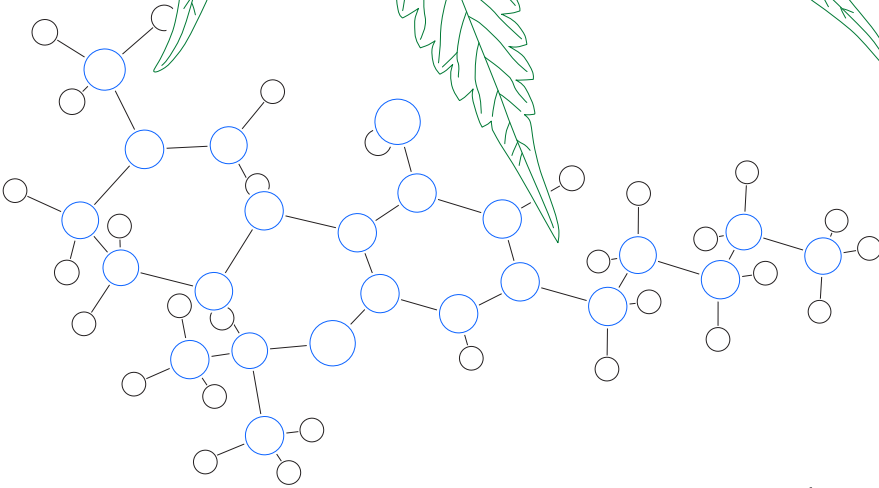




TRANSFORM
Drug Policy Foundation



How to Regulate **Cannabis**

A Practical Guide

THIRD EDITION
UPDATED & EXPANDED

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THIRD EDITION
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Transform Drug Policy Foundation

Our vision is a world where drug policy promotes health, protects the vulnerable and puts safety first.

To achieve this, we educate the public and policymakers on effective drug policy; we develop and promote viable alternatives to prohibition; we provide a voice for those directly affected by drug policy failures; and we support policymakers and practitioners in achieving positive change.

Our current system of drug prohibition fails everybody. That is why we believe currently illegal drugs should be legally regulated through a system of risk-based licensing.

In addition to our long-term goal, we work actively to support pragmatic changes to drug policy that can save lives today. These include decriminalisation and police diversion schemes, overdose prevention centres and drug safety checking.

Drug policy harms impact people across society. Through our Anyone's Child campaign, we provide opportunities for people with personal experiences of drug policy failures to be heard.

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Introduction

This is the third edition of our guide to regulating legal markets for the non-medical use of cannabis. It is for policy makers, reform advocates and affected communities all over the world who are seeing the legal regulation of cannabis move from the political margins decisively to the mainstream. The question is no longer just ‘*Should we maintain cannabis prohibition?*’ or ‘*How will legal regulation work in practice?*’, but also ‘*What can we learn from legalisation efforts so far?*’

Transform first published *How to Regulate Cannabis: A Practical Guide* in 2013, shortly after Colorado and Washington passed state-level initiatives to legalise cannabis, and shortly before licensed sales of cannabis began. Since then, the cannabis policy landscape has changed dramatically. As well as an ever-increasing number of state-level initiatives to legalise cannabis in the US, now well into the double figures, we have seen moves at a national level in Uruguay, Canada and Mexico, as well other states in the process of doing so, including Luxembourg, Switzerland, Germany, Israel, South Africa, and jurisdictions across the Caribbean. Transform has been there from the beginning, working, alongside its partner organisation México Unido Contra la Delincuencia, as consultant to the Government of Uruguay on its proposed cannabis regulation model. Subsequently Transform has acted as consultant to a number of other governments and jurisdictions including Canada and Luxembourg.

Cannabis regulation is no longer hypothetical, and the challenge is no longer to prove that workable frameworks exist; regulation has already been implemented in many different ways with differing impacts. Instead, the challenge now is to draw on best practice, learn lessons from early experiences, and make the case for optimising regulatory models to ensure they best protect the public, reduce harms and promote social justice. Reform is accelerating. We are fast approaching half a billion people living in legal cannabis jurisdictions. Emerging lessons from these new legal jurisdictions have been incorporated throughout this updated and expanded third edition.

Early experiences of cannabis legalisation have brought the issues of social and racial justice to the fore. In the US, fledgling social equity schemes have sought to promote market access to communities disproportionately impacted by the war on drugs – to varying degrees of success – while criminal record expungement schemes have received increasing attention. In this new edition, both of these areas receive detailed attention (in [Section 2G: Vendors](#); and [Chapter 3A: Past criminal records](#)) comparing approaches in different jurisdictions and drawing out best practice for those seeking to regulate cannabis going forward.

A related, pressing issue that requires specific attention is corporate capture (now discussed in a dedicated chapter, [Section 3B](#)). Without positive action from the outset, there is a real risk that the benefits of cannabis legalisation will not be received by those most harmed under prohibition, and in fact many of the dangerous market dynamics we have seen historically with tobacco and alcohol will be recreated. However, this does not have to happen. This guide spells out clearly the pitfalls to avoid, and the measures to be taken, in order to build a regulatory framework that truly works to promote public health and social justice.

Transform, working with international colleagues, has produced this guide to help those engaged in cannabis policy through the key practical challenges involved in developing and implementing an effective regulation approach. Rather than a ‘one-size-fits-all’ model, this guide makes broad recommendations that are flexible enough to help those interested in cannabis regulation to develop an approach appropriate to their local circumstances, and achieve a world where drug policy promotes health, protects the vulnerable and puts safety first.

- **Section 1** provides the **conceptual foundations** for a responsible regulatory approach.
- **Section 2** tackles the **details of how to regulate** the various aspects of a cannabis market, including key challenges and broad recommendations for best practice.
- **Section 3** focuses on **specific cannabis-related issues** that run parallel to wider market regulation questions, nationally and internationally.

Section 1

Foundations

Political context

The debate around the legalisation and regulation of cannabis has rumbled on ever since the drug was first prohibited. But it is finally nearing its end point. Support for a punitive prohibitionist approach is waning rapidly, while globally, support for pragmatic reform has passed a tipping point in mainstream political and public opinion. Since this book was first published in 2013, Uruguay, Canada, Mexico and 15 US states have moved to legally regulate cannabis – with further developments, imminent on every continent. As more of the world looks to drug law reform, this book provides important guidance on how to regulate cannabis in a way that protects public health and promotes social justice.

Cannabis is the world's most widely used illegal drug. The United Nations Office on Drugs and Crime (UNODC) estimates, probably conservatively, that 192 million people use it worldwide each year.¹ Retail expenditure on the drug is valued at between 40 and 120 billion euros.² For many years, this has provided a lucrative, untaxed income stream for unregulated suppliers and organised crime

¹ United Nations Office on Drugs and Crime (2020) *World Drug Report 2020*. <https://wdr.unodc.org/wdr2020/>

² Kilmer, B. and Pacula, R. (2009) *Estimating the size of the global drug market: A demand-side approach*, RAND Corporation. www.rand.org/pubs/technical_reports/TR711.html.

groups on the illegal market. As domestic markets are increasingly legally regulated, some of this revenue has re-directed towards governments, and licensed producers and vendors.

Nearly a century ago cannabis, along with other drugs, was identified as an *'evil'*, a threat to be fought in a winnable war that would completely eradicate the non-medical use of these drugs. The experience of the past 50 years demonstrates that prohibitionist policies have not, and cannot, achieve their stated aims.³ Worse still, as even the UNODC itself acknowledges, these policies are generating a range of disastrous *'unintended consequences'*.⁴ Given how well documented these are, they can no longer really be called *'unintended'* – they are simply the inevitable negative consequences of prohibition. Indeed the UNODC's own analysis demonstrates that it is the drug control system itself that is ultimately responsible for most drug related harms – including by creating the financial opportunity that enables transnational organised crime groups to compete for power with states across the world.

However, rather than focusing on reducing harm to individuals and society, fighting the two perceived *'threats'* – of drugs themselves and those who supply them – has often become an end in itself. This has been accompanied by a retreat into largely self-referential and self-justifying rhetoric that makes meaningful evaluation, review and debate difficult, while positioning those who advocate for change as somehow *'pro-drugs'*. As a result, we have had a high-

3 Werb, D. et al. (2013) *The temporal relationship between drug supply indicators: an audit of international government surveillance systems*, BMJ Open. www.bmjopen.bmj.com/content/3/9/e003077.full.

4 See: UNODC (2008) *2008 World Drug Report*, p.212. www.unodc.org/documents/wdr/WDR_2008/WDR_2008_eng_web.pdf; Rolles, S. et al. (2012) *The Alternative World Drug Report*, Count the Costs initiative. <https://transformdrugs.org/product/the-alternative-world-drug-report-2nd-edition/>; Reuter, P. (2009) *The unintended consequences of drug policies*, RAND Europe, prepared for the European Commission. www.rand.org/content/dam/rand/pubs/technical_reports/2009/RAND_TR706.pdf.

level policy environment that routinely ignores critical scientific thinking, and health and social policy norms.

The extent of this failure has been chronicled in detail by many hundreds of independent and objective assessments by government committees, academics, and non-governmental organisations across the world, over many decades.⁵

It is not the aim of this guide to explore this critique, though it is inevitably woven into much of the analysis because many of the current risks and harms associated with cannabis and cannabis markets are directly or indirectly due to prohibition. Aside from the harms associated with the mass criminalisation of people who use cannabis, and low level actors in cannabis markets, the lack of market regulation under the prohibitionist model maximises the risks associated with cannabis use and, by default, abdicates control of the market to unregulated entrepreneurs and organised crime groups.

This guide begins with the premise that not only has prohibition failed, but also that, at least for cannabis, this is rapidly becoming the consensus view. As a result, the debate has moved beyond whether prohibition is a good idea, or whether it can be tweaked and modified to work. The reality is that cannabis policy and law is now being actively reconsidered in mainstream public, media

5 Some examples include: International Drug Policy Consortium (IDPC) (2018) *Taking stock: A decade of drug policy — A civil society shadow report*. idpc.net/publications/2018/10/taking-stock-a-decade-of-drug-policy-a-civil-society-shadow-report; Reuter, P. and Trautmann, F. (eds) (2009) *A Report on Global Illicit Drugs Markets 1998-2007*, European Commission. www.tni.org/files/publication-downloads/global-illicit-markets-short.pdf; United Nations Development Programme (2015) *Addressing the Development Dimensions of Drug Policy*. www.undp.org/content/undp/en/home/librarypage/hiv-aids/addressing-the-development-dimensions-of-drug-policy.html; UN system coordination Task Team on the Implementation of the UN System Common Position on drug-related matters (2019) *What we have learned over the last ten years: A summary of knowledge acquired and produced by the UN system on drug-related matters*. https://www.unodc.org/documents/commissions/CND/2019/Contributions/UN_Entities/What_we_have_learned_over_the_last_ten_years_-_14_March_2019_-_w_signature.pdf; Transform Drug Policy Foundation (2016) *The Alternative World Drug Report, 2nd edition*. transformdrugs.org/wp-content/uploads/2018/10/AWDR-2nd-edition.pdf; See also the work of The Global Commission On Drug Policy. Reports available: www.globalcommissionondrugs.org/reports.

and political debate in many parts of the world, and numerous real reforms are already underway. Almost universally, these reforms are moving away from ‘war on drugs’ enforcement models, and towards less punitive approaches to people who use cannabis, with a greater emphasis on public health interventions, social justice and human rights, and now serious exploration of the legal regulation of cannabis production and availability.

Alongside Canada, Uruguay, Mexico, Malta and the 18 US states that have legalised non-medical cannabis in the past decade, numerous other jurisdictions are also in the process of developing regulations for legal sale, including Luxembourg, Switzerland, Germany, Israel, South Africa, and jurisdictions across the Caribbean. 36 US states have legally regulated medical cannabis in some form, while legislation proposed at a federal level would decriminalise and deschedule cannabis entirely, removing barriers for further state-level regulation.⁶ This is all part of a wider movement of progressive cannabis reform in recent years that has seen removal of criminal penalties for personal cannabis possession at national level in 25 countries worldwide, with multiple jurisdictions now also tolerating informal supply channels via cannabis social clubs and home growing (see [Section 2A](#)).⁷ A range of municipal and state-level initiatives have also been developed, including tolerated supply in Copenhagen, and more than 20 municipalities in the Netherlands, among others.⁸

Clearly the situation is evolving rapidly, and policymakers will need to monitor and incorporate lessons learnt. It is vital that

6 US Congress (2019-2020) H.R.3884 — MORE Act of 2020. <https://www.congress.gov/bill/116th-congress/house-bill/3884>

7 Talking Drugs, Release, International Drug Policy Consortium and Accountability International (2020) Drug Decriminalisation Across the World. <https://www.talkingdrugs.org/drug-decriminalisation>

8 Blickman, T. (2020) *Cannabis policy reform in Europe*, Transnational Institute. <https://www.tni.org/en/briefing/cannabis-policy-reform-europe>; Stanners, P., (2013) *Life after cannabis prohibition: The city announces its ambitions*, Copenhagen Post, 15th March. <https://cphpost.dk/?p=9247>; de Graaf, P. (2013) *Burgemeesters werken aan manifest voor legalisering wietteelt*, Volkskrant.nl. <http://www.volkskrant.nl/vk/nl/2686/Binnenland/article/detail/3565577/2013/12/20/Burgemeestersmanifest-voorlegalisering-wietteelt.dhtml>

new regulations draw from the successes and failures in the US, Canada, Uruguay, Mexico and elsewhere, and civil society has an important role to play in identifying and spelling out good practice as it develops. Wider reforms are also being discussed on the international stage, as other nations, particularly in Latin America, call for alternative approaches to simply prohibiting all drugs. In a joint declaration at the 2012 UN General Assembly, the presidents of Guatemala, Colombia and Mexico formally urged the UN to review the current drug control system and, *'analyse all available options, including regulatory or market measures'*.⁹ As a result of these calls, the UN held a General Assembly Special Session in April 2016 to review responses to *'the world drug problem'*. The UN Secretary-General supported this process, urging member States to: *'use these opportunities to conduct a wide-ranging and open debate that considers all options.'*¹⁰ While this event did not ultimately find a way for the international drug control system to accommodate the growing calls from member states for reform, regulation was advocated in the General Assembly by nine member states, and the issue dominated much of the satellite discussions.

This high-level political shift was also reflected in the groundbreaking 2013 report from the Organization of American States, which recommended the decriminalisation of personal drug possession and use, and noted on the cannabis legalisation question that, *'Sooner or later, decisions in this area will need to be taken'*.¹¹ Most significantly, it mapped out a credible route through which cannabis regulation could be explored at domestic and UN levels¹² (see [Cannabis and the UN drug conventions, Section 3G](#)).

⁹ Joint declaration of Colombia, Guatemala and Mexico to the United Nations General Assembly (2012) https://mision.sre.gob.mx/onu/images/dec_con_drogas_esp.pdf

¹⁰ United Nations (2013), Secretary-General's remarks at special event on the International Day Against Drug Abuse and Illicit Trafficking New York, 26th June. www.un.org/sg/statements/index.asp?nid=6935.

¹¹ Organization of American States (2013) *The Drug Problem in the Americas*, p.104. www.oas.org/documents/eng/press/Introduction_and_Analytical_Report.pdf

¹² Ibid

In 2019, the World Health Organization (WHO) recommended removing cannabis from Schedule 4 of the 1961 drug convention. While this move in itself would not affect the international control of cannabis for non-medical purposes, it would serve to acknowledge the increasingly recognised medical properties of cannabis. However, the political situation of cannabis at an international level was perceived as so volatile, and the international framework mandating its control so vulnerable, that the UN Commission on Narcotic Drugs (CND) twice voted to delay a vote on the rescheduling, putting off the inevitable.¹³ Clearly, it was feared that even such a small, symbolic move could cause unstoppable tremors to the creaking structure of international drug control. In December 2020, the vote was finally able to go ahead, and the CND voted to remove cannabis from Schedule 4 (for more discussion on the UN conventions, see [Section 3G](#))¹⁴

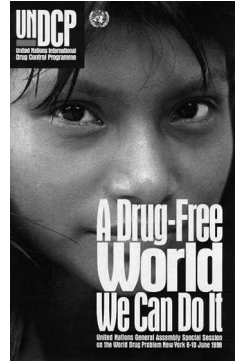
This guide is needed, not just because the legalisation and regulation debate has moved from the margins to the political mainstream, but because it has now moved from theory to reality. In turn, the realities of cannabis regulation in practice provide an instructive evidence base from which we must learn; they offer vital guidance and good practice on how cannabis can be regulated most effectively, as well as showing where policy design can potentially fall short or go wrong. We, as policymakers, concerned citizens, or reform advocates have a responsibility to make sure regulation is done in the right way, and achieves the aims we all seek.

¹³ Fordham, A, *In the heartbeat before global lockdown: Business as usual in Vienna drugs debate*, International Drug Policy Consortium, 06/04/2020. <https://idpc.net/blog/2020/04/in-the-heartbeat-before-global-lockdown-business-as-usual-in-vienna-drugs-debate>

¹⁴ IDPC et al (2020) *UN green lights medicinal cannabis but fails to challenge colonial legacy of its prohibition*. <https://idpc.net/media/press-releases/2020/12/un-green-lights-medicinal-cannabis-but-fails-to-challenge-colonial-legacy-of-its-prohibition?>

Aims and principles of effective cannabis regulation

Clear principles and aims are essential both for developing policy, and for evaluating its impacts to facilitate future improvement. Yet these have often been absent in both cannabis and broader drug policy, replaced by vague aims like *'sending out the right message'*, or lost in simplistic *'tough on drugs'* populism: *'Drugs are evil – therefore we must fight them'*. Regulatory policy must be different; it must be rooted in key aims against which performance can be measured. When Canada legally regulated cannabis in 2018, the federal government outlined its key aims of regulation from the outset: to protect children, to promote public health, and to reduce criminality. The government was criticised for principles it did not incorporate – social justice being a key one – but, nonetheless, clearly outlining its policy intentions has allowed the Canadian government to evaluate measures more effectively.



Poster from the 1988 UN General Assembly Special Session on the World Drug Problem

Historically, when aims have been outlined they have often reflected the ideological or political preoccupations of prohibitionists, meaning they are overly focused either on catching and punishing people who use or sell drugs, or on reducing or even eliminating use (often with specific reference to achieving a *'drug-free world'*) – the key aim to which all others have historically become subservient.¹⁵

¹⁵ For discussion, see: Rolles, S. *The rise and fall of the 'drug free world' narrative*, in: Bewley-Taylor, D.R. and Tinasti, K. (eds) (2020) *Research Handbook on International Drug Policy*, Cheltenham: Edward Elgar Publishing.

The moral question also looms large in drug policy debates. A simplistic understanding of illegal drug use as fundamentally immoral, or even ‘evil’, provides all the justification many need for a punitive enforcement response. We argue there is a key distinction between moral judgements on individual private conduct, and moral policy and law making.¹⁶ Ultimately, our goal is to present and explore a range of policies and measures that minimise the potential harms and maximise the potential benefits associated with cannabis, both on a personal and societal level. Transform has referred to this pragmatic approach as the ‘*ethics of effectiveness*’.¹⁷

To some, the legal regulation of cannabis may appear radical. But the legal and historical evidence demonstrates that, in fact, it is prohibition that is the radical policy. The legal regulation of drug production, supply and use is far more in line with currently accepted ways of managing health and social risks in almost all other spheres of life. So, far from being radical, this guide simply proposes that we extend established principles of risk management to an area where they have rarely been applied. The general principles of effective regulation outlined in the box below are adapted from those used by the New Zealand Government, but are similar to those used by most governments, and are a good starting point for discussion.

¹⁶ Ibid.

¹⁷ Rolles, S. (2009) *After the War on Drugs: Blueprint for Regulation*, Transform. www.tdpf.org.uk.

How do we know regulations are fit for purpose¹⁸

Proportionality

The burden of rules and their enforcement should be proportionate to the benefits that are expected to result. Another way to describe this principle is to place the emphasis on a risk-based, cost-benefit regulatory framework and risk-based decision-making by regulators. This would include that a regime is effective and that any change has benefits that outweigh the costs of disruption.

Certainty

The regulatory system should be predictable to provide certainty to regulated entities, and be consistent with other policies (in this case, for example, alcohol and tobacco regulation). However, there can be a tension between certainty and flexibility.

Flexibility

Regulated entities should have scope to adopt least cost and innovative approaches to meeting legal obligations. A regulatory regime is flexible if the underlying regulatory approach is principles or performance-based, and policies and procedures are in place to ensure that it is administered flexibly, and non-regulatory measures, including self-regulation, are used wherever possible.

Durability

The principle of durability is closely associated with flexibility; the regulatory system should have the capacity to evolve to respond to new information and changing circumstances. Flexibility and durability can be two sides of the same coin; a regime that is flexible is more likely to be durable, so long as the conditions are in place for the regime to 'learn'. Indicators of durability are that feedback systems are in place to assess how the legal/policy framework is working in practice; decisions are reassessed at regular intervals and when new information comes to hand; and the regulatory regime is up-to-date with technological change, and external innovation.

Transparency and Accountability

This is reflected in the principle that rules development and enforcement should be transparent. In essence, regulators must be able to justify decisions and be subject to public scrutiny. This principle also includes non-discrimination, provision for appeals and sound legal basis for decisions.

¹⁸ Adapted from: New Zealand Government (2012) *The Best Practice Regulation Model: Principles and Assessments*, p.9. www.treasury.govt.nz/economy/regulation/bestpractice/bpregmodel-jul12.pdf.

Capable Regulators

This means that the regulator has the people and systems necessary to operate an efficient and effective regulatory regime. A key indicator is that capability assessments occur at regular intervals, and are subject to independent input or review.

Appropriate Weighting of Economic Objectives

Economic objectives are given an appropriate weighting relative to other specified objectives. These other objectives could be related to health, safety or environmental protection, or consumer and investor protection. Economic objectives include impacts on competition, innovation, exports, compliance costs and trade and investment openness.

Transform propose the following seven key aims for cannabis policy:

- Respect, protect and promote human rights
- Protect and promote public health
- Promote social equity, improve development opportunities and ensure communities most impacted by prohibition are included in policy development
- Reduce crime, corruption and violence associated with drug supply
- Protect against excessive corporate influence on policy making
- Limit the incentives for profit-making driven by problematic use
- Protect the young and vulnerable from potential harms
- Incorporate clear outcome indicators, measures of success and evaluation processes

Each of these key aims has sub-aims, many of which this guide explores in more detail. To be useful for policy making and impact evaluation, aims need meaningful and measurable performance indicators attached to them. Baselines should be therefore set

before legal markets are open to ensure that successes and failures can be measured accurately.¹⁹

The seven key aims are presented in no particular order, and their ranking will depend on the needs and priorities of a specific jurisdiction – for example, reducing the impact of illegal cannabis farming on environmentally sensitive areas, or reducing racial disparities in criminal justice outcomes. In all cases, aims will have to be balanced carefully, and prioritised prudently when in conflict.

As discussed later in this chapter (**Getting the balance right**), determining the balance of conflicting priorities is an important factor in shaping the precise contours of any regulatory framework. This reinforces the importance of ensuring a diverse group of stakeholders from identified priority areas, including people who use cannabis and other impacted communities, are involved in decision making from the outset.²⁰ Furthermore, any jurisdiction introducing a new framework for cannabis regulation will inevitably be working within a set of constraints specific to their locale. They will need to:

- Meet any requirements of the process that led to implementation. For example, the authorities implementing models in Washington and Colorado were bound by the wording of the ballot initiatives that mandated them, while in Canada authorities were bound by the promises of the elected government
- Negotiate the local legal and policy environment, as well as the overarching framework of international law. For example,

¹⁹ See, for example, measures taken in Canada: Statistics Canada (2018) Cannabis Stats Hub. <https://www150.statcan.gc.ca/n1/pub/13-610-x/13-610-x2018001-eng.htm>

²⁰ Røgeberg, O. et al (2018) A new approach to formulating and appraising drug policy: A multi-criterion decision analysis applied to alcohol and cannabis regulation, *Int J Drug Policy* 56, pp144-152. <https://pubmed.ncbi.nlm.nih.gov/29459211/>

in the US cannabis remains illegal at the federal level, placing major restrictions on state-level regulators – as a result, no US state-owned production or retail is possible because that would require government employees to break federal law. In Spain, the cannabis social club model has had to evolve within the confines of domestic decriminalisation policy (requiring non-profit production and supply), and avoid breaching UN treaty commitments prohibiting formally licensed supply

- Manage the concerns of local communities. Cannabis sale may remain a divisive topic, with levels of support varying across different communities, even where a majority of residents are in favour. In US states where cannabis regulation has been approved by popular vote, many individual municipalities have still subsequently decided to prohibit retail in their own jurisdiction.²¹ Governments must ensure that the concerns of local communities are accounted for, but not allow this to undermine the aims of regulation.
- Fit with a wide range of existing laws and regulations for other drugs or risky products or activities such as those governing poisons, food safety, medicines, or driving. They should also fit in with wider laws and regulations relevant to the industry, including standards and regimes preventing labour exploitation in the workplace
- Fit with cultural and political norms. For example, in the US there is greater hostility towards government intervention in markets than in many other countries, while in many others there is hostility towards corporations dominating market space at the expense of small and local businesses

²¹ Slade, H. (2020) *Altered States: Cannabis regulation in the US*, Transform Drug Policy Foundation.
<https://transformdrugs.org/product/alterd-states-cannabis-regulation-in-the-us/>

- Be realistic economically. If the regulatory requirements are too costly to implement, the model will be unsustainable
- Be feasible politically. For example, the need to assuage hostility from the public, political opponents, and neighbouring countries has shaped the development of Uruguay's more restrictive government-controlled regulatory model

It is important to be clear that legal regulation is not a '*silver bullet*' or panacea for '*the drug problem*'. It will not eliminate problematic or harmful cannabis use, nor will it entirely eliminate the illegal market. Prohibition cannot produce a drug-free world; regulatory models cannot produce a harm-free world. Legal regulation seeks to reduce or eliminate the harms created or exacerbated specifically by prohibition and the resulting illegal markets. It is therefore useful to distinguish between the aims of drug policy reform (essentially reducing or eliminating the harms relating to prohibition: primarily the criminalisation of people who use drugs, and harms stemming from unregulated trade²²) and the wider aims of an effective drug policy post-prohibition (the seven aims detailed [above](#)).

Approaches to cannabis policy post-prohibition will be fundamentally similar to those for alcohol, tobacco and other drugs. From a public health perspective, the aims of policy and the regulatory tools for achieving these aims are almost identical. However, outside of this, areas that will require much greater focus for cannabis policy than for tobacco or alcohol are the promotion of social justice and protection of human rights. Alcohol and tobacco policy have not had such a recent history of being used as a tool for oppression of minority groups in the way that cannabis policy has. Nor have alcohol and tobacco policy facilitated the criminalisation of entire

²² For a detailed consideration of these policy-related harms see the publications of the 'Count the Costs' initiative: <https://transformdrugs.org/publications>

communities or the phenomenon of mass incarceration. Cannabis policy reform cannot start from a blank slate: it must acknowledge the devastating, targeted harms that have been experienced by, primarily, Black, minority ethnic, indigenous, and socially and economically marginalised communities. New cannabis markets must not recreate and entrench the same inequalities that were experienced under prohibition. Cannabis policy should seek to repair historic harms experienced under prohibition and ensure equitable access to any benefits stemming from new markets going forward.

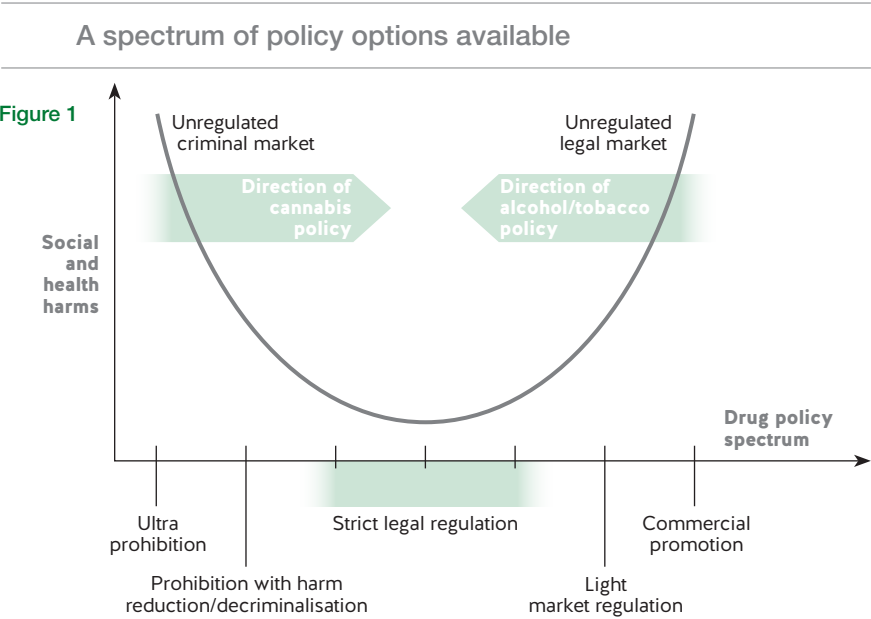
Aside from this, it will become increasingly important to see cannabis within the bigger picture of drug policy making, not isolated or in some way a '*special case*'. Cannabis, tobacco and alcohol are all drugs that people enjoy recreationally and carry individualised degrees of risk. The ongoing process of establishing effective regulation models for cannabis markets is naturally mirrored by the process of improving regulation models for alcohol and tobacco – and it is of course both consistent and logical to advocate for both (see [A spectrum of policy options available](#), below). As the drug policy reform debate evolves beyond cannabis, this thinking will naturally encompass other drugs including psychedelics, stimulants and depressants.²³

To meaningfully address the wider challenges of cannabis or other drug misuse requires improving public health education, prevention, treatment and recovery, as well as action on poverty, inequality, social exclusion and discrimination. But by implementing regulatory models based on clear and comprehensive policy aims and principles, by removing political and institutional obstacles, and by freeing up resources for evidence-based public health and social interventions, legal regulation can potentially create a

23 Rolles, S., Slade, H. and Nicholls, J. (2020) *How to regulate stimulants: a practical guide*, Transform Drug Policy Foundation. <https://transformdrugs.org/product/how-to-regulate-stimulants-a-practical-guide/>

more conducive environment for achieving improved drug policy outcomes in the longer term.²⁴ So reform can not only reduce prohibition harms, but also create opportunities and benefits.

