



MASSACHUSETTS  
GENERAL HOSPITAL

PSYCHIATRY ACADEMY

# Treating Cocaine and Methamphetamine Use Disorders

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# Disclosures



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Neither I nor my spouse/partner has a relevant financial relationship with a commercial interest to disclose



# Learning Objectives

- Participants will be able to identify at least one significant barrier to implementing treatment for stimulant use disorders in the ambulatory setting.
- Participants will be able to recall the basic principles of contingency management.
- Participants will be able to name at least 2 medications that may be clinically indicated for patients with stimulant use disorder in the ambulatory setting.



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# Getting Started

How to train your staff and what to prepare them for



## Creating space and fighting stigma



- Start by training staff about the basics of stimulants.
- Consider de-escalation training in the event of overramping patient presentations.
- Create a cool-down space for patients who present overramping.
- Consider having medications on hand that can be administered for the patient overramping.
- Train staff about discrete populations of people most likely to use stimulants (LGBTQ+, AI/AN) and how to create a welcoming environment.

The Washington Post

### Crack Babies: The Worst Threat Is Mom Herself

By Douglas J. Behar

**L**AST WEEK in this city, Greater Southeast Community Hospital released a 7-week-old baby to her homeless, drug-addicted mother even though the child was at severe risk of pulmonary arrest. The hospital's explanation: "Because [the mother] demanded that the baby be released."  
The hospital provided the mother with an apnea monitor to warn her if the baby stopped breathing while asleep, and trained her in CPR. But on the very first night, the mother went out drinking and left the child at a friend's house—without the monitor. Within seven hours, the baby was dead. Like Dooney Waters, the 6-year-old living in his mother's drug den, whose shocking story was reported in The Washington Post last week, this child was all but abandoned by the authorities.

### Children of the Opioid Epidemic

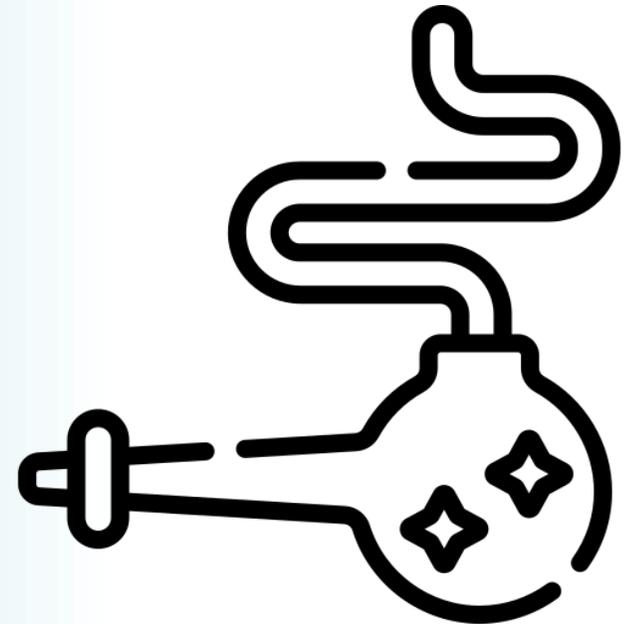
In the midst of a national opioid crisis, mothers addicted to drugs struggle to get off them — for their babies' sake, and their own.

By JENNIFER EGAN MAY 9, 2018





**Don't forget they are different!**





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# Behavioral Health Treatments

Creating reinforcement

# Evidence-Based Treatments



- Most treatments have been studied individually.
- Studies that did examine combined approaches found that CM combined with any other intervention improved overall outcomes compared to either intervention alone.
- Mix and Match!

Treatment Name	Description	Evidence	Implementation Considerations
<b>Contingency Management</b>	Provides positive reinforcers to promote recovery activities or abstinence.	(Bach et al., 2020; Brown & DeFulio, 2020; Gagnon et al., 2021; Lake et al., 2022; Minozzi et al., 2016; Okafor et al., 2020)	Currently \$75 limit, effective dose is \$300-500/p/y
<b>Community Reinforcement Approach</b>	Use of functional analysis and community resources to promote recovery over use.	(Meyers et al., 2011; Riccardo De Giorgi et al., 2018; Stitzer et al., 2011)	Can be complicated to implement for an individual provider. Needs community support.
<b>Exercise-Supported Recovery</b>	Use of aerobic and anaerobic exercise to promote regulation of dopamine and promote recovery.	(Huang et al., 2020; Killeen et al., 2020; Li et al., 2022; J. Liu et al., 2021; X. Liu & Wang, 2021; Marrero-Cristobal et al., 2022; Reddy et al., 2020; Salem et al., 2022; Thoi et al., 2022; Wang et al., 2022; Zhou et al., 2021)	Medical complications associated with methamphetamine use can complicate ability to exercise.
<b>Matrix Model</b>	An intensive cognitive behavioral approach to engaging patients and changing behaviors for recovery.	(Huber et al., 1997; Rawson et al., 1995, 2002)	High burden for staff in terms of intensive treatment programming.
<b>Motivational Interviewing</b>	A therapeutic form of communication that promotes change from within.	(Korcha et al., 2014; Parsons et al., 2018; Polcin et al., 2014)	For patients with varying levels of cognition it may not be effective.



