

Adult ADHD in the Context of Substance use disorders

R. Tyler Reidenbaugh, MD

Disclosures

N/A

There's a race
of men who
don't fit it, a
race that can't
stay still. . .



Questions

- ▶ Who has it and why?
- ▶ What are the consequences of not treating?
 - ▶ Cost
 - ▶ Academic
 - ▶ Vocational
 - ▶ Relational
 - ▶ Judicial/Legal
 - ▶ Personal, on the daily



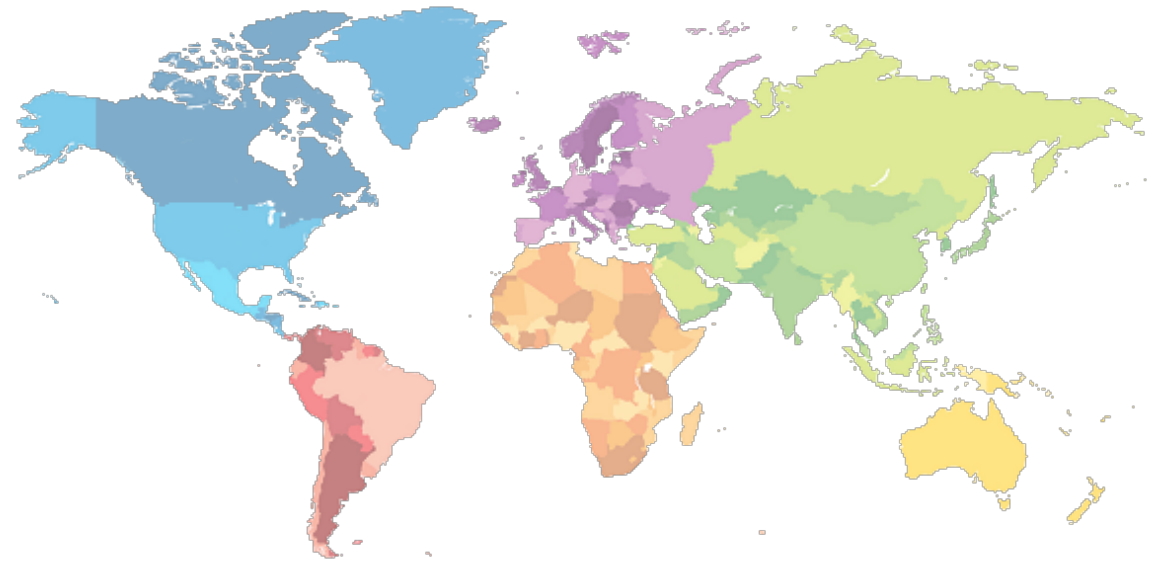
Questions

- ▶ What are the relationships with other psychiatric disorders?
- ▶ What are the relationship with SUDs?
- ▶ Is it helpful or harmful to persons with ADHD and StUD to tx with prescriptions stimulants?
- ▶ Would I be placing a person with a history of Stimulant Use Disorder at risk of relapse by providing prescription stimulants?



Epidemiology

- ← Children & Adolescents: 5.9 (2012)
→ 9.8 (2022)
- ← Adults: **up to 4.4%** (10-11 million)
- ← ADHD is more common in males than females (12.9% vs. 5.9%)
 - ← 4:1 predominantly hyperactive presentation
 - ← 2:1 predominantly inattentive presentation



Genetics

Heritability Index is estimated to be 76%

The risk of ADHD in parents and siblings of children with ADHD is increased 2-8x

~60% of childhood ADHD persists into adulthood



Adult Expression of ADHD

Hyperactivity

- ▶ Restlessness
- ▶ Verbosity
- ▶ Constant activity

Impulsivity

- ▶ Ending relationships
- ▶ Quitting jobs
- ▶ Overreacting
- ▶ Interrupting
- ▶ More driving violations
- ▶ Financial difficulties

Inattention

- ▶ Procrastinating (stacking)
- ▶ Difficult decision making
- ▶ Poor time management
- ▶ Difficulty organizing activities and prioritizing
- ▶ Accidents

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First US Adult ADHD Guidelines Finally on the Way?

Alicia Ault

April 11, 2024



[+ Add to Email Alerts](#)

COMING SOON!

American Professional Society of ADHD and Related Disorders (APSARD) and the American Psychiatric Association (APA) are collaborating to formulate guidelines.

