tooth grinding
- incessant talking
- irritability
- Aggressiveness
- increased alertness
- increased energy
- decreased appetite
- Paranoia
- auditory and visual hallucinations

Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico.
biology.unm.edu/toolson/biotox/methamphetamine.ppt

Effects of the High

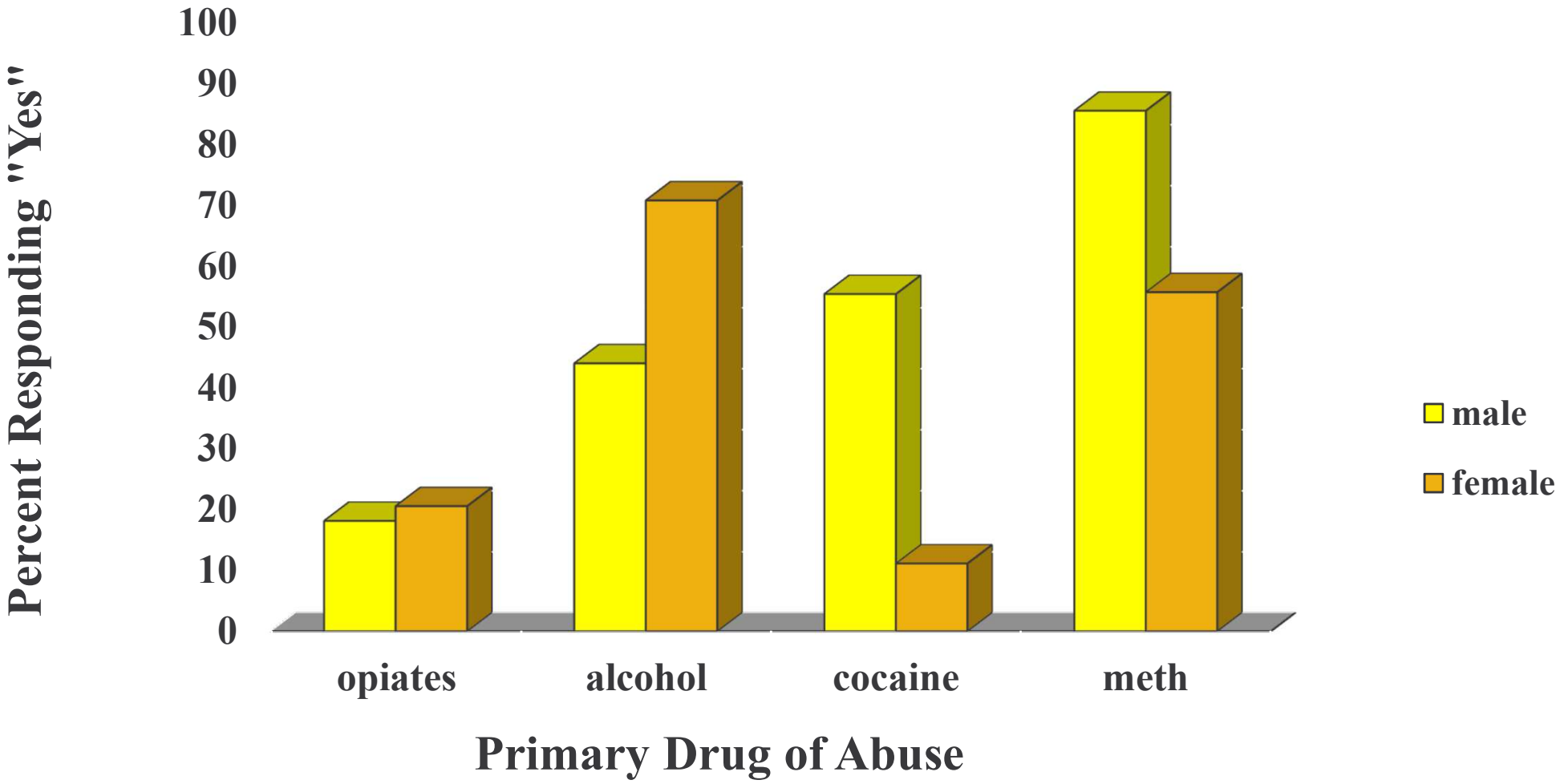


1998 2002



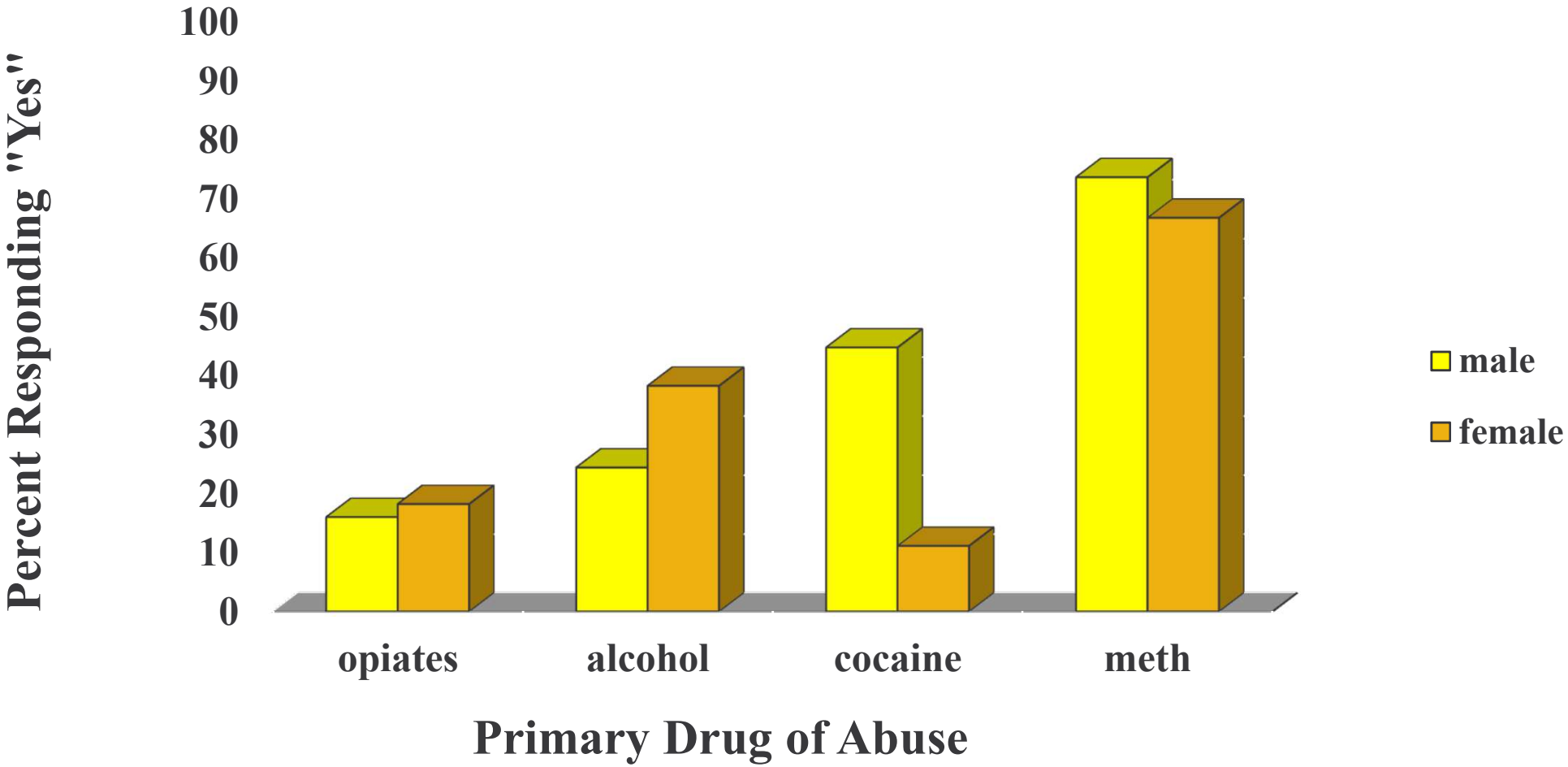
Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico. biology.unm.edu/toolson/biotox/methamphetamine.ppt

