Is there a role for marijuana in medical practice?

**YES**

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Crude preparations of herbal cannabis have been used for thousands of years to treat many symptoms, including pain, spasms, and nausea. Preparations historically included extracts of roots, leaves, and flowering heads but were not commercially standardized or characterized. Modern pharmacology has identified the principal psychoactive ingredient of cannabis as delta-9-tetrahydrocannabinol; specific cannabinoid receptors have been identified in the central and peripheral nervous system as well as in immune cells, endothelial tissue, and other visceral organs. Animal studies have confirmed that many of the effects of cannabis in human beings have solid neurophysiologic bases, particularly with respect to pain control. The cannabinoid system is, therefore, a major target for drug development.

**History of medical cannabis policy in Canada**

In 1999 the Court of Appeal for Ontario ruled that it was unconstitutional to enforce the rule of law with respect to cannabis. Since 2001, the Marihuana Medical Access Regulations (MMAR) have made cannabis possession legal for authorized patients in Canada. Since July 2005 the streamlined MMAR application requires that physicians sign a form confirming the diagnosis, the symptoms, the fact that prior treatments have been tried or considered, that the use of cannabis has been discussed, and that cannabis is not an approved drug.

There are 2 main categories of complexes recognized under the MMAR: those requiring approval from family physicians and those requiring approval from both family physicians and specialists. For the second category, family physicians must discuss the case with a specialist; whose name and the date of consultation, but not signature, are required. Amending this process appears to have increased the number of applications. As of September 2006, 1492 persons were authorized to possess medical marijuana and 917 physicians had supported applications under this program.

Herbal cannabis, cultivated by Prairie Plant Systems Inc under licence to Health Canada, is distributed to authorized patients for $5/g. This herbal cannabis is cultivated under controlled conditions, is free of contaminants, and is irradiated to destroy pathogenic microorganisms. It is delivered as a milled herb.

**NO**

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In its Marihuana Medical Access Regulations, Health Canada authorizes physicians to prescribe dried cannabis, an unproven and potentially dangerous substance, under the guise of medical treatment. The program is intended to help patients with serious illnesses, such as HIV infection and cancer, but severe arthritis is also listed as an indication. Surveys confirm that chronic pain and arthritis are common reasons for medical cannabis use. As analgesics, however, pharmaceutical cannabis products are weaker and less well tolerated than opioids. While cannabis users testify to its therapeutic benefits, they also commonly report pleasant psychoactive effects that are easily confused with direct analgesia.

**Safer alternatives available**

The main active ingredient in marijuana is delta-9-tetrahydrocannabinol (THC), but both an oral THC and a buccal spray of THC and cannabidiol are available and are far safer than smoking dried cannabis. Cannabis smoke contains many of the same carcinogens as tobacco, and case-control studies suggest that cannabis smokers are at increased risk for prostate cancer and for head and neck cancer. Cannabis smokers are also at increased risk for bronchitis. Even if cannabis were vaporized and inhaled rather than smoked, the rapid delivery of high THC doses increases the risk of psychomotor impairment and addiction.

**Risks associated with use**

While many people smoke cannabis occasionally without obvious harm, regular cannabis smoking can be dangerous. Cannabis use is a major risk factor for psychosis and schizophrenia, aggravates psychotic symptoms, and might have long-term cognitive effects. Adolescents who smoke cannabis have higher rates of other substance use, school failure, criminal activity, and suicidal thoughts. Cannabis impairs driving ability and so is a risk factor for motor vehicle accidents. In utero cannabis exposure is associated with attention deficit disorders, behavioural problems, and poor academic performance in childhood.

Health Canada states that “the average daily amount approved for over 90% of patients…is 5 grams or less per day (5 to 10 joints).” Based on Health Canada’s
with 10 mm particles and moisture content of 15%. The potency is standardized at 12% ±2.0% delta-9-tetrahydrocannabinol.  

Cannabis and family physicians

What do family physicians need to know about the MMAR? First, there is a legal means by which patients can obtain quality-controlled cannabis for medical use. Second, physicians do not “prescribe” cannabis under this approach but instead support a patient’s application for authorization to possess the drug. This process reduces the risk of prosecution for patients whose cannabis use is part of a therapeutic approach. Third, medical cannabis use can be documented and monitored as part of standard care.

Prescribed cannabinoids offer an alternative to herbal cannabis and should be considered in all cases where cannabis is discussed. Inhaled cannabinoids have the potential pharmacokinetic advantages of bypassing the first-pass effect of hepatic metabolism, of rapid onset of action, and of easy titration. Risks include irritation of the upper airways, cognitive effects of central cannabinoid activity, and stimulation of reward mechanisms.

Considerations

Advocates for medical marijuana are often involved in political action to change policy. For every placard-carrying marijuana activist, however, many more silent sufferers have turned to cannabis where all else has failed. These patients might be afraid to discuss cannabis with their doctor and might not be aware that they have other legal and safe options. Physicians will formulate their own moral and scientific positions based on available evidence. Cannabis has not yet been formally evaluated in clinical trials, but safety and efficacy studies are under way and further studies should be designed and conducted. Without such trials it is premature to consider prescribing cannabis, but based on what is known of a drug that has been around for thousands of years, based on the safety data generated from 2 generations of recreational users, and based on the mechanism of action of cannabinoids, it is reasonable for family physicians to become more familiar with cannabis. Its undignified position as a drug of abuse with no known medical value deserves to be reconsidered.

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Legal complications

Physicians are relatively safe from legal sanctions in cases of adverse drug reactions as long as they have exercised due precaution. This standard, however, will not protect physicians who prescribe an unapproved drug, such as marijuana. The Canadian Medical Protective Association waiver purportedly absolves physicians of legal responsibility for untoward events related to cannabis prescribing, but it cannot protect physicians from legal action brought by third-party victims.

Society pays

From a public health perspective, the Health Canada program is fundamentally unjust and harmful. The program diverts resources to an unproven substance of uncertain efficacy with abuse liability, contributing to the public’s perception of cannabis as a harmless recreational product with therapeutic benefits.

Forty-seven percent of 18- to 19-year-olds in Canada have smoked cannabis in the past year, and 5% of Canadians report at least 1 concern related to cannabis. Six thousand patients were treated for cannabis dependence in Ontario in 2000, which likely represents a small fraction of those who need help. As one author stated, “…the costs to society are continuing to mount from past neglect of this continuing health problem.”[11]

If legislators wish to decriminalize cannabis possession, they should do so without disguising it as medical therapy. Smoked medical marijuana is unnecessary and unsafe, especially in the doses allowed by Health Canada, and it distracts physicians and the public from the widespread harm caused by cannabis use and dependence.

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References

KEY POINTS
• There is solid scientific rationale for therapeutic use of cannabis.
• Pharmaceutical cannabinoid preparations should always be considered.
• Mechanisms exist in Canada for herbal cannabis to be used legally.
• Ongoing research and education regarding cannabis is needed.

I t is now generally recognised that one of the most likely sources of wound infection is the hands of the surgeon and his assistants. It is only by carefully studying to avoid all contact with infective matter that the hands can be kept surgically pure, and that this source of wound infection can be reduced to a minimum. The risk of infection from this source has further been greatly reduced by the systematic use of rubber gloves by house-surgeons, dressers, and nurses. The habitual use of gloves has also been adopted by the great majority of surgeons; the minority, who find they are handicapped by wearing gloves as a routine measure, are obliged to do so when operating in infective cases or dressing infected wounds, and in making rectal and vaginal examinations.

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References

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References

KEY POINTS
• Cannabis use has been associated with multiple medical problems, including bronchitis, psychosis, and cognitive impairment.
• The dose of dried cannabis recommended by Health Canada far exceeds the recommended doses of approved products that contain THC and thereby puts patients at risk for dependence and psycho-motor impairment.
• There is no good evidence for medical marijuana, and physicians might be liable for prescribing an unapproved and unproven product.