This guide focuses specifically on the market regulation dimension of cannabis policy. While there are clear implications and overlaps with prevention, education and treatment, these important policy areas are not dealt with in any detail.



As this graphic shows, there is a spectrum of legal/policy frameworks available for regulating the production, supply and use

²⁴ See Rolles, S. et al (2014) *Ending the War on Drugs: How to Win the Global Drug Policy Debate*, Transform Drug Policy Foundation/MUCD.
<https://transformdrugs.org/publications/ending-the-war-on-drugs-how-to-win-the-global-drug-policy-debate>

of non-medical psychoactive drugs – in this case, cannabis.²⁵ At one extreme are the illegal markets created by absolute prohibition, moving through less punitive prohibition-based models, partial/*de facto*/quasi-legal supply models, legally regulated market models with various levels of restrictiveness, to legal/commercial free markets at the other extreme.

The question is, what kind of regulation model will most effectively achieve the policy aims of any given jurisdiction?

At either end of this spectrum are effectively unregulated markets. The models advocated in this guide are based on the proposition that both of these options are associated with unacceptably high social and health costs because there is no way to curb the dominant profit motive of actors in control of the market. Between these extremes exists a range of options for legally regulating different aspects of the market in ways that can minimise the potential harms associated with cannabis use and cannabis markets, while maximising potential benefits.

Given the reality of continuing high demand for cannabis, and the resilience of illegal supply in meeting this demand, the regulated market models found in this central part of the spectrum will best be able to deliver the outcomes we all seek. Contrary to the suggestion that such reform is '*liberalisation*', drug market regulation is a pragmatic position that involves introducing strict government control into a marketplace where currently there is little or none.

It is interesting to note how many governments that strongly resist the legalisation and regulation of cannabis are, nonetheless, moving

²⁵ Adapted from an original concept by John Marks: Marks, J. (1987) *The Paradox of Prohibition*, *Mersey Drugs Journal* 1.

towards this graphic's centre ground – in particular adopting less punitive approaches towards people who use cannabis, and emphasising public health interventions and treatment-based alternatives to incarceration. This '*gentler prohibition*' approach was prominent in rhetoric from the US Government in the early 2010s, which claimed to represent a '*middle way*' between the '*extremes*' of '*legalisation*' and a '*war on drugs*'. While this line of argument relies on misrepresenting the reform position with numerous straw man arguments, the fact there is even rhetorical movement towards the centre can be seen as positive change, and in fact, in the case of the US, was followed by 15 states moving to legalise non-medical cannabis between the years 2013–20, with more likely to follow.

This tussle over who occupies the pragmatic middle ground between advocates of '*gentler prohibition*' and advocates of pragmatic regulation is likely to remain a defining feature of the debate in the coming years. The reality is that this tussle indicates how most people in the debate are, in fact, nearer to the centre, and to each other, than the polarised caricatures of much media debate might suggest. The aims of regulation outlined in this book, for instance, would likely find broad agreement as principles across the spectrum of views. We hope that this guide can be a useful tool for constructively bringing some on the prohibitionist side of the fence into the debate by asking: '*If we do move towards regulation, how do you think it should function?*''²⁶ We have already witnessed this kind of '*not if, but how*' engagement in the US federal government's response to state-level regulation initiatives. The *Cole Memorandum*, issued by the Deputy Attorney General to all US Attorneys in 2013, outlined eight priority areas for federal law enforcement,

²⁶ How to constructively engage with opponents in the debate is explored in Transform/MUCD's 2014 publication: *Ending the War on Drugs: How to Win the Global Drug Policy Debate*, available at <https://transformdrugs.org/publications/ending-the-war-on-drugs-how-to-win-the-global-drug-policy-debate>.

including preventing sale to minors and preventing cannabis use on federal property.²⁷ The memorandum has effectively served as a tacit framework for state-level regulation; so long as states stay within these parameters, theoretically, federal enforcement action will not be taken. The wave of state-level regulation efforts that subsequently took place have now been followed by genuine efforts to decriminalise and deschedule cannabis at a federal level (leaving no legal barriers to state-level legalisation), through the MORE Act co-sponsored by Vice President Kamala Harris.²⁸ Not only does the Act seek to explicitly permit state-level regulation, it seeks to expunge historic convictions and boost social equity in local markets – demonstrating how the question has truly become *how* we regulate – and what aims we pursue – not *if*.

Legal regulation of cannabis markets: what it is and isn't

Historically, the drugs debate has been characterised by the imprecise or inconsistent use of key terms, inevitably leading to misunderstandings and myths about what is in reality being advocated by proponents of drug policy reform. For a clear sense of what the legal regulation of cannabis markets could look like, it is therefore necessary to clarify some of the terminology commonly used to describe options for reform.

In much of the debate on drug policy, '*decriminalisation*' is used interchangeably with '*legalisation*' or '*legal regulation*'. Yet these terms mean very different things. While not a formal legal term, decriminalisation is generally understood to refer to the removal of

²⁷ Cole, J. M. (2013) Memorandum for all United States Attorneys, US Department of Justice, Office of the Deputy Attorney General. www.justice.gov/iso/opa/resources/3052013829132756857467.pdf.

²⁸ US Congress, 116th Congress (2019-2020) H.R.3884 — MORE Act of 2020. <https://www.congress.gov/bill/116th-congress/house-bill/3884>

criminal sanctions for certain offences – usually the possession of small quantities of currently illegal drugs for personal use, although sometimes including small scale cultivation for personal use, or as part of non-profit co-operatives.²⁹ However, civil or administrative sanctions, such as fines or treatment assessments often remain. The threshold for, as well as the nature of, such sanctions varies across the jurisdictions operating models of decriminalisation. Decriminalisation can also be implemented formally, through legislation or court decisions (*de jure*) or less formally, through the practice of police or prosecutors to refrain from arresting or charging individuals for activities that remain an offence in law but are tolerated in practice (*de facto*).

So, in the case of decriminalisation, the mere possession of drugs often remains a punishable offence – albeit one that no longer attracts a criminal record. Commercial production and supply also generally remain offences, meaning cannabis demand is still being met by the illegal market. Decriminalisation is one example of ‘*alternatives to incarceration*’, a broader term with which decriminalisation is sometimes conflated. Alternatives to incarceration may include scenarios in which people receive a criminal record for a particular offence even if they are not incarcerated. Another example of an ‘*alternative to incarceration*’ is pre- or post-arrest diversion programmes, including ‘*drug courts*’. Drug courts often maintain a coercive threat of criminalisation or incarceration, either to encourage participation, or for breach of programme conditions, and as such should also not be confused with ‘*decriminalisation*’ – even if avoidance of a criminal record is a possible outcome.

²⁹ In the US, the term is sometimes used more narrowly to mean that you can no longer go to prison for a particular offence – but it is still deemed a criminal infraction or misdemeanour (this describes some of the US ‘*decrim states*’).

By contrast, any form of legalisation and regulation necessarily entails the removal of all types of penalty – criminal or administrative – for production, supply and possession that takes place within the parameters of the regulatory framework. Activities that take place outside any regulatory framework, such as sales to minors, are still subject to sanctions (though the nature of sanction may vary) in order to encourage compliance with the regulatory framework. Legal regulation can also be on a *de facto* basis: in the Netherlands, for example, the possession and retail supply of cannabis is still prohibited under law, yet is *de facto* legal, given it is tolerated within the licensing framework of the country's cannabis '*coffee shops*'.

Finally, while they are inherently related, it is useful to differentiate between the terms '*legal regulation*' and '*legalisation*'. Legalisation is merely a process – essentially, of making something illegal, legal. Legal regulation, on the other hand, is the end point of this process, referring to the development of a system of rules that govern the product or activities related to its production, supply and use. These rules are necessary in order to implement the key aims of drug policy outlined at the beginning of this section. Consequently, just calling for the legalisation of cannabis alone could reasonably be mistaken as a proposal for precisely the sort of unregulated commercial market that Transform and most drug policy reform advocates do not support. '*Legally regulated cannabis markets*' or '*legalisation and regulation*' are more useful descriptive terms.

Summary of cannabis regulation models

This section outlines a summary of cannabis regulation models available, many of which are already in place in different parts of the world. Some points should be noted:

- Combinations of these policy models are possible. For example, Uruguay, Canada and some US states have parallel provisions for personal cultivation, and Uruguay additionally permits cannabis social clubs alongside licensed legal production and sales
- These models are ordered from the most to the least restrictive
- Within each model there remains considerable variation in the detail of the policy, and how it is or could be implemented and enforced in different jurisdictions
- These models primarily refer to *'bricks and mortar'* retail of cannabis, via physical retail stores. Online retail is an additional possibility that should be considered as part of regulation (serving a vital role in making the legal market accessible for those unable to access nearby stores), and the same principles outlined below apply for online retail, too

1 Prohibition of all production, supply and use

Penalties for violations of prohibitions can vary dramatically, from fines, formal warnings and cautions, through to criminal prosecutions and incarceration, and in extreme cases, use of the death penalty

Examples

This has been the default system for most of the world for more than 50 years

Pros

- Argument is made that prevalence of use is reduced or contained through a combination of deterrent effect and restricted availability. There is, however, little evidence to support either of these claims³⁰

Cons

- Law enforcement (including stop and search, arrests and imprisonment) is disproportionately focused on Black and minority ethnic people
- Continued prohibition in the face of high or growing demand incurs substantial financial costs throughout the criminal justice system (CJS) including overcrowded prisons
- Facilitates mass criminalisation and punishes vulnerable people rather than supporting them
- Government forfeits any ability to regulate key aspects of the market, or to generate tax revenue
- Market is controlled by unregulated actors and organised crime groups by default
- Millions consume unregulated products of unknown safety and quality

³⁰ Murkin, G. (2016) *Will drug use rise? Exploring a key concern about decriminalising or regulating drugs*, Transform Drug Policy Foundation.
<https://transformdrugs.org/publications/will-drug-use-rise-exploring-a-key-concern-about-decriminalising-or-regulating-drugs>

2 Legal production and supply for medical use only

Cannabis may be legally produced and supplied, but only for medical use. Production and supply of cannabis for non-medical purposes is still prohibited. Available products range from herbal cannabis to cannabis preparations and extracts. For more on medical cannabis regulation see [Section 3D](#)

Examples

Various US states,³¹ the United Kingdom, Czechia, Germany, Chile and others

Pros

- Allows patients access to potential medical benefits of cannabis or cannabis products
- Facilitates research into medical uses that may otherwise be hindered

Cons

- Same as model 1 above
 - Potential for confusion and tensions between medical and non-medical regulatory systems, particularly while wider non-medical prohibitions remain in place
- Inadequate regulation of medical models can:
- Create potential for leakage into non-medical supply
 - Lead to sub-standard medical advice for patients, and poor quality control of medicinal cannabis products

³¹ Updates on the number of states that have legalised cannabis for medical use are available here: medicalmarijuana.procon.org/view.resource.php?resourceID=000881.

3 Prohibition of production and supply — with decriminalisation of possession for personal use

Maintains prohibition on production and supply but removes criminal penalties for possession of small quantities for personal use. Thresholds for personal possession vary, as does the level of non-criminal penalties applied (they usually include confiscation, but may additionally include fines, mandatory treatment screenings, or other penalties). Policy can be *de facto* or *de jure* (see **Legal regulation of cannabis markets: what it is and isn't**, above)

Examples

Around 25 countries internationally — a world map of decriminalisation has been produced by a group of organisations working in drug policy reform and can be viewed online.³²

Pros

- Reduces costs across the CJS
- Removes stigma of criminality from users
- Can facilitate public health interventions by redirecting CJS expenditure, and removing a barrier that deters problematic users seeking help

Cons

- Does not address harms associated with criminal market and may potentially facilitate some forms of market-related criminality
- If inadequately implemented, can lead to more people coming into contact with the CJS (particularly where enforcement budgets are linked to revenue from fines)
- Non-criminal sanctions may still be disproportionate.
- Non-payment of fines may lead to criminal sanctions, particularly for low-income populations, potentially exacerbating racial disparities or other forms of discrimination in law enforcement
- As law enforcement still seeks to combat production and supply, law enforcement is often still disproportionately focused on Black and minority ethnic groups³³

³² Talking Drugs, Release, International Drug Policy Consortium and Accountability International (2020) *Drug Decriminalisation Across the World*. <https://www.talkingdrugs.org/drug-decriminalisation>

³³ ACLU (2020) *A Tale of Two Countries: Racially Targeted Arrests in the Era of Marijuana Reform*. <https://www.aclu.org/report/tale-two-countries-racially-targeted-arrests-era-marijuana-reform>

4 Prohibition of production and supply — with decriminalisation of possession for personal use, and some retail sales

The same as model 3, but with additional decriminalisation and a licensing model for commercial retail sales, and/or premises for sale and consumption. Supply to retail outlets continues to be illegal

Examples

- Dutch '*coffee shop*' model ³⁴
- Some localised informal models in European cities, Australia and East Asia

Pros

- Reduces illicit market sales and related problems
- Allows for regulation of outlets and vendors
- Allows for limited regulation of products
- Generates tax revenue from profits and staff earnings and corporate profits (although not from sales taxes on products)
- Separates cannabis consumers from illicit market for more risky drugs

Cons

- The '*backdoor problem*' — production and supply to the Dutch coffee shops is via the illegal market. Criminality associated with this market remains
- Inability to tax products which remain nominally illegal
- Inconsistencies between the law and policy practice/objectives

³⁴ Under a new plan, a limited number of coffeeshops in 10 Netherlands municipalities are set to sell cannabis cultivated legally by producers licensed by the Dutch government. As part of the plans, the licensed growers will be responsible for distributing cannabis to the coffeeshops. See [Section 2A](#) on [Production](#).

5 Prohibition of production and supply — with decriminalisation of small-scale personal cultivation and cannabis social clubs

Extends decriminalisation of personal possession to tolerate personal cultivation of a small number of plants for personal use. Has also led to membership-based cannabis cooperatives or '*cannabis social clubs*' (CSCs) in some places, whereby groups of people who use cannabis delegate their '*allowance*' to a grower who then supplies the group members within a self-regulated non-profit co-op framework (see [Spain's cannabis social clubs](#) in [Section 2A: Production](#))

Examples

- Personal cultivation is tolerated or allowed in, among other places, Belgium, Spain, the Netherlands, and Switzerland
- Personal cultivation and cannabis social clubs are tolerated in some regions of Spain, and on a smaller scale in Belgium and Switzerland.

Pros

- Reduces size of illicit trade and associated harms
- Removes need for some users to interact with the illegal market
- Can usefully operate in a period of transition to wider legal regulation while retail markets are being developed, to allow limited access to a legal supply of cannabis

Cons

- Informal CSCs within a decriminalisation model lack legal basis or legislated regulatory framework to ensure best practice
- As the CSC model expands, maintaining effective self-regulation and non-profit ethos becomes difficult without more formal controls
- Some potential tax revenue from retail sales may be forfeited with home growing
- Restricts access to those with growing facilities or particular social networks and access to CSCs, so may discriminate against certain marginalised populations

6 Regulated legal production and supply – entirely under government monopoly

Production and supply is legalised and regulated, but only government agencies are authorised to produce or supply cannabis, and independent commercial actors are prevented from entering the legal market

Examples

- Government monopolies on alcohol, such as the Russian Government's monopoly on vodka until 1992
- Chinese Government maintains a virtual monopoly on tobacco production/retail
- Most remaining tobacco and alcohol examples involve a government monopoly on only part of the market – see [model 7](#)

Pros

- Allows for strict regulation of outlets, vendors, and products, to ensure market operates in line with regulatory aims
- Commercial profit motive entirely removed from market may allow greater focus on public health
- All revenues and profits accrue to the government

Cons

- Profits generated by government monopolies have the potential to distort government policy priorities
- Potential for market distortions and negative consequences if models are overly restrictive or do not adequately meet demand (in terms of either quantity produced or range of products available)
- Requires enforcement against unlicensed sales outside the monopolistic market
- May result in a slower transition of consumers to the legal cannabis market owing to lack of competition
- Provides no space for groups disproportionately impacted under prohibition to develop and own businesses in the industry

7 Regulated legal production and supply – allowing limited private actor involvement

Legal, regulated market, with a government monopoly on certain elements of the market – most likely at the retail stage – but allowing private actor involvement (either from commercial actors, social enterprises or not for profit actors) in other areas (for instance, production)

Examples

- Various examples in alcohol and tobacco control models³⁵
- Uruguay's model of legal cannabis regulation (where a Government agency is the sole buyer from licensed producers, and sole supplier to licensed pharmacy vendors)
- Quebec, Nova Scotia, Northwest Territories and Prince Edward Island in Canada (New Brunswick's government-controlled retail arm is out to tender at the time of writing)³⁶
- Borland 'Regulated Market Model' (see [Section 2A: Production](#) for further discussion)

Pros

- Commercial activity and competition in parts of the market may drive innovation, efficiencies, improvements in product standards
- Allows government to maintain direct control over aspects of the market to ensure they operate in line with regulatory aims³⁷
- Generates government revenue from taxation

Cons

- For monopoly elements, see problems outlined in model 6
- Risk of over-commercialisation, as well as commercial industry lobbying, where competition is allowed

³⁵ Examples include: 'Systembolaget' in Sweden, 'Alko' in Finland, 'Vinbúð' in Iceland, 'Vinmonopolet' in Norway, 'SAQ' in Quebec, Canada, and the 'LCBO' in Ontario, Canada

³⁶ Slade, H. (2020) *Capturing the Market: Cannabis regulation in Canada*, Transform. <https://transformdrugs.org/product/capturing-the-market/>

³⁷ See: Room R. and Cisneros Örnberg, J (2019) *Government monopoly as an instrument for public health and welfare: lessons for cannabis from experience with alcohol monopolies*, *Int J Drug Policy* 74, pp223–8; Her, M., et al. (1999) *Privatizing alcohol sales and alcohol consumption: evidence and implications*, *Addiction* 94, pp1125–39; Babor T. et al. (2010) *Alcohol: No Ordinary Commodity Research and Public Policy*, 2nd edn, Oxford University Press.

8 Regulated legal production and supply – licensed producers and/or licensed vendors

Regulated commercial market model comparable to many that already exist for alcohol and tobacco. Detail of the licensing and regulatory framework can vary widely in terms of controls over products, vendors, retail outlets, marketing, and access to markets. Licensed actors can still be non-profits or social enterprises, as in model 7, while co-operatives and cannabis social clubs can also be allowed to operate in parallel.

Examples

- Various alcohol and tobacco control regimes
- Cannabis regulation models in most legalising US states, as well as several Canadian provinces including Manitoba, Ontario, and Newfoundland and Labrador

Pros

- Competition may drive up market standards, innovation and efficiencies, and encourage consumers over to legal market more quickly
- Maintains ability of government to intervene in key aspects of the market and reduce the risks of over-commercialisation
- Price controls can still be implemented directly through minimum pricing and indirectly through varying levels of taxation
- Allows for development of social equity schemes designed to promote industry access to communities disproportionately impacted by law enforcement under prohibition

Cons

- Risk of over-commercialisation (and rising use/health harms) if regulation of retail sales and marketing is inadequate
- Without adequate regulation, risk of market capture by a small group of corporate actors, unfavourable to social equity aims
- In the event of corporate capture, actors may obtain extensive lobbying power to push for profit-driven amendments to regulation contrary to public health aims

9 Largely unregulated commercial market

Largely unregulated legal market, or '*supermarket model*', in which products are subject only to basic trading standards and product controls similar to those that exist for foods or beverages. Vendors may provide additional self-regulation

Examples

- Regulation of caffeine products

Pros

- Minimal regulatory costs
- Minimal government interference with commercial freedoms
- Competition likely to drive down prices for consumers

Cons

- Relies on self-regulation by vendors, and experience from unregulated alcohol and tobacco markets suggests profit-motivated entities are unlikely to act in the best interests of public health and wellbeing
- Increased risk of over-commercialisation and high likelihood of corporate capture, at the expense of smaller businesses
- Falling prices and unregulated marketing could lead to increased or irresponsible use and health harms

Learning from the successes and failings of alcohol and tobacco regulation

Alcohol and tobacco are the most widely used drugs, that, in most jurisdictions, are legal to produce, sell and consume.³⁸ They are subject to various policy responses around the world, ranging from absolute prohibition, through differing regulation models, to unregulated free markets. As a result, they provide invaluable lessons for developing effective cannabis regulation models – a running theme throughout this guide.

While there are key similarities, there are also important differences between alcohol, tobacco and cannabis – regarding their effects, risks, the way they are used, and the evidence supporting current and proposed policy interventions – which are worth noting when trying to transfer lessons between the policy experiences of these drugs.

One important distinction between reform of alcohol and tobacco regulation and attempts to regulate currently illegal drugs is that policy development is starting from a very different place.

A recurring issue in alcohol and tobacco policy literature is the conflict between public health policy and alcohol and tobacco industries as commercially driven entities. This raises concerns for cannabis policy and law reform. Commercial alcohol and tobacco producers and suppliers are profit-seeking entrepreneurs who see their respective markets from a commercial rather than a public health perspective, primarily because they rarely bear the secondary costs of problematic use.³⁹ Quite naturally, their primary motivation – and their legal fiduciary duty in many countries – is to

³⁸ Apart from caffeine.

³⁹ The 1998 Tobacco Master Settlement Agreement in the US is one example of this happening.
http://en.wikipedia.org/wiki/Tobacco_Master_Settlement_Agreement.

generate the highest possible profits. This is most readily achieved by maximising consumption, both in total population and per capita terms, and by encouraging the initiation of new users. The majority of product consumption is often linked to problematic or dependent use, meaning the goal of maximising consumption directly conflicts with the idea of promoting public health. Public health issues only become a concern when they threaten to affect sales, and will invariably be secondary to profit maximisation goals.

Both industries have tried to concede as little market control to regulators as possible. The situation with tobacco has changed significantly in some countries, less so with alcohol. So for alcohol and tobacco, policymakers are trying to ‘reverse-engineer’ appropriate or optimal regulatory frameworks onto already well-established and culturally embedded legal commercial markets, against the resistance of well-organised, large-scale commercial lobbying.

By contrast, for most jurisdictions cannabis offers a blank canvas; an opportunity to learn from past errors, and replace unregulated illegal markets with regulatory models that are built on principles of public health and wellbeing from the outset, without a large-scale legal commercial industry resisting reform or distorting priorities. There are exceptions: most obviously jurisdictions with more established medical cannabis markets, where market actors have sometimes welcomed regulation as necessary for their survival, yet on other occasions have opposed it where it threatened their commercial interests. In one sense, established medical markets may be seen as beneficial; they provide a pool of experienced businesses with sufficient resources and expertise to smoothly expand into non-medical retail. Many US states have sought to prioritise existing medical businesses in licensing procedures for non-medical markets for this reason. However, this also creates significant barriers to new and diverse participation in the market, and limits access for smaller businesses – likely to represent

local communities more closely than the larger operators already operating in the medical sphere.

Another factor complicating this ‘blank canvas’ for regulation is the fact that, in Canada in particular, many businesses have already profited immensely from fledgling non-medical cannabis markets. There are now multiple producers operating across five continents, seeking to expand into medical and non-medical market space wherever it arises. This is a reality that regulators of new markets must face. If they wish to prioritise smaller or domestic producers, action will need to be taken at the outset, as otherwise large, established producers have the financial means to assert domination over new markets at great speed.⁴⁰ This is a particular challenge for low and middle income countries – more historically susceptible to large scale predatory corporate actors from the Global North. A related potential challenge going forward is the level of investment in fledgling cannabis markets from large alcohol and tobacco companies (see [Section 3B: Corporate capture](#)).

In [Figure 1](#), recent alcohol and tobacco regulation reforms mean moving away from the more commercial market end of the spectrum (on the right of the x-axis), and towards the optimal regulatory models in the centre. It is therefore entirely consistent to call for improved or increased regulation of alcohol and tobacco, *as well as* the legalisation and responsible regulation of cannabis (and/or certain other currently illegal drugs). This is about applying the same evidence-led public health and harm reduction principles to all drugs, and developing the most appropriate level of regulation for each. This convergence in regulatory approaches between cannabis and alcohol and tobacco is already well underway, and will

⁴⁰ Slade, H. (2020) *Capturing the Market: Cannabis regulation in Canada*, Transform.
<https://transformdrugs.org/product/capturing-the-market/>

undoubtedly be a defining theme of the drug policy discourse in the coming years.

Getting the balance right

A key theme to emerge from this discussion is the conflicting priorities that often arise as decisions are made when developing and implementing a cannabis regulation model for any given locale. These must be carefully managed, with priorities and related targets agreed by stakeholders in advance, and proactive monitoring and evaluation put in place to ensure that the right balance is struck at all times. Where it is not, the appropriate response should be made, using the regulatory tools available.

1. Commercial interests vs public health

A fundamental challenge in drug regulation is managing the often conflicting goals of commerce and public health. Commercial entities will naturally seek to increase profits, and so will err towards promoting use and products with the highest profit margins. This is at odds with public health aims, which encourage actions that seek to minimise potential harms — and so will err towards moderating or reducing use, or encouraging use of safer products in safer ways. Depending on the way the market is structured, policymakers should manage the involvement of commercial entities to harness their benefits, in terms of investment, innovation, and efficiencies, while preventing or moderating the potential costs — most obviously in terms of negative public health, environmental or other externalities.

This tension will need to be dealt with during the formulation of any model of cannabis regulation, with the overall degree of government intervention in the market, as well as specific

questions such as licensing, pricing and taxation, all requiring negotiation and compromise.

2. Regulated markets vs residual illegal markets

If a regulatory model is too restrictive – for example, if prices are too high, controls are over-burdensome, or products are not sufficiently available when sought – demand will not be met through legal channels adequately. As a result, opportunities for a parallel illegal market will remain with all the attendant risks. On the other hand, if the model is not restrictive enough and an unrestrained commercial market emerges this will create new risks and severely limit the opportunities to mitigate them. Other factors influencing residual illegal market space include long-standing quasi-legal markets and the inaccessibility of retail stores (or online sales). In California, widespread municipal bans on cannabis retail (covering 76% of municipalities), as well as large existing illegal and quasi-legal markets stemming from a twenty-year-old medical market have been pointed to as reasons for a large persisting illegal market.⁴¹

‘Capturing the market’ has been a theme of regulation in Canada and the US, and a source of much media interest. Encouraging existing consumers to migrate from illegal to legal sources of supply is clearly a vital element of legal regulation, but it is not the only goal of regulation, and moves to capture illegal market space must be balanced with other aims, including the promotion of public health. A preoccupation with market capture percentages runs the risk of oversimplifying a wide-ranging process and it may take a number of years before consumer behaviours change as

⁴¹ See: McGreevy, P (2019) *California now has the biggest legal marijuana market in the world. Its black market is even bigger.* LA Times 15th August. <https://www.latimes.com/california/story/2019-08-14/californias-biggest-legal-marijuana-market>; Halperin, A. (2019) *Can legal weed ever beat the black market?*, The Guardian 18th March. <https://www.theguardian.com/society/2019/mar/17/legal-weed-black-market-california-gavin-newsom>

emerging regulatory frameworks are rolled out, and new cultural norms and market equilibriums are established.

This careful balancing act has already been highlighted with Canadian experiences of regulation. After one year, it was estimated that roughly a third of market demand was being met through legal sources (ranging significantly between provinces) – a figure that drew criticism in some quarters, but was acknowledged as steady progress in others.⁴² Factors posited as inhibiting progress of the legal market included well established legal and quasi-legal supply networks, a lack of retail availability in some provinces, as well as grumblings about the quality of many new legal cannabis products. A particularly significant issue was pricing: survey data indicated that, by the end of 2019, licensed sources were charging 80% more on average than unlicensed sellers.⁴³

It is clear that excessively high prices will not tempt consumers to migrate to legal sources, and rising price differentials may even push them the other way. Were legal cannabis to have been significantly cheaper from the outset in Canada, it is likely that greater inroads would have been made into the illegal market, but there may have been greater coinciding risks from setting prices too low, such as increased initiation and overall consumption. Such trends have been experienced previously with tobacco policy, where evidence shows that increasing prices can help reduce use, particularly among young people, but at the same time incentivising circumvention of regulations via smuggling and counterfeiting (though this risk has often been overstated by the tobacco industry). It is also clear that, in the case of Canada, market capture is still moving steadily in the right direction – though slower than

⁴² See: Armstrong, M. (2020) *Legal cannabis market shares during Canada's first year of recreational legalisation*, Int J Drug Policy 88. <https://www.sciencedirect.com/science/article/abs/pii/S0955395920303662?via%3Dihub>

⁴³ Slade, H (2020) *Capturing the Market: Cannabis regulation in Canada*, Transform Drug Policy Foundation. <https://transformdrugs.org/product/capturing-the-market/>

some may like. Careful planning, linked to effective market and behavioural monitoring can ensure any risks are mitigated and an appropriate balance between conflicting priorities is maintained.