My sexual *drive* is increased by the use of …



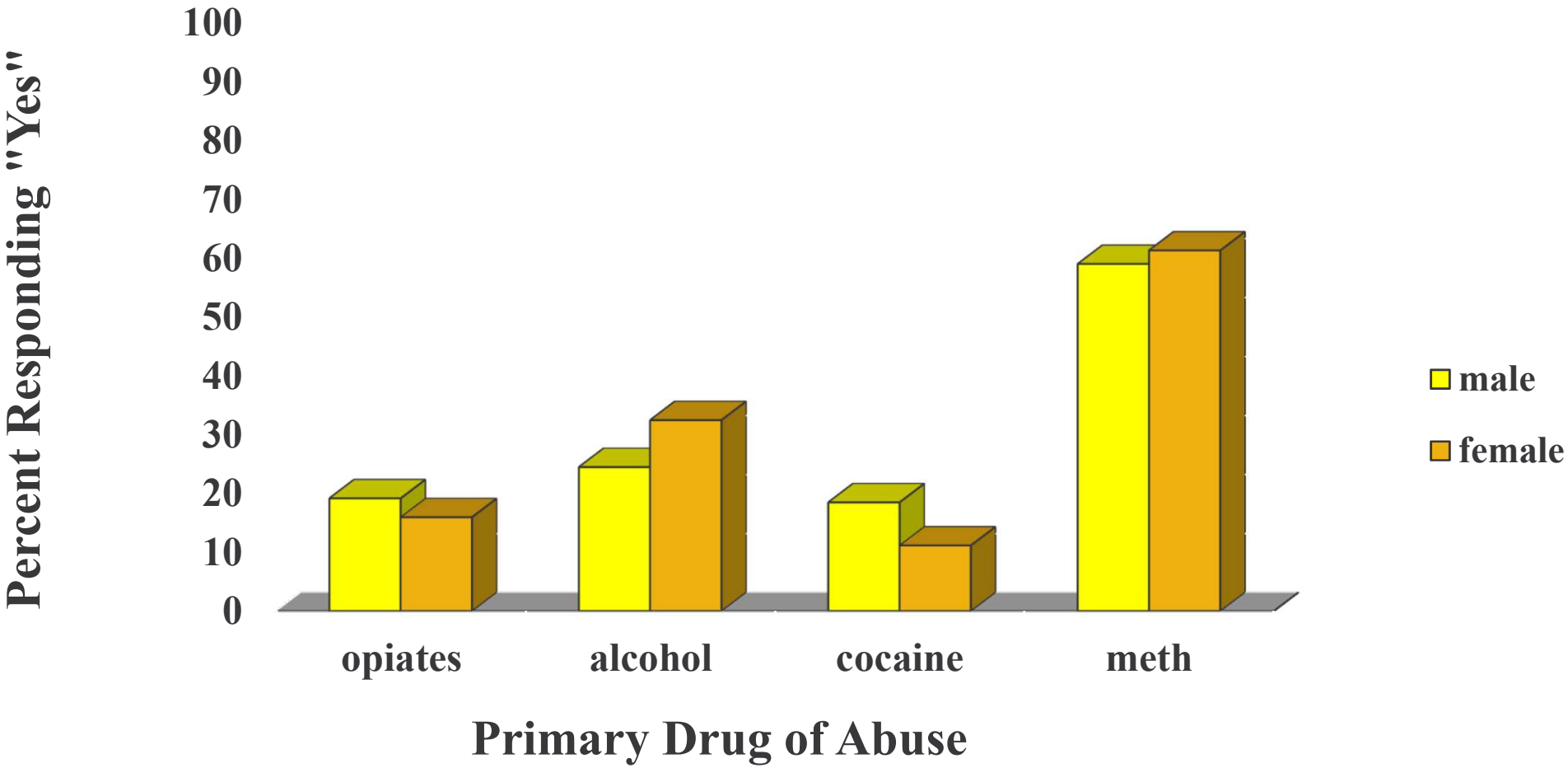
(Rawson et al., 2002)

My sexual *pleasure* is enhanced by the use of …



(Rawson et al., 2002)

My sexual *performance* is improved by the use of …



(Rawson et al., 2002)

Effects of the High

- Prolonged high does produces anxiety reactions, fearfulness, concern about well-being, hallucinations, suspicion, depression, suicidal thoughts
- Attack on immune system which leads to infections due to malnutrition, sleep deprivation, etc.
- Tooth Decay, Lung Damage, Deteriorating nasal cartilage when snorted

Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico. biology.unm.edu/toolson/biotox/methamphetamine.ppt

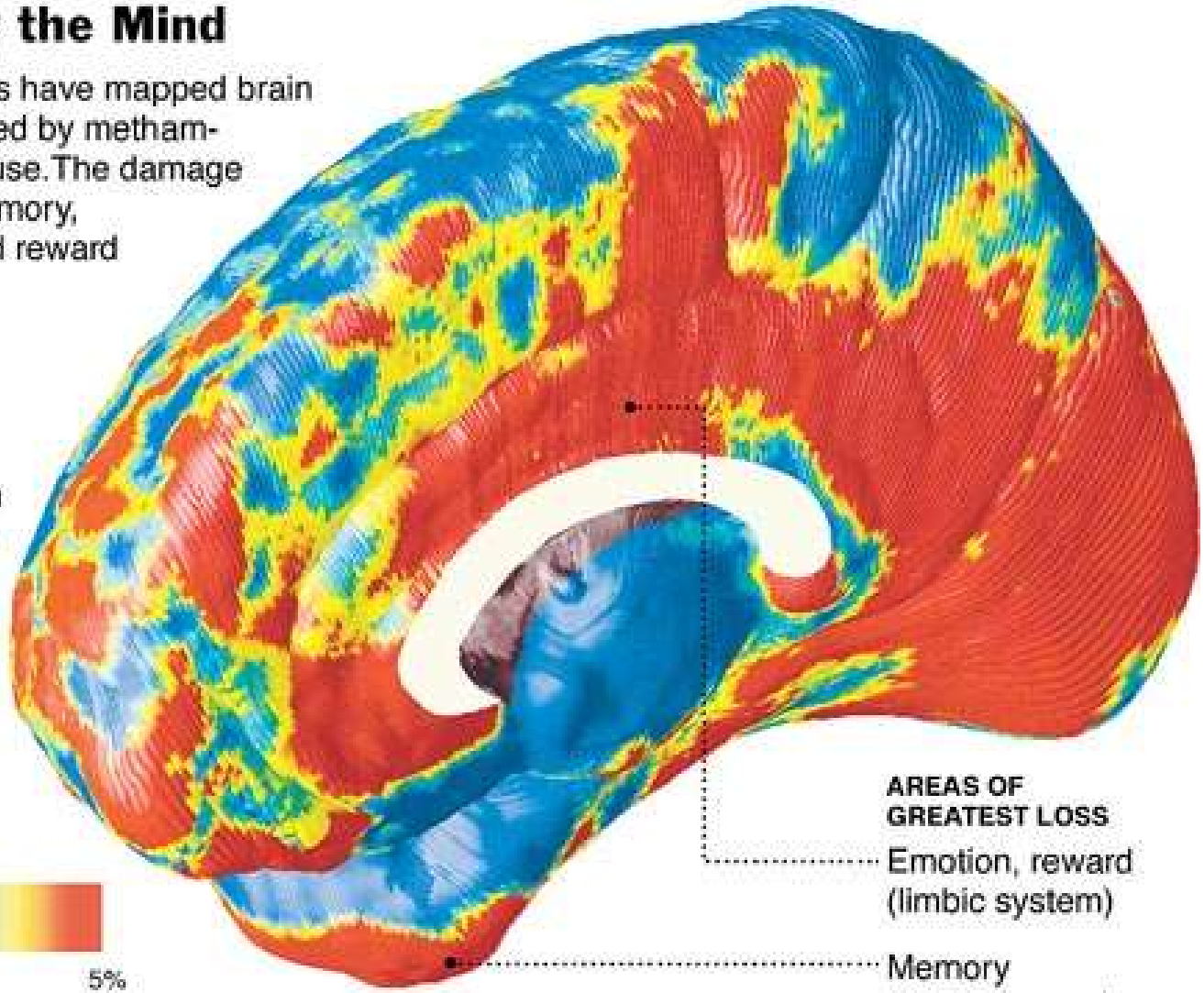
Biological Effects

- Onset can be immediate (in the case of injection or smoking), or can take as long as 30-40 minutes if ingested orally
- Will stay in the plasma between 4 to 6 hours
- A toxic reaction (or overdose) can occur at relatively low levels, 50 milligrams of pure drug for a non-tolerant user

Slide Credit: Patty Chenevey, Kate Mahoney, Ben Lohr. University of New Mexico. biology.unm.edu/toolson/biotox/methamphetamine.ppt

