Arthritis Talks
Medical Cannabis: What's new and changing

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Hamilton, Ontario

November 9, 2022

Presenters

Dr. Siân Bevan

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Arthritis Society

(Moderator)

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Hamilton, Ontario

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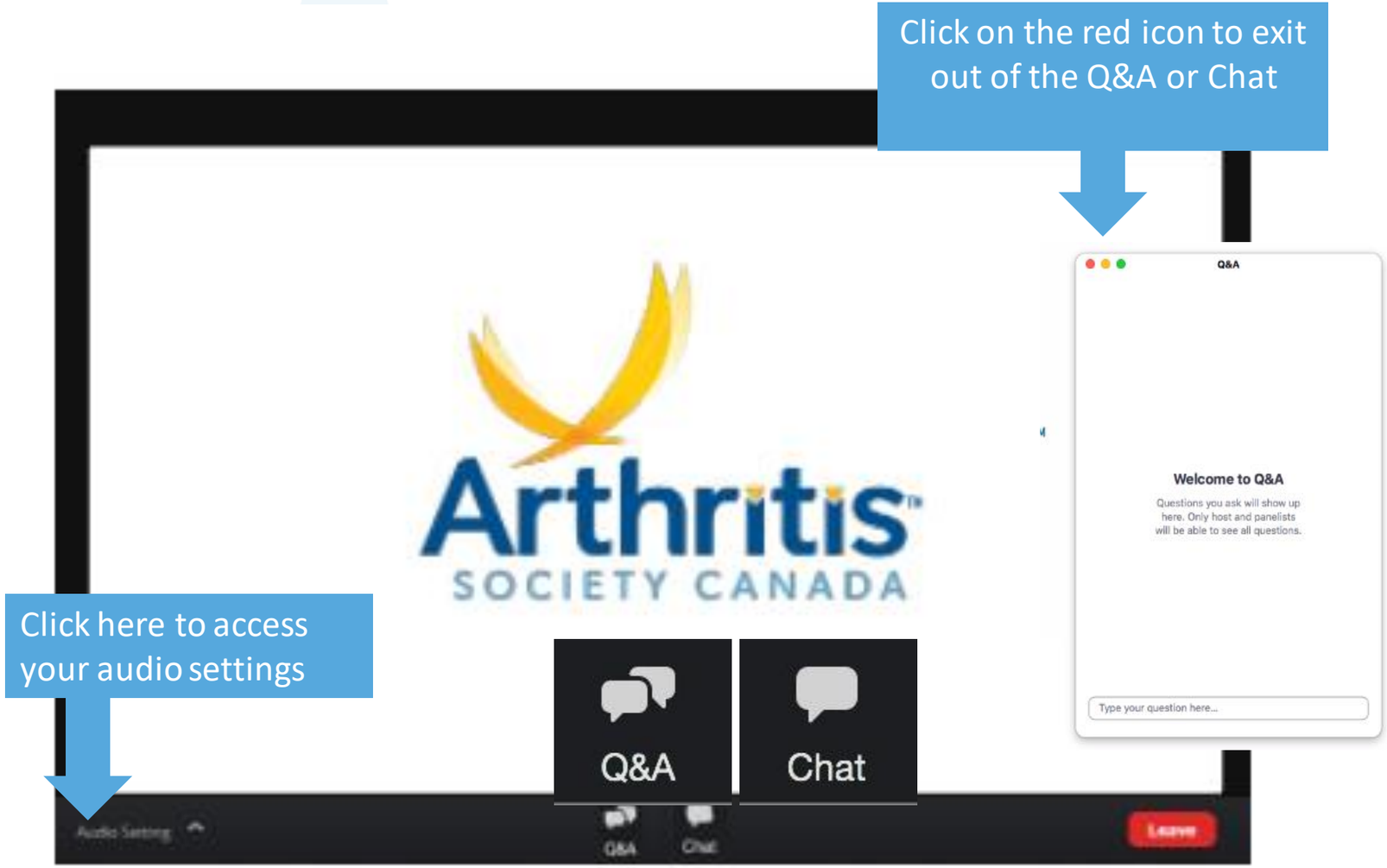
Webinar tips

- Use the **Q&A** section to ask the presenters your questions. Some of the questions will be chosen for the live question period at the end of the webinar.
- Click on the **Chat** box to connect with other participants and the Arthritis Society's chat moderator.
- If you have further issues, email arthritistalks@arthritis.ca



Overview

[1]

New Evidence for Medical Cannabis and Chronic Pain

[2]

Health Canada Guidelines

[3]

Questions & Answers

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What’s the latest information and research related to medical cannabis for people affected by arthritis?

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Background

- Cannabis has been legally available for select medical conditions in Canada since 2001.
- Licensed healthcare practitioners can provide authorization for patients to acquire medical cannabis.
- The number of Canadians authorized to use medical cannabis increased from **23,930** in June 2015 to **377,024** by September 2020.

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ORIGINAL RESEARCH

Annals of Internal Medicine

Risks and Benefits of Marijuana Use

A National Survey of U.S. Adults

Salomeh Keyhani, MD, MPH; Stacey Steigerwald, MSSA; Julie Ishida, MD, MAS; Marzieh Va
Deborah Hasin, PhD; Camille Dollinger, BS; Sodahm R. Yoo, BS; and Beth E. Cohen, MD, MA

Background: Despite insufficient evidence regarding its risks and benefits, marijuana is increasingly available and is aggressively marketed to the public.

