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**Irish General Practitioner (GP) Perspectives Toward Decriminalisation, Legalisation and Cannabis for Therapeutic Purposes (CTP)**

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### Article

**Citation** (please note it is advisable to refer to the publisher's version if you intend to cite from this work)

**van Hout, MC, Collins, C, Delargy, I and Crowley, D (2016) Irish General Practitioner (GP) Perspectives Toward Decriminalisation, Legalisation and Cannabis for Therapeutic Purposes (CTP). International Journal of Mental Health and Addiction. 15 (3). pp. 670-683. ISSN 1557-1874**

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## Qualitative Health Research

### **Irish general practitioner perspectives toward decriminalisation, legalisation and cannabis for therapeutic purposes (CTP).**

Journal:	<i>Qualitative Health Research</i>
Manuscript ID	Draft
Manuscript Type:	Research Article
Keywords:	Substance Use < Addiction, Medicine, Risk, Self-Care < Self, Therapies
Regions, Cultures, and Peoples:	Europe, Europeans, Ireland < Western Europe < Europe, Europeans
Methods:	Online < Research, Content Analysis < Research Strategies

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## Abstract

Cannabis is the most prevalent illicit drug used globally. Regulatory debate in Ireland on the decriminalisation of cannabis and legalisation for therapeutic purposes (CTP) is on-going. The study aimed to investigate Irish general practitioner (GP) attitudes toward decriminalisation of cannabis and assess levels of support for CTP. An online survey was administered to all GPs in the Irish College of General Practitioner (ICGP) database. A content analysis was conducted on open-ended survey questions, with five themes emerging; *'Young People and Family Impacts'*; *'Adverse Health Consequences'*; *'Legal Status and Comparisons to Legal Substances'*; *'Decriminalisation and Legalisation Debates'*; and *'Cannabis for Therapeutic Purposes'*. GPs were concerned around early onset of use and intergenerational impacts, vulnerabilities to drug induced psychosis, patient self-medication with cannabis and potential for misuse of prescribed cannabis. Comments centred on the need for product regulation and a stronger evidence base for CTP. Further research and medical education is warranted.

## Key Words

Cannabis, decriminalisation, medical use, general practice; family medicine

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9 Globally, cannabis or marijuana is the most prevalent illicit drug used (Hall, Renstrom  
10 & Poznyak, 2016). In recent times, the legal status of cannabis is increasingly debated  
11 in drug policy, medicines control and academic discourse (Kilmer, 2014). Prohibition is  
12 the most common drug policy worldwide, followed by decriminalisation and  
13 legalisation (EMCDDA, 2015; Rehm & Fischer, 2015). Prohibition appears most  
14 expensive in terms of law enforcement cost, and is a potentially ineffective tactic (van  
15 den Brink, 2008). In 1995, The Lancet in their editorial entitled '*Deglamorising*  
16 *cannabis*' concluded "*cannabis per se is not a hazard to society but driving it further*  
17 *underground may well be.*" In countries with a prohibitionist drug policy (for example  
18 the US), lifetime experience of cannabis with probability of use of cocaine is higher  
19 than in countries such as the Netherlands who have a liberal cannabis policy  
20 (Engelsman, 1989; MacCoun & Reuter, 2001).  
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35 The dynamic policy landscape and contested nature of whether cannabis is a safe  
36 drug to use and if criminal sanctions for personal use or possession of small amounts are  
37 excessive continue (Joffe & Yancy, 2004; van den Brink 2008), despite the  
38 International Centre for Science in Drug Policy, (2015) advocating for policy responses  
39 based on best available evidence. Proponents of cannabis legalisation underscore the  
40 comparative cost to society in the case of alcohol and tobacco, with the policy shift  
41 toward de facto decriminalisation in the form of reduced sanctioning for possession of  
42 small amounts or personal use occurring as consequence of widespread use of cannabis  
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9 in Western societies (most European Member States, North America and Australia)  
10 (EMCDDA, 2002; Hall, 1997; van den Brink, 2008). Kalant et al. observed that  
11 *'cannabis appears to pose a much less serious public health problem than is currently*  
12 *posed by alcohol and tobacco in Western societies'*, (Kalant, Corrigan, Hall, & Smart,  
13 1999:495). In 2012, Colorado and Washington State legalised adult use and sale of  
14 cannabis for non-medical purposes, followed by Uruguay in 2013, with regulatory  
15 debates in Jamaica, Canada, Spain, Italy, several Latin American countries, and other  
16 U.S. states (for example California) in 2016.  
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26 This dynamic policy landscape is underpinned by concerns around the  
27 dependence potential of cannabis (van den Brink, 2008; Schlossarek, Kempkensteffen,  
28 Reimer & Verthein, 2016). The available evidence base is rated as weak and supports  
29 lower probability of dependence, and less physical and social harms when compared to  
30 other substances such as alcohol, cocaine, opiates and nicotine (Anthony, Warner &  
31 Kessler, 2002; International Centre for Science in Drug Policy, 2015; Nutt, King,  
32 Saulsbury & Blakemore, 2007). A minority of users develop dependence and  
33 withdrawal syndrome on discontinuation of cannabis (Dragt et al., 2010; Hall &  
34 Degenhardt, 2009). Reported health risks of cannabis use include development of  
35 schizophrenia in vulnerable individuals, respiratory illness and cancers, accidents, and  
36 low birth weight and cognitive impairment in babies whose mothers use cannabis  
37 during pregnancy (Kalant, 2004; International Centre for Science in Drug Policy, 2015).  
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9 In terms of medical use of cannabis, multiple sclerosis and chronic pain patients  
10 are reported to use cannabis for pain management and psychological support (Clark,  
11 Ware, Yazer, Murray & Lynch, 2004; Joy, Watson & Benson, 1999), despite smoking  
12 being a crude delivery system for the relief of posttraumatic, peripheral and HIV  
13 neuropathic pain (Ellis et al., 2009; Ware, Doyle, Woods, Lynch & Clark, 2003; Ware  
14 et al., 2010; Wilsey et al., 2008). Some States in the US have shifted their policy stance  
15 to permit use of cannabis for therapeutic purposes (CTP) (Chu, 2014). This legalisation  
16 in the form of de facto supply for medical use has not caused increased consumption,  
17 prevalence of use or related adverse consequences (Nussbaum, Boyer & Kondrad, 2011;  
18 Hall & Weier, 2015; Sznitman and Zolotov, 2015; Ziemianski, Capler, Tekanoff ,  
19 Lacasse, Luconi & Ware, 2015) and according to one study has contributed to  
20 heightened patient perceptions of safety and awareness (Trout & DiDonato, 2015).  
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35 Research on the views of medical practitioners on decriminalisation and  
36 legalisation for medical use of cannabis remains limited (Nussbaum, Thurstone &  
37 Binswanger, 2011). Available studies in the US indicate minority support among  
38 oncologists for the rescheduling of cannabis for medical purposes (Schwartz, Voth &  
39 Sheridan, 1997) and availability of cannabis on prescription (Doblin & Kleiman, 1991).  
40 US medical practitioner views on CTP are less in favour of medical use due to potential  
41 for adverse mental and physical health harms (Charuvastra, Friedmann & Stein, 2005;  
42 Kondrad & Reid, 2013). In Israel, medical practitioners reflect partial acceptance of  
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9 CTP (Ebert, Zolotov, Eliav, Ginzburg, Shapira & Magnezi, 2015), with Israeli  
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rheumatologists observing a majority opinion for the role of cannabinoids in the management of rheumatoid disease (Ablin, Elkayam & Fitzcharles, 2016).

