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ADHD and substance use ...

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Acknowledgement of Country



I wish to acknowledge the original owners of the land on which we gather. I pay my respects to their Elders and the members of the community I call my friends.

I celebrate the oldest continuing culture in the world and acknowledge the memory of their ancestors.



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Acknowledgement of people with lived/living experience

- I recognise the experience and wisdom of people with ADHD
- I celebrate their strengths
- I acknowledge the important contribution that they make to health and community services.



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What I am covering

- Relationship between ADHD & SUD
- Prevalence of ADHD in SUD treatment
- Barriers to treatment
 - SPAM
 - Risk of diversion
- Reason to treat with enthusiasm



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Royal Commission into Mental Health in Victoria

Recommendation 36:

A new statewide service for people living with mental illness and substance use or addiction



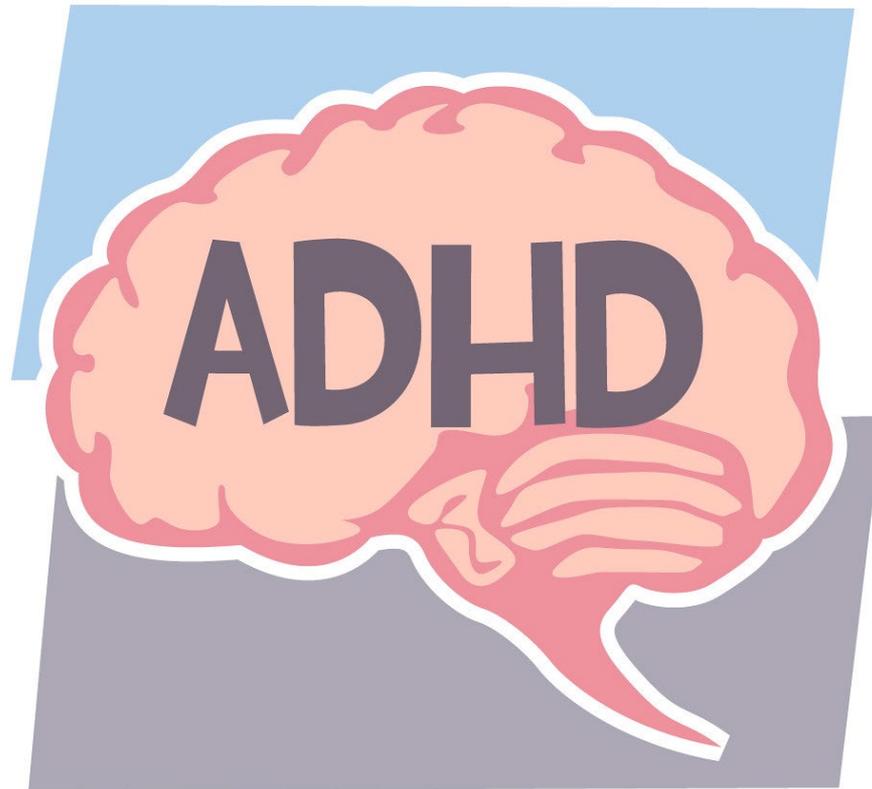
The Royal Commission recommends that the Victorian Government:

1. establish a new statewide specialist service, built on the foundations established by the Victorian Dual Diagnosis Initiative, to:
 - a. undertake dedicated research into mental illness and substance use or addiction;
 - b. support education and training initiatives for a broad range of mental health and alcohol and other drug practitioners and clinicians;
 - c. provide primary consultation to people living with mental illness and substance use or addiction who have complex support needs; and
 - d. provide secondary consultation to mental health and wellbeing and alcohol and other drug practitioners and clinicians across both sectors.



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ADHD and drug use

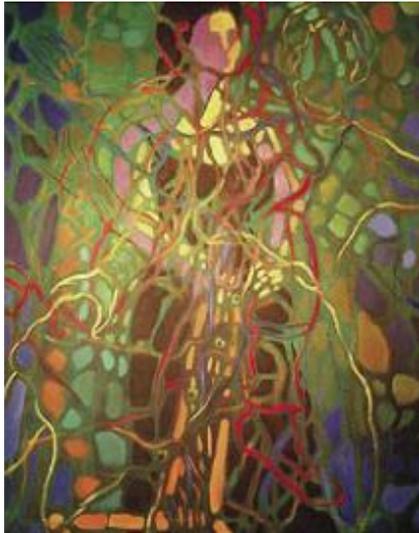




People use drugs for a reason that makes sense to them

To feel good

To have novel:
feelings
sensations
experiences
AND
to share them



To feel better

To lessen:
anxiety
worries
fears
depression
hopelessness



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When I grow
up I want
to be...



- Stigma
- Prejudice
- Anger
- Misunderstanding

on



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Laura's story

- Laura is now 42
- Grew up in a little country town
- Went to a small primary school
- Described herself as
 - Chatterbox
 - Daydreamer
 - 'Laura stop talking'
 - 'Laura pay attention'



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Laura needs help!