Objective: To understand the public's views on the risks and benefits of marijuana use.

Design: Probability-based online survey.

Setting: United States, 2017.

Participants: 16 280 U.S. adults.

Measurements: Proportion of U.S. adults who agreed with a statement.

Results: The response rate was 55.3% (n = 9003). Approximately 14.6% of U.S. adults reported using marijuana in the past year. About 81% of U.S. adults believe marijuana has at least 1 benefit, whereas 17% believe it has no benefit. The most common benefit cited was pain management (66%), followed by treatment of diseases, such as epilepsy and multiple sclerosis (48%), and relief from anxiety, stress, and depression (47%). About 91% of U.S. adults believe marijuana has at least 1 risk, whereas 9% believe it h
tified by the public was
diction (50%) and impa
29.2% agree that smok
About 18% believe exp
somewhat or complete
that it is somewhat or comple
spondents, 7.3% agree t
pletely safe durin
lieve that marijuana is not at all addictive.

Limitation: Wording of the questions may have affected interpretation.

Conclusion: Americans' view of marijuana use is more favorable than existing evidence supports.

Primary Funding Source: National Heart, Lung, and Blood Institute.

Ann Intern Med. 2018;169:282-290. doi:10.7326/M18-0810 Annals.org
For author affiliations, see end of text.
This article was published at Annals.org on 24 July 2018.

- 81% believe cannabis has health benefits
- 9% believe it has no risks
- 22% believe it is not addictive

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Dr. Tod Mikuriya was a psychiatrist who was one of the first physicians to recognize the incredible potential healing power of medical cannabis.

Dr. Mikuriya developed a list of chronic conditions for which cannabis was shown to be helpful. This list is included below.

Spinal Stenosis 724.02
Lower Back Pain 724.5
Peripheral enthesopathies 726
Tenosynovitis 727.x
Dupuytens Contracture 728.6
Muscle Spasm 728.85
Fibromyalgia/Fibrositis 729.1
Osgood-Schlatter 732.4
Tietze's Syndrome 733.6
Melorheostosis 733.99
Spondylolisthesis** 738.4
Cerebral Aneurism 747.81
Scoliosis 754.2
Spina Bifida Occulta 756.17
Osteogenesis imperfecta 756.51
Ehlers Danlos Syndrom 756.83
Nail patella syndrome 756.89
Peutz-Jehgers Syndrome** 756.9
Mastocytosis 757.33
Darier's Disease 757.39
Marfan syndrome 759.82
Sturge-Weber Eye Syndrome** 759.6
Insomnia+ 780.52
Sleep Apnea 780.57
Chronic Fatigue Syndrome 780.7
Tremor/Invol Movements 781.0
Myofacial Pain Syndrome**782.0
Anorexia+ 783.0
Hyperventilation 786.01
Cough+ 786.2
Hiccough+ 786.8
Vomiting 787.01
Nausea+ 787.02
Diarrhea 787.91
Pain, Ureter 788.0
Cachexia 799.4
Vertebral dislocation unspecific 839.4
Whiplash 847.0
Back Sprain 847.9
Shoulder Injury Unspec 959.2
Fore Arm/Wrist/Hand 959.3
Hip 959.6

ADD w hyperactivity 314.01
ADD other 314.8
Migraine, Classical+ 346.0
Cluster Headaches 346.2
Compression of Brain 348.4
Tic Doloroux+ 350.1
Bell's palsy 351.0
Thoracic Outlet Syndrome 353.0
Carpal Tunnel Syndrome 354.0
Mononeuritis lower limb 355
Charcot-Marie-Tooth 356.1
Neuropathy+ 357
Muscular dystrophies 359
Glaucoma 365.23

Dyslexic Amblyopia** 368.0
Color Blindness* 368.55
Conjunctivitis 372.9
GastroEsophgeal Reflux Dis 530
Acute Gastritis 535.0
Gastritis+ 535.5
Peptic Ulcer/Dyspepsia 536.8
Colitis, Ulcerative 536.9
Pylorospasm Reflux 537.81
Regional Enteri & Crohns 555.9
Colitis+ 558.9
Colon diverticulitis 562.1
Constipation 564.0
Irritable Bowel Synd. 564.1

Hepatitis-non-viral 571.4
Pancreatitis 577.1
Nephritis/nephropathy 583.81
Ureter spasm calculus 592
Urethritis/Cystitis 595.3
Prostatitis 600.0
Epididymitis** 604.xx
Testicular torsion 608.2
Pelvic Inflammatory Dis 614
Endometriosis** 617.9
Premenstrual Syndrome+ 625.3
Pain, Vaginal 625.9
Menopausal syndrome 627.2
Sturge-Weber Disease 759.6
Eczema 692.9
Arthritis, Rheumatoid+ 714.0
Felty's Syndrome 714.1
Arthritis, Degenerative 715.0
Arthritis, post traumatic+ 716.1
Arthropathy, Degenerative+ 716.9
Patellar chondromalacia 717.7
Ankylosis 718.5
Multiple joints pain 719.49
Intervertebral Disk Disease 722.x
L-S disk disorder sciatic nerve irritation
IVDD Cerv w Myelopathy 722.71

Knee, ankle & foot injury 959.7
Motion Sickness 994.6
Anaphylactic or Reaction 995.0
Trachoria Growths***1

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THE WALL STREET JOURNAL.
WSJ

OPINION | COMMENTARY

If Weed Is Medicine, So Is Budweiser

Legalize marijuana, but don't pretend it's therapeutic.