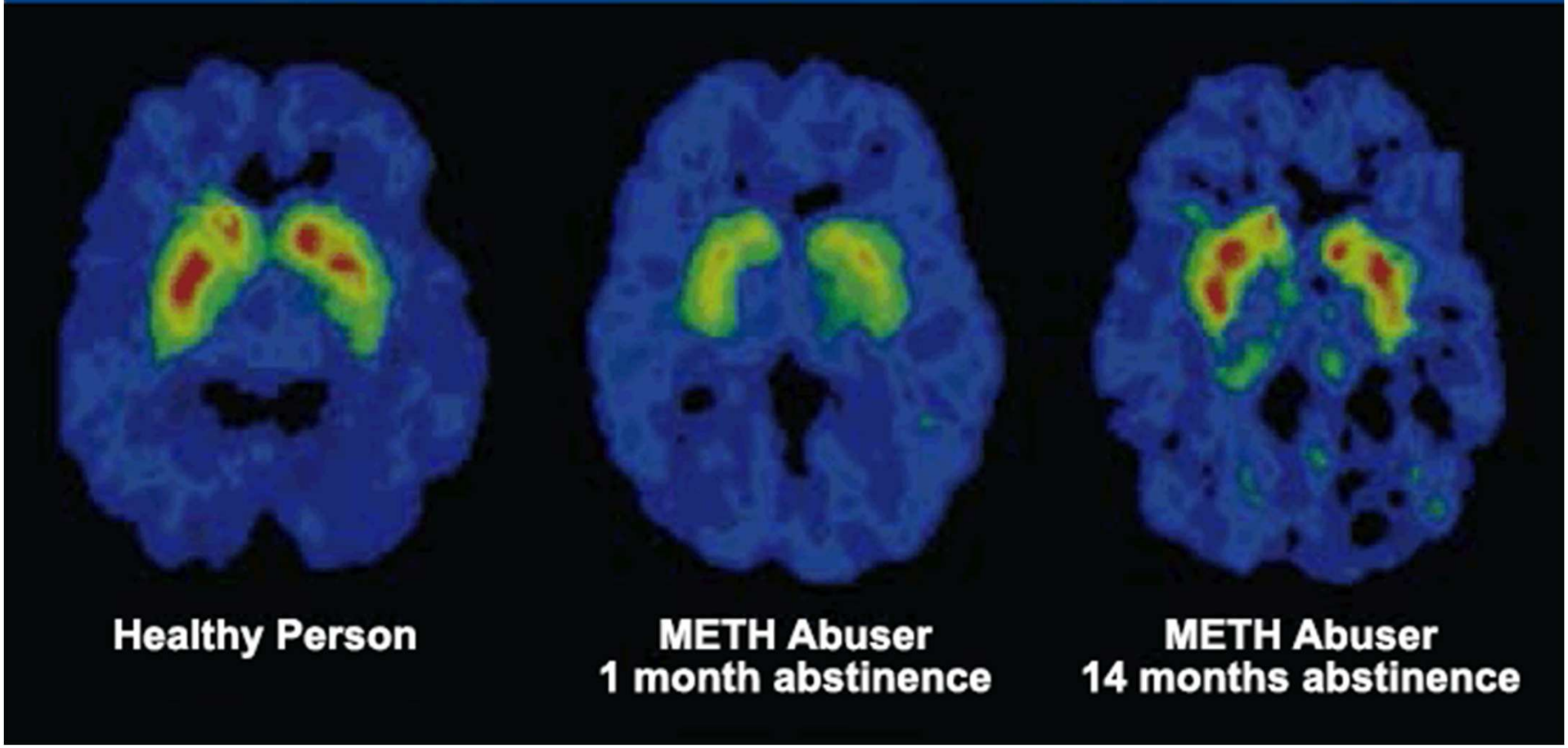
Eroding the Mind

Researchers have mapped brain decay caused by methamphetamine use. The damage affected memory, emotion and reward systems.

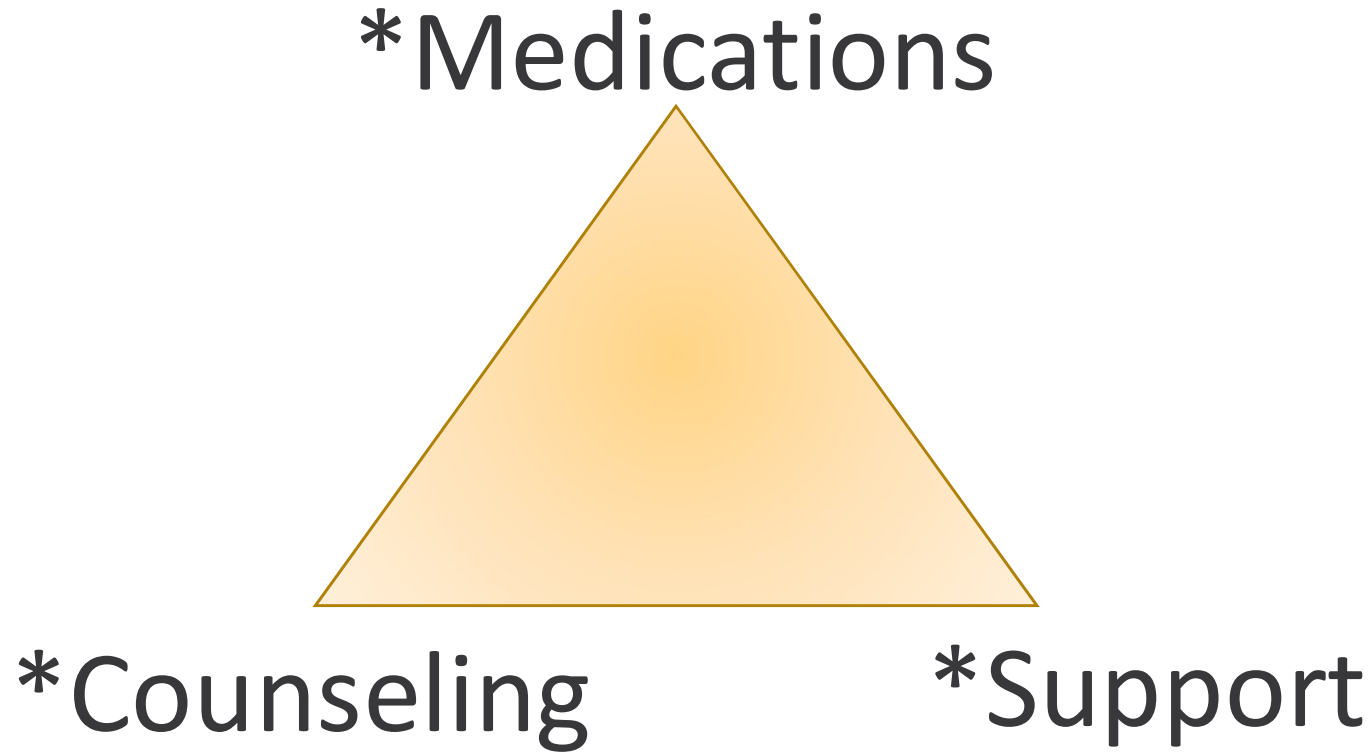


Source: Dr. Paul Thompson, U.C.L.A.

BRAIN RECOVERY WITH PROLONGED ABSTINENCE



Core Components of Addiction Treatment



*When appropriate

Source: https://www.samhsa.gov/treatment

Medications for Methamphetamine Use Disorder

Positive/Under Consideration

bupropion (better in low severity users)
mirtazapine
naltrexone
methylphenidate
d-amphetamine (craving/WD)
topiramate* (better if abstinent at tx entry)

Slide Credit: Rick Rawson, PhD

Medications for Methamphetamine Use Disorder

Negative Results

imipramine
desipramine
tyrosine
ondansetron
fluoxetine
sertraline, paroxetine
aripiprazole
gabapentin
n-acetylcysteine
modafinil* (better in hi-severity users)

Slide Credit: Rick Rawson, PhD

Summary of Evidence – Methamphetamine

- Underpowered studies, high attrition
- Bupropion (300 mg/day) may be more effective in individuals with lower use disorder severity
  - May be better in individuals with depression, males
- Low strength evidence that methylphenidate and topiramate may facilitate reduction in use
  - Topiramate better if negative urine screen at baseline
- Standard dosing ranges generally studied

Chan B, Kondo K, Ayers C, Freeman M, Montgomery J, Paynter R, and Kansagara D. Pharmacotherapy for Stimulant Use Disorders: A Systematic Review of the Evidence. VA ESP Project #05-225; 2018.