- Several episodes of psychosis
- Diagnosed with
 - Bipolar Disorder – several admissions
 - Drug induced psychosis
 - ? Schizophrenia
 - Borderline Personality Disorder
- Failed relationships
- Neurodivergent children are challenging



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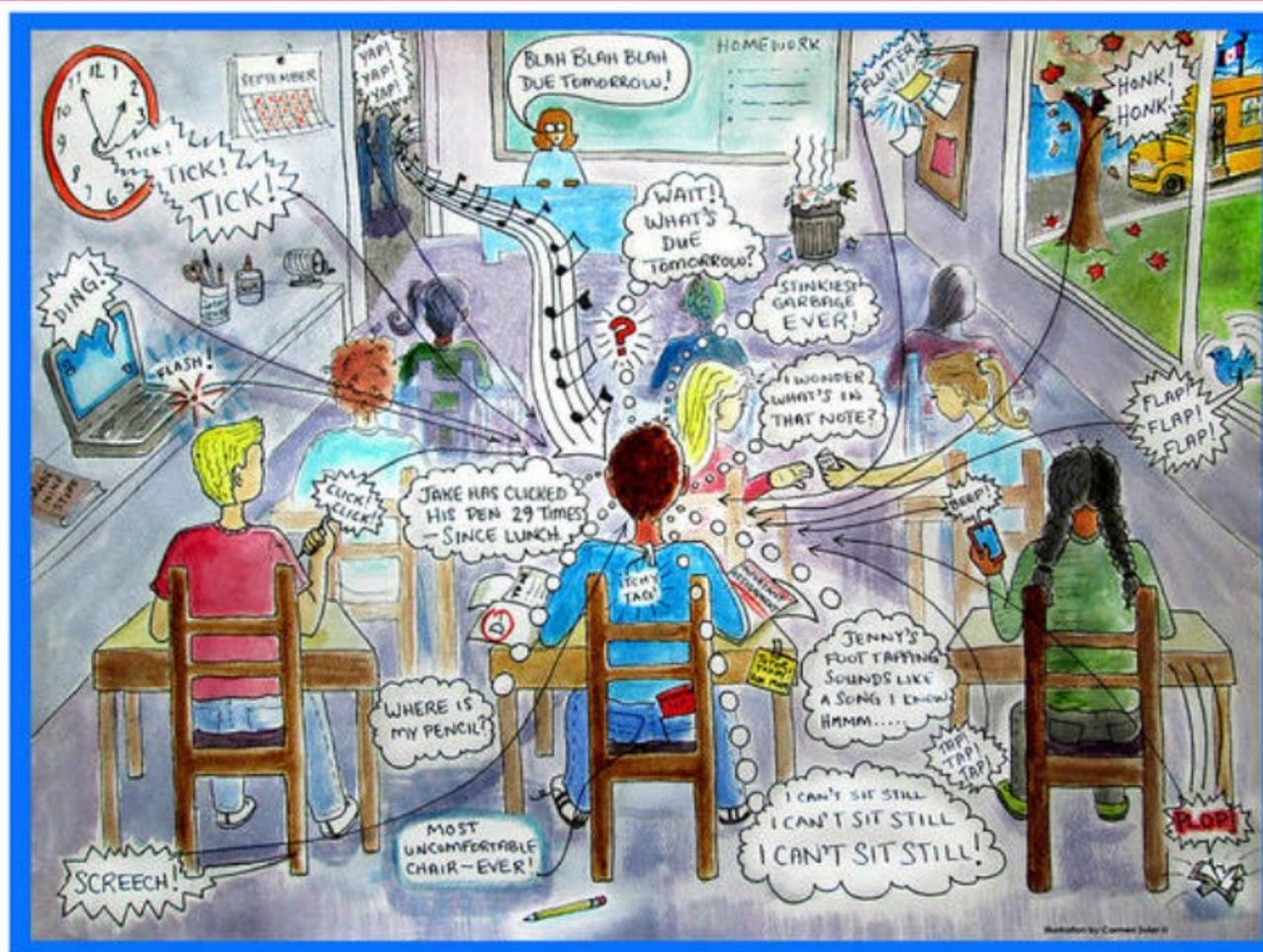
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DISTRACTED?



The busy brain



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Why are ADHD & SUD related?



- Self-medication

Wilens, T. E. and S. Fusillo (2007). "When ADHD and substance use disorders intersect: Relationship and treatment implications." Current Psychiatry Reports **9**(5): 408-414.

- Shared genetic links

Biederman, J., et al. (2008). "Stimulant Therapy and Risk for Subsequent Substance Use Disorders in Male Adults With ADHD: A Naturalistic Controlled 10-Year Follow-Up Study." American Journal of Psychiatry **165**(5): 597-603.

