

Research paper

Coverage of medical cannabis by Canadian news media: Ethics, access, and policy



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ABSTRACT

Background: The use of recreational cannabis by adults was legalized in Canada in 2018 (The Cannabis Act, 17 October 2018). This change in drug policy indirectly opened the doors to broader uses, including those for health-related conditions. As a first step towards understanding ethical, legal, and social shifts on this landscape, we examined messaging surrounding medical cannabis and health in Canadian news media before and after legalization.

Methods: We retrieved news articles about medical cannabis and health from Canadian sources (2010–2020). Deductive and inductive content analytic approaches were applied to code eligible articles for both *a priori* ethical, legal, social, and issues, and emergent themes. Wilcoxon-Mann-Whitney U tests were used to test for thematic changes pre- and post-legalization.

Results: Two hundred and sixteen (216) articles met inclusion criteria. Analysis yielded three themes and eight subthemes, comprising 4931 coded references. The *a priori* theme of Ethical, Legal and Social Issues (access, benefits/risks of medical cannabis, public engagement, and conflicts of interest) dominated news media coverage across the decade (coded in 99% of articles). The emergent theme of Medical Applications (therapeutic use of cannabis, consumption considerations, comparisons to other drug and treatment options) was coded in 86% of articles; Resource Issues (research and education) in 50%. We found little discourse on ethics issues specific to exceptional populations. Coverage on aspects of access declined significantly post-legalization.

Conclusion: Capturing the push of Canadian news coverage of medical cannabis is a powerful means of understanding how public opinions on the subject are shaped and then, by extension, inform public policy for well-being and healthcare. Continued examination of these issues, public consultation, engagement with diverse populations such as people with disabilities and neurologic and mental health conditions, and integration of diverse cultural views into the policy discourse are critical steps for future research and action.

Introduction

Cannabis has long been used for both medicinal and recreational purposes, but prohibitions against it have also historically existed in many jurisdictions across the world. In recent years, including Canada beginning in 2001, court cases challenging the constitutionality of cannabis prohibitions and higher court decisions have forced governments to provide legal exceptions and protections for medicinal use (Cox, 2018, 2021; Fischer, Kuganesan, & Room, 2015; Martin, Hall, Fitzcharles, Borgelt, & Crippa, 2020). Legalization of adult (over 18) use of recreational cannabis under the Canadian Cannabis Act, implemented in October 2018, makes Canada one of the only countries in the world in which both medical and recreational possession and use are pro-

tected (Cox, 2021; Martin et al., 2020). This helps to poise Canada as a leader in cannabis regulation, research and use. Canadian regulatory schemes can be used as frameworks for other countries moving toward decriminalization or legalization of recreational or medical cannabis (Cox, 2018, 2021; Martin et al., 2020). Given the nature of Canada's national health system, and major related investments from federal funding in the arena of health research, cannabis is being increasingly studied in many contexts (CIHR's Cannabis Initiative, 2018; Gibbard, Mount, Rassekh, & Siden, 2021; Ware, 2018). With growing public awareness of potential therapeutic benefits of cannabis, use is becoming more widespread in Canada (Cox, 2021; Ko, Bober, Mindra, & Moreau, 2016; Rotermann, 2019).

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While The Cannabis Act (17 October 2018) has increased accessibility, there remain important ethical, legal and social concerns about safe use, research obligations, and protecting exceptional populations, among others (Cairns & Kelly, 2017; Cox, 2018, 2021; Gagnon, Gudiño, Guta, & Strike, 2020; Gibbard et al., 2021; Martin et al., 2020; Rieder, 2020; Ware, 2018). For example, federal, provincial and local regulations for adult use of recreational cannabis are still evolving, creating uncertainty within the public about appropriate, legal use for both recreational and medical purposes (Cox, 2018, 2021; Gagnon et al., 2020; Gibbard et al., 2021; Martin et al., 2020). While there has been an increase in funding, researchers can still face barriers to studying medical applications of cannabis, such as lack of access to standardized products and complex study design considerations (CIHR's Cannabis Initiative, 2018; National Academies of Sciences Engineering & Medicine et al., 2017; Ware, 2018). Despite increasing social acceptance of cannabis, stigmatization and lack of knowledge can create obstacles for medical use, especially in clinical settings (Balneaves, Alraja, Ziemianski, McCuaig, & Ware, 2018; Elliott et al., 2020; Gagnon et al., 2020; Gibbard et al., 2021; Valleriani et al., 2020).