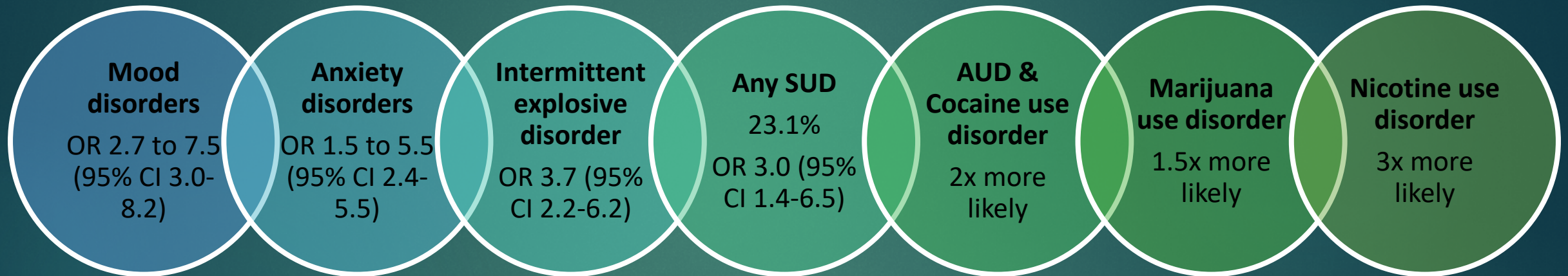
To be released this fall???

ADHD is highly co-morbid with many DSM disorders

Psychiatric Comorbidities in Adults

Condition	w/ADHD	w/o ADHD
Social Phobia	29.3%	7.8%
Specific Phobia	22.7%	9.5%
Bipolar Disorder	19.4%	3.1%
MDD	18.6%	7.8%
PTSD	11.9%	3.3%
GAD	8.0%	2.6%
Alcohol Dep	5.8%	2.0%
Drug Dep	4.4%	0.6%

ADHD Comorbidity



- ← A dose-response relationship exists - the more ADHD symptoms, the more # of comorbidities
 - ← ADHD + ≥3 comorbidities: OR 7.2 (95% CI 5.1-10.2)
- ← The rate of comorbidities + ADHD in adults ↑ with age
 - ← ↑ age = ↑ likelihood of anxiety, depression, SUD & antisocial personality disorder

Consequences

Healthcare-related Financial Burden (2000)

- ▶ 1.6B for the treatment of ADHD
- ▶ 12.1B for the treatment of co-morbidities

Vocational losses

- ▶ 3.7B

Birnbaum, H. G., Kessler, R. C., Lowe, S. W., Secnik, K., Greenberg, P. E., Leong, S. A., & Swensen, A. R. (2005). Costs of attention deficit-hyperactivity disorder (ADHD) in the US: excess costs of persons with ADHD and their family members in 2000. *Current Medical Research and Opinion*, 21(2), 195-205. <https://doi.org/10.1185/030079904X20303>

Consequences

Childhood

- ▶ Academic underachievement
- ▶ Grade retention
- ▶ Social rejection

Adult

- ▶ Higher college dropout rates
- ▶ Poorer job performance
- ▶ Difficulty sustaining employment
- ▶ Lower wages than peers of similar intelligence

Cost to productivity and work loss

- ▶ 1.2B, women
- ▶ 2.26B men

Beauchaine TP, Ben-David I, Bos M. ADHD, financial distress, and suicide in adulthood: A population study. *Science Advances*. Nov 8, 2019, vol 6, 40.

Matza LS, Paramore C and Manishi Prasad. A Review of the economic burden of ADHD. *Cost Effectiveness and Resource Allocation* 3, 5 (2005).

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Consequences

Contribution to Criminality

- 47% v 24% arrests
- 42% v 14% convicted
- 15% v 1% incarcerated

Accidents

- 38% v 18% accident rate for adults with ADHD

Consequences

Individuals with ADHD have a 2-fold increase in premature death vs non-ADHD peers.

Medication initiation for persons with ADHD is associated with:

- ▶ Lower risk of all cause mortality (hazard ratio [HR], 0.79; 95% CI, 0.70 to 0.88)
- ▶ And unnatural cause mortality (2-year mortality risk, 25.9 per 10 000 individuals vs 33.3 per 10 000 individuals; risk difference, -7.4 per 10 000 individuals; 95% CI, -14.2 to -0.5 ; HR, 0.75; 95% CI, 0.66 to 0.86)
- ▶ No difference for natural cause mortality

Catalá-López F, Hutton B, Page MJ, et al. Mortality in persons with autism spectrum disorder or attention-deficit/hyperactivity disorder: a systematic review and meta-analysis. *JAMA Pediatr.* 2022;176(4):e216401. doi:10.1001/jamapediatrics.2021.6401

Li, Lin, et al. "ADHD pharmacotherapy and mortality in individuals with ADHD." *JAMA* 331.10 (2024): 850-860.