- ADHD

- Inattentive predicts earlier use of drugs

- Conduct disorder -> more problems

Molina, B. S. and W. E. Pelham Jr (2003). "Childhood predictors of adolescent substance use in a longitudinal study of children with ADHD." Journal of Abnormal Psychology **112**(3): 497.



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Twins and siblings



- Twin data

- More severe ADHD -> alcohol & marijuana earlier
- Hyperactive/impulsive -> heavy drinking ♀
- Inattentive -> marijuana use

Elkins, I. J., Saunders, G. R., Malone, S. M., Keyes, M. A., McGue, M., & Iacono, W. G. (2018). Associations between childhood ADHD, gender, and adolescent alcohol and marijuana involvement: A causally informative design. *Drug and alcohol dependence, 184*, 33-41.

- Sibling data

- Earlier age of substance use
- More mental illness
- More severe addiction

— Arias, A. J., Gelernter, J., Chan, G., Weiss, R. D., Brady, K. T., Farrer, L., & Kranzler, H. R. (2008). Correlates of co-occurring ADHD in drug-dependent subjects: prevalence and features of substance dependence and psychiatric disorders. *Addictive behaviors, 33*(9), 1199-1207.



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Prevalence



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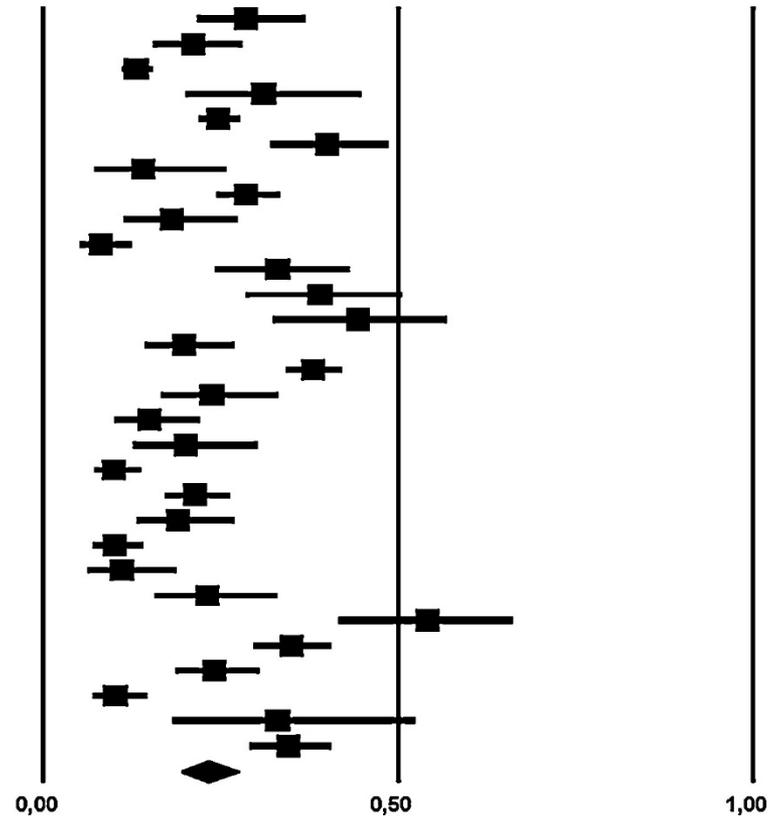
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Prevalence 20 to 30%



Study name	Statistics for each study					ADHD/ Total sample
	Event rate	Lower limit	Upper limit	Z-Value	p-Value	
Clark et al	0,286	0,216	0,368	-4,768	0,000	38 / 133
Garland et al	0,211	0,156	0,280	-6,933	0,000	35 / 166
Grella et al	0,130	0,110	0,152	-20,135	0,000	129 / 992
Hovens et al	0,310	0,200	0,447	-2,668	0,008	16 / 52
Jainchill et al	0,246	0,218	0,276	-13,889	0,000	204 / 829
Latimer et al	0,400	0,321	0,485	-2,308	0,021	54 / 135
de Milio	0,140	0,072	0,256	-4,756	0,000	8 / 57
Molina et al	0,286	0,244	0,333	-8,217	0,000	113 / 395
Novins et al	0,180	0,113	0,274	-5,496	0,000	16 / 89
Stowell et al	0,080	0,051	0,123	-9,961	0,000	18 / 226
Subramaniam A	0,330	0,243	0,431	-3,229	0,001	31 / 94
Subramaniam B	0,390	0,286	0,505	-1,877	0,061	29 / 74
Szobot et al	0,443	0,324	0,569	-0,888	0,374	27 / 61
Tarter et al	0,199	0,143	0,270	-6,832	0,000	30 / 151
Tims et al	0,380	0,342	0,420	-5,820	0,000	228 / 600
Carroll et al	0,238	0,165	0,331	-4,980	0,000	24 / 101
Ciure et al	0,150	0,099	0,220	-7,223	0,000	20 / 136
Daigre et al	0,200	0,126	0,302	-4,960	0,000	16 / 80
Falck et al	0,099	0,070	0,137	-11,669	0,000	31 / 313
Johann et al	0,213	0,171	0,262	-9,482	0,000	67 / 314
King et al	0,190	0,130	0,268	-6,360	0,000	24 / 125
Levin et al	0,100	0,070	0,141	-11,050	0,000	28 / 281
Modestin et al	0,110	0,062	0,187	-6,574	0,000	11 / 101
Ohlmeier et al A	0,231	0,156	0,328	-4,835	0,000	21 / 91
Ohlmeier et al B	0,541	0,416	0,661	0,640	0,522	33 / 61
Rounsaville et al	0,349	0,297	0,405	-5,130	0,000	104 / 298
Schubiner et al	0,240	0,186	0,304	-6,979	0,000	48 / 201
Tang et al	0,101	0,069	0,146	-10,269	0,000	25 / 243
Wood et al	0,330	0,181	0,523	-1,730	0,084	9 / 27
Ziedonis et al	0,346	0,291	0,405	-4,912	0,000	91 / 263
Pooled mean	0,231	0,194	0,272	-10,677	0,000	