Slide Credit: Rick Rawson, PhD

Symptomatic Pharmacology

- Evaluate for co-occurring mental health disorders
- Can medicate depressive symptoms, ADHD, psychosis, insomnia

Aberrant Medication Taking Behaviors
The Spectrum of Severity

- Requests for increase dose
- Requests for buprenorphine monotherapy Subutex by name
- Non-adherence w/ other recommended therapies
- Running out early (i.e., unsanctioned dose escalation)
- Resistance to change therapy despite AE
- Deterioration in function at home and work
- Non-adherence w/ monitoring (e.g. pill counts, urine drug tests)
- Multiple "lost" or "stolen" prescriptions
- Illegal activities – forging scripts, selling prescription

Slide Credit: Daniel Alford, M.D.

Assessing Benefit - Risk/Harm
"Universal Precautions"
(has become "standard" of care)

- Screening Tools
- Agreements "contracts", informed consent
- Monitor for benefit and harm with frequent face-to-face visits
- Monitor for adherence, addiction and diversion
  - Urine drug testing
  - Pill counts
  - Prescription monitoring program data

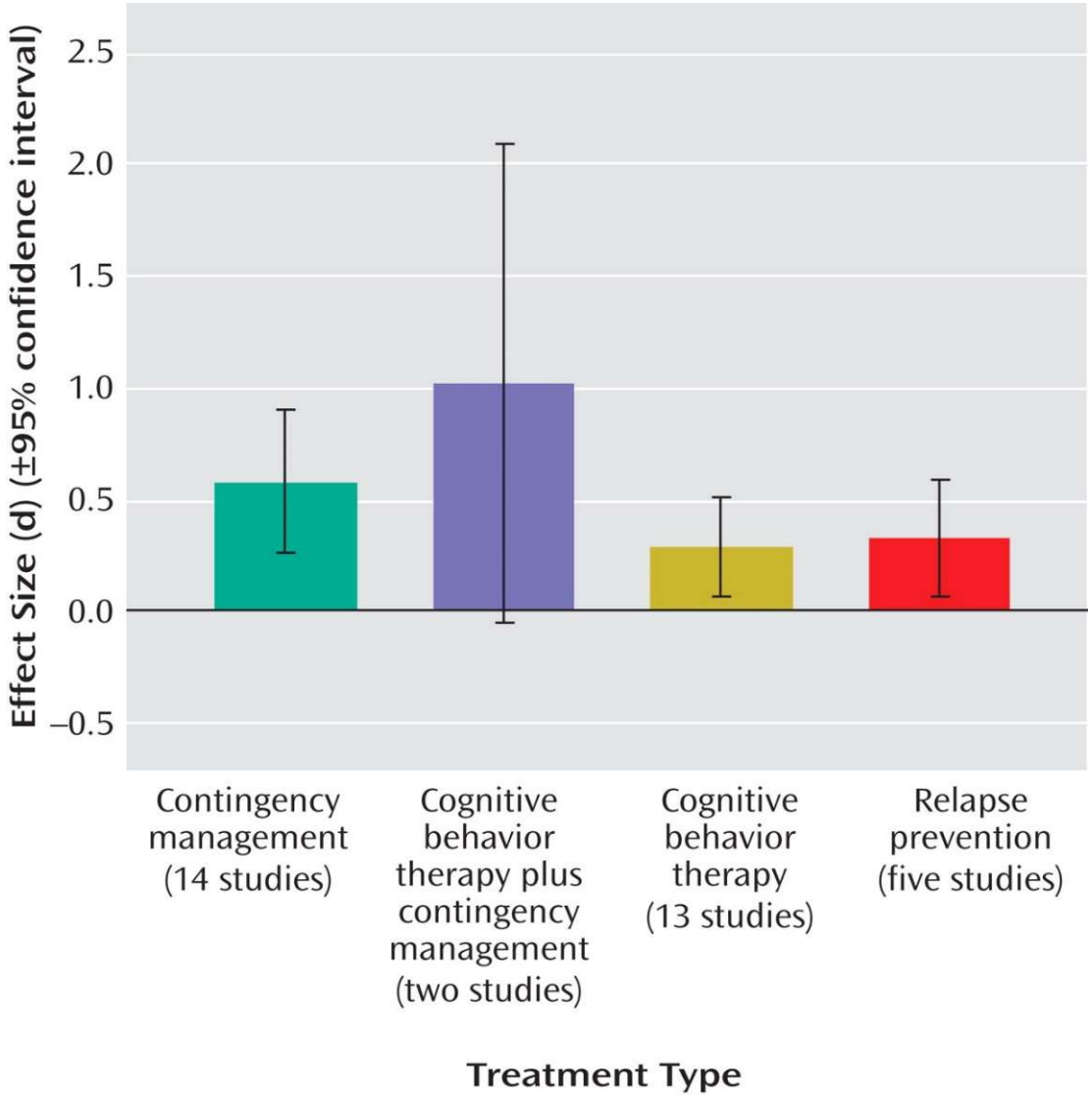
Only limited data are available regarding the efficacy of any of these strategies, and these are based upon expert consensus

FSMB Guidelines 2004 www.fsmb.org
Gourlay DL, Heit HA. Pain Medicine 2005
Chou R et al. J Pain 2009

Key Principles

- Maintain benefit-risk (harm) framework
- Judge the treatment NOT the patient

Slide Credit: Daniel Alford, M.D.



Dutra, L., Stathopoulou, G., Basden, S. L., Leyro, T. M., Powers, M. B., & Otto, M. W. (2008). A meta-analytic review of psychosocial interventions for substance use disorders. American Journal of Psychiatry, 165(2), 179-187.

