WELCOME!

Today’s Topic:
Treating ADHD in SUD patients

How do I treat patients with ADHD and SUDs without making them addicted to stimulants?

Robert Sise, MD, MBA, MPH

PANELISTS:
MARK DUNCAN, MD, RICK RIES, MD, AND BARB MCCANN, PHD
TREATING ADHD IN ADULTS WITH CO-OCCURRING SUDS

BOB SISE, MD, MBA, MPH
UNIVERSITY OF WASHINGTON
ADDICTION PSYCHIATRY FELLOWSHIP
GENERAL DISCLOSURES

The University of Washington School of Medicine also gratefully acknowledges receipt of educational grant support for this activity from the Washington State Legislature through the Safety-Net Hospital Assessment, working to expand access to psychiatric services throughout Washington State.
SPEAKER DISCLOSURES

✓ None
OBJECTIVES

1. REVIEW GENERAL CONSIDERATIONS IN DIAGNOSIS OF ADULT ADHD
2. EXPLORE MULTIMODAL TREATMENT FOR ADULT ADHD WITH CO-OCCURRING SUDS
3. DISCUSS RISKS/BENEFITS OF PHARMACOTHERAPY
4. EXPLORE HOW ADHD TREATMENT SHOULD BE COORDINATED WITH SUDS TREATMENT
GB- 33 y/o M presents to your clinic.

- BA education.
- Recently hired for sales position with local tech company.
- Alcohol use (> 4 drinks on weekdays with regular binge drinking on weekends)
- Smokes cannabis several times weekly
- Remote cocaine use.
– Reports prior physician in CA diagnosed him with ADHD when he was 26 y/o and prescribed Adderall IR 20 mg BID- no records readily available.

– Has been purchasing diverted Adderall and notes remarkable benefit.

– Requests Rx for Adderall.
COMMON OR USUALLY MORE CHALLENGING?

→ If you treat SUDs, situation may be all too familiar:

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<th>Substance abuse</th>
<th>All twins, n (%)</th>
<th>ADHD, total OR (95% CI)</th>
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<td>Alcohol, Abuse</td>
<td>543 / 17,940 (3.06)</td>
<td>1.88*** [1.44, 2.46]</td>
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<td>Alcohol, dependence</td>
<td>1,070 / 17,734 (6.03)</td>
<td>3.58*** [2.86, 4.49]</td>
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<td>6.29*** [4.01, 9.87]</td>
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<td>Drugs, Stimulants</td>
<td>688 / 17,779 (3.87)</td>
<td>2.45*** [1.79, 3.35]</td>
<td>1.69 [0.99, 2.89]</td>
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Note. SUD = substance use disorder; OR = odds ratios, calculated from multilevel logistic regression adjusted for sex, age, and education and controlled for the random effect of twins; CI = confidence interval.

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GENERAL CONSIDERATIONS IN ADHD TREATMENT FOR ADULTS

• Making/Confirming Diagnosis:
  – How to accomplish this in-house with limited time and resources?
  – How to leverage community resources?
GENERAL CONSIDERATIONS IN ADHD TREATMENT FOR ADULTS

• Screening: ASRS-v 1.1 has relatively high sensitivity in SUDs populations

GENERAL CONSIDERATIONS IN ADHD TREATMENT FOR ADULTS

• ASRS screened+, now what?
  – Considering how proper diagnosis often requires collateral and experienced psychiatrists find it challenging to achieve diagnostic clarity in one 60 min session....
  – Consider referring out: UW Learn Clinic-
    • 2 hours and $500 for the eval: https://psych.uw.edu/psych.php?p=374
GENERAL CONSIDERATIONS IN ADHD TREATMENT FOR ADULTS (GEN POP)

• Emphasis on multimodal treatment for adult ADHD:
  – Psychoeducation regarding ADHD and comorbid disorders
  – Pharmacotherapy for ADHD and comorbid disorders
  – Coaching and CBT for ADHD*

SPECIFIC CONSIDERATIONS FOR ADHD TREATMENT FOR ADULTS W/ SUDS

• Emphasis on multimodal treatment for adult ADHD w/ SUDs:
  – Psychoeducation regarding ADHD and co-occurring substance use
  – Pharmacotherapy for ADHD and co-occurring substance use
  – CBT for ADHD and 12-step facilitation for substance use
TREATMENT: PSYCHOEDUCATION

• Regarding ADHD
  – Basic symptoms and impairments
  – Prevalence
  – Frequent comorbidities
  – Heritability
  – Type of brain dysfunction
  – Treatment Options*

* Kooij, J. J. S., et al.
TREATMENT: PSYCHOEDUCATION

• Regarding deleterious impact of substance use disorders on executive function.
  – There may exist at least one noteworthy exception: mild evidence in support of self-medication hypothesis for cannabis use in ADHD.
    “Adults with ADHD may represent a subgroup of individuals who experience a reduction of symptoms and no cognitive impairments following (moderate) cannabinoid use.”
    – Equivocal statistical significance
    – A few adverse events: muscle spasms/cardiovascular*

TREATMENT: PHARMACOTHERAPY

PERTINENT CONCERNS & FINDINGS

- Will ADHD pharmacotherapy make my patient’s substance use disorder worse?
  - No immediate evidence of this per several studies including a systematic review examining several randomized, placebo-controlled trials of pharmacotherapy for ADHD in adult and adolescent SUD patients.