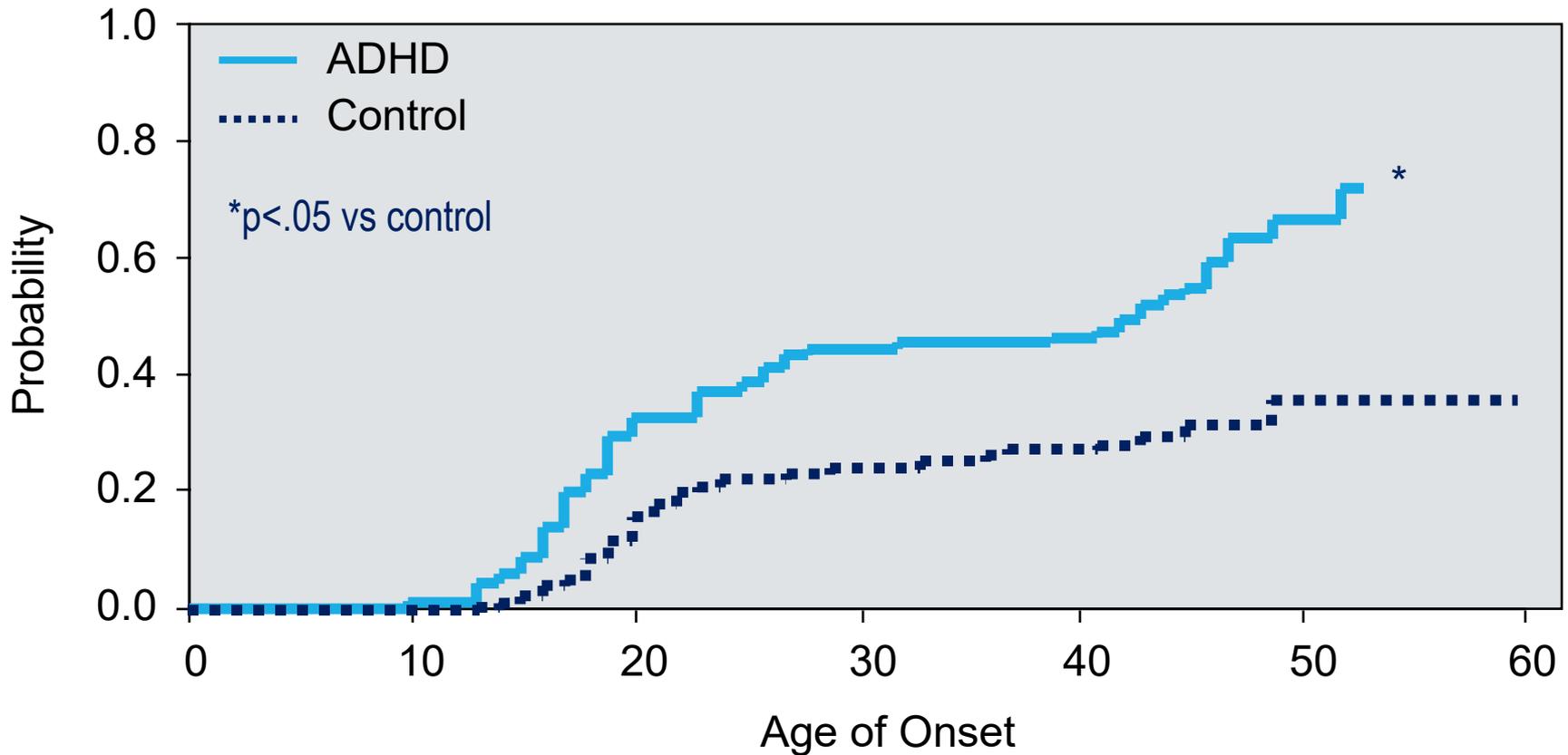
Event rate and 95% CI



van Emmerik-van Oortmerssen, K., van de Glind, G., van den Brink, W., Smit, F., Crunelle, C. L., Swets, M., & Schoevers, R. A. (2012). Prevalence of attention-deficit hyperactivity disorder in substance use disorder patients: a meta-analysis and meta-regression analysis. *Drug and alcohol dependence*, 122(1-2), 11-19.