To date no such research investigating the perspectives of medical professionals has been undertaken in Europe. We present here the qualitative findings from a national survey of general practitioners (GP) in Ireland, where in recent years, several regulatory developments and debates have taken place with regard to de facto decriminalisation of cannabis, and legalisation for medical use. In terms of previous Irish attitudinal and prevalence surveys, Irish males report greater use and knowledge of cannabis compared to females (Bryan, Farrell, Moran & O'Brien, 2000), with prevalence rates highest among men and younger adults aged 15-34 years (National Advisory Committee on Drugs and Alcohol (NACDA), 2012). Most recent Irish addiction treatment data shows that cannabis is the most common problem drug among new cases presenting for drug treatment (Bellerose, Carew & Lyons, 2011). Governmental recommendations have centred on decriminalisation with possession of small amounts of cannabis for personal use not to be dealt with through the criminal justice system, and advocating for the treatment of small-scale users with compassion. Another development centred on the Health Products Regulatory Authority granting marketing authorisation in 2014 for the cannabis-based medicinal product (Sativex®) to be used for treatment of spasticity for individuals with multiple sclerosis.

## Method

### *Participants*

The Irish College of General Practitioners (ICGP) is the professional body for GPs in Ireland. Continuing medical education for general practitioners and training for GP registrars in Ireland is provided by the ICGP. Specialist training in the treatment and management of substance use problems is provided by the ICGP in Level 1 and 2 certifications. A national online survey investigating Irish GP attitudes toward decriminalisation of cannabis and assessing levels of support for CTP was administered to all GPs in the ICGP database.

### *Instruments*

A survey tool was designed based on a review of extant literature and consultation between members of the research team. It consisted of the definition of decriminalisation as '*It is no longer a criminal offence for users to possess the drug for their own use*' followed by three sections namely; closed questions relating to participant profile and practice location, specialist Level 1 or 2 registration, experience in treating opioid users; a series of 5 point Likert scale attitudinal statements toward decriminalisation of cannabis, legalisation for CTP, potential for decriminalisation to increase cannabis use, adverse mental and physical health effects of cannabis use, cannabis use in young people and risk of development of schizophrenia, role of CTP in pain management, treatment of multiple sclerosis and palliative care (author cite); and a



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9 third section consisting of an open question designed to add participant views to the  
10 Likert scaled responses. We report here on this qualitative open ended data.  
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### 12 13 *Procedure*

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15 Electronic invitations were sent to all GPs on the national register which included  
16 information on the study's aims and objectives, informed consent and the link to access  
17 the online survey. A notice encouraging response was also placed on the Substance  
18 Misuse Division of the ICGP website.  
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### 23 24 25 *Ethical Considerations*

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27 Ethical approval was granted by the ICGP.  
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### 29 30 31 *Data Analysis*

32 Overall 6,512 words formed the open ended data set. Content analysis was conducted,  
33 with text segments referencing distinct views tagged by code names. Codes were not  
34 preconceived according to attitudinal scales, but with each new code identifying a new  
35 discrete view not previously mentioned. Coding for common and emergent themes was  
36 assisted by QSR –NVIVO which linked the codes and related textual passages.  
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38 Analysis was conducted by author one in consultation with the last and corresponding  
39 author. Five themes emergent from the analysis namely; '*Young People and Family*  
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*Impacts*'; '*Adverse Health Consequences*'; '*Legal Status and Comparisons to Legal*  
*Substances*'; '*Decriminalisation and Legalisation Debates*'; and '*Cannabis for*  
*Therapeutic Purposes*'.

## Results

### *Participant Characteristics*

The response rate for this survey was low (15%) but consistent rates reported in systematic reviews on physician response rates (Van Geest, Johnson & Welch, 2007). All demographics of the participants are consistent with national data on GPs (O'Shea & Collins, 2016). See Table 1 (author cite).

*Insert Table 1 about here*

### *Young People and Family Impacts*

Many GPs commented on how early onset of cannabis use, and use during childhood and adolescence impacted negatively on the lives of young people, their families and communities in their practice area. Of particular concern for some GPs was presentation of young people with mental health disorders, reported suicide attempts, and general apathy to engage productively in society.

*'Cannabis is currently one of Irelands leading problem drugs and having a very negative impact on the mental health of young people, academic achievement and career prospects'.*

*'We see a lot of very young teenagers in school in trouble from taking drugs usually cannabis and the whole family and other siblings also suffer.'*

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*Cannabis use sounds benign but it is ruining some children's lives and their families.'*

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Some comments were made around young people's perception of safety of cannabis use compared to more socially accepted forms of substance use such as alcohol or tobacco smoking. Many GPs observed the need for more intense efforts at drug education advising young people and their parents of the harms of cannabis use in schools and also via general practice itself, in order to deter early onset of use, and progression toward more serious excessive patterns of use.

