ATTC

Addiction Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

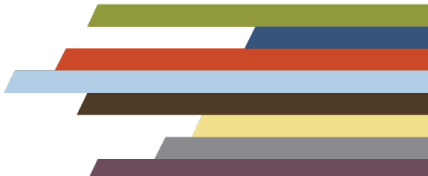
Treating Stimulant Use Disorder: Doing What Works

Panelists: Bryan Knowles, Shemonta Dean, Cari McCarty, and Doug Burgess

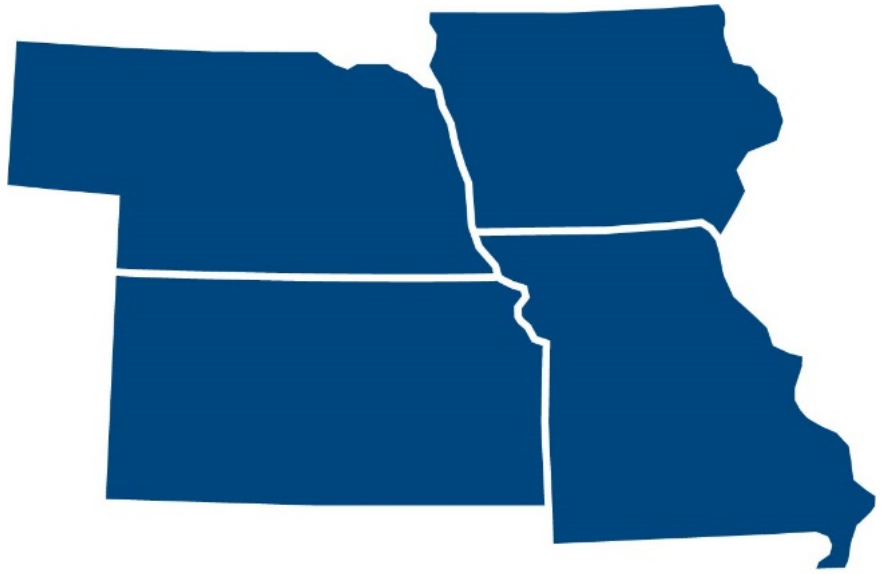
Facilitator: Erika Holliday

SAMHSA

Substance Abuse and Mental Health Services Administration



Mid-America ATTC

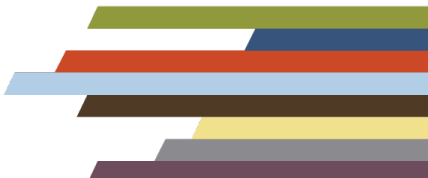


Mid-America (HHS Region 7)
ATTC
Addiction Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

Mid-America Addiction Technology Transfer Center

- The purpose of the Technology Transfer Centers (TTC) program is to ***develop and strengthen*** the ***specialized behavioral healthcare and primary healthcare workforce*** that provides substance use disorder (SUD) and mental health prevention, treatment, and recovery support services.

- Help people and organizations incorporate ***effective practices*** into substance use and mental health disorder prevention, treatment and recovery services.



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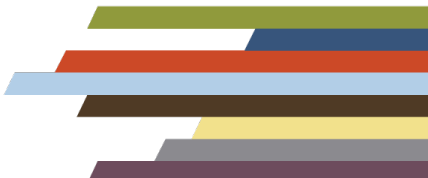
At the time of this presentation, Miriam E. Delphin-Rittmon, Ph.D., Assistant Secretary for Mental Health and Substance Use in the U.S. Department of Health and Human Services and the Administrator of SAMHSA. The opinions expressed herein are the views of the authors and do not reflect the official position of the Department of Health and Human Services (DHHS), or SAMHSA. No official support or endorsement of DHHS, SAMHSA, for the opinions described in this product is intended or should be inferred.

The work of the Mid-America ATTC is supported 100% by SAMHSA grant in the amount of $775,294 (1H79TI080208-01).



Opioid Response Network (ORN)

Sherrie Watkins, LMSW
Technology Transfer Specialist

Opioid Response Network

Working with Communities

- The SAMHSA-funded *Opioid Response Network (ORN)* assists states, organizations and individuals by providing the resources and technical assistance they need locally to address the opioid crisis and stimulant use.

- Technical assistance is available to support the evidence-based prevention, treatment and recovery of opioid use disorders and stimulant use disorders.

Working with Communities Cont.

- The *Opioid Response Network (ORN)* provides local, experienced consultants in prevention, treatment and recovery to communities and organizations to help address this opioid crisis and stimulant use.

- *ORN* accepts requests for education and training.

- Each state/territory has a designated team, led by a regional Technology Transfer Specialist (TTS), who is an expert in implementing evidence-based practices.

Contact the Opioid Response Network

- To ask questions or submit a technical assistance request:
  - Visit www.OpioidResponseNetwork.org
  - Email: orn@aaap.org
  - Call (401) 270-5900

Substance Abuse and Mental Health Services Administration (SAMHSA)

- *Funding for this initiative was made possible (in part) by grant no. 1H79TI083343 from SAMHSA. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.*

Thanks to our Partners!!