A significant contribution to ongoing debates about cannabis is media coverage because it has been shown to have a profound impact on public attitudes, beliefs, and behaviours, including making decisions about drug use and healthcare, and by extension, public policy (Cummings & Proctor, 2014; Lewis, Broitman, & Sznitman, 2015; Malik, McFadden, Elharake, & Omer, 2020; Munjal, Arakelyan, McDonald, & Illes, 2020; Suppli et al., 2018; Vidanapathirana, Abramson, Forbes, & Fairley, 2005; Young et al., 2018). By and large, cannabis has been portrayed negatively in the media. Reports fraught with misinformation and propaganda from the Reefer Madness era in the 1930s and later, the War on Drugs, sought to entrench the illicit status of cannabis and its purported association with deviant and criminal behavior (Griffin, Fritsch, Woodward, & Mohn, 2013; Stringer & Maggard, 2016). While these movements were prominent in the USA, they also had a lasting effect on Canadian drug policy and the position of cannabis therein as a controlled substance (Haines-Saah et al., 2014). North American media reports have also highlighted practical implications of potential decriminalization or legalization of cannabis such as those for health, youth, housing and workplaces, rather than the criminalization of use and users (Gagnon et al., 2020; Griffin et al., 2013; Haines-Saah et al., 2014; McGinty et al., 2016; Park & Holody, 2018; Stringer & Maggard, 2016).

The few studies that have investigated the framing of specifically medical cannabis by traditional news media reveal different perspectives (Golan, 2010; Lewis et al., 2015; Sznitman & Lewis, 2015; Zarhin, 2020). For example, in reporting from the USA, medical cannabis was portrayed asymmetrically: in editorials, discussions focused on legal, political and social considerations of legalizing and decriminalizing both medical and recreational cannabis; whereas in opinion-editorials, the focus on medical implications and benefits was much more sustained (Golan, 2010). In Israel, another country from which media analysis of medical cannabis has come, reporting focused more on policy and regulatory issues. These included the implications of medicalizing cannabis, and patient perspectives on the beneficial effects of relieving suffering (Lewis et al., 2015; Sznitman & Lewis, 2015; Zarhin, 2020).

To our knowledge, a systematic investigation of the nature of long-term coverage on medical cannabis and health in traditional Canadian news media has not previously been conducted. We applied pragmatic framework (Miller, Fins, & Bacchetta, 1996; Pavarini & Singh, 2018; Racine, 2008, 2011) with the view that empirical evidence will most effectively lead to solution-oriented action to fill this gap.

Methods

We conducted a media content analysis of freely available (i.e., not behind a subscription paywall) news information using multiple

searchable sources. We searched the Dow Jones Factiva, Inc © (2020) database, an online archive of news and business information housing media sources from around the world (Cabrera, Bittlinger, Lou, Müller, & Illes, 2018; Dow Jones & Co, 2013; Haines-Saah et al., 2014; Munjal et al., 2020). Factiva has comprehensive coverage of Canadian news, an exceptional search interface and tunable parameters, and offers access to downloadable full-text articles (Cabrera et al., 2018; Dow Jones & Co, 2013; Haines-Saah et al., 2014; Marcon, Master, Ravitsky, & Caulfield, 2019; Munjal et al., 2020; Murdoch, Marcon, Downie, & Caulfield, 2019). We included both high and low circulation news sources.

To complement the Factiva search that did not cover Atlantic Canada or the Northern Territories, we conducted several independent manual searches on Google using “Atlantic Canada newspapers” or “North* Canada newspapers.” We used the first page of results from each search (Lewis et al., 2015) to identify additional news archives (Supplement Table 1).

Using Factiva and the additional news archives, we searched for English-language articles from Canadian national, provincial and regional news sources published between January 2010 and December 2020. This decade of time encompasses the most recent federal cannabis legislative changes in Canada, including the Marihuana for Medical Purposes Regulations (MMPR, 2013) and The Cannabis Act (2018) (Cox, 2018, 2021; Haines-Saah et al., 2014).

To ensure precision of returns, we applied a series of free text and subject search parameters: 1) at least three mentions of medical cannabis or medical marijuana, or more colloquial terms such as pot, weed or grass; 2) one mention of these terms occurring the headline or lead paragraphs as indexed by Factiva or identified manually; and, 3) at least one mention of a health-related key term within three words of cannabis, marijuana, pot, weed or grass (Dow Jones & Co, 2013; Golan, 2010; Lewis et al., 2015; LexisNexis, 2017). We further ensured specificity to medical cannabis and medical marijuana by excluding repeated mentions of non-medical cannabis or non-medical marijuana (Golan, 2010; Haines-Saah et al., 2014; Lewis et al., 2015). To allow for differing terminology, we used the termination character (*). Health-related key terms included treat*, condition*, patient*, relie*, disease*, medicat*, therap*, perscrip*, aliev*, symptom*, cancer, neuro*, psych*. Articles also had to be related to health issues. Dow Jones Intelligence Indexing™ uses a taxonomy structured around corporate, economic, market, sports and general and political news to classify articles by subject (Dow Jones & Co, 2013). In Factiva, we selected the Health subject tag from the General and Political News taxonomy, and excluded tags for corporate, economic, market and sports subjects (Dow Jones & Co, 2013). We manually assessed the focus of articles from the additional archives by reading the headline and body text.