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*'The perception is that it is safe, and no different from alcohol or cigs. I blame us, the medical profession for not highlighting its significant dangers and this needs education at secondary level where to be safe is to say a loud no to drugs'.*

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*'More effort needs to be made to reduce the use and also educate our youth so prevent starting in the first place. We need to do everything we can to try and prevent teenagers using.*

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Some GPs were concerned with regard to potency of available cannabis on the street. Many described intergenerational impacts of cannabis use within families, the potential progression toward more serious forms of illicit drug use such as heroin and cocaine, and described opioid/cocaine dependent patients in their practices with prior histories of smoking cannabis.

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*‘Some areas in my practice, drugs have ruined the lives of whole families over two generations, I see it as a gate way drug.’*

### *Adverse Health Consequences*

The majority of GP comments underscored their awareness of mental health and dependence consequences of cannabis use over time, particularly when early onset of use is a factor. A minority commented on the associated cancer and respiratory disorders in the case of long term smoking.

*‘Sadly I have dealt with the mainly psychological negative effect of what is described as ‘harmless social use’ in a patients past, they are left with a life time of mainly mental health issues, which could have been prevented.’*

*‘I have had to section three young teenagers and have seen many more teenagers seriously affected by smoking it. Many are now attending mental health and addiction services as a result’.*

Some GPs were aware of pre-disposition to drug induced psychosis, and development of schizophrenia on excessive/ continual use in vulnerable individuals.

*‘I have seen several cases of psychosis related to cannabis use but believe this was in cases where there was an underlying tendency towards schizophrenia rather than that cannabis was a single direct cause’.*

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9 A minority of GPs speculated on patient self-medication of underlying mental health  
10 issues with cannabis.

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12 *'Cannabis increases risk of developing schizophrenia in susceptible*  
13 *patients. And many people with mental health problems self-medicate*  
14 *already'.*

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20 Difficulties in treating cannabis use in patients with mental health disorders were  
21 described by some GPs, particularly relating to suicidal ideation and self-harm attempts,  
22 and who highlighted the need for enhanced psychiatric service supports in their  
23 communities.  
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28 *'It is contributing to some suicides.'*

### 32 33 *Legal Status and Comparisons to Legal Substances*

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35 GP comments around harms of cannabis use and its legal status centred on public  
36 and medical practitioners comparisons of cannabis safety to nicotine, alcohol and  
37 opioid analgesics in terms of the consequences of use.  
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42 *'Cannabis is potentially less harmful than cigarette smoking and than a lot*  
43 *of the opiate analgesics used in chronic pain syndrome which are finding*  
44 *their way onto the streets'.*

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48 Some comments centred on the acceptability of moderated use.  
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*'Cannabis use just like alcohol can have a negative effect on mental and physical health if consumed without moderation. Alcohol is legal.'*

The majority of GP comments compared the illicit status of cannabis to licit status of alcohol, and the rates of risky drinking behavioural patterns in Ireland.

*'It is immeasurably less harmful than alcohol, the great national vice.'*

*'The harmful effects of cannabis pale in comparison to alcohol but that does not make it harmless.'*

#### *Decriminalisation and Legalisation Debates*

In many instances GPs used the terms *'decriminalisation'* and *'legalisation'* interchangeably.

*'Legalisation' or 'decriminalisation' without regulations would of course be harmful, but right-touch regulation of cannabis would remove the criminalisation of this drug, with multiple positive societal effects.'*

GP comments were mixed with regard to the current prohibitive approach in Ireland.

*'I feel cannabis and other illicit drugs should be legalised. Prohibition in general does not work.'*

*'Despite agreeing to all of the harmful effects of cannabis, I feel it should be legalised. It would be better to have regulated use of harmful substances,*

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9 *than to pretend that by making them illegal, you would deter people from*  
10 *using these substances’.*

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13 Regulatory controls on cannabis itself and the decriminalisation/legalisation were  
14 viewed by GPs as potentially ensuring quality standards, standardised strengths of  
15 tetrahydrocannabinol (THC) content and ensuring public safety in consumption of the  
16 drug. Some commented on the potential revenue income generated.  
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22 *‘Another advantage with decriminalisation would be the ability to enforce*  
23 *quality and strength controls.’*

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26 *‘My version of decriminalisation is that we would have registered suppliers*  
27 *(as with any other drug/alcohol) who would meet certain production*  
28 *values/assessments/tax liabilities etc. They would (like alcohol and tobacco*  
29 *producers be required to label their products with relevant appropriate*  
30 *health warnings. Production or supply of drugs not meeting these criteria*  
31 *would be a criminal offence, with complete regulation of market and users’.*

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39 *‘Legalise and legislate. Have it sold through pharmacies and have taxable*  
40 *revenue stream’.*

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44 Some GPs commented on the potential displacement of cannabis out of illicit drug  
45 networks if legalised nationally.  
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49 *If cannabis is to be legalised then it should be seen for what it is: A*  
50 *recreational drug, the use of which carries negative effects, both mental and*  
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*physical. It should be managed like alcohol or tobacco and only sold under license. The main reason to decriminalise it is to take it away from the illegal drug pedlars.'*

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Decriminalisation comments centred on the benefits of de facto decriminalisations in terms of this reduced contact with street dealers and reduced illicit income generation, versus the potential for increased prevalence of use with resultant negative repercussions and cost to society.

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*'I have mixed feelings about the decriminalisation of cannabis. On one hand, it may reduce the dangers of being in contact with drug dealers/reduce drug industry etc, on the other hand, it may lead to more of the population overall using cannabis and lead to problems of its own (mental health, driving issues...).'*

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GP comments were mixed around potential increased public use of cannabis as consequence of decriminalisation.

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*'I think there would be an initial increase in cannabis use but this would balance out over time'.*

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Many GPs with experience of significant negative mental health impacts of cannabis use were not in favour of decriminalisation due to concerns around harm.