TREATMENT: PHARMACOTHERAPY

PERTINENT CONCERNS & FINDINGS

- Recent evidence suggests treatment of ADHD with stimulants at upper end of therapeutic window:
  - Improves ADHD Symptoms
  - Improves SUDS Outcomes

- Konstenius (2014)— Assessed high doses of Concerta (up to 180 mg per day) for treatment of ADHD over 24 weeks among 54 amphetamine-addicted men, recruited during prison incarceration.
  - Medication was started 2 weeks prior to release and then continued in outpatient care.
  - High drop out rate
  - Active treatment improved ADHD symptomatology and retention in treatment.
  - The active-treatment group had a greater proportion of amphetamine-negative urines

- Levin (2015)—Sustained-release mixed amphetamine salts (60 vs. 80 mg/day) in a population of ADHD patients with cocaine addiction.
  - Treatment significantly reduced ADHD symptomatology and improved abstinence
  - Better abstinence in the highest-dosage group

- Emerging hypothesis: severe ADHD contributes to SUDs: treat ADHD→ better SUD outcomes
  Evidence suggesting this:
  - Patient’s whose ADHD symptoms respond to stimulant treatment saw the best response in so far as improved SUDs outcomes
TREATMENT: PHARMACOTHERAPY

PERTINENT CONCERNS & FINDINGS

• Non-stimulant options: Atomoxetine & Bupropion
• **Atomoxetine: (+)Study** Wilens (2008) Dosed up to 100 mg qday treating recently abstinent ADHD adults with alcohol use disorder:
  • Significant reduction ADHD symptoms, significant (26%) reduction in number of heavy drinking days but not effect on time to relapse to heavy drinking.

  **(-)Studies**
  – **Thurstone (2010)**—Dosed up to 100 mg qday treating adolescents with alcohol and cannabis failed to demonstrate a significant effect on ADHD symptomatology or substance use.
  – **McRae-Clark (2010)**—Dosed up to 100 mg qday treating cannabis use disorder pts. High dropout. Improvement on some but not all ADHD

• **Bupropion:** Levin (2006)- Bupropion SR 400 mg vs. methylphenidate (SR 20–40 mg twice daily) and placebo for treating ADHD among OUD pts on MMT. Bupropion failed to show a significant effect.
TREATMENT: PHARMACOTHERAPY

PERTINENT CONCERNS & FINDINGS

• Is my patient at risk for abusing prescription stimulants?
  – Yes as having a SUD is a risk-factor for this.

• **Westover 2018 Study:** US national cohort of adult incident stimulant medication users in the Veterans Affairs healthcare system, measured from fiscal years 2001 to 2012,
  – 78,829 incident users of stimulant medications, 1.3% (n=1064) were diagnosed with an amphetamine use disorder (AUD) at follow-up.
  – comorbid substance use disorders were common and were risk factors for development of AUD.

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TREATMENT: PHARMACOTHERAPY

• What level of abstinence should we require before/during treatment?
  – “In principle, medication is not started when substance use is insufficiently under control. The commitment to abstinence can be used to monitor commitment to therapy.”
  – Routine urine screens may not only help ensure stimulant adherence/deter diversion but can be used to: “objectively demonstrate their commitment to achieving abstinence.”*

*Carpentier et al.
TREATMENT: PHARMACOTHERAPY

• Key Considerations?

Do Benefits outweigh Risks?
TREATMENT: PHARMACOTHERAPY

• Key Considerations?

Benefits: Potential Improved performance across domains (job, family etc.)
          Potential Improved SUDs outcomes

Risks: Rx Stimulant Abuse Diversion (See appendix)

outweigh
TREATMENT: PHARMACOTHERAPY

• Which medication?
  – Given demonstrated efficacy for ADHD treatment, first-line treatment:
    – Increase levels of catecholamines (primarily dopamine and norepinephrine) at synapses
    – Favor long-acting preparations to improve adherence and minimize risk of abuse and diversion, including:
      • Lisdexamfetamine (Vyvanse)
      • Methylphenidate ER (Concerta)*

*Carpentier et al.
TREATMENT: PHARMACOTHERAPY

• **Prodrug** that is metabolized in the blood by RBCs’ hydrolytic activity to L-lysine and dextroamphetamine.
  → Sympathomimetic amine: causes presynaptic release of catecholamines and (some) inhibition of catecholamine reuptake.