3. Ensuring proportionality with tobacco and alcohol controls vs ensuring policy is evidence-based

There is the potential, indeed the likelihood, that cannabis regulation models will be substantially more restrictive than those that currently exist for alcohol, and in many places, tobacco. We are already seeing this with regulatory models in the US, Canada and Uruguay. This is partly linked to desires to ensure that new models are *politically amenable*; the cultural shift of cannabis being a prohibited substance to a product available in local shops is one that legislators are often overly wary of. This caution has been reflected, for example, in the Uruguayan model, where consumers must be registered in order to purchase cannabis from a pharmacy.

It is vital that regulatory controls are proportionately applied and evidence based, whatever policy area they concern. This has not always been the case with emerging cannabis controls. Moves to increase the age access limit for cannabis in Quebec to 21 (it is 18 for alcohol and tobacco) appear designed to make a political statement rather than being based on any particular evidence, and risk preferencing tobacco and alcohol among younger people as a result. Likewise, the fact that penalties for cannabis offences and regulatory infringements are markedly stricter than for equivalent behaviours in relation to alcohol seems driven by political considerations rather than evidence. Nonetheless, many of the regulations imposed on cannabis market actors in Canada (for instance in relation to packaging) are grounded in a public health approach that alcohol and tobacco policy could benefit from. This is clearly a balancing act, too, but the mere fact that controls in certain areas are comparatively stricter than for alcohol and

tobacco does not necessarily mean that they are disproportionate: in contrast, it may be that the controls for alcohol and tobacco are inadequate.

Some may feel this is somehow ‘*unfair*’, especially given the relative health harms of the three drugs. But it is more useful to view emerging cannabis regulation as an opportunity to demonstrate best practice in drug control. If an evidence-based and public health-led approach to cannabis regulation is shown to be effective, it may have a positive knock-on effect by informing and accelerating improvements in alcohol and tobacco control, as well as creating useful precedents for other drugs likely to be legally regulated in the future.

4. New commercial actors vs impacted communities

The moves towards cannabis legalisation in North America have highlighted the critical importance of, as well as opportunities for, promoting social equity in a regulated environment. Some US states, for example, have proactively sought to achieve this through a range of measures including: the expungement of criminal records for past cannabis offences; ensuring licence application fees are priced so as to reduce barriers to entry in the new market; limiting licences on a per-business basis so as to prevent monopolies; and providing priority in licence applications for people from poorer and minority communities, and communities disproportionately impacted by drug law enforcement. Left unchecked, commodity markets inevitably tend towards the dominance of large commercial operators. This is already occurring in fledgling cannabis markets in Canada, where smaller businesses are being sidelined by the dominance of several large, federally licensed producers.

It is important that cannabis law reform is not cut off from its roots as a method to combat the use of drug policy as a form of racial oppression. The history of prohibition – decades of disproportionate criminalisation and economic exclusion of marginalised communities – cannot be forgotten, and must be redressed. Axiomatic to this is the principle that natural market dynamics cannot be left unconstrained. Rather, the regulatory system has to actively design in promotion of social justice, and ensure that historically impacted communities are part of the policy development process and given a stake in the market. A good example of this is legislation in Massachusetts, which requires the Cannabis Control Commission to ensure the meaningful participation of disproportionately impacted groups.⁴⁴

This is easier said than done, as highlighted by well-meaning but struggling efforts in many US states. As of 2020, social equity programmes were present in nearly all legalising states, but the industry remains overwhelmingly white.⁴⁵ This highlights that regulation is not a *‘silver bullet’* for social justice, and proactive efforts are required to hardwire principles of equity into regulations from the outset, while ongoing commitment and resources are required to maintain them.

5. Different conceptions of freedom and autonomy

All regulation implies some degree of restrictions on individual freedom. Unless the goal is a market free-for-all, then the question is not whether we should regulate but where the lines of justifiable intervention should be drawn. This is a key political problem, which

⁴⁴ See: Commonwealth of Massachusetts (2017) Acts 2017, Chapter 55: *An Act to Ensure Safe Access to Marijuana*. <https://malegislature.gov/laws/sessionlaws/acts/2017/chapter55>.

⁴⁵ Slade, H. (2020) *Altered States: Cannabis regulation in the US*, Transform Drug Policy Foundation. <https://transformdrugs.org/product/alterd-states-cannabis-regulation-in-the-us/>; Yzola, A. (2020) *The legal cannabis industry is exploding, but overwhelmingly run by white owners*, Insider 17 August. <https://www.insider.com/how-big-weed-became-rich-white-business-2019-12>.

cannot be overlooked. The classically liberal position is that the state should not intervene in private behaviours until, and unless, they demonstrably harm other people. The '*public health*' position is that a degree of further constraint is justified if it protects citizens from health risks, or indeed the uninvited pressures of commercial influence. At the extremes of either side lie either the dereliction of government duty (and the handing over of control to entities driven solely by profit) or the unacceptable intrusion of a paternalistic state (including self-appointed guardians of public health) into aspects of private life where they have no business.

There is, of course, no '*right*' answer to this question. There are those among cannabis reform communities primarily motivated by the protection of individual rights, others motivated by the prospect of commercial potential, and others whose focus is the promotion of public health. Transform, while recognising the validity of more libertarian arguments, views drug policy through a public health lens and so, inevitably, emphasises policy solutions in which the trade-off between personal or commercial freedom and public health protection is geared towards the latter.

Cannabis regulation is a matter of balancing priorities, seeing what works, staying flexible and making responsible, informed choices based on a rational and ongoing evaluation of costs and benefits. However, to reiterate: the history of tobacco and alcohol control suggests that it is, initially at least, wise to err on the side of being overly restrictive, and potentially roll back some controls later where justified, rather than face a struggle to tighten inadequate regulation after it has been implemented and become embedded. This '*Pandora's box*' effect dictates that market dynamics are established very quickly, and once markets are up and running it is much more difficult to reshape policy. This is in part because, once licences have been distributed and retail outlets are open, there will be numerous stakeholders looking to effectively shape

regulation in line with their interests, and inevitably impact on regulatory decision making over time.

However, it is also important that the ‘*blank slate*’ regulation offers is carefully utilised by ensuring that key aims of regulation, discussed at the beginning of this chapter, are identified, prioritised and effectively planned for from the outset. These key aims cannot easily be retroactively implemented once a market is up and running. For instance, in Washington state, attempts to boost diversity in the industry, and facilitate market participation of impacted communities, have been dramatically undermined by the fact that it is not currently accepting new licence applications for vendors or producers. Had social equity been hardwired into initial regulations, this would not have been such a problem.

Moving forward given what we know, and what we don’t know

While there are vital lessons to be drawn from experiences with alcohol and tobacco control, as well as the rapidly growing body of evidence from cannabis policy innovations around the world, there remains a great deal we do not know about cannabis regulation. The proposition of developing a fully functional regulatory model – for most jurisdictions, effectively from scratch – is highly unusual in social policy and almost unique in drug policy. It is precisely for this reason that so much international attention (and scepticism) has been directed at trailblazing regulatory efforts in Canada, the USA and Uruguay. Any policy innovation has a degree of intrinsic unpredictability and will carry risks. But from what we know already, we can reasonably anticipate and mitigate against nearly all of these risks related to cannabis regulation. As when developing any public policy, progress should involve informed experimentation,

evaluation, and a willingness to be flexible and respond intelligently to both successes and failures.

As discussed, the most obvious risk is that of over-commercialisation and the undermining of public health goals by profit-motivated commercial activity. This observation has informed much of our thinking in this guide and, as subsequent chapters will demonstrate, has strongly influenced our approach. We believe drug policy should serve the interests of public health and wellbeing, not business. If the two can complement each other – and it is entirely possible they can – then fine. But if there is one message policymakers should take from this guide, it is to ensure the core regulatory decision-making power stays with the public health authorities, not business people or those who represent them. The record of self-regulation by business is at best patchy even for ordinary products. And drugs, even relatively lower risk drugs such as cannabis, are not ordinary products. The unique challenges drugs present justifies a different, and greater level of government intervention – particularly given the novelty of legal cannabis markets at this early stage, and our relative lack of experience observing their functioning and impacts. As touched upon in relation to the *‘Pandora’s box’* effect discussed above, it is much easier to loosen regulations where careful evaluation shows they are superfluous, than to enforce new restrictions which may create friction from corporate actors and consumers.

There are no perfect solutions; compromises are inevitable and no stakeholder will get everything they want. There will always be challenges to be addressed, not least as the policy environment changes with time. It is, however, also a unique opportunity to set the standards for a new drug policy paradigm as we emerge from the practical and ideological failings of the prohibitionist era.

Key conclusions and recommendations

- There is a balance to strike between the urgency of implementing reforms and the risks of moving too hastily. The steps forward that any jurisdiction takes will depend on the nature of the existing market, policy frameworks, and social and political environment. Early adopters will doubtless face different challenges to those that come later. There is no one-size-fits-all approach, and no *‘silver bullets’*
- Cannabis regulation should not be undertaken in isolation from the history of prohibition – in particular its disproportionate impacts on Black and minority ethnic communities, as well as other marginalised groups. This means seeking to redress harms caused by prior cannabis policy, and providing equitable access to benefits going forward. Two key ways this may be achieved are through expungement of past criminal records (which should be automatic, and not rely on individual petition of affected persons – see [Section 3A](#)) and through the development of social equity programmes to facilitate market access for disproportionately impacted communities and individuals (see [Section 2G](#)), or reinvest industry dividends in impacted communities in other ways.
- Relevant authorities should establish an independent commission of domestic and international experts, and people with lived experience, to identify key issues, and make broad recommendations on reforming cannabis policy, and the shape of any new regulatory models. Expertise should come from a broad range of fields, including: public health, drug policy, international and domestic law, legal cannabis production and regulation, agriculture, environmental science, and monitoring and evaluation. Direct participation of people with lived experience – of cannabis use, cannabis markets (legal and illegal) and cannabis

enforcement, should be mandated. This expert group can then evolve into a dedicated task force to oversee and make recommendations on the detail of policy and its implementation.

- Key priorities of regulation, outlined in the principles at the start of this chapter, must also be balanced carefully. This is particularly the case where aims are drawn into a conflict. For instance, while encouraging consumers to purchase from legal sources, thereby shrinking the illegal market is a priority of regulation, it should not simply be done at any cost. Slower uptake in the legal market is justifiable if the alternative is to compromise other key aims – for instance limiting the protection of public health. This balancing act can only be successfully achieved if combined with the proactive evaluation of market outcomes against the key aims
- Meaningful and measurable performance indicators should be established for all aspects of the market and its functioning. Impact monitoring and evaluation should be adequately resourced and built into the regulatory framework from the outset. Wider impacts – such as changes in prevalence or patterns of cannabis use (particularly problematic/higher risk use and use among young people), illegal market-related criminality, expenditure and revenue – should also be evaluated on an ongoing basis, with data collection beginning prior to the opening of retail markets in order to establish baselines against which to evaluate outcomes.⁴⁶ Monitoring should be used to ensure that policy, and in particular any policy changes, are subject to regular review, and that the flexibility and willingness exists to adapt approaches in light of emerging evidence

⁴⁶ A good example of this would be the National Cannabis Survey established by Statistics Canada as part of Canadian regulation efforts, though such a data source could clearly be supplemented by other research activities.

- There should be adequate institutional capacity to ensure compliance with regulatory frameworks, once they are established. This will require trained and experienced staff, management and oversight, and sufficient budgets for regulatory agencies. Given all the areas cannabis regulation will touch on, either an existing agency will need to be expanded to coordinate between all relevant government departments, or a new umbrella body will need to be created. The government departments under which agencies sit will to a large extent depend on how the particular system of governance is structured
- There are a range of reforms that can be undertaken within the parameters of existing international law, including decriminalisation of personal possession and use with provisions for home growing and cannabis social clubs (see [Section 2A: production](#)). Such measures can be implemented relatively easily, and even if their positive impacts are more modest, they demonstrate a political will to embrace reform, do not carry a significant regulatory burden, and are supported by a useful and growing evidence base. Their relative ease of implementation also means that they provide a useful means for jurisdictions to facilitate transition towards more ambitious regulated production and retail models, while licensing and regulatory structures are still being developed
- When a jurisdiction is willing or able to negotiate the existing hurdles of international law, which presently prohibit legally regulating the sale of cannabis for non-medical purposes (see [Section 3G](#)), the priority at the outset should be to meet adult demand as it currently exists. That means a legal market that approximately mirrors the existing illegal market in terms of product range, price and availability. Any major departures from this model are likely to have unpredictable, potentially negative

impacts. Changes to the market, for whatever reason, should be introduced incrementally and closely evaluated

- As a starting point, err on the side of more restrictive models, and a greater level of government control, then move forward on the basis of careful evaluation, aiming to move to less restrictive or interventionist models once new social norms and social controls around legal cannabis markets have been established. From a pragmatic and political perspective, this is preferable to the reverse scenario of needing to retroactively introduce more restrictive controls due to inadequate regulation
- For jurisdictions where a more sophisticated illegal cannabis market does not exist, there is no urgency to introduce an extensive menu of cannabis products and services at the outset. Instead, opt for functional retailing of a relatively limited range of quality controlled products that approximately mirror the current illegal market. Again, the precautionary approach may be adopted: a more diverse market that can potentially include concentrates, edibles, and on-site consumption venues can be developed once the core retail market has bedded in and been evaluated. An example of this is the Canadian approach to edibles, which were not available for retail until one year after retail markets for herbal cannabis had opened. Edibles are easy to prepare at home, and home growing and cannabis social clubs can cater for more specialised demand in the meantime
- A particular focus of restrictive controls should be at the retail end from the outset, with a key aim being to meet demand in a way that does not encourage use, but is not so restrictive, or off-putting, that it creates significant avoidable opportunities for a parallel unlicensed trade. Retail outlets should be functional but unintimidating, with pharmacies offering a useful model. On-site consumption venues need to provide a welcoming and pleasant

environment, but controls can still focus on external signage and appearance, and on the point of sale within the venue

- Where it is politically and legally feasible, a ban on all cannabis marketing, advertising, branding and sponsorship should be the default starting point of any regulatory regime, and should be complemented by prevention and education measures aimed at curbing potential increases in higher risk consumption. Where a comprehensive ban is not viable, restrictions on such activities should be as stringent as possible
- More intensive government control – or even direct government control or ownership, where feasible – may be required at retail level, to eliminate or restrict commercial incentives to increase or initiate cannabis use, or use of more risky preparations. Limiting the scale of individual businesses may help prevent the emergence of overly powerful commercial interests with the capacity to distort policy priorities. In lieu of this, regulation should strictly limit the licences available per applicant and combine this with social equity measures to boost market participation of impacted communities
- Moves towards more effective cannabis regulation should be part of a wider process of reforming existing approaches to other drugs – both legal and illegal. This is likely to mean increased regulation of alcohol and tobacco markets as a greater consensus (and evidence base) emerges on what constitutes optimal drug regulation. The rationale for regulating cannabis will also need to be applied to some other currently illegal drugs in the future – this wider debate should not be avoided

Section 2

The practical detail of regulation

a Production

Challenges

- Guaranteeing product quality through appropriate testing, evaluation and oversight of production processes
- Ensuring the security of production processes to prevent leakage to unregulated illegal markets
- Managing commercial activity and links between producers and the rest of the supply chain
- Preventing the emergence of corporate monopolies/oligopolies, preventing corporate capture, and facilitating market access for smaller producers

Analysis

- There are a range of existing legal and quasi-legal production models, operating at various scales, from which lessons can be learned
- Risks associated with over-commercialisation are a concern at the production level, so producers should be subject to comprehensive marketing controls
- Production limits can help minimise the risk of diversion to the illegal market (although if set too low can incentivise unlicensed production to meet demand). Applied to individual producers they can also prevent the emergence of monopolies or large commercial entities with excessive lobbying power
- Ensuring availability of lower threshold production licences prevents smaller businesses being excluded from the market, and may be usefully combined with social equity programmes promoting market participation for disproportionately impacted communities
- Home growing for personal use is difficult to regulate and police, but experience suggests will result in only relatively minor challenges. The majority of users will prefer the convenience of legal retail outlets
- Legalisation creates opportunities and incentives for product innovation, the development of which may bring both benefits and risks – warranting cautious and proactive regulation
- Regulation of home growing should aim to prevent, as far as possible, unlicensed for-profit sales, and prevent underage access to the crop
- Cannabis social clubs represent a small-scale, *de facto* or *de jure* legal model of production and supply that has been proven to operate largely non-problematically
- Cannabis social clubs provide lessons that can inform the development of future regulatory models and, given that they do not appear to breach UN treaty commitments, may be a useful

transitional model that policymakers can implement before more formal legal production systems are put in place. However, such clubs could equally operate alongside more formal production systems post-legalisation (as in Uruguay)

- Without positive regulatory action, existing domestic cannabis producers operating in illegal or quasi-legal markets are likely to be excluded from newly regulated markets. This may represent a loss of useful expertise, encourage the continuance of unlicensed production and sale, and discourage established consumers from migrating to legally regulated markets
- In countries such as the UK, the production of cannabis in illegal markets is associated with high levels of human trafficking and exploitation.¹ In a regulated market, the profit margins and opportunity for such activity would dramatically diminish, and exploitation could be combatted as it is in other legal industries: through the monitoring and enforcement of strict labour standards
- Expanding domestic cultivation in jurisdictions that legalise and regulate will have impacts on traditional producer regions abroad, and their economies. As well as reductions in criminality and corruption, there will inevitably be reductions in income and economic opportunities for some already marginalised populations
- A number of corporations are already licensed to produce cannabis in multiple continents, primarily for medical markets. These corporations are in prime position to expand into developing market space, and already hold significant domestic and international lobbying power. Such lobbying power has the potential to distort policy priorities related to emerging legal markets, international trade, and how they are regulated

¹ See: Anyone's Child and Transform Drug Policy Foundation (2020) *Reforming Drug Policies to Reduce the Trafficking and Exploitation of Vulnerable People*. <https://anyoneschild.org/trafficking-and-exploitation-briefing/>

Recommendations

- Ensuring quality control and the security of production systems can be achieved using measures that are already in place in several countries' existing medical and non-medical cannabis markets
- Preventing exploitation in production lines can be addressed in part through existing labour standards and monitoring mechanisms already in place for other legal industries
- At the outset, tracking systems that monitor cannabis from 'seed to sale' can be employed in order to identify any instances of diversion, though may prove less necessary once the market beds in. Care should be taken to ensure any seed to sale systems do not create undue barriers to entry for smaller market actors
- Production by private for-profit companies is best managed when they are producing the drug for retail by separate, strictly regulated outlets that are not under their ownership (which may include not-for-profit, or government-run retail stores)
- Regulations should seek to prioritise consumer safety, warranting a cautious approach to novel products and product developments (including new vaping liquids, concentrates, edibles or cannabis infused beverages) where risk profiles are relatively less well understood
- Access to lower threshold production licences should be ensured to prevent corporate capture or the emergence of corporate monopolies or oligopolies, and ensure smaller producers are able to enter the market
- Small scale non-profit cannabis social clubs should be promoted as an option for combined production and supply to provide an alternative to larger scale production and retail sale
- Home growing of cannabis for personal consumption should be subject to age restrictions and production limits, although the inherent challenges associated with regulating home growing

mean these requirements will mostly act as a moderating influence, rather than a strict control

- Home growing provisions and cannabis social clubs may serve as useful legal access routes while wider production and retail frameworks are being established and the market is not yet *'up and running'*
- Regulation should seek to incorporate existing domestic cannabis producers, including through facilitating access to social equity programmes
- Regulation should be considered through the lens of international development; the development impacts of cannabis reforms for traditional producer regions should not be forgotten and environmentally sustainable production practices should be incentivised through regulation

There are already a significant number of well-established businesses producing plant-based drugs including extensive production of cannabis for both medical and (more recently) non-medical use, within existing regional, national, and global legal frameworks. These functioning models suggest cannabis production for non-medical use will mostly require the expansion and adaptation of existing regulatory controls, rather than the creation of entirely new ones. The development of large-scale federally licensed non-medical production in Canada, for example, shows that this is perfectly achievable, and realistic for other jurisdictions to be able to follow suit.

While managing the production of cannabis appears relatively straightforward, there are still key concerns that must be taken into account if regulation is to be effective. As with the production of pharmaceutical drugs, the main aims should be to ensure the quality and safety of the cannabis produced, and to ensure the security of production systems in order to limit diversion to illegal markets.

Existing regulation of cannabis for both medical and non-medical use offers a range of examples of how these aims can be achieved, all with varying degrees of government involvement and success.

As noted earlier, there will often be other restrictions on what regulatory frameworks it is possible to implement in a given jurisdiction, in terms of what is acceptable socially, culturally, economically and politically. For example, in the US, the ongoing tensions between state-level cannabis legalisation initiatives and federal-level prohibition have meant that it was not possible to set up a state-owned production (or retail) model, because that would have effectively required the relevant state employees to violate federal law.

Licensing

The way in which cannabis production is licensed, and the mechanisms by which production is linked to supply, are foundational elements of any regulatory framework. Depending on the licensing system in place, production can be highly restricted, to a single or small number of companies or agencies, or essentially be open to any willing market participant that fulfils certain criteria.

While the existence of a functioning regulation model for medical cannabis production will in some respects make transitioning to non-medical production easier, regulators should be mindful that simply attempting to duplicate or extend medical market production is likely to be exclusionary in nature – favoring incumbent market actors and creating barriers to market entry, particularly to small businesses. This in turn can run counter to overarching regulatory aims to combat the emergence of corporate monopolies, and to promote a diverse and equitable new market sector.

The process put in place in Colorado initially required that any cannabis sold for non-medical use had to be grown in accordance with the state's existing model of medical cannabis production. That meant that for the first year of the new regulatory system, production licences were only granted to those able to also supply the drug at retail level. This so-called '*vertical integration*' means vendors and producers are part of the same company. As per the state's medical cannabis model, outlets were required to produce at least 70% of what they sell, and were forbidden from selling more than 30% of what they produce to other outlets.

Linking production and supply operations in this way has been justified on the basis that it minimises the number of transactions in the supply chain, simplifying regulatory oversight and making it easier to track cannabis from '*seed to sale*', thereby reducing the risk of its diversion to the illegal market. In reality, it still requires transfers that need tracking between producers and retailers, even if they are owned by the same company.

Vertical integration permits private commercial activity, but also (in theory at least) puts certain limits on competition and commercialisation by favouring larger, better-established businesses that have the substantial resources necessary to manage both production and supply.²

However, under frameworks such as Colorado's, in which the state acts as a regulator of private enterprise, rather than a market participant itself, mandating vertical integration of production and supply may prove overly restrictive, and could have negative consequences in the long term. By giving preference to economies of scale, a policy of vertical integration runs the risk of creating an industry dominated by select large scale corporate actors

2 Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p48.

with substantial marketing and lobbying power. While having an influential industry that can competently make the case for effective regulation is potentially a good thing, industry lobbying should not be allowed to reach a scale where it becomes able to distort the policy making process in favour of industry interests by obstructing or weakening regulatory controls, as has been witnessed historically in the alcohol and tobacco industries.

Perhaps illustrating this point, one of the main driving forces behind the vertical integration requirement in Colorado was the state's existing medical cannabis industry. The rationale behind this was that, having been subject to the 70/30 rule for several years, and having already invested in the cultivation spaces and equipment needed to establish combined production and supply operations, medical cannabis outlets seeking to enter the non-medical market did not want to face competition from new entrants who had been unencumbered by these requirements. However, extending the 70/30 rule in this way went beyond levelling the playing field. It actually created a major barrier for new entrants, particularly smaller businesses, giving existing medical cannabis companies a crucial year to establish themselves in the market.

In direct contrast to Colorado, licensing laws in Washington were established with the express intention of avoiding a concentrated market dominated by only a few large, key players. The state implemented three licensing tiers: production, processing and retail. Any person or business may hold no more than three production and processing licences, and producers or processors are not allowed to hold any retail licences. Multiple-location licensees are also not permitted to possess more than 33% of their licences in any one county.³ Washington and Colorado's contrasting

3 Washington State Liquor and Cannabis Board (2015) Frequently Asked Questions about the Marijuana Rules.
<https://lcb.wa.gov/mj2015/faqs-rules>

models have provided valuable lessons for subsequent regulating states, and it is notable that in 2014 the 70/30 requirement in Colorado was dropped and vertical integration became optional. As of 2020, vertical integration is permitted in Alaska, Illinois, Maine, Michigan, Nevada and Oregon but is prohibited in California (until 2023) and Washington.⁴

In the Netherlands, too, limited licensing and the separation of production and supply are features of the country's medical cannabis regulations. A private company, Bedrocan BV, is currently the sole licensed producer of cannabis,⁵ while the national government's Office for Medicinal Cannabis is the sole purchaser and has a monopoly on supply, distributing the cannabis through registered pharmacies.

Uruguay's legislation also required a similar separation of production and supply under its regulatory framework for the non-medical use of cannabis. Initially, production licences were granted to two private companies which then sold the cannabis to the government as the sole purchaser at a fixed price, for it then to be sold via the designated pharmacies. While intended to reflect a precautionary approach, this limited production model was linked to issues of undersupply as, after legal markets opened, the small number of pharmacies licensed to sell cannabis reportedly ran out of cannabis in a matter of hours. One reason given for this was the initial failures of one of the licensed producers to meet product testing standards set by the Uruguay regulatory body (IRCCA, the Instituto de Regulación y Control del Cannabis).⁶

⁴ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p47.

⁵ This is only the current situation; there is no specified limit on producers, and there has previously been a second producer. In 2019, it was reported that production would be expanded to other countries, with Canadian producers taking note: Pascual, A. (2019) *Netherlands to expand cannabis production, potentially creating competition for Bedrocan*, Marijuana Business Daily 24th April. <https://mjbizdaily.com/netherlands-to-expand-cannabis-production-potentially-jeopardizing-bedrocans-monopoly/>

⁶ Queirolo, R., *Uruguay: the first country to legalize cannabis*, in: Decorte, T., Lenton, S. and Wilkins, C. (eds) (2020) *Legalizing Cannabis: Experiences, Lessons and Scenarios*. Routledge.

Whatever the potential range of cannabis producers permitted by a given regulatory system, the awarding of production licences should obviously be carried out in accordance with the basic elements of standard licensing procedures used in other industries. These typically involve, among other things, health and safety inspections of business premises, compliance with all the relevant environmental laws and regulations, and credit and criminal record checks on prospective licensees.

With regard to criminal record checks, it is vital that procedures do not lead to the general exclusion of those punished under previous repressive cannabis laws. An important way to address this will be through the implementation of expungement procedures (see [Section 3A](#) on removing criminal records), which would permanently delete historic criminal records for relevant cannabis offences. Where less comprehensive criminal record removal schemes, such as record sealing, are employed instead, it is vital that these nonetheless effectively prevent ongoing stigma and discrimination creating barriers to accessing the industry. Regulation should seek to incorporate and adapt parts of existing markets where possible, not appropriate or eradicate them.

Licensing has an important role to play in determining the shape and appearance of the market. Criminal records create barriers at an individual level to accessing employment. However, further structural barriers exist which, without regulatory response, are likely to see the exclusion of communities disproportionately impacted by law enforcement under cannabis prohibition from accessing production licences. As well as the implementation of expungement measures, therefore, regulatory authorities should seek to promote social equity through the licensing process. Facilitating such aims at the application stage may include requiring applicants to submit '*social equity plans*' as in Michigan, scoring business diversity as part of assessment as in Nevada, or

specifically allocating points to applicants for status as a social equity applicant, as in Illinois.⁷ Regulators should also seek to further remove or reduce licensing barriers (including by offering fee waivers or reductions) for these communities, to promote their access. The development of ‘*social equity programmes*’, and the wider measures that can be undertaken to promote industry access for disproportionately impacted communities, is discussed in more detail later in this book, in relation to retail (see **Section 2G: Vendors**).

The Borland ‘Regulated Market Model’

Debate in response to the historic public health failings of tobacco policy has generated proposals for a new regulatory model that could also potentially be applied to cannabis or other drugs. In 2003, Professor Ron Borland proposed what he calls the Regulated Market Model (see **Figure 2**, overleaf), which is built on the assumption that smoked tobacco is not an ordinary consumer product.

Even when used as directed, tobacco is both highly addictive and significantly harmful to personal health. It follows that any commercial marketing, which aims to increase tobacco consumption and thus profitability, will inevitably lead to unacceptable increases in health harms.

Responding to this, the proposed model would maintain legal access to adults but eliminate any incentives for profit-motivated efforts to increase consumption. Under the model, there would be no scope for tobacco companies to create even more addictive products, or to employ marketing or other techniques to promote tobacco use among existing or new consumers. It would establish a regulatory body, a Tobacco Products Agency (TPA), to act as the bridge between manufacturers and retailers.

The TPA would take complete control over the product, managing the types of products available, their production, packaging and any potential marketing activity. Competitive commercial interaction would still occur at point of production, and point of supply. Tobacco producers would compete to supply the TPA with raw materials, while retailers would profit from selling tobacco products within a licensed vendor framework.

7 Slade, H. (2020) *Altered States: Cannabis regulation in the US*, Transform Drug Policy Foundation, p23.
<https://transformdrugs.org/product/alterd-states-cannabis-regulation-in-the-us/>

By removing the opportunity for private companies to maximise tobacco use and thus profits, the TPA would therefore be in a position to pursue public health goals by managing and possibly reducing consumption (see [Figure 2](#)). Uruguay's system of legal cannabis regulation is essentially based on this Regulated Market Model. It has the benefit of maintaining commercial competition at the production and retail stages, but puts a responsible government agency in control of key elements of the cannabis market.

Quality control

Quality and safety testing protects consumers from the health risks associated with adulterated or contaminated cannabis, and from the risks of consuming cannabis of unknown or unreliable potency. It should therefore be a strict licensing condition for producers.