Mid-America (HHS Region 7) ATTC
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Opioid Response Network

SAINT LOUIS UNIVERSITY

Mid-America (HHS Region 7)

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Motivational Interviewing

Bryan Knowles

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SAMHSA

Substance Abuse and Mental Health Services Administration

What is Motivational Interviewing?

It's a collaborative, goal-oriented style of communication with particular attention to the language of change.

It is designed to strengthen personal motivation for and commitment to a specific goal.

Accomplishes this by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion.

Notes about Motivational Interviewing

MI is not intended to be a standalone treatment modality. MI is often blended with other interventions to help people change.

Even once a person has resolved to change a behavior, they may be ambivalent about any given step in making the change.

MI Spirit

Partnership

Acceptance

Compassion

Evocation

MI and Stimulant Use Disorder

SAMHSA has identified MI as having “Strong Evidence” for people with stimulant use disorder

Evidence includes increased willingness in meth-abusing adolescents to enter treatment, decreased alcohol use in women w/co-occurring alcohol and meth addiction, & decrease in severity of psychiatric sx’s for people with both mental illness and stimulant use d/o

However, there’s still a need for further study re: StimUD

A Word About Empathy

Empathy is a central relational component of Motivational Interviewing.

Research indicates that empathy is an essential component of achieving positive outcomes, especially in SUD treatment.

In their review of research related to empathy, Moyers and Miller argue that empathy is so important that screening for empathy should be part of the hiring process for providers of SUD treatment.

Moyers, T. B., & Miller, W. R. (2013). Is low therapist empathy toxic?. *Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors*, *27*(3), 878–884.

Considerations for Implementing MI

Trainings/Workshops are just a starting point

Regular practice is necessary

Two aspects indicated by the research:

Feedback

Coaching

May be worthwhile for agencies to create internal expertise of a few staff who can then provide feedback/coaching in regular practice

A-CRA IN JUVENILE JUSTICE SETTINGS

Shemonta Dean and Cari McCarty
Seattle Children's Hospital
August 2021

POST Study

Population: Adolescents and young adults (ages 15-25)

Setting: Washington State Juvenile Rehabilitation Administration

Interventions: A-CRA – Adolescent Community Reinforcement Approach

ACC – Assertive Continuing Care

Psychoeducation

Outcomes: Frequency of substance use

Recidivism back to confinement

Cost and cost effectiveness

HISTORY OF A-CRA

First used in the 1970s in inpatient adults with alcohol use disorders

Studied in a variety of inpatient and community settings

Adapted for use in adolescents in the 1990s

A-CRA Session Structure

10 individual sessions with the adolescent

4 sessions with the caregiver

- 2 individual sessions with the caregiver
- 2 sessions with the caregiver and the adolescent

In the correctional setting, in person or Zoom, and then post-release

GOALS

Sessions with clients

- Abstinence
- Participation in pro-social activities
- Positive relationships with family
- Positive relationships with peers

Sessions with caregivers

- Motivate their participation
- Promote the client's abstinence
- Provide information about effective caregiving

This scale is intended to estimate your current happiness with your life on each of the eleven areas listed. You are to circle one of the numbers (1-10) beside each area. Numbers toward the left end of the ten-unit scale indicate various degrees of unhappiness, while numbers toward the right end of the scale reflect increasing levels of happiness. Ask yourself this question as you rate each life area: "How happy am I with this area of my life? In other words, state according to the numerical scale (1-10) exactly how you feel today. Try to exclude all feelings yesterday and concentrate only on the feelings of today in each of the life area. Also try not to allow one category to influence the results of the other categories.

1 = Completely Unhappy (can't get any worse)
5 = Neutral (not unhappy, not happy either)
10 = Completely Happy (can't get any better)

		Unhappy				Neutral					Happy
	Happiness with:										
1.	Alcohol use/nonuse	1	2	3	4	5	6	7	8	9	10
	Marijuana use/nonuse	1	2	3	4	5	6	7	8	9	10
	Other drug use/nonuse	1	2	3	4	5	6	7	8	9	10
2.	Relationship with:										
	Boyfriend or girlfriend	1	2	3	4	5	6	7	8	9	10
	friends	1	2	3	4	5	6	7	8	9	10
3.	Parents or caregiver	1	2	3	4	5	6	7	8	9	10
4.	School	1	2	3	4	5	6	7	8	9	10
5.	Social activities	1	2	3	4	5	6	7	8	9	10
6.	Recreational activities										
7.	Personal habits	1	2	3	4	5	6	7	8	9	10
8.	Legal issues	1	2	3	4	5	6	7	8	9	10
9.	Money Management	1	2	3	4	5	6	7	8	9	10
7.	Emotional Life	1	2	3	4	5	6	7	8	9	10
8.	Communication	1	2	3	4	5	6	7	8	9	10
9.	General Happiness	1	2	3	4	5	6	7	8	9	10
10.	Add specific	1	2	3	4	5	6	7	8	9	10