All articles were made software-ready for management and qualitative analysis in NVivo (QSR-12)©. We collected the following features of each article: article headline (title), date of publication, source of publication (i.e., Vancouver Sun), province of publication (i.e., British Columbia), and population of focus (i.e., general population). We determined population of focus from the title and context of the article.

Analysis followed a deductive and inductive coding procedure. We built the initial codebook around ethical, legal and social issues drawing on previous work, and used a hierarchy structure of themes, sub-themes and factors, whereby subthemes and factors allowed for detailed coding categorization under overarching themes (Cabrera et al., 2018; Golan, 2010; Haines-Saah et al., 2014; Lewis et al., 2015; Munjal et al., 2020; Sznitman & Lewis, 2015; Zarhin, 2020). We allowed for further refinement of *a priori* and emergent themes, subthemes and factors during the inductive coding phase. The unit of coding was a paragraph, and we employed a rich coding strategy to allow for the attribution of more than one unique thematic code per paragraph.

Two independent coders analyzed 20% of the articles ($n = 43/216$). Inter-coder reliability was calculated for each theme, subtheme and factor using Cohen's Kappa in NVivo (QSR-12)© (K statistic, unweighted)

(Benjamin, Lo, & Illes, 2016; Munjal et al., 2020; Sharpe, Di Pietro, & Illes, 2016). Discrepancies were discussed until consensus reached.

We calculated the percentage of articles as the number of articles per theme, subtheme or factor over the total number of articles. We calculated the percentage of coded references as the number of coded references per theme, subtheme or factor over the total number of references. The contribution of factors to overarching subthemes was calculated as the number of references per factor over the total number of references per subtheme. We used prominence of themes, subthemes and factors as proxies of importance.

We used Wilcoxon-Mann-Whitney *U* tests to examine differences in the percentage of coded references pre-to-post legalization of adult use of recreational cannabis (The Cannabis Act, 17 October 2018). We report select quotes from the media articles to enrich the quantitative data.

Results

The search resulted in 1064 articles, 475 of which were unique. The final, manually curated sample for analysis included 216 English-language news articles: 213 from Factiva; 3 from the additional manual searches. Cohens Kappa tests yielded *K* statistics in the range of 0.72–1.00, with an overall unweighted score of 0.90, assuring good reproducibility of the coding scheme for themes, subthemes, and factors (Fig. 1; Supplement Tables 2 and 3).

Analysis revealed an increasing number of news articles published from 2010 to 2016 and then a decline through 2017 to 2020 (Fig. 2). The highest number of published articles was from the province of Ontario (93/216 from 34 newspapers) and British Columbia (59/260 from

11 newspapers), which were obtained from national (i.e., Globe and Mail stories from Ontario, or British Columbia editions), provincial (i.e., Toronto Sun, Vancouver Sun) or regional (i.e., Kingston Whig Standard, Peace Arch News) newspapers. No articles from Atlantic Canada sources met inclusion criteria (see Supplement Table 4).

Ethical, legal and social issues

The *a priori* theme of Ethical, Legal and Social Issues received the most in-depth coverage, and appeared in nearly all Canadian news articles on medical cannabis and health (99% of articles [*n* = 214/216]; 67% of coded references [*n* = 3315/4931]). Access was the most frequently cited ethical, legal and social subtheme (96% of articles [*n* = 208/216; 55% of coded references [*n* = 2734/4931]), comprised primarily of references to gatekeeping, supply, rights and clinician authorization (Fig. 3).

Articles reporting on gatekeeping further consisted of references to court proceedings, and rulings (i.e., injunctions), policies, regulations or laws at the federal, provincial or local level that influence patient access to medical cannabis (83% of articles [*n* = 180/216]; 25% of coded references [*n* = 1219/4931]; 45% of access coded references [*n* = 1219/2734]) (Fig. 3). Gatekeeping was reported primarily as a structure that could both ensure and limit access through laws, regulations, and policies about product supply, use, possession, authorization and cost. Administration, abuse and approval of the federal medical cannabis program were also discussed, as were impacts of recreational cannabis and legalization on regulation of medical cannabis.