In the US, the medical cannabis industry has historically been largely self-regulating when it comes to quality control and consumer safety issues, with mixed results. Due to the ongoing conflict between federal and state laws governing medical cannabis, no central authority such as the Food and Drug Administration or Department of Agriculture has been charged with ensuring that adequate testing of cannabis takes place. Many of the states to first legalise medical cannabis did not immediately follow up with legislation requiring testing for levels of pesticide, mould, bacteria or other microorganisms that can be harmful for health. The absence of a central authority also meant that, even where testing requirements were established, they were often inconsistent between states – many states not requiring specific testing for heavy metals, for instance.⁸

⁸ Leafly (2020) *Cannabis testing regulations: A state-by-state guide*.
www.leafly.com/news/industry/leaflys-state-by-state-guide-to-cannabis-testing-regulations

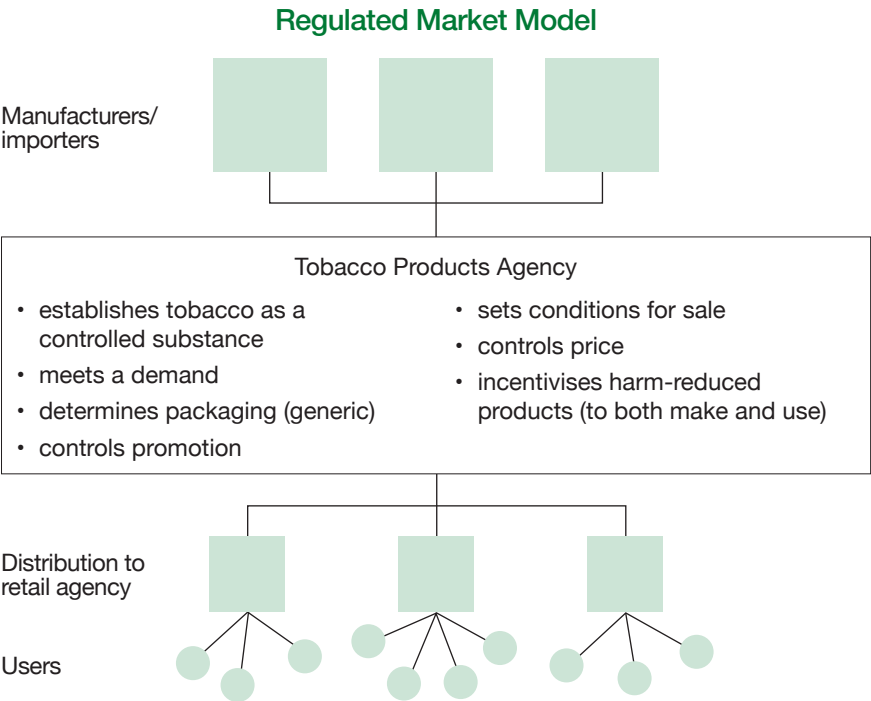


Figure 2

Adapted from: Borland, R. (2003) **A strategy for controlling the marketing of tobacco products: a regulated market model**, Tobacco Control, Vol.12, No.4, pp.374–382.

Despite this, the rapid growth of medical cannabis markets in legalising states enabled a level of competition to develop, meaning that vendors whose products did not meet quality standards were liable to lose customers to other competitors offering better products. A significant online community of medical cannabis users also played a part in encouraging quality control, with websites such as leafly.com and WeedMaps.com allowing consumers to post reviews of dispensaries and highlight instances of bad practice.

Regulators developing the non-medical cannabis markets in the US have made testing a more central part of the trade. Washington’s regulations, for example, oblige every licensed cannabis producer

and processor to submit representative samples of their cannabis and cannabis-infused products to an independent, state-accredited third-party testing laboratory on a schedule determined by the state liquor control board. If these samples do not meet standards adopted by the board, the entire lot from which the sample was taken must be destroyed. In Denver, it was reported that over 28,000 products were recalled in 2017 owing to levels of pesticides recorded.⁹ Similar testing requirements have subsequently been adopted in other regulating states: Massachusetts, for instance, similarly prohibits the sale of any cannabis or cannabis products that have not been independently tested and confirmed to comply with detailed testing requirements.¹⁰ All US states which now have regulated non-medical cannabis production require producers to make at least some provisions for testing, in order to establish the potency (THC concentration) of products, which must be clearly marked on packaging.¹¹

The importance of adequate product testing was brought to the fore in 2019, following a significant number of vaping-related lung injuries in the US, including fatalities. Many of the injuries were sustained following the consumption of cannabis vape cartridges, although notably these were almost entirely purchased from unregulated sources. The chemical causing the injuries, vitamin E acetate, sometimes added to vape liquids as a thickener, was not specifically tested for in most legalising states. However, general potency and quality control requirements widely adopted in regulated markets meant that the vast majority of vitamin E acetate injuries were sustained from unregulated supplies.¹² It has

⁹ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p136.

¹⁰ See: Commonwealth of Massachusetts (2017) 935 CMR (Adult Use of Marijuana) 500.160: Testing of Marijuana and Marijuana Products. https://mass-cannabis-control.com/wp-content/uploads/2019/11/Fall_2019_Adult_Regs_500.pdf

¹¹ See: Slade, H. (2020) *Altered States: Cannabis regulation in the US*, Transform Drug Policy Foundation, p17. <https://transformdrugs.org/wp-content/uploads/2020/06/Altered-States-Digital-2020.pdf>

¹² Leafly (2020) *Cannabis testing regulations: A state-by-state guide*. www.leafly.com/news/industry/leaflys-state-by-state-guide-to-cannabis-testing-regulations

also been subsequently found that states providing for regulated non-medical cannabis sales at the time tended to record lower levels of lung injuries – the exception being Massachusetts, which adopted a prohibition on cannabis vapes in response to the crisis, creating a default to unregulated supplies more likely to cause injury. Massachusetts re-opened sales in 2020, with specific testing requirements.¹³ In contrast, in Michigan, sales of cannabis vapes were temporarily halted to allow for testing, with only products failing new requirements restricting levels of vitamin E acetate recalled from the market.¹⁴

Obviously any testing requirement will impose costs on producers. Different laboratories in the US charge different rates for their services, however the average price for the necessary safety and potency testing is in the region of several hundred dollars per sample, reflecting high running costs for testing facilities themselves. A 2020 Californian study estimated the average cost of testing per sample at \$273 for larger labs, compared to \$537 for medium labs and \$778 for small labs. It identified that a '*major component*' of overall testing costs is the losses suffered from the destruction of cannabis that fails testing, with higher failure rates resulting in markedly higher costs per sample. This cost variability per sample, in turn, is significantly greater for smaller labs – further highlighting the entry barriers faced by small businesses looking to break into the industry.¹⁵ This is something that regulators should seek to offset (as with other market areas)

¹³ Jaeger, K. (2020) *Most Legal Marijuana States Had Fewer Vaping-Related Lung Injuries*, Study Finds, *Marijuana Moment* 26th August. <https://www.marijuanamoment.net/most-legal-marijuana-states-had-fewer-vaping-related-lung-injuries-study-finds/>; Bartlett, J. (2020) *State plans to release quarantined vapes for resale*, *Boston Business Journal* 3rd August. <https://www.bizjournals.com/boston/news/2020/08/03/ma-to-release-quarantined-vapes.html>

¹⁴ Medical Xpress (2019) *Michigan halts sale of marijuana vape products, orders tests*, 22nd November. <https://medicalxpress.com/news/2019-11-michigan-halts-sale-marijuana-vape.html>; Strachan, J. (2020) *Michigan Recalls Vape Cartridges Over Vitamin E Acetate*, *Patch* 7th February. <https://patch.com/michigan/detroit/michigan-recalls-vape-cartridges-over-vitamin-e-acetate>

¹⁵ Valdes-Donoso, P. et al. (2020) *Costs of cannabis testing compliance: Assessing mandatory testing in the California cannabis market*, *PLoS One*, Vol. 15(4). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7179872/>

through proactive measures to increase market access, promote equity, and prevent monopolisation and corporate capture (though due to the specialist dynamics of testing, entry barriers are likely to be more than simply financial in nature). Examples of proactive equity measures are discussed in greater detail later in the book in relation to vendors, but many of the same broad principles apply: cost of market access can be reduced by licence fee reductions; high initial costs of setting up a business can be curtailed through interest free business loan schemes; and market dominance can be guarded against through limiting available licences per applicant.

Although these testing costs, passed on to producers, may seem high, they will be offset by the profits producers accrue from the cannabis grown (although, correspondingly, higher testing costs will lead to higher retail prices down the line for the consumer). The Californian study discussed above estimated that, overall, cannabis testing costs \$136 per pound of dried cannabis flower, roughly 10% of cannabis wholesale price in the state's regulated market.¹⁶ It is also likely that testing costs will decline as legal production expands, the market matures, and testing technologies evolve.

Testing procedures and frameworks have also developed steadily as non-medical cannabis regulation has become more common. The Canadian Cannabis Regulations adopted in 2018 provide detailed requirements for the testing of cannabis and cannabis products, prohibiting sale where such requirements are not met. They mandate the testing of a representative sample of each lot or batch of cannabis, which must be conducted by a third party laboratory that holds a licence to test cannabis under the Cannabis Regulations. The regulations provide detailed thresholds for pesticide active ingredients that are reviewed periodically, and link more widely to maximum thresholds already established for

16 Ibid

chemical or microbial contaminants in the Food and Drugs Act and pest control residue thresholds established in the Pest Control Products Act. Both producers and testers are required to maintain records of batch testing for at least two years and, to ensure compliance with the system of testing, the regulations provide powers for inspectors to review operating procedures, certificates of test analyses and batch records.¹⁷

Outside of North America, the Netherlands has provided a strong example of quality and safety regulation, with medical cannabis production conducted in accordance with European Good Agricultural Practice criteria to ensure consistent quality and potency. As part of this process, an independent laboratory also tests the cannabis for moisture content, unwanted substances such as heavy metals, pesticides or microorganisms, and to establish the levels of active ingredients.

Such existing examples from around the world provide a useful guide as to the level of testing that will be required under any system of legal cannabis regulation. As in Canada, additional quality control requirements (including linkage to wider food and safety legislation) will need to be in place in relation to edible cannabis products, reflecting the fact that they are food or beverage products with specific risks and characteristics.

Environmental sustainability

All industries should be regulated in a way that ensures their sustainability. Controlling the use of pesticides in production is an important element of ensuring environmental sustainability

¹⁷ Government of Canada (2019) Mandatory cannabis testing for pesticide active ingredients — Requirements. www.canada.ca/en/public-health/services/publications/drugs-health-products/cannabis-testing-pesticide-requirements.html#4; Cannabis Regulations, Part 6. <https://laws-lois.justice.gc.ca/eng/Regulations/SOR-2018-144/page-15.html#docCont>

for cannabis markets. While it is important to protect crops from pests and insects, an integrated approach to pest management has developed over recent decades which prioritises the management, rather than elimination of pests and encourages the use of natural pest controls as core principles of regulation. Seddon and Floodgate argue that a '*locally tailored and contextually attuned*' approach is an important part of such an integrated approach, developed through ongoing evaluation and adjustment.¹⁸ There are other key questions related to sustainability of cannabis production, too, notably concerning the regulation of water consumption and land use, as well as energy consumption. Cannabis is a comparatively '*thirsty*' crop and production may impact heavily on water resources – an issue of growing importance in the midst of a changing climate and growing water scarcity. Similarly, cannabis production can be an extensive drain on electricity depending on the cultivation methods employed.¹⁹

Seddon and Floodgate provide detailed analyses on these points in *Regulating Cannabis*, acknowledging that there are a multitude of lessons from existing agricultural industries that can be applied to cannabis production. They note that sustainability of production operations may depend on the climate of the region in question, with greater irrigation necessary in drier regions, as well as whether production is undertaken inside or outside. While the evolution of indoor growing technology has made cannabis production possible in historically unsuitable climates, it also variously involves high-intensity lighting, dehumidifiers, space heaters or coolers, water heaters, as well as ventilation and air conditioning. In Colorado, widespread disregard for sustainability – including reliance on climate control systems and high-powered lights – has led to estimates that cannabis production in the state emits more carbon

¹⁸ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p253.

¹⁹ For a detailed discussion of these issues, see: Seddon, T. and Floodgate, W. (2020), cited above.

than its coal mines.²⁰ Unregulated illegal production is likely to be even less environmentally friendly.²¹ Regulating for sustainable indoor growing is therefore an important challenge, and may in turn require encouraging outdoor cultivation where possible, the use of renewable energy sources to generate electricity, as well as the more sustainable sourcing of materials more generally.²² Sustainable production could also be incentivised by offering cheaper licence fees for outdoor growing, where possible, or charging more for indoor licences that enable the use of less sustainable materials.

Security

Some cannabis producers will inevitably attempt to increase profits by diverting part of their inventory to a parallel illegal market for untaxed sales that undercut legal market prices.

Secure and properly monitored production systems can help minimise the risk of such activity, and should therefore be a licensing condition for cannabis producers, with clear penalties for violations. The high unit-weight value of cannabis may also make it a target for theft, necessitating further security measures. Although ensuring security requires what are essentially common sense regulatory controls, the extent of both the risks faced, and what measures are financially viable, will vary between jurisdictions. It is also the case that the need for stringent security controls may reduce over time, as the size and scope of the illegal market is

20 Summers, H.M. et al (2021) *The greenhouse gas emissions of indoor cannabis production in the United States*, Nature Sustainability. <https://doi.org/10.1038/s41893-021-00691-w>

21 Charles, K. (2021) *Colorado's legal cannabis farms emit more carbon than its coal mines*, New Scientist 8th March. <https://www.newscientist.com/article/2270366-colorados-legal-cannabis-farms-emit-more-carbon-than-its-coal-mines/#ixzz6pAVqfCg>

22 Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p239-260.

reduced, though this will require constant evaluation to measure the necessity (and effectiveness) of restrictions.

For example, under general requirements outlined in the Canadian Cannabis Regulations, cultivators and processors are required to have a Head of Security, responsible for ensuring the compliance with security measures outlined in the regulations.²³ Requirements for physical security measures outlined in the regulations include (amongst other things):

- Restrictions on site design (it must prevent unauthorised access)
- Requirements for visual recording devices and alarm systems to protect the perimeter
- A system of record-keeping for detected intrusions on the site²⁴

Similarly strict requirements apply within the premises – including physical barriers between operations and storage areas; keeping a record of every individual entering or exiting a storage area; and a requirement for recording devices in both operations and storage areas, functioning at all times.²⁵ Whether such restrictions are cost-effective, or necessary in practice, is open to question. However, this is an important demonstration of the precautionary principle in practice: in a new, developing market – especially for a drug that still has a lucrative illegal market – it is prudent to err on the side of over-protection from the outset. Controls can always be reduced at a later stage as the illegal market shrinks, and risk of diversion is correspondingly reduced.

Requirements that production be conducted indoors may be appropriate in some localities, but will be overly restrictive in

²³ Canadian Cannabis Regulations, s38(1). <https://laws-lois.justice.gc.ca/eng/Regulations/SOR-2018-144/index.html>

²⁴ Canadian Cannabis Regulations, s62(1), 63(1), 64-65, 66(3).

²⁵ Canadian Cannabis Regulations, s68(2), 69, 71(1).

most, and will also have impacts on sustainability, as discussed above. Stealing, transporting, drying and processing any significant number of cannabis plants will be less appealing than targeting processed products. More importantly, there is no obvious reason why outdoor growing areas, or other movable facilities such as greenhouses or polytunnels, could not be adequately secured and monitored in order to prevent diversion. For example, Washington's non-medical cannabis regulations permit outdoor growing facilities, provided they are properly fenced off and have surveillance systems in place. Similar requirements have since been adopted in other US states: California, for instance, offers a range of licences depending on whether cultivation is due to take place outdoors or indoors (and on the scale of cultivation). In Massachusetts, additional security requirements apply for outdoor cultivation, including commercial-grade locks and a security alarm system that is continuously monitored and is able to provide alerts to designated employees of alarms being triggered within five minutes.²⁶

With regard to monitoring, Colorado has produced a comprehensive set of regulations requiring video surveillance of areas where production/cultivation, weighing, packaging, and preparation for transportation all take place. Such requirements have become common in regulations: Canadian regulations require *'each operations area and storage area must be monitored at all times by visual recording devices to detect illicit conduct'*. An exception is growing areas, which only require entry and exit points to be monitored.²⁷ Regulations in Massachusetts specifically require that the cameras be angled in such a way *'as to allow for the capture of*

²⁶ Commonwealth of Massachusetts (2019) 935 CMR Adult Use of Marijuana 500.110: Security Requirements for Marijuana Establishments, s(6).

²⁷ Canadian Cannabis Regulations, s70(1)-(2)

*clear and certain identification of any Person entering or exiting the Marijuana Establishment or area’.*²⁸

Adding another level of oversight, producers (and retailers) in Colorado must also use a state-created online inventory tracking programme to record the journey their cannabis takes from harvest to sale. The programme employs radio-frequency identification (RFID) technology commonly used by many commercial enterprises to track their products and manage their inventories. This more sophisticated security measure complements more prosaic requirements such as minimum standards for door locks and alarms. Similar systems have since been adopted in many US states to subsequently regulate non-medical cannabis production, with two major software providers, METRC and BioTrackTHC, dominating the field.²⁹

Under any system of legal cannabis regulation, the overall level of security required will be determined by the extent of any problems that emerge, but erring on the side of caution at the outset and reviewing the situation once cannabis markets have been established seems the sensible course.

Production limits

In Washington, there is a state-wide limit on the amount of space that can be used for cannabis production.³⁰ The limit is set at 2 million square feet (equivalent to roughly 35 NFL football fields),

²⁸ Commonwealth of Massachusetts (2019) 935 CMR Adult Use of Marijuana 500.110: Security Requirements for Marijuana Establishments, s(5)-(6).

²⁹ McVey, E. (2018) Chart: *Dominant player emerging for state cannabis seed-to-sale tracking contracts*, Marijuana Business Daily 10th September. <https://mjbizdaily.com/chart-dominant-player-emerging-for-state-cannabis-seed-to-sale-tracking-contracts/>

³⁰ Washington State Liquor and Cannabis Board (2012) Board approves filing of proposed rules to implement Initiative 502. <https://lcb.wa.gov/printpdf/5654>

and prospective producers must apply for licences based on the planned size of their production operation. There are three production tiers for which licences can be awarded:

- Tier 1: Less than 2,000 square feet
- Tier 2: 2,000 to 10,000 square feet
- Tier 3: 10,000 to 30,000 square feet³¹

Accordingly, there are limited production licences available, which means the state is rarely accepting new licence applications for producers. The decision to limit production in this way was taken with a number of aims in mind. Firstly, the intention was to minimise the risk that the US Federal Government would object to the new regulatory system being put in place. The US Department of Justice had previously made it clear that the size of an operation would be a significant factor in deciding whether to initiate federal law enforcement. However, there are also a number of other intended benefits:

- To reduce the financial incentive and opportunities to divert cannabis for sale into out-of-state illegal markets
- To potentially constrain the consumption levels of heavy users³²
- To limit the marketing and political power of larger producers

While these are all laudable aims, and production limits may prove to be an effective means of achieving them to at least some degree, as always there is the potential for undesired outcomes. If legal production is restricted to the point where a substantial

³¹ Washington State Liquor and Cannabis Board, Producer License Descriptions and Fees.
https://lcb.wa.gov/mjlicense/producer_license_descriptions_fees

³² The idea behind this potential effect is that by preventing over-production (and a resultant fall in prices), production limits will constrain the spending power — and therefore consumption levels — of heavy or dependent users, who are typically more price-sensitive. For more, see Kleiman, M. A. R. (2013) *Alternative Bases for Limiting Cannabis Production*, BOTEK Analysis, UCLA.
www.liq.wa.gov/publications/Marijuana/BOTEC%20reports/5e_Alternative_Bases_for_Limiting_Production-Final.pdf.

demand is not met, profit opportunities will appear for unlicensed producers, frustrating one of the key goals of the policy (this could be a particular problem with the US states' models if there is substantial purchasing by residents from neighbouring states that do not permit a legal supply of cannabis). In addition, although production limits help prevent the concentration of power among a small group of companies, they also ensure that production is diffuse and variable, which may mean an increased regulatory burden – which, ironically, may create increased barriers to market entry for smaller producers. Finally, production limits based on the size of growing operations may, in the absence of potency limits, lead producers to prioritise growing high-potency (and therefore high-value) cannabis, as they attempt to maximise the profits that can be made from their available production space (For more on potency, see [Section 2E](#)). In Jamaica, the replacement of indigenous strains of cannabis with imported breeds from Northern latitudes has been recorded (albeit in unlicensed cultivation) in response to desires for faster growth and processing— often at the expense of product quality.³³ A THC-based production quota system may therefore be a more effective, albeit more onerous, regulatory approach to limiting production than one based on the area under cultivation.³⁴ As with most aspects of cannabis regulation, a balance between positive and negative outcomes will need to be struck when designing production limits, and the system must include both ongoing evaluation, and the ability to change as new evidence emerges.

33 Klein, A. and Hanson, V. (2020) *Ganja Licensing in Jamaica Learning lessons and setting standards*, UWI and ICCR (Interdisciplinary Centre for Cannabis Research).
<http://iccresearch.org/sites/default/files/Ganja%20Licensing%20in%20Jamaica%20-%20April2020.pdf>

34 For more on how such a system could work, see Kleiman, M. A. R., cited above.

Smaller-scale production

Conducted in the absence of formal licensing systems, smaller-scale cannabis production occurs in a number of countries including India, Vietnam and Cambodia, where cannabis is grown much like any other medium-value herbal product. These long-established markets, usually based around traditional use of lower-potency cannabis, appear to exist largely non-problematically, either in a quasi-legal policy space (as with '*bhang*' in some Indian states) or tolerated, subject to low priority policing.

Cannabis users in Spain, too, have utilised a legal grey area of the country's drug laws by establishing so-called '*cannabis social clubs*' (CSCs).³⁵ The clubs are relatively self-contained and self-regulating entities, historically operating on a not-for-profit basis to produce cannabis for registered club members.

Spain's cannabis social clubs³⁶

- The clubs take advantage of the Spanish decriminalisation law that tolerates limited cultivation of cannabis plants for personal use. Club members allocate their personal allowance under this toleration policy to the club, which then grows the pooled allocation of plants and supplies club members from a designated venue
- Currently the clubs operate under a voluntary code of practice established by the European Coalition for Just and Effective Drug Policies (ENCOD).³⁷ Although there has been a high level of compliance with the code from the country's several hundred clubs, it has no legal standing – and compliance with its letter and spirit is not universal
- Clubs are run on a not-for-profit basis with revenue reinvested back into the running of the clubs. However, concerns have been expressed about the

³⁵ Marks, A. (2015) *The Legal Landscape for Cannabis Social Clubs in Spain*, Transnational Institute. https://www.tni.org/files/publication-downloads/the_legal_landscape_for_cannabis_social_clubs_in_spain_0.pdf

³⁶ Murkin, G. (2016) *Cannabis social clubs in Spain: legalisation without commercialisation*, Transform Drug Policy Foundation. <https://transformdrugs.org/blog/cannabis-social-clubs-in-spain-legalisation-without-commercialisation>

³⁷ ENCOD (2011) Code of Conduct for European Cannabis Social Clubs. www.encod.org/info/CODE-OF-CONDUCT-FOR-EUROPEAN.html.

emergence of some newer clubs that appear to be moving away from the original non-profit ethos³⁸

- As with all other associations and organisations in Spain, cannabis social clubs are legally obliged to be listed in a local registry, with founding members subject to background checks
- Membership is granted only upon invitation by an existing member who can vouch that the individual seeking to join already uses cannabis (the aim being to supply existing users rather than initiating new users)
- The quantity of cannabis to be cultivated is calculated based on the number of expected members and predicted levels of consumption
- Cultivation is overseen by sufficiently experienced volunteers or paid staff
- In some clubs, members 'sponsor' a specific cannabis plant, from which they take their supply
- Distribution is conducted on the club's premises, where members are encouraged to consume within designated areas. This is to promote planned usage and minimise the risk of a member's supply being re-sold on the illegal market or diverted to a non-member
- Daily maximum personal allowances of, on average, 3 grams per person are set as a way of encouraging responsible levels of use and limiting the quantity of cannabis that can be taken away for consumption off-site (and possibly diverted to secondary sales)
- Clubs pay rent, tax, employees' social security fees, corporate income tax, and in some cases VAT (at 18%) on cannabis products sold

The Dutch city of Utrecht, and a number of other municipalities, have previously sought to experiment with the CSC production model³⁹ to solve the so-called '*back-door problem*' in the Netherlands, whereby retail sales of cannabis for non-medical use are effectively legal (the drug can leave the country's coffee shops via the front door), but production and cultivation (i.e. the supply chain that leads up to the back door) remain prohibited. It

³⁸ Barriuso Alonso, M. (2012) *Between collective organisation and commercialisation: The cannabis social clubs at the cross-roads*. www.druglawreform.info/en/weblog/item/3775-between-collective-organisation-and-commercialisation; Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p132; Burgen, S. (2020) *Spain becomes cannabis hub as criminals fill tourism void*, *The Guardian* 11th October. <https://www.theguardian.com/society/2020/oct/11/spain-becomes-cannabis-hub-as-criminals-fill-tourism-void>

³⁹ Bennett-Smith, M. (2013) *First Cannabis Cultivation Club Reportedly Forms in Dutch City of Utrecht*, *The Huffington Post*, 12th September. www.huffingtonpost.com/2013/09/11/cannabis-cultivation-club-utrecht_n_3909025.html

was reported that the local government asked for an exemption from Dutch drug laws that would allow it to establish a closed-membership CSC consisting of 100 people who wish to produce the drug for personal consumption, although unfortunately the proposal never got off the ground. The Utrecht club proposal was intended to complement rather than replace the coffee shops; it was specifically aimed at eliminating crime in the supply chain, and avoiding the potential health risks posed by cannabis that has been produced without any quality controls.⁴⁰ The failure of the proposals to come to fruition suggests, in part, that establishing CSCs in environments with already functioning points of legal access may be more difficult to achieve. The proposals are unlikely to be repeated in light of a new experiment to resolve the '*back-door problem*', with a limited number of coffeeshops in 10 municipalities set to sell cannabis cultivated legally by producers licensed by the Dutch government. As part of the plans, the licensed growers will be responsible for distributing cannabis to the coffeeshops, meaning both the preceding supply chain and retail of cannabis will, at least in select locations, be using the '*front door*'.⁴¹

A 2020 study identified informal CSCs in 13 European countries, with the inception of CSCs intensifying in the 2010s.⁴² While the largely self-regulating nature of CSCs means there are variations in how they are run, the general principles on which most of them are based suggest this model could be a pragmatic short to medium term option for policymakers looking to make the transition to legally regulated cannabis markets. CSCs have the advantage of

⁴⁰ Rolles, S., *Cannabis policy in the Netherlands: moving forwards not backwards*, p.165 in Transform Drug Policy Foundation (2016), *The Alternative World Drug Report: 2nd Edition*. <https://transformdrugs.org/product/the-alternative-world-drug-report-2nd-edition/>

⁴¹ Government of the Netherlands (Undated), Controlled cannabis supply chain experiment. <https://www.government.nl/topics/drugs/controlled-cannabis-supply-chain-experiment>

⁴² Pardal, M. and Decorte, T. et al (2020) *Mapping Cannabis Social Clubs in Europe*, European Journal of Criminology. <https://doi.org/10.1177%2F1477370820941392>

not being prohibited under the UN drug treaty system,⁴³ as they are essentially an extension of the decriminalisation of personal possession/cultivation. They can therefore potentially be put in place before more formal commercial markets are established in countries that, while reluctant to become non-compliant with their treaty commitments, also do not want to wait for treaty reform before exploring their own policy reform options (For more details, see the chapter on [Cannabis and the UN drug conventions, Section 3G](#)).

Given that CSCs, at least in their present form, are run on a not-for-profit basis and are bound by production limits that are linked to the number of members they admit, they have no incentive to increase consumption or initiate new users in the way that commercial producers or retailers do. Additionally, the relatively closed membership policy of many CSCs means that while existing cannabis users have safe access to the drug, the initiation of new users is restricted. While restricted access is a potentially positive feature of the CSC model in some respects, care needs to be taken to ensure that this does not lead to unfair discrimination in terms of access for non-residents or those who are not part of local social networks.

The CSC model of production and supply could easily be more formally regulated in line with the existing informal codes of practice outlined above, and many CSCs are now calling for such increased regulation. The problem, as it stands, is the clubs' quasi-legal status, which excludes them from effective government oversight. This would clearly no longer be an issue if the clubs were fully recognised by law as has now happened with CSCs in Uruguay. In Spain, local governments and municipalities have moved to bring specific aspects (for instance hygiene, hours of operation) within

⁴³ The UNODC and International Narcotics Control Board have not yet stated anything to the contrary.

the scope of regulation, but there remains an ongoing tension between CSCs and national government.⁴⁴ Bewley-Taylor et al note that the ambiguous interpretations of the legal position of CSCs means that, in practice, police raids and prosecution actions continue to take place – often resulting in court rulings restating the legality of the model and ordering the return of seized cannabis.⁴⁵

Research in Uruguay has suggested that one attraction of CSCs is a perceived higher quality of product, in part owing to members developing direct relationships with and trust in growers. Equally, however, there has been a growing trend of CSCs moving away from social co-operative models towards ‘*quasi-dispensary*’ status.⁴⁶ Overall, the CSC model has obvious potential both as a transitional system of *de facto* legal production and supply that could operate within a prohibitionist framework, and as an alternative system of *de jure* legal production and supply that could be run in parallel with more conventional retail models. CSCs may also usefully serve as an important source of legal access during any transitional period, before cannabis markets are up and running. If regulated in a way that ensures a genuine not-for-profit approach is maintained, CSCs could help moderate the risks of over-commercialisation, and potentially meet demand for some specialist cannabis products (which might not be available through retail outlets) in a controlled environment.

