



UW PACC

Psychiatry and Addictions Case Conference

UW Medicine | Psychiatry and Behavioral Sciences

Opioid Use Disorder and ADHD Overlap

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UW PACC 03/28/24



SPEAKER DISCLOSURES

✓ Any conflicts of interest?

✓ No

PLANNER DISCLOSURES

The following series planners have no relevant conflicts of interest to disclose; other disclosures have been mitigated.

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MENTI POLL

OBJECTIVES

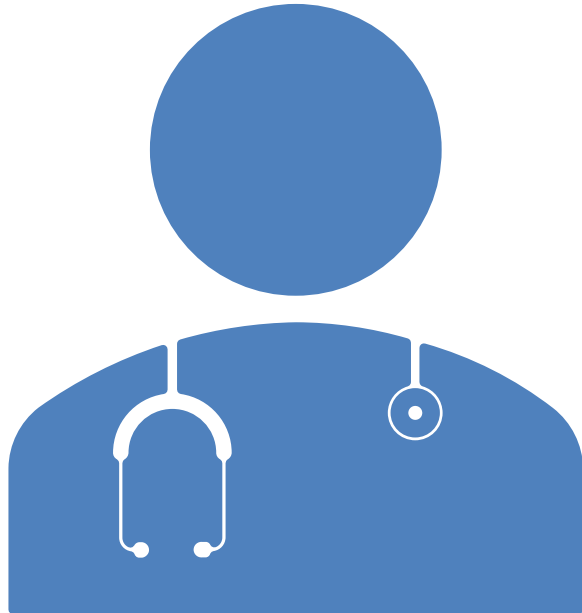
By the end of this presentation participants should be able to:

1. State what is known about prevalence of ADHD/ODD overlap
2. Have a gross understanding of the relevant studies relating to substance use disorders and ADHD
3. List the potential advantages of treatment of ADHD in the context of substance use disorders including OUD
4. Understand the effects of early ADHD treatment with stimulants on development of SUDs
5. Understand estimates risk of prescription stimulant misuse
6. Understand screening and diagnosis of ADHD in this population
7. Feel more comfortable with treatment of ADHD in opioid use disorder and substance use disorders

OUTLINE / QUESTIONS TO ADDRESS

- Epidemiology
 - How Common is ADHD?
 - How Common is OUD in ADHD?
 - How Common is ADHD in OUD?
- SUD and ADHD
 - How Does ADHD effect SUD treatment?
 - OUD and ADHD
 - Discuss relevant studies
 - Guidelines?
- Practical approach
 - Screening
 - Diagnosis
 - Addressing mimics
 - Treatment options

Dr B



A LOT OF MY PATIENTS ARE COMING TO ME FOR TREATMENT FOR OPIOID USE DISORDER.

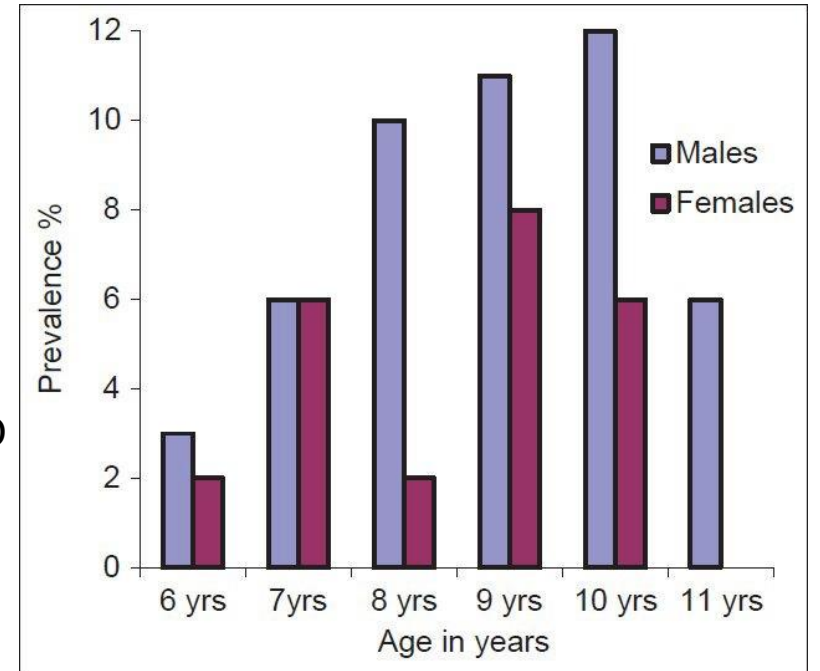
I DON'T KNOW HOW COMMON ADHD IS IN THIS POPULATION, SOME OF THEM THINK THEY HAVE IT.

HOW COMMON IS IT?

IS IT WORTH TREATING IN THIS POPULATION?

ADHD PREVALENCE

- Children diagnosed with US ADHD (5%-9.4%), (Worldwide 5%-7%)
- Between 1/3 to 2/3 retain the diagnosis into adulthood
- Prevalence of persistent adult ADHD = 2.5% - 4.4% (Worldwide 2%-6%)



Akam Venkata, Jyothsna & S Panicker, Anuja. (2013). Prevalence of Attention Deficit Hyperactivity Disorder in primary school children. Indian journal of psychiatry. 55. 338-42. 10.4103/0019-5545.120544.

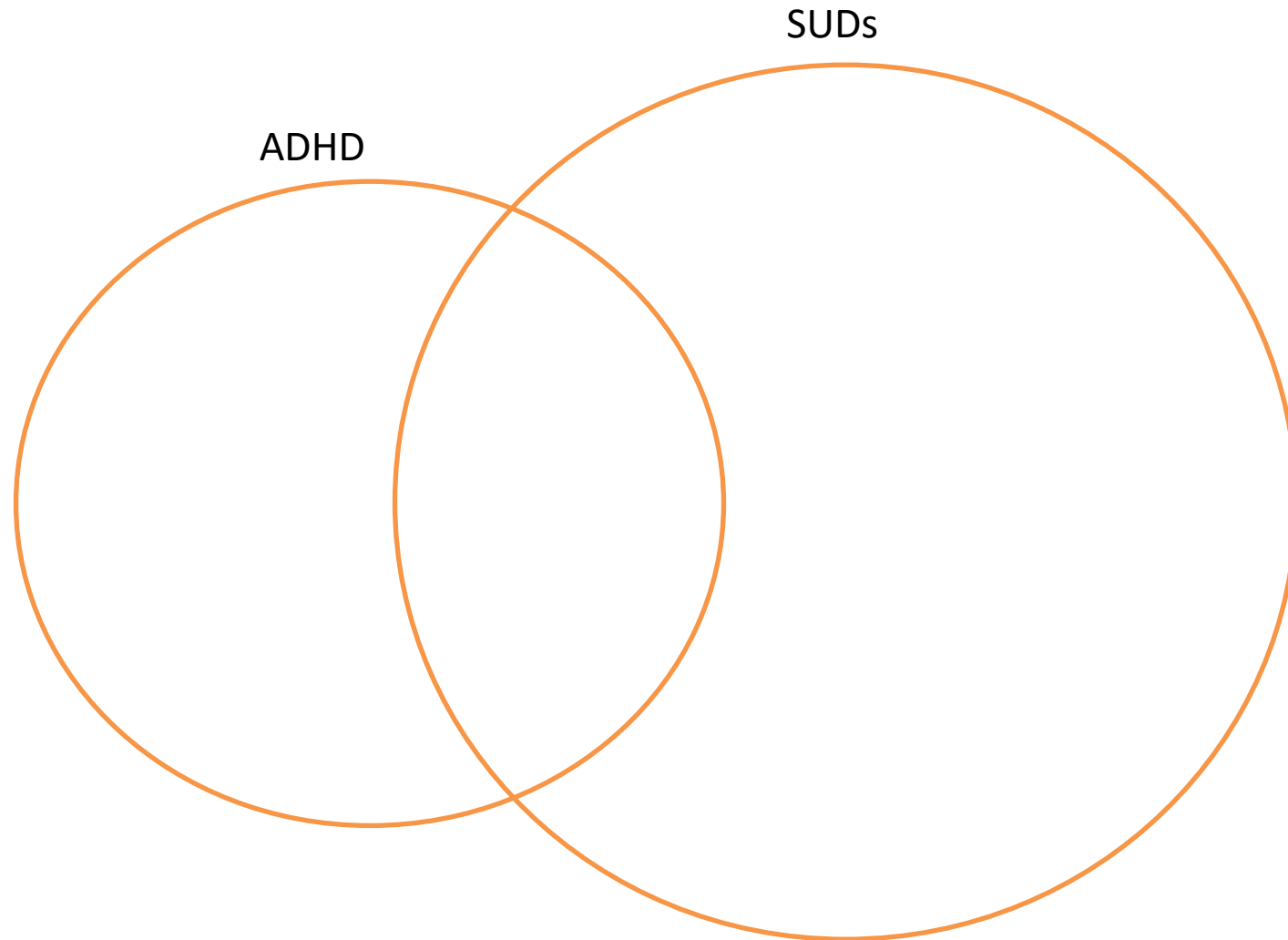
Table 2.1 Prevalence of Comorbidities

Canadian-ADHD-Practice-Guidelines

Psychiatric comorbidities prevalence: **+** 1-10% **++** 11-30% **+++** >31% **?** controversial/unknown

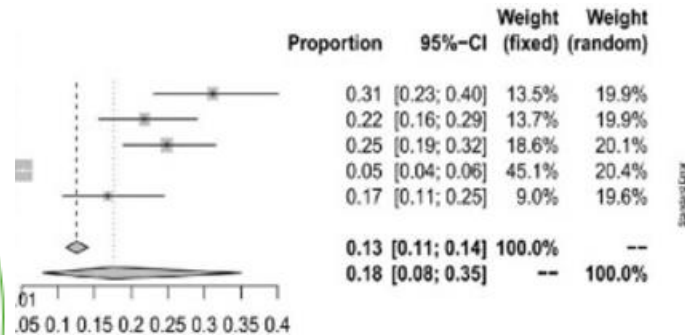
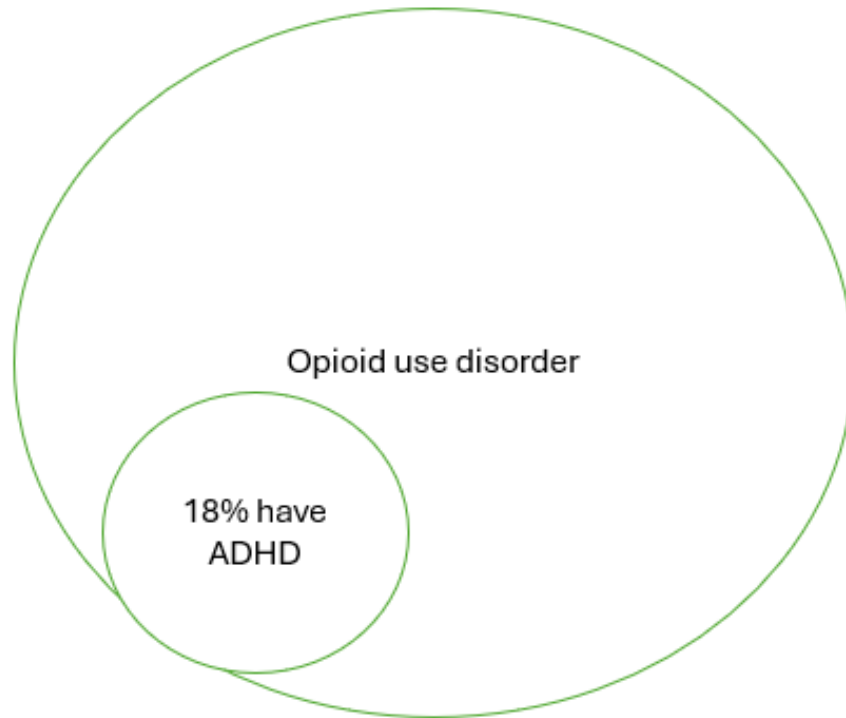
	CHILD (6-12)	ADOLESCENT (13-17)	ADULTS (18+)
ANXIETY	++	++	+++
DEPRESSION	+	++	+++
LEARNING DISABILITIES	+++	+++	+++
OPPOSITIONAL DEFIANT DISORDER	+++	++	+
CONDUCT DISORDER	++	++	++ (Antisocial PD)
BIPOLAR	+ (?)	+	++
SUBSTANCE USE	+	++	+++
AUTISM SPECTRUM DISORDER	++	++	++ (?)
TIC DISORDERS	++	++	+
DMDD	?	?	?
BORDERLINE PERSONALITY DISORDER		?	+++
OBSESSIVE COMPULSIVE DISORDER	+	+	++

OVERLAP BETWEEN ADHD AND SUDs



WHAT ABOUT PREVALENCE OF ADHD IN OUD

- Prevalence of Attention Deficit Hyperactivity Disorder (ADHD) among Substance Use Disorder (SUD) Populations: Meta-Analysis [Int J Environ Res Public Health](#). 2023 Jan; 20(2): 1275.