Onset of Substance Abuse in ADHD Adults

(Retrospectively Derived)

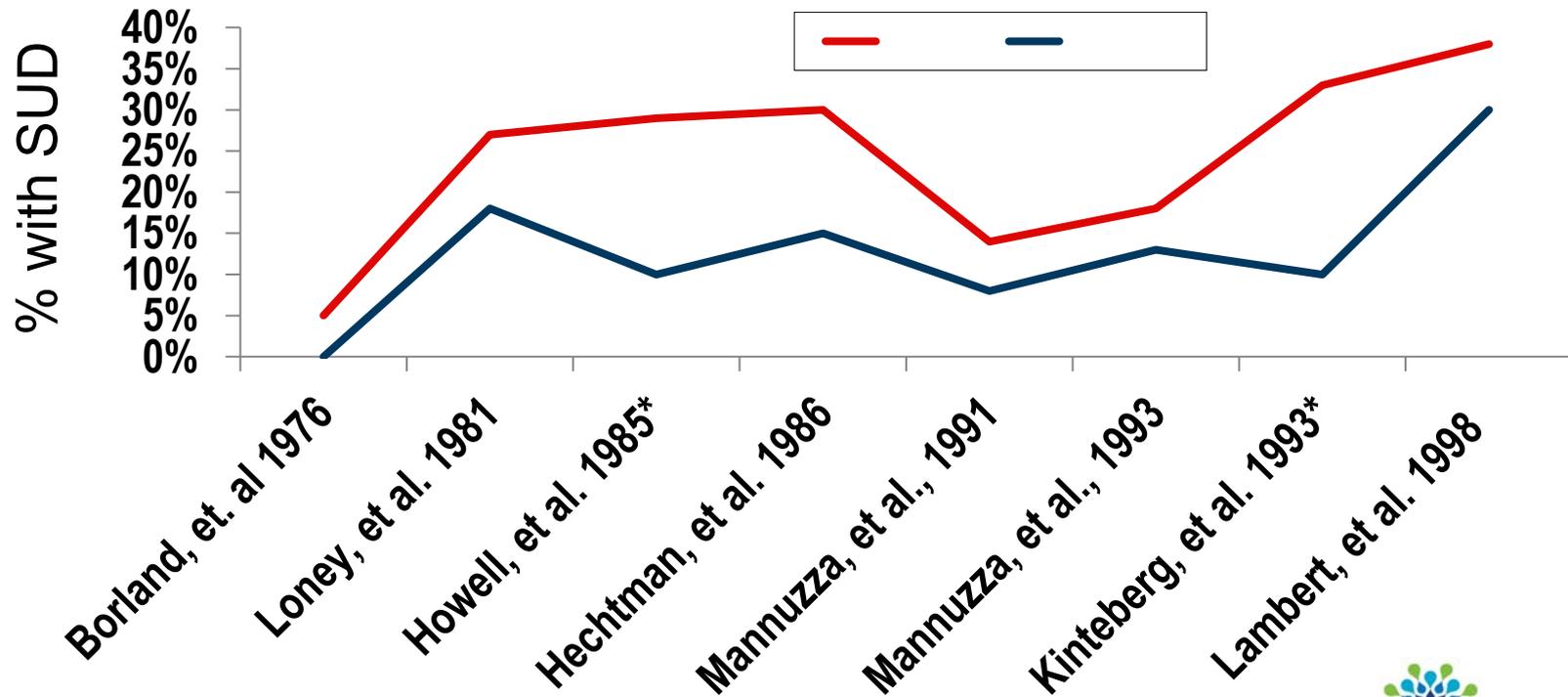


Lifetime Rates of SUD

in Controlled Longitudinal Studies of ADHD Adults

Mean age range at follow-up: 18-26 years

Total ADHD N=845, total Control N=1085



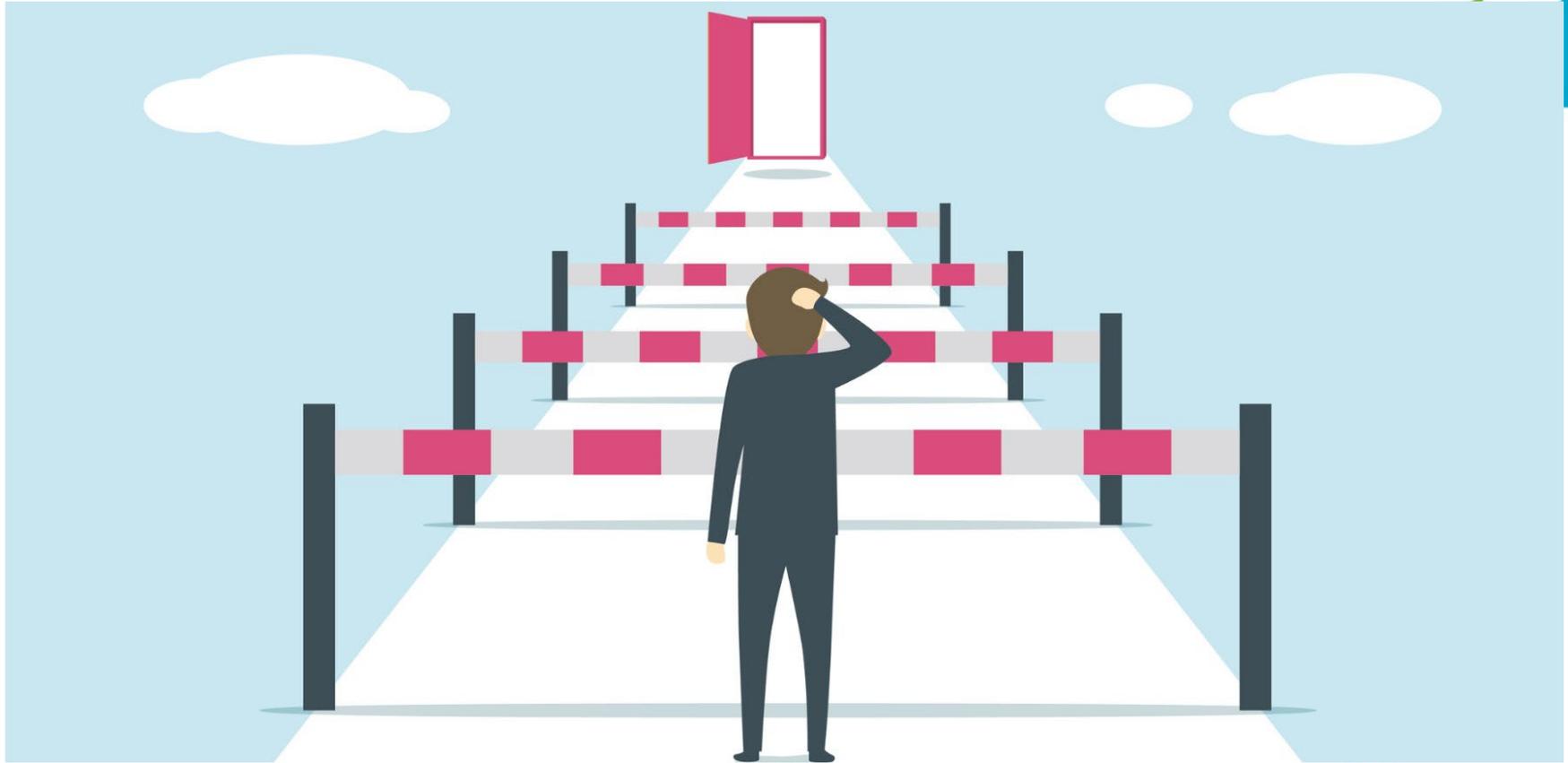
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Barriers to care



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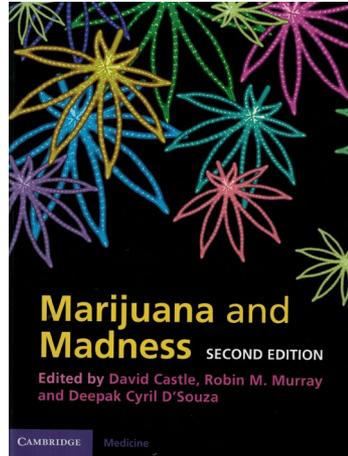
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Laura is rejected



- 'I don't (can't) treat people who use drugs'
- Come back after detox and rehab



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Not in my practice!

We don't have people like that here!

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Addiction Medicine Specialist



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Substance use & ADHD

Myths

- Adults don't have ADHD
- Women don't have ADHD
- They will abuse stimulant medication
- We “don't believe in ADHD”
- You can't treat ADHD in drug users
- You can't treat ADHD in people with mental illness



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- **Stigma** (against the drug use)
- **Prejudice** (against drug users)
- **Anger** (moral judgement)
- **Misunderstanding** (about what to do)

SPAM leads to widely-held inaccurate beliefs, as compared to research-generated facts)



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Laura has ADHD

- Enters residential rehabilitation
- Commences treatment as part of her recovery
 - Dexamfetamine/Ritalin
 - Mood stabiliser
- ‘Wow – this is how I am meant to feel!’



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Diversion



What's popular?