⁴⁴ See: CND Blog (2020) *Side event: Social Norms and Rituals, Individual and Collective Self-Regulation Strategies in Cannabis Use – What Research and Alternative Practices Can Tell to Cannabis Policy Reform*. <http://cndblog.org/2020/03/social-norms-and-rituals-individual-and-collective-self-regulation-strategies-in-cannabis-use-what-research-and-alternative-practices-can-tell-to-cannabis-policy-reform/>

⁴⁵ Bewley-Taylor, D., Blickman, T. and Jelsma, M. (2014) *The Rise and Decline of Cannabis Prohibition*, GDPO and TNI, Chapter 3, p10. https://www.tni.org/files/download/rise_and_decline_ch3.pdf

⁴⁶ Pardal, M. et al (2019) *Uruguayan Cannabis Social Clubs: From activism to dispensaries?* *International Journal of Drug Policy* 73 pp49–57. <https://doi.org/10.1016/j.drugpo.2019.06.022>

Home growing

Small-scale cultivation of cannabis for non-medical personal use has been tolerated in a number of jurisdictions as part of cannabis decriminalisation policies, with relatively few problems emerging. Provisions for self-cultivation have also been specifically included in the regulatory models for the non-medical use of cannabis that have been established in Canada, Uruguay and US states. Such provisions can additionally serve as a useful part of transition towards regulated market supply, particularly while regulations for a retail market are still being developed. In the US state of Michigan, for example, possession and home cultivation of cannabis were legalised at the end of 2018, allowing for individuals to possess up to 2.5 ounces, cultivate up to 12 plants and keep up to 10 ounces of cannabis in their property. However, the state only began accepting retail licence applications from 1 November 2019, with sales beginning in a small number of stores on 1 December 2019. Similarly, in the US state of Maine, the Marijuana Legalization Act took effect in 2016 to authorise personal cultivation of up to three mature plants and personal possession of up to 2.5 ounces of cannabis.⁴⁷ However, licence applications for commercial cultivators, manufacturers and retailers did not open until December 2019 and delays owing to COVID-19 meant that initial plans for retail sales to begin in June 2020 were delayed until later in the year.⁴⁸

The regulatory framework established by the federal Canadian government similarly permits residents to grow up to four plants per household, but allows scope for provinces and territories to impose further restrictions on this limit. However, a move

⁴⁷ Slade, H. (2020) *Altered States: Cannabis regulation in the US*, Transform Drug Policy Foundation. <http://transformdrugs.org/product/alterd-states-cannabis-regulation-in-the-us/>

⁴⁸ Sambides Jr., N. (2020) *After 4-Year Delay, Maine Retail Pot Sales To Begin In October*, Bangor Daily News/Maine Public 14th August. <https://www.mainepublic.org/post/after-4-year-delay-maine-retail-pot-sales-begin-october>

from the Quebec provincial Government to use this flexibility to prohibit personal cultivation entirely was ruled unconstitutional in a Quebec Court as it was found to infringe upon the jurisdiction of the federal government.⁴⁹ The Canadian province of Manitoba, which similarly interpreted this flexibility as allowing a total prohibition on home growing, still presently operates a ban but is facing its own court challenge following the judgment in Quebec.⁵⁰

It makes little practical or legal sense to try to operate a complete ban on self-cultivation for personal use once possession for personal use is legal, and other legal supply sources have been established. As well as serving little practical purpose, it would be near impossible to enforce. A good case, however, can be made for establishing a legal framework that sets parameters within which such home growing should be conducted. The aim of such a framework would be to limit production for personal use, specifically to prevent unlicensed commercial production and for-profit sales, and to prevent non-adults from accessing cannabis. These aims have been reflected in a number of provincial regulations in Canada, which incorporate the existing four plant limit established at the federal level and outline further controls in addition. For instance, in New Brunswick and Prince Edward Island, if plants are cultivated outdoors (e.g. in a garden), they must be *'surrounded by a locked enclosure having a height of at least 1.52m'*, while regulations in Prince Edward Island and British Columbia further clarify that plants must not be visible from any public space. In New Brunswick, if cultivation is done indoors, plants must also be in a separate, locked space. Prince Edward Island simply requires that plants are kept in a space *'inaccessible to'* any person under

⁴⁹ The Canadian Press (2019) *Judge strikes down Quebec law forbidding home cultivation of cannabis*, Global News 3rd September. <https://globalnews.ca/news/5852022/judge-strikes-quebec-law-cannabis/>

⁵⁰ Frew, F. (2020) *Manitoba man taking province, attorney general to court over ban on growing pot at home*, CBC 27th August. <https://www.cbc.ca/news/canada/manitoba/manitoba-cannabis-ban-home-court-1.5703157>

19 years of age or those without an invitation to the property.⁵¹ Whether such regulations are necessary or proportionate to the risks they seek to address remains a moot point. Some have been criticised as over-regulatory political posturing, whilst others may argue they are a reasonable exercise of the precautionary principle given the novelty of the policy model. Certainly the specifics of such rules need to be carefully considered and subject to review and an openness to change towards stricter or more relaxed approaches as appropriate. Limits on the scale of self-cultivation, either in the form of a maximum number of cannabis plants allowed, or an area of ground under cultivation, have already been adopted (even if informally) in most jurisdictions that permit such activity and are a prudent measure that should be implemented wherever home growing is made legal.

It is important to be aware that while the law may permit individuals to cultivate up to a certain number of plants, this does not imply an unconstrained right to do so. For instance, an individual's ability to cultivate may still be constrained by leasehold agreements. Clearly, home growing should also only be allowed for those who meet the jurisdiction in question's age-access threshold.

The difficulty of enforcing regulations on home cultivation does, however, need to be emphasised. The privacy of the home is a right not lightly intruded upon in many countries, and there will be reluctance on the part of both the state and police to expend significant energies pursuing petty home growing violations. A similar reluctance can already be observed in the virtual non-enforcement of laws prohibiting domestic alcohol stills, or those requiring the payment of duty on home-grown tobacco in many countries.

⁵¹ Slade, H. (2020) *Capturing the Market: Cannabis regulation in Canada*, Transform Drug Policy Foundation, p34. <https://transformdrugs.org/product/capturing-the-market/>

Similar to home brewing of beer, home growing of cannabis is likely to become largely the preserve of hobbyists and connoisseurs in the post-prohibition era. As the experience of the Netherlands suggests, if a legal retail supply is available, most consumers will default to the convenience and reliability offered by this option, rather than going to the trouble of growing their own supply (even if there is an initial surge of interest). In this scenario, home growing is likely to remain a minority pursuit and, as such, a relatively marginal concern for regulators and law enforcement.

However, even small scale production limited to less than 10 plants can still produce quite significant quantities. A single indoor grown plant can easily yield 150g (5oz), and a single outdoor plant, three times as much. Such quantities still create potentially significant incentives for unlicensed for-profit sales particularly if legal retail prices remain high. Licensing of home growers is a possibility, but is likely to be both bureaucratic and widely ignored in the absence of vigorous enforcement, which, as noted, is not a realistic prospect either. Imposing a charge for a home growing licence might help cover the costs of inspections and enforcement measures, but would also incentivise people to ignore it. As is the case for regulations more generally, their usefulness in moderating behaviours will be undone if their requirements are so onerous or undesirable as to deter a vast majority of individuals from complying.

A more pragmatic approach would involve:

- Setting clear limits on the scale of cultivation permitted, whether in terms of the number of plants (a figure of around five might be a useful starting point for discussion) or the size of the growing area
- Prohibiting unlicensed for-profit sales (although some degree of sharing/ gifting of crops is inevitable)

- Establishing an age restriction (the same that exists for access to retail supply) for home growers, and potentially also for access to cannabis seeds
- Establishing growers' responsibility to restrict access to minors. For harvested cannabis this will be the same as the responsibilities of those in possession of legally retailed supply, but presents a bigger challenge for cannabis that is grown outdoors. Guidelines could be established for cultivation in spaces not easily visible or accessible to children.
- Regulating seed markets, potentially through licensing of sales or vendors. Regulation could:
 - Help disincentivise the production and use of certain more potent cannabis strains
 - Require vendors to have training (so that they can, for example, advise growers on potency/risk issues)
 - Be used to enforce restrictions on sales to minors
- Permitting the home production of cannabis edibles, resin, and other concentrates, in line with the constraints listed above

In the absence of a licensed grower model, the enforcement of any regulation of home growing would inevitably be mostly reactive. Some flexibility would be needed (for example, in dealing with the cultivation of seedlings in greater numbers than the limit for mature plants), with the key concerns being age controls and the prevention of unlicensed larger-scale commercial production. In the overall context of regulation, enforcement of home growing laws should be a low priority (reflecting the low risk of harm) except where high levels of risk of diversion are evident, and any sanctions for minor breaches should be proportionate (limited in nature, and non-criminal).

As in Canada, plant limits are more likely to be applied per residence rather than per person. Issues might arise where multiple people choose to grow in the same location, for example in a shared garden, or communal indoor space, though, to prevent issues arising, leasehold agreements may seek to limit home growing activity, or prohibit growing in shared spaces. In such scenarios, guidelines could also be put in place mandating the establishment of a more formal cannabis cooperative licence (see [above](#)) for sites over a certain size or number of plants.

The timing of the introduction of a home growing provision will also influence decisions around the regulatory model adopted. If home growing is introduced before any regulated retail production and supply is established (as has occurred in some parts of Europe as an element of a decriminalisation model, and many US states prior to retail markets opening), then it is likely to prove more popular than if the two models are implemented simultaneously (as has happened in Uruguay and Colorado). Increased popularity will correspondingly intensify any regulatory and enforcement burden, a situation potentially worsened by the greater incentive for secondary sales in the absence of legal retail alternatives. The *'grow and give'* model operated in the US state of Vermont highlights some of these issues: while the sale of cannabis remains prohibited, individuals in Vermont are allowed to grow up to two mature (and four immature) plants per household, which they may also share. In theory, the opportunity to share produce should provide limited access to legal supply while regulation of sale is still pending, able to satisfy a small level of demand (although, in Vermont, there are no plans to open a retail market as yet). For these reasons, home growing provisions can make clear that a limited degree of sharing (i.e. without the exchange of money or other goods in return) is permissible. However, in Vermont, there have inevitably been attempts to circumvent this limitation, leading the Vermont Attorney General to clarify that businesses

charging a '*delivery fee*' to deliver '*free*' cannabis were still breaking the law.⁵² While the above considerations might indicate a need for tighter regulation while retail markets are pending, the relatively unproblematic nature of home growing models where they have been implemented, whether for medical or non-medical use, suggests they will pose relatively minor enforcement issues.

The global cannabis trade and international development

Currently, the United Nations (UN) drug conventions prevent a legally regulated export trade for non-medical cannabis. This is acknowledged in the Canadian Cannabis Regulations, which only permit the import and export of cannabis for medical and scientific purposes (for those granted the relevant import or export permit).⁵³ However, while jurisdictions that have moved beyond their UN treaty obligations and legalised cannabis domestically have thus far avoided more contentious international trade, in the longer term such a trade (and changes in the international treaties to allow it) seems inevitable.

Recent years have seen cannabis producers become multinational companies. There are multiple Canadian producers which now operate in five continents, serving both the non-medical market in Canada and medical markets in Canada and elsewhere. The already-global nature of cannabis policy, and the existence of multinational operators, highlights that future market dynamics are already being established. At some point soon, these dots will be joined and international trade in cannabis for non-medical use will become a reality. This further highlights the urgent need to hardwire

⁵² McCullum, A. (2018) Marijuana 'gifting' businesses illegal, says Vermont Attorney General, Burlington Free Press 25th July. <https://eu.burlingtonfree-press.com/story/news/politics/government/2018/07/23/marijuana-delivery-fees-illegal-says-vermont-attorney-general/818276002/>

⁵³ See Part 10, Canadian Cannabis Regulations.

sustainable development and social equity into the policy design of emerging regulated markets at both national and international levels, while taking steps to prevent corporate capture. If regulators wish to prioritise local, or smaller, businesses then proactive steps will need to be taken to ensure they are able to access market space. In the absence of such proactive measures, market forces with no inherent sympathy for sustainable development or social equity will prevail.

There is already extensive experience, both good and bad, from the regulation of international trades in all manner of products, that can provide lessons on the best way forward. The development of international trade in medical cannabis will inform future trade in non-medical cannabis and, given the similarities of the markets, the latter is likely to mirror the experiences of the former.

However, at present, protectionism is a feature of many medical cannabis markets, with regulators favouring local producers. In the US, this is due to the fact that cannabis remains illegal at a federal level, meaning a series of internal markets have developed at state-level. In the Netherlands, as discussed earlier in this section, there is presently a single licensed cannabis producer, with a government office the sole purchaser. In Canada, government data indicated that in September 2020 the country had not imported any commercial medical cannabis since late-2018, with only very small quantities of dried cannabis and cannabis oils imported in that timeframe, and then only for research and scientific purposes. In contrast, commercial exports of medical cannabis from Canada have grown dramatically in recent years – exporting to 19 countries in 2019.⁵⁴

⁵⁴ Lamers, M. (2020) *Canada hasn't imported any commercial medical cannabis, new data shows*, Marijuana Business Daily 1st September. <https://mjbizdaily.com/canada-has-not-imported-any-commercial-medical-cannabis/>

In the longer term, one area of particular interest is the potential for long-established cannabis cultivation regions to continue production under a regulated market framework, given demand for some traditionally produced forms of cannabis will no doubt continue in consumer countries. If legalisation occurs in both producer regions and consumer markets, if international transit issues can be resolved, and if the products can meet established quality criteria, then there is the possibility that some form of export trade could be established. However, current trends suggest that these will not be easy obstacles to overcome. Legalising cannabis production and export for medical use has become an increasing trend in recent years, viewed as a potentially lucrative source of revenue to meet demand in consumer medical markets.⁵⁵ However, in reality, as already noted, many Global North countries with growing medical markets, like Canada and Germany, are nurturing their own domestic production. Emerging production in Africa, for example, may not have sufficient advantages, in terms of climate or lower production costs, to compete with domestic production in the Global North. Despite the size of the market by value, the area under cultivation for medical cannabis remains relatively tiny in agricultural terms. And for a very high net value crop, required to meet the stringent standards required for domestic or regional Good Agricultural Practices and Good Manufacturing Practices, domestic production is attractive in both practical and economic terms.⁵⁶

It is also the case that the global nature of future markets may, without adequate protection, encourage those in producer regions

⁵⁵ See, e.g.: Mumbere, D. (2020) *Malawi becomes latest African country to embrace cannabis*, *Africa News* 18th February.

<https://www.africanews.com/2020/02/28/african-countries-embrace-cannabis-zambia-south-africa-zimbabwe-lesotho/>

⁵⁶ For discussion on the challenges of meeting regulatory standards to export cannabis, see: Klein, A. and Hanson, V. (2020) *Ganja Licensing in Jamaica: Learning lessons and setting standards*, UWI and ICCR (Interdisciplinary Centre for Cannabis Research), p21-22.

<http://iccresearch.org/sites/default/files/Ganja%20Licensing%20in%20Jamaica%20-%20April2020.pdf>

to alter production methods to match demand in the lucrative Global North markets (for example, moving to produce higher THC products).⁵⁷ That is to say, rather than traditionally produced cannabis being afforded its own niche market space, producers may be financially incentivised to adapt away from traditional methods to meet profitable consumer demand. However, positive action at an international level can help boost and maintain these niche export markets, while encouraging good practice at a production level, and nurture demand for traditionally produced cannabis.

Small scale producers will realistically be unable to compete with corporate multinationals. Some forms of protectionism may be needed to guarantee livelihoods, but this is also a natural opportunity for well-established fair trade principles and structures to be applied.⁵⁸ Fair trade models have been implemented in a range of other industries, seeking to address *‘the exploitative structure of transnational consumer markets’*.⁵⁹ A broader understanding of *‘fair trade’* involves guaranteed minimum prices for producers to provide economic sustainability, and a premium paid by the consumer that is then invested in community development projects, education, and training. This is alongside a goal of ensuring wider realisation of development goals including: the protection of workers rights; empowerment of women; protection of children; and responsible environmental stewardship. Rather like coffee, cannabis production could be subject to fair trade principles, and even some kind of protectionism along the lines of the EU’s *‘Protected Designation of Origin’* (PDO), *‘Protected Geographical Indication’* (PGI) or

⁵⁷ See, for instance, changes brought about in Morocco to produce higher THC strains: EMCDDA (2019) Developments in the European cannabis market, p8. <https://www.emcdda.europa.eu/system/files/publications/11391/TDAU19001ENN.pdf>

⁵⁸ See for example: World Fair Trade Organization, Fairtrade International et al. (2018) The International Fair Trade Charter. https://docs.wixstatic.com/ugd/291e20_d0760267b37a41328b80e4df127f85cb.pdf

⁵⁹ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p265; see also: Jelsma, M., Kay, S. and Bewley-Taylor, D. (2019) *Fair(er) Trade Options for the Cannabis Market*, TNI. <https://www.tni.org/en/publication/fairer-trade-cannabis>

'Traditional Speciality Guaranteed' (TSG) systems⁶⁰ could be applied to certain traditional forms of cannabis. Lessons must also be learned from the failures of coffee, and other industries implementing principles of fair trade; proactive steps and evaluation are necessary to ensure that multinationals do not simply utilise fair trade to *'fairwash'* their brands, and that the system provides meaningful benefits for Global South producers.⁶¹

The Caribbean Fair(er) trade Cannabis Working Group, in their 2020 position paper, propose 23 guiding principles for establishing fair trade among traditional actors in legal cannabis markets. These include:

- Traditional actors must be afforded privileges and concessions to assist transition: including legal recognition of traditional cannabis/ganja farmers; access to farming subsidies; and recognition of traditional grown areas of cannabis
- The establishment in law of privileges and concessions to traditional actors, to constrain regulators
- Cannabis should be acknowledged as a plant for regulatory purposes, to facilitate access to benefits and subsidies available in agricultural sectors
- The development of a niche market in global cannabis trade, with geographic branding indicators, to support the fair trade agenda

⁶⁰ See the relevant EU detail here: <http://www.ec.europa.eu/agriculture/quality/>.

⁶¹ Johannessen, S., & Wilhite, H. (2010) *Who Really Benefits from Fairtrade? An Analysis of Value Distribution in Fairtrade Coffee*, *Globalizations* 7(4) pp525–544; Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p266.

- Binding foreign investors under clear conditions which allow local farmers to compete, including providing training to help research and manufacturing capacity⁶²

Traditional illicit cannabis production in countries including Mexico, India, Afghanistan, Lebanon, Morocco and Thailand is still a major industry that employs significant numbers of people. If domestic production is favoured in legalising countries elsewhere, the major positive impacts of reform on producer regions, such as reductions in criminal profiteering, conflict and instability, need to be weighed against the short- to medium-term reductions in GDP that some regions may experience, as well as the loss of economic opportunities that are likely to be felt by some already marginalised populations. Indeed, the involvement of most farmers and labourers in the illegal drug trade is in large part driven by ‘need not greed’, their ‘migration to illegality’ primarily the result of poverty and limited life prospects.

These negative consequences of reform should not be ignored, and measures to counteract them should, where possible, be incorporated by domestic and international agencies during the development of any new systems of legal cannabis regulation. As Seddon and Floodgate argue, *‘The status of former participants in the illicit cannabis retail trade in the Global North should be understood as a matter of transitional justice. Supporting and resourcing their capacity to earn livelihoods, either within or outside the legal cannabis industry, should be a long-term commitment.’*⁶³ More conventional development interventions will be required for those cannabis producers for whom employment in any legally regulated trade is not practically or economically viable,

⁶² Fair(er) trade Working Group (2020) Position Paper — The emerging cannabis industry in the Caribbean and a place for small-scale traditional farmers. <http://iccresearch.org/project-papers/position-paper—emerging-cannabis-industry-caribbean-and-place-small-scale>

⁶³ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p280.

or not desired. Lessons can certainly be learnt from the extensive experience of so-called ‘*alternative development*’ which, while failing in its goal of reducing illicit drug production, has, when done well, at least, demonstrated how drug crop growers can establish livelihoods outside of the drug trade.

At their best, alternative development programmes have attempted to tackle structural factors driving communities to cultivate illegal crops and helped them transition into the legal economy. Some local successes have been achieved, even if there is little impact on wider supply controls.⁶⁴ The more effective alternative development projects have employed long-term, carefully sequenced and adequately financed multi-agency support and avoided criminalising small-scale actors. Rather than demanding the immediate eradication of drug crops as a precondition of participation, they have sought to involve impacted communities in the design of programmes. However, the alternative development debate has also historically failed to acknowledge drug prohibition as one of the key structural drivers of regional underdevelopment, let alone explore options for regulation as a way forward.

Regulation promises to deliver the contraction of illegal drug production over time that alternative development, eradication and interdiction have so conspicuously failed to achieve. For example, the emerging legal cannabis markets in the United States are already likely to be affecting the scale of Mexico’s illegal market production (pending the implementation of Mexico’s own legal market).⁶⁵ But as this transition continues, the low-level actors in cannabis production will need to establish alternative livelihoods

⁶⁴ Federal Ministry for Economic Cooperation and Development (BMZ) (2016) Rethinking the Approach of Alternative Development: Principles and Standards of Rural Development in Drug Producing Areas, 4th edition, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. https://snrd-asia.org/download/sector_programme_rural_development/Rethinking-the-Approach-of-Alternative-Development.pdf

⁶⁵ Chouvy, P.-A. (2019) *Cannabis Cultivation in the World: Heritages, Trends and Challenges*, EchoGéo 48, pp1–20, p12.

or make the transition to producing cannabis for the nascent legal economy. In either scenario, the lessons learnt from decades of alternative development: what has worked and what has not can offer useful guidance. How long the transition to a truly global cannabis market may take is unpredictable, but it is important that these development issues are planned for from the outset.

Given key consumer countries played a driving role in establishing and maintaining the prohibition that created current patterns of illicit production, they should also bear some responsibility for funding the development interventions that the transition to legal markets will require. So a proportion of the '*peace dividend*' that will arrive with the end of the cannabis prohibition (the criminal justice savings plus potential cannabis market tax income) could be earmarked for development efforts in former cannabis-producing regional economies. This clearly needs international collaboration and coordination, so will likely be hampered until revisions are made to the UN drug control regime.

The consequences of global drug prohibition for sustainable development, the impacts of any shifts away from it, and how to mitigate any resulting harms, all need to assume much greater prominence in the debate around cannabis law reform, which has historically tended to focus on the concerns of Global North consumer countries. It is promising that, in recent years, the role of social equity programmes has featured prominently – particularly in debates around cannabis regulation in the US. However, internationally, there needs to be greater focus on the role that regulation has in sustainable development, and how social equity and justice can be promoted outside of domestic markets. This is particularly the case as the international cannabis market continues to develop and multinational companies continue to speculate for emerging market space. As the International Drug Policy Consortium calls for in its advocacy note on the responsible

regulation of cannabis, we need to ensure that regulatory models *‘promote business models and international trade policies that advance economic inclusion, sustainable development and climate justice throughout local, regional and global supply chains’*.⁶⁶

⁶⁶ IDPC (2020) *Principles for the responsible legal regulation of cannabis*, p4.

http://files.idpc.net/library/IDPC_Responsible_Leg_Reg_1.0.pdf;

See also the webinar series, and related publications, produced by Health Poverty Action in association with a number of other drug policy NGOs: Health Poverty Action (2020) *A World With Drugs: Legal Regulation Through a Development Lens*. <https://www.healthpovertyaction.org/change-is-happening/campaign-issues/a-21st-century-approach-to-drugs/legal-regulation-of-drugs-a-development-lens/>

b Price

Challenges

- Ascertaining how regulated markets will impact on cannabis prices, and how prices can be effectively controlled
- Estimating what the likely impacts of changing prices will be, how price controls will affect levels and patterns of use, and what effect they will have on legal and illegal cannabis markets
- Using price controls to strike a balance between often conflicting priorities, such as dissuading cannabis use, reducing the size of illegal cannabis markets, displacing cannabis use from or to other drugs, and generating revenue from cannabis sales

Analysis

- There are many ways in which governments can influence prices: through fixed price controls, minimum and/or maximum price controls, licence fees, or various tax options
- Price controls can be established, adjusted and monitored more easily under a state monopoly retail model, where the government is the sole retailer
- Decisions can be informed by the extensive, if imperfect, alcohol and tobacco studies literature that has examined the impacts of various types of price controls
- Price controls are a flexible regulatory tool, one that can respond relatively quickly to changing circumstances or emerging evidence, and also potentially be applied to certain products or in certain localities if specific problems or concerns arise
- The importance of price regulation in achieving the aims of effective drug policy warrants a greater level of government intervention than that which may be appropriate in other markets

- In the absence of price controls, production costs for cannabis are likely to fall significantly in a legally regulated market over time, below illegal-market prices
- While a substantial fall in retail price is likely to lead to an increase in total cannabis consumption, reliable estimates of the extent of such an increase are problematic as the price elasticity of demand for cannabis is not well established and is likely to vary between different populations and different locations
- If legal-market prices are kept artificially high through government intervention, opportunities for a parallel illegal trade to gain a greater share of the overall cannabis market will increase, especially if production costs fall
- Higher prices could also incentivise home growing, or displace cannabis use to other drugs – in particular alcohol or synthetic cannabinoids
- Conversely, lower prices could displace use from other drugs, including alcohol, to cannabis
- Differential price regulation on products could encourage use of safer products, and discourage use of more risky products
- Direct price controls have the disadvantage (compared to taxes) of putting money in the hands of vendors, potentially incentivising them to sell more (a problem mitigated by state monopoly retailing)

Recommendations

- At the outset of any new system of legal cannabis regulation, it is sensible and cautious to use price controls to set retail prices at or near those found on the illegal market. More significant variations are likely to have unpredictable, potentially negative impacts
- Experimentation with price regulation will be needed, and should be accompanied by close evaluation and monitoring, as well as the flexibility and willingness to alter prices when necessary

- The impacts of any price regulation should be evaluated based on analysis of a range of variables, such as: levels of cannabis use among different populations, patterns of use (in terms of frequency, products consumed, using behaviours, and in particular, high risk use), the relative sizes of parallel legal and illegal markets, the extent of any home growing, and displacement from or to the use of other drugs, including alcohol
- Impact evaluation and emerging evidence should shape the evolution of regulatory frameworks over time, with local bodies determining how best to balance conflicting priorities
- Local experiences with alcohol and tobacco pricing are likely to be instructive and should therefore inform decisions about where to set cannabis prices

Price controls

Under a system of legal regulation, governments will be able to influence the price at which retailers can sell cannabis both by imposing fixed costs, such as licence fees, and by requiring them to pay the more variable costs entailed by satisfying various regulatory requirements, such as those outlined in this guide. However, regulators can also intervene more directly in the pricing of cannabis, through a range of well-established measures that are frequently adopted for other products:

- **Direct price fixing:** the government specifies fixed prices (which may or may not include tax) at which certain products must be sold.
- **Minimum and/or maximum prices:** such price controls (which may or may not include tax, and may be applied on a per-unit, per-weight, or per-product basis) allow a degree of market flexibility and competition, but within fixed parameters defined

by government. They can be used to prevent certain price-based forms of marketing such as loss leaders or two-for-one promotions, as well as profiteering.

- **Fixed per unit (or ‘specific’) tax:** a tax is imposed that charges a set amount per unit of a given product, for example, per gram, or per unit of THC. It can be applied at production level, retail level, or both. Generally, a specific tax system is more effective in regulating potency than an ad valorem model (see [below](#)) because it can establish a direct relationship between the potency of a product and the duty charged (for further, specific discussion on taxes, see [Section 2C](#))
- **Ad valorem tax:** Tax is calculated as a fixed percentage of the retail price of the product. In this case, two products of different potencies may be taxed at the same level as long as their retail price is the same.
- **Local tax:** a tax applied at municipal or other sub-national jurisdiction (county, province, etc.) level. This can help cover specific localised regulatory burdens/costs, or address local concerns, but may incentivise diversion, or geographical displacement of markets. This need not be at a set rate, and flexibility can be given to jurisdictions.
- **Differential pricing:** any of the above pricing controls can be applied in different ways to different products, or similar products in different locations

These pricing control models have all been tried at different times and in different places around the world for alcohol and tobacco, so there is a useful if imperfect literature from these sources to

inform initial decision-making.^{1 2} It is clear that interventions on price are a particularly useful policy tool, as once a price control infrastructure is established, it allows for relatively rapid responses to changing circumstances and emerging problems. Price controls are highly flexible and can potentially be targeted at specific products, populations of consumers, types of outlets or geographical regions associated with particular concerns. The differential application of price controls can also contribute to an incentive-disincentive gradient that can help encourage more responsible using behaviours, and the use of lower-risk products.

As with alcohol and tobacco, the potential risks associated with the use of cannabis mean it is qualitatively different from other consumer products. In setting cannabis prices, a level of government intervention beyond that which is accepted for many other products is therefore justified. In a state monopoly retail model, where a government agency is the sole retailer, control over prices can be implemented directly, and profits accrue to the state rather than private interests. However, in a private licensed retail model, the full suite of price control measures discussed above are all available as potentially useful regulatory levers.

The simplest broad assumption to transfer from the experiences with alcohol and tobacco is that the pricing of drugs follows the same basic laws of supply and demand that hold for most consumer products: essentially, as price increases, consumption falls, and as price falls, consumption increases. Transferring this basic observation into policy is, however, far from simple. Price changes have very different impacts on different sub-populations of consumers. Wide variations in price elasticity of demand – that is, the degree to which demand responds to changes in price –

¹ Wagenaar, A. C. et al. (2008) *Effects of beverage alcohol price and tax levels on drinking: a meta-analysis of 1003 estimates from 112 studies*, *Addiction* 104, pp.179–190.