By Peter B. Bach

Jan. 17, 2019 7:23 p.m. ET

Actual medicines have research behind them, enumerating their benefits, characterizing their harms, and ensuring the former supersedes the latter. Marijuana doesn't. It's a toxin, not a medicine. It impairs judgment and driving ability. It increases the risk of psychosis and schizophrenia. Smoking it damages the respiratory tract. A 2017

Cannabis legalization may be associated with reduced prescription drug use

Where medicinal cannabis is legal, U.S. states saw a significant reduction in the use of prescription drugs.

- E.g. anxiety, depression, nausea, pain, sleep disorders and spasticity
- Users may substitute cannabis for prescription medication, suggesting the possibility of therapeutic benefits

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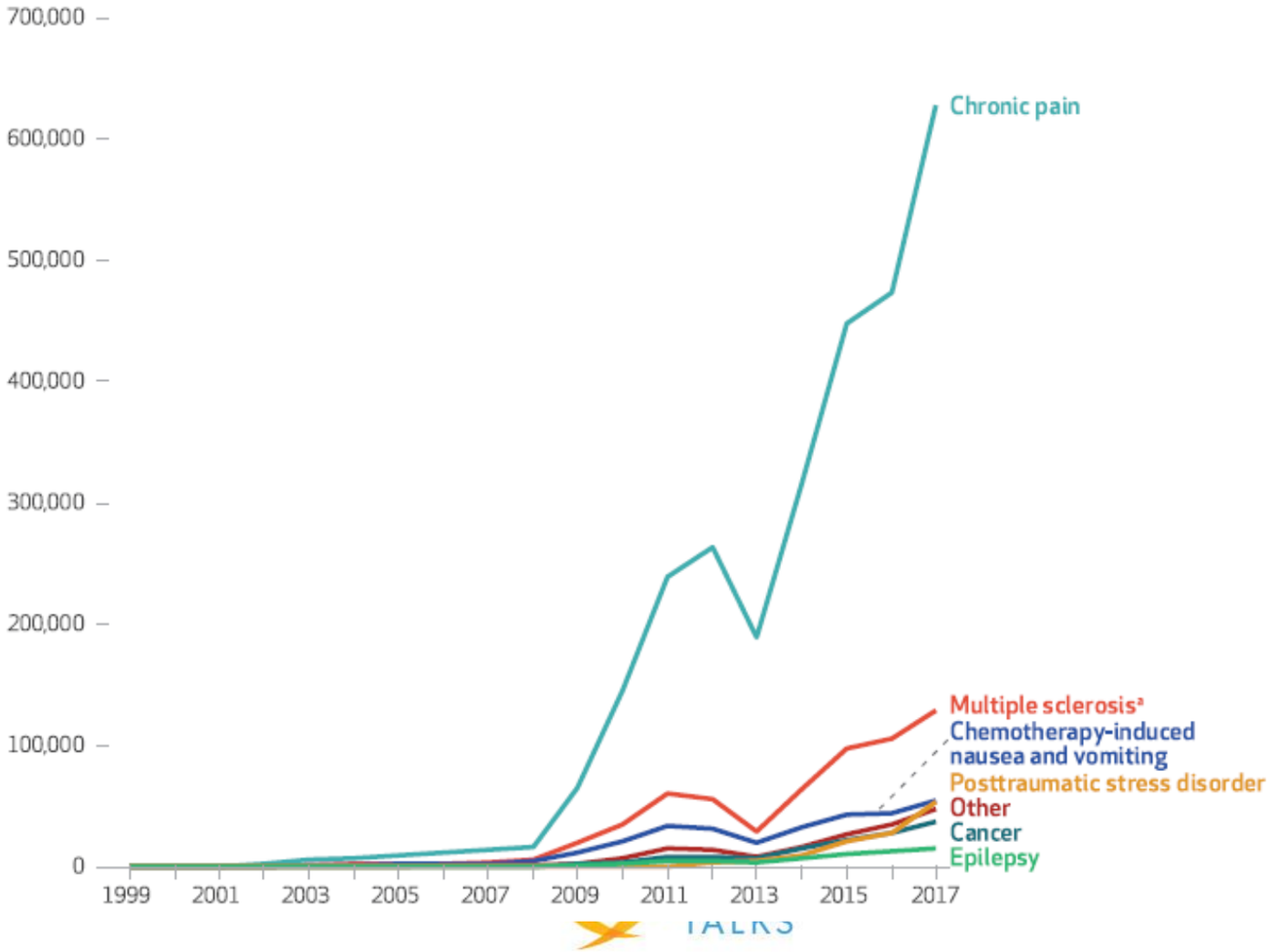
Qualifying Conditions Of Medical Cannabis License Holders In The United States