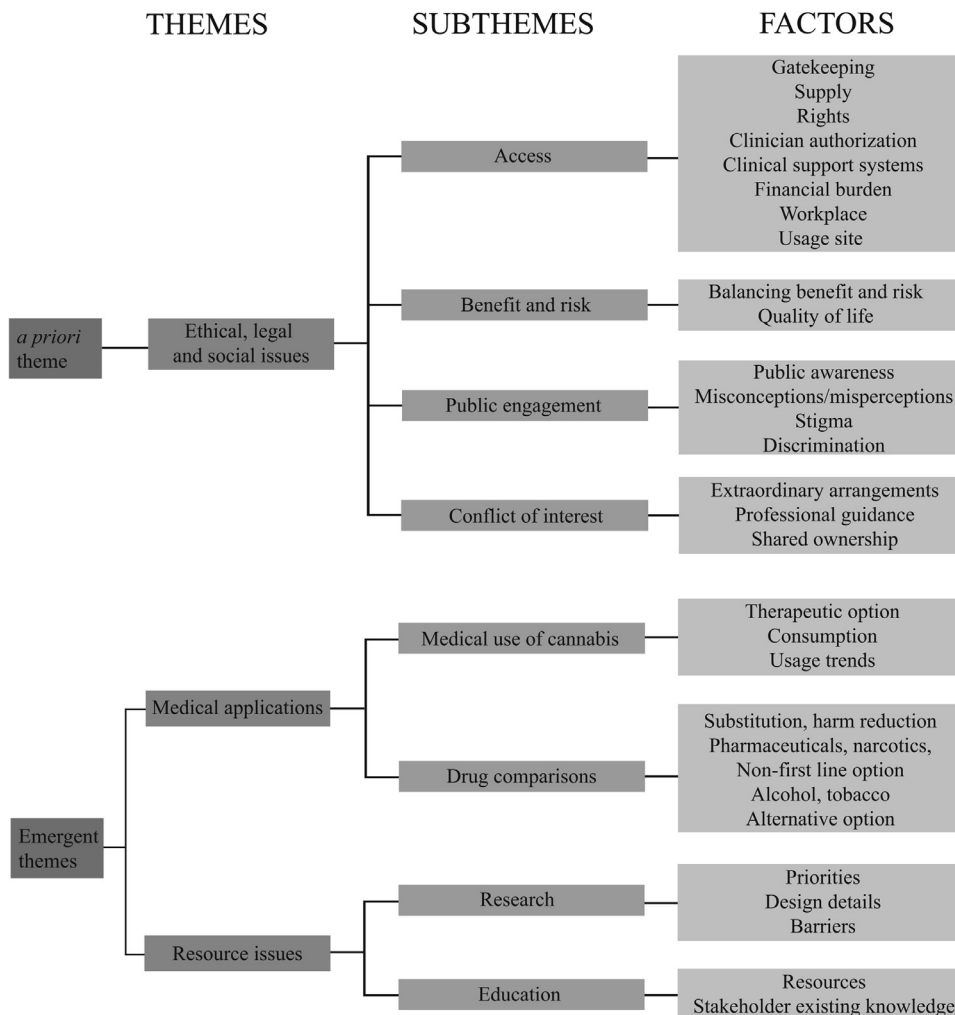


Fig. 1. Code category scheme for themes, subthemes and factors.

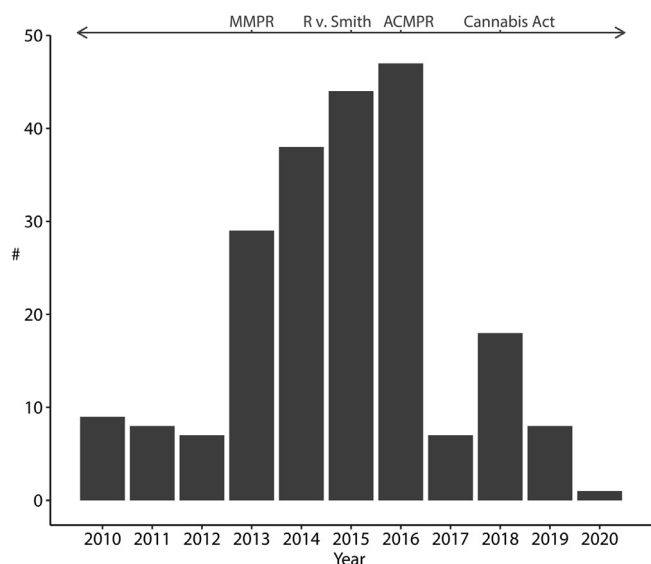


Fig. 2. Coverage of medical cannabis from January 1, 2010 to December 31, 2020 in Canadian news media. Timeline shows select Canadian legislative acts or proceedings. MMPR: Marihuana for Medical Purposes Regulations; ACMPR: Access to Cannabis for Medical Purposes Regulations.