² Gallus, S. et al. (2006) *Price and cigarette consumption in Europe*, *Tobacco Control* 15, pp.114–119.

have been observed with different groups of people who use drugs, and different patterns of use. Therefore, caution is needed when making generalisations or oversimplifying how price can influence behaviours.

The price elasticity of legal cannabis (the degree to which demand changes with price) is relatively poorly researched. A 2010 US-based estimate tentatively puts it at -0.54 , meaning a 10% decrease in price would lead to a 5.4% increase in consumption, although a 2014 literature review (based on jurisdictions without legal markets, and among varying populations) documented elasticities hovering between -0.2 and -0.4 for 30 day participation.³⁴ A 2017 study in Washington State analysed the effects of its excise tax increase from 25% to 37%, which led to a retail price increase of roughly 2.3%. One of the first studies able to utilise evidence from a legal non-medical market, the authors found that the reforms indicated a short term price elasticity of -0.43 , but rising to nearly -1 within two weeks of the reform.⁵

Such estimates are acknowledged to be, by their nature, rather speculative, since calculations of the price elasticity of a particular good or service are typically made with the assumption that while monetary price changes, all other factors are held constant. Controlling for these factors can be very challenging. In reality, both patterns and prevalence of drug use demonstrably often rise and fall independently of price, and population levels of consumption are influenced by a range of non-price variables including: fashion and culture; perceived quality and safety; social attitudes; stigma

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- 3 Kilmer, B. et al. (2010) *Assessing How Marijuana Legalization in California Could Influence Marijuana Consumption and Public Budgets*, RAND Corporation. www.rand.org/pubs/occasional_papers/OP315.html.
 - 4 Pacula, R.L. and Lundberg, R. (2014), *Why Changes in Price Matter When Thinking About Marijuana Policy: A Review of the Literature on the Elasticity of Demand*, *Public Health Rev.* 35(2) pp1–18. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4310503/>
 - 5 Hansen, B. et al. (2017), *The Taxation of Recreational Marijuana: Evidence from Washington State*, NBER Working Paper No. 23632. <https://www.nber.org/papers/w23632>

around use; geographical and temporal availability; as well as availability and price of alternative drugs or activities. Estimating price elasticity is further complicated as legalising a product that has until that point been prohibited clearly represents a significant change in circumstances and is likely to impact on other environmental variables, such as a potential change in availability, or the social acceptance of cannabis use, that could, independently of price, affect levels of consumption.⁶ Equally, while new legal markets are fairly immature, consumption habits are still likely to be settling and are more prone to volatility.

The price of cannabis in existing illegal markets is determined by the interplay of supply and demand in a largely unregulated marketplace. In Global North markets the illegal cannabis production model is increasingly characterised by a large number of small- to medium-sized domestic producers. This more localised and flexible production has progressively displaced established models of previous decades that involved larger-scale production and importation from regions such as Central America, North Africa or parts of Central and South East Asia.

Compared to alcohol, the cost of either legally or illegally producing herbal cannabis (which requires only a modest amount of processing) has been relatively low as a percentage of final retail price. This means marginal changes in production costs can be easily absorbed and have relatively minor impacts on market prices. However, illegal-market cannabis prices are typically highly inflated, primarily as a result of the risks and costs involved in evading law enforcement throughout production, transit and sale. Straightforward profiteering is an additional factor that leads to such elevated prices. In essence, entrepreneurs who populate the

6 Kilmer, B. et al. (2010) Assessing How Marijuana Legalization in California Could Influence Marijuana Consumption and Public Budgets, RAND Corporation. www.rand.org/pubs/occasional_papers/OP315.html.

illegal market will simply maintain prices at the highest possible level that consumers are willing to pay. As such, illegal-market prices can potentially provide guidance on the point at which legal-market prices should be set.

The price elasticity of demand for cannabis is likely to vary significantly between individuals and populations:

- The personal economic burden of an individual's expenditure on drugs, relative to their total disposable income, is decisive in determining the price elasticity of their demand. If initial prices are sufficiently low and/ or if use is moderate/occasional, total spend is likely to be low and even a dramatic change in price is likely to have only a marginal impact on demand. Conversely, where use is more frequent and total spend relative to disposable income is high, price changes are likely to have more significant impacts on levels of use. This is certainly the case with alcohol and tobacco
- This assumption may be complicated where dependency is involved, as an individual's need to maintain their use can make their demand less price elastic than that of other consumers. Furthermore, significantly increasing prices above pre-regulation levels may have unintended consequences for those people with heavy or dependent use and low disposable incomes. They may, for example, engage in fundraising-related criminal activity or reduce their spending on food necessary for a healthy diet (also sometimes observed among people dependent on alcohol and tobacco)⁷

⁷ This is a phenomenon often witnessed with people who use heroin or cocaine, but relatively rarely with those using cannabis, alcohol or tobacco because total spend is comparatively much lower. The nature of cannabis dependency is also relatively less intense.

- Research into alcohol and tobacco markets suggests that those with lower disposable incomes, in particular, young people, will generally be most affected by price increases that are intended to moderate levels of consumption (in other words, their demand is more price elastic). Although such price increases can have a positive impact in reducing use among young people, they could potentially be seen as discriminatory, effectively penalising those on lower incomes – or driving them to the illegal market and creating a two-tiered market: one for the rich and another for the poor, with potentially serious impacts on social equity goals
- Changes in the price of legal cannabis relative to illegal cannabis may lead to displacement between the two, and suppliers in the illegal market may respond directly to price changes in the legal market to encourage consumers to purchase from them instead. Similarly changes in the price of legal cannabis relative to other products or activities (most obviously alcohol consumption) may also lead to displacement between the two. These are important but distinct issues

Impact of legal cannabis prices on the illegal market

The price of legally supplied cannabis (inclusive of any government interventions) will naturally have an impact on the size of any parallel illegal market that remains. A key factor will be the relative price difference: in other words, the ability of the illegal trade to undercut legal prices yet remain sufficiently profitable.

The nearer the retail price of legal cannabis is to the cost of bringing illegal cannabis to market, the smaller the profit opportunity that exists for any parallel illegal trade. However, because the gap between production costs and current retail prices is so disproportionately large compared to more conventional product

markets, even a substantially cheaper legal product is likely to offer opportunities for undercutting. Unlicensed producers have one market advantage in not having to incur costs from compliance with regulatory requirements and quality controls. Nonetheless, they will still be disadvantaged by the need to incorporate the risk of criminal penalties into their costs and are disadvantaged by the economies of scale and industrial efficiencies more readily available to legal enterprises.

Price of cannabis in Canada on the legal and illegal markets

Source: Statistics Canada (2019)⁸

Canada, which legalised and regulated production, supply and use of non-medical cannabis for adults in October 2018, provides an instructive case study in relation to pricing. Despite making significant inroads into illegal markets, after a year of legal regulation it was clear that uptake to the legal cannabis market remained slower than many hoped, and that comparatively high prices for legal products have been part (though not all) of the reason.⁹ By early 2020, the average price of cannabis on the illegal market was less than the year prior (\$5.73, down from \$6.44 per gram), whereas average prices of cannabis on the legal market were slightly higher (\$10.30 up from \$9.69), meaning that the gap was wider than it had been shortly after legalisation.¹⁰ Getting the balance right is difficult, and it is clear that excessively high prices will not tempt consumers towards legal sources, and rising price differentials may even push them the other way.

Were legal cannabis to have been significantly cheaper, it is likely that greater inroads would have been made into the illegal market – but there may have been greater coinciding risks from setting prices too low, such as increased overall consumption. Nonetheless, only through regulation does the state have the ability to adjust prices, and find a position at which the optimal outcomes can be achieved.

⁸ Statistics Canada (2019) Crowdsourced cannabis prices.
<https://www150.statcan.gc.ca/n1/daily-quotidien/200123/dq200123c-eng.htm>

⁹ Slade, H. (2020) *Capturing the Market: Cannabis regulation in Canada*, Transform Drug Policy Foundation and México Unido Contra la Delincuencia, p.37. <https://transformdrugs.org/product/capturing-the-market/>

¹⁰ Statistics Canada (2019) Crowdsourced cannabis prices.
<https://www150.statcan.gc.ca/n1/daily-quotidien/200123/dq200123c-eng.htm>

Realism is obviously needed on this front. Legal supply cannot displace illegal markets entirely unless it involves effectively unregulated provision at, or below, cost price. This would likely incur unacceptable public health costs. The aim should instead be to reduce the size of illegal markets over time, recognising that new markets, social norms and purchasing behaviours will inevitably take time to bed in. A feature of the New Zealand Government's proposed Bill to regulate cannabis considered in 2020 was the stated intention to reduce the use of cannabis over time, with research commissioned by the Ministry of Justice attempting to model how gradual price changes might bring about this outcome.¹¹ This is a laudable aim, but one seen by many as unrealistic in the short- to medium-term. While there is international evidence in legally regulated drug markets, for example tobacco, as to the role of price control measures in reducing overall consumption, such markets have not so recently had extensive levels of unregulated supply to the degree that cannabis has (or, at least, unregulated supply has not exceeded regulated supply to such a degree). In reality, if prices are raised too quickly with the aim of reducing overall consumption, the far more likely trend is that consumers will shift back to established illegal supply chains. Such efforts should therefore only be made once the legal market is sufficiently bedded in, serving the majority of demand, and new consumer norms have developed. Even then, they should be made incrementally and subject to proactive and constant evaluation to ensure other regulatory aims are not being undermined.

A parallel illegal market at some scale is an inevitability, as illustrated by the continuing existence of parallel illegal markets for alcohol and tobacco. The size of these illicit alcohol and tobacco markets

¹¹ New Zealand Government (2020) Summary of the proposed Cannabis Legalisation and Control Bill. <https://www.referendums.govt.nz/cannabis/summary.html>; Business and Economic Research Limited (BERL) (2019) Evidence to inform a regulated cannabis market. <https://www.berl.co.nz/our-mahi/recreational-cannabis-regulation-and-harm-reduction>

varies significantly between jurisdictions, with price controls on the legal market being a key variable. Where cigarette taxes are high, for example in the UK where tax makes up over 70% of the retail price, the incentive for illegal sales is significant.¹² Indeed, in 2013 it was estimated that 9% of the UK market in cigarettes and 38% of rolling tobacco is smuggled or counterfeit.¹³ The illegal alcohol market is generally smaller than that for tobacco, reflecting a number of factors. These include the lower profit margins and levels of taxation for alcohol (and therefore reduced opportunities for undercutting), the greater value added by legal production and sales (people appear to be more willing to smoke counterfeit/smuggled cigarettes than drink illegally produced alcohol) and the greater challenges of transporting and storing heavy liquids compared with tobacco.

This demonstrates that the relative attractiveness of legal and illegal products is about much more than just price. For example, in 2019 the National Cannabis Survey in Canada found that consumers were more likely to value quality over price when making purchasing decisions.¹⁴ Similarly, when Canadian cannabis consumers were asked to rank factors influencing purchase decisions in 2020, 26% of consumers said safe supply was most important, while 15% said quality – although 29% said price.¹⁵ Purchasing decisions clearly involve a range of complex factors that may be difficult to disentangle. Nonetheless, it is clear that legally regulated cannabis production and sale can confer various forms of added value for consumers, for which they will be willing to pay a premium over an

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- ¹² European Commission (2019) Excise Duty Tables: Part III – Manufactured Tobacco, p13.
https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/taxation/excise_duties/tobacco_products/rates/excise_duties-part_iii_tobacco_en.pdf
 - ¹³ Morse, A. (2013) Progress in tackling tobacco smuggling: Report by the Comptroller and Auditor General, National Audit Office. www.nao.org.uk/wp-content/uploads/2013/06/10120-001-Tobacco-smuggling-Full-report.pdf
 - ¹⁴ Statistics Canada (2019) National Cannabis Survey, second quarter 2019.
<http://www150.statcan.gc.ca/n1/daily-quotidien/190815/dq190815a-eng.htm>
 - ¹⁵ Government of Canada (2020) Canadian Cannabis Survey 2020: Summary, Figure 13. t

illegally produced and supplied product. This added value includes: avoidance of contact with illegal markets (and any associated harms); guarantees and consistency in the quality and safety of the product (supported by accurate packaging information); the range of products available (supported by accurate information on the differences provided by a licensed vendor); and, in the case of venues that permit on-site cannabis consumption, an appealing environment in which to consume.

Thus, as with tobacco pricing, a key challenge in designing effective cannabis price controls is how to reconcile the need to dissuade use by keeping prices relatively high, with the need to disincentivise a parallel illegal trade by keeping prices relatively low. As the legal trade matures, the challenge of setting a desired after-tax price is complicated by the predictable decline in pre-tax prices over time. There is no perfect solution, and a compromise between the competing objectives has to be struck, guided by local priorities. The disproportionately large gap between production costs (illegal or legal) and current illegal market prices makes this an even greater challenge in the case of cannabis. For these reasons, it is important to protect against the diversion of legally produced cannabis, and to enforce regulations effectively to stop unregulated for-profit production and sale – thereby keeping the concurrent costs of such production and sale relatively high. Emphasising the added value of legally regulated cannabis bought and/or consumed in safe, controlled environments is also likely to be a useful measure alongside wider public health and harm reduction education.

Evidence from the Netherlands is instructive here. The popularity of the Dutch coffeeshops, which is such that many cannabis users travel from other countries to visit them (see the chapter on cannabis tourism, [Section 3F](#)), has meant that they have squeezed out most of the domestic illegal retail market. The coffee shops have achieved this majority market share despite maintaining prices

at a level not dramatically different from illegal market prices found in adjacent countries. According to the EMCDDA, in 2011 the average per-gram price of cannabis (resin/herbal) was: €9.7/€5.9 (imported) or €9.3 (locally produced) in the Netherlands (via the coffee shops); approximately €7.5/€8 in Belgium; and €7.2/€8.9¹⁶ in Germany. Unlicensed cannabis retailers in the Netherlands have therefore not been able to drop prices sufficiently to outweigh the other benefits coffee shops offer most purchasers. It is also important to note that rates of cannabis use in the Netherlands remain similar to those in neighbouring countries.

Displacement effects of relative price changes

The availability and costs of potential substitute drugs, or substitute recreational activities, will also be a factor in determining the net impact of post-regulation legal cannabis pricing (inclusive of government interventions). That at least some displacement of use from other drugs to cannabis (if the relative price of cannabis falls), or from cannabis to other drugs (if the relative price increases) will occur is a reasonable assumption, but one that has historically been poorly researched.

The most obvious and potentially significant area for such an effect is displacement between alcohol and cannabis, as their patterns of use and effects are *relatively* similar, and indeed, often overlap directly. While there has been some speculation that an increase in cannabis use (whether related to a price fall, some other impact of legal regulation, or some entirely unrelated variable) would be likely to lead to a fall in alcohol use, the existence or extent of any

¹⁶ EMCDDA (2013) Table PPP-1. *Price of cannabis products at retail level, 2011.*
www.emcdda.europa.eu/stats13#display/stats13/ppptab1a

such effect is not well established, and is hard to test.^{17 18 19} There are conflicting examples of cannabis and alcohol use rising and falling at the same time and, in the US at least, more recent patterns of cannabis use rising while alcohol use falls.²⁰ Reduction in sales of alcohol is reported in Canada post-legalisation of cannabis but, as with each of these trends, correlation is not necessarily causation and other societal, cultural or other factors may be at play.²¹ Epidemiological evidence needs to be supported by studies of individual behaviours, and there are clearly many variables other than price that influence decisions to use one drug over another. The reality of cannabis and alcohol frequently being used together complicates the picture further: are they ‘*complements*’ or ‘*substitutes*’? Caution is certainly needed before jumping to conclusions about simplistic causality. There is, of course, also the possibility that government interventions that increased cannabis prices above current market levels would lead to displacement in the opposite direction, with cannabis use falling and alcohol use increasing. However, if legal retail prices are set too high at the outset (higher than current illegal market prices) the more likely outcome, as explored above, is that a significant proportion of demand will simply continue to be met via unlicensed supply – the economics of which, in terms of profitability, will be largely unchanged (or potentially even improved).

¹⁷ Cameron, L. and Williams, J. (2001) *Cannabis, Alcohol and Cigarettes: Substitutes or Complements?* The Economic Record 77, No. 236, pp.19–34.

¹⁸ Chaloupka, F. J. and Laixuthai, A. (1997) *Do Youths Substitute Alcohol and Marijuana? Some Econometric Evidence*, Eastern Economic Journal 23.3, pp.253–276.

¹⁹ Pacula, R. L. (1998) *Does increasing the beer tax reduce marijuana consumption?* Journal of Health Economics 17.5, pp.557–585

²⁰ Johnston, L. D. et al. (2012) *Monitoring the Future National Survey Results on Drug Use, 1975-2011: Volume I, Secondary school students*, Institute for Social Research, Ann Arbor, Michigan: The University of Michigan, p.159. http://www.monitoringthefuture.org/pubs/monographs/mtf-vol1_2011.pdf.

²¹ Cain, P. (2020) *Are Canadians drinking less as weed gets easier to buy? It's starting to look that way*, Global News 28 February. <https://globalnews.ca/news/6574008/drink-less-alcohol-cannabis/>

Two other displacement possibilities are also worth noting here. One is that increased cannabis prices might incentivise home growing. Inevitably, this would be subject to less regulatory controls, but even the worst-case scenario would hardly be disastrous. Another possibility is that increased price might also cause displacement to drugs other than alcohol. The net impact of any increased use of other drugs would depend on their relative risks, but likely candidates for displacement would include some synthetic cannabinoids (see [Section 3E](#)) and other new psychoactive substances (NPS). Displacement to synthetic cannabinoids has already been experienced in some jurisdictions as a response to cannabis prohibition, notably with ‘spice’, which is considerably higher risk than cannabis but became more popular among vulnerable and marginalised populations having initially come onto the market as a legal alternative to cannabis – before subsequently being subject to widespread bans.²² However, large-scale displacement from legal markets among people who use cannabis would be unlikely, given the differing product profiles, unless the price of cannabis on the illegal market also experienced a coinciding rise. Conversely, providing legal availability of cannabis may displace some higher risk use of synthetic cannabinoids towards consumption of traditional herbal cannabis or other cannabis products – with lower prices likely to provide greater degrees of displacement.

²² Transform Drug Policy Foundation (2017) *Dealing with Spice — Why More Enforcement Won't Help*.
<https://transformdrugs.org/dealing-with-spice-why-more-enforcement-wont-help/>

C Tax

Challenges

- Effectively integrating taxation policy into pricing regulation in a way that balances revenue generation with more important policy aims

Analysis

- Tax policy is closely linked with pricing policy
- Various possible tax mechanisms exist: tax on unit weight, on active content, on sales value, or on business expenses
- Tax revenue will be available not only from cannabis sales, but also from production, industry-related earnings, and standard value added taxes (VAT), as well as revenues from other sources such as licence fees,
- Potential tax revenue will vary significantly depending on the nature and size of the market, and regulatory/tax regime adopted – predicting tax revenue before these are established is problematic
- If prices are to be maintained at or near current market levels, a substantial tax burden will eventually be required to prevent inordinate profits (unless sales are regulated under a state monopoly) – but higher taxes or relaxed tax enforcement also create incentives for diversion, tax avoidance, and fuel illegal markets
- Tax revenue also has the potential to distort government priorities

Recommendations

- A system based on taxation of both production and sales – with THC content by weight being the taxable unit – is a sensible starting point for products whose THC content is reliably

measurable, but the detail of such decisions would need to be incorporated into wider pricing policy considerations, and fit within the needs of local political environments and existing tax frameworks

- Maximising tax revenue should not be a key driver of policy; tax revenue should be seen more as a welcome additional benefit
- Ringfencing cannabis tax revenue for drug treatment, prevention or other social programmes is a politically attractive proposition but is problematic; public health interventions should be funded according to need and not be dependent on sales. The same is true for social equity programmes, which should have separate and sufficient funding not dependent on tax revenue

Economic pressures faced by governments around the world have drawn increasing attention to the potential fiscal benefits of legally regulating cannabis. The logic being that the move could not only create savings in the criminal justice system, but additionally provide a much-needed boost in tax revenue for regional and national budgets. Indeed, campaigns to legally regulate cannabis in many US states explicitly highlighted the potential fiscal benefits of such a move.

As discussed in the previous section, tax is also an important policy lever to implement price control. However, there are multiple ways to tax cannabis markets, offering different policy levers to regulators, which will each have distinct impacts.

Tax options

1 Ad Valorem sales tax added as a fixed % of retail price

Pros

- Easy to understand and administer

Cons

- Potentially leads to revenue collapse and to very low after-tax prices as market matures (absent other forms of price control to prevent price fall)

2 Fixed-rate tax based on unit weight

Pros

- Easy to administer

Cons

- Potentially incentivises selling more potent varieties of a product (e.g. higher THC varieties of herbal cannabis) that retail at higher prices
- Requires different tax rates for different products that are not comparable in weight, like concentrates and edibles

3 Fixed-rate tax on THC content by weight

Tax based on THC content by weight

Pros

- Avoids incentivising sales of higher-potency strains

Cons

- More technically difficult to administer

4 Progressive tax that increases according to potency, or other risk variable

(can be either fixed rate or value added)

Pros

- May help dissuade use of more potent varieties or more risky products

Cons

- More complex and technically difficult to administer

5 Licence fees

Effectively a tax on licensees to at least cover bureaucratic costs, may include application fees and renewal fees

Pros

- Offers an initial funding stream for regulators that is not dependent on sales

Cons

- In the absence of social equity programmes and other proactive measures, may act as a barrier for prospective market actors and small businesses with modest investment capital

6 Local tax

Municipal- or county-level tax to cover any localised cost burdens associated with trade

Pros

- Can help cover specific localised regulatory burdens or costs
- Can incentivise local authorities to allow sales (could also potentially be a con)

Cons

- Local tax differentials may incentivise diversion, or geographically displace markets

7 Deny tax deductions for advertising/marketing expenses¹

Pros

- Targets efforts to increase demand
- Levels the playing field to some degree, for smaller businesses that rely more on word of mouth rather than promotional expenditures

Cons

- Designing carve-outs for innocuous sales activity like ads listing hours of opening and location would take time and be complex

1 Oglesby, P., (2015) *How Bob Dole got America addicted to marijuana taxes*, Brookings
<https://www.brookings.edu/blog/fixgov/2015/12/18/how-bob-dole-got-america-addicted-to-marijuana-taxes/>

The ‘sweet spot’ for cannabis taxation

The scale of any sales tax revenue generated from the different tax options would be dependent on a number of variables:

- The price of products and rates of taxation in the new legal market
- The total size of the market and levels of consumption of different products (which may change post-prohibition)
- The proportion of the market that is taxable – parallel illegal markets and home cultivation are untaxed, and tax breaks for medical cannabis, especially if they go to ‘*healthy pretenders*’ will also potentially reduce the taxable market²
- Tax evasion – in the form of diversion from legal production channels before tax is collected for the purpose of illegal ‘*off the books*’ sales
- Tax avoidance – exploitation of legal loopholes to reduce taxes payable
- The intensity of tax law enforcement

These variables are naturally interlinked. For example, higher taxes are likely to push up prices, incentivising tax evasion and avoidance, home cultivation, and a parallel illicit trade, in turn shrinking the taxable market and reducing potential taxable income. They may also reduce operating profits for private actors at various levels in the market, deterring others from entering the legal trade. These potentially complex interactions and the wide variety of potential regulatory models and tax regimes mean predictions about likely levels of tax revenue can only be made within very wide margins of error.

² Oglesby, P., (2015) *Supplemental Thoughts About Revenue from Marijuana in Vermont*, Center for New Revenue http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2551029

Setting levels of taxation, like all other elements of regulation, is a matter of careful balancing that requires constant monitoring and evaluation, and regulators may rely on a variety of the tax options detailed above to fine-tune this. As Seddon and Floodgate note, the “*sweet spot*” for cannabis taxation is significantly under-researched at the moment,³ but it is clear that this will vary between markets and locations. A 2017 research paper estimated that Washington State, with the highest taxes in the US (37% excise tax, 6.5% state sales tax, and often further local sales taxes) is ‘near the peak of the Laffer curve’, the point after which increasing tax rates further may not increase overall tax revenue received (i.e., because diversion to informal supply, tax avoidance and evasion may become more prominent).⁴ Nonetheless, the finding that Washington State, with its much higher taxes than other states, is still not at this point suggests that other states in the US are on the left side of the Laffer curve – meaning tax increases could still lead to overall increased revenue.

As discussed earlier in the book, pure production costs of cannabis are very low compared to illegal market prices and it can be expected that, over time and without corresponding regulatory reaction, a competitive legal market would see a reduction in prices. Government cannabis revenue can rise to absorb most of the after-tax price, as with cigarettes in the EU, where the take recorded by governments dwarfs that of the private sector. Still, cannabis revenue should not be overestimated, and revenue estimates should not be the leading drivers for reform. In reality, estimates as to the potential revenue provided by legal cannabis markets have varied dramatically (at a federal level in the US, this has ranged

3 Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p176.

4 Hansen, B. et al. (2017) *The Taxation of Recreational Marijuana: Evidence from Washington State*, NBER Working Paper No. 23632. <https://www.nber.org/papers/w23632>

from \$8.7 billion⁵ to \$28 billion⁶, for example) but a clearer picture will not emerge until we are able to evaluate and compare the existing regulation models over a longer period of time. It will take time for retail markets to bed in, and tax revenues will not achieve stability in the immediate years following legalisation.

We are now seeing the early results of cannabis legalisation on tax revenue in US states. Colorado, the first state to commence regulated non-medical cannabis retailing, reported nearly \$1.5 billion in tax revenue between February 2014 and August 2020.⁷ Revenue continues to grow each year, highlighting that, even now, the market is still bedding in. Despite concerns about the persisting illegal market in California, its legal retail market has nonetheless been reported as the largest in the world, with an estimated tax revenue of \$300 million for 2018, surpassed only by Washington's estimated \$319 million.⁸ According to Statistics Canada, in the first six months after cannabis was legalised, the federal government collected \$55 million in both excise and goods taxes, while provincial governments collected \$132 million.⁹

While potential sales tax revenue has received most attention from policymakers and researchers, tax revenue can be generated at various points in a legally regulated cannabis market. Revenue can be generated by taxes imposed at production/wholesale level,

5 Miron, J. A. and Waldock, K. (2010) *The budgetary impact of ending drug prohibition*, Cato Institute. www.cato.org/sites/cato.org/files/pubs/pdf/DrugProhibitionWP.pdf

6 Ekins, G., Henchman, J., (2016) *Marijuana Legalization and Taxes: Federal Revenue Impact*, Tax Foundation. <http://taxfoundation.org/article/marijuana-legalization-and-taxes-federal-revenue-impact>

7 Colorado Department of Revenue (Undated) *Marijuana Tax Data*. <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data>

8 McGreevy, P (2019) *California now has the biggest legal marijuana market in the world. Its black market is even bigger*, LA Times 15th August. <https://www.latimes.com/california/story/2019-08-14/californias-biggest-legal-marijuana-market>; McCarthy, N. (2019) *Which States Made The Most Tax Revenue From Marijuana In 2018?* [Infographic], Forbes 26th March. <https://www.forbes.com/sites/niallmccarthy/2019/03/26/which-states-made-the-most-tax-revenue-from-marijuana-in-2018-infographic/#570924c7085e>

9 Government of Canada (Undated), *Cannabis duty — Calculate the excise duty on cannabis*. <https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/excise-duties-levies/collecting-cannabis.html>

corporation taxes paid on profits, business taxes paid on the use of premises, and income taxes paid by those employed in the legal cannabis trade. A range of different models are already developing in regulating jurisdictions, with some imposing the majority of tax at production level, and others not imposing tax at this level at all. In Uruguay, producers are required to pay either a flat-rate excise duty at the point of packaging, or an ad valorem duty at the point of delivery, depending on which is higher.¹⁰

Taxes may be applied differently among different cannabis products, or on different strengths of product: in Illinois, for example, a 10% sales tax is applied to herbal cannabis or products with less than 35% THC as a proxy for flower, a 25% sales tax is applied to those products if their THC content is greater than 35% as a proxy for concentrates, while a 20% tax applies to all cannabis-infused products, like edibles.¹¹ In Canada, cannabis is taxed at both a federal and provincial level – through taxes at both production and retail level respectively. General taxes on goods range from 5% in Alberta to 15% in New Brunswick, Nova Scotia, and Prince Edward Island. Excise taxes are charged at either \$1 per gram or 10% of the wholesale price – whichever is higher – with provision for further adjustments in certain provinces.¹² A table of US state-level taxes as of early-2020 is included below¹³, though further states have since moved to legally regulate cannabis and this may be further impacted by the proposed MORE Act at a federal level,

¹⁰ See: Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p61, 77.

¹¹ Marijuana Policy Project, Overview of the Illinois Cannabis Regulation and Tax Act. <https://www.mpp.org/states/illinois/overview-of-the-illinois-cannabis-regulation-and-tax-act/>

¹² Slade, H. (2020) *Capturing the market: Cannabis regulation in Canada*, Transform Drug Policy Foundation and MUCD, P28. <https://transformdrugs.org/wp-content/uploads/2020/06/Capturing-the-Market-Digital-2020.pdf>

¹³ See also: Oglesby, P. (2020) *California Marijuana Weight Taxes as of January 2020* – and Alaska, Maine, Colorado and Nevada, Center for New Revenue 19th February. <https://newrevenue.org/2020/02/19/california-marijuana-tax-rates-as-of-january-2020/>

which would implement further taxation to be directed in part towards promoting social equity.¹⁴

Clearly, a range of different strategies are being deployed and evaluation is essential to develop evidence on the best approaches going forward, with taxes having effects on the supply chain at different levels. With the variety of options available, however, the ‘fine-tuning’ of tax rates and even tax bases is likely to continue as jurisdictions seek to respond to changing consumer behaviours and market trends, including tax rates in neighbouring states.