HEALTH AFFAIRS 38,
NO. 2 (2019): 295–302

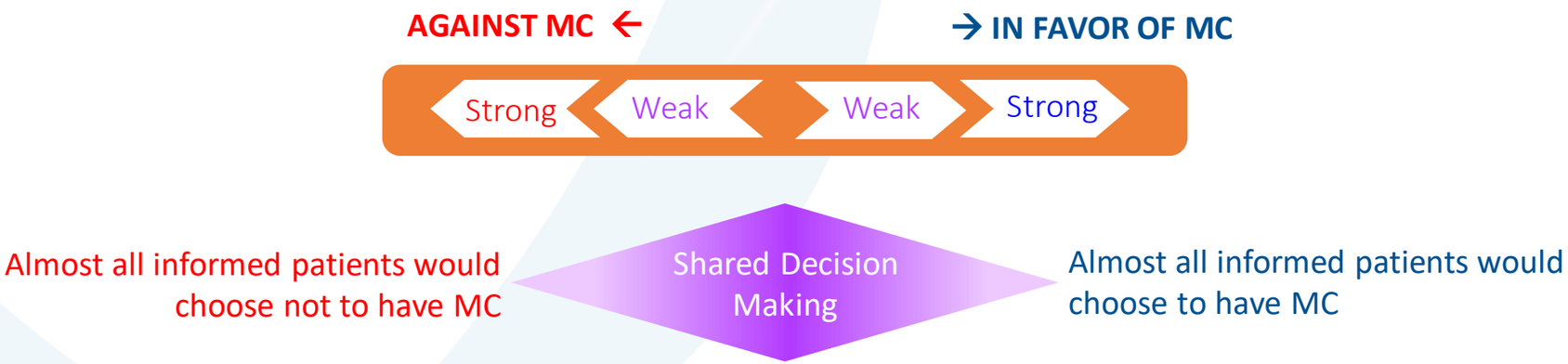
Numbers of patient-reported qualifying conditions for medical cannabis licenses, 1999–2017



- 2017: **813,917** medical cannabis licence holders in the U.S.
- Chronic pain was the qualifying condition reported by **62%** of patients

Our clinical question

- In adult and adolescent patients living with cancer or non-cancer chronic pain, should we recommend/suggest a **trial of medical cannabis (MC) or cannabinoids** vs. **continued care without medical cannabis or cannabinoids**?



Strong recommendations can be quality of care standards.

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GRADE

Strong recommendations

1. **Clear imbalance**

- benefits clearly outweigh risks/hassle/cost
- risk/hassle/cost clearly outweighs benefits

2. **Sufficient certainty in estimates**

3. **Patients' values & preferences:**

- almost all same choice

Weak recommendations

1. **Close balance**

- Close call between benefits and risks/hassle/cost
- Therefore, more preference-sensitive

2. **Lower certainty in estimates**

3. **Patients' values & preferences:**

- choice varies appreciably (or is very uncertain)

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Guideline perspective

Patient-centered perspective

Not: funder-centred or societal-perspective

Guideline Panel

- 21 members
- Clinical experts
- Methodologists
- 3 patient partners living with chronic pain, including 1 veteran
- No financial or important intellectual conflicts of interest

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Values and preferences

We conducted a systematic review for studies that reported the values and preferences of patients with chronic pain, wh cannabis (MC), as well as the values and preferences

1) The relativ

2) The attitu n routes, ingestion methods,

3) Factors that influe

15 studies were eligible for review:

- All reported adult patient values and preferences (no carers, children or adolescents)
- 9 enrolled U.S. patients (2 UK, 2 Israel, 1 Canada, 1 Australia)
- All conducted from 2000 onwards
- Both cancer and non-cancer patients were represented

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Values and preferences: Results

Moderate- to High-Certainty Evidence

- Many valued the effectiveness of medical cannabis for symptom management even when experiencing adverse events related to concentration, memory or fatigue.
- Greater preference for high CBD (cannabidiol) or balanced ratios of THC of medicinal cannabis
- Cannabis use was influenced by both positive social consequences (e.g. family) and negative social consequences (e.g. stigma surrounding
- Concerns about medical cannabis included side effects, addiction, tolerance acting strangely, and were related to unwillingness to use cannabis

Neither NICE nor the IASP systematically explored patients' values & preferences

Low-Certainty Evidence

- Highly variable values towards medical cannabis among people living with chronic pain
- Patients were motivated to use medical cannabis to reduce use of prescription medication, and felt it was 'safer' than opioids

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Systematic review of randomized clinical trials (RCTs) of cannabis for chronic pain

- 32 eligible trials: 28 non-cancer and 4 cancer chronic pain
- Adult populations, median age among trials: 54
- Length of follow-up ranged from 28 to 140 days
- Placebo was the most common control
- **Types of cannabis:**
  - Endocannabinoids (PEA) – 5
  - Phytocannabinoids – 20
  - Synthetics – 12
- Mode of administration: oral (16), spray (13), sublingual (1), transdermal (2)

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Review of RCTs: Cannabis vs. placebo (benefits)