Name _____ ID _____ Date _____

Goals of Counseling: Setting Goals

Goals of Counseling contains the categories on the Happiness Scale

Guide the client's selection of a category

In general, set short-term goals that are scheduled to be completed in about a month

Develop a step-by-step weekly strategy for reaching each goal

Addressed obstacles to completing the goals

The strategy = the "homework" for the week

Guidelines for Goal Setting

Goals and weekly strategies should be:

Brief (uncomplicated)

Positive (what *will* be done)

Specific behaviors (measurable)

Reasonable

Under the client's control

Based on skills the client already has

A-CRA SKILLS

Happiness Scale	Goals of Counseling	Communication Skills	Problem Solving Skills	Systemic Encouragement
FA of Sub Abuse	**FA of Pro Soc Bx**	Drink/Drug Refusal	Relapse Prevention	Sobriety Sampling
	Job Seeking Skill	Anger Management	(Homework)	

CASE STUDY/ JIM

- 18 year old male
- Abused alcohol, marijuana, meth
- Family history of mental illness
- Strained relationship with mother, father spending life in prison

Acknowledgements and Contacts

Robert E. Meyers, Ph.D.

Jane Ellen Smith, Ph.D.

University of New Mexico

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Chestnut Health Systems

Mid-America (HHS Region 7)

ATTC Addiction Technology Transfer Center Network

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Role of Medication in the Treatment of Methamphetamine Use Disorder:

Making a mole hill out of a mountain

SAMHSA Substance Abuse and Mental Health Services Administration

Doug Burgess, MD

Assistant Professor of Psychiatry, University of Missouri Kansas City

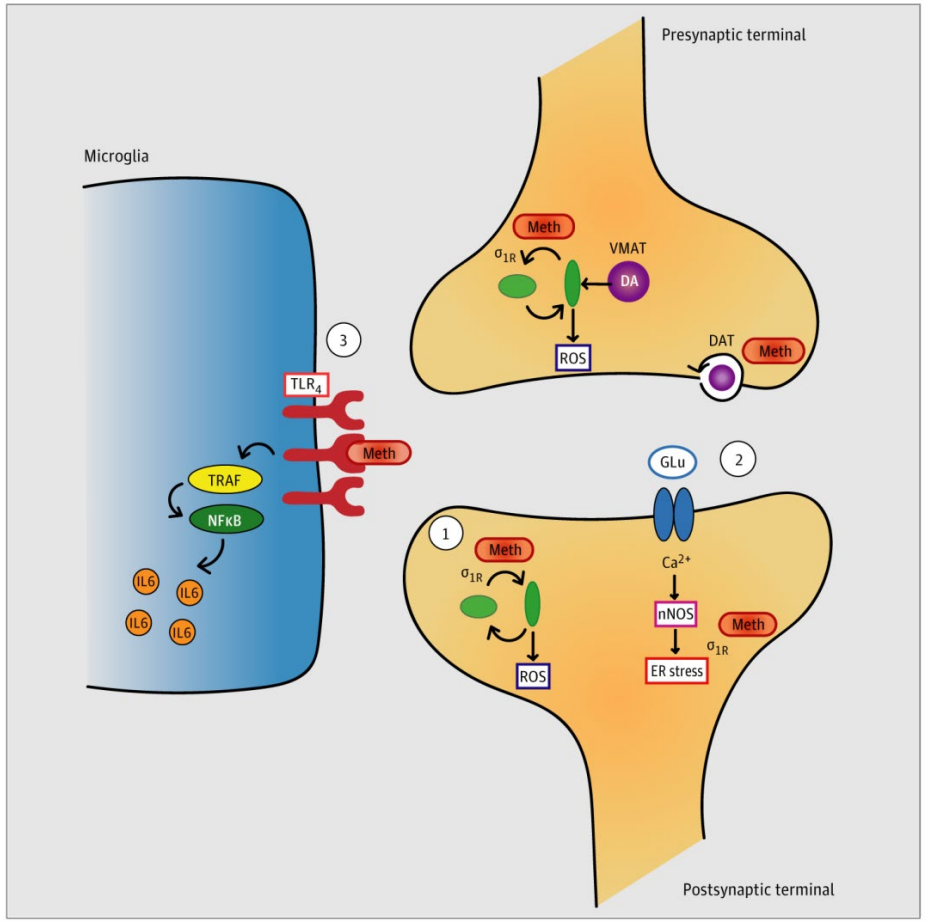
Medical Director of Addiction Services

University Health Physicians/Truman Medical Centers

Disclosures

- I have no financial conflicts of interest to disclose
- I will be discussing off-label indications for some medications

Methamphetamine Challenges



- Unlike opioids, methamphetamine has a complicated mechanism of action
  - DA, 5-HT, NEpi, Epi
- Difficult to target treatment with medication
- Significant oxidative stress and neurotoxicity
- Clinical presentation can vary significantly
- Diverse psychiatric comorbidity

Paulus, M. P., & Stewart, J. L. (2020). Neurobiology, Clinical Presentation, and Treatment of Methamphetamine Use Disorder: A Review. *JAMA psychiatry*, *77*(9), 959–966. https://doi.org/10.1001/jamapsychiatry.2020.0246