Class	Drugs
Benzodiazepines	all
Opioids	all
Stimulants	dexamphetamine pseudoephedrine methylphenidate
Antipsychotics	olanzapine quetiapine
Anaesthetic drugs	ketamine propofol
GABA agonists	gabapentin pregabalin



Figure 1. Unnecessary medicines removed from patients' homes

Vuong, T., & Marriott, J. L. (2006). Unnecessary medicines stored in homes of patients at risk of medication misadventure. *Journal of Pharmacy practice and research*, 36(1), 16-20.

Wood, D. (2015). Drug diversion. *Australian prescriber*, 38(5), 164.



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Risk of diversion (sharing)

- Stimulants are valued for
 - Studying
 - Recreation
- Adolescents
 - 23% asked for medication
 - 16% to 29% had misused or diverted at least once
 - (This means > 70% had never diverted)
- But 36% of college students diverted a medicine

Clemow, D. B., & Walker, D. J. (2014). The potential for misuse and abuse of medications in ADHD: a review. *Postgraduate medicine*, 126(5), 64-81.

Wilens, T. E., Adler, L. A., Adams, J., Sgambati, S., Rotrosen, J., Sawtelle, R., ... & Fusillo, S. (2008). Misuse and diversion of stimulants prescribed for ADHD: a systematic review of the literature. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(1), 21-31.

Garnier, L. M., Arria, A. M., Caldeira, K. M., Vincent, K. B., Kevin, E. O., & Wish, E. D. (2010). Sharing and selling of prescription medications in a college student sample. *The Journal of clinical psychiatry*, 71(3), 19507.

Diversion and Misuse of Medications in ADHD

- **All cases receiving immediate-release stimulants**
 - Methylphenidate
 - Dexamphetamine
- **No evidence of diversion or misuse of**
 - Extended-release stimulants (e.g. lisdexamfetamine, long-acting methylphenidate)
 - Nonstimulants (atomoxetine, clonidine, guanfacine)



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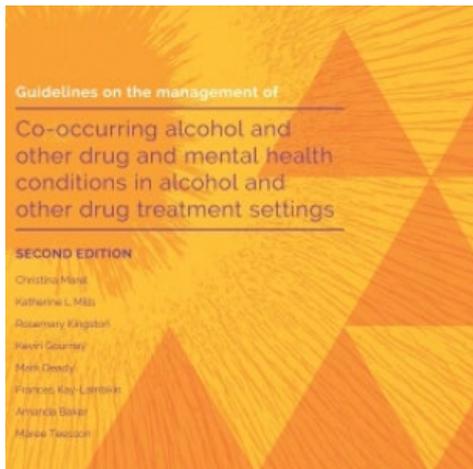


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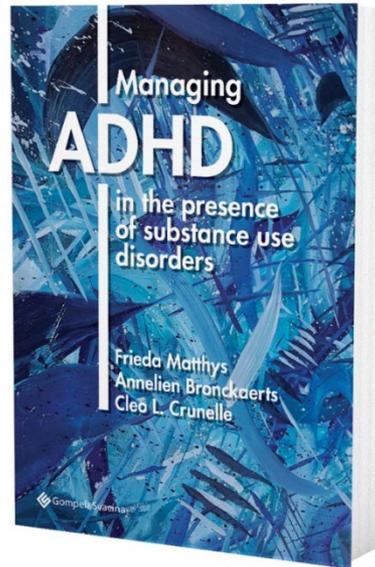
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Why bother?

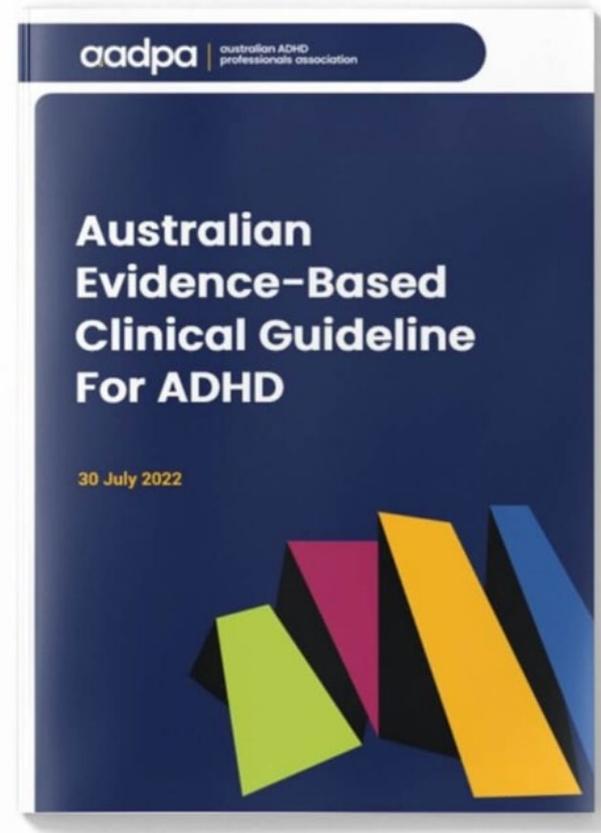
- We have guidelines



NDARC Guidelines,
Australia, 2016



ICASA
2018



Australian Guidelines
2022



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Why treat ADHD in drug users?