Event (#RCTs, #pts)	Follow-up (months)	Treatment Effects		Certainty (GRADE)	Lay Summary
		placebo	cannabis		
Pain, 10cm VAS (27 RCTs, 3,939 pts) MID: 1cm	1 - 4	952 (52%)	1,309 (62%)	Moderate Due to inconsistency (I^2 = 75%)	Cannabis probably results in a small increase in the proportion of patients experiencing an important reduction in pain
		Risk difference +10% (5% to 15%)			
		WMD -0.50cm (-0.75 to -0.25)			
SF-36 Physical functioning subscale, 0-100 (16 RCTs, 2,473 pts) MID: 10-points	1 - 4	294 (28%)	447 (32%)	High	Cannabis results in a very small increase in the proportion of patients experiencing improvement in physical functioning
		RD +4% (0% to 7%)			
		WMD 1.57 (0.001 to 3.14)			
SF-36 Emotional functioning subscale, 0-100 (10 RCTs, 2,115 pts) MID: 10-points	1 - 4	276 (31%)	403 (33%)	High	Cannabis does not improve emotional functioning
		RD +2% (-2% to 4%)			
		WMD 0.53 (-0.67 to 1.73)			

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Review of RCTs: Cannabis vs. placebo (penefits)

Event (#RCTs, #pts)	Follow-up (months)	Treatment Effects		Certainty (GRADE)	Lay Summary
		placebo	cannabis		
Role physical, 0-100 SF-36 subscale (7 RCTs, 1128 pts) MID: 10 points	1 – 3.5	19			Cannabis does not improve role functioning
Social functioning, 0-100 SF-36 subscale (8 RCTs, 1405 pts) MID: 10 points					nnabis does not improve social functioning
Sleep quality, 0-10cm (9 RCTs, 2652 pts) MID: 1cm	1.25				Cannabis results in a small increase in the proportion of patients experiencing improved sleep quality
Daily opioid dose (MED) (4 RCTs, 1359 pts)	1.25 – 1.75	WMD -5.37mg (-8.37 to 1.63)		Very Low * (>20% LTFU) (indirect)	It is uncertain whether cannabis may reduce opioid use

All 4 trials reporting opioid dose instructed cancer patients to maintain their dose during the trial

Review of 6 observational studies (n=710) provides VERY LOW certainty evidence that cannabis reduces opioid dose among chronic pain patients (WMD -20 MED, 95%CI -33 to -7)

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What are the risks associated with medical cannabis use?

Side effects

- **Most often, THC is dose dependent and dissipate over time through tolerance.**
- **Many can be prevented, or at least mitigated, with low-dose initiation and slow titration.**
- **Common adverse events include:**
  - drowsiness/fatigue
  - dizziness
  - dry mouth
  - nausea
  - effects on cognitive function
  - deficits in motor
  - diarrhea

Review Article "*Is medical cannabis safe for my patients?*"
A practical review of cannabis safety considerations Caroline A. MacCallum, et al"

Event (#RCTs, #pts)	Follow-up (months)	Treatment Effect		Certainty (GRADE)	Lay Summary
		placebo	cannabis		
Cognitive impairment (5 RCTs, 1033 pts)	1.3 – 3.5	7 (1%)	21 (3%)	Moderate (imprecise)	Cannabis probably results in a very small increase in the proportion of patients experiencing cognitive impairment
		RD +2% (0.1% to 6%)			
		RR 2.39 (1.06 to 5.38)			
Vomiting (9 RCTs, 2284 pts)	1 – 3.5	61 (6%)	117 (9%)	Moderate (imprecise)	Cannabis probably results in a very small increase in the proportion of patients experiencing vomiting
		RD +3% (0.4% to 6%)			
		RR 1.46 (1.07 to 1.99)			
Drowsiness (16 RCTs, 2553 pts)	1 – 3.5	53 (5%)	151 (9%)	Moderate (imprecise)	Cannabis probably results in a very small increase in the proportion of patients experiencing drowsiness
		RD +4% (2% to 8%)			
		RR 2.01 (1.44 to 2.81)			
Dizziness <3m F/U (11 RCTs, 2270 pts)	1 – 1.9	79 (8%)	472 (16%)	Moderate (imprecise)	Cannabis probably increases the proportion of patients experiencing dizziness at 1-2 months
		RD +8% (4% to 12%)			
		RR 2.10 (1.56 to 2.60)			
3+m F/U (7 RCTs, 1595 pts)	3 - 4	63 (9%)	173 (42%)	Moderate (indirectness*)	Cannabis probably results in a substantial increase in the proportion of patients experiencing dizziness at 3-4 months
		RD +33% (21% to 50%)			
		RR 4.64 (3.31 to 6.51)			

Oral cannabis vs. placebo (adverse events)

Event (#RCTs, #pts)	Follow-up (months)	Treatment Effects		Certainty (GRADE)	Lay Summary
		placebo	cannabis		
Impaired attention (7 RCTs, 895 pts)	1 - 4	4 (1%)	25 (4%)	Moderate (imprecise)	Cannabis probably results in a very small increase in the proportion of patients experiencing impaired attention
		RD +3% (1% to 8%)			
		RR 4.04 (1.67 to 9.74)			
Diarrhea (7 RCTs, 2005 pts)	1 - 4	30 (4%)	119 (8%)	Moderate (imprecise)	Cannabis probably results in a very small increase in the proportion of patients experiencing diarrhea
		RD +4% (2% to 8%)			
		RR 2.19 (1.49 to 3.22)			
Nausea (14 RCTs, 2877 pts)	1 - 4	208 (8%)	213 (13%)	Moderate (imprecise)	Cannabis probably results in a very small increase in the proportion of patients experiencing nausea
		RD +5% (2% to 8%)			
		RR 1.59 (1.28 to 1.99)			