# Contingency Management

## Voucher-based

- Based in behavioral analysis: “A behavior that is reinforced in close temporal proximity to its occurrence will increase in frequency”
- Voucher-based CM focuses on direct reinforcement for a specific behavior.
- Effective doses of CM are between \$300-500 per person per year.
- The effects produced in CM outlast the occurrence of reinforcers.
- Frequency and increasing magnitude are key to making this effective.
- Funding limitations throughout the US.

Week	Visit	Voucher	Week	Visit	Voucher
1	1	\$2.50	7	1	\$25
	2	\$3.75		2	\$26.25
	3	\$5 + \$10		3	\$27.50 + \$10
2	1	\$6.25	8	1	\$28.75
	2	\$7.50		2	\$30
	3	\$8.75 + \$10		3	\$31.25 + \$10
3	1	\$10	9	1	\$32.50
	2	\$11.25		2	\$33.75
	3	\$12.50 + 10		3	\$35 + \$10
4	1	\$13.75	10	1	\$36.25
	2	\$15		2	\$37.50
	3	\$16.25 + \$10		3	\$38.75 + \$10
5	1	\$17.50	11	1	\$40
	2	\$18.75		2	\$41.25
	3	\$20 + \$10		3	\$42.50 + \$10
6	1	\$21.25	12	1	\$43.75
	2	\$22.50		2	\$45
	3	\$23.75 + \$10		3	\$46.25 + \$10
		296.25			701.25



# Contingency Management

## Fish-bowl

- The fish-bowl method of CM employs an element of chance.
- Important to have a robust tracking, storage, and delivery system, particularly if reinforcing abstinence.
- Building the prize cabinet should happen with input from the participants. Get creative!

### Draw Schedule

Week in Treatment	Consecutive Samples Submitted	Total Draws Per Day (if negative)
1	1	1
	2	2
2	3	3
	4	4
3	5	5
	6	6
4	7	7
	8	8
5	9	9
	10	10
6	11	10
	12	10
7	13	10
	14	10
8	15	10
	16	10
9	17	10
	18	10
10	19	10
	20	10
11	21	10
	22	10
12	23	10
	24	10

Table 4.1 Draw Schedule



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# Medical Treatments

Pharmacotherapy for SUD and co-occurring considerations



# Consider pharmacotherapy options

Although there are **no FDA-approved medications** to treat methamphetamine use disorder there are some options that are evidence-informed and can be used in the outpatient setting.

Medications used for methamphetamines may not be clinically indicated for cocaine use disorder and vice versa.

Medication Name	Dose	Frequency	Evidence	Side effects	Other Considerations
Mirtazapine	30-45mg	Daily at bedtime	(Chan et al., 2020; Colfax et al., 2011; Karila et al., 2010; Naji et al., 2022)	Risk for QTc prolongation. Risk for serotonin syndrome, Weight gain/metabolic changes	Studied most robustly in populations of MSM engaging in chemsex.
Naltrexone (IM) and Bupropion	380mg + 300-450mg	Injection q21 days + Daily in AM	(Ahmadi et al., 2019; Trivedi et al., 2021, Kidd, et al, 2023)	Injection site reaction, weight loss, serotonin syndrome, depression	An opioid antagonist, making it not ideal for patients with PSU



