

# Cannabis: prevention and public health responses

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# Public health responses to cannabis use neglected?

- Public health impact of cannabis somewhat neglected?
  - Hall 2000 – (in countries such as Australia and NZ) more attention should be paid to the public health impact of cannabis use, especially by young adults
- The particular concerns include
  - risks of early onset use
  - increasing regular use
  - limited evidence base and relatively slow uptake of public health responses
  - relatively low treatment engagement and modest outcomes

# **When planning public health responses need to remind ourselves**

**‘why they do it’**



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- Drug use is functional and symbolic – freedom, belonging, adulthood, rebellion
  - “...it is often a performance in front of an audience of associates and others, expressing solidarity in a group or marking off social boundaries”. Paglia and Room 1999

# When planning public health responses need to remind ourselves

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  - “...it is often a performance in front of an audience of associates and others, expressing solidarity in a group or marking off social boundaries”. Paglia and Room 1999
  - .... the prevention literature fails to recognize how the phenomena of drug use appear to youth themselves. **If we view prevention as something to be sold to youth, those selling it often fail to understand the market.** One great failing is a lack of recognition of the ‘fun’ side of drug use ...[The majority of youth] ... take drugs because they enjoy the experience. The youth prevention literature .... often assumes that drugs are used mainly to assuage the troubles in one’s life. ... and pays too little attention to the collective and symbolic aspects of drug use Paglia and Room 1999

# Where does a public health model take us?

- Loxley and colleagues (2004) defined prevention as:
  - measures that prevent or delay the onset of drug use as well as measures that protect against risk and reduce harm associated with drug supply and use
  - delaying the onset of use important because heavy use in the early years associated with harms then and risk of problems later in life

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- US Institute of Medicine (1994) suggests three levels:
  - universal prevention (targeting whole populations);
  - selective prevention (targeting specific groups who have above average risk); and,
  - indicated prevention (targeting individuals with emerging problems).



# Where does a public health model take us?

- The evidence suggests a focus should not just be on preventing use but preventing  
  
‘more than trivial cannabis use in the first place seems sensible, but how to achieve this aim is not obvious’ McLeod 2008

# Where does a public health model take us?

- Effective prevention in relation to cannabis use likely to include a range of strategies, from whole-of-community approaches that aim to prevent uptake, to more targeted programs aimed at those who are currently using and beginning to experience adverse outcomes.
- Current thinking on prevention of drug related harms suggests embracing a combined risk and protective factors approach

# Where does a public health model take us?

- Risk factors for heavy use include:
  - Troubled early lives
  - Drug using peers
- Protective factors include:
  - Connectedness
  - Family factors
- Can we identify cannabis strategies that demonstrate a strong connection to risk/protection models of drug use and harm?
- Can we identify cannabis strategies that are strongly influenced by an intent to prevent harm across the full spectrum of risk?
- Given the connection with other drug use (e.g. tobacco; alcohol) has this influenced our prevention/public health approaches?
- Has a public health focus influenced policy?

# Public health responses to cannabis use neglected?

- Need to be wary of a drug only focus in public health. That is, while drug use can contribute to diverse adverse outcomes, some of these can themselves contribute to drug use
  - For example:
    - heavy use might increase risk of poor educational attainment, but also need to recognise that poor educational performance can contribute to risk of **USE** Ellickson et al 2004

# Does drug policy matter?

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- There is no clear consistent link between cannabis policy and rates of use – indeed it seems almost independent of it
- As well as the potential for doing good, it is often forgotten it also has the potential to do harm

DARING  
DRUG  
EXPOSE



SHAME  
HORROR  
DESPAIR

DARING  
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DESPAIR



# MARIHUANA



DARING  
DRUG  
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SHAME  
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# MARIHUANA

WEED with ROOTS in HELL

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**WEED with ROOTS in HELL**

**NOT RECOMMENDED FOR CHILDREN**

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# MARIHUANA

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NOT RECOMMENDED FOR CHILDREN

Smokes  
That  
Gets In  
Youth's  
Eyes



What  
Happens  
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**WEIRD ORGIES  
WILD PARTIES  
UNLEASHED  
PASSIONS**

# Does drug policy matter?

- There is no clear consistent link between cannabis policy and rates of use – indeed it seems almost independent of it
- As well as the potential for doing good, it is often forgotten it also has the potential to do harm
- In many countries, drug policy and related strategies driven largely by legal considerations and mechanisms rather than public health

