



St. Vincent's Hospital, Melbourne
Australia



ST VINCENT'S
HEALTH AUSTRALIA

Medicinal cannabis for OUD?

UNDER THE STEWARDSHIP OF MARY AIKENHEAD MINISTRIES



Promise of medicinal cannabis reducing the opioid crisis

JAMA Intern Med. 2014 October ; 174(10): 1668–1673



Cannabinoid – opioid synergism

- not merely additive effect



Population studies

MC and reduction in opioid mortality?

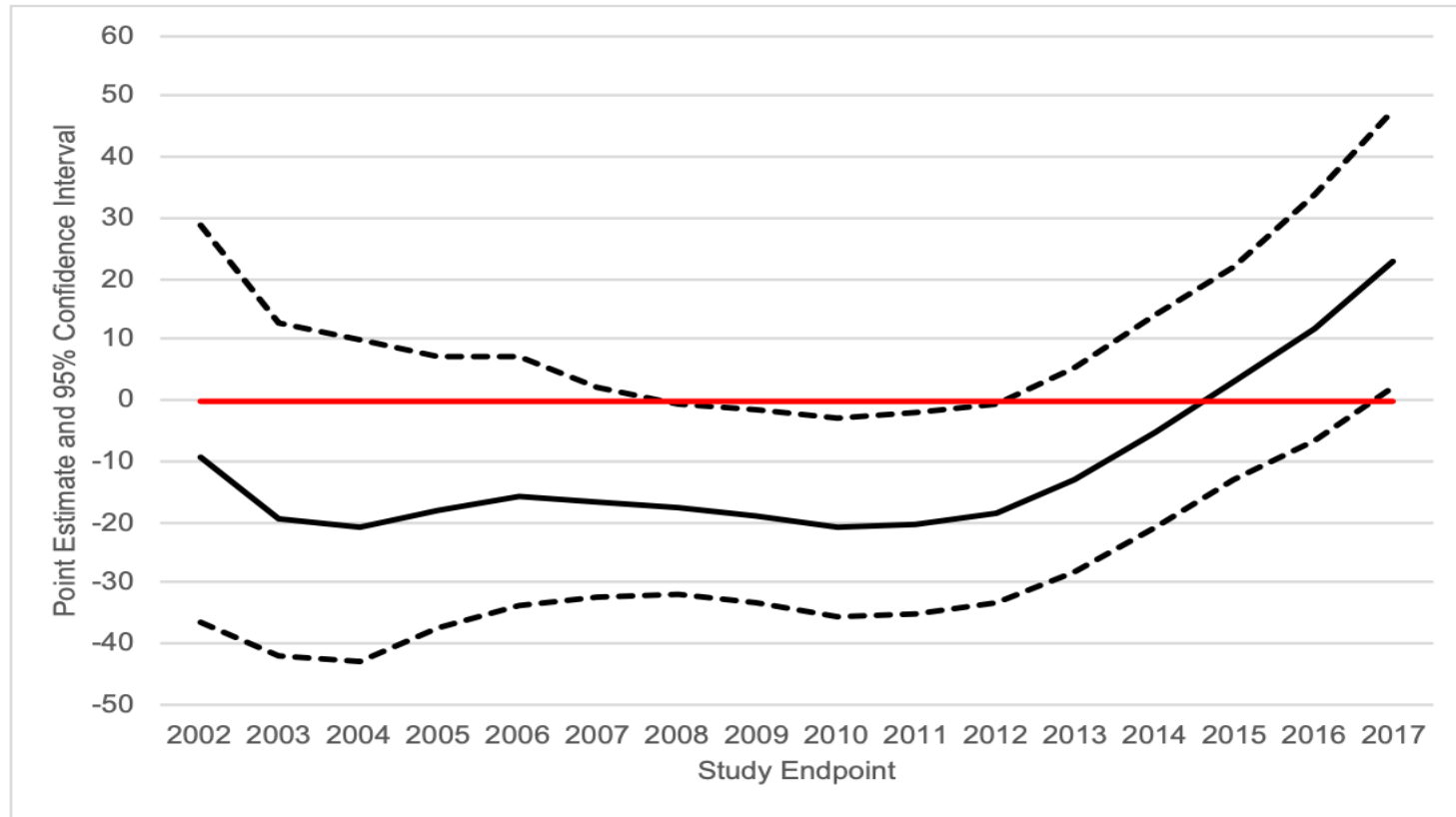


Fig 1 Shover C. *PNAS* 2019; 116(26)

MC and reduction in opioid 'abuse'?

- Literature search to examine whether cannabis legalisation reduces opioid related *outcomes* (2012-2018)
- 10 studies:
 - 3 cross-sectional
 - 6 ecologic (aggregate data analysis)
 - 1 retrospective cohort study

MC and reduction in opioid 'abuse'?