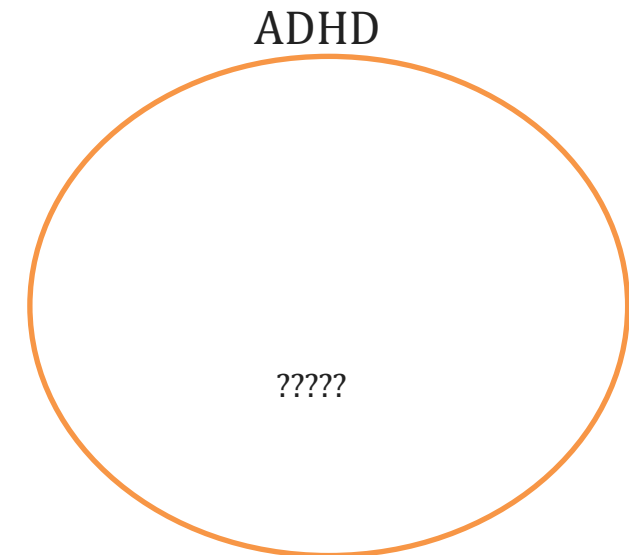


WHAT ABOUT PREVALENCE OF OUD IN ADHD

Substance use in ADHD

Amphetamine (19.1%),
cannabis (17.1%),
cocaine or ecstasy (7.4%),
benzodiazepines (7.4%),
heroin or other opioids (2.9%)

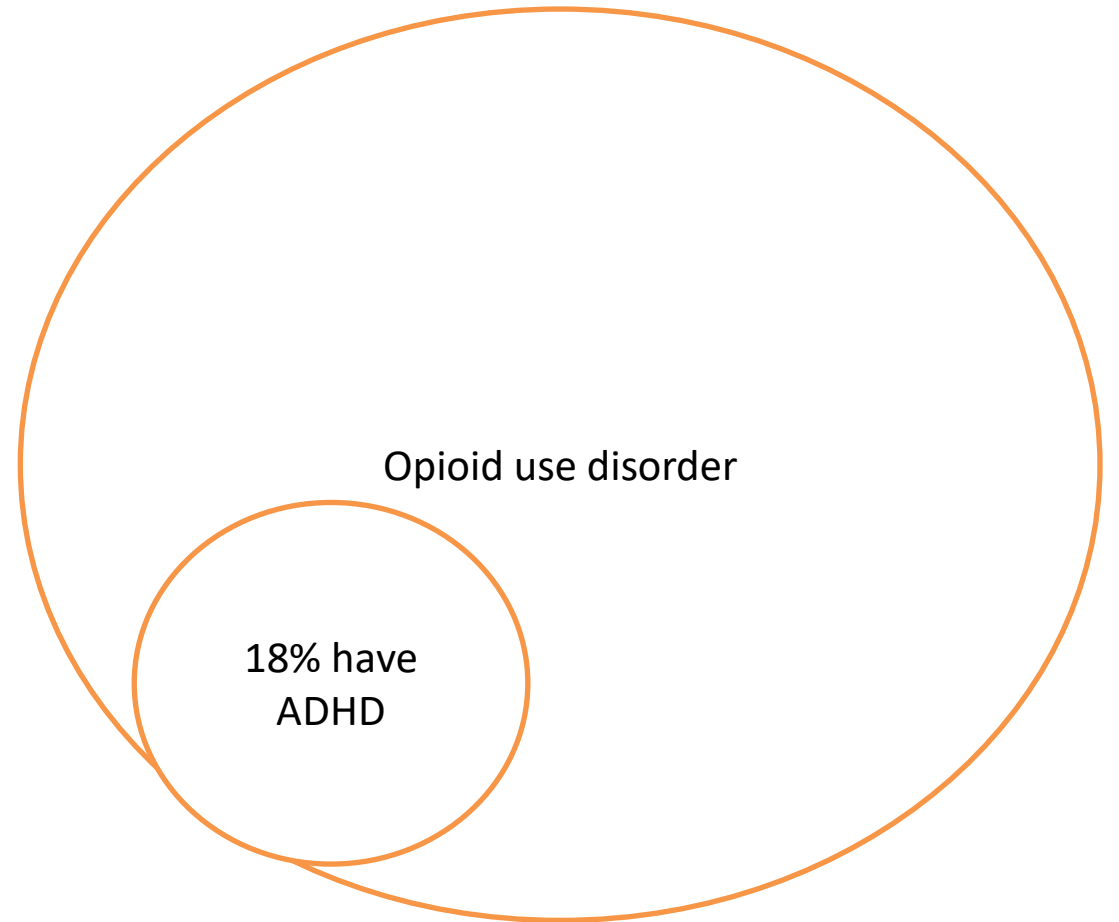
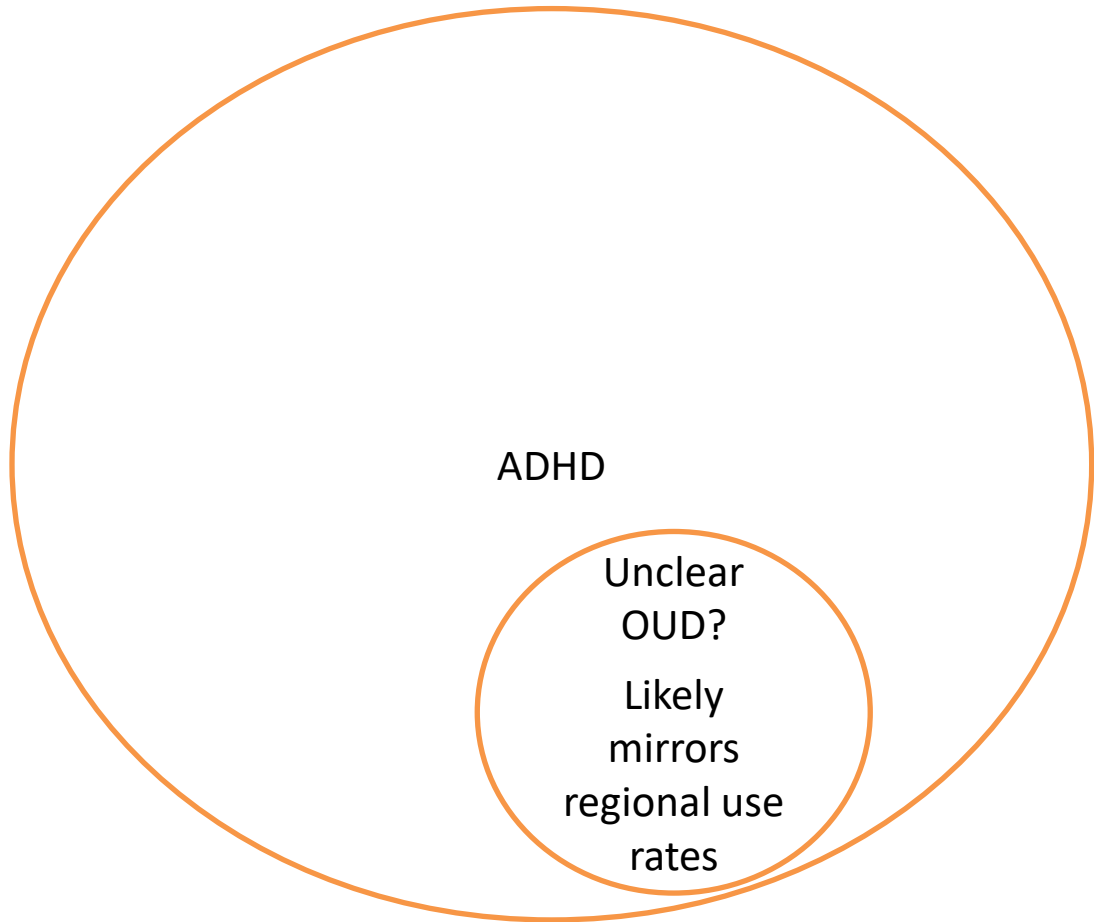
- Mirrors rates of use in country of origin.



[World J Psychiatry](#). 2020 Sep 19; 10(9): 202–211.
Published online 2020 Sep 19. doi: [10.5498/wjp.v10.i9.202](https://doi.org/10.5498/wjp.v10.i9.202)

PMCID: [PMC7515748](https://pubmed.ncbi.nlm.nih.gov/33014721/)
PMID: [33014721](https://pubmed.ncbi.nlm.nih.gov/33014721/)

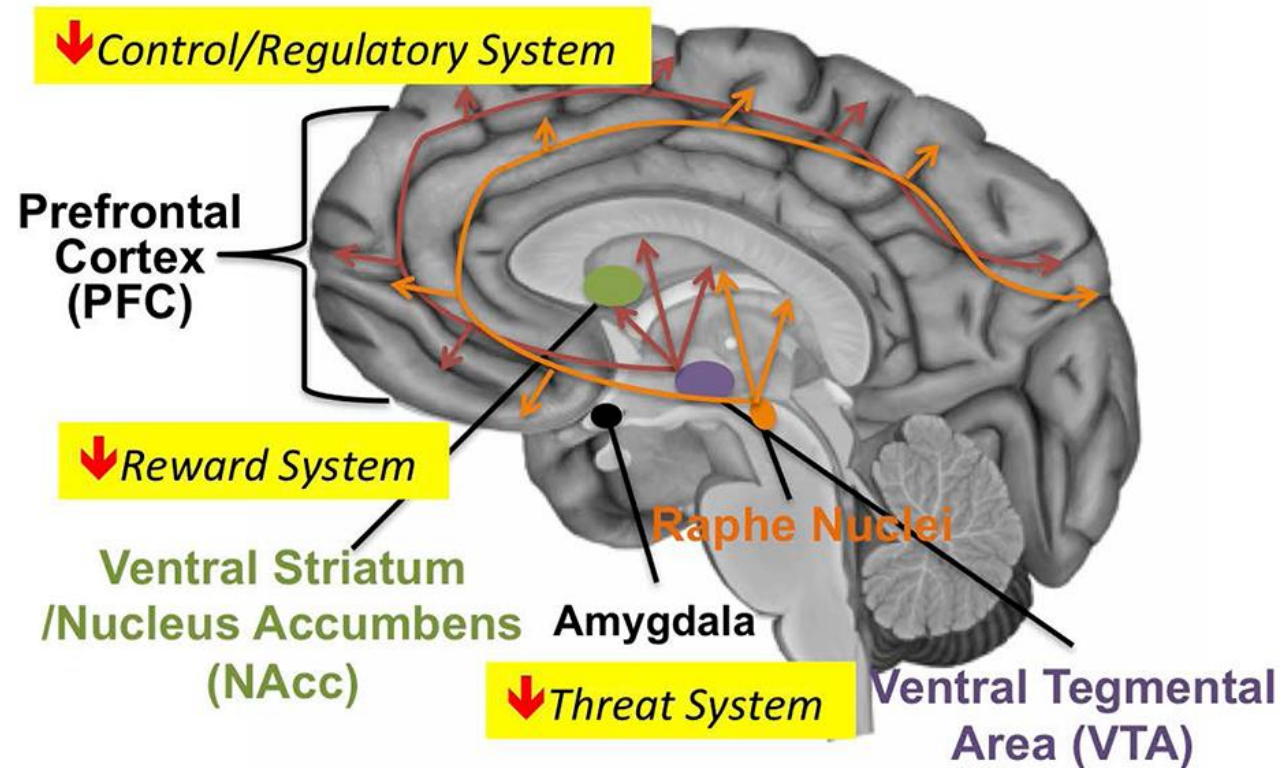
Alcohol and drug use disorders in adult attention-deficit/hyperactivity disorder:
Prevalence and associations with attention-deficit/hyperactivity disorder symptom
severity and emotional dysregulation



**WHY DOES IT
MATTER?
HOW IS ADHD
LIKELY TO EFFECT
YOUR SUD?**

- More Severe SUD
- Less likely to recover
- Complicated courses
- Lower retention in treatment
- Higher rates of other psychiatric comorbidities

WHY?