* 1 RCT of topical cannabis reported “no adverse events”

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Systematic review of observational studies

Event (# studies, #pts)	Follow-up (months)	Risk Difference or Prevalence	Certainty (GRADE)	Lay Summary
Cannabis dependence (n=3, 1824 pts)	3	prevalence: 5% (95%CI 0% to 20%)	Very Low	We are very uncertain regarding the prevalence of dependence or effect of cannabis on motor vehicle accidents and falls
Road traffic accident causing injury (n=1, 431 pts)	12	RD 14 more/100,000 (95%CI 6 fewer to 523 more)	Very Low	
Falls (n=1, 431 pts)	12	RD 0 more/1,000 (16 fewer to 56 more)	Very Low	
Suicide (n=1, 431 pts)	12	RD: 3 fewer/1,000 (5 fewer to 36 more)	Very Low	We are very uncertain regarding the prevalence of suicidal thoughts, or the effect of cannabis on suicide
Suicidal thoughts (n=3, 3066 pts)	12	prevalence: 0.2% (0% to 0.4%)	Very Low	

cmajOPEN
Research

Cannabis use and driving-related performance in young recreational users: a within-subject randomized clinical trial

Tatiana Ogourtsova PhD OT(c), Maja Kalaba MPH, Isabelle Gelinas PhD OT(c), Nicol Korner-Bitensky PhD OT(c), Mark A. Ware MBBS MSc

- Participants completed tests in the no-cannabis state and at 1, 3 and 5 hours after inhalation of a standard 100mg dose of cannabis.
- Cannabis use showed no effect on simple driving-related tasks, but there was significant impairment on complex tasks, especially when these were novel.
- These effects, along with lower self-perceived driving ability and safety, lasted up to 5 hours after use.

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To whom the recommendation applies

- No trial eligible for our systematic review explored the effect of inhaled forms of medical cannabis, or enrolled patients involved in palliative care.
  - Our recommendation does not apply to smoked or vaporized forms of cannabis, cannabis provided for recreational purposes, or patients receiving end-of-life care.

- Trials eligible for our reviews largely excluded chronic pain patients with concurrent mental illness, or those receiving disability benefits; the generalizability of our recommendations to these populations is therefore uncertain.

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GRADE

Strong recommendations

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Final recommendation

PRACTICE

For numbered affiliations see end of article.
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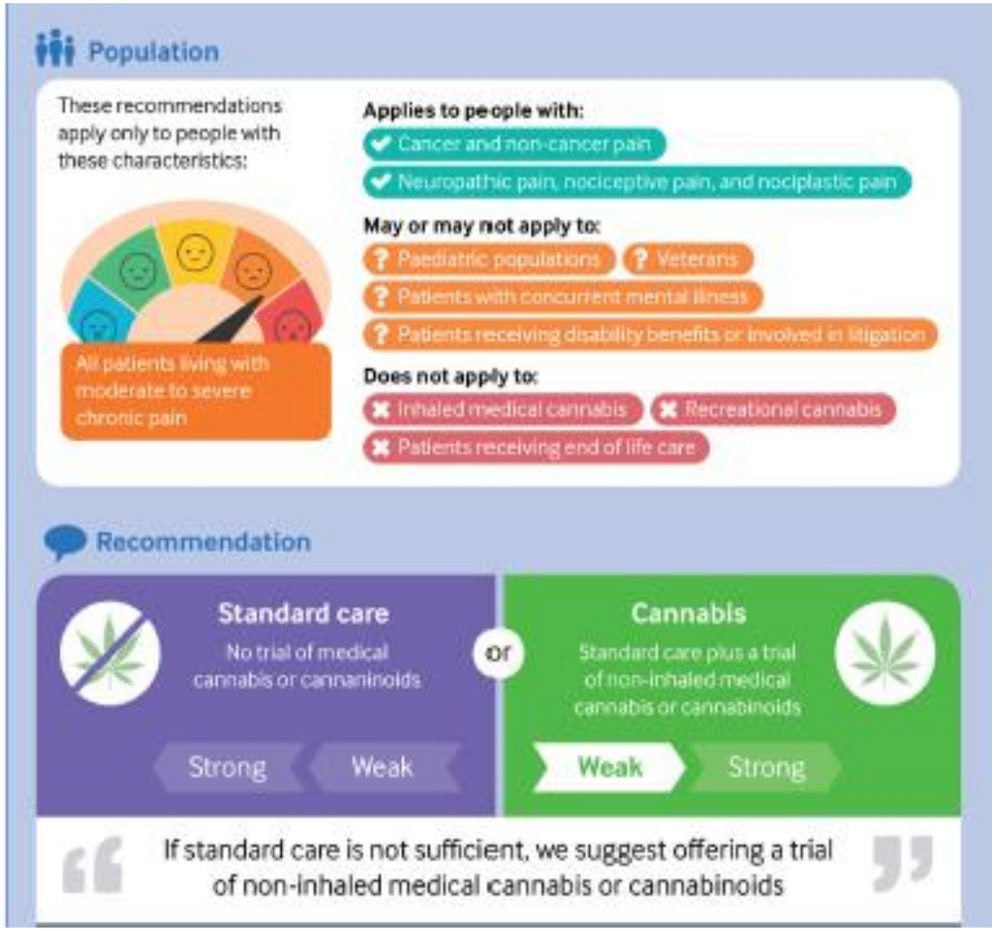
Additional material is published online only. To view please visit the journal online