Medications in the literature

Buproprion

Modafinil

Dextroamphetamine

Methylphenidate

Aripiprazole

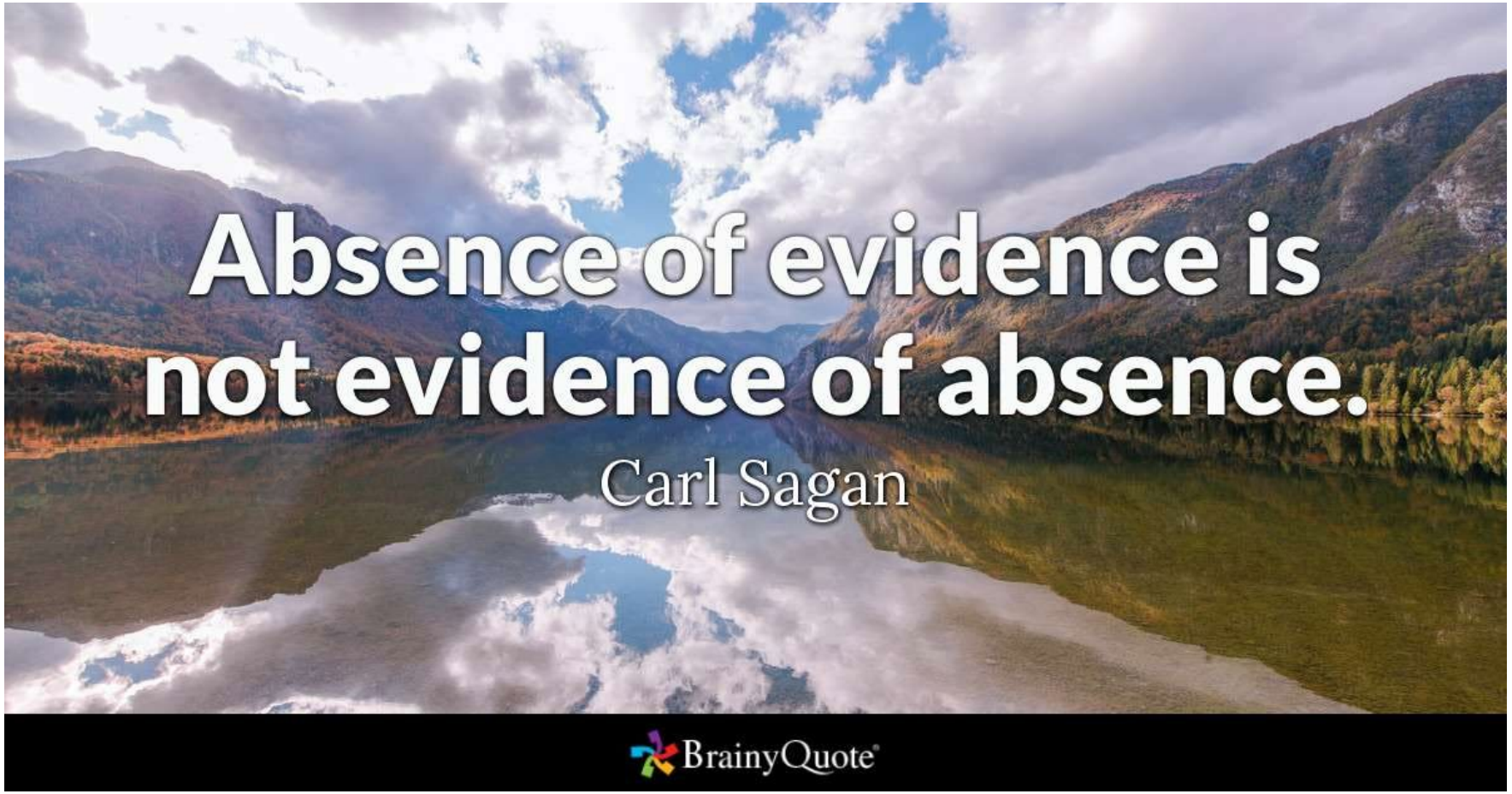
Risperidone

Sertraline

Mirtazapine

- Pexacerfont

Siefried, K. J., Acheson, L. S., Lintzeris, N., & Ezard, N. (2020). Pharmacological Treatment of Methamphetamine/Amphetamine Dependence: A Systematic Review. *CNS drugs*, *34*(4), 337–365. https://doi.org/10.1007/s40263-020-00711-x