- Complex relationship between dysfunction in ADHD with impulsivity, Substance use and reward and inhibition

**SOUND LIKE THIS IS
A BIT MORE
COMMON THAN I'M
AWARE OF.**

**I'M A BIT
CONCERNED THAT
PRESCRIBING
STIMULANTS MIGHT
LEAD TO SUBSTANCE
USE DISORDERS
LATER ON IN LIFE, IS
THAT TRUE?**

Dr B



Impact of intervention on SUD, other studies, adopted from Boland 2020- A literature review and meta-analysis on the effects of ADHD medications on functional outcomes

Study	N (ADHD)	Age range	Finding
Quinn et al., 2017	2.9 million	Range: 15-42	Stimulant medication use was associated with a <u>significantly lower risk</u> of substance-related events within the same individuals for periods off medication.
Sundquist et al., 2015	9424	Avg.: 15	Stimulant medication was <u>not associated with an increased nor decreased risk</u> for drug use disorder diagnoses when compared to those not taking medication.
Chang et al., 2014	38,753	Range: 8-46	Stimulant medication was associated with a <u>significantly reduced risk</u> of substance abuse outcomes when compared to non-stimulant users.
Steinhausen and Bisgaard, 2014	20,742	Avg.: 11-20	Stimulant medication was associated with a <u>significantly reduced risk</u> for SUD versus non-medicated and within individuals for periods on versus off medication

ADHD INTERVENTION, DOES IT EFFECT SUD OUTCOME? CHANG 2019

Injuries and traumas

Dalsgaard et al., 2015 (39), Denmark
 Man et al., 2015 (41), Hong Kong
 Mikolajczyk et al., 2015 (43), Germany
 Raman et al., 2013 (44), United Kindom

Motor vehicle accidents

Chang et al., 2014 (49), Sweden. Males
 Females

Chang et al., 2017 (50), United States. Males
 Females

Criminality

Lichtenstein et al., 2012 (57), Sweden. Males
 Females

Suicidality

Chen et al., 2014 (59), Sweden
 Man et al., 2017 (63), Hong Kong

Substance use disorder

Chang et al., 2014 (64), Sweden
 Quinn et al., 2017 (66), United States. Males
 Females

Depression

Chang et al., 2016 (67), Sweden

Bipolar disorder and mania

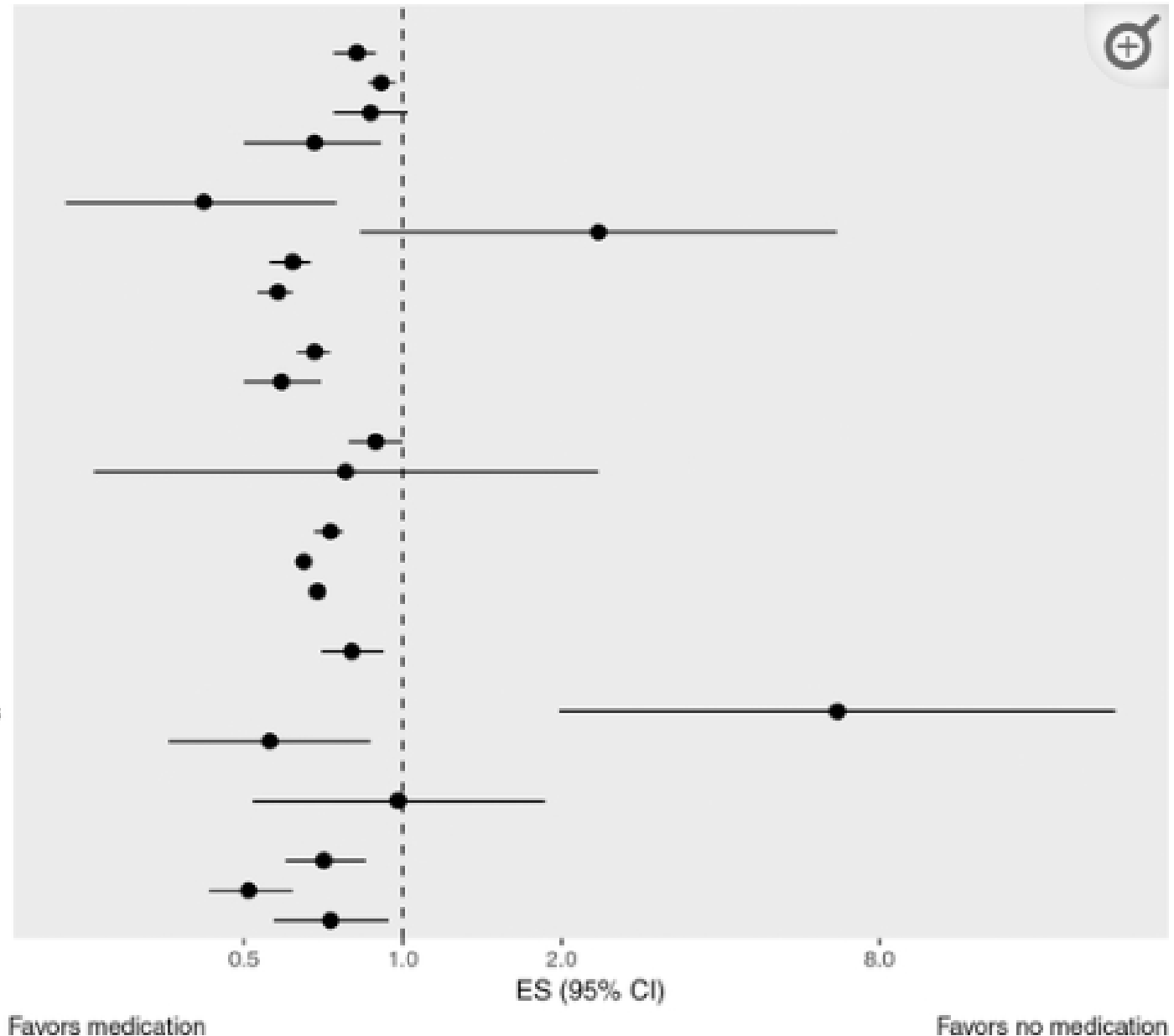
Viktorin et al., 2017 (69), Sweden. Without mood stabilizers
 With mood stabilizers

Psychosis

Man et al., 2016 (71), Hong Kong

Seizures

Wiggs et al., 2018 (76), United States. Prior seizure
 No prior seizure
 Brikell et al., 2019 (77), Sweden



MORTALITY BENEFIT FOR ADHD TREATMENT

- LI ET AL 2024

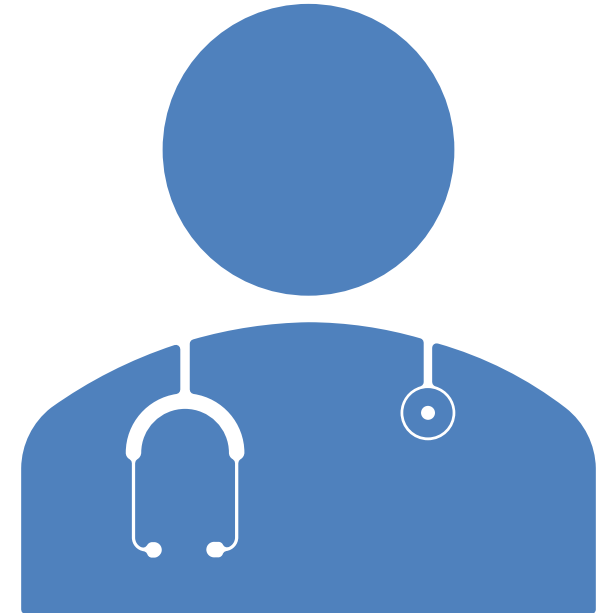
	Crude				Weighted				2-Year risk difference (95% CI) ^a	Adjusted hazard ratio (95% CI)			
	Initiation		Noninitiation		Initiation		Noninitiation						
	Deaths (person-years, 133 201)	Incidence rate per 10 000 person-years	Deaths (person-years, 91 912)	Incidence rate per 10 000 person-years	Deaths (person-years, 310 362)	Incidence rate per 10 000 person-years	2-Year risk (95% CI) ^a	Deaths (person-years, 307 604)	Incidence rate per 10 000 person-years	2-Year risk (95% CI) ^a			
All cause	231	17.3	292	31.8	598	19.3	39.1 (33.8-45.4)	731	23.8	48.1 (42.5-54.5)	-8.9 (-17.3 to -0.6)	0.79 (0.70-0.88)	
Natural cause	66	5.0	102	11.1	203	6.6	13.1 (10.0-17.3)	226	7.4	14.7 (11.9-18.2)	-1.6 (-6.4 to 3.2)	0.86 (0.71-1.05)	
Unnatural cause	165	12.4	190	20.7	395	12.7	25.9 (21.8-30.8)	505	16.4	33.3 (28.5-38.8)	-7.4 (-14.2 to -0.5)	0.75 (0.66-0.86)	
Suicide	103	7.7	105	11.4	248	8.0	16.3 (13.0-20.3)	268	8.7	17.7 (14.4-21.8)	-1.4 (-6.6 to 3.7)	0.88 (0.74-1.04)	
Accidental injuries	19	1.4	11	1.2	41	1.3	2.7 (1.6-4.3)	33	1.1	2.1 (1.1-4.0)	0.5 (-1.4 to 2.4)	1.34 (0.85-2.14)	
Accidental poisoning	38	2.9	68	7.4	92	3.0	6.0 (4.2-8.7)	183	6.0	12.1 (9.4-15.6)	-6.0 (-9.8 to -2.3)	0.47 (0.36-0.60)	



- Among individuals diagnosed with ADHD, medication initiation was significantly associated with lower mortality, in particular for unnatural causes.

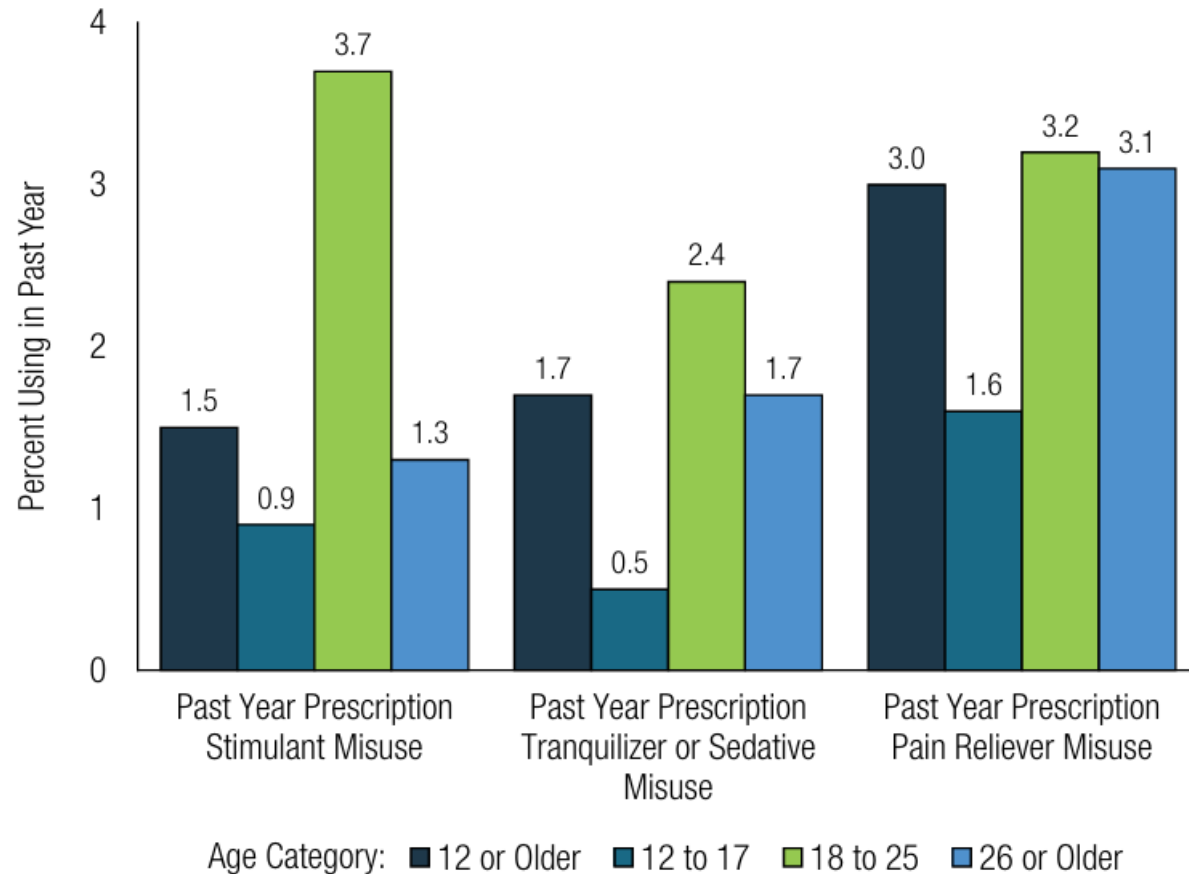
**ALL THAT MAKES SENSE,
BUT WHAT ABOUT THE
RISKS OF MISUSE?**

Dr B



WHAT IS THE SCALE OF MISUSE OF PRESCRIPTION STIMULANTS?

