

What have we learned so far from the legalization of cannabis use?



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Outline

- Cannabis legalisation in the USA
 - Regulatory model
 - Effects on cannabis products and prices
 - Short term effects on cannabis use and harms
 - Limitations of evidence
- Possible long term effects of legalization
 - Acute harms
 - Harms from long term regular use
- Policies to minimise the harms of cannabis legalisation
 - Product regulation
 - Availability
 - Taxes and prices
 - Protecting youth

Cannabis legalisation in the USA

- Regulatory model based on alcohol
 - License producers and retailers who operate for profit
 - Few restrictions on the cannabis products that can be sold
 - Minimal restrictions on promotion of cannabis via social media
- This model of cannabis commercialisation has
 - Substantially reduced cannabis retail prices
 - increased the potency of cannabis flower 15%+
 - Increased the use of cannabis extracts > 70% THC
 - Popularised edibles: gummy bears, candy and chocolates

How has legalisation affected cannabis use and harms so far?

- There have been increases in
 - the frequency of cannabis use among adult users
 - acute harms in EDs in adults:
 - anxiety, psychotic symptoms, hyperemesis syndrome
 - Acute harms from accidental ingestion in children and adolescents
- Unclear if legalisation has increased
 - Car crashes involving cannabis impaired drivers
 - Major challenges in identifying cannabis-impaired crashes
 - Problem cannabis use among adults
 - Conflicting findings in 2 major survey series
 - Treatment data affected by reduction in coerced treatment

Limitations of data on short term impacts of legalisation

- Still early in implementation of legalisation:
 - 8 years in Colorado and Washington State
 - Much shorter in the other 16 states
 - Legalisation has not displaced the illicit market in most states
 - Prices still higher than they are likely to be in a mature market
- Federal prohibition has limited full commercialisation
 - No legal national cannabis market
 - Limited investment by alcohol, tobacco and finance industries
 - Banking problems for cannabis businesses
 - Federal promotional restrictions because cannabis is illegal
 - Profitability of companies has been a challenge

How may full legalisation affect cannabis-related harm in the longer term?

How may acute adverse effects change?

- Acute toxicity:
 - More adult cases anxiety, dysphoria, panic, and paranoia
 - More child poisonings from accidental ingestion
 - More acute psychiatric presentations
- Cognitive and psychomotor impairment
 - More accidental injuries?
- Psychotic symptoms from high doses of THC
 - Especially among persons with or at risk of psychoses
- More cannabis use in pregnancy
 - Lower birth weight and greater prematurity
 - Unclear if birth defects will increase

How may the adverse effects of long-term regular use change?

- What do we mean by long term regular use?
 - Daily or near daily use over months and years
 - Most data on the effects of daily use from teens to early 30s
 - In samples using much lower potency cannabis
- What are the outcomes of most concern?
 - Dependence syndrome
 - Poor psychosocial outcomes in young adults
 - Poorer mental health: psychoses, anxiety and depression
 - Noncommunicable diseases in much longer term
 - Cancers, respiratory and cardiovascular diseases

Cannabis dependence

- What do we mean by cannabis dependence?
 - loss of control over cannabis use
 - continued cannabis use despite evidence of harms
 - impaired cognitive and work performance
 - partner disapproval
 - the economic costs of heavy use
 - respiratory symptoms if cannabis is smoked
- What are the risks of cannabis dependence?
 - 9% of lifetime users (in early 1990s in USA)
 - 16% in adolescent initiators, 33-50% of daily users
 - These may increase with use of more potent cannabis
- More cannabis users seeking help to reduce their use

Outcomes associated with cannabis dependence

- More likely to use other illicit drugs:
 - Amphetamines, cocaine and heroin
- Poor school outcomes in adolescent users:
 - Early school leaving and
 - Greater welfare dependence in adulthood
- Poorer mental health:
 - Cognitive impairment
 - Schizophrenia and other psychoses
 - Depression and suicide
 - Anxiety disorders
- Are they causes, consequences, or due to common causes?

What may be the longer term effects of legalisation?

- A profit-seeking cannabis industry that seeks to
 - Increase the N of daily users
 - Extend the duration of cannabis use later into adulthood
 - Use advertising, price and frequent user discounts
 - Market more potent cannabis products
- If US model of legalisation is adopted unclear:
 - how much and how soon regular use will increase
 - How much may harm increase
 - How these harms will be socially distributed
 - How much policies can minimise these harms

The major challenge for policy makers

- Managing the competing goals of cannabis legalisation:
 - Eliminating illicit cannabis markets
 - Protecting public health
 - Creating a viable cannabis industry
- Policies that eliminate illicit markets likely to promote use
 - Low or no taxes
 - Minimal regulation of availability via retail outlets
 - Wide promotion of use
- Policies that protect public health also protect illicit markets
 - High cannabis taxes
 - Limiting the N of retail outlets
 - a government monopoly on retail sales

Minimising adverse effects of legalisation

- Broad principles
 - give a greater priority to public health than to eliminating illicit markets
 - Regulate tightly from the start rather than try to do so later
- Allow only herbal cannabis: regulatory simplicity and cost
 - Next best options:
 - a cap on THC content
 - steeply increasing taxes based on THC content of cannabis products
- Restrict access to cannabis
 - Limit N of retail outlets and their hours of sale
 - Do not allow cannabis sales in alcohol and food outlets
- Restrict advertising and promotional activities
 - No brands, celebrity endorsements, or attractive packaging
 - Sales of products that will appeal to children