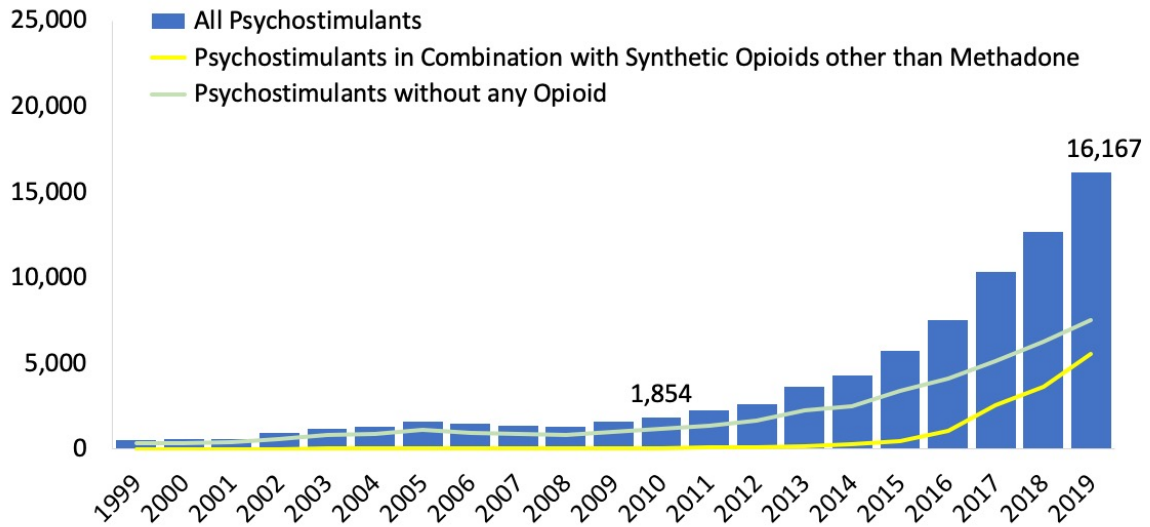

Absence of evidence is not evidence of absence.
Carl Sagan
BrainyQuote

Neuropsychiatric Harms

- Stroke
  - Five fold increase in risk of Hemorrhagic Stroke
- Neurocognitive Impairment
  - Learning, executive functioning, memory, processing speed and language skills
- Parkinson's Disease
  - Up to 3 times increased risk
  - Remains rare
- Seizures (Acute Intoxication)
- Psychotic Illnesses
  - Frequent Incidence (13-27%)
  - 15-30% of first break psychotic episodes- comorbid stimulant use

Lappin, J. M., & Sara, G. E. (2019). Psychostimulant use and the brain. *Addiction (Abingdon, England)*, *114*(11), 2065–2077. https://doi.org/10.1111/add.14708

Figure 6. National Drug Overdose Deaths Involving Psychostimulants with Abuse Potential (Primarily Methamphetamine)*, by Opioid Involvement
Number Among All Ages, 1999-2019



*Among deaths with drug overdose as the underlying cause, the psychostimulants with abuse potential (primarily methamphetamine) category was determined by the T43.6 ICD-10 multiple cause-of-death code. Abbreviated to *psychostimulants* in the bar chart above.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.

The Case of Brian

28 y/o male with 5 emergency room presentations over the last 2 months related to depression and psychosis in the setting of substance use.

Chief Complaint: “They won’t stop following me and I just want to die to show them they’re wrong”

Reports almost daily use of methamphetamine, up to 1 gram- usually by smoking it but recently has injected a few times as well. Also reports use of oxycodone which he buys from a friend. Lately using 1-2 times per week 30 mg tablets. Last use of methamphetamine was about 12 hours ago and last use of oxycodone was 5 days ago

Endorses low energy, feelings of hopelessness, and suicidal thoughts without a specific plan. States that he has trouble sleeping and also feels restless and anxious when he is not using drugs.

Reports memory problems, “twitching” in his arms and difficulty following along in groups at the clinic where he is being treated.

Also reports that people from a government agency are following him and tracking his cell phone. Believes they may have implanted a tracking chip in food that he has eaten.

Case of Brian Continued

Past Psych History:

Reports 3 prior hospitalizations. 2 related to use of methamphetamine and 1 episode at the age of 22 when he was hospitalized for 5 days for a “Nervous Break Down”. Prescribed medication but did not take it after hospitalization

No Prior suicide attempts

Diagnosed with ADHD in grade school- prescribed medication but did not take if for longer than a few months

Enrolled in an outpatient substance use treatment program but does not attend regularly. Saw a psychiatrist but no medications were prescribed

Case of Brian Continued

Past Medical History:

History of one prior seizure 1 year ago when using methamphetamine. Otherwise unremarkable

Does not have a primary care doctor

Family History:

No reported history of suicide attempts

States that father and paternal grandmother were both hospitalized and had “bipolar disorder”

Father had problems with alcohol and methamphetamine- deceased at 45 from stroke

Case of Brian Continued

Substance Use History:

Began alcohol use at age of 17. Reported minimal problems related to alcohol. Drinks infrequently

Tobacco Use- smokes 1 ppd and started smoking at 14

Began cannabis use around the age of 17. Smokes 4-5 times per month. Helps with anxiety and sleep

Began Methamphetamine use at the age of 23. Used recreationally at first but was using regularly at age of 25. Primarily smoking but has used intravenously. Uses almost every day for the last year- about 1 gram per day.

Opioids: began using oxycodone which he got from a friend about 6 months ago. Uses about 30 mg 4-5 times per month but use has been increasing recently.