The Matrix Model Treatment Approach for Methamphetamine Use Disorder

Michael J. McCann, MA
Matrix Institute on Addictions
Arlington, VA
May 9, 2006

Elements of Effective Treatment with Methamphetamine Users

- Focus on the present; behavior vs feelings
- Structure: 3 X week meetings; 16 weeks
- Information on addiction and recovery
- Teach relapse prevention
- Urine testing
- Introduce and encourage self-help

Slide Credit: Michael J. McCann, MA

Matrix Program Schedule (Sample)

Monday	Wednesday	Friday
Weeks 1-4 **Early Recovery Skills**	**Weeks 1-12** **Family/Education**	**Weeks 1-4** **Early Recovery Skills**
Weeks 1-16 **Relapse Prevention**	**Weeks 13-16** **Social Support**	**Weeks 1-16** **Relapse Prevention**

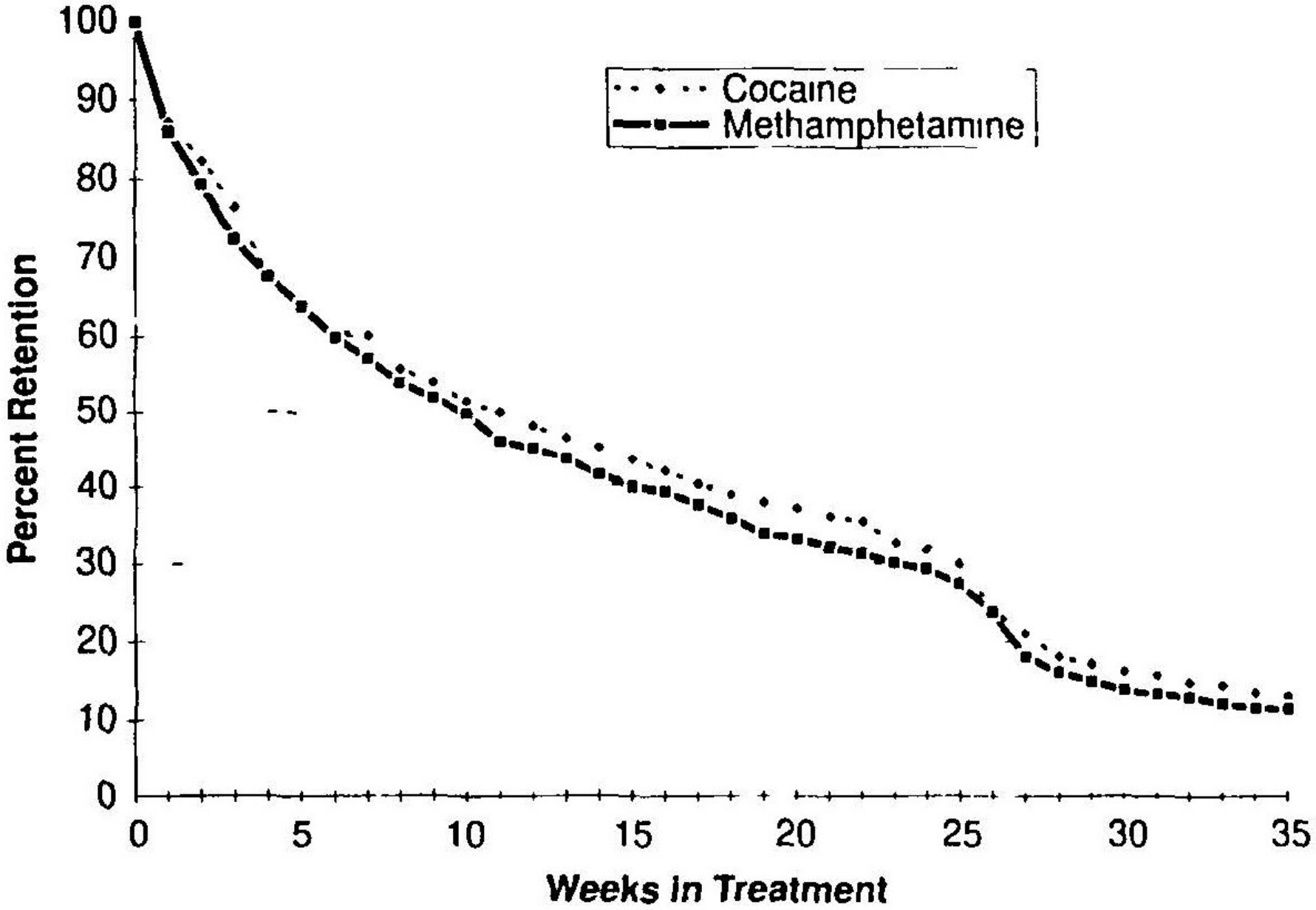
Urine and breath alcohol tests once per week, weeks 1-16
Ten Individual/Conjoint sessions during 1st 16 weeks

Slide Credit: Michael J. McCann, MA

Integrating Treatments for Methamphetamine Abuse: A Psychosocial Perspective

Alice Huber, PhD
Walter Ling, MD
Steven Shoptaw, PhD
Vikas Gulati, BS
Paul Brethen, MA
Richard Rawson, PhD

Huber, A., Ling, W., Shoptaw, S., Gulati, V., Brethen, P., & Rawson, R. (1997). Integrating treatments for methamphetamine abuse: A psychosocial perspective. *Journal of Addictive diseases*, *16*(4), 41-50.


Cocaine
Methamphetamine
Percent Retention
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
Weeks in Treatment

- Poor treatment engagement rates, high dropout rates, severe paranoia, high relapse rates, ongoing episodes of psychosis, severe craving and protracted dysphoria, and anhedonia are clinical challenges that are frequently far more problematic than is seen with standard treatment populations.
- In many small communities it is unclear which agency other than the police is the agency with the proper skills and knowledge to address the needs of MA users.

Rawson, R. A., Gonzales, R., & Brethen, P. (2002). Treatment of methamphetamine use disorders: an update. *Journal of substance abuse treatment*, *23*(2), 145-150.

What's Feasible in Primary Care?