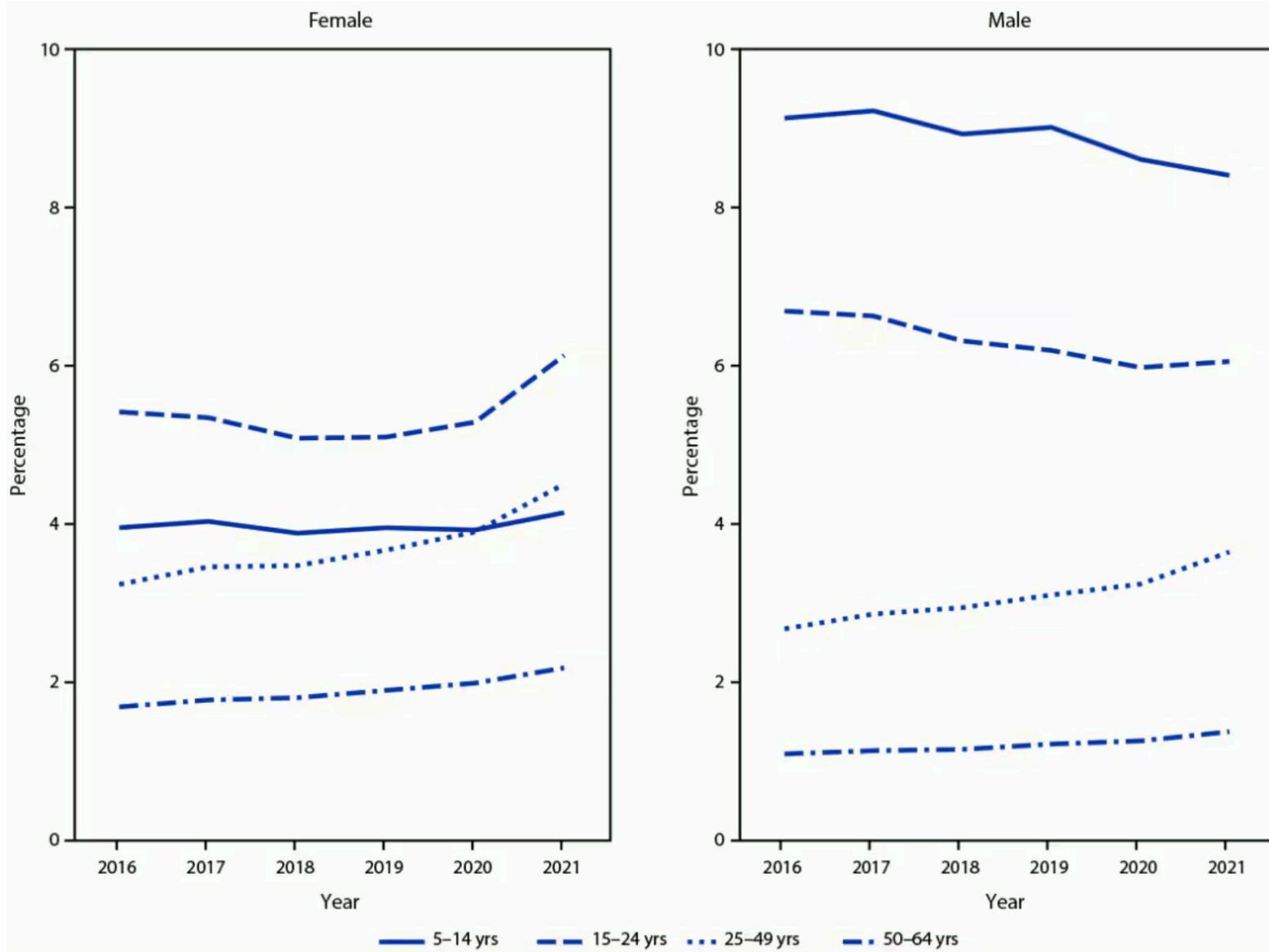


Morbidity and Mortality Weekly Report (*MMWR*)

Trends in Stimulant Prescription Fills Among Commercially Insured Children and Adults — United States, 2016–2021

Weekly / March 31, 2023 / 72(13);327–332

Melissa L. Danielson, MSPH¹; Michele K. Bohm, MPH²; Kimberly Newsome, MPH¹; Angelika H. Claussen, PhD¹; Jennifer W. Kaminski, PhD²; Scott D. Grosse, PhD³; Lila Siwakoti, MPH²; Aziza Arifkhanova, PhD²; Rebecca H. Bitsko, PhD¹; Lara R. Robinson, PhD¹ ([VIEW AUTHOR AFFILIATIONS](#))



Why the Trend?



INCREASED RECOGNITION




GLOBAL PANDEMIC THAT
SHIFTED WORKS AND STUDENTS
INTO ISOLATED ENVIROMENTS



AVAILABILITY (PROMOTION)

The Hazards of Prescribing A.D.H.D. Drugs Online

Buzzy start-ups promising easy access to mental health medication found an eager market on social media. Should anyone be looking for treatment on TikTok, though?