Figure 20. Past Year Prescription Stimulant Misuse, Past Year Prescription Tranquilizer or Sedative Misuse, or Past Year Prescription Pain Reliever Misuse: Among People Aged 12 or Older; 2022



Key Substance Use and Mental Health Indicators in the United States: Results from the 2022 National Survey on Drug Use and Health SAMHSA

- Assessed via questionnaire

ARE CHILDREN WHO RECEIVE STIMULANTS MORE LIKELY TO DEVELOP STIMULANT USE DISORDERS?

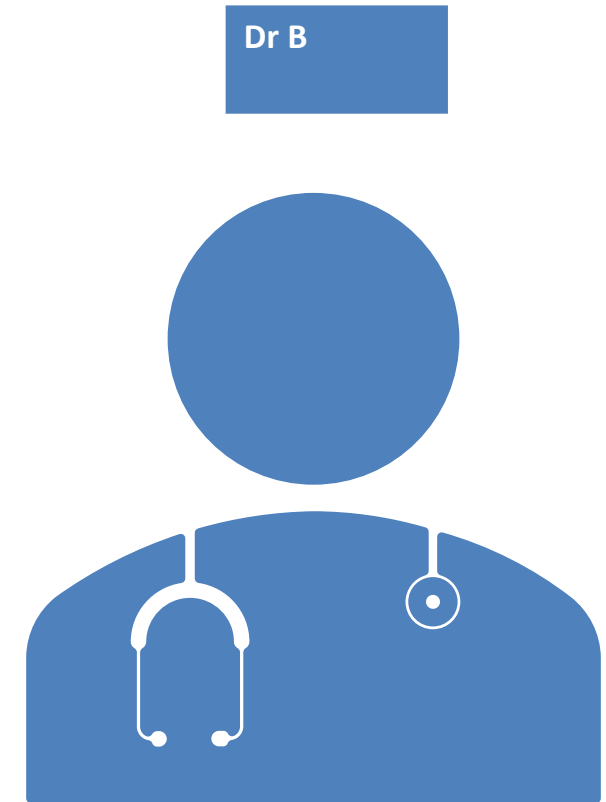
MCABE ET AL 2023

- Among 5034 students enrolled at baseline 470 (10.2% [95% CI, 9.4%-11.2%]) reported use of stimulant therapy for ADHD,
- 671 (14.6% [95% CI, 13.5%-15.6%]) reported prescription stimulant misuse only,
- 3459 (75.2% [95% CI, 73.9%-76.4%]) reported neither (and served as population controls).
- NO statistically significant differences between adolescents who reported stimulant therapy for ADHD at baseline compared with population controls during young adulthood (19-24 years of age).
- In contrast, PSM during adolescence in those not treated with stimulants for ADHD had significantly higher odds of transitioning to later cocaine or methamphetamine initiation and use during young adulthood compared with population controls (adjusted odds ratio, 2.64 [95% CI, 1.54-4.55]).

Table 1. Baseline Respondent Characteristics at 18 Years of Age

Characteristic	No. (%) of respondents (N = 5034) ^a
Lifetime prescription stimulant exposure	
No stimulant therapy for ADHD or PSM	3459 (75.2)
Stimulant therapy for ADHD only	294 (6.4)
Stimulant therapy for ADHD and PSM	176 (3.8)
PSM only	671 (14.6)

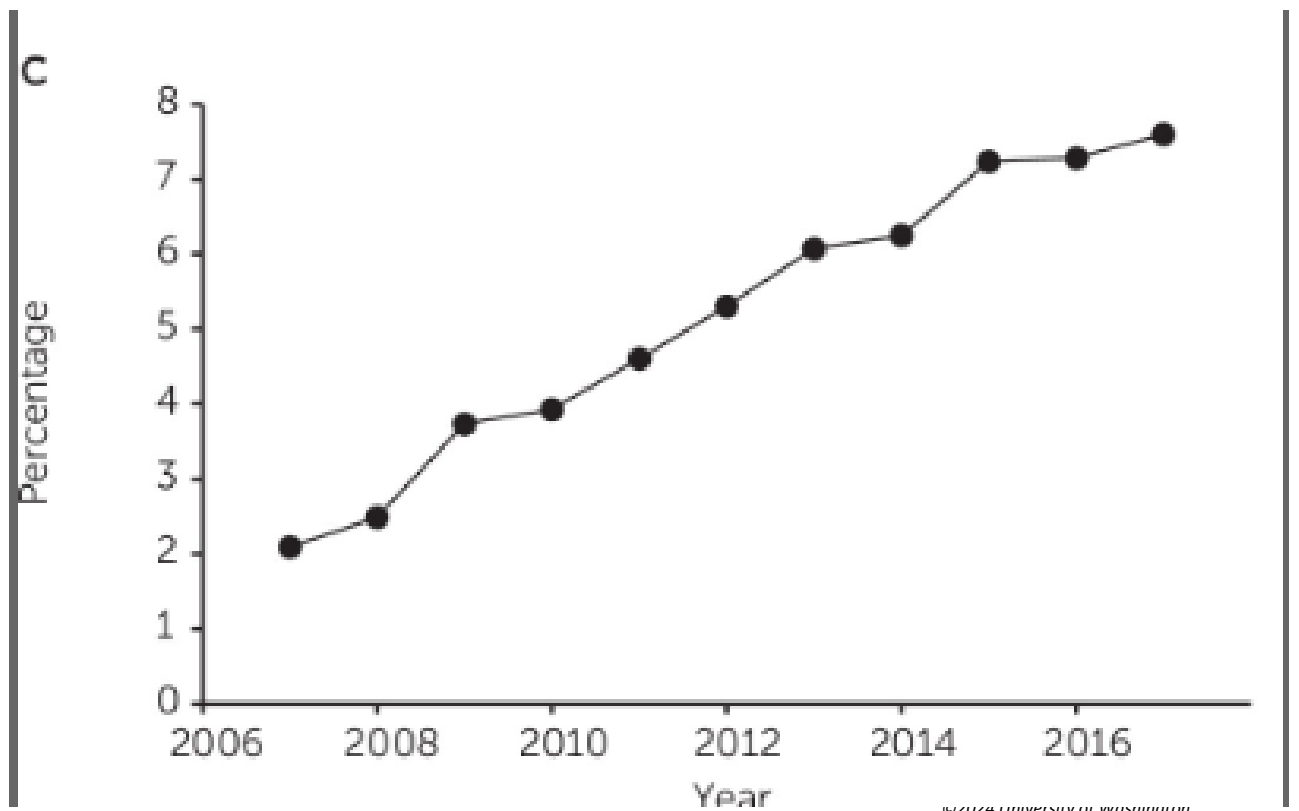
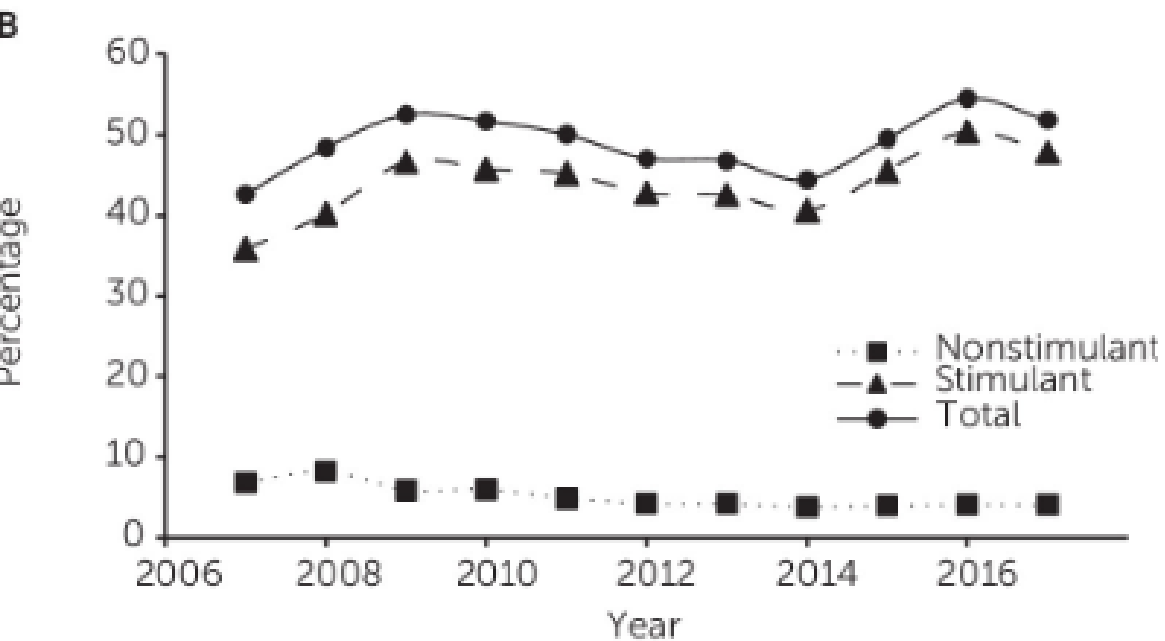
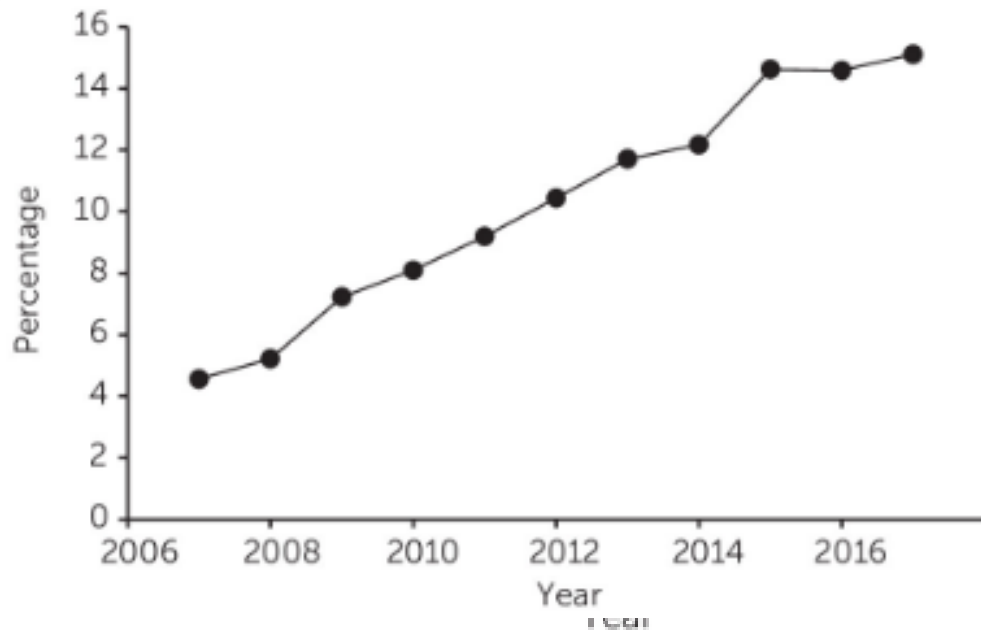
I UNDERSTAND WHAT YOU ARE SAYING, BUT I WAS TRAINED NOT TO PROVIDE CONTROLLED MEDICATIONS INCLUDING STIMULANTS TO PEOPLE WITH SUDS. WHAT ARE OTHER PEOPLE DOING?



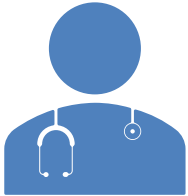
Trends in Attention-Deficit Hyperactivity Disorder Diagnosis and Pharmacotherapy Among Adults With Opioid Use Disorder

Tae Woo Park, M.D., M.Sc., Tithi D. Baul, M.P.H., Jake R. Morgan, Ph.D., Timothy E. Wilens, M.D., Amy M. Yule, M.D.