- *ADHD increases the risk of going off the rails in life ... but the downward life spiral can be arrested by the right treatment.*
- *The drugs were just something I needed to make me feel normal. It was only when I didn't do them that I felt crazy.*



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Because it works!



- ‘I haven’t used ice since I started treatment ‘
- I no longer crave drugs ...’
- I didn’t think I would ever study!
- I am working full time.



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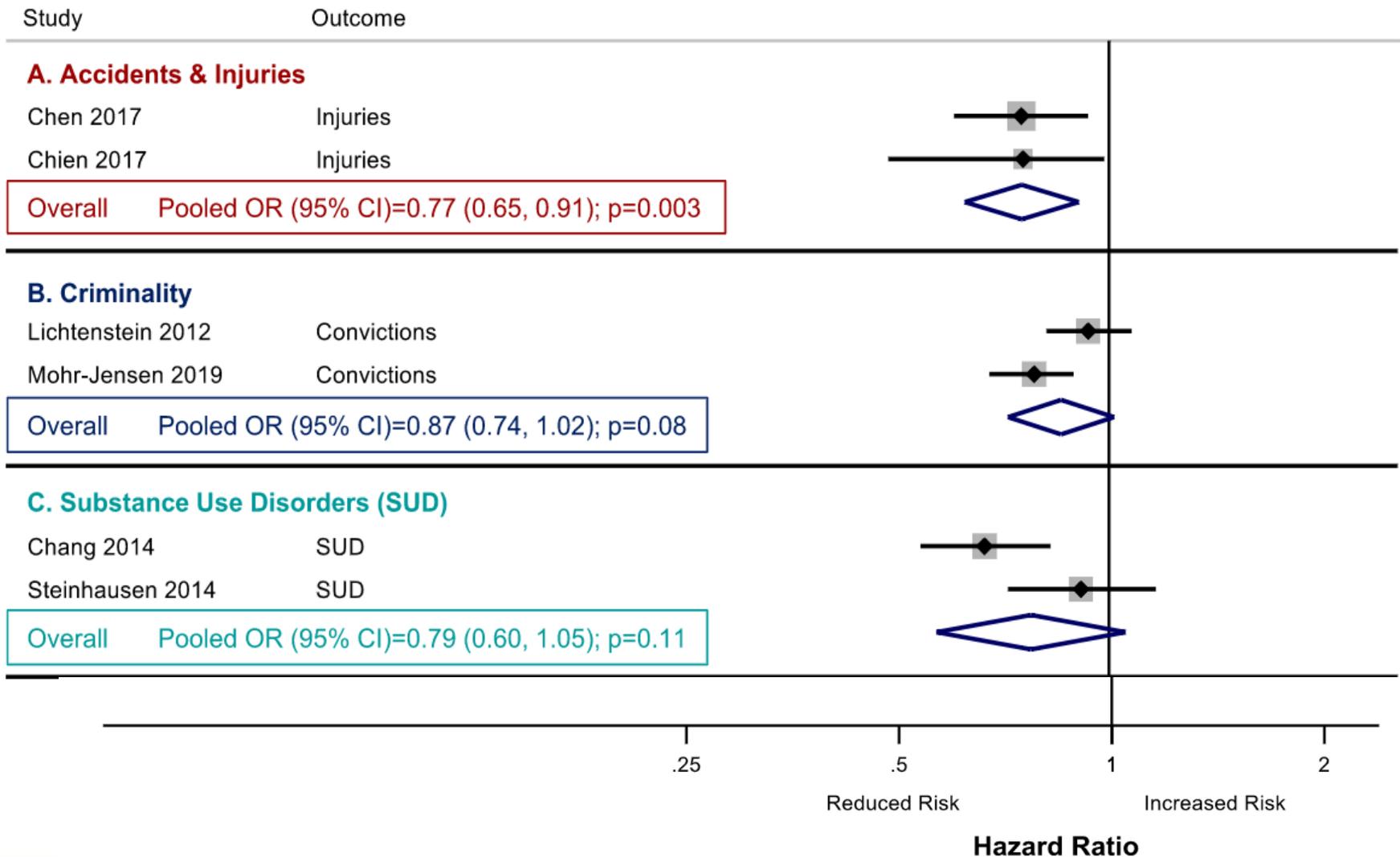


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So what about Laura?

- Immediately after starting treatment
 - Stopped using illicit drugs
 - Relationships improved
 - Watched her first movie and read her first book!
- Laura is now a mature age student
 - Free of substance misuse
 - Working full-time



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So why wait?

- Waiting for abstinence is guaranteeing failure
 - Loss of confidence
 - Loss of opportunity
- Treatment is possible
 - The risks are low and exaggerated
 - The rewards are HUGE



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