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9 *'Decriminalisation would inevitably lead to increased availability and I*  
10 *would be concerned that some people may develop psychotic illnesses who*  
11 *wouldn't have otherwise'.*  
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15 *'Those that politically lobby for its decriminalisation are not involved in the*  
16 *long term complicated mental and physical health care of that individual.'*  
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22 A minority of GPs commented on the decriminalisation model implemented in Portugal  
23 over a decade ago, and how it aimed to address more serious forms of use. They  
24 recognised the required investment in terms of medical, treatment and social supports.  
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29 *'While I believe cannabis is not as benign as its supporters often portray I*  
30 *believe the Portuguese model has more to offer in terms of addressing*  
31 *harmful use and offering treatment to people who find difficulty with it. It*  
32 *should be managed on the medical rather than criminal model'*  
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38 *'The problem I see is the use and early involvement with crime and criminal*  
39 *records in deprived areas and knock on effects in people's lives. The*  
40 *example of Portugal which has decriminalised all drug use is interesting.*  
41 *This has to go hand in hand with more youth resources and community*  
42 *funding. Otherwise we are simply continuing to hand these populations to*  
43 *drug dealers on a plate'.*  
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9 GPs underscored the need for an evidence based approach to regulation and control, and  
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11 cognisant of the input from medical practitioners and educators.

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13 *'Although cannabis is a toxic substance and it's use is dangerous there are*  
14  
15 *avoidable consequences of its illicit status that could be avoided by*  
16  
17 *decriminalising it. There should still be resources devoted to discouraging*  
18  
19 *its use and informing people of its dangers. However, users should probably*  
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21 *be treated for addiction (or possible addiction) rather than through the*  
22  
23 *criminal justice system. Distributors and people who produce or trade in it*  
24  
25 *should still be prosecuted.'*  
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### 31 Cannabis for Therapeutic Purposes

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33 GP observations around the prescribing of cannabis for medical reasons were mixed and  
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35 centred on the available evidence base for use in treatment of certain medical  
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37 conditions, and the need for regulation of products.  
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40 *'If it was regulated, quality controlled and prescribed properly, I feel it*  
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42 *would benefit the end user'.*

43  
44 *'I regard the potential controlled use of cannabis for these medical*  
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46 *purposes, to be a very different thing to legalising the use of cannabis for*  
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48 *recreational purposes'.*  
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9 Some GPs were concerned around the prescribing of cannabis and potential for misuse  
10 of the product, patient recreational use of cannabis products for intoxication purposes,  
11 and risk of escalation toward problematic use, particularly in vulnerable patients.  
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15 *'Decriminalise/legalise recreational use instead of making doctors the de*  
16 *facto drug dealers to "sick patients" (There may well be medicinal benefits*  
17 *but I think the vast majority of "patients" seeking "treatment" would actually*  
18 *be using it recreationally and this would not sit well with me as a doctor).'*  
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24 Many GPs voiced concerns around patient misuse of and access to prescribed cannabis  
25 medications particularly for patient registered on the Irish General Medical Scheme  
26 (GMS) where medical care and prescriptions are subsidised by the government. Some  
27 comparisons were made to the recent rise in misuse and dependence on, and street trade  
28 in opioid analgesics, benzodiazepines and Z-hypnotic drugs in Ireland.  
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35 *'Giving Irish people access to free cannabis on the GMS is like giving a*  
36 *child a credit card and dropping them off outside a sweet shop. A recipe for*  
37 *disaster!'*  
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42 *'Prescribed Cannabis would of course be open to abuse as in the case of*  
43 *opiates and benzodiazepines'.*  
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48 Many observed the weak evidence base for CTP, and questioned its place against the  
49 availability of better forms of medical therapy.  
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*'I think cannabis should only be legalised for medical use if its efficacy were proven to be beyond that of other medications.'*

*'I personally have not heard definite clear medical benefits over other conventional therapies and I certainly would not like to see medical marijuana in Ireland leading to a scenario where doctors are prescribing marijuana to people with a range of ailments from back pain to epilepsy, as in certain US states'.*

GP views around potential cost-benefits of cannabis in treatment of pain, multiple sclerosis and in palliative care were mixed.

*'Cannabis if legalised and regulated could offer an additional resource in the management of chronic pain and also help as an appetite stimulant in patients with conditions such as cancer and MS'.*

*'I believe there would be a true improvement in palliative and chronic illness patients' well-being with the availability of cannabis as a prescribed drug'.*

*'While cannabis would undoubtedly have a role in pain management, I do not think it should be legalised, even for medical use as it is too open for abuse and there is no gaping hole in pain management where cannabis is the only drug that can help, overall the risk of abuse and all the negative effects which are all too evident far out way any potential benefit'.*

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GP comments on CTP centred on the need for further investigation into the use of standardised formulation of cannabis containing products for medical conditions.

*'There is a significant accumulation of albeit low quality evidence that suggests it's benefit in some cancers. Regulation for medical use would at least allow for this to be further explored. The potential benefits would in many cases outweigh the risks.'*

*'We struggle to follow evidence based medicine with licensed medication. If cannabis is to be used it should go through the rigorous testing that any licensed medication.'*

## Discussion

The study was the first of its kind in Ireland, and Europe, and builds on growing global interest into the debate around de-facto decriminalisation of cannabis, legalisation and CTP. We recognise the limitations of the study given the relatively small sample size of 567 GPs for this open-ended textual analysis. However, the findings are validated in terms of what is reported elsewhere in terms of medical professional concerns around potency of available cannabis on the street, mental and physical health consequences, and dependence, patient vulnerabilities to psychiatric conditions, and the need for an enhanced evidence base for CTP. Concerns were evident around potential misuse of prescribed cannabis containing products and increased prevalence trends occurring on