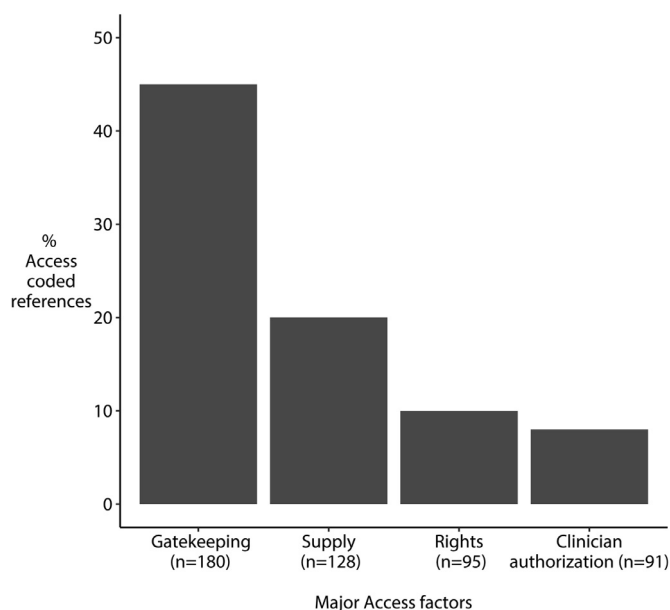


Fig. 3. Major Access factors by percentage of coverage of the overarching sub-theme. Minor Access factors accounting for less than 5% of total coded references are not shown.

“...with the recent Supreme Court decision, patients can possess extracts and derivatives such as oils and tinctures, but they are not able to purchase these from a licensed producer under the MMPR, at least not yet...Last Wednesday, however, Health Canada issued a Section 56 exemption under the Controlled Drugs and Substances Act, which allows [them] to sell cannabis oils and fresh cannabis buds in addition to dried cannabis to registered patients.”

The Globe and Mail, How Ottawa created the ‘wild west’ of medical marijuana, 2015

“New rules on medical marijuana will make it too expensive and too hard to purchase, Manitoba patients fear. Health Canada, mean-

while, says the rule changes will make purchasing medical marijuana safer and more efficient.”

Winnipeg Free Press, Shakeup in medical marijuana rankles - Patient bemoans loss of growing privileges, 2013

Under new federal regulations that came into effect April 1, responsibility for authorizing marijuana shifted from Health Canada officials to individual doctors.

The London Free Press, Doc oks pot prescriptions, 2014

A separate medical cannabis system must remain in place to protect patient access and proper treatment after recreational sales of the drug are legal, a local advocate argues.

Winnipeg Sun, Weed Worries; Merged medical marijuana system could leave patients vulnerable: Advocate, 2018

The supply of medical cannabis was discussed in over 50% of included articles (59% of articles [$n = 128/216$]; 11% of coded references [$n = 543/4931$]; 20% of access coded references [$n = 543/2734$]) (Fig. 3). Commonly cited suppliers included licensed producers, dispensaries or compassion clubs, or home or designated growers, with fewer mentions of buying medical cannabis from the street, or from alternative sources such as Health Canada or pharmacies.

Rights to access medical cannabis (44% of articles [$n = 95/216$]; 5% of coded references [$n = 261/4931$]; 10% of access coded references [$n = 261/2734$]) (Fig. 3) were discussed in terms of safety, choice to use or grow the product, privacy, and balancing patient rights with public rights.

Justice Robert Johnston [ruled that the medical marijuana access regulations were] unconstitutional [in restricting] medical marijuana patients to using dried cannabis alone. Johnston found that criminalizing a patient’s choice of smoking or eating his or her medication was an unwarranted infringement of security of the person rights guaranteed under Section 7 of the Constitution.

Victoria Times Colonist, Ottawa appealing medical marijuana ruling, 2014

Clinician authorization of medical cannabis was discussed in 91 articles (42% of articles [$n = 91/216$]; 5% of coded references [$n = 231/4931$]; 8% of access coded references [$n = 231/2734$]) (Fig. 3). Reluctance to authorize medical cannabis for moral or clinical reasons was a common factor:

“[Doctors] don’t all feel comfortable prescribing medical marijuana. That might be for moral reasons or, more likely... because they are new to the treatment options and don’t feel knowledgeable about it.”

Pelham News, Niagara’s first medical marijuana clinic opens, 2014

Four minor factors within access, clinical support systems, including specialized cannabis clinics and pharmacies, financial burden, workplace issues, and usage site issues, were cited infrequently, each occurring at less than 5% of total coded references.

Ethical issues of benefit and risk, public engagement, and conflict of interest were discussed in news articles with relatively less frequency compared to access. Benefit and risk were covered in (56% of articles [$n = 120/216$]; 6% of coded references [$n = 275/4931$]), focusing on balancing potential benefits of use against risks (34% of articles [$n = 73/216$]), such as potential for drug dependence, and negative impacts on cognition, lung and heart health, among others, and on quality of life (32% of articles [$n = 69/216$]), such as positive outcomes associated with a return to normal functioning (e.g., regaining mobility), and relief from suffering.

Issues of public engagement included views on medical cannabis, awareness, and stigmatization of and discrimination against medical cannabis or medical cannabis users (49% of articles [$n = 105/216$]; 5% of coded references [$n = 244/4931$]):

“I think that the stigma of the recreational use of cannabis and goal of “getting high” has coloured the view of both the public and the medical community on the use of cannabis for medicinal purposes.”