Cite this as: *BMJ* 2021;374:n2040
http://dx.doi.org/10.1136/bmj.n2040

RAPID RECOMMENDATIONS

Medical cannabis or cannabinoids for chronic pain: a clinical practice guideline

Jason W Busse, [1,2,3,4] Patrick Vankrunkelsven, [5,6] Linan Zeng, [2,7] Anja Fog Heen, [8] Arnaud Merglen, [9] Fiona Campbell, [10] Lars Petter, [11] Bert Aertgeerts, [12,13] Rachelle Buchbinder, [14,15] Matteo Coen, [16,17] David Juurlink, [18,19] Caroline Samer, [20,21] Reed A C Siemieniuk, [2] Nimisha Kumar, [22] Lynn Cooper, [23] John Brown, [4] Lyubov Lytvyn, [2] Dena Zeraatkar, [2,24] Li Wang, [2,3] Gordon H Guyatt, [2] Per O Vandvik, [8] Thomas Agoritsas[2,25]



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More comprehensive guidelines are underway

- **Recent funding by Health Canada has facilitated more comprehensive guideline development, including:**
  - Updating of all prior evidence syntheses
  - Benefits and harms of inhaled forms of cannabis
  - Relative effectiveness of medical cannabis vs. opioids
  - Impact of cannabis on driving
  - Guidance of cannabis tapering
  - Evidence on risk for developing cannabis use disorder
  - Primary study of patients values and preferences regarding cannabis for chronic pain

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How can medical cannabis be accessed?

What are the steps for accessing medical cannabis?

1. A **medical document** (prescription) is written by an MD or NP and is sent to a **Health Canada-regulated License Holder** (your pharmacy for medical cannabis) by secure fax or physical mail.

2. You must fill out a **registration document for each License Holder** you order from online or by hand.

3. After your registration document is **approved** by the License Holder, **you can then place an order online or over the phone**.

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Accessing medical cannabis

- **Patients authorized by their healthcare provider may access cannabis for medical purposes by:**
  - buying directly from a federally licensed seller
  - registering with Health Canada to produce a limited amount of cannabis for their own medical purposes
  - designating someone to produce it for them

https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/medical-use-cannabis.html

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What is the Cannabis Act, why is it up for review, and how will its review affect medical cannabis users?

The Cannabis Act

- **The Cannabis Act has two objectives:**
  1. Aims to protect the health and safety of Canadians while adapting and responding to the ongoing and emerging needs of Canadians.
  2. Provides for the establishment of a competitive legal industry to displace the illicit market.
- **A review of the Act has recently been announced, whose goal is to ensure that the Act adapts to the current situation and continues to meet Canadians needs and expectations.**

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What resources are available to learn more about medical cannabis?

- **Most physicians were reluctant to authorize cannabis due to:**
  - **lack of knowledge,**
    - There is no formal training in medical school about medical cannabis
    - Most expressed interest in continuing medical education on cannabis
  - **concerns about limited evidence,**
    - Conflicting guidelines
  - **potential harms**
    - Increased risk for older patients (e.g., falls)
    - Drug interactions with cannabis: There are 392 drugs known to interact with cannabis, 27 are major and 365 are moderate:

    https://www.drugs.com/drug-interactions/cannabis.html

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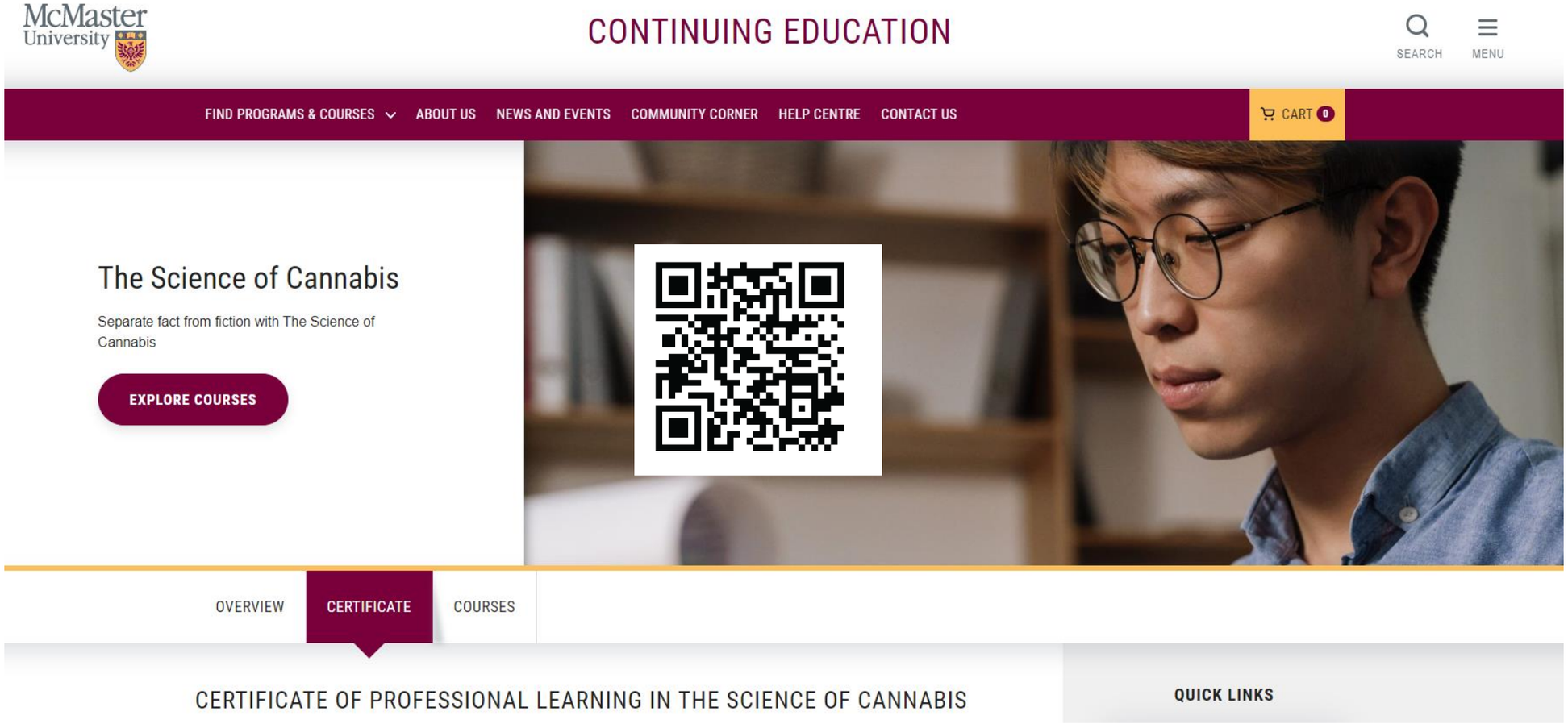
Michael G. DeGroote

CENTRE FOR MEDICINAL CANNABIS RESEARCH

cannabisresearch.mcmaster.ca

https://cannabisresearch.mcmaster.ca/news/newsletter-sign-up

Curating the Evidence Base



https://continuing.mcmaster.ca/programs/health-social-services/the-science-of-cannabis/#tab-content-certificate

Medical Cannabis Learning Hub available at arthritis.ca

- **Learn more about:**
  - CBD & THC
  - Risks of cannabis use
  - Accessing and using medical cannabis
  - Current research

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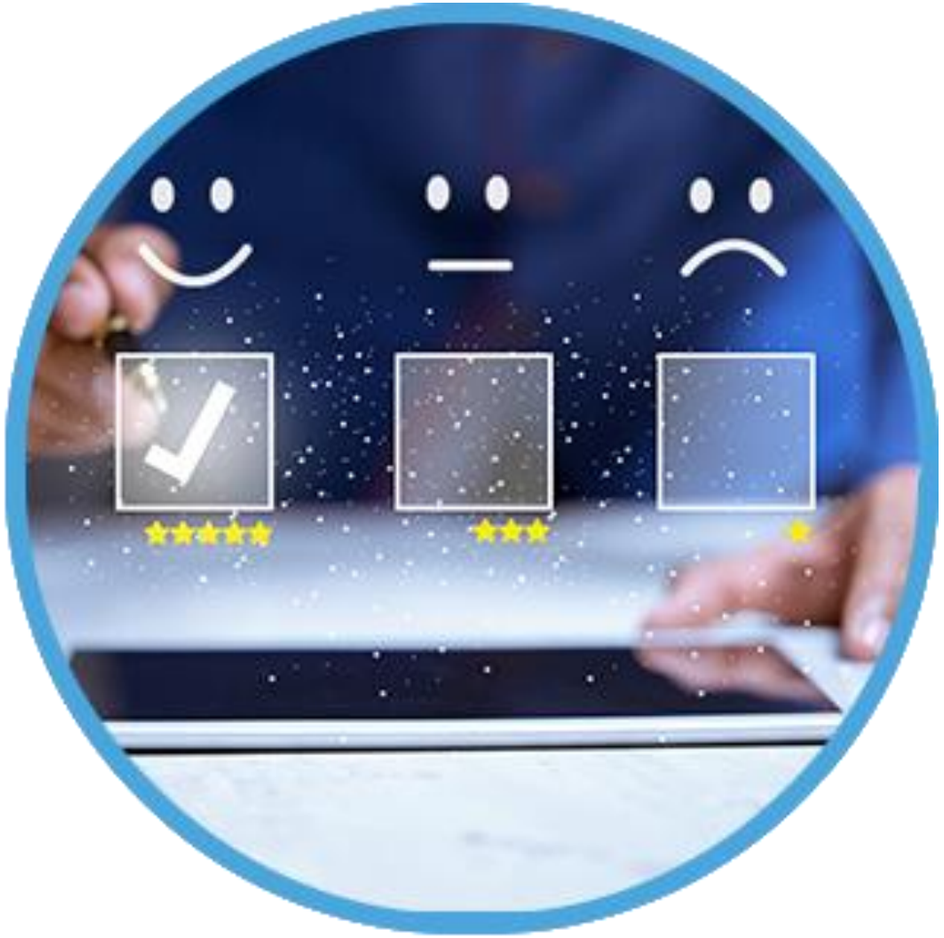
Any final thoughts or recommendations?

Questions

Tell us what you think…



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