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9 de-facto decriminalisation. Studies elsewhere however have indicated that  
10 decriminalisation does not result in significant increases in cannabis use (Kilmer, 2002;  
11 Maag, 2003; Single, Christie & Ali, 2000); and incurs a marginal effect on onset of  
12 cannabis use among young people (Korf, 2002; Reinerman, Cohen & Kaal, 2004; van  
13 den Brink, 2008). However, Yuyan, Michela & Ruopeng (2015) in their review of 38  
14 countries reported that partial prohibition of cannabis is associated with higher levels of  
15 regular cannabis use among adolescents. Hall and Lynskey (2016) have speculated  
16 whether the potential effects of legalising recreational cannabis use may also increase  
17 the number of new cannabis users. GP concern for the effect of cannabis use among  
18 young people, and intergenerational impacts particularly those living in marginalised  
19 areas was evident, and underscored the need for enhanced preventative measures in  
20 schools and in community primary care. Studies show that recreational use of cannabis  
21 is largely determined by environmental factors, but with dependence genetically  
22 inherited and is affected by increased levels of THC (Agrawal, Neale, Prescott &  
23 Kendler 2004; Compton Thomas, Conway & Colliver, 2005; Golub Johnson & Dunlap  
24 2006; Schlossarek Kempkensteffen, Reimer & Verthein, 2016)

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44 Barrett and Bradley (2015) have recently reported on relatively low levels of  
45 Irish adolescent perceived risk of mental and physical health problems with cannabis  
46 use. According to EUROBAROMETER (2014), Ireland has the highest number of  
47 young people who have used cannabis in the past year (28%), compared to an EU  
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9 average of 17%; with 46% of young Irish people considering regular cannabis use to be  
10 high risk, compared to an EU average of 63%. The great overlap between medicinal and  
11 recreational cannabis use in the US has been reported on (Pacula, Chriqui & King,  
12 2016). Previous general population surveys in Ireland have reported on majority  
13 agreement with CTP; and disagreement with recreational use of cannabis (NACDA,  
14 2012). The EUROBAROMETER in 2014 also reported that 56% of Irish 15-24-year-  
15 olds agreed that the cannabis market should be regulated, which is almost a reverse  
16 position of the EU average. We recognise that individuals with personal experience of  
17 cannabis use are more inclined to be in favour of legalising (Williams, van Ours &  
18 Grossman, 2016).  
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31 GPs in this national study were concerned around patient pre-disposition to drug  
32 induced psychosis, patient self-medication with cannabis and related health harms.  
33 Kondrad and Reid (2013) have also reported on the majority agreement of US  
34 physicians with regard to the serious mental and physical health consequences of  
35 cannabis use. Early onset of use and excessive long term use of cannabis are associated  
36 with dependence, psychosis, suicidal ideation, development of schizophrenia and  
37 depression (Nussbaum, Thurstone & Binswanger, 2011; Shapiro & Buckley-Hunter,  
38 2010). Debates continue around the cannabinoid hypothesis of psychosis, whereby  
39 exposure to cannabis and cannabinoid agonists is associated with psychosis through  
40 activation of CB1R (McLaren, Silins, Hutchinson, Mattick & Hall, 2010;  
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9 Radhakrishnan, Addy, Sewell, Skosnik, Ranganathan & D'Souza, 2012; Sewell,  
10 Skosnik, Garcia-Sosa, Ranganathan & D'Souza, 2010). A causal relationship has not yet  
11 been established (International Centre for Science in Drug Policy, 2015).  
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15 Regulatory controls in the case of legalisation for medical use were viewed  
16 some Irish GPs as potentially ensuring quality standards, standardised strengths, and  
17 ensuring public safety in consumption of the drug, whilst displacing cannabis out of  
18 illicit drug networks. Others voiced concerns around potential misuse in the event of  
19 availability of prescribed cannabis. Few similar studies are available on medical  
20 practitioner attitudes toward CTP. In 2005, US physicians reported less support of CTP  
21 than the public (Charuvastra, Friedmann & Stein, 2005). CTP is driven by public  
22 approval without the evidence base to justify new medication regulation (Bostwick,  
23 2012; Porche, 2012). Beliefs in the medical benefits of cannabis are salient for the  
24 support of legalisation (Sznitman & Bretteville-Jensen, 2015). Other studies on medical  
25 professional views around CTP are mixed and indicative of partial acceptance of CTP  
26 as a potential treatment avenue (Kondrad & Reid, 2013; Ebert, Zolotov, Eliav, Ginzburg,  
27 Shapira & Magnezi, 2015). Of interest is the reported difference between oncologists  
28 and pain specialists who did not agree unanimously that medical cannabis can  
29 undermine mental health, whereas other physicians did (Ebert, Zolotov, Eliav,  
30 Ginzburg, Shapira & Magnezi, 2015). Despite these mixed views on the merits of CTP,  
31 available studies on medical professional views on medical cannabis emphasise the  
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9 need for formal training and medical education on CTP (Ablin, Elkayam & Fitzcharles,  
10 2016; Ebert Zolotov, Eliav, Ginzburg, Shapira & Magnezi, 2015; Kondrad & Reid  
11 2013; Ziemanski Capler, Tekanoff, Lacasse, Luconi & Ware, 2015).  
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## 16 17 18 **Conclusion**

19  
20 The study is unique in terms of illustrating Irish GP views around cannabis use,  
21 decriminalisation, legalisation and levels of support for CTP. Continued efforts to raise  
22 medical and public awareness around the changing policy landscape for cannabis,  
23 evidence for therapeutic use, and regulatory policy developments are warranted.  
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## 32 **Declaration of Conflicting Interests**

33  
34 The authors declared no potential conflicts of interest with respect to the research,  
35 authorship, and/or publication of this article.  
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## 41 **Funding**

42  
43 The authors disclosed receipt of the following financial support for the research,  
44 authorship, and/or publication of this article. The research was supported by the Irish  
45 College of General Practitioners (ICGP).  
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For Peer Review