The Hamilton Spectator,

Pain-free with cannabis; Medical marijuana offers an addiction-free and natural alternative to opioids, 2018

“The doctor said that while there are still misperceptions surrounding the use of medical marijuana, its stigma has largely gone up in smoke because of better education and awareness among medical professionals as well as members of the public.”

Petrolia Topic, Stigma around medical pot going up in smoke, 2018

Six articles (3% of articles [$n = 6/216$]) reported on conflict of interests arising between healthcare providers and industry through extraordinary arrangements such as kickbacks (i.e., paying for patients) or other partnerships (i.e., patient outreach or research support), or through shared ownership.

Emergent themes

Medical applications

Medical cannabis was referenced for use as a primary or adjunct therapeutic option for a wide variety of ailments and symptoms (73% of articles [$n = 158/216$]; 15% of coded references [$n = 723/4931$]; 67% of medical use of cannabis coded references [$n = 723/1074$]), most notably for management of pain, seizure disorders, cancer treatments and post-traumatic stress disorder (PTSD) (Table 1).

Consumption of medical cannabis in different forms, strains, or concentrations (i.e., buds, oils, indica strains, high cannabidiol (CBD): low delta-9-tetrahydrocannabinol (THC)), via different administration methods (i.e., smoking, vaping, edibles) were covered in terms of their differing effects and use for specific conditions or symptoms in 101 articles (47% of articles [$n = 101/216$]; 6% of coded references [$n = 277/4931$]; 26% of medical use of cannabis coded references [$n = 278/1061$]):

“...Medical marijuana isn’t a cure for PTSD, but ...it helps with symptoms and quality of life and different strains can be used to target different symptoms.”

Calgary Sun, Vets fight PTSD with marijuana, 2016

An additional minor factor within the medical use of cannabis sub-theme included references to usage trends across Canada. A subset of articles compared using medical cannabis to other drugs, such as a potential substitution or harm reduction tool, or alternative treatment option (32% of articles [$n = 70/216$]) (Table 2):

Medical marijuana may be an effective substitute for prescription drugs or alcohol, just as methadone is used to treat heroin ad-

Table 1

Cited uses of medical cannabis in condition treatment or symptom management.

Therapeutic Use	Number of articles	Number of references
Pain	90	151
Seizure disorders	39	94
Cancer treatments	39	53
Post-traumatic stress disorder	22	45
Rheumatoid conditions	25	38
Multiple sclerosis	29	36
Mental health*	27	34

* Mental health includes use for management of symptoms of depression, anxiety and stress.

Table 2

Cited uses of medical cannabis compared to other drugs.

Drug Comparison	Number of articles	Number of references
Substitution, harm reduction	33	70
Pharmaceuticals, narcotics	19	26
Non-first line option	18	22
Alcohol, tobacco	14	18
Alternative option	6	10

dicts, says addiction researcher and former Victoria city councillor Philippe Lucas.

Victoria Times Colonist, Cannabis a substitute for prescription drugs: Lucas, 2012

Resource issues

The emergent theme of Resource Issues was cited in 107 articles (50% of articles [$n = 107/216$]; 8% of coded references [$n = 396/4931$]). Research was the most cited subtheme under resources (33% of articles [$n = 71/216$]; 5% of coded references [$n = 244/4931$]), comprising primarily of references to research priorities, including the need for and facilitators of research. Reporting on education was less frequent, and focused on information resources, educating stakeholders, and remediating an overall lack of knowledge and education about medical cannabis.

Issues specific to exceptional populations

We found few articles discussing ethical, legal and social issues surrounding medical cannabis and health specific to exceptional populations. Articles with youth and family perspectives focused primarily on difficulties that children using medical cannabis to treat seizure disorders and their families had faced in access, such as lack of authorizing clinician, lack of insurance coverage and lack of product(s) (7% of articles [$n = 15/216$]). A small subset of articles discussed the use of medical cannabis as a treatment option for veterans with PTSD; these articles mainly sought to increase public awareness and destigmatize the use of medical cannabis as an option supported within veteran communities (5% of articles [$n = 11/216$]).

An Alberta mother whose daughter has severe epilepsy has travelled to Ontario for a medical marijuana prescription after the girl’s doctor said he was no longer allowed to provide permission to purchase the product.

Hamilton Spectator, Alberta mom denied marijuana prescription for daughter turns to St. Catharines clinic, 2015

Both men are at the sharp end of the spear, as soldier-types like to say of those headed into battle. Theirs is a sort of rescue mission, with the goal of clearing the stigma around medical marijuana in order to help their ill and injured comrades whether from the Afghan war or from as far back as deployment to Bosnia in the late 1990s.

Toronto Star, War veterans fight to clear stigma around medical marijuana, 2016

Shifts in reporting from pre-to-post legalization

Twelve news articles were published in the approximately two years after legalization of adult use of recreational cannabis (The Cannabis Act, 17 October 2018; median=4), compared to the 204 published pre-legalization (median=15). With Access as the dominant overall sub-theme, we tested for changes in reporting pre-to-post legalization of access factors occurring at more than 5% of coded references. We found that references to gatekeeping ($p = 0.02$) were covered significantly less post-legalization, while discussion of rights ($p = 0.06$), clinician authorization ($p = 0.14$), and supply ($p = 0.46$) did not change significantly (Table 3).