 Share full article



 151



Elizabeth D. Herman for The New York Times



By **Dani Blum**

May 13, 2022

Diversion

1

Among high school students prescribed stimulants: 15% shared, 7% sold meds to other students

2

61.5% of college students prescribed ADHD meds shared/sold those meds at least once

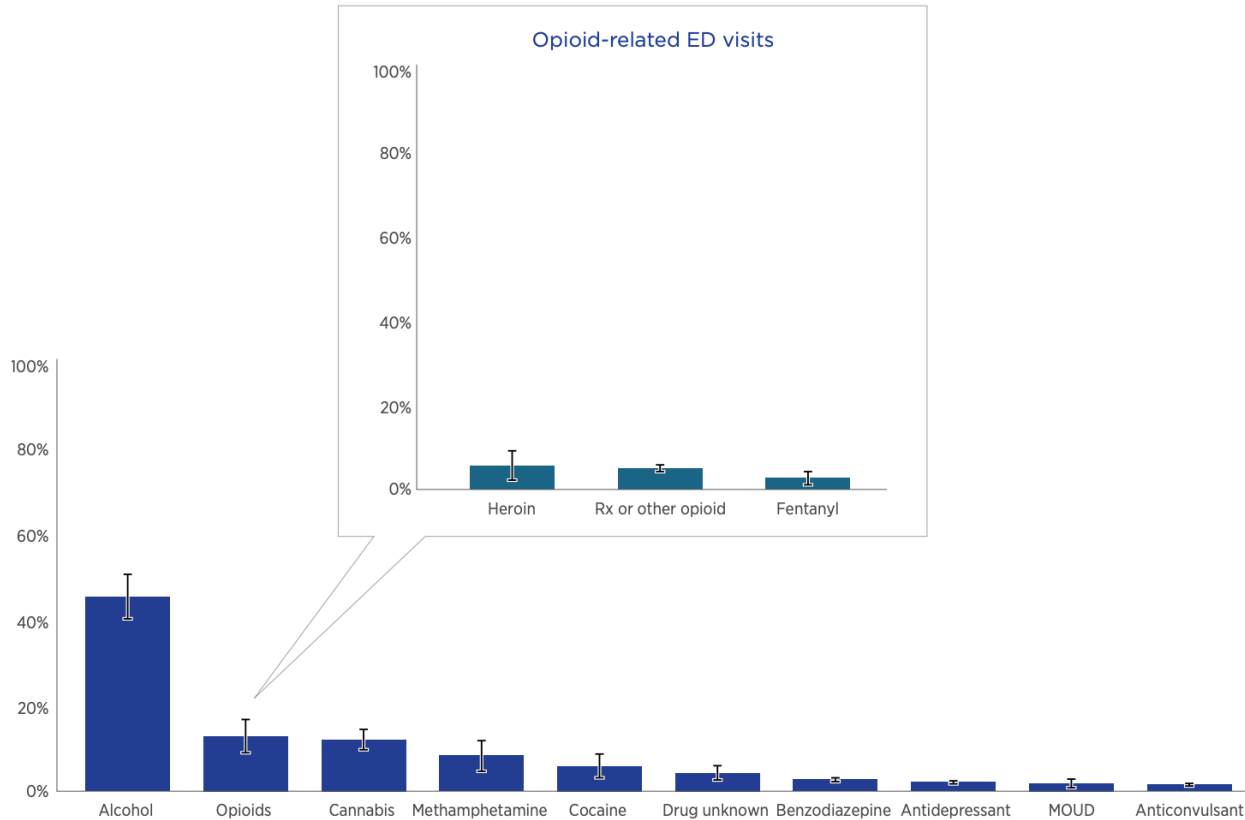
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At a medical school, 25% of students had been offered stimulants without a prescription