Published Online: 4 Oct 2023 | <https://doi.org/10.1176/appi.ps.20220400>



Dr B



**OKAY, I UNDERSTAND
TREATING ADHD IS
SOMETHING I SHOULD BE
CONSIDERING WITH SUDS IN
GENERAL, WHAT ABOUT
ABOUT OUD SPECIFICALLY?**

WHY BOTHER WITH TREATMENT?

- Individuals with ADHD are at a higher risk of developing substance use disorders, including OUD.
- ADHD is associated with increased impulsivity and risk-taking behaviors, which can contribute to SUDs including OUD.
- Adult ADHD is also associated with more common adverse behavioral and neuropsychiatric outcomes

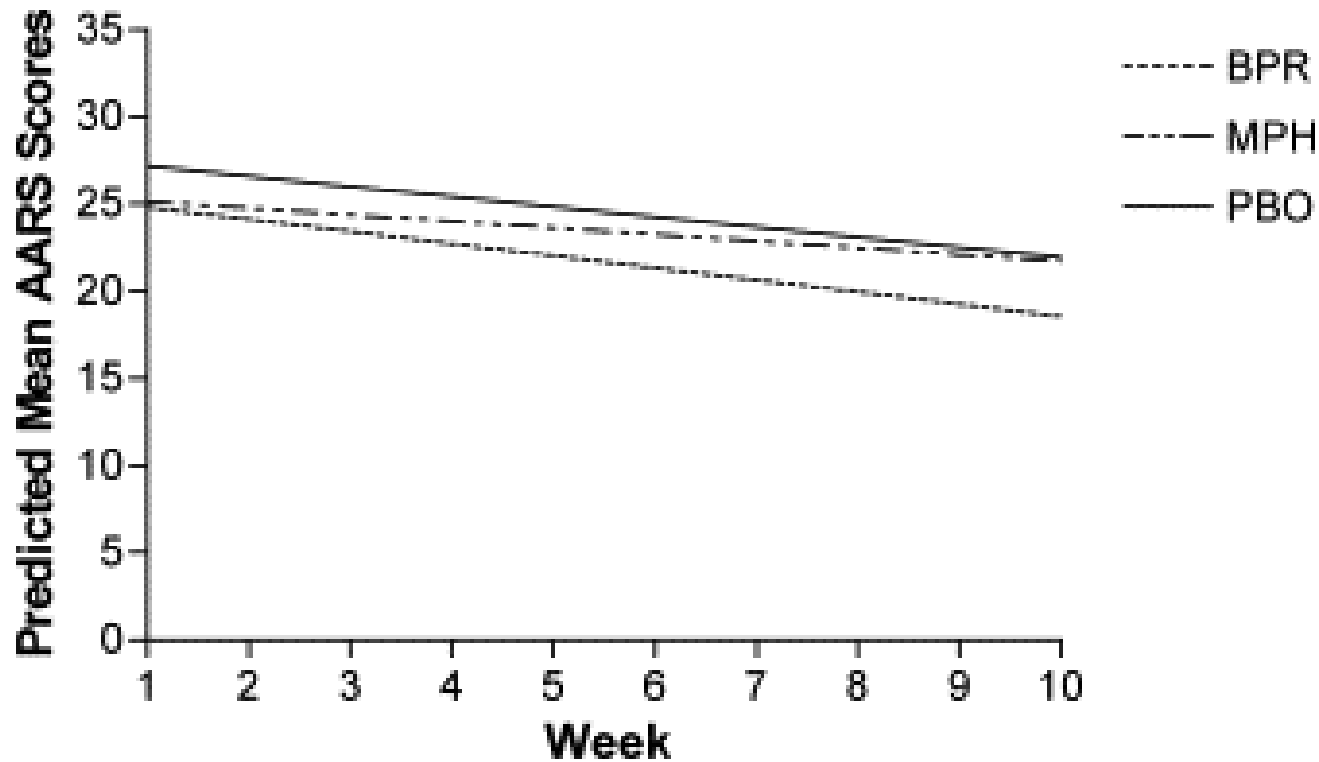


Fig. 2. Mean AARS scores over 10-week treatment phase.

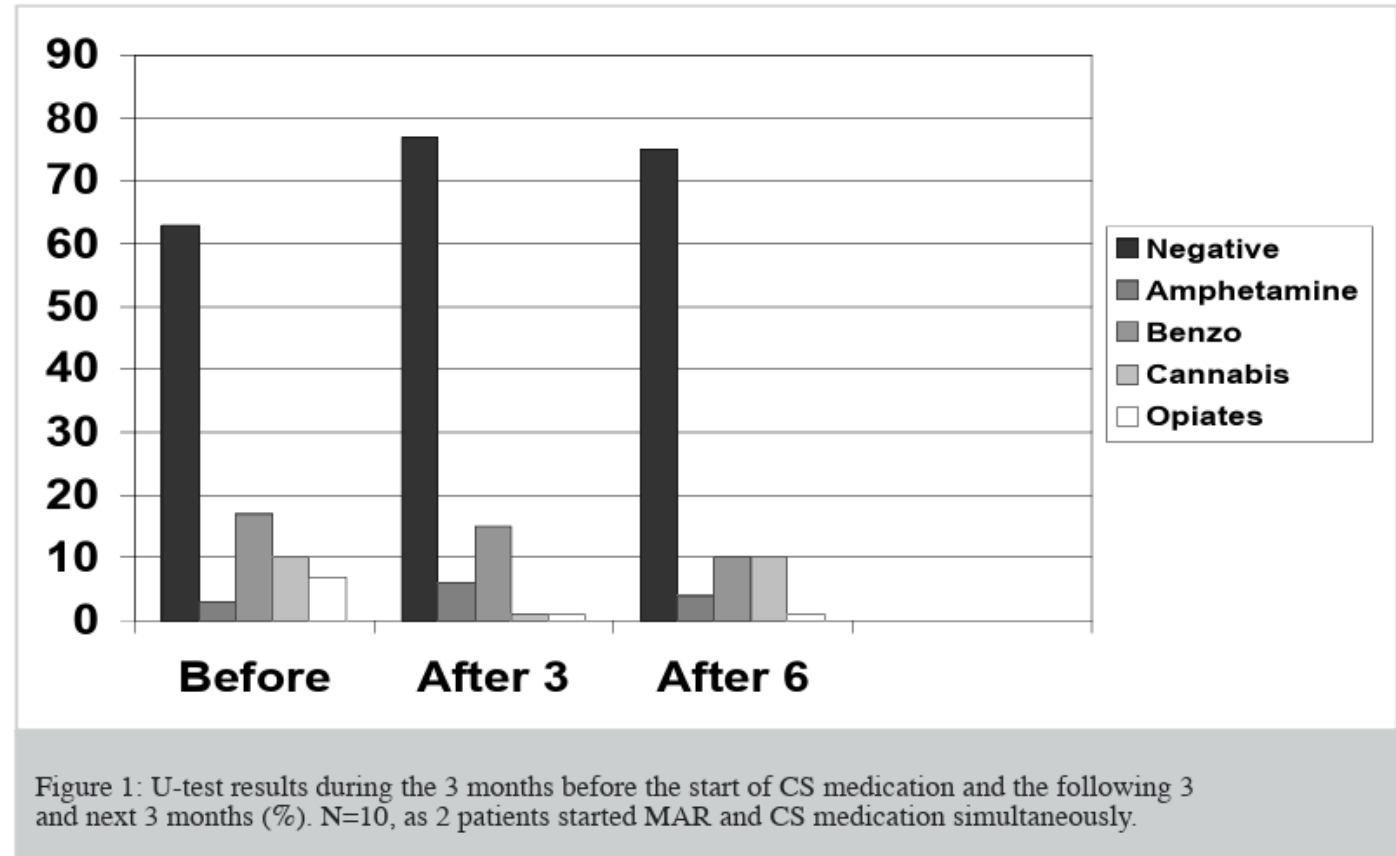
-Subjects were
 --- methadone maintained
 --- had active cocaine dependence/abuse
 --- received weekly cbt (individual)

Results

--- 70% completed the trial
 Responder = 30% reduction in AARS score
 --- high placebo response 46%
 --- no statistically significant benefit to MPH / BPR
 --- No evidence of misuse in any group

Levin F.R., Evans S.M., Brooks D.J., Kalbag A.S., Garawi F., Nunes E.V.
 Treatment of methadone-maintained patients with adult ADHD: Double-blind comparison of methylphenidate, bupropion and placebo. *Drug Alcohol Depend.* 2006;81:137-148. doi: 10.1016/j.drugalcdep.2005.06.012.

BLIX ET AL 6 MONTH SMALL NATURALISTIC STUDY

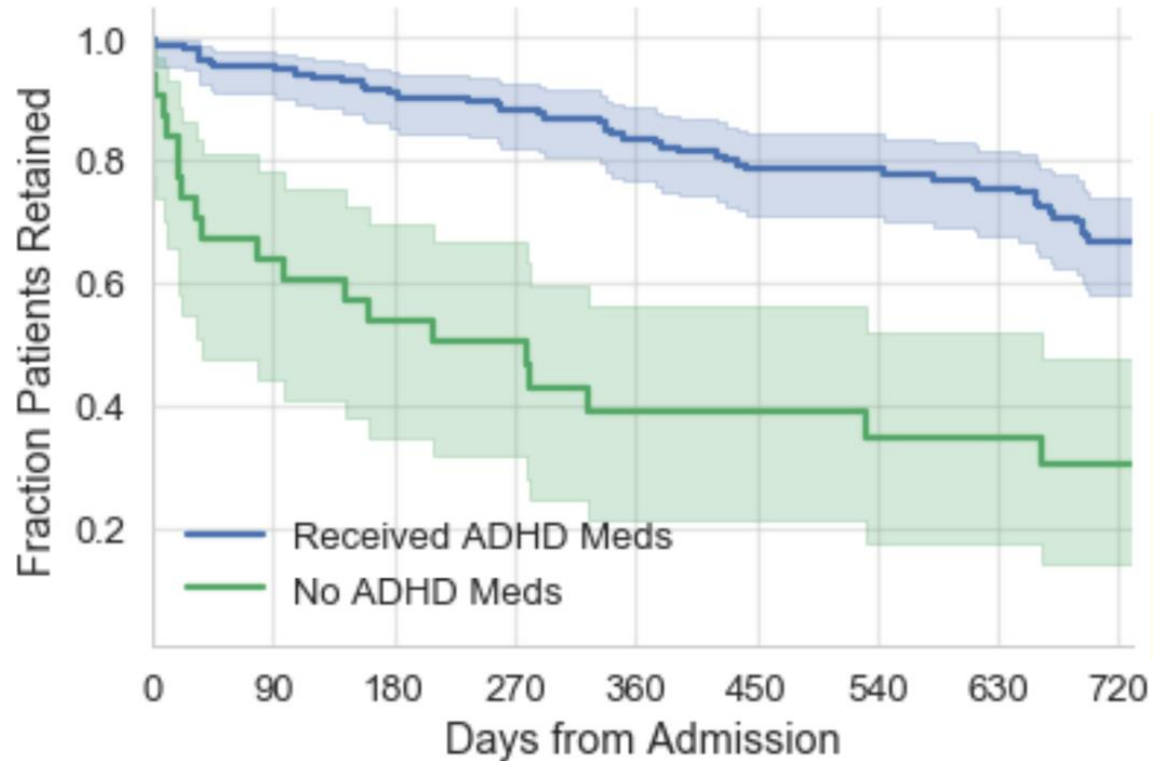


Total: 12
ADHD:
Methylphenidate: 11
Modafinil: 1
OMT:
Methadone: 6
Buprenorphine: 6

Test battery to assess
for criteria of
ADHD/ADD

Percent of negative urine drug
screens overall
Baseline: 66%
3 months: 77%
6 months: 79%

KARST ET AL 2020



Individuals receiving no ADHD medication had a 4.9-fold increased likelihood of attrition within 90 days ($p = 0.041$)

	All admitted individuals	ADHD	No ADHD	p-value
n	2163	203	1960	-
Age	44 +/-14	38 +/-11	45 +/-14	$p < 0.001$
Female	37%	43%	37%	$p = 0.64$
White	87%	89%	86%	$p = 0.92$
Private insurer	46%	64%	44%	$p < 0.001$
Cocaine use disorder	14%	31%	12%	$p < 0.001$