Denies any other drug use

Enrolled in a community based outpatient treatment program where he attends groups 1-2 days per week. Has an individual therapist who he sees infrequently.

Case of Brian Continued

Social History:

Raised by his mother and father. Has one older sister. No history of abuse or neglect growing up. Graduated high school and has worked mostly service oriented jobs. No significant legal history. Currently lives in an apartment over the garage at his mother's house. Has limited social support. No spiritual beliefs. Not currently in a relationship and has no children.

Where might Medication Have a Role?

Listen to the Patient

Effects of Chronic Use:

Anxiety and Depression

Aggressiveness

Social Isolation

Psychosis

Psychomotor dysfunction

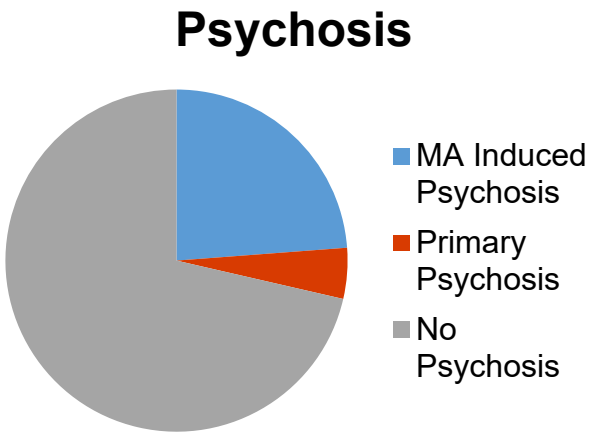
Withdrawal Symptoms: Anhedonia, irritability, fatigue, intense craving

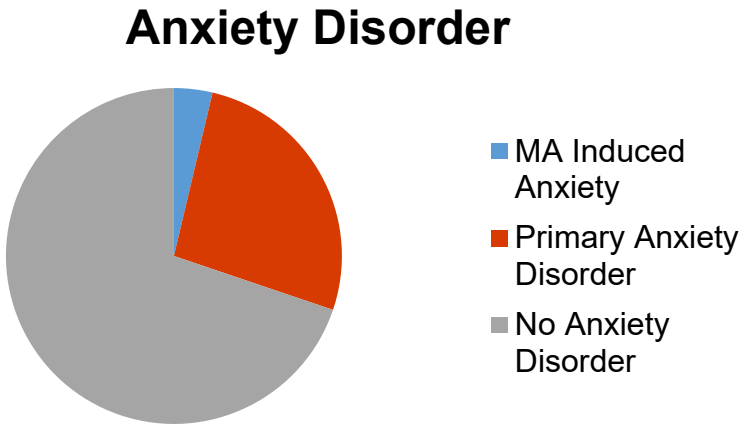
Consider symptom based pharmacologic interventions

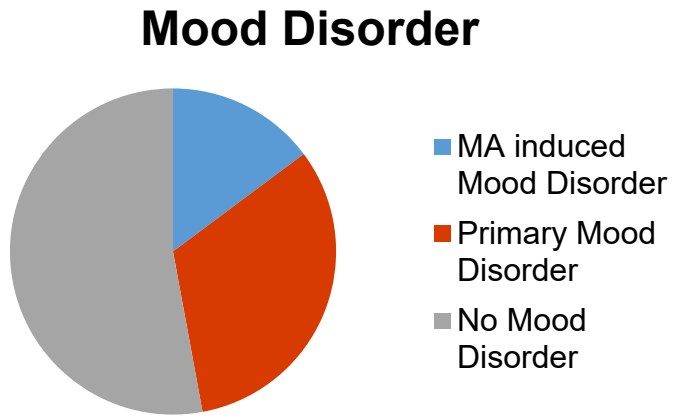
Decision based on risks of treatment versus no treatment

Blum, K., Cadet, J. L., & Gold, M. S. (2021). Psychostimulant use disorder emphasizing methamphetamine and the opioid -dopamine connection: Digging out of a hypodopaminergic ditch. *Journal of the neurological sciences*, *420*, 117252. https://doi.org/10.1016/j.jns.2020.117252

Psychiatric Co-Morbidities







Salo, R., Flower, K., Kielstein, A., Leamon, M. H., Nordahl, T. E., & Galloway, G. P. (2011). Psychiatric comorbidity in methamphetamine dependence. *Psychiatry research*, *186*(2-3), 356–361. https://doi.org/10.1016/j.psychres.2010.09.014

Psychosis and Methamphetamine

Psychotic Symptoms- “Positive” symptoms

- Suspiciousness, Unusual Thought Content, Hallucinations and Bizarre Behavior (Wang et al. 2017)
- Most Episodes are brief (hours to days)
- Can persist for months and recur during periods of abstinence (Grant et al. 2012)

Is there a compelling reason to wait?