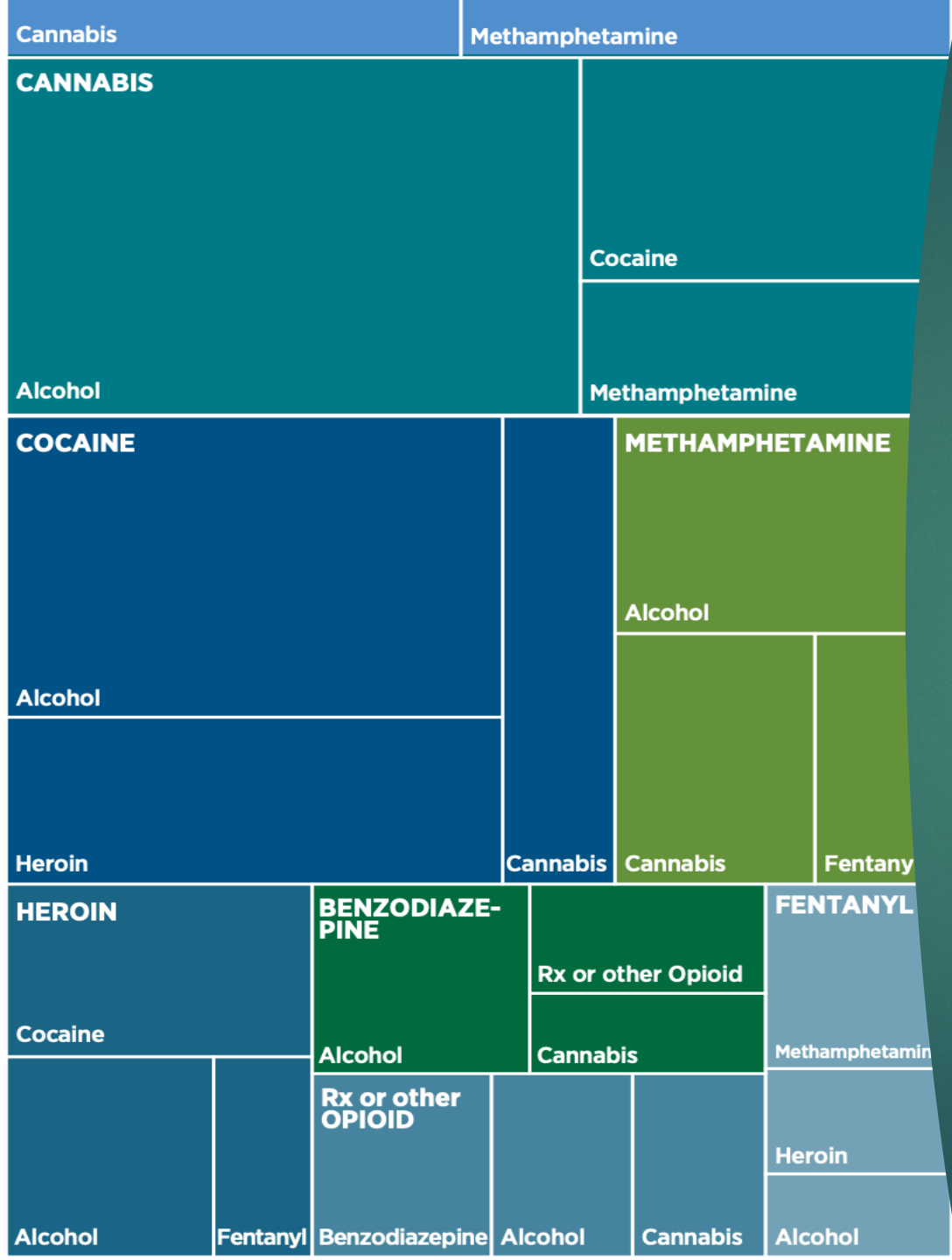
4

Among adults prescribed methylphenidate, 44% diverted and 29% misused

Drug Abuse Warning Network (DAWN)



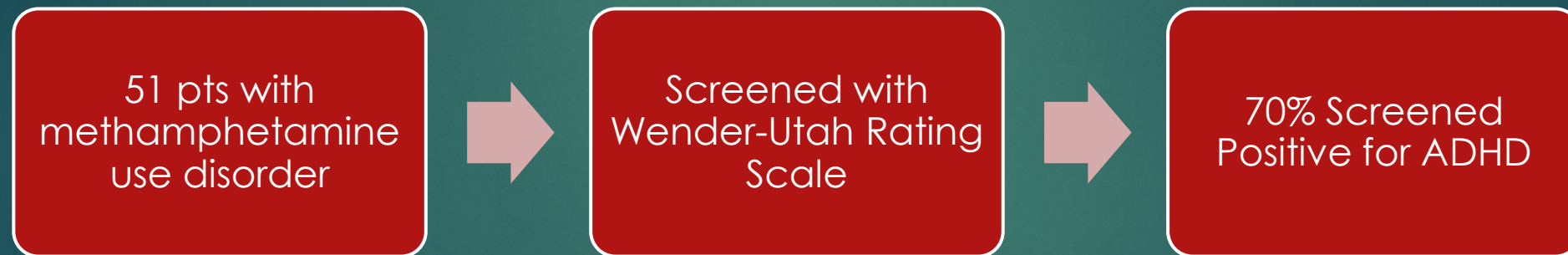
Substance Abuse and Mental Health Services Administration. (2023). Drug Abuse Warning Network: Findings from Drug-Related Emergency Department Visits, 2022 (HHS Publication No. PEP23-07-03-001). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>.



Drug Abuse Warning Network

Substance Abuse and Mental Health Services Administration. (2023). Drug Abuse Warning Network: Findings from Drug-Related Emergency Department Visits, 2022 (HHS Publication No. PEP23-07-03-001). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>.

ADHD and Stimulant Use Disorder



ADHD and Stimulant Use Disorder

Patients who screened positive for ADHD had higher rates of methamphetamine use in the previous 30 days



Co-Occurrence of ADHD and SUD

Any substance use disorders (SUDs), odds ratio 3.0 (95% CI 1.4-6.5)

A meta-analysis of 29 studies of adults with an SUD, the lifetime prevalence of ADHD was 23.1 percent

Among treatment seeking individuals the prevalence of ADHD is 19 – 27%

Co-Occurrence of ADHD and SUD

Persons with adult ADHD have poorer outcomes and higher risk of relapse than patient w/o ADHD

The multiple psychiatric comorbidities further complicate successful outcomes

Persons with substance use disorders are less likely to receive to treatment for ADHD.

Consequences of co-occurring ADHD and SUD

Earlier onset of substance use

Longer duration of active substance use

More frequent use

Heavier use patterns

Increase difficulty achieving remission

Lower retention (than non those with SUD but not ADHD)

Psychostimulants and Substance Abuse

Does untreated ADHD increase the risks of developing a Substance use disorder?

YES

Does treatment of a patient (child/adolescent) with a psychostimulant predispose them to later substance use or development of SUD?