Table 3
Changes in percentage of coded references for major access factors across time.

Major Access factor	Median% references pre-legalization	Median% references post-legalization	W	P value
Gatekeeping	27%	3%	27	0.02*
Rights	6%	1%	24	0.06
Clinician authorization	5%	4%	22	0.14
Supply	10%	1%	18	0.46

% references were calculated per year as the number of coded references per code divided by the number of total coded references. Median% references were calculated for pre- and post-legalization time periods. Pre-legalization: 01/2010 – 17/10/2018; post-legalization 18/10/2018–12/2020. *denotes significant differences at $p < 0.05$ (Wilcoxon-Mann-Whitney U-Test (W)).

Discussion

In this study of English-language articles published in Canadian news media about medical cannabis and health over a 10-year period, we found that the majority focused on access. Emergent themes included Medical Applications and Resource Issues. The results suggest that the public receives many different messages about institutional and societal barriers to accessing medical cannabis, including potential uncertainty about the impact of legalization of adult use of recreational cannabis and about issues specific to exceptional populations within Canada. These factors also have implications for Canadian drug policy and, by extension, the international medical cannabis policy landscape.

Complexities reported in accessing medical cannabis

Results suggest that access to medical cannabis is multifactorial: It is a combination of institutional policies governing it, growing and supplying it, the rights of persons who seek it, and clinicians supporting it. The range of factors presented in the media reflects how accessing medical cannabis has been, and continues to be, a complex issue (Belle-Isle et al., 2014; Capler et al., 2017; Elliott et al., 2020; Ko et al., 2016; Szafarski & Sirven, 2017; Valleriani et al., 2020; Walsh et al., 2013). Indeed, accessing healthcare itself has been conceptualized many times by health and policy researchers, policy makers and healthcare practitioners, with most definitions incorporating systematic (provider) factors, such as infrastructure and regulations delivering healthcare and healthcare services, and individual (user) factors, such as socioeconomic status and personal identity and beliefs (Levesque, Harris, & Russell, 2013). For example, the Canadian Medical Association defines equitable access as “the opportunity of patients to obtain appropriate health care services based on their perceived need of care,” necessitating consideration of availability, affordability, quality and appropriateness of care, and characteristics of the individual seeking care, including self-identified gender and cultural background, among many other factors (Canadian Medical Association, 2014; Levesque et al., 2013).

Past interview and survey studies conducted with key stakeholders such as healthcare practitioners and patients have identified potential barriers to accessing medical cannabis consistent with the findings of the present study. Commonly reported factors influencing access are the identification a clinician from whom to obtain an authorization and guidance on use, high cost and lack of insurance coverage, and source of supply, including lack of high-quality products and specific strains (Balneaves & Alraja, 2019; Balneaves et al., 2018; Belle-Isle et al., 2014; Capler et al., 2017; Chapman et al., 2021; Elliott et al., 2020; Gibbard et al., 2021; Ko et al., 2016; Martin et al., 2020).

Medical applications of cannabis, including specific conditions being treated, mode of administration, and how they are regulated can create roadblocks to access. For example, using medical cannabis to treat mental health conditions, which was reported on in a small number of the news articles, lacks federal approval and is not included in professional treatment guidelines in Canada (Balneaves & Alraja, 2019; Belle-Isle et al., 2014; Gibbard et al., 2021; Ko et al., 2016; Martin et al., 2020; Walsh et al., 2013).

The nature of reporting suggests that while in some contexts medical cannabis is being destigmatized, continued public and institutional discrimination against medical cannabis and users negatively impacts not only the ability of patients to access medical cannabis, but also their physical and emotional well-being (Balneaves & Alraja, 2019; Belle-Isle et al., 2014; Bottorff et al., 2013; Gibbard et al., 2021; Ko et al., 2016; Walsh et al., 2013).

Articles referencing resource issues dovetail calls by clinicians and regulatory bodies for more research and education, including on safety parameters, benefits and risks for different health conditions, and mode and dosing of administration in order to better support appropriate care (Balneaves & Alraja, 2019; Balneaves et al., 2018; Ko et al., 2016; Ziemianski et al., 2015). Lacking from most articles, however, were direct citations and external links for peer-reviewed research and information sources.

While a subset of articles focused on ethical, legal and social issues faced by youth and veterans using medical cannabis, missing from the analyzed news articles were issues specific to additional exceptional populations, such as BIPOC, LGBTQIA+, refugee populations, and those with disabilities, and their perspectives on medical cannabis.