Washington

Sales or Excise tax

- 37%¹⁵

Further taxes

- 7–10% further state and local sales tax¹⁶

Colorado¹⁷

Sales or Excise Tax

- 15% in transactions outside of vertical integration framework (see **Section 2A**), applied on the basis of weight, based on the part of the plant (5 different categories)¹⁸

Further taxes

- Further 15% state retail ‘special marijuana sales tax’ and further 2.9% state sales tax

¹⁴ US Congress, H.R.3884 — MORE Act of 2020 (116th Congress, 2019–2020). <https://www.congress.gov/bill/116th-congress/house-bill/3884/text>

¹⁵ MRSC (Undated) Marijuana Regulation in Washington State. <http://mrsc.org/getdoc/8cd49386-c1bb-46f9-a3c8-2f462dc576b/Marijuana-Regulation-in-Washington-State.aspx>

¹⁶ Priceonomics (Undated) Which States Have the Highest Taxes on Marijuana?. <https://priceonomics.com/which-states-have-highest-taxes-on-marijuana/>.

¹⁷ Colorado Department of Revenue (Undated) Marijuana Tax Data. <https://www.colorado.gov/pacific/revenue/colorado-marijuana-tax-data>

¹⁸ Colorado Department of Revenue (2020) Average Market Rate for Unprocessed Retail Marijuana: Period Rate: July 1 to September 30, 2020. <https://tax.colorado.gov/average-market-rate>.

Illinois¹⁹

Sales or Excise tax

- 10% for THC <35%
- 25% for THC >35%
- 20% on all cannabis infused products

Further taxes

- Further cultivation tax of 7% of gross receipts applied to cultivators.
- Municipalities and counties can add further taxes on stores up to 3% and 3.75% respectively

Nevada²⁰

Sales or Excise tax

- 15% on the wholesale price (paid by the cultivator); converted to weight in all transactions; 6 weight categories
- 10% on the retail sale

Further taxes

- Retail sales tax at the local rate

Oregon²¹

Sales or Excise tax

- 17%

Further taxes

- Up to 3% further local taxes

Massachusetts²²

Sales or Excise tax

- 10.75%

Further taxes

- Further 6.25% state general sales tax and up to 3% local option tax

¹⁹ Government of Illinois (Undated) Adult Use Cannabis Summary. https://www2.illinois.gov/ISNews/20242-Summary_of_HB_1438_The_Cannabis_Regulation_and_Tax_Act.pdf.

²⁰ Marijuana in Nevada (Undated) Taxes. <http://marijuana.nv.gov/Businesses/Taxes/>; Government of Nevada (Undated) Fair Market Value at Wholesale of Marijuana. [https://tax.nv.gov/uploadedFiles/taxnv.gov/Content/Home/Features/Fair%20Market%20Value%20at%20Wholesale%20Summary%20Jan%202020%20\(Final%20Draft\).pdf](https://tax.nv.gov/uploadedFiles/taxnv.gov/Content/Home/Features/Fair%20Market%20Value%20at%20Wholesale%20Summary%20Jan%202020%20(Final%20Draft).pdf).

²¹ Government of Oregon (Undated) Recreational Marijuana — FAQs: Taxes. <https://www.oregon.gov/olcc/marijuana/Pages/FAQs-Taxes.aspx>.

²² Government of Massachusetts (Undated) Learn about Massachusetts tax rates. <https://www.mass.gov/service-details/learn-about-massachusetts-tax-rates>.

Maine

Sales or Excise tax

- \$335 per pound for flower; \$94 per pound for trim (less potent leaves/ plant elements).²³

Further taxes

- Further sales tax of 10% on sales by a cultivation facility to a retail store or product manufacturer.²⁴

California²⁵

Sales or Excise tax

- 15% at retail

Further taxes

- Cultivation taxes per dry weight ounce: \$9.65 for flowers; \$2.87 for leaves or \$1.35 for fresh cannabis plant.
- Local government can also levy additional taxes.

Michigan

Sales or Excise tax

- 10%²⁶

Further taxes

- Further 6% state sales tax.²⁷

²³ Maine Legislature, Title 36: Taxation, Chapter 723: *Marijuana Excise Tax*. <https://legislature.maine.gov/statutes/36/title36sec4923.html>

²⁴ Valigra, L. (2019) *How the first year of Maine's adult-use marijuana market will likely roll out*, WGME 17 June. <https://wgme.com/news/marijuana-in-maine/how-the-first-year-of-maines-adult-use-marijuana-market-will-likely-roll-out>.

²⁵ California Department of Tax and Fee Administration (Undated) *Tax Guide for Cannabis Businesses*. <https://www.cdfta.ca.gov/industry/cannabis.htm#Cultivators>.

²⁶ Michigan Legislature (2018) *Michigan Regulation and Taxation of Marihuana Act*. 333.27963, Imposition of excise tax. [https://www.legislature.mi.gov/\(S\(bobk5ccm12k2hrilk33dxih\)\)/mileg.aspx?page=getObject&objectName=mcl-333-27963](https://www.legislature.mi.gov/(S(bobk5ccm12k2hrilk33dxih))/mileg.aspx?page=getObject&objectName=mcl-333-27963)

²⁷ State of Michigan: Department of Treasury (2018, updated 2019) *Marihuana Provisioning Center Tax and Sales and Use Tax Treatment of Marihuana*. https://www.michigan.gov/documents/treasury/RAB_2018-2_Marihuana_611377_7.pdf

Alaska

Sales or Excise tax

- Mature flower: \$50 per ounce.
- Trim: \$15 per ounce.
- Abnormal/immature flower: \$25 per ounce.
- Clones: \$1 per clone.²⁸

Further taxes

- 7-10% further state and local sales tax

Vermont

Sales or Excise tax

- 14% retail tax (proposed – retail is not presently available)²⁹

Further taxes

- Further 6% state sales tax (proposed)

Tables are as of mid-2020, and do not include states which voted to legalise cannabis at the end of 2020, or subsequently.

Given that almost all proceeds from the global cannabis trade currently accrue to unregulated producers, suppliers and organised crime groups, legal regulation clearly offers an opportunity for governments to collect what is currently foregone revenue. The argument, often heard, that tax revenue will not cover the social and health costs of cannabis use is unpersuasive in this context as some tax revenue is clearly preferable to none at all.

A range of other considerations may also need to be taken into account when deciding on the right combination of taxes to employ and how high they should be set. Cannabis is relatively compact compared to alcohol and tobacco, so smuggling and tax avoidance is comparatively easy. Taxing at production stage could help avoid this.³⁰ Furthermore, If tax was administered on herbal cannabis at

²⁸ Alaska Department of Revenue — Tax Division (Undated) Marijuana Tax: Frequently Asked Questions. <http://tax.alaska.gov/programs/programs/help/faq/faq.aspx?60000#section0question0>.

²⁹ Marijuana Policy Project (2020) Summary of S. 54, the bill to regulate and tax cannabis in Vermont. <https://www.mpp.org/states/vermont/summary-of-s-54-the-bill-to-regulate-and-tax-cannabis-in-vermont/>

³⁰ Caulkins et al. (2013) Marijuana legalization — what everyone needs to know, Oxford University Press, p.156.

a flat rate by weight it would create an incentive to produce higher-potency cannabis, which retails for higher prices. Administering tax by potency – for simplicity, by THC content – would avoid this risk. For raw plant matter, a THC potency-based system would be more of an administrative burden (less so for more potent homogenous concentrates). However, under any proposed systems, weight produced and sold, and potency, should already be subject to regular independent monitoring.

A system based on taxation of both production and sales, with THC content by weight being the taxable unit, is a sensible starting point, but the detail of such decisions would need to be incorporated into wider pricing policy considerations, and fit within the needs of local political environments and existing tax frameworks. A state monopoly on production, sales, or both, would simplify tax and pricing matters substantially, and allow regulators to use price controls to respond more quickly to both consumer behaviour and illegal market trends.

Experiences with alcohol and tobacco show how generating substantial tax revenue can potentially distort or have a negative impact on public health priorities. Other political lessons from alcohol and tobacco taxation should also not be ignored, such as much of the public's inevitable hostility to any tax increases, the lobbying power of large-scale production and supply industries, and the difficulties in intervening in such industries given their employment of a significant number of potential voters. Adopting the precautionary principle at an early stage of regulation may dictate in this case that taxes should be set higher early on, with the idea that they can be reduced at a later stage if evaluation suggests this would result in better outcomes. This is preferable to the inverse; if evaluation suggests a tax rise is necessary to facilitate the goals of regulation, friction from stakeholders and consumers may make implementing this very challenging.

Directing tax revenue

In theory, tax revenue acquired can be spent on anything. However, a potential attraction of legal regulation (often highlighted by campaigners alongside the fiscal benefits more generally) is that tax income can fund implementation of the regulatory framework, as well as potentially supporting improved drug education and service provision, or other social programs. Some regulating states in the US have therefore sought to specifically earmark (or ‘*hypothecate*’) revenue for these purposes. In Illinois, 20% of state taxes go to Community Services to ‘*address substance abuse ... prevention and mental health concerns*’ and 2% go to the Drug Treatment Fund to assist in its public education campaign and analysis of public health impacts as a result of regulation.³¹ In Oregon, 20% of taxes go directly to the Mental Health Alcoholism and Drug Services Account which assists with drug abuse prevention, intervention and treatment and a further 5% directly to the health authority for alcohol and drug abuse prevention.³² While hypothecation has the potential to both boost key funds and establish a ‘*polluter pays*’-type principle in regard to drug- related harms, it also takes responsibility for service provision away from general taxation in ways that may expose it to severe cuts if tax income falls.

Rather than suggesting that hypothecation is, in itself, a bad thing, the key principle here is that such programmes should receive sufficient and adequate funding regardless of tax income. Levels of effective monitoring and evaluation, and ongoing service provision, should be determined by need and evidence of efficacy, and not vary according to cannabis tax revenue. Expenditure that is conditional

31 Government of Illinois (2019) Adult Use Cannabis Summary (24 June). https://www2.illinois.gov/IIISNews/20242-Summary_of_HB_1438_The_Cannabis_Regulation_and_Tax_Act.pdf

32 Government of Oregon (Undated) Recreational Marijuana — FAQs: Taxes. <https://www.oregon.gov/olcc/marijuana/Pages/FAQs-Taxes.aspx>; 2017 Oregon Revised Statutes, Volume 10, Chapter 430. Mental Health Alcoholism and Drug Services Account. <https://www.oregonlaws.org/ors/430.380>

on this revenue should only be additional to any spending that would otherwise have occurred. It is reasonable, therefore, that such programmes would benefit from a rise in tax revenue, particularly where this is indicative of expansion in the market more generally (stemming from which may be a corresponding increase in workload). Campaigners in Massachusetts, for example, have been critical of the fact that the budget for the state social equity programme has remained unchanged, despite the generation of large and growing amounts of tax revenue.³³

33 Bartlett, J. (2020) *Bill that would use cannabis revenue for police, not equity, comes under fire*, Boston Business Journal 23rd July.
<https://www.bizjournals.com/boston/news/2020/07/23/bill-that-would-use-state-cannabis-revenue-for-pol.html>

d Preparation (and method of consumption)

Challenges

- Regulating the availability of different preparations of cannabis in such a way that meets demand and therefore minimises the market opportunities for unregulated suppliers
- Promoting the use of lower-risk cannabis products and encouraging lower-risk consumption behaviours in the longer term
- Ensuring the development of new products and technologies does not outpace regulation, and controls are in place to protect against new risks

Analysis

- Cannabis is available in a range of preparations and can be consumed in a range of different ways
- The risks associated with cannabis use are significantly influenced by preparation, dosage, and method of consumption, which are all closely linked to potency
- Differing regulatory controls applied to the preparations of cannabis that are legally available can influence patterns of use. For example, by making more risky products less available, and less risky products relatively more available, certain risks and harmful using behaviours can be reduced
- Key considerations are the potential risks to lung health from inhaled cannabis smoke (particularly if mixed with tobacco), and the ability of consumers to be informed about and to control the dosage of active cannabis ingredients – both in terms of total consumed and speed of onset of effects
- The smoking of herbal cannabis, in joints, blunts or pipes, remains the most popular method of consumption throughout most of the world, because it is simple, cheap, portable, sociable, and allows consumers to control dosage relatively easily

- Encouraging people who use cannabis to consume it through methods other than smoking is a long-term challenge, but if achieved would reduce the risks to lung health associated with smoking – particularly where cannabis is mixed with tobacco
- Edible cannabis preparations do not involve risks to lung health, but do have a much slower onset of effects and therefore pose some greater risks relating to dosage control, and can have longer lasting effects
- Herbal vaporisers – which create vapour from herbal cannabis, rather than smoke from burning – offer a more user-friendly inhaling experience, reduce lung health risks, and offer a similar level of dosage control to smoked cannabis
- Vaporisers that utilise e-cigarettes technology to vaporise an extracted cannabis oil (rather than herbal cannabis), are another lower-risk alternative to smoking cannabis. Regulators should learn from experiences in regulating e-cigarettes and nicotine vaping liquid, and regulation should ensure quality control of cannabis vaping oils/liquids and vaping devices

Recommendations

- Non-smoked cannabis inhalation using vaporisers should be encouraged as an alternative to smoking, as they significantly reduce the risks associated with smoking, particularly smoking cannabis mixed with tobacco. Public education campaigns, bans on sales of pre-rolled joints, mandating the provision of vaporisers in cannabis consumption venues, or even establishing ‘*vape-only*’ consumption venues, are some examples of how this transition might be encouraged
- More research is needed into the use of vaporisers, and some form of testing and standardisation would be useful, potentially associated with an official ‘*quality tested/approved*’ mark or logo on products

- Similarly, a greater policy and research focus is needed on the use of cannabis vaping oils, which have quickly become more popular than herbal vaporisers in some jurisdictions as a more accessible and user-friendly product. Dedicated regulatory controls are needed for these products, which have different risk profiles from smoked cannabis
- More research into the relative risks of emerging cannabis concentrates and related consumption methods is needed
- Decisions about which products to make available from the outset of any system of legal cannabis regulation should be guided in large part by matching the nature of existing illegal consumption. While an exact match between the products available on the new legal and former illegal markets is not necessary, the more significant the discrepancy, the more likely unpredictable and potentially negative market distortions become
- Attempts to influence patterns of use by regulating different products in different ways should be gradual and guided by careful monitoring and evaluation

Preparations

Cannabis comes in a range of preparations, with new products being developed all the time. These include:

- **Herbal cannabis** — a wide range of cannabis strains are available, varying in quality, and content of THC and CBD (as well other cannabinoids, terpenes etc).¹ Herbal cannabis is usually dried after picking and can be smoked, vaporised, eaten (most commonly incorporated into food or beverages), or processed into a range of other products (see [below](#))

¹ For example, at the time of writing, leafly.com provides information on 1,382 different strains: www.leafly.com/explore.

- **Cannabis resin and other concentrates** – resin is a solid cannabis preparation most commonly made from elements of the plant that contain the highest concentration of active ingredients. There is a wide variety of resin products, ranging from traditional rolled or pressed resins made from the manually collected cannabis trichomes, through to more processed products made using solvents or other extraction techniques (these include more potent cannabis oil and ‘wax’, etc.). Although resin is generally more potent than herbal cannabis (in terms of THC % by weight) and correspondingly more expensive, resin potency can vary significantly. There are some lower-potency resins, such as the mass-market resin historically produced in North Africa and consumed in much of southern Europe (although potency of these resin exports has been rising in recent years).² This is often bulked up with non-cannabis adulterants. The most potent resins and oils, especially those made using the latest extraction processes, can be extremely potent: some with a THC concentration of over 80% such as butane hash oil (BHO) made using the extraction solvent butane. These highly potent cannabis concentrates are sometimes consumed via a process known as ‘dabbing’, whereby the user touches the concentrate onto a heated surface and inhales its vapours,³ but can also be smoked or used more conveniently in vaporisers. More conventional resins can be smoked on their own in a pipe, smoked with tobacco in a joint, vaporised, eaten on their own, or cooked into a food product. Oils are usually smoked or eaten in foods
- **Cannabis edibles/beverages** – herbal cannabis can be eaten in its unprocessed form, but more commonly the active ingredients, which are fat-soluble, are dissolved in oils or butter, and

² EMCDDA (2019) Developments in the European cannabis market, p8.
<https://www.emcdda.europa.eu/system/files/publications/11391/TDAU19001ENN.pdf>

³ BHO and ‘dabbing’ remain a predominantly North American phenomenon so far — see: Black, B. (2013) To Dab or not to Dab? High Times, 2 November. www.hightimes.com/read/dab-or-not-dab.

consumed in a huge range of prepared foods. Popular edibles in existing markets include cakes, biscuits and brownies, although preparations, unsurprisingly, vary across the world according to local cultures. A variety of cannabis-based beverages made with the infused oils or tinctures (and infusion in alcohol) are also available.⁴ While there is a longer history of cannabis-infused beverages (such as '*bhang*'-based drinks in India), product innovation has been a feature of legal markets, and attempts to develop consumer-friendly 'drinkable' cannabis products have been boosted by cross-sector investment, notably from alcohol producers including ABInBev and Molson Coors (see [Section 3B](#) on corporate capture).⁵ This raises obvious concerns, given experiences with aggressive marketing and promotion of alcohol products, and risks of corporate capture from such established market actors. There are also significant unknowns about how patterns of cannabis beverage consumption might develop (including interactions with alcohol use) and potential impact on harms. The constant development of new products also presents challenges from a quality control perspective (see [innovation](#) below). Collectively, this points to a need for cautious, incremental and carefully monitored policy development, to mitigate risks and allow for appropriate regulatory frameworks to be developed.

- **Other cannabis preparations** – many novel products have been developed in recent years, often with innovation driven by or for people using cannabis for medical reasons. These include cannabis tinctures (including Sativex, a whole-plant cannabis tincture sublingual spray, the first such product to be licensed as a medicine), sublingual tablets or strips, topical creams/balms, nasal

4 Cannabis can be added to hot water to make cannabis tea or other drinks, but because its active ingredients are not water-soluble it is an inefficient method of use. Teas are therefore usually made with tinctures or cannabis-infused oils.

5 Slade, H. (2020) Capturing the market: Cannabis regulation in Canada, Transform Drug Policy Foundation and MUCD, p45. <https://transformdrugs.org/assets/files/PDFs/capturing-the-market-canada-fulltext-2020.pdf>

sprays, suppositories and more besides. Most of these products – at least those that contain THC and are consumed internally – do have psychoactive effects, but are not widely used non-medically. However, many such developments will potentially be transferable to non-medical products in the future. It is clear that cannabis preparations is an area of rapid innovation. This is particularly the case in more commercially oriented legal cannabis jurisdictions, and the regulation of markets in Canada and the US have notably spurred attempts to develop new more consumer-friendly products, for a range of existing and potential new market sectors. Regulatory frameworks therefore have to be forward-thinking, while product approval systems need to be flexible, responsive and robust to ensure quality control and consumer protection.

Methods of consumption

Cannabis can be consumed in a variety of ways, each associated with different effects and risks.

Smoking

In most of the world, the most popular method of consuming cannabis (whether resin or herbal) is by smoking it, either in some form of pipe, or in a *'joint'* or *'spliff'* (a hand-rolled cannabis cigarette) containing either pure herbal cannabis, or herbal/resin cannabis mixed with tobacco (or less often, some other herbal mix). The reason for the popularity of smoking is unsurprising: it is quick, easy, and inexpensive. The rapid onset of the drug effect is both desirable in itself and also offers a high degree of dosage control. Smoking also offers a sociable, shared experience in the preparation and sharing of the pipe or joint, which in various forms has become culturally embedded, even ritualised, in a range of social environments in much the same way as many alcohol consumption behaviours.

The burning of the cannabis (and anything it is mixed with) results in the creation of a range of combustion products (such as tars, carbon monoxide, toluene and benzene⁶) and while, contrary to ‘reefer madness’ mythology, cannabis smoke appears to be less risky than tobacco smoke,^{7,8} it is reasonable to assume that inhalation of smoke of any kind increases risks to throat and lung health.⁹

When cannabis is smoked mixed with tobacco, as is common in much of the world, it makes the ongoing debate over the relative risks of smoking cannabis and tobacco separately rather academic. However, the smoking of cannabis and tobacco together presents often under-acknowledged but serious health risks.¹⁰ Because of the high potential of smoked tobacco to lead to nicotine dependence, the smoking of mixed cannabis and tobacco joints can be an initiator of long-term tobacco use, which is unquestionably associated with serious health harms that may continue independently of any cannabis use. It can also mean that individuals crave joints for their nicotine content, and therefore end up smoking more cannabis, or smoke it more frequently, than they otherwise would.

Smoking through a water pipe or ‘bong’ is widely perceived to be somehow less risky than other forms of smoking. But, rather like the supposed benefits of filters on cigarettes, there is no good evidence to support this supposition. Even if the smoking experience is more pleasant because the smoke is marginally cooled by the water, it

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- 6 For a comprehensive list of the chemical components of cannabis smoke, see: Moir, D. et al. (2008) *A comparison of mainstream and sidestream marijuana and tobacco cigarette smoke produced under two machine smoking conditions*, *Chemical Research in Toxicology* 21.2, pp.494–502.
 - 7 Rooke, S. E. et al. (2013) *Health outcomes associated with long-term regular cannabis and tobacco smoking*, *Addictive Behaviours* 38.6, pp.2207–2213.
 - 8 Pletcher, M. J. et al. (2012) *Association Between Marijuana Exposure and Pulmonary Function Over 20 Years*, *JAMA* 307.2, pp.173–181.
 - 9 While the carcinogenic potential of cannabis smoke remains contentious (but appears to be modest and certainly considerably less than that of tobacco smoke), smoke from combustion of any herbal products can undoubtedly irritate the airways and is associated with increased health risks.
 - 10 This is probably because most cannabis research is US-based, where smoking cannabis with tobacco is uncommon relative to other regions such as Europe, where it is the norm

is essentially the same smoke.¹¹ Some research has suggested that because the water absorbs THC more effectively than it does tars, it will actually increase the tar-to-THC ratio, meaning individuals inhale more than they otherwise would with a joint.¹²

Vaporising

HERBAL VAPORISERS

The active ingredients in cannabis can also be released and inhaled in a vapour form, avoiding most of the toxic components of the smoke produced by actual burning in pipes or joints, such as tars and carbon monoxide. This is achieved using some form of ‘*vaporiser*’, a piece of equipment that heats cannabis to a temperature hot enough to release the volatile cannabinoids (from any redundant plant material) as a vapour, but not so hot that it actually combusts to create smoke, which contains an array of additional toxic components.

There are many such devices commercially available that produce this heated vapour in different ways. These include: conduction-style vaporisers, which heat the cannabis on a hot plate in a contained air space, and ‘*forced-air*’ vaporisers, which fill a detachable balloon from which the vapour is then inhaled. While such vaporisers have been growing in popularity since the 1990s, the extent of their use had long been limited due to their high price relative to conventional pipes (herbal vaporisers often cost \$100 or more, with the top-of-the-range ‘*volcano*’ forced-air models costing over \$300), and due to their bulky designs, which make them somewhat impractical for use outside the home. Newer pocket-sized models and ‘*pen*’ vaporisers have since emerged – and

¹¹ Gieringer, D. (1996) *Marijuana waterpipe and vaporizer study*, MAPS Bulletin 6.3, pp.53–66.
www.maps.org/news-letters/v06n3/06359mj1.html.

¹² Ibid.

in a growing and competitive market have rapidly become more sophisticated and cheaper, now dominating vaporiser sales. The effectiveness of some of these products in creating vapour rather than smoke has been questioned, indicating the potential benefits for some form of product testing approval and quality assurance ‘kite mark’ system.

Published research on vaporisers (mostly carried out in the context of medical uses of cannabis) has convincingly demonstrated that vaporised cannabis delivers similar levels of the active ingredients to the user as smoked cannabis does, but without most of the harmful elements that are found in smoke from combustion.^{13 14 15} In doing so, vaporising reduces the respiratory symptoms and risks associated with smoking.¹⁶ This research also indicates that the inhalation experience is generally preferred by consumers because the vapour is cooler, less harsh, and so more pleasant to inhale. However, there have been relatively few studies in this area, most of which have focused on the physical outputs of vaporisers and a small sample of individual reactions to them, rather than epidemiological studies of actual health impacts. Additionally, in a rapidly expanding market of vaporiser products, relatively few have been subjected to rigorous independent analysis, with mainly just the more expensive ‘forced-air’ type being assessed. There is a clear need for more research and testing to support some sort of quality assurance framework if health professionals, regulators and consumers are to make informed decisions.

13 Abrams, D. et al. (2007) Vaporization as a smokeless cannabis delivery system: a pilot study, *Clinical Pharmacology & Therapeutics* 82, pp.572–578. www.maps.org/media/vaporizer_epub.pdf.

14 Earlywine M. and Barnwell, S. (2007) *Decreased respiratory symptoms in cannabis users*, *Harm Reduction Journal* 4.11. www.harmreductionjournal.com/content/pdf/1477-7517-4-11.pdf.

15 Hazekamp A. et al. (2006) *Evaluation of a vaporizing device (Volcano) for the pulmonary administration of tetrahydrocannabinol*, *Journal of Pharmacological Science* 95, pp.1308–1317.

16 Although they are not eliminated: coughing can still result from inhalation, for example. With some devices, vapour can be additionally passed through water to cool it and reduce potential respiratory irritation.

‘E-CIGARETTE’ VAPORISERS

A more recent development is the adaptation of electronic cigarette or ‘*e-cigarette*’ technology, developed as a safer way of consuming nicotine than smoking tobacco, for use with cannabis products. Like cannabis vaporisers, e-cigarette technology produces a vapour containing the active drug content rather than smoke from burning, although they work in a very different way. Instead of using heat to extract the volatile content from plant matter into a vapour, they use a pre-prepared solution, which is then turned into a vapour in a battery-powered atomisation chamber upon inhalation. Nicotine e-cigarettes have proved far more popular than previous nicotine substitution products such as gum or patches, because not only are they widely acknowledged to be substantially safer than smoking, they also closely replicate the experience of smoking in terms of holding the cigarette and inhalation, without the more anti social impacts of cigarette smoke.

For reasons that mirror the attraction of e-cigarettes for smokers, the use of extracted cannabis oils with e-cigarette technology has become increasingly popular as a method of cannabis consumption, most notably in North American legal cannabis jurisdictions. These products have been variously called ‘*e-joints*’, ‘*canna-vapes*’ or, the less catchy ‘*Electronic Cannabis Delivery Systems*’ (ECDS). In more recent years, however, they have become synonymous with vaping cannabis (more so than herbal vaping devices), owing to greatly increasing popularity. They offer a user-friendly product that is safer (and many claim more pleasant) than smoking joints or pipes, they are relatively cheap (with many types of e-cigarette retailing at under \$10), and they are more convenient than herbal cannabis vaporisers, as e-cigarette technology using cannabis oil does not need to be refilled with herbal cannabis after each use. It seems reasonable to speculate that the rapidly growing popularity of e-cigarette technology for cannabis consumption is set to continue

(particularly in legal cannabis jurisdictions) and could soon displace smoked cannabis as the dominant form of consumption (excluding edibles). The benefits of such a shift would seem to be positive from a public health perspective given the relative risks of smoking and vaporising.¹⁷ The recent spate of lung injuries, including fatalities, experienced in the US from unregulated cannabis vaping oils highlights the ongoing importance of regulation and quality control, however; the central tenets of which include regulating the use of pesticides and solvents, chemicals in flavouring, and other additives.¹⁸

Lung injuries in the US are thought to have been caused by the presence of vitamin E acetate in THC vaping oil, and were almost exclusively associated with use of unregulated supplies (as discussed in [Section 2A: production](#)), in relation to quality control. It is also possible that the convenience of vaping products could potentially encourage increased consumption, and that they could facilitate clandestine use (as they are easier to use without detection than smoked cannabis). However, in practice, this seems a minor concern. The investment of tobacco companies in the cannabis industry, with a view to developing vaping technology or utilising their existing technologies for new purposes, is a separate area to monitor. Altria, one of the world's largest tobacco producers, has invested over a billion dollars into Canadian producer Cronos Group, where it now owns a 45% stake and has three out of seven seats on the board.¹⁹ Altria's work with Cronos has included investment — both financial and staff expertise — in Cronos'

¹⁷ Quigley, J, et al (2020) *Electronic cigarettes and smoking cessation: An evidence review*, Health Research Board. <https://www.drugsandalcohol.ie/33170/>

¹⁸ Borodovsky, J.T. et al (2019) Letter to the editor: *Cannabis Vaping and Health: Regulatory Considerations, Addiction*. <https://doi.org/10.1111/add.14855>

¹⁹ Hirsch, L. (2018) *Altria to invest \$1.8 billion in cannabis company Cronos Group, exits some e-cig brands*, CNBC 7th December. <https://www.cnbc.com/2018/12/07/altria-to-invest-1point8-billion-in-cannabis-company-cronos-group.html>



A 'volcano' forced air vaporiser and bag
lelandkim.com



'o.pen' brand cannabis 'e-cigarette'
Weedhype.com

research and development centre, focused on vaping devices.²⁰ It is clear that vaping is seen as a potentially lucrative portion of the cannabis market, suggesting greater regulatory scrutiny and resources will need to be focused on this area in coming years.

There are important lessons that should be learnt from the emergence of the nicotine e-cigarette market. Its rapid expansion has caught medical authorities and regulators off guard, as the products were not covered by regulatory frameworks for either cigarettes or for medicines/pharmaceuticals in many jurisdictions. As a result, even if the substitution of smoked cigarettes for e-cigarettes is widely agreed to be beneficial for public health, the products that are being sold have been inadequately monitored and regulated in most jurisdictions.