• **Duration of action**: 8 to 14 hours  
  Absorption: Rapid

• **Metabolism**: does **not** undergo CYP mediated metabolism

• **Half-life elimination**: Lisdexamfetamine: <1 hour; Dextroamphetamine: 10 to 13 hours

• **Time to peak**: $T_{\text{max}}$: Lisdexamfetamine:~1 hour; Dextroamphetamine: ~4 hours

• **Abuse potential?** Appears low- As per “IHateOpiophobes” on [www.bluelight.org](http://www.bluelight.org):
  • “its dextro-amphetamine thats been fused to L-lysine, so the body has to separate the two molecules before it becomes active, essentially its a extended release dextro-amphetamine that cannot be easily converted to instant release (unless as toxicferret stated you could just put it into acidic liquid to release the amphetamine)”
TREATMENT: PHARMACOTHERAPY

- Osmotic controlled release formulation (OROS) of methylphenidate.
  - A norepinephrine–dopamine reuptake inhibitor
- OROS tablet: immediate-release overcoat
  - Provides initial dose of methylphenidate within 1 hr
  - Remaining released at controlled rate over 5-9 hrs
  - Water from GI tract enters the core, the osmotic components expand and methylphenidate is released

Abuse potential - Perhaps - As per “thuggin-highlifeyo” on www.bluelight.org:
- “concerta is time release an ppl say its hard to chew because of that but if u put it on ur molars an grind it breaks almost instantly it dose take some pressure but not as hard as ppl say(:”
TREATMENT: PHARMACOTHERAPY

• When to consider alternative medication
  – If patient demonstrates significant risk of abusing medication (i.e. past history of abusing Rx’ed meds or h/o diversion).
  – Patient has a pre-existing psychiatric/medical condition (i.e. cardiac or otherwise) that could be worsened by prescription stimulants

• Principle alternatives to stimulants:
  – Atomoxetine (Strattera)
  – Bupropion (Wellbutrin)*

*Carpentier et al.
TREATMENT: PHARMACOTHERAPY

• Which medication and for how long?
  – While obviously lower efficacy in SUDs patient (vs. that in general pop)
    → still worthwhile to utilize standard ADHD medications whenever possible*
  – Medications should be tried for a sufficiently long time at adequate doses (likely high-end of therapeutic range):
    • > 4 weeks for stimulants
    • > 6 weeks for other ADHD medications (including atomoxetine and bupropion)**


TREATMENT: COACHING (SUPPORTIVE PSYCHOTHERAPY)

• Key targets include:
  – acceptance of the disorder
  – learning to deal with time management
  – learning to limit activities to “one goal at a time”
  – organizing home, administration, finances
  – dealing with relationship and work difficulties
  – learning to initiate and complete tasks
  – understanding emotional responses associated with ADHD*

* Kooij, J. J. S., et al.
TREATMENT: CBT

• Similar targets:

Chapter 1  Information About Adult ADHD  7
Chapter 2  Overview of This Treatment Program for ADHD in Adulthood  9
Chapter 3  Informational Session with Spouse, Partner, or Family Member (if applicable)  17

Module 1  Organizing and Planning

Chapter 4  The Foundation: Organizing and Planning Skills  23
Chapter 5  Organization of Multiple Tasks  31
Chapter 6  Problem Solving and Managing Overwhelming Tasks  39
Chapter 7  Organizational Systems  45

Module 2  Reducing Distractibility

Chapter 8  Gauging Your Attention Span and Distractibility Delay  53
Chapter 9  Modifying Your Environment  61

Module 3  Adaptive Thinking

Chapter 10  Introducing a Cognitive Model of ADHD  69
Chapter 11  Adaptive Thinking  83
Chapter 12  Rehearsal and Review of Adaptive Thinking Skills  93
OBJECTIVES

1. REVIEW GENERAL CONSIDERATIONS IN DIAGNOSIS OF ADULT ADHD

2. EXPLORE MULTIMODAL TREATMENT FOR ADULT ADHD WITH CO-OCCURRING SUDS

3. DISCUSS RISKS/BENEFITS OF PHARMACOTHERAPY

4. EXPLORE HOW ADHD TREATMENT SHOULD BE COORDINATED WITH SUDS TREATMENT
TAKEAWAYS

1. REVIEW GENERAL CONSIDERATIONS IN DIAGNOSIS OF ADULT ADHD
   ➔ Leverage ASRS, Community Resources

2. EXPLORE MULTIMODAL TREATMENT FOR ADULT ADHD
   ➔ Psychoeducation – Pharmacotherapy - Psychotherapy

3. DISCUSS RISKS/BENEFITS OF PHARMACOTHERAPY
   ➔ Treat with long-acting stimulants unless contraindicated

4. EXPLORE HOW ADHD TREATMENT SHOULD BE COORDINATED WITH SUDS TREATMENT
   ➔ Ideally simultaneousness/complimentary
APPENDIX ON DIVERSION: ST RX

Index= Suboxone (bup 8mg/nlx 2mg sublingual tab)?
APPENDIX ON DIVERSION: ST RX

Street Value of Adderall 30 mg looks comparable
APPENDIX ON DIVERSION: ST RX

Whereas generic methylphenidate ER 36 mg = $10

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*Overpriced:* $82
APPENDIX ON DIVERSION: ST RX

Whereas generic methylphenidate ER 36 mg = $10

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APPENDIX ON DIVERSION: ST RX

Similary, Vyvanse 70 mg: $10
REFERENCES