MINTZ ET AL 2022

- Buprenorphine was associated with a 38% decreased odds of drug-related poisonings.
- People prescribed stimulants were at increased risk of drug related poisonings
- People prescribed stimulants were more likely to remain in treatment for longer and gain protective effects of buprenorphine on overdose, offsetting effect of stimulant on drug related poisoning, net 26% decreased odds of poisoning

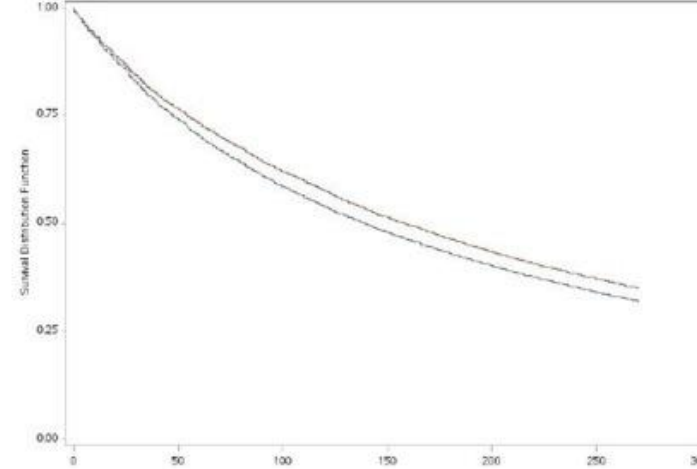
Table 2. Adjusted Odds of Drug-Related Poisoning Associated With Stimulant Use Among Persons With Opioid Use Disorder Prescribed Buprenorphine

Medication	OR (95% CI)
Main model ^a	
Stimulant	1.19 (1.06-1.34)
Buprenorphine	0.62 (0.59-0.65)
Benzodiazepine	1.93 (1.84-2.03)
Statin	0.99 (0.86-1.13)

2023 TARDELLI ET AL

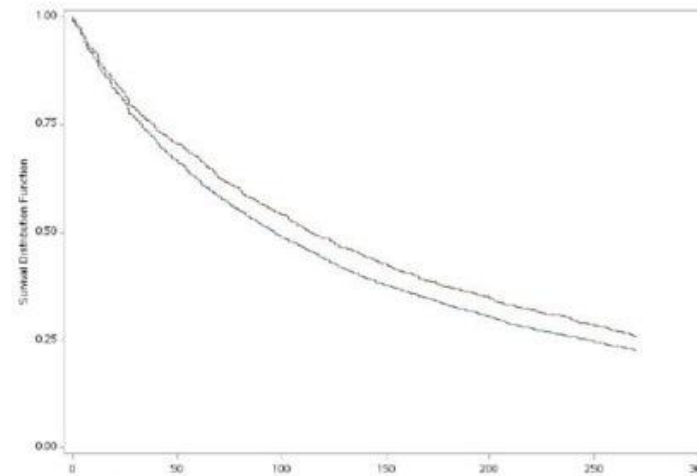
- N 90 269 patients with OUD (mean age 34.2 years (SD=11.3)) who initiated buprenorphine.
- PA was associated with improved buprenorphine retention among individuals
 - With PSUD (cocaine/meth)
 - (adjusted HR (aHR) 0.91 (95% CI 0.86 to 0.97))
 - Without a concurrent psychostimulant use disorder (PSUD)
 - (aHR 0.92 (95% CI 0.90 to 0.93)).

A



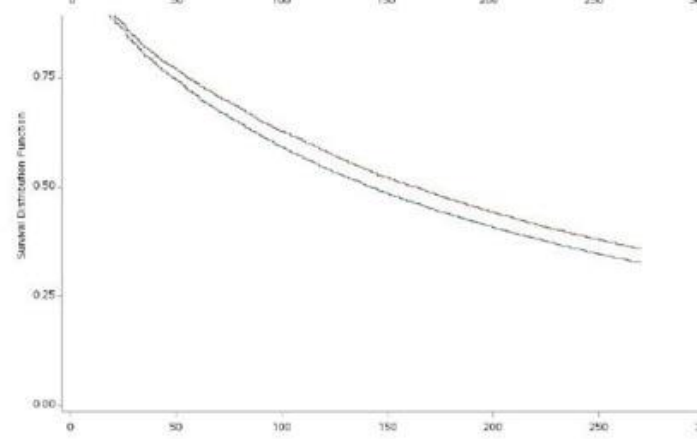
Median: 139 days (no PAs) vs
158 days (PAs), $\chi^2=85.5, p<.001$

B



Median 97 days (no PAs) vs 114
days (PAs), $\chi^2=11.1, p<.001$

C



Median 143 days (no PAs) vs
164 days (PAs), $\chi^2=89.1, p<.00$

MEDICATIONS FOR ADHD IN OUD

- More likely to keep people in treatment
- More likely to keep patients in treatment with MOUD BOTH methadone and buprenorphine
- How does this compare to other substance use disorders?
- Mixed data as to efficacy in treatment of ADHD during active substance use

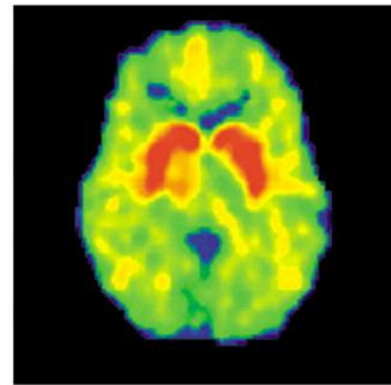
**OKAY,
IT SEEMS LIKE TREATMENT HELPS
THIS POPULATION STAY IN
POTENTIALLY LIFE SAVING
TREATMENTS.
BUT AREN'T STIMULANTS ADDICTIVE?
HOW DO I MITIGATE THEIR ABUSE
LIABILITY?**

Dr B

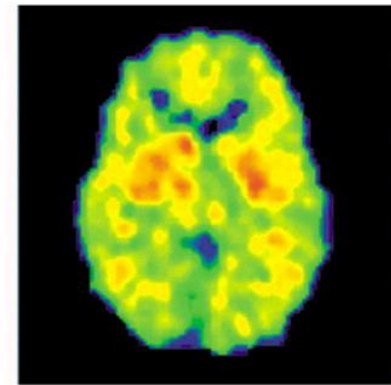


STUDY #1 VOLKOW ET AL 2003

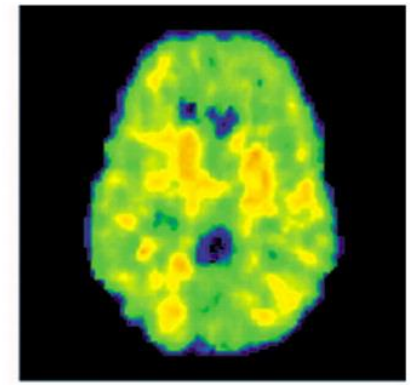
- Avoiding abuse when prescribing stimulants (in this study methylphenidate)
- Key Factors
 - Dose
 - Pharmacokinetics
 - Individual differences
 - Context