NO

Does stimulant treatment for ADHD reduce the risk of SUDs or decrease use of substances of abuse?

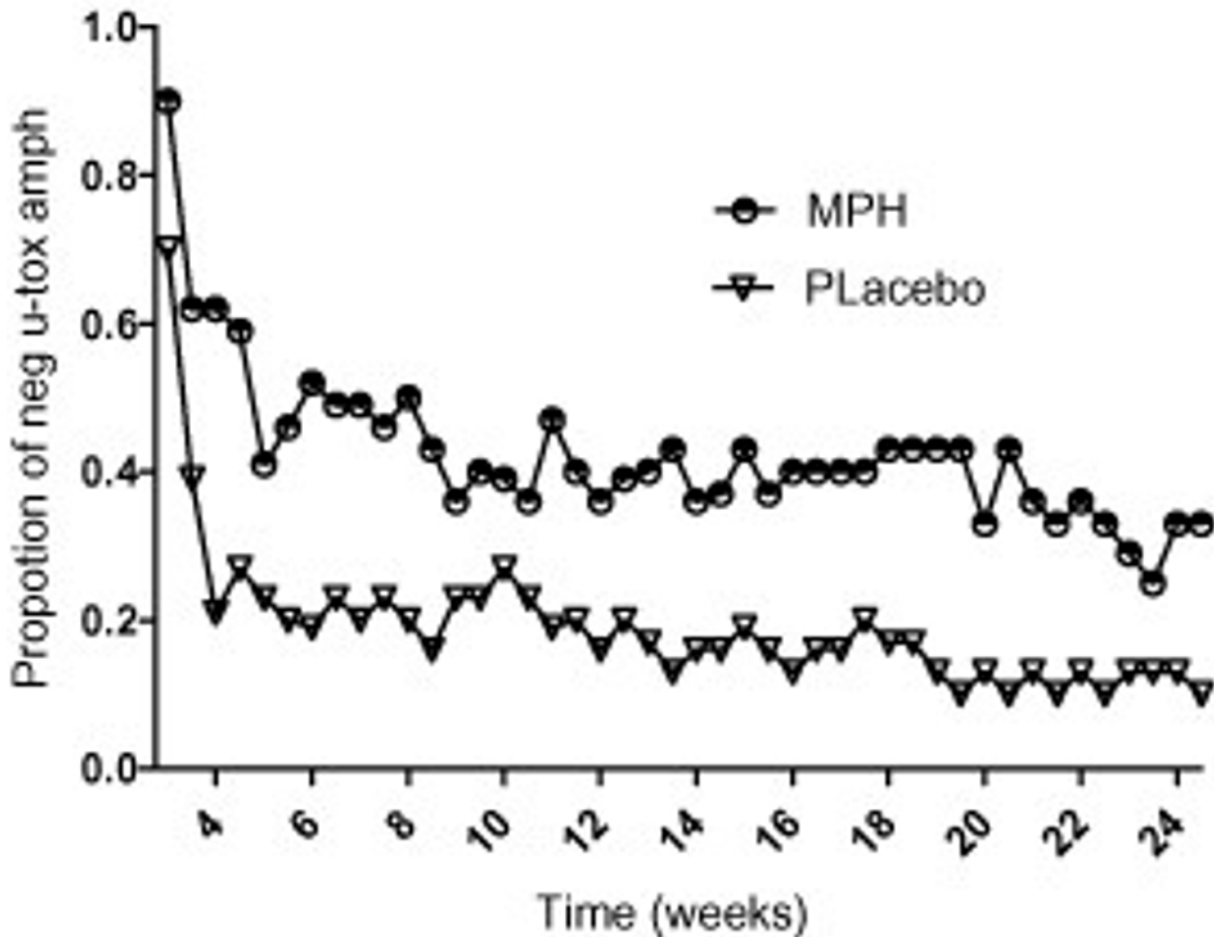
YES

MPH for Co-Occurring ADHD and Amphetamine Use Disorder

56 patients with
ADHD and
amphetamine
use disorder

27 pts received
MPH at 96 to
180 mg/day

27 pts received
placebo



MPH for Co-Occurring ADHD and Amphetamine Use Disorder

Subjects with
co-occurring
ADHD and
cocaine use
disorder

60 mg

80 mg

Placebo

Subjects with
co-occurring
ADHD and
cocaine use
disorder

60 mg

75% had >30% ↓ in ADHD symptoms