- Consider use of aripiprazole or risperidone

Hart, C. L., Gunderson, E. W., Perez, A., Kirkpatrick, M. G., Thurmond, A., Comer, S. D., & Foltin, R. W. (2008). Acute physiological and behavioral effects of intranasal methamphetamine in humans. *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology*, *33*(8), 1847–1855. https://doi.org/10.1038/sj.npp.1301578

Psychosis

Buproprion

Modafinil

Dextroamphetamine

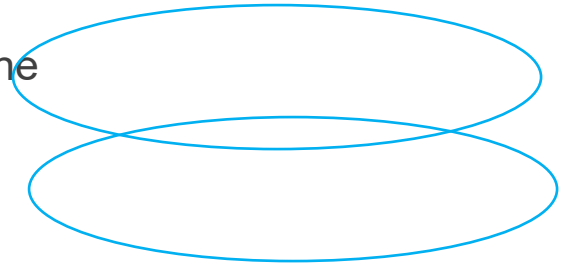
Methylphenidate

Aripiprazole

Risperidone

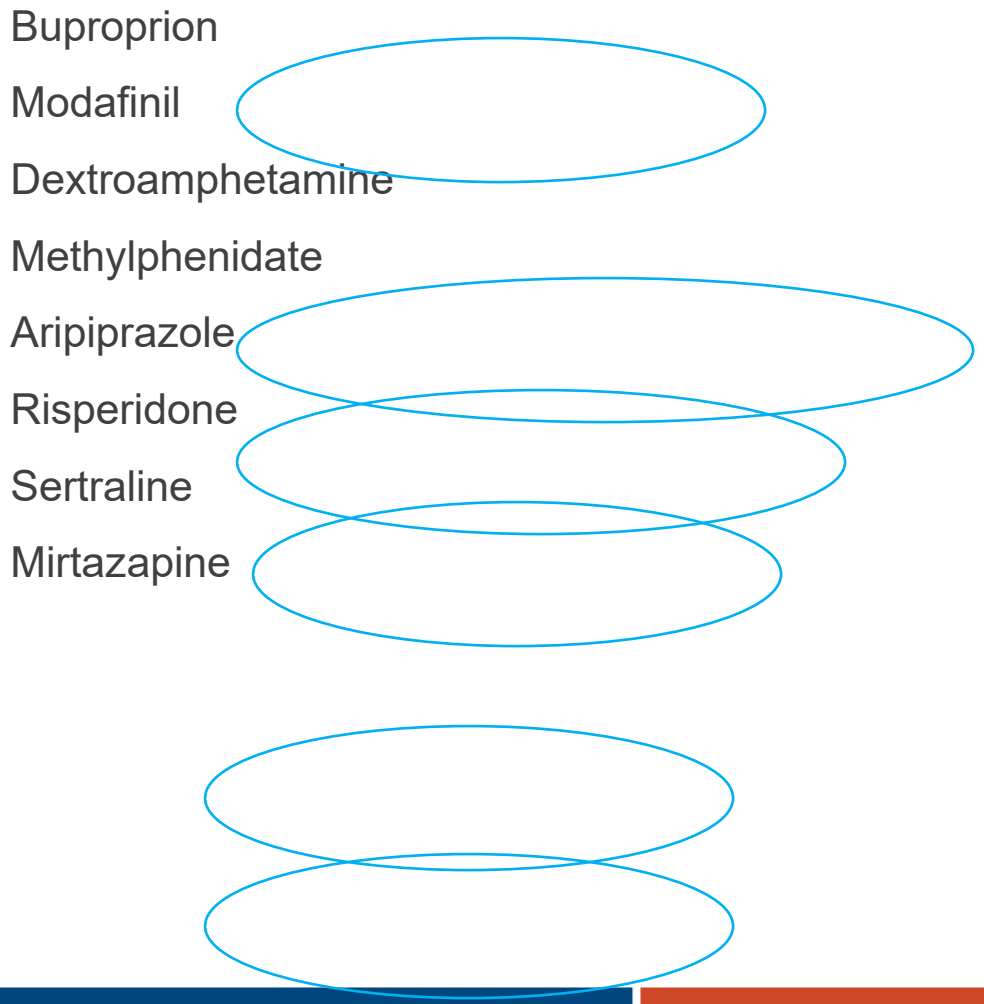
Sertraline

Mirtazapine



- Varenicline
- Gabapentin
- Baclofen
- Topiramate
- Naltrexone
- Buprenorphine
- Riluzole
- Pexacerfont

Depression



- Varenicline
- Gabapentin
- Baclofen
- Topiramate
- Naltrexone
- Buprenorphine
- Riluzole
- Pexacerfont

Anxiety

Buproprion

Modafinil

Dextroamphetamine

Methylphenidate

Aripiprazole

Risperidone

Sertraline

Mirtazapine

- Varenicline
- Gabapentin
- Baclofen
- Topiramate
- Naltrexone
- Buprenorphine
- Riluzole
- Pexacerfont

ADHD and Substance Use Disorders

Some studies indicate prevalence of SUDs in individuals with ADHD is 2-4xs higher (Cumyn et al. 2009)

Up to 1/3 of all people with cocaine use disorders meet criteria for ADHD (Levin et al. 2007)

The prevalence rates of ADHD within SUD treatment settings found to be up to 24% (van Emmerik-van Oortmerssen et al. 2013)

Levin, F. R., Evans, S. M., Brooks, D. J., & Garawi, F. (2007). Treatment of cocaine dependent treatment seekers with adult ADHD: double-blind comparison of methylphenidate and placebo. *Drug and alcohol dependence*, *87*(1), 20–29. https://doi.org/10.1016/j.drugalcdep.2006.07.004

van Emmerik-van Oortmerssen, K., Crunelle, C. L., & Carpentier, P. J. (2013). Verslaving en ADHD: een overzicht van recent Nederlands onderzoek [Substance use disorders and ADHD: an overview of recent Dutch research]. *Tijdschrift voor psychiatrie*, *55*(11), 861–866.