- Consider CBT group and CM program
- CM Webinar: https://www.careinnovations.org/resources/contingency-management-treatments-for-stimulant-and-other-substance-use-disorders-what-they-are-and-how-they-work/

Application of CM

- Behavioral targets:
  - Counseling attendance
  - Drug use
- Reinforcing consequences:
  - Money (or vouchers)
  - Privileges (e.g. take-home doses)

Slide Credit: Maxine Stitzer, Ph.D., Johns Hopkins University SOM, ctndisseminationlibrary.org/PPT/485Stitzer.ppt

Nancy Petry's Fishbowl: Intermittent Reinforcement Schedule

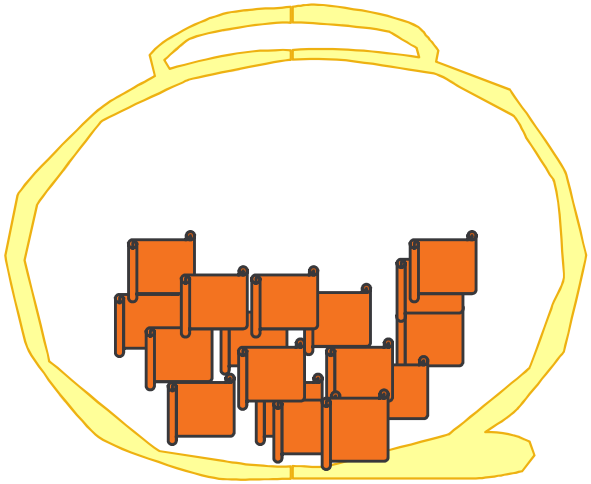
For cost reduction in community clinic settings

Slide Credit: Maxine Stitzer, Ph.D., Johns Hopkins University SOM, ctndisseminationlibrary.org/PPT/485Stitzer.ppt

Fishbowl Method

Incentive = draws from a bowl

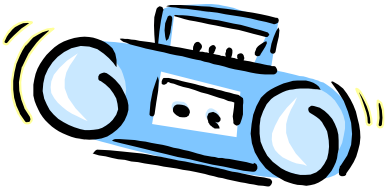
- Draws earned for each negative urine or BAC
- Number of draws can escalate
- Bonus draws can be given for consecutive weeks of abstinence



Slide Credit: Maxine Stitzer, Ph.D., Johns Hopkins University SOM, ctndisseminationlibrary.org/PPT/485Stitzer.ppt

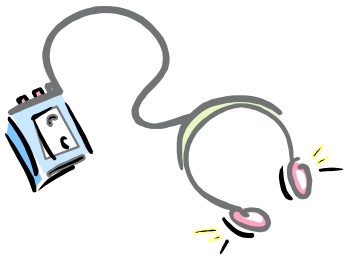
Half the slips are winners
Win frequency inversely related to cost

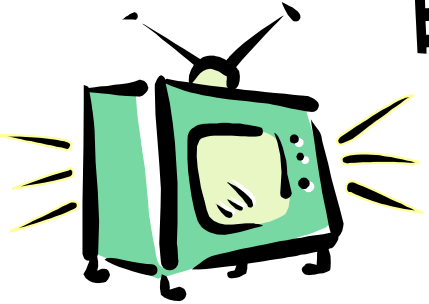
- largest chance of winning a small $1 prize



- moderate chance of winning a large $20 prize

- small chance of winning a jumbo $100 prize

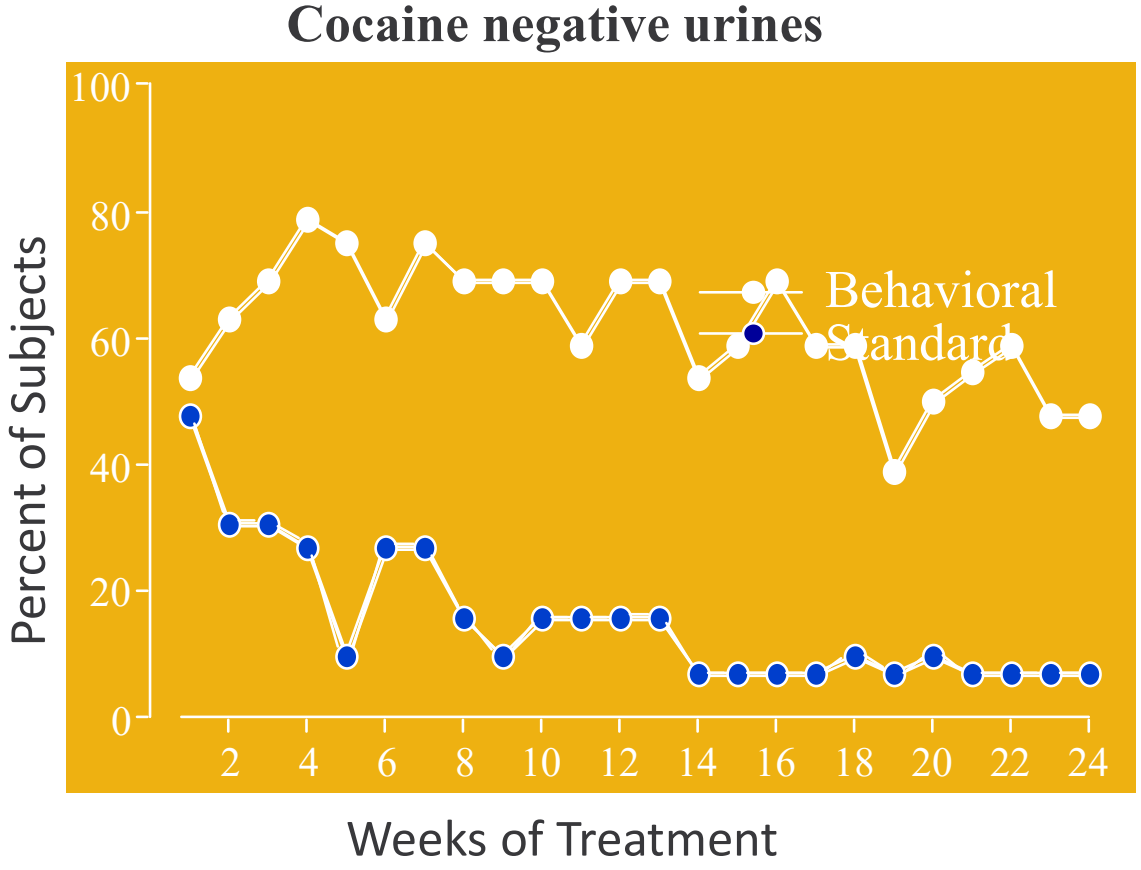




Slide Credit: Maxine Stitzer, Ph.D., Johns Hopkins University SOM, ctndisseminationlibrary.org/PPT/485Stitzer.ppt