- 8 studies (cross sectional and ecologic) reported reduced prescription opioid use with decriminalisation of cannabis (substitution of opioids with cannabis)
- 1 study was inconclusive
- Retrospective cohort study showed *increased* illicit opioid use



Clinical trials

PICOS framework



	Inclusion	Exclusion
Population	<ul style="list-style-type: none"> • Humans • Primary mental health diagnosis recognised in the Diagnostic and Statistical Manual for Mental Disorders (DSM-5) • All ages 	
Intervention	<ul style="list-style-type: none"> • Medicinal cannabis, including cannabis flower, cannabinoids and cannabis derived cannabinoid-based products (i.e., Sativex/Nabiximols and Epidyolex) • Singly (single component of cannabis such as cannabidiol (CBD) or tetrahydrocannabinol (THC)) or in combination (CBD and THC, in various ratios) • All routes of administration • As primary treatment or adjunct 	<ul style="list-style-type: none"> • Synthetic cannabinoids • Non-medicinal cannabis
Comparison	<ul style="list-style-type: none"> • Placebo or active comparator 	
Outcome(s)	<ul style="list-style-type: none"> • Change in mental health symptoms or remission of a mental disorder 	
Study type	<ul style="list-style-type: none"> • Randomised controlled trials • English 	<ul style="list-style-type: none"> • All non RCT study types • Protocols • Grey literature • Studies where full text was not available

MC and OUD

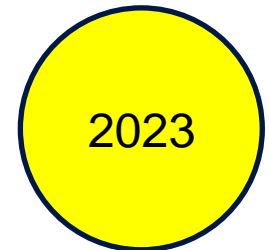


Opioid Use Disorder	Hurd et al., 2019	Cannabidiol for the Reduction of Cue-Induced Craving and Anxiety in Drug-Abstinent Individuals with Heroin Use Disorder: A Double-Blind Randomized Placebo-Controlled Trial	United States	Parallel	CBD (400 mg or 800 mg) or 0 mg (placebo)	42	2 weeks total (3 consecutive days with 1 week follow up)	Cue-induced craving measured using the Heroin Craving Questionnaire, anxiety measured using the visual analogue scale for anxiety (VAS-A) and The Clinical Opiate Withdrawal Scale to identify any signs of opioid withdrawal, Measures of opioid craving (assessed using the visual analogue scale for craving [VAS-C]).
	Suzuki et al., 2023	Impact of cannabidiol on reward- and stress-related neurocognitive processes among individuals with opioid use disorder: A pilot, double-blind, placebo-controlled, randomized cross-over trial	United States	Crossover	CBD (600 mg) or 0mg placebo (as adjunct to buprenorphine or methadone)	10	2 days (1 week apart)	Cue-induced craving, attentional bias (visual probe task), subjective stress-reactivity measured using the negative affect subscale of the PANAS, physiologic stress-reactivity measured with salivary cortisol

Results: Opioid Use Disorder

	Dronabinol (N=3)	CBD (N=1)
Withdrawal Severity	↓*	
Craving		↓
Anxiety, Heart Rate	↑	↓
Cognitive Abilities	↓	=

Symbols Legend
 = Non Significant Effect
 ↓ Significant Reduction
 ↑ Significant Increase



*doses required for withdrawal suppression (>20mg) caused significant physiological (tachycardia) and cognitive (anxiety, poor time estimation/continuous performance tasks)



Medicinal cannabis and OUD in CNMP

MC and OUD in CNMP (1)

Systematic Review

9 studies (N=7222)

Wide range of MC dosage (1.5 - 2000mg)

Reduced opioids (from 0 - 75% reduction in opioids b/w studies)

BUT

- high risk of bias in all the studies included

- no causal inference can be made

Okusanya O. *Syst Rev* 2020; 9: 167

Cannabis as medicine & OUD

POINT Study (**P**ain and **O**pioids **I**N **T**reatment)

N= 1514 participants

1/3 used cannabis for their CNMP

NO evidence of cannabis having an opioid-sparing effect


NO evidence of improved patient outcomes

Campbell G. *Lancet Pub Health* 2018; 3: e341

Should MC be included in OAT?

Conclusions

No rigorous evidence (yet?) of:

- Reduction in overdose
 - Reduction in opioid use
 - Treatment retention
 - Reduction in craving or withdrawal
 - Other benefit in relation to opioids
- 



Downsides of medicinal cannabis?

Dependence on MC?

Dependence +/- addiction reported in 10% users:

Withdrawal syndrome

Tolerance: increased dose (CB1 down regulation?)

25% meet criteria problematic use with MC

Ware M. *Psychopharm* 2018; 235: 409



Watch this space.....