Reporting trends pre and post legalization

In the subset of news media articles published post-legalization of adult use of recreational cannabis under the 2018 Canadian Cannabis Act, there was less of a focus on institutional gatekeeping of patient access compared to the pre-legalization period. While a decline in discussion may suggest that some access issues have been resolved or are no longer of interest to the public, there is ongoing debate about the necessity for two separate regulatory schemes under the Canadian Cannabis Act, with some stakeholders such as the Canadian Medical Association, advocating for one system, and others such as patient advocate groups recommending dual systems (Cairns & Kelly, 2017; Cox, 2018; C. 2021; Pursaga, 2018). Those advocating for separate systems suggest that maintaining a medical scheme will ensure access to quality care supporting safe, appropriate use, thereby reducing patient risk, encouraging research and continuing education, and guiding future public health policies (Cairns & Kelly, 2017; Cox, 2018). In a recent study of 18 months of online media coverage, Gagnon et al. (2020) highlighted that there are access concerns for recreational cannabis, including those around product availability, source, cost and usage site regulations, similar to our own results. Debated and unanswered questions about legalization suggest there are indeed ongoing access concerns for both medicinal and recreational use (Cairns & Kelly, 2017; Cox, 2018; C. 2021; Gagnon et al., 2020; Martin et al., 2020).

We also observed a decline in coverage of patient rights, clinician authorization and supply post-legalization. Legal protections may suggest to patients and the public that they have unfettered rights and access to medical cannabis. However, this is often not the case, as the right to healthcare in many medical contexts includes assessment of appropriate and supported use – medical cannabis remains unsupported as a treatment option for many conditions, necessitating careful guidance from healthcare practitioners (Ko et al., 2016). Reporting on the distinction

between the *right to medical cannabis*, and the *right to medical cannabis when deemed appropriate by and supported by a clinician*, may help not only to inform the public, but also to creating a positive discourse between patients and clinicians. Likewise, as regulatory and policy debates are ongoing for medical and recreational schemes, informing stakeholders about how to properly access, and safely use medical-grade products will be essential in ensuring appropriate, clinically supported use (Cox, 2018; C. 2021).

Limitations

The Dow Jones Factiva, Inc © (2020) database does not have access to all news available in Canada, nor do all Canadian news sources have non-subscription, searchable archives. For example, many publications in Atlantic Canada are archived under subscription by the SaltWire Network, and are not included in Factiva. We searched for articles published in a critical 10-year period but outside the turn of the century, when medical cannabis was first protected in Canada in 2001 under the Marihuana Medical Access Regulations. The search was also limited by the free text search parameters to focus on precision of returns. Industry-focused articles and social media sources were excluded. Articles published in the gray literature (i.e., alternative news distribution sources) are not captured here; analysis of them is underway in a separate study. The small number of articles post-legalization prohibited broad statistical testing of the pre and post data. Similarly, too few reader comments were available for meaningful analysis. It is possible that the surge of coverage of COVID-19 in 2020 accounts for some of the decline in reporting on medical cannabis in that year.

Conclusion

Media coverage has been found to impact public knowledge, attitudes, beliefs, behaviours, and policies around many public health issues such as alcohol use (Young et al., 2018), tobacco use (Cummings & Proctor, 2014), vaccine uptake (e.g., COVID-19, human papillomavirus) (Malik et al., 2020; Suppli et al., 2018), HIV/AIDS prevention (Vidanapathirana et al., 2005). While not all reporting results in substantive or long-term changes in behavior or successful policy implementation, reporting does impact the knowledgebase of stakeholders (Ishida et al., 2020; Lewis et al., 2015; Myhre & Flora, 2000; Vidanapathirana et al., 2005; Young et al., 2018). With this in mind, the role of medical cannabis in Canadian healthcare and society will continue to be debated as industry, policy, research and public attitudes evolve. Traditional news media coverage plays an important role in communicating health information, and shaping public knowledge and behaviours about medical cannabis, and policy decisions that ensue. While legalization of adult use of recreational cannabis has increased accessibility, there is still uncertainty about regulations and policies, potential health effects and appropriate use, and perspectives of diverse and expectational populations (Cairns & Kelly, 2017; Cox, 2021; Gibbard et al., 2021; Martin et al., 2020). It is imperative that any reporting on therapeutic benefits and adverse effects of medical cannabis is evidence-based to help ensure informed choice and appropriate use by patients and their families. Increasing public consultation and engaging with exceptional populations will be necessary to further destigmatize medical cannabis and medical cannabis users, and for policy makers to ensure regulations are created to protect patient access. Possibilities for coverage under public health insurance, better clinician education, knowledge translation and communication approaches that are culturally-sensitive and meaningfully tuned through stakeholder input, and standardization of the medical product content and cost sold in dispensaries and by licensed products are all critical issues that remain to be explored and addressed.

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Ethics approval

This study did not require ethics approval because publicly available news articles were analyzed.

Declarations of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.drugpo.2021.103361.

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