Cumyn, L., French, L., & Hechtman, L. (2009). Comorbidity in adults with attention-deficit hyperactivity disorder. *Canadian journal of psychiatry. Revue canadienne de psychiatrie*, *54*(10), 673–683. https://doi.org/10.1177/070674370905401004

ADHD

Buproprion

Modafinil

Dextroamphetamine

Methylphenidate

Aripiprazole

Risperidone

Sertraline

Mirtazapine

- Varenicline
- Gabapentin
- Baclofen
- Topiramate
- Naltrexone
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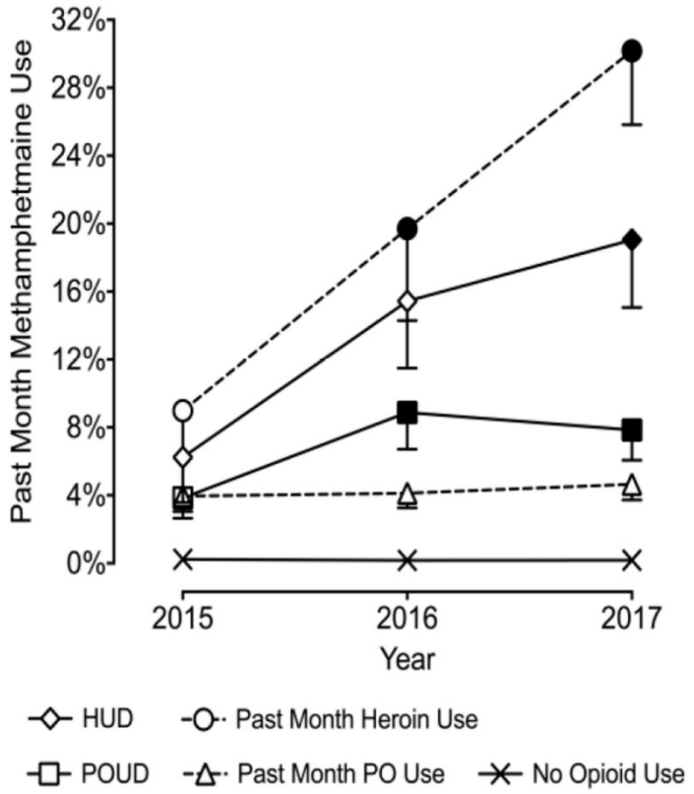
Opioids and Methamphetamine Use



Past Month Methamphetamine Use by Opioid Use History. Plotted are weighted prevalence estimates for past month methamphetamine use from the 2015-2017 NSDUH. Values are presented for past month heroin use (circles), past year heroin use disorder (diamonds), past month non-medical prescription opioid use (triangles), and past year non-medical prescription opioid use disorder (squares). Filled symbols are significantly different from 2015. Dotted lines represent substance use disorder variables and solid lines represent past month variables. Also plotted are estimates for individuals with no past month heroin or non-medical prescription opioid use (crosses). Error bars represent standard error of the mean. HUD = heroin use disorder; POUD = prescription opioid use disorder.

Strickland, J. C., Havens, J. R., & Stoops, W. W. (2019). A nationally representative analysis of "twin epidemics": Rising rates of methamphetamine use among persons wh use opioids. *Drug and alcohol dependence*, *204*, 107592. https://doi.org/10.1016/j.drugalcdep.2019.107592

Co-Occurring Substance Use Disorder

Buproprion

Modafinil

Dextroamphetamine

Methylphenidate

Aripiprazole

Risperidone

Sertraline

Mirtazapine

- Varenicline
- Gabapentin
- Baclofen
- Topiramate
- Naltrexone
- Buprenorphine
- Riluzole
- Pexacerfont

References

Blum, K., Cadet, J. L., & Gold, M. S. (2021). Psychostimulant use disorder emphasizing methamphetamine and the opioid -dopamine connection: Digging out of a hypodopaminergic ditch. *Journal of the neurological sciences*, *420*, 117252. https://doi.org/10.1016/j.jns.2020.117252

Cumyn, L., French, L., & Hechtman, L. (2009). Comorbidity in adults with attention-deficit hyperactivity disorder. *Canadian journal of psychiatry. Revue canadienne de psychiatrie*, *54*(10), 673–683. https://doi.org/10.1177/070674370905401004

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Thank you!

Questions?