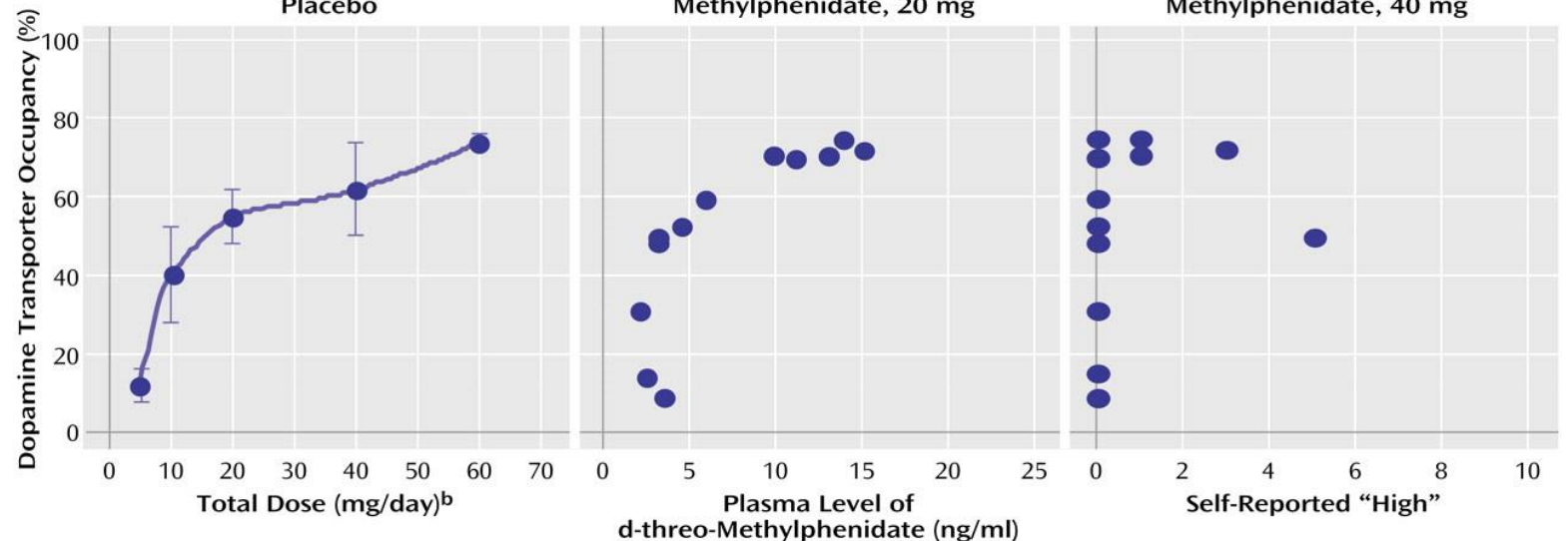
Placebo



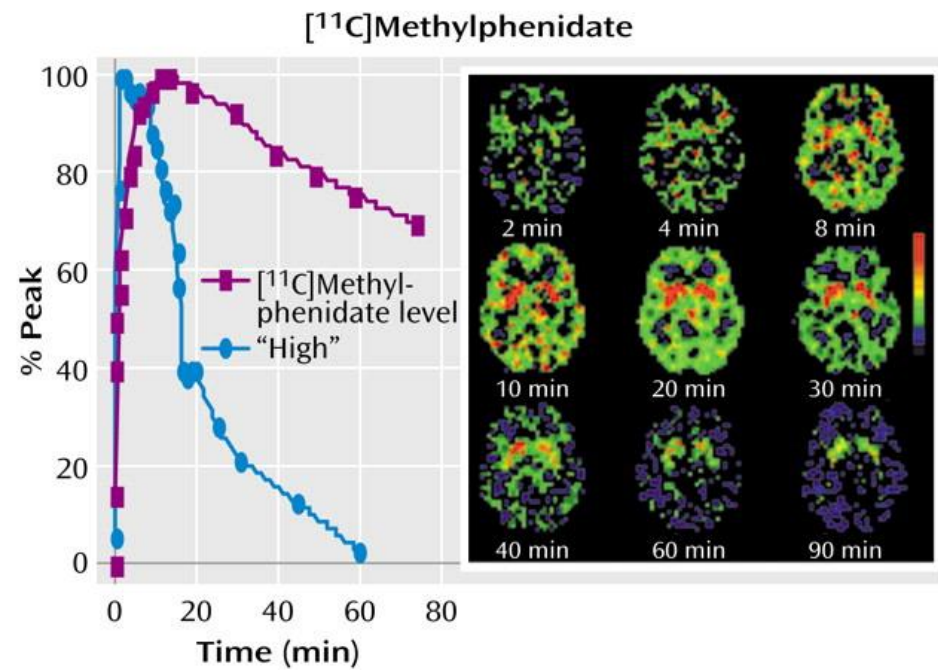
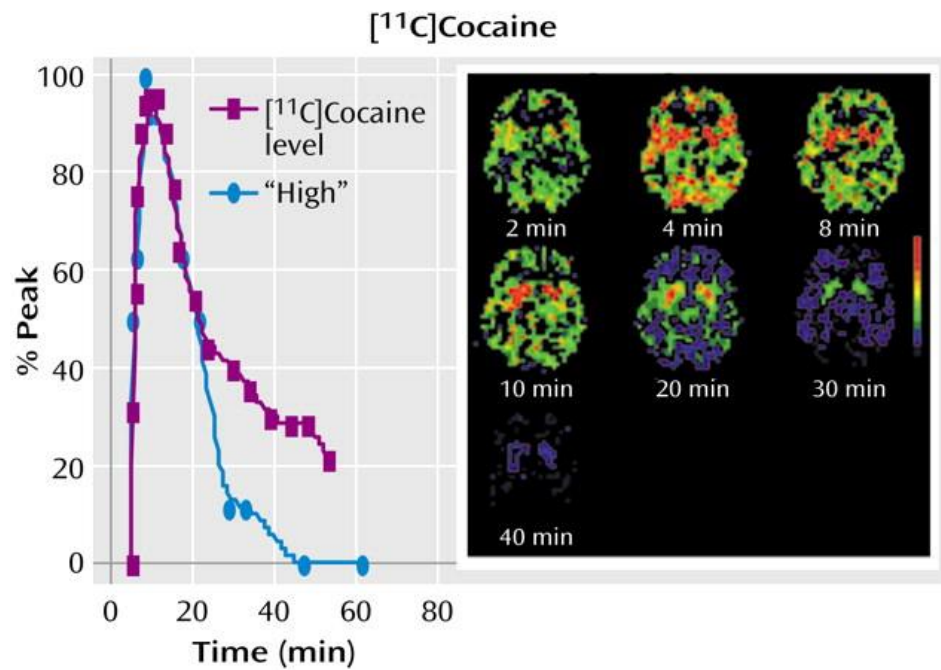
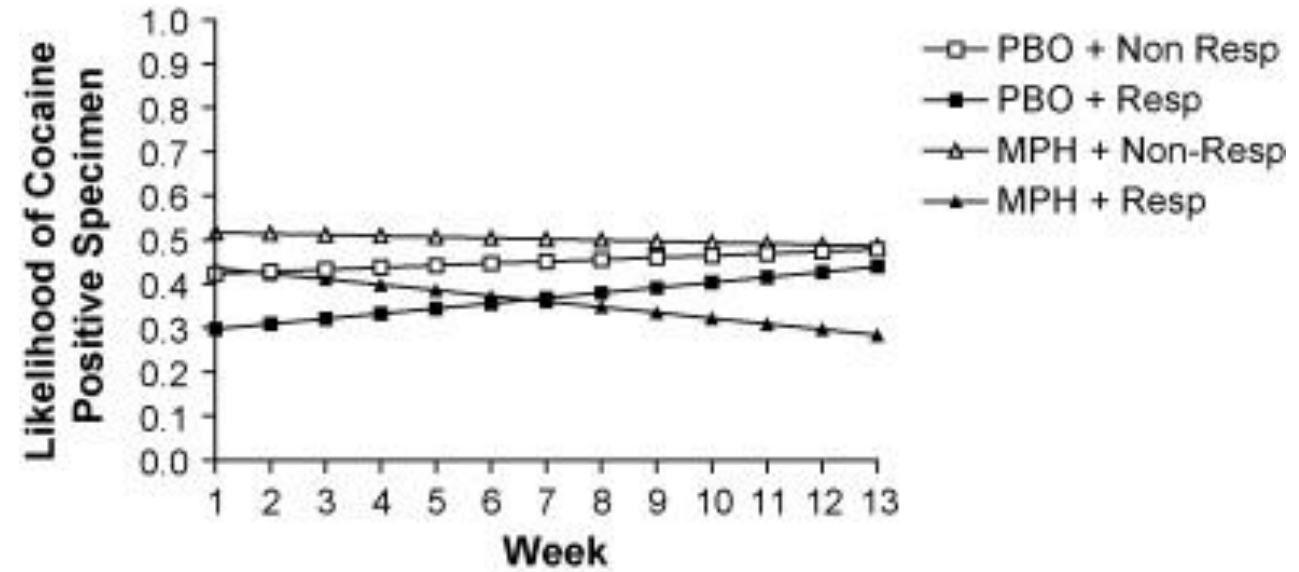
Methylphenidate, 20 mg



Methylphenidate, 40 mg

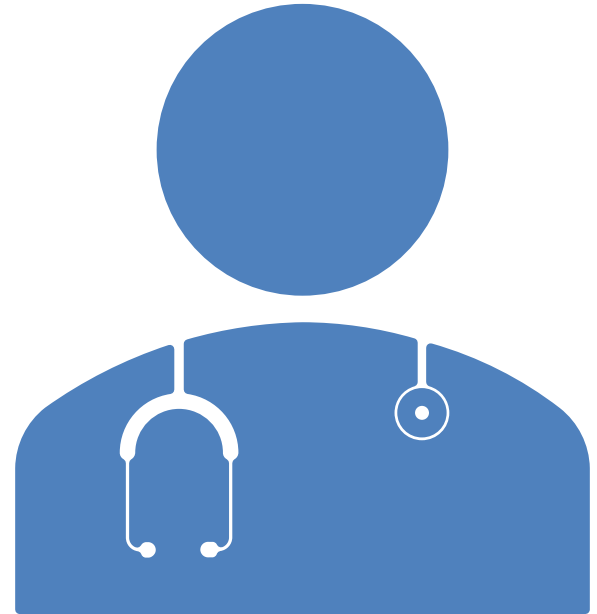


METHYLPHENIDATE VS COCAINE



**I HAVEN'T SEEN ANY
GUIDELINES ABOUT WHAT
TO DO IN THIS
POPULATION, WHAT DO
THEY SAY?**

Dr B



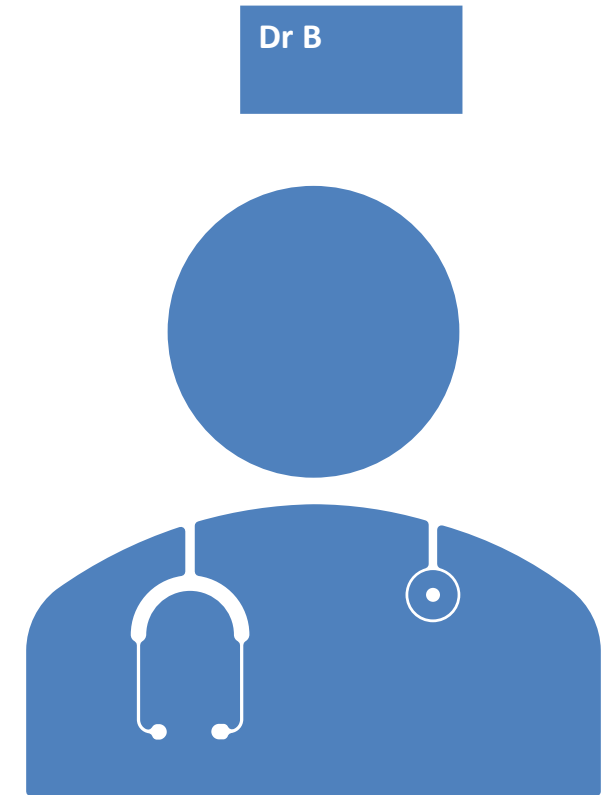
GUIDELINES ARE LACKING FOR THIS SPECIFIC POPULATION

- No specific guidelines on treatment of OUD/ADHD overlap from ASAM, SAMHSA or any other large addictions organization.

Canadian-ADHD-Practice-Guidelines

- “The best approach to treatment sequencing in individuals with ADHD and comorbid substance use disorder is concurrent intervention with specific interventions for each disorder [125]. Some researchers suggest that ADHD and SUD-related craving share neurobiological similarities, and that treatment of ADHD may reduce craving for substances and subsequently reduce the risk for relapse to substance use [137]. An aggregate of the literature seems to suggest that early stimulant treatment reduces or delays the onset of SUDs and perhaps cigarette smoking into adolescence; however, the protective effect may be lost in adulthood [138].”

**OKAY, I THINK I
UNDERSTAND THIS TOPIC
A BIT BETTER NOW, HOW
SHOULD I GO ABOUT
SCREENING AND
DIAGNOSIS?**



SCREENING AND DIAGNOSIS

- Screening for ADHD in OUD patients is crucial due to the high prevalence of co-occurrence.
- Comprehensive assessment should include history, collateral information, and validated screening tools.
- The Short Version of the Adult ADHD Self-Report Scale (ASRS-SV) screener is currently the most widely used and investigated screening tool in individuals with ADHD and comorbid SUD, with good sensitivity and specificity across studies

ADULT ADHD SELF-REPORT SCALE

Establishing US norms for the Adult ADHD Self-Report Scale (ASRS-v1.1) and characterising symptom burden among adults with self-reported ADHD

[Lenard A. Adler](#),¹ [Stephen V. Faraone](#),² [Phillip Sarocco](#),³ [Norman Atkins](#),³ and [Alexandra Khachatryan](#)³

▶ [Author information](#) ▶ [Article notes](#) ▶ [Copyright and License information](#) ▶ [PMC Disclaimer](#)

[ADHD-PACKET-220112.pdf \(uwmedicine.org\)](#)

Patient Name	Today's Date				
Please answer the questions below, rating yourself on each of the criteria shown using the scale on the right side of the page. As you answer each question, place an X in the box that best describes how you have felt and conducted yourself over the past 6 months. Please give this completed checklist to your healthcare professional to discuss during today's appointment.					
	Never	Rarely	Sometimes	Often	Very Often
1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?					
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?					
3. How often do you have problems remembering appointments or obligations?					
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?					
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?					
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?					
Part A					
7. How often do you make careless mistakes when you have to work on a boring or difficult project?					
8. How often do you have difficulty keeping your attention when you are doing boring or repetitive work?					
9. How often do you have difficulty concentrating on what people say to you, even when they are speaking to you directly?					
10. How often do you misplace or have difficulty finding things at home or at work?					
11. How often are you distracted by activity or noise around you?					
12. How often do you leave your seat in meetings or other situations in which you are expected to remain seated?					
13. How often do you feel restless or fidgety?					
14. How often do you have difficulty unwinding and relaxing when you have time to yourself?					
15. How often do you find yourself talking too much when you are in social situations?					
16. When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to, before they can finish them themselves?					
17. How often do you have difficulty waiting your turn in situations when turn taking is required?					
18. How often do you interrupt others when they are busy?					
Part B					

DIFFICULTIES WITH DIAGNOSING ADHD IN SUD POPULATIONS

- DSM is strict
- Patients with SUD can have impaired memory
- Difficult, sometimes impossible to distinguish symptoms from intoxication/withdrawal
- Patients are typically presenting for SUD not for ADHD treatment
- Impact on school/work performance often obscured by presence of SUD

DSM-5 FOR ADHD

Classified as a neurodevelopmental disorder:

- A. Threshold level of symptoms of Inattention and/or Hyperactivity – impulsivity must be present for 6 months or more (5 in individuals > 17 years)
- B. Several symptoms must be present before 12 years of age – Current controversy – adult onset ADHD?
- C. Impairment from symptoms must be present in 2 or more settings (e.g. school, work, home, other)
- D. Significant impairment: social, academic, or occupational
- E. Symptoms must not be better accounted for by other mental (or physical) disorders

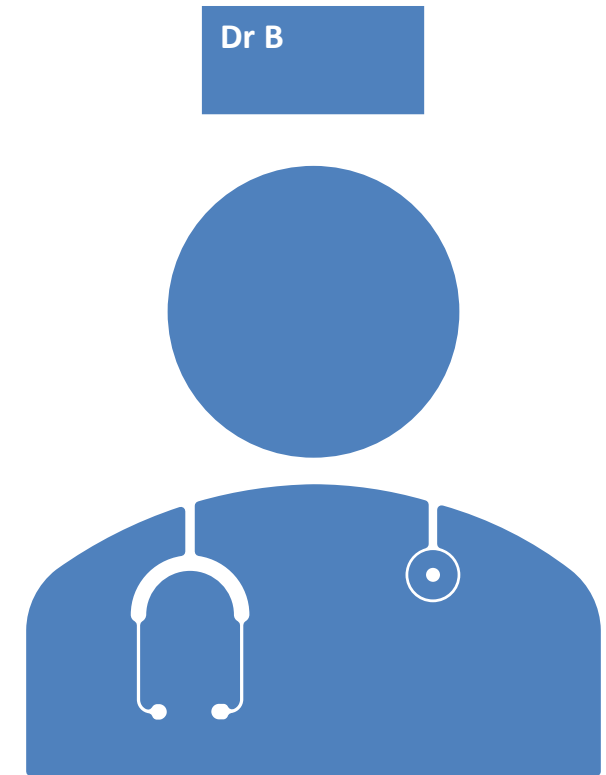
HOWEVER..... IN THE END SAME CRITERION APPLY

- Diagnosis
 - Collateral history is important
 - Must include childhood symptoms
 - Complete interview of ADHD
 - symptoms,
 - course,
 - impairment.
 - Whenever possible, get collateral about lifetime symptoms/impairment history
 - Thorough and complete assessment of
 - SUD
 - Medical/psychiatric history and exam
 - Consider neuropsychological assessment for cognitive performance and existing neurocognitive deficits