The overarching problem here is that such products clearly do not fit neatly within existing tobacco regulation frameworks; they are novel products that require their own regulatory framework that draws on key elements of tobacco regulation and other areas, including for medical products. This has obvious

²⁰ Peters, B. (2019) *Why An Analyst Calls This Cannabis Stock The 'New King In The North'*, Investor's Business Daily 18th October. <https://www.investors.com/news/cronos-group-stock-king-in-north/>

relevance to cannabis regulation policy; it should not be assumed that any existing regulatory structures will be able to cater for novel cannabis-based products or technologies. This has been highlighted in the drafting of regulations in Canada, for example, that have separate rules applying specifically to cannabis concentrates. For example, in addition to labelling requirements in place more generally for herbal cannabis products (including THC and CBD concentrations), concentrates must additionally outline:

- List of ingredients
- Names of food allergens present
- Identity of product in common name
- THC per unit (when in discrete units)
- CBD per unit (when in discrete units)

Regulations similarly prohibit the use of any ingredients other than carrier substances, flavouring agents and *‘substances that are necessary to maintain the quality or stability of the cannabis product’*, as well as sweetening agents and substances already prohibited in the Tobacco and Vaping Products Act.²¹

Eating — edibles/beverages

As noted above, cannabis can be eaten in herbal or resin form or in a variety of preparations, with the active ingredients then absorbed through the lining of the stomach and digestive tract. Since the active ingredients in cannabis are fat-soluble or can be prepared in a tincture (i.e. extracted into alcohol), they can then easily be added into almost any form of food or beverage. Unlike inhaling cannabis smoke or vapour, which causes the drug to enter the blood via the lungs, providing an almost immediate effect, when

²¹ Canadian Cannabis Regulations, s101.

eaten the effects of cannabis take much longer to be felt; anything from 20 minutes to 2 hours or more, depending on the nature of the edible and whether it is ingested on an empty stomach. The effects of eating cannabis will also tend to be longer lasting than when smoked/inhaled.

This means that cannabis edibles present something of a balance of costs/benefits when weighed against smoked/inhaled cannabis. While avoiding respiratory risks entirely, edibles are intrinsically harder to dose control than smoking. Particularly in the absence of clear and reliable content labelling it is hard to judge how strong a particular edible will be without the inconvenience of trying a partial portion of it first and waiting a reasonable period of time, potentially as much as two hours to be sure (this is sensible harm reduction for any edibles use). Individuals may also react differently or unpredictably to the same product at different times. Adjusting dosage upwards if deemed inadequate is therefore a slow process; individuals must wait to ensure they have received the desired dose from the ingested product before taking any more. Impatience and uncertainty around how long to wait mean the likelihood of an individual consuming more than they want to, and potentially having unwanted negative or distressing effects is increased, even if the risk of any long-term health harms from such ‘overdose’ episodes remains small. Hence regulating the potency and contents, and labelling of any legally produced and sold edibles is obviously a key issue.²² (For more information, see [Section 2E: Strength/potency](#) and [Section 2F: Packaging](#)).

Edibles have been a cause of regulatory concern in some markets; in Washington, regulators backtracked on plans to ban edibles entirely, but have sought to limit the available colours and shapes in

²² See: Washington State Liquor Control Board Marijuana Regulation, WAC 314-55-095 (serving sizes), 314- 55-104 (extraction requirements), and 314-55-105 (packaging and labeling). http://lcb.wa.gov/marijuana/initiative_502_proposed_rules.

order to prevent their appeal to children, now only allowing colours and shapes contained on its ‘*approved list*’. In Colorado, shapes including the popular ‘*gummy bear*’ were banned in 2017,²³ while Quebec has also moved to prohibit certain types of edibles that may appeal to children (including cannabis brownies, chocolate and gummies) from being sold on the market.²⁴

Edibles are, of course, a food as well as a cannabis product meaning that they should comply with wider food regulations. In Canada, in addition to labelling requirements in force for cannabis products more generally (such as THC and CBD concentrations), edibles are required to include a nutrition facts table, as well as food allergens and ingredients.²⁵ The contents of edibles are also strictly regulated: for instance, caffeine (except where naturally occurring), certain additives and meat products are expressly prohibited from being included, while wider quality control requirements outlined in the Food and Drugs Act are cross-referred to.²⁶

Innovation

Early experiences in the US and Canada indicate that legalisation is likely to lead to increasing innovation in relation to cannabis products in more commercially oriented regulatory frameworks. On the one hand, innovation can be an important process within any market to constantly improve what is available to consumers (making the market more attractive than unlicensed alternatives), but on the other hand it may bring unknown risks where new

²³ Slade, H. (2020) *Altered States: Cannabis regulation in the US*, Transform Drug Policy Foundation.
<https://transformdrugs.org/product/altered-states-cannabis-regulation-in-the-us/>

²⁴ Forster, T. (2019) *Quebec Officially Outlaws Most of the Fun Marijuana Edibles*, Eater Montreal 30th October.
<https://montreal.eater.com/2019/10/30/20940028/quebec-cannabis-restrictions-edibles-ban-brownies-gummies-chocolate>

²⁵ Canadian Cannabis Regulations, s132.

²⁶ Canadian Cannabis Regulations, s102.

products – or product development processes – and related consumption behaviours are under-researched.

One of the attractions for alcohol companies investing in the Canadian cannabis market has been the potential to develop cannabis ‘drinkable’ products, expanding the way cannabis is consumed. AB inBev and Molson Coors (two of the largest alcohol companies in the world) have joint partnerships with Canadian cannabis companies Tilray and HEXO respectively, to create drinkable cannabis products, while the CEO of Molson Coors has previously been quoted as saying that drinkable products could ‘soon make up 20 to 30 percent of cannabis sales’.²⁷ Similarly, a key interest of tobacco companies investing in legal cannabis markets has been the potential to develop new vaping products. As discussed above a large amount of spending by cannabis producers in Canada is focused on product development, highlighting the speculative nature of the market as well as a desire for innovation, made possible by a legal market; former Canopy Growth CEO, Mark Zukelin, has previously stated that ‘the IP [intellectual property] moat around our business’ is one of the company’s greatest assets, boasting over 110 patents and 290 patent applications.²⁸ Canopy Growth has since announced plans to launch its THC-infused beverages in the US via US company Acreage Holdings, over which it holds a majority ownership.²⁹

However, with this focus on innovation and product development, new and as-yet unknown risks are likely to arise with cannabis products, warranting a cautious and flexible regulatory approach

²⁷ Lewis, A.C. (2019) *Drink up, stoners*, The Verge.
<https://www.theverge.com/2019/7/30/18639829/weed-beer-drinkable-marijuana-cannabis-drinks-alcohol>

²⁸ Paley, D.M. (2019) *Canada’s Cannabis Colonialism*, Toward Freedom 8th October.
<https://towardfreedom.org/story/canadas-cannabis-colonialism/>

²⁹ Reuters (2019) *Canopy Growth, Acreage plan U.S. launch of cannabis-infused beverages in 2021*, Reuters 1st October. <https://uk.reuters.com/article/canopy-growth-acreage-beverages/canopy-growth-acreage-plan-us-launch-of-cannabis-infused-beverages-in-2021-idUKL4N2GS2GP>

to new products arriving on the market. There will also need to be separate and specific quality control regulations for different types of product; for example, vitamin E acetate was an issue specific to vaping oils, while the use of food additives warrants specific attention in relation to edibles. Regulation has an important role in promoting positive developments in the field that benefit consumers, while acting cautiously to prevent potentially risky products (or those that incentivise risky use) entering the market.

Recommendations

A running theme through this guide is how varying levels of regulation on different cannabis products, and how they are consumed, can help shape consumption behaviours in a positive way, encouraging the use of safer products and of safer methods of consumption.

Even if the often heated debate about the extent of the risks of cannabis use is unlikely to subside soon, as described above, there are a number of observations about the nature of the relationship between risks and cannabis preparation and/or method of use that can be made with confidence:

- There is a dosage/risk relationship, i.e. the more you consume the greater the risks
- Consumer knowledge and ability to control dosage are important risk variables
- The speed of onset of effects varies between methods of use and impacts on the nature of the experience, and ability to control dosage
- The respiratory health risks associated with smoking cannabis are reduced significantly by avoiding mixing with tobacco, and by substituting inhalation of cannabis smoke with inhaled cannabis

vapour (although quality control of vaping oil contents used with e-cigarette technology is essential to ensure consumer safety). Such risks are eliminated entirely by consuming edible cannabis preparations or using other non-inhaled preparations

- New products may present as-yet unknown risks, which require careful research

Priorities for regulators should therefore be:

- **Decide which preparations to licence for sale**

How to address this question will largely depend on the overarching regulatory framework that has been adopted. More commercially-oriented market models are likely to permit the sale of most products and preparations by default, albeit with certain potency limits imposed. They may then deploy regulatory powers to reactively prohibit the sale of certain risky products or types of product, as deemed appropriate, on a case-by-case basis.

More regulated or state-controlled models are likely to reverse this approach, adopting a more cautious and simpler regulatory system involving a default ban on sales of products that have not been specifically licensed. To a certain extent, this has been practiced in Canadian regulation efforts, which delayed the sale of edibles for one year while allowing sales of herbal cannabis. Canadian regulations manage the introduction of new products onto the market by requiring licence holders to notify the Minister of Health if they are planning to introduce a new class of product at least 60 days before introducing it. In the notification, they must include information on the class of product, a description and the date it will be made available.³⁰ Health Canada will then review the application to ensure the product's

³⁰ Canadian Cannabis Regulations, s244(1).

compliance with the Regulations. This measure meant that, despite cannabis edibles becoming officially legal on 17 October 2019, they were not immediately available to consumers since this date was only when producers could submit their notification to the Minister.³¹

The content of products, and the types of product available, may be further restricted at the provincial level in Canada. For example, in Newfoundland and Labrador, regulations establish the power of the Liquor Corporation to *‘fix the classes, varieties, types and brands of cannabis that may be sold’*.³² It is clear that these powers are viewed as providing important levers over which to promote public health within local market spaces. However, they need to be deployed carefully, and can sometimes be counterproductive. In response to the vitamin E acetate vaping crisis, Quebec and Newfoundland and Labrador both moved to prohibit the sale of all cannabis vaping products, while Nova Scotia has banned flavoured vaping products – potentially pushing consumers to more risky unregulated vaping supplies.³³ Again, this is an issue of carefully balancing regulatory aims and evaluating responses to understand any impact on the scope and nature of the market.

Ultimately, decisions will need to be guided by the nature of the existing illegal market. In many jurisdictions the types of illegal cannabis available are fairly limited, often restricted to a two-tier market featuring cheaper, less-potent outdoor-grown

31 See: Eneas, B. (2019) *Cannabis edibles, extracts, topicals now legal, but unavailable in Sask. for at least 60 days*, CBC News 17th October. www.cbc.ca/news/canada/saskatchewan/edibles-extracts-topicals-unavailable-60-days-1.5324505

32 Newfoundland and Labrador (2018) Bill 20: *An Act Respecting the Control and Sale of Cannabis*, s73(1). <https://assembly.nl.ca/HouseBusiness/Bills/ga48session3/bill1820.htm>

33 CBC News (2019) *Province extends flavoured vape ban to cannabis products*, CBC 6th December. <https://www.cbc.ca/news/canada/nova-scotia/cannabis-vape-health-flavour-ban-1.5387308>; Saminathe, N. (2019) *Quebec, Newfoundland & Labrador say they will not allow cannabis vape sales*, Reuters 4th December. <https://www.reuters.com/article/us-canada-marijuana-vaping-nl/quebec-newfoundland-labrador-say-they-will-not-allow-cannabis-vape-sales-idUSKB1Y82HY>

herbal cannabis (often including leaves, seeds and sticks) and more expensive, and more potent, indoor-grown herbal cannabis (usually just the flowering tops or buds of the cannabis plant). Where resin is the most widely used form of cannabis, there is often a similar two-tiered market. By contrast, the medical cannabis markets in some US states, such as Colorado and California, as well as the Dutch coffee shops, have exposed a broad base of consumers to more sophisticated markets before the arrival of non-medical legalisation. These include not only an extensive selection of different ‘*premium*’ herbal cannabis varieties, but also a range of processed products including various concentrates and edibles. Trends in the US suggest that many consumers in states where regulated non-medical cannabis supply is not yet available still report accessing concentrates and vaping oils (15% and 30% in the past 12 months respectively) – suggesting that more novel preparations of cannabis are increasingly accessed prior to regulation.³⁴ Where such a product range is already available, and a market already established, putting in place a more restricted product range for non-medical use may prove challenging and probably undesirable, although not impossible.

A separate, related challenge to regulating the range of products available will be managing the lobbying power of corporate actors. For instance, the Cannabis Council of Canada, a national membership organisation for Canada’s federally-licensed cannabis producers, which aims to ‘*act as the national voice for... members in their promotion of industry standards*’³⁵ spoke out against the move in Quebec to ban certain edibles, explaining that

³⁴ Goodman, S. et al (2020) *Prevalence and forms of cannabis use in legal vs. illegal recreational cannabis markets*, International Journal of Drug Policy 76. <https://pubmed.ncbi.nlm.nih.gov/31927413/>

³⁵ Cannabis Council of Canada (Undated) About. <https://cannabis-council.ca/about>

such a move would hinder efforts to displace the illegal market.³⁶ While they were right to have concerns about the impact of such measures on the illegal market, it is also the case that they are naturally disposed against restricting the range of products available which impinge on their members' ability to grow their businesses and maximise profit. This highlights the difficulty in managing relationships with corporate actors: on the one hand, they may provide important, first-hand insight into elements of the retail market; on the other, their interests should not undermine the role of the regulatory body in making objective decisions, taking into account all factors. Indeed, the potential for corporate interests to negatively influence policy making is a key reason that jurisdictions may opt for a state monopoly retail model, or something closer to the *'Borland'* monopsony model where the state is positioned as sole buyer in the market as Uruguay has opted to do (see **The Borland 'Regulated Market Model'** in **Section 2A: Production**).

In places where there is a limited variety of cannabis products available on the illegal market, we recommend that, initially at least, any new legal market should not offer a significantly greater product range. In such cases, this will probably mean allowing only a relatively restricted range of herbal cannabis varieties (covering lower-, medium- and higher-potency products) and/or resins (See **Section 2E: Strength/potency**). The rationale here would be to not change the nature of the market too dramatically or too fast, so as to avoid unpredictable impacts on patterns of use.

The range of products can then be expanded over time, rather than moving, almost *'overnight'*, from the kind of limited two-tier illegal markets familiar in most jurisdictions to the kind of

36 Cannabis Council of Canada (2019) *Cannabis Council of Canada Response to draft Regulation under the Cannabis Regulation Act* published in the *Gazette Officielle du Quebec*.
<https://cannabis-council.ca/files/advocacy/Cannabis-Council-of-Canada-Quebec-Regulatory-Submission-English.pdf>

product range that has evolved in the Netherlands and in some US and Canadian medical cannabis dispensaries (and now non-medical retailers) over a number of years. Even under a regulatory framework that only permits a more restricted product range, individuals seeking specific ‘*premium*’ cannabis strains that are unavailable via licensed retailers would still, in principle, be able to access them if, as we are proposing, home growing is also permitted, perhaps alongside small-scale cannabis social clubs, as happened in Uruguay.

There is also no urgent need to make cannabis edibles available for retail at the outset of any regulatory system (medical cannabis edibles are a separate issue). Cooking with herbal cannabis is very simple and anyone who wishes to prepare edibles with purchased herbal cannabis can easily do so. Given this freedom, it might be sensible to avoid the inherent complexities of regulating edibles for retail sale, at least initially. This is an area that can always be revisited at a later stage, when the regulatory framework for herbal cannabis is better established. A similar ‘*phased*’ approach was adopted in Canada, where edibles only became available for retail a year after herbal cannabis products, with new products requiring pre-approval from the government health agency. Usefully, this phased rollout allowed time to establish the more complex regulatory infrastructure surrounding edibles, and for dedicated focus on regulating herbal cannabis during the first year of supply.³⁷ As well as managing capacity, such a ‘*phased*’ model may allow for lessons learned during the rollout of herbal cannabis to be applied to subsequent regulatory efforts in relation to edibles.

³⁷ See: Transform (2019) What do experts think of Canada’s first year of legalising cannabis? Part 1, 17th October. <https://transformdrugs.org/what-do-experts-think-of-canadas-first-year-of-legalising-cannabis-part-1/>

In any event, permitting sales of products that obviously resemble sweets, such as lollies, gummy bears or chocolates (particularly in packaging that resembles conventional candy products), is an exceptionally bad idea, and should be avoided. The famed '*gummy bear*' edible, while initially allowed in Colorado, was banned in 2017 owing to concerns around its specific appeal to children.³⁸

The same rationale could be used to restrict or prohibit retail sales of some cannabis concentrates, certainly the more potent types such as those produced with CO₂ or solvent extraction methods. Again, whether this is appropriate will depend on the nature of the existing market and the extent of demand, as well as whether they are available in neighbouring jurisdictions. But if such products are not already in widespread use, and there are legitimate concerns that the retail availability of more potent products could increase certain risks, there is no urgency to make them available at the outset of any regulatory system.

Regulators may wish to consider first establishing a functional herbal (or where locally prevalent, resin) cannabis market that meets the majority of demand, and then exploring the regulation of production and retail for edibles and concentrates at a later stage. This would not have to represent a permanent or complete ban on either: edibles would be effectively accessible in the home, and, alongside more niche strains of cannabis and concentrates, could potentially be accessed via the more controlled environment of cannabis social clubs.

- **Discourage smoking of cannabis (particularly when mixed with tobacco) and encourage safer methods of consumption**

³⁸ CBS News (2017) *Colorado bans pot gummy bears, other edibles appealing to kids*, CBS 2nd October. <https://www.cbsnews.com/news/colorado-bans-pot-gummy-bears-other-edibles-shapes/>.

Some ways this could potentially be achieved include:

- Prohibiting licensed vendors from selling pre-rolled joints containing a cannabis and tobacco mix (particularly an issue for European markets), or more restrictively, limiting retail sales to unprepared loose herbal cannabis and cannabis vaping oils/liquids, at least to begin with
 - Establishing licensed premises for sale and on-site consumption that permit the use of vaporisers. This may come into conflict with local laws on public smoking, which is a potential barrier, though specific exceptions could be made for licensed vape-only on-site consumption premises
 - Providing adequate harm reduction information at point of sale (in print and via vendors), on packaging, and as part of wider public health education campaigns
 - Using preferential pricing/taxation controls to ‘nudge’ consumers towards safer products (see [Section 2B: price](#) and [Section 2C: tax](#))
- **Regulate vaporisers**

The relevant national-level regulatory bodies should put in place appropriate regulation governing the use of both herbal and oil-based vaporisers (for more on the role of national bodies in regulating cannabis, see [Section 2K](#)). Attempts to prevent sales of cannabis paraphernalia have not proved practical in the past, but regulation could sensibly involve an independent testing procedure for different models, with clear performance parameters established through vapour content analysis. Meeting the agreed standards could then result in a particular model being awarded a ‘*quality mark*’ logo, potentially then linked to approval for sale from certain outlets or for use in licensed venues.

- **Regulate e-cigarette-type vaporisers
(or Electronic Cannabis Delivery Systems – ECDS)**

Regulation of e-cigarette-type vaporisers, or ECDS will need to cover not only the devices and how they function, but also the content of the solution or extracts sold for use with them, as well as how they are marketed. This is especially the case if the vaporiser and the cannabis product are ‘*tied*’, i.e. only a specific cartridge can be used with a particular vaporiser, or, in the case of the disposable variety, only a certain number of puffs can be taken before it must be discarded. This area of regulation, and the product research behind it, has been behind pace with the rapidly rising popularity of nicotine vaping products in recent years,³⁹ and will naturally require more focused work by future regulators of cannabis, particularly given the trajectory of a market in which demand is also likely to increase rapidly in the coming years. Lessons learned from vaping will need to be applied to further product developments in the future. We suggest that vaping is an area of regulatory research and development that should be prioritised – but offer the following as a starting point:

Elements of an appropriate regulatory regime

ECDS are sold as recreational consumer products – generally as alternatives to smoked cannabis. This is the appropriate regulatory approach (ECDS supplied specifically as licensed medical products would engage parallel medical product regulation regimes). General consumer regulation should apply, with some specific technical quality control standards set for cannabis vaping oils and vaping devices, defined labelling requirements, with enhanced

³⁹ Van Paridon, B. (2020) *Chemistry at work in e-liquids is still poorly understood, worrying researchers*, Chemistry World 14th October. <https://www.chemistryworld.com/news/chemistry-at-work-in-e-liquids-is-still-poorly-understood-worrying-researchers/4012593.article>

marketing controls reflecting the adult nature of the product, and proper communication of risks and benefits.

The most elegant way to regulate ECDS is to set performance standards, which would then become embedded as industry norms. The first standards have appeared in the UK for Electronic Nicotine Delivery Systems (ENDS) under the auspices of British Standards Institute (BSI)⁴⁰ and in France under the equivalent body, AFNOR.⁴¹ These documents set standards and testing regimes for various aspects of e-cigarette design and e-liquid composition and containers. Standards like these may emerge as European (CEN) standards and eventually as international (ISO) standards – and provide a useful model for equivalent regulatory standards for ECDS.

A reasonable and proportionate regulatory regime should cover the elements explored below – operating in conjunction with the wider cannabis regulatory framework. It may evolve over time in response to research developments and there is no need to try to reach a final regulatory regime in one attempt. Generally, the approach is to identify particular sources of risk and set standards that mitigate the risks.

Standards for liquids/oils

The regulatory standard should ensure high quality ingredients are used and that substances known or likely to cause harm are

⁴⁰ BSI PAS 54115 (2015) Vaping products, including electronic cigarettes, e-liquids, e-shisha and directly-related products — Manufacture, importation, testing and labelling — Guide. <http://shop.bsigroup.com/ProductDetail/?pid=000000000030303130>

⁴¹ AFNOR (France) (2015) *Electronic cigarettes and e-liquids Part 1: Requirements and test methods for e-cigarettes XP D90-300-1* March 2015 and *Part 2: Requirements and test methods for e-cigarette liquid XP D90-300-2*. <http://www.boutique.afnor.org/norme/xp-d90-300-2/cigarettes-electroniques-et-e-liquides-partie-2-exigences-et-methodes-d-essai-relatives-aux-cigarettes-e-liquides-/article/823265/fa059566>

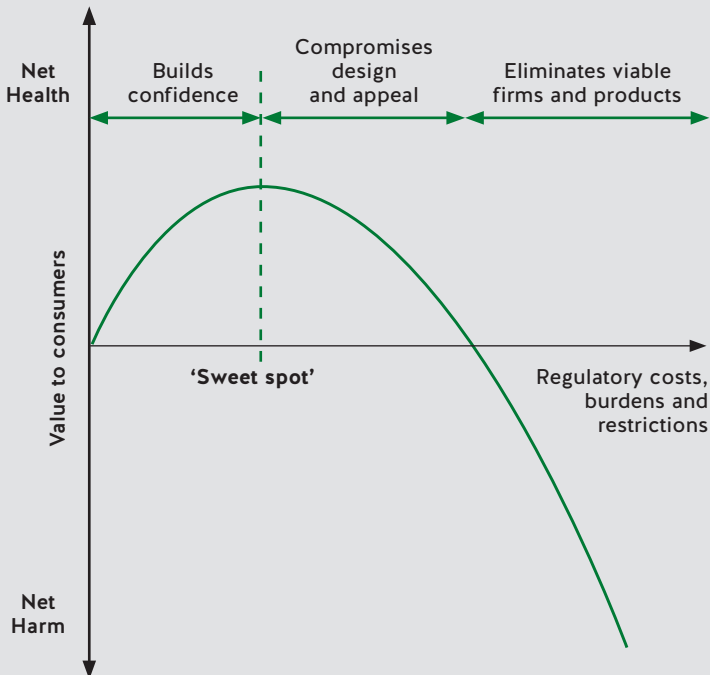
How to regulate electronic cannabis delivery systems

This section was produced based on the work of Clive Bates – graphic used with permission

The aims of ECDS regulation should be firstly to ensure that ECDS are as safe as possible without compromising their appeal as alternatives to smoking; and secondly, to ensure that they are not sold or marketed in a way that increases total population harm, including through recruitment of young people or non-cannabis smokers who would not otherwise smoke.

The aim of regulators should be to achieve a ‘sweet spot’ of regulatory intervention that builds confidence among consumers and removes defective products and non-compliant actors from the market, but does not impose costs, burdens and restrictions that preference more risky products or methods of consumption, crush the smaller players, radically change the products available or obstruct positive innovation. This relationship is illustrated below:

Figure 3 Consumer value from e-cigarette regulation (conceptual)



not. The constituents of the liquid should match the description, and any warnings needed should be specified.

- **Requirements for liquids**

This would set pharmaceutical grade standards for the major ingredient (and food grade standards for flavourings – if used, linking to wider food legislation as necessary). It would specify any prohibited or restricted ingredients, to be added to and amended over time, known to be carcinogenic, mutagenic, repro-toxic (CMR) or respiratory sensitisers. It would set limits for microbial activity and provide guidance on allergens. It would concentrate on the liquids rather than attempt to measure vapour components, which may vary with the way the product is used.

- **Prohibited substances**

As well as a general requirement to exclude CMR and respiratory sensitisers, they should be on an explicit ‘*black list*’ of banned substances. The purpose would be to build industry-wide confidence among consumers.

- **Requirements for containers – refill bottles or cartridges**

This would cover materials, leak-proofing, sealing caps – and make use of established standards for containers. Pre-filled and disposable ECDS and cartridges should all be in child resistant, tamper-evident, re-closable packaging compliant with international standards.⁴²

- **Information requirements**

The standard should specify what information the cannabis vaping oil manufacturer needs to provide with the liquid (on the label, packaging or in a leaflet, see discussion in [Section 2F: packaging](#)). This would include both general requirements applicable to

⁴² Specifically: EN 862:2005, ISO 13127:2012 and ISO 8317:2003

all cannabis products and accessories, as well as requirements specific to vaping oils.

- **Standardised test methods**

These would include analytical techniques for measuring liquids, identifying contaminants and determining potency. These standards may be primarily addressed at testing laboratories for importers or in-house analytical facilities at cannabis vaping oil manufacturers.

Standards for vapour devices

The priority is to ensure the devices are safe to use, that any risks to the user are minimised and that appropriate information is provided.

- **Mechanical risks**

Control of risks linked to filling or leakage, sharp edges, components that form part of the mouthpiece, structural integrity.

- **Thermal risks**

Maximum temperature permitted for different materials on the exterior of the product.

- **Chemical risks**

For example, materials that should not be used in the mouthpiece or substances that may leach toxins from the device into the liquid where these are in contact.

- **Electrical risks**

Regulation could specify a safe charging regime and ensure that chargers and batteries are compatible. Ideally regulation would ensure that chargers were interchangeable. The challenges of

electrical safety and lithium-ion batteries have been faced for many and varied devices. Here there is an opportunity to adopt international standards:

- IEC 60335-1 (safety of household appliances);
 - IEC 60335-2-29 (safety of battery chargers);
 - IEC 62133 (safety of portable batteries);
 - IEC 61558 (safety of AC adaptors);
 - IEC 61000 series; and
 - EN 55022 & EN 55024 (for USB chargers & cables)
- **Information requirements**

This would include details of the product and contact information for responsible supplier, technical specifications (power range, capacity etc), and any information about refilling. It could also detail any requirements for the operating manual, including a requirement that it is maintained online, and any warnings that should be given.

e Strength/potency

Challenges

- Ensuring potency is regulated, and reliably and consistently monitored in any retail products
- Ensuring that consumers are informed about the potency of what they are consuming, its potential effects, and how to minimise or avoid risks
- Minimising the potential risks associated with high-potency cannabis and concentrates

Analysis

- There is some confusion around what cannabis potency means
- The concept of '*potency*' with regard to cannabis products is not exactly equivalent to that for alcohol:
 - Cannabis has more than one active ingredient and the ratio of active contents is an important variable of both risk and subjective effects
 - The amount of active content consumed from a given amount of smoked/inhaled cannabis can vary significantly (for example, depending on the number, depth and length of inhalations)
 - Auto-titration with inhaled cannabis means that potency issues are less of a concern – most individuals are able to moderate and control use to achieve their desired level of intoxication, although this becomes more difficult as potency rises, and higher potency tends to increase total THC consumption
- Unknown or unpredictable strength/potency is a risk of unregulated illegal cannabis that can be largely eliminated in an effectively regulated market
- Effective testing and monitoring is needed – but can potentially be an expensive and onerous regulatory burden

- There are additional issues to consider with the potency of edible cannabis products, and how this should be assessed and labelled on any retail products

Recommendations

- The strength and potency of THC and CBD content should be tested and monitored for all retail products – there should be routine independent monitoring at production and retail stages of the market, supported by random retail purchase monitoring
- The production or sale of cannabis products with strength/potency varying significantly from their stated level or the level required by regulation should be considered a serious licensing violation
- Product packaging and points of sale in on-site consumption venues should ensure that consumers have access to full and accurate information about the strength/potency of what they are purchasing – expressed in terms of THC and CBD content, as well as relevant harm reduction information (see [Section 2F: packaging](#))
- Licensed vendors should be required to undergo training in strength/ potency-related health issues, so that they can inform and advise customers effectively (see [Section 2G: vendors](#))
- Upper limits on THC potency could be considered for retail herbal cannabis, but a combination of accurate/clear labelling, responsible retailing, and consumer education around potency issues and risk is a preferable option. Encouraging production and consumption of products/strains with safer THC:CBD ratios, including through consumer ‘nudges’ utilising price controls to preference less potent products, would be a useful part of this approach
- Limits on sales of high-potency concentrates are a more reasonable proposition, especially where such markets are not

already established – although establishing thresholds may be somewhat arbitrary and difficult to enforce

- Controls on total THC and CBD content by weight are a more practical proposition for edibles