## References

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9  
10  
11 Ablin, J.N., Elkayam ,O., & Fitzcharles, M.A. (2016). Attitudes of Israeli Rheumatologists to  
12 the Use of Medical Cannabis as Therapy for Rheumatic Disorders. *Rambam*  
13 *Maimonides Medical Journal* 7, e0012. Published Online First: Apr 19 2016.  
14 doi:10.5041/RMMJ.10239PMCID.  
15  
16  
17  
18  
19 Agrawal, A., Neale, M.C., Prescott, C.A. & Kendler K.S. (2004). A twin study of early  
20 cannabis use and subsequent use and abuse/dependence of other illicit drugs.  
21 *Psychological Medicine*, 34, 1227-1237.  
22  
23  
24  
25 Anthony, J.C., Warner, L.A. & Kessler, R.C. (2002). Comparative epidemiology of  
26 dependence on tobacco, alcohol, controlled substances, and inhalants: basic findings  
27 from the National Comorbidity Survey. *Experimental and Clinical*  
28 *Psychopharmacology*, 2, 244-268.  
29  
30  
31  
32  
33 Author cite.  
34  
35  
36 Barrett, P., & Bradley, C. (2015). Attitudes and perceived risk of cannabis use in Irish  
37 adolescents. *Irish Journal of Medical Science*, [Epub ahead of print].  
38  
39  
40 Bellerose, D., Carew, A., & Lyons, S. (2011). *Trends in treated problem drug use in Ireland*  
41 *2005 to 2010*. Dublin: Health Research Board (HRB).  
42  
43  
44 Bostwick, J.M. (2012). Blurred boundaries: the therapeutics and politics of medical  
45 marijuana. *Mayo Clinic Proceedings*, 87, 172-186.  
46  
47  
48 Bryan, A., Farrell, E., Moran, R., & O'Brien, M. *Drug-Related Knowledge, Attitudes and*  
49 *Beliefs in Ireland: Report of a Nation-Wide Survey*. Dublin: Health Research Board  
50  
51 (HRB).  
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2  
3  
4  
5  
6  
7  
8  
9 Charuvastra, A., Friedmann, P.D., & Stein, M.D. (2005). Physician attitudes regarding the  
10 prescription of medical marijuana. *Journal of Addictive Diseases*, 24, 87-93.  
11  
12 Chu, YW.L. (2014). The effects of medical marijuana laws on illegal marijuana. *Journal of*  
13 *Health Economics*, 38, 43-61.  
14  
15 Clark, A.J., Ware, M.A., Yazer, E., Murray, T.J. & Lynch, M.E. (2004). Patterns of cannabis  
16 use among patients with multiple sclerosis. *Neurology*, 62 (11), 2098-2100.  
17  
18 Compton, W.M., Thomas, Y.F., Conway, K.P. & Colliver, J.D. (2005). Developments in the  
19 epidemiology of drug use and drug use disorders. *American Journal of Psychiatry*,  
20 162, 1494-1502.  
21  
22 Deglamorising cannabis [editorial]. (1995) *Lancet*, 346 (8985), 1241.  
23  
24 Doblin, R.E. & Kleiman, M.A. (1991). Marijuana as antiemetic medicine: a survey of  
25 oncologists' experiences and attitudes. *Journal of Clinical Oncology*, 9, 1314-  
26 1319.doi: 10.3122/jabfm.2013.01.120089.  
27  
28 Dragt, S., Nieman, D.H., Becker, H.E., van de Fliert, R., Dingemans, P.M., de Haan, L., van  
29 Amelsvoort, T.A. & Linszen, D.H. (2010). Age of onset of cannabis use is  
30 associated with age of onset of high-risk symptoms for psychosis. *Canadian Journal*  
31 *of Psychiatry*, 55 (3), 165-171.  
32  
33 Ebert, T., Zolotov, Y., Eliav, S., Ginzburg, O., Shapira, I. & Magnezi, R. (2015). Assessment  
34 of Israeli Physicians' Knowledge, Experience and Attitudes towards Medical  
35 Cannabis: A Pilot Study. *The Israel Medical Association Journal*, 17 (7), 437-441.  
36  
37 Ellis, R.J., Toperoff, W., Vaida, F., van den Brande, G., Gonzales, J., Gouaux, B., Bentley,  
38 H. & Atkinson, J.H. (2009). Smoked medicinal cannabis for neuropathic pain in  
39  
40  
41  
42  
43  
44  
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47  
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2  
3  
4  
5  
6  
7  
8  
9 HIV: a randomized, crossover clinical trial. *Neuropsychopharmacology*, 34, 672-  
10 680.  
11  
12 Engelsman, E.L. (1989). Dutch policy on the management of drug-related problems. *British*  
13 *Journal of Addiction*, 84, 211-218.  
14  
15 EUROBAROMETER (2014). *Flash Eurobarometer 401: Young people and drugs*.  
16 EUROBAROMETER: Brussels: European Commission.  
17  
18 European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). (2015).  
19 *Perspectives on drugs: Models for the legal supply of cannabis: recent developments*  
20 (pp. 4). Lisbon: European Monitoring Centre for Drugs and Drug Addiction.  
21  
22 Golub, A., Johnson, B.D. & Dunlap, E. (2006). Smoking marijuana in public: the spatial and  
23 policy shift in New York City arrests, 1992–2003. *Harm Reduction Journal*, 3, 22.  
24  
25 Hall, W. & Degenhardt, L. (2009). Adverse health effects of nonmedical cannabis use.  
26 *Lancet*, 374, 1383-1391.  
27  
28 Hall, W. & Weier, M. (2015). Assessing the public health impacts of legalizing recreational  
29 cannabis use in the USA. *Clinical Pharmacology and Therapeutics*, 97 (6), 607-615.  
30  
31 Hall, W., & Lynskey, M. (2016). Evaluating the public health impacts of legalizing  
32 recreational cannabis use in the USA. *Addiction* Early Online:15 Apr 2016.  
33 doi:10.1111/add.13428.  
34  
35 Hall, W. (1997). The recent Australian debate about the prohibition on cannabis use.  
36 *Addiction*, 92, 1109-1115.  
37  
38 Hall, W., Renstrom, M., & Poznyak, V. (Eds.). (2016). *The health and social effects of*  
39 *nonmedical cannabis use*. Geneva: World Health Organization.  
40  
41  
42  
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44  
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6  
7  
8  
9 International Centre for Science in Drug Policy. (2015). *State of the evidence: cannabis use*  
10 *and regulation* (pp. 41). Toronto: International Centre for Science in Drug Policy.  
11  
12 Joffe, A., Yancy, W.S. & the Committee on Substance Abuse and Committee on  
13 Adolescence. (2004). American Academy of Pediatrics Technical Report.  
14  
15 Legalization of Marijuana: Potential Impact on Youth. *Pediatrics*, 113, e632-e638.  
16  
17 Joy, J.E., Watson, S.J. Jr., & Benson, J.A. (1999). *Marijuana and medicine: assessing the*  
18 *science base*. Institute of Medicine, Washington, DC: National Academy Press.  
19  
20  
21  
22 Kalant, H. (2004). Adverse effects of cannabis on health: an update of the literature since  
23 1996. *Progress in Neuro-psychopharmacology & Biological Psychiatry*, 28, 849-  
24 863.  
25  
26  
27  
28  
29 Kalant, H., Corrigall, W., Hall, W., & Smart, R. (1999). *The health effects of cannabis*.  
30 Toronto: Centre for Addiction and Mental Health.  
31  
32  
33 Kilmer, B. (2002). Do cannabis possession laws influence cannabis use? In I. Spruit (Ed.)  
34 *Cannabis 2002 report: a joint international effort at the initiative of the Ministers of*  
35 *Public Health of Belgium, France, Germany, The Netherlands, Switzerland:*  
36 *technical report of the scientific conference Brussels, Belgium* (pp. 101-123).  
37  
38 Brussels: Ministry of Public Health.  
39  
40  
41  
42  
43 Kilmer, B. (2014). Policy designs for cannabis legalization: starting with the eight Ps.  
44 *American Journal of Drug Alcohol Abuse*, 40 (4), 259-261. doi:  
45 10.3109/00952990.2014.894047.  
46  
47  
48  
49 Kondrad, E. & Reid, A. (2013). Colorado Family Physicians' Attitudes toward Medical  
50 Marijuana. *Journal of the American Board of Family Medicine*, 26, 52-60.  
51  
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58  
59  
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2  
3  
4  
5  
6  
7  
8  
9 Korf, D.J. (2002). Dutch coffee shops and trends in cannabis use. *Addictive Behaviors*, 27,  
10 851-866.  
11  
12 Maag, V. (2003). Decriminalisation of cannabis use in Switzerland from an international  
13 perspective: European, American and Australian experiences. *International Journal*  
14 *of Drug Policy*, 14, 279-282.  
15  
16 MacCoun, R. & Reuter, P. (2001). Evaluating alternative cannabis regimes. *The British*  
17 *Journal of Psychiatry*, 178, 123-128.  
18  
19 McLaren, J.A., Silins, E., Hutchinson, D., Mattick, R.P., & Hall, W. (2010). Assessing  
20 evidence for a causal link between cannabis and psychosis: a review of cohort  
21 studies. *International Journal of Drug Policy*, 21 (1), 10-19.  
22  
23 National Advisory Committee on Drugs and Alcohol (NACDA). *General Population Survey*  
24 *on Drug Prevalence 2010/2011*. Dublin: National Advisory Committee on Drugs  
25 and Alcohol.  
26  
27 Nussbaum, A., Thurstone, C., & Binswanger, I. (2011). Medical marijuana use and suicide  
28 attempt in a patient with major depressive disorder. *American Journal of Psychiatry*,  
29 168, 778-781.  
30  
31 Nussbaum, A.M., Boyer, J.A., & Kondrad, E.C. (2011). "But my doctor recommended pot":  
32 medical marijuana and the patient-physician relationship. *Journal of General*  
33 *Internal Medicine*, 26, 1364-1367.  
34  
35 Nutt, D., King, L.A., Saulsbury, W., & Blakemore, C. (2007). Development of a rational  
36 scale to assess the harm of drugs of potential misuse. *Lancet*, 369, 1047-1053.  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
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48  
49  
50  
51 Author cite.  
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55  
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60