LOOK-ALIKES/ MIMICS

- Bipolar disorder
- PTSD
- Dementia
- Obstructive sleep apnea
- Major depression
- Anxiety disorders
- Hearing problems
- Intellectual disability/learning disorders

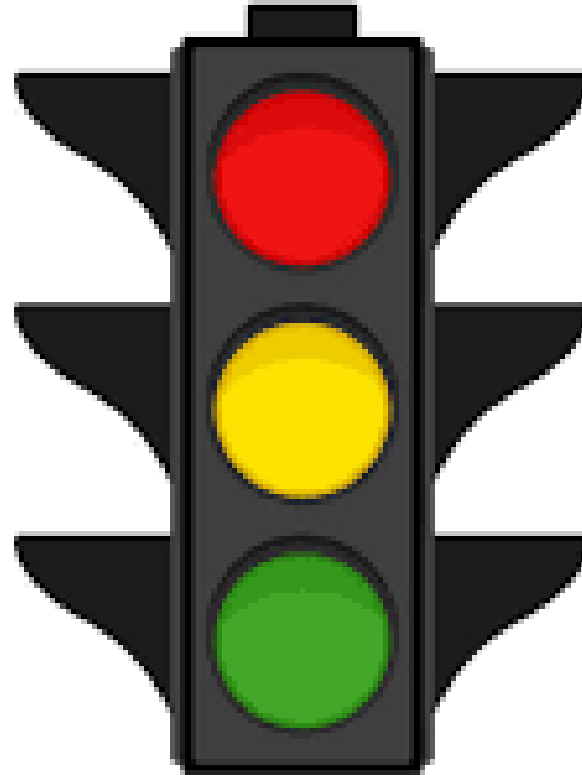
**WHAT ABOUT
TREATMENT OPTIONS?
WHICH ONES ARE SAFE
AND EFFECTIVE?**



TREATMENT PSYCHOSOCIAL

- Cognitive-behavioral therapy (CBT) has been shown to be effective in treating both ADHD and OUD.
 - 2020 SR and metanalysis
 - CBT + M is more effective than M in improving adult ADHD symptoms and maintains an advantage for at least 3 months. It is recommended to intensifying CBT treatment after 3 months.
- Contingency management, which provides tangible rewards for positive behaviors, can be beneficial in dual diagnosis patients. Though there is no direct studies related to OUD and ADHD.
 - Contingency management training can be effective in children but this is typically done with parental reward systems

WHAT ABOUT MEDICATIONS?



ADHD TREATMENT MODALITIES

- Stimulants - FDA Approved for adults
 - Methylphenidate
 - Dexedrine
 - Amphetamine compounds
- Prodrugs
 - Lisdexamfetamine - Vyvanse
 - Serdexmethylphenidate - Astartys
- Non stimulants:
 - Atomoxetine
- FDA approved pediatric only, not in adults
 - Guanfacine
 - Clonidine
- Not FDA approved
 - Bupropion
 - Modafinil

WHICH TREATMENT TO CHOOSE? WHEN?

Stimulant medications, such as methylphenidate and amphetamine salts, are first-line treatments for ADHD but require careful monitoring in OUD patients.

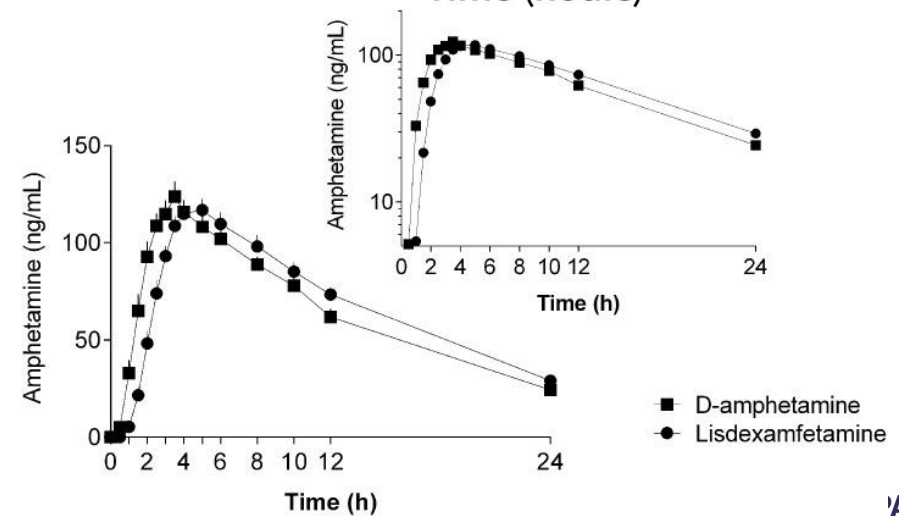
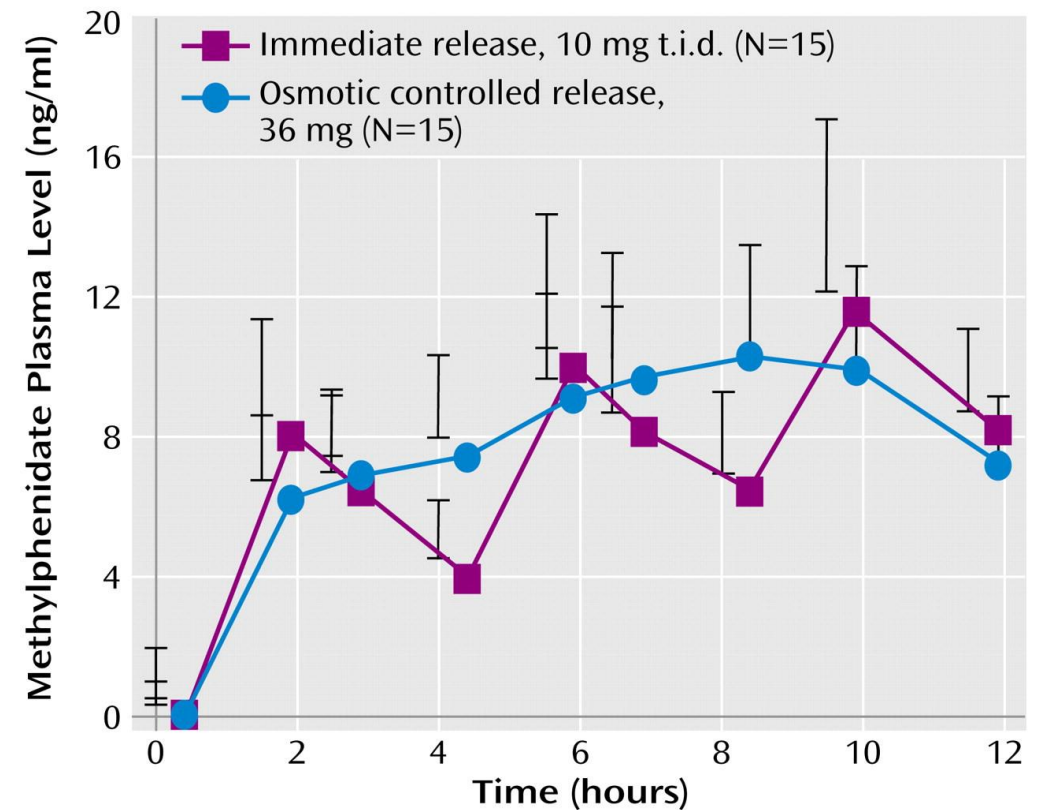
- Less useful in acute withdrawal and can exacerbate withdrawal symptoms i.e. anxiety, restlessness

Non-stimulant options, like atomoxetine and guanfacine/clonidine, are considered safe in OUD patients, however have smaller treatment effects and are not studied as extensively.

- Guanfacine has a similar mechanism of action to clonidine and can be used in acute withdrawal, however given titration of MOUD is based on severity of withdrawal symptoms and this can mask some symptoms of withdrawal caution should be utilized.

WHAT ABOUT ABUSE LIABILITY

- From higher to lower abuse liability:
 - immediate release (IR) methylphenidate or dexamphetamine
 - LA/ER/osmotic release oral system (OROS) methylphenidate
 - Prodrugs like lisdexamphetamine
 - Nonstimulants
 - Atomoxetine
 - All other options (likely equivocal)



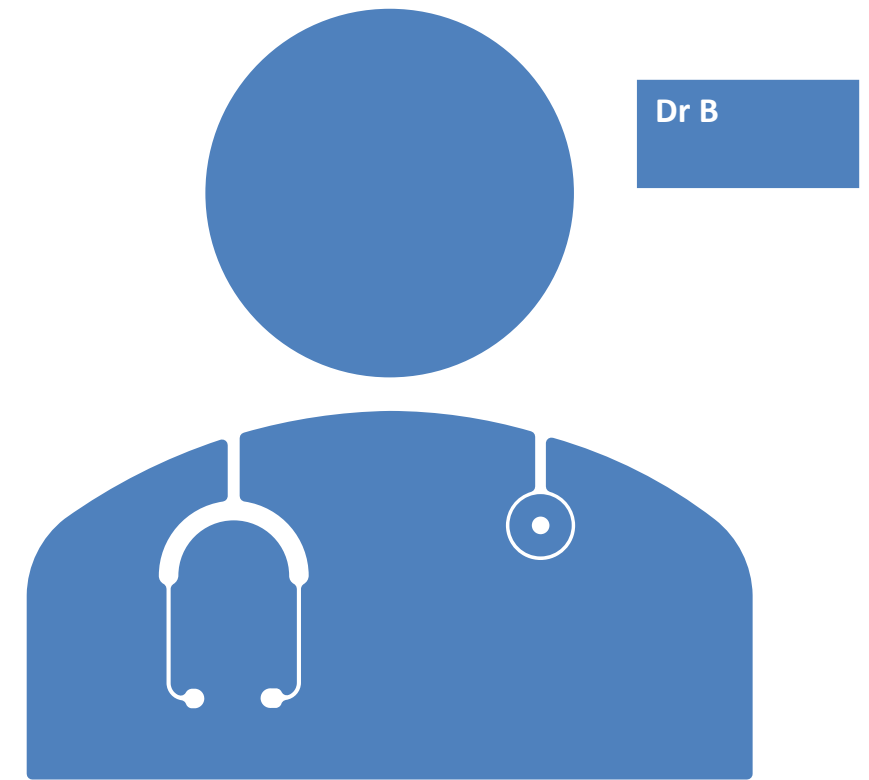
STIMULANT OR NOT TO STIMULANT?

Clear Diagnosis
No comorbid history
Typical effects
Medically healthy agenda
Clear adaptive improvement
Clear outcome measure

Unclear Diagnosis
Hx of agitation
Active/decompensated of
sub use disorder
Sympathetic vulnerability
Subpopulation specific risk
Misuse/ diversion
Lack of outcome measure



**YOU'VE GIVEN ME A LOT TO
THINK ABOUT, ANYTHING ELSE
I SHOULD BE CONCERNED
WITH?**



ADDRESSING CO-OCCURRING DISORDERS



Common comorbidities with ADHD and OUD include depression, anxiety disorders, and conduct disorders.



Managing comorbid conditions is essential for improving treatment outcomes and reducing relapse rates.

MONITORING AND FOLLOW UP



Ongoing monitoring is essential in dual diagnosis patients to assess treatment response and medication adherence.

Consider monthly UDAS while initiating treatment



Regular follow-up visits help to address any emerging issues and adjust treatment as needed.



PATIENT EDUCATION AND SUPPORT

- Providing education on ADHD and OUD for patients in addiction treatment
- Strategies for supporting patients with dual diagnosis in addiction recovery
- Involving family members and support networks in addiction treatment planning
- Providing education on ADHD and OUD can help reduce stigma and improve treatment engagement.
- Involving family members and support networks can enhance treatment outcomes and provide additional support.

SUMMARY

Opioid use disorder (OUD) affects over 10 million people globally.

Co-occurrence of ADHD in OUD patients ranges from 9-25%.

Leads to a reduced compliance to the methadone/buprenorphine treatment, higher rates of drop out, likely higher rates of drug poisonings

ADHD treatment helps mitigate these risks

Unclear exactly which ADHD treatment option is best, there are clear differences in effectiveness in the general population and abuse liability.

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QUESTIONS