80 mg

symptoms

58.1% had >30% ↓ in ADHD

Placebo

39.5% had >30% ↓ in ADHD sx

Subjects with
co-occurring
ADHD and
cocaine use
disorder

60 mg

17.5% abstinence last 3 weeks

80 mg

30.2% abstinence last 3 weeks

Placebo

7% abstinence last 3 weeks

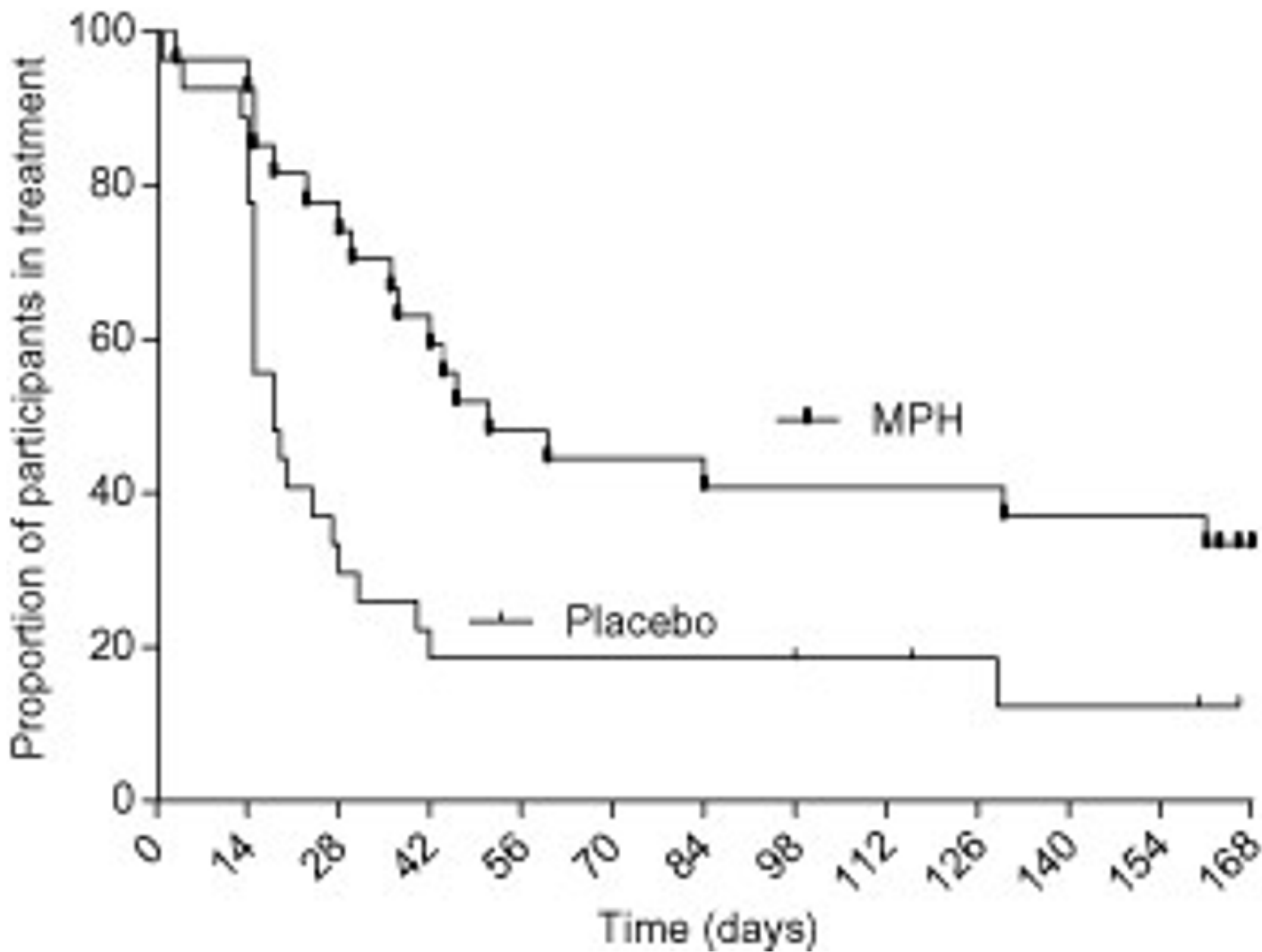
Summary of Treatments

Emerging directions only recently been codified as guidelines

Both trials utilized psychostimulants at the upper end of the therapeutic window

Treatment was significantly structured with a minimum of two participant encounters weekly