Voucher Incentives in Outpatient Treatment

Higgins et al. Am. J. Psychiatry, 1993

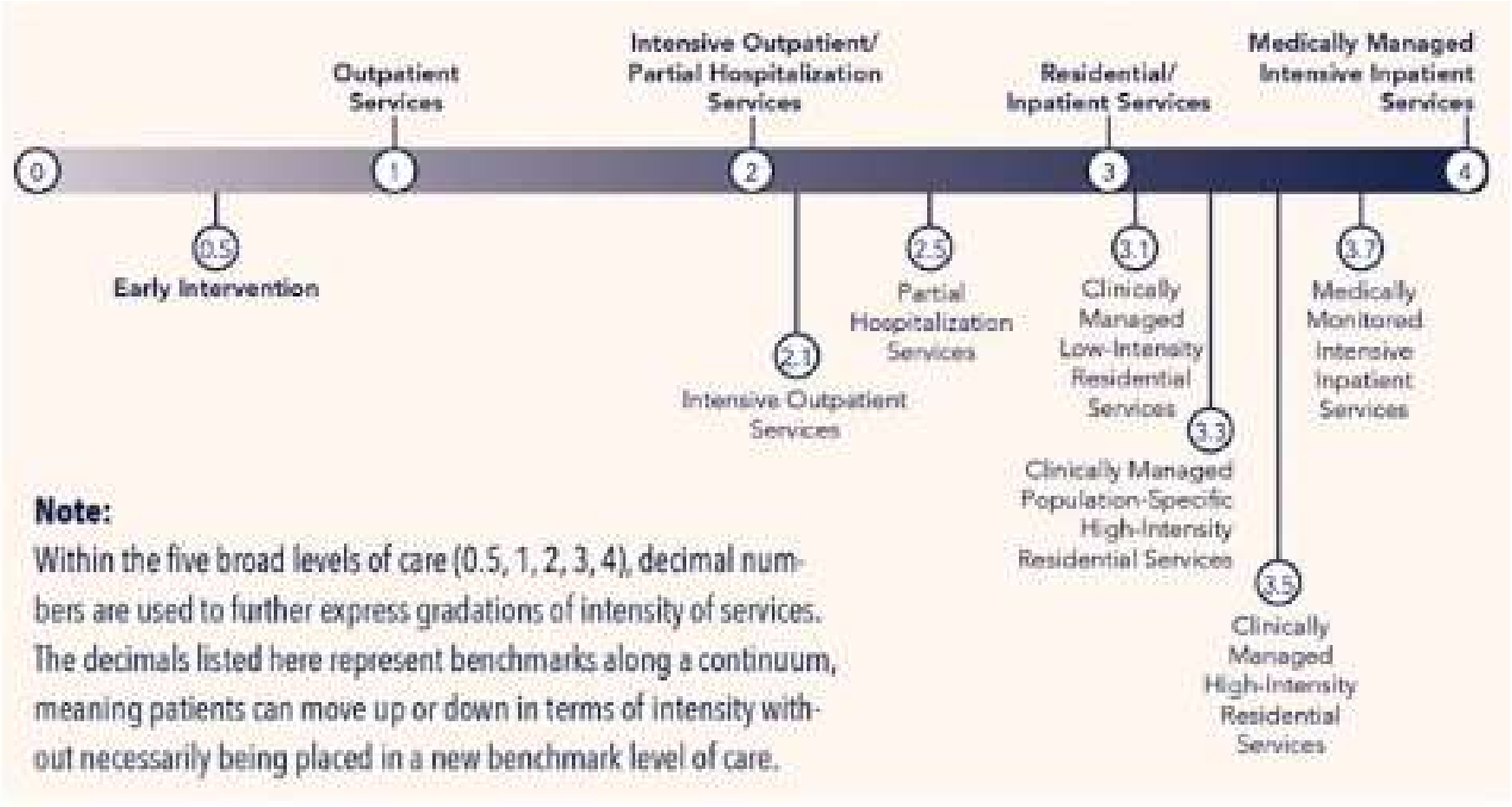


Slide Credit: Maxine Stitzer, Ph.D., Johns Hopkins University SOM, ctndisseminationlibrary.org/PPT/485Stitzer.ppt

Likely Need to Partner

- Partner with agencies in your community

Specialty Addiction Treatment



American Society of Addiction Medicine - http://www.asam.org/quality-practice/guidelines-and-consensus-documents/the-asam-criteria/about - accessed 1/15/2016

Specific Program Types

- Residential
- IOP / PHP
- Opioid Treatment Programs

Evaluate for:

  - Tx Philosophy
  - Availability
  - Responsiveness to Coordination

The best treatment programs provide a combination of therapies and other services to meet the needs of the individual patient.

https://www.drugabuse.gov/publications/drugfacts/treatment-approaches-drug-addiction

PERSISTENCE

THANK YOU!

Slide Credit: Hilary Connery, M.D., Ph.D.

Questions + Answers

Upcoming ATSH:PC Events

- Webinar #2 – June 19th from 12-1pm. This webinar is being led by the Santa Cruz team. They will discuss some common themes and questions that emerged from the storyboards, discussions, and evaluations at ATSH:PC Learning Session 1. Registration info coming soon!

- Raven e-Learning Session – June 14th from 12-1pm. This webinar is being led by Borrego Health. They will discuss using Telehealth as a modality to increase the effectiveness of addiction treatment programs in the safety net. Registration info coming soon!

- Site Visits: Scheduled for June-September. Registration information has been sent to teams who expressed interest. Please submit your registration forms on Eventbrite by June 3rd.

- Leading Profound Change: PDSA Webinar – July 9th from 12-1pm. This webinar will be led by CCI's own Tammy Fisher. Tammy will share real-world approaches and stories to rev up your PDSA Cycles for greatest impact. Click here to register: **https://zoom.us/meeting/register/db1cfc8e17805958cde7dc3c8da9331e**

Questions / Feedback

bhurley@ucla.edu

Interested in more?

Come to:

- CSAM Annual Meeting (Anaheim, CA in September!) https://csam-asam.org
- Come to the Integrated Care Conference! October 23-24, 2019 (Universal City, CA)

  https://dmh.lacounty.gov/event/16th-statewide-integrated-care-conference/
- AAAP Annual Meeting (North San Diego, CA in Dec!) https://www.aaap.org
- ASAM Annual Meeting (Denver, CO in April 2020!) https://www.asam.org