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2  
3  
4  
5  
6  
7  
8  
9 Pacula, R.L., Chriqui, J.F. & King, J. (2003). *Marijuana Decriminalization: What does it*  
10 *mean in the United States?* (NBER working paper no. 9690). Cambridge, MA:  
11 National Bureau of Economic Research (NBER).  
12  
13  
14 Porche, D.J. (2013). Legalization of medical marijuana (Cannabis). *American Journal of*  
15 *Mens Health*, 7, 449.  
16  
17  
18 Radhakrishnan, R., Addy, P.H., Sewell, R.A., Skosnik, P.D., Ranganthan, M. & D'Souza,  
19 D.C. (2012). Cannabis, Cannabinoids, and the Association with Psychosis. In: B.  
20 Madras, M.J. Kuhar. (Ed.) *The Effects of Drug Abuse on the Human Nervous System*  
21 (pp.423-458). Oxford: Elsevier.  
22  
23  
24  
25  
26  
27 Rehm, J. & Fischer, B. (2015). Cannabis legalization with strict regulation, the overall  
28 superior policy option for public health. *Clinical Pharmacology and Therapeutics*,  
29 97 (6), 541-544.  
30  
31  
32  
33 Reinerman, C., Cohen, P.D. & Kaal, H.L. (2004). The limited relevance of drug policy:  
34 cannabis in Amsterdam and in San Francisco. *American Journal of Public Health*,  
35 94, 836-842.  
36  
37  
38  
39 Schlossarek, S., Kempkensteffen, J., Reimer, J., & Verthein, U. (2016). Psychosocial  
40 determinants of cannabis dependence: a systematic review of the literature.  
41 *European Addiction Journal*, 22 (3), 131-144. doi: 10.1159/000441777.  
42  
43  
44  
45 Schwartz, R.H., Voth, E.A., & Sheridan, M.J. (1997). Marijuana to prevent nausea and  
46 vomiting in cancer patients: a survey of clinical oncologists. *Southern Medical*  
47 *Journal*, 90, 167-172.  
48  
49  
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6  
7  
8  
9 Sewell, R.A., Skosnik, P.D., Garcia-Sosa, I., Ranganathan, M., & D'Souza, D.C. (2010).  
10 [Behavioral, cognitive and psychophysiological effects of cannabinoids: relevance to  
11 psychosis and schizophrenia]. *Revista brasileira de psiquiatria*, 32 (Suppl 1), S15–  
12 S30.  
13  
14  
15  
16  
17 Shapiro, G.K. & Buckley-Hunter, L. (2010). What every adolescent needs to know: cannabis  
18 can cause psychosis. *Journal of Psychosomatic Research*, 69 (6), 533-539.  
19  
20  
21 Single, E., Christie, P., & Ali, R. (2000). The impact of cannabis decriminalisation in  
22 Australia and the United States. *Journal of Public Health Policy*, 21, 157-186.  
23  
24  
25 Sznitman, S.R., & Zolotov, Y. (2015). Cannabis for therapeutic purposes and public health  
26 and safety: a systematic and critical review. *International Journal of Drug Policy*, 26  
27 (1), 20-29. doi: 10.1016/j.drugpo.2014.09.005.  
28  
29  
30  
31 Sznitman, S.R., & Bretteville-Jensen, A.L. (2015). Public opinion and medical cannabis  
32 policies: examining the role of underlying beliefs and national medical cannabis  
33 policies. *Harm Reduction Journal*, 12, 46.  
34  
35  
36  
37 Troutt, W.D., & DiDonato, M.D. (2015). Medical Cannabis in Arizona: Patient  
38 Characteristics, Perceptions, and Impressions of Medical Cannabis Legalization.  
39 *Journal of Psychoactive Drugs*, 47 (4), 259-266. doi:  
40 10.1080/02791072.2015.1074766.  
41  
42  
43  
44  
45 van den Brink, W. (2008). Forum: decriminalization of cannabis. *Current Opinion in*  
46 *Psychiatry*, 21, 122-126  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
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- 1  
2  
3  
4  
5  
6  
7  
8  
9 van Geest, J.B., Johnson, T.P., & Welch, V.L. (2007). Methodologies for Improving  
10 Response Rates in Surveys of Physicians: A Systematic Review. *Evaluation and*  
11 *Health Professionals, 30*, 4, 303–21.  
12  
13  
14  
15 Ware, M.A., Doyle, C.R., Woods, R., Lynch, M.E. & Clark, A.J. (2003). Cannabis use for  
16 chronic non-cancer pain: results of a prospective survey. *Pain, 102* (1–2), 211-216.  
17  
18  
19 Ware, M.A., Wang, T., Shapiro, S., Robinson, A., Ducruet, T., huynh, T., Gamsa, A.,  
20 Bennett, G.J., & Collet, J.P. (2010). Smoked cannabis for chronic neuropathic pain:  
21 a randomized controlled trial. *CMAJ : Canadian Medical Association Journal, 182*  
22 (14), e694-e701.  
23  
24  
25  
26  
27 Williams, J., van Ours, J., & Grossman, M. (2016). Attitudes to legalizing cannabis use.  
28 *Health Econ Early Online*: 1 Apr 2016. doi:10.1002/hec.3340.  
29  
30  
31 Wilsey, B., Marcotte, T., Tsodikov, A., Millman, J., Bentley, H., Gouaux, B., & Fishman, S.  
32 (2008). A randomized, placebo-controlled, crossover trial of cannabis cigarettes in  
33 neuropathic pain. *Journal of Pain, 9*, 506-521.  
34  
35  
36  
37 Yuyan, S., Michela, L., & Ruopeng, A. (2015). Cannabis liberalization and adolescent  
38 cannabis use: a cross-national study in 38 countries. *PLoS ONE, 10*, e0143562.  
39  
40  
41 Ziemanski, D., Capler, R., Tekanoff, R., Lacasse, A., Luconi, F., & Ware, M. (2015).  
42 Cannabis in medicine: a national educational needs assessment among Canadian  
43 physicians. *BMC Medical Education, 15*, 52.  
44  
45  
46  
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Table 1 Participant Characteristics<sup>1,2</sup>