Not treatments for stimulant use disorder



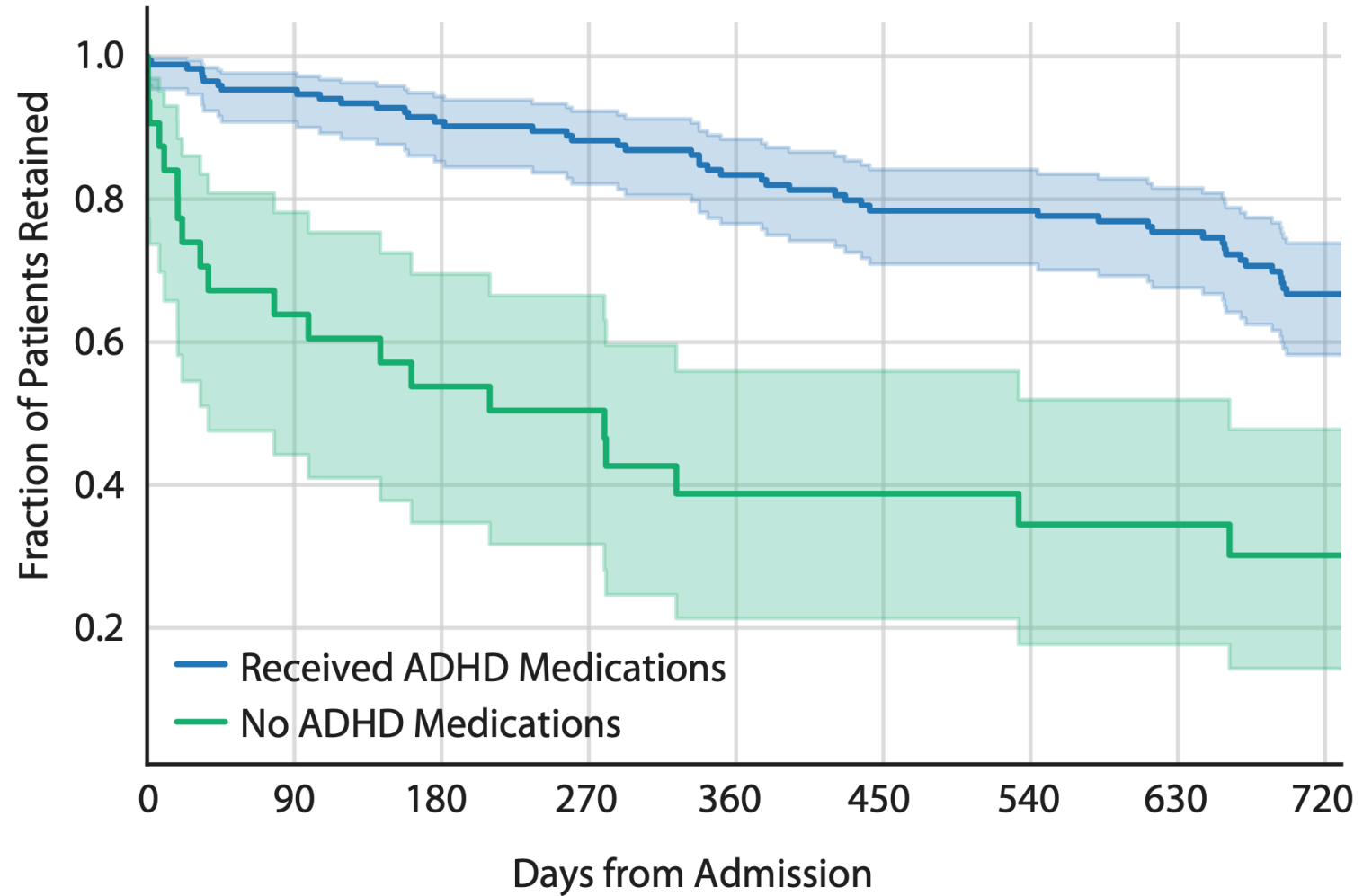
MPH for Co-Occurring ADHD and Amphetamine Use Disorder

Retention

2,163 individuals admitted to outpatient SUD treatment during a 4.5 yr study period

- ▶ 203 dx ADHD
- ▶ 171 received pharmacotherapy
 - ▶ 63% received non-stimulants; 82% received stimulants
 - ▶ 67% of stimulants given were XR or prodrug formulations
 - ▶ Those receiving amphetamine formulations (n=105), 97% were adherent by tox screen
- ▶ 32 pts with ADHD received no pharmacotherapy

Retention



Retention

Those not receiving treatment had 4.9-fold increased risk of attrition

A stimulant trial may increase retention short/long-term

- ▶ The half-life of retention was 9 months vs 36 months

Deferring treatment may risk early dropout

Kast KA, Rao V, Wilens TE. Pharmacotherapy for attention-deficit/hyperactivity disorder and retention in outpatient substance use disorder treatment: a retrospective cohort study. *J Clin Psychiatry*. 2021;82(2):20m13598.



- Recommend: An assessment of StUD should include screening for ADHD

GUIDELINES

- Addressing ADHD symptoms should be part of tx (low certainty, Strong recommendation)
 - Psychostimulants
 - non-stimulants
 - Behavioral approaches (CM, CRA, CBT)
- When prescribing psychostimulants
 - use extended-release formulations
 - Maintain a level of monitoring commensurate with the risk (Clinical consensus, Strong Recommendation)
- For adolescent and young adults
 - Observe administration
 - Counsel on safe-storing and restricted access (Clinical consensus, Strong Recommendation)



The ASAM/AAAP
CLINICAL PRACTICE GUIDELINE ON THE

Management of Stimulant Use Disorder

Conclusion

Our treatments for stimulant use disorder are modest

- ▶ Opiates = great!
- ▶ Alcohol = moderate (grossly underutilized)
- ▶ Stimulants = we don't have much

THEREFORE

When have known co-morbidity with such a successful treatment it is imperative that we treat.

Take homes

Help for assessing and treating adult ADHD is on the way!

Guidelines are now available for treating combination ADHD and StUD

It can be a challenging patient population

REFER TO PEOPLE LIKE ME



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