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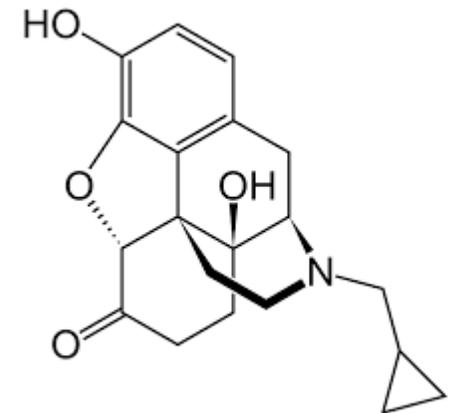
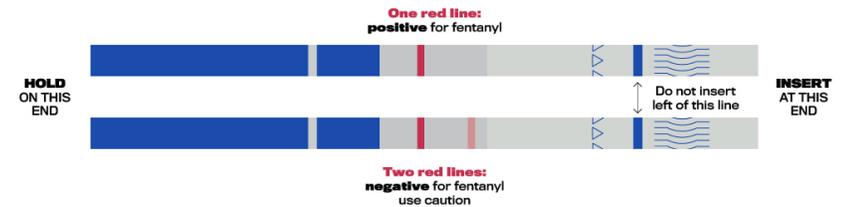
Medication Name	Dose	Frequency	Evidence	Side effects	Other Considerations
Topiramate	150mg BID	Twice Daily	(Chan et al., 2019; Johnson et al., 2013; Prince & Bowling, 2018; Siniscalchi et al., 2015)	Risk for renal impairment. Risk for skin reactions, acute myopia, weight loss, drug rxns	Risk for people of pregnancy capacity to fetal development.
Mixed-amphetamine salts ER (in combo)	60-80mg	Daily	(Chan et al., 2019; Levin et al., 2015, 2020)	Weight loss, dry mouth, anxiety, cardiac monitoring, drug interactions.	For patients with a history of psychosis would avoid or use cautiously.



# Considerations for Contamination and Polysubstance Use

- Consider the risk of a contaminated cocaine supply and the risk for accidental fentanyl consumption.
- **Overdose prevention is key!** Access and education regarding naloxone should occur for all patients.
- In some cases “prescribe to protect”, and always provide drug-checking resources.
- Prioritize treatment of the OUD to prevent fatal opioid overdose.

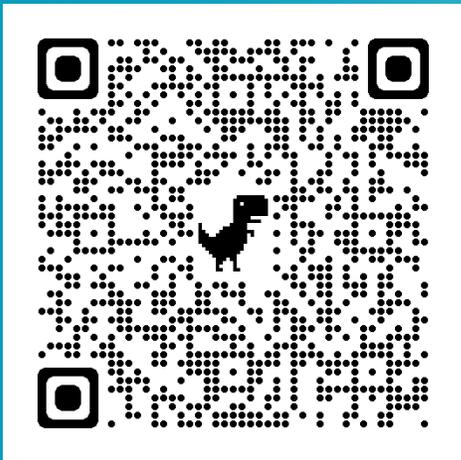
## FENTANYL TEST STRIPS



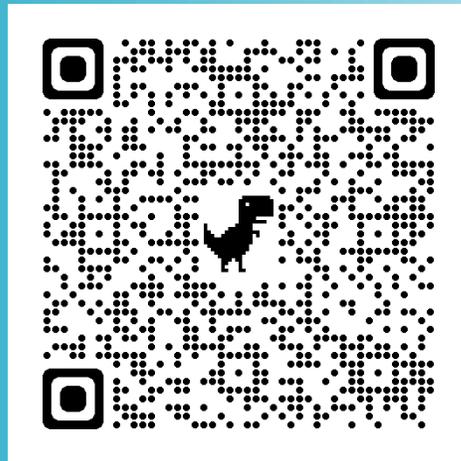


# Questions?

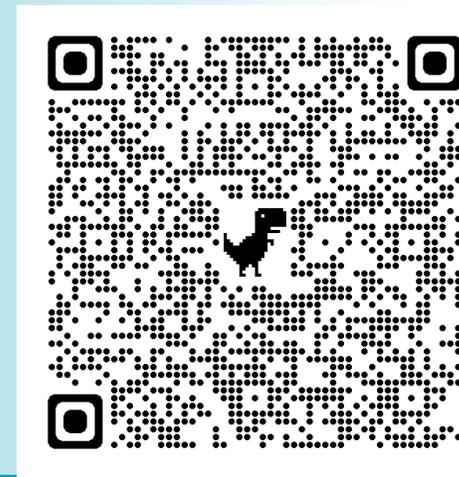
## Additional Resources



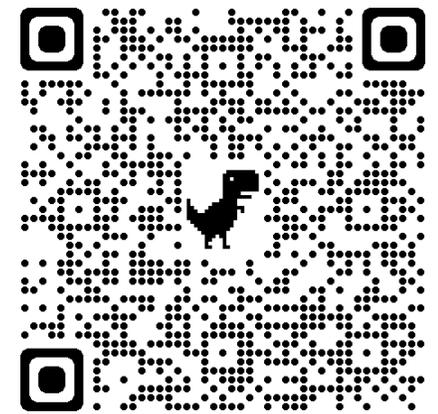
SAMHSA TIP 33



S3 Practice Guidelines



Australian Clinical Guidelines



Chemsex First Aid Guide