	Total	Male	Female	
	(n 565)	(n 278)	(n 287)	
				P-value
<b>Age n(%)</b>				
<30 yrs	41 (7.3)	16 (5.8)	25 (8.7)	0.180
		121	179	
30-50 yrs	300 (53.2)	(43.7)	(62.4)	0.288
		140		
>50 yrs	223 (39.5)	(50.5)	83 (28.9)	<0.0001
<b>Membership of the ICGP n(%)</b>				
Associate, part-time, other	18 (3.2)	8 (2.9)	10 (3.5)	0.681
		204	199	
Full-Time	403 (71.3)	(73.4)	(69.3)	0.288
Retired	36 (6.4)	24 (8.6)	12 (4.2)	0.030
Trainee	108 (19.1)	42 (15.1)	66 (23.0)	0.017
<b>Training n(%)</b>				
		216	219	
On the GP Specialist Register	435 (77.5)	(78.3)	(76.8)	0.687
Working in General Practice	482 (85.3)	242	240	0.250

		(87.1)	(83.6)	
<i>Working in Academic General Practice</i>	129 (23.0)	64 (23.4)	65 (22.7)	0.859
<i>Level 1 trained GP managing opioid users</i>	169 (29.9)	77 (27.7)	92 (32.1)	0.258
<i>Level 2 trained GP managing opioid users</i>	25 (4.4)	16 (5.8)	9 (3.1)	0.130
<b>Practice population n(%)</b>				
		110	101	
<i>Mixed</i>	211 (39.7)	(41.5)	(38.0)	0.405
<i>Rural</i>	88 (16.6)	42 (15.8)	46 (17.3)	0.655
		113	119	
<i>Urban</i>	232 (43.7)	(42.6)	(44.7)	0.626
			112	
<i>Working in an area of deprivation</i>	211 (39.4)	99 (37.4)	(41.5)	0.329

<sup>1</sup>Values are n (%); <sup>2</sup>Chi-square analysis for categorical variables for comparisons of distributions between gender

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