# What options might be available to us?

# Mass Media Campaigns

- Universal prevention strategies, usually designed to
  - raise awareness
  - provide information and
  - sometimes to provide a rationale for a policy position or support other strategies (e.g., used to raise awareness about roadside drug testing)
- Mass media campaigns more likely to be effective when they:
  - are well resourced and enduring;
  - target a clearly defined audience;
  - have a basis in advanced marketing strategies that effectively target, communicate with, and have relevance for and credibility with the desired audience; and,
  - provide a credible message to which the audience is frequently exposed (Bertram et al 2003)

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- Such comprehensive approaches hard to find in relation to illicit drugs



# Mass Media Campaigns

- The limited evidence of impact suggests that mass media campaigns might best be conceived as one component of a multifaceted approach
  - Mass media might be more effective as: an ‘agenda setting mechanism’: increase awareness and support for other programs; gain support for policy; and, challenge norms

# Mass Media campaigns

- They have potential for unintended consequences.
  - e.g. create knowledge about or interest in how to use a drug where none previously existed
  - messages that do not sit well with an individual's own experience (e.g., implying that cannabis use will frequently result in psychosis when such outcomes are rarely observed) may not be credible with the target audience and potentially undermine confidence in other messages or strategies.
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- Can campaigns make people worse?

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  - Contribute to stigmatisation and marginalisation
- Can campaigns make people worse?
  - “Greater exposure to the US anti-drug advertisements was associated with an increase in the belief among young people that their peers used cannabis regularly .... Individual misperceptions of higher drug use prevalence in general and peer populations are strong predictors of intention to use” Sumnall and Bellis 2007

# Community mobilization approaches

- Some researchers have developed community capacity to prevent and respond to drug-related problems
- Most commonly been employed with alcohol (e.g., Holder et al. 1997) and consist of multifaceted and community wide approaches, such as:
  - raising awareness of existing policy and ways to use policy approaches to reduce risk (e.g., enforcement of liquor and drink-driving legislation)
  - engagement of diverse stakeholders (e.g., police, health services and community organisations) and targeting specific at-risk groups and behaviours (e.g. young people and drink driving)
  - community mobilisation and education targeted towards at-risk groups to increase support of prevention efforts and raise awareness of key issues
  - use of law enforcement approaches, but in combination with the broad range of other interventions and,
  - development of coalitions of support and action across a broad range of organisations and individuals (e.g., police, health, media, education) consistent with the broad range of issues to be addressed.

# School-based prevention activities

- School-based programs popular preventives, but most have little supporting evidence
- Evidence base much stronger for those initiatives that target higher prevalence legal drugs, such as alcohol and tobacco and, cannabis
- Other than the divide between legal or illegal drugs, most programs are not drug specific
  - that is, for example, they aim to prevent any illegal drug use, as opposed to, say, focusing on cannabis alone and most focus on preventing uptake of drug use, with very few addressing harm reduction for those who are exposed to risk from their own drug use or the drug use of others
- Two cautions
  - School based approaches will have limited relevance for those who are at higher risk of harm, such as those disconnected from the school system
  - if drug use is influenced by availability, environmental and individual risk factors outside the influence of the education system, it is unlikely that a few hours of drug education will be sufficient antidote
    - (don't set fantastic objectives – Munro)

# School-based prevention activities

- The limited evidence about effective programs is that they do not rely on passive information exchange or a singular focus on skills related to preventing drug use (e.g., drug refusal skills), but are
  - well resourced and ongoing
  - connected to other activities in the school and community and based on
    - personal self-management and social skills, and,
    - ensuring school connectedness through social and academic competence (Midford and Munro 2006)
- ‘Climate school’ approach uses internet delivery of education to students 6 x 40 minute course with teacher reinforcement of content/lessons resulted in greater knowledge and frequency of use at 6 month follow up (Newton et al 2009)

# Peer based interventions

- Many young people misperceive (overestimate) use by their compatriots - and it appears to matter what young people perceive everyone else is doing - perceptions about the prevalence and nature of drug use amongst one's peers is associated with personal drug use (Birckmayer et al. 2008; Kilmer et al 2006)
- Challenging norms about peer drug use might be an appropriate intervention
- Also, peer information may have relevance/influence:
  - information from a personal source rather than a booklet, or other printed material or some other 'official' source is more likely to be understood and assimilated. For these reasons, most knowledge about using drugs is almost exclusively derived from other drug users. (Moore 1992, p.87)
- Use of peer based approaches could enhance access to individuals who might otherwise be 'hard to reach'
  - Many consumers do not access existing service networks
- There is little research that examines if such approaches do reduce the probability of cannabis use and related harm

# Family interventions

- Family influences early adolescence and peers influence later adolescence
  - Quality of parent child relationship important
  - Proactive family management – monitoring, setting and enforcing rules delay initiation irrespective of parental use
- “Youth, especially females, appear to care about what their parents think ....” Appears to have more impact on escalation not abstinence Butters 2004



# Preventing harm from use in risky circumstances

- Reducing the effects of impaired driving
  - Interventions based on success with alcohol impaired driving
- Workplace interventions
  - Little evidence about effective drug interventions in the workplace, especially those that are directed at preventing and responding to cannabis use.
  - This lack of evidence is, in part, related to the challenge of conducting controlled investigations in the workplace
- Preventing and reducing problems for current users
  - A large number do not want to give up but some may welcome reduction strategies or strategies to manage unwanted adverse outcomes

# Challenges in public health responses to cannabis use

- **The need for multifaceted responses**
  - The diverse contexts in which cannabis might be used (e.g., in the workplace; at a social function; in an entertainment venue) and the diverse range of consumers and potential risks leads to a conclusion that we should adopt multifaceted approaches - no single strategy could possibly address all the potential issues of concern (e.g. mental health and physical health; risk taking behaviour; impaired driving; specific risks to young people etc.).

# Treatment

- “While it is the most common illicit drug of dependence, only a minority of individuals with cannabis dependence access specialist treatment”  
Gates et al 2009
  - (eg in US even though about 1 in 5 of consumers report some problems, less than 10% of these receive treatment)
- Main reasons
  - Lack of interest/motivation to seek treatment/not necessary
  - Too hard to get to (hours of operation)
  - Lack of knowledge of options
  - Feeling of being stigmatised/privacy/embarrassment/not like other drug users

# Treatment

- Many clinicians don't think treatment necessary or at least not a priority
- Evidence base relatively recent
  - Specific treatment trials only recent – last 15-20 years
  - Pharmacotherapies early days
  - Strongest evidence for BI, MET, CBT and CM

# Treatment

- Those who do enter treatment
  - Perhaps more severe (use to cope rather than to enhance other experiences; greater severity of [esp MH] problems/dependence)
  - More likely to seek GP help?
  - More likely to seek outpatient treatment?
- **But** - numbers of people entering treatment is significantly increasing (doubling over one recent 10 year period)

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- **But** - numbers of people entering treatment is significantly increasing (doubling over one recent 10 year period)
  - (but many formally referred)

# Brief interventions

- Opportunistic interventions show some benefits
  - eg Cannabis Check Up trialed in US and Australia (eg Martin et al 2005)
- BI's effective
  - (eg Stephens et al 2000; Babor et 2004; Budney et al 2006)
- Gates et al (2012) four-session telephone intervention RCT (wait list control or treatment)
  - Based on MI and CBT delivered weekly with self-help workbooks:
  - Reduction in cannabis problems and dependence at 12 weeks
  - In general strongest evidence is for reduced frequency of cannabis use and driving after use, and cannabis use, but limited impact on quantity of cannabis used (eg Fischer et al 2013)

# MET/CBT/CM

- MET, CBT and CM effective compared to controls, especially when MET, CBT and CM combined (this combination has most enduring impact)
- However, outcomes for most treatment studies are modest – minority attain abstinence while others might reduce frequency of use, dependence and some adverse consequences
- Leads to conservative conclusion:
  - Only a small proportion enter treatment and few achieve abstinence – the majority of treatment attendees continue to use cannabis after treatment engagement



# Multi-Dimensional Family Therapy

- Some evidence about the benefits of MDFT from US and studies in other countries
  - Compared to MI and CBT more likely to reduce cannabis use and frequency of use but may be a function of intensity
    - MDFT was 2 sessions per week x 6 month
    - CBT or MI were one session per week
    - When time controlled for, significant differences disappeared
  - At 12 months 38% met criteria for dependence and 33% for cannabis abuse (eg Rigter et al 2013)

# The relative neglect of cannabis has left us some challenges

- Responses still dominated by legal as opposed to public health response
- Rates of use and harm seem somewhat independent of policy
  - the potential to do harm has too little impact on policy development
  - insufficient consideration of unintended adverse outcomes of our responses
- While we have good models of risk and protective factors, limited translation to well-resourced, enduring, evidence based public health/prevention responses to cannabis use
- Limited, but building, evidence base about treatment
- But few perceive themselves at risk and only a minority enter treatments that have modest impact
- What are the public health implications of ‘cannabis isn’t necessarily all the same’?
- What challenges do recent changes to law and discussion of medical benefits of cannabis pose to a public health approach to cannabis related harm?