First, do no harm: The role of cannabis education in response to the opioid crisis

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Abstract

Recent years have seen unprecedented levels of accidental opioid overdose–related deaths in British Columbia. In response, the College of Physicians and Surgeons released guidelines to reduce over–prescribing of opioids. Unfortunately, many Canadians continue to suffer with chronic pain, and offering suitable treatment alternatives is a priority. Since 1999, the courts have recognized patients' rights to use cannabis for therapeutic purposes (CTP). Recently, the government tasked physicians as gatekeepers to CTP. However, there is a need for greater educational opportunities on CTP for clinicians engaged in pain management to ensure that lack of knowledge is not a barrier to accessing a potentially effective therapy with a safety profile that is superior to opioids.

One in five Canadians live with chronic pain (CP).[1] It is associated with an increased risk of co–morbid psychological illnesses and mortality, as well as decreased quality of life.[2,3] Additionally, the costs incurred from CP are staggering. In 2010, it was estimated that CP costs the Canadian healthcare system more than $6 billion dollars annually. Productivity costs related to job loss and sick days were estimated at $37 billion.[4]

In the 1990s, opioids emerged as a primary treatment for CP, due in part to increased marketing efforts by pharmaceutical manufacturers of novel opioid analgesics such as oxycodone (OxyContin) that purportedly improved the "efficiency and quality of pain management… without unacceptable side–effects".[5] These campaigns contributed to significant increases in the prescription of opioids; for example, oxycodone prescriptions increased by 850% between 1991 and 2007.[6] OxyContin was pulled from the market in 2012 and was replaced with a non-crushable and non–chewable capsule called OxyNEO in order to decrease misuse. The discontinuation of OxyContin created a void for dependent users, which was subsequently filled by an influx of illicit opioids and cheap generic opioids.[5] In April 2016, Dr. Perry Kendall, British Columbia's Provincial Medical Health Officer, declared a public health emergency in response to the increasing number of overdoses occurring in British Columbia. The majority of these overdoses were the direct result of opioid use.[7]

Although they are widely prescribed for pain relief, opioid therapies are controversial as they pose a risk for dependence and potential for fatal overdose due to tolerance and drug interaction.[8,9] Despite the risks, opioids continue to be prescribed to Canadians at a high rate. In 2015, physicians wrote 53 opioid prescriptions for every 100 people in Canada.[10] As such, Canada ranks second in the rate of opioid prescription of all developed countries.[11] In British Columbia, prescription of strong opioids saw an increase of 50% from 2005 to 2011, and in 2016, the College of Physicians and Surgeons of British Columbia released standards and guidelines in an attempt to reduce over-prescribing of opioids.[12] The standards state that non–pharmacologic and non–opioid analgesics (e.g., nonsteroidal anti–inflammatory drugs) are preferred for the treatment of chronic non–cancer pain and that the potential benefit of long-term opioid treatment is modest with significant risks. Nevertheless, opioids still play an important role in pain management in certain patient populations. For example, the Fraser Health Authority recommends the use of opioids in patients with advanced illnesses and in patients with cancer and non–cancer debilitating pain that is refractory to non–opioid medications.[13]

For some patients, cannabis may be a suitable alternative to opioid analgesics. Cannabis is a complex therapeutic agent that possesses psychoactive, analgesic, and anxiolytic capabilities. It has been posited that cannabis not only modulates pain signaling, but may also improve psychological aspects implicated in pain perception, such as mood and sleep.[14,15] In contrast to opioid analgesics, cannabis has a relatively low risk of dependence and no risk of fatal overdose.[16] Many patients report using cannabis effectively to treat their pain, and 30% of patients report substituting opioid medication with cannabis.[17,18] Findings from a recent review provide evidence of the efficacy of cannabis for pain. Of 38 published randomized clinical trials, 71% concluded that cannabinoids had empirically demonstrable and significant pain relieving effects.[19] Furthermore, a 2017 report produced by the National Academies of Sciences, Engineering, and Medicine (NASEM) stated that there is conclusive evidence that CTP is an effective treatment for chronic pain. The NASEM report also concluded that using cannabis is associated with specific harms, including worsening respiratory function, acute cognitive impairment, and risk of developing a substance use disorder.[20]

Since 1999, the Canadian courts have recognized the rights of patients to access CTP under Health Canada's Marihuana Medical Access Program.[21] The government program has gone through several iterations and is now the Access to Cannabis for Medical Purposes Regulations, which authorizes physicians to provide medical documentation allowing patients to access CTP from government-authorized producers of cannabis. Currently, there are well over 100,000 CTP patients registered in the government program, and this number is expected to increase to 400,000 over the next few years.[21,22] The incoming Cannabis Act will likely increase access to CTP, as patients who formerly experienced barriers finding a physician to authorize CTP will be able access cannabis outside of the medical system.

However, despite its apparent promise as an analgesic, the College of Family Physicians of Canada (CFPC) guidelines recommend CTP as a last resort in light of a paucity of research on the effectiveness and long-term consequences of using cannabis to treat pain, as well as concerns over misuse.[23] Given the current opioid crisis, the good

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safety profile of cannabis, and the dozens of studies reporting cannabis as effective for pain relief, this stance by the CFPC seems unduly conservative. Indeed, although physicians are integral to the process of patients acquiring CTP, physicians may perceive themselves as lacking the necessary knowledge about benefits, harms, indications, and appropriate treatment plans pertaining to CTP. Researchers from McGill University recently conducted a national survey aimed at determining the educational needs pertaining to CTP among physicians. They concluded that there was a clear need for education on the use of CTP, proper dosage, and the creation of effective treatment plans. In addition, it was concluded that the inclusion of CTP in physician practices would likely increase with additional education. Specifically, survey results called for peer–reviewed summaries with a preference for online education.[24] Past research suggests that continuing medical education interventions directed in a family practice setting are effective and directly influence patient outcomes.[25] Finally, increasing CTP educational opportunities in medical school could play an important role in producing future cohorts of physicians who are more comfortable with CTP and its value as treatment option in CP.

Many questions regarding CTP still need to be answered, but the therapeutic potential of cannabis in the treatment of CP and other conditions is encouraging. As the number of individuals using cannabis increases, governing bodies must update their recommendations with emerging research findings. Specifically, it is imperative that barriers to researching CTP are altered so that it can be studied more effectively; this can be achieved by developing more diverse funding networks, reclassifying cannabis, and improving standards of research methodology pertaining to cannabis.[20] Additionally, greater educational opportunities pertaining to CTP should be made available to improve standard–of–care and to provide greater treatment options for patients. Cannabis must be subject to the same risk–benefit analysis as other medications, and an important aspect of that is appropriate training for the healthcare professionals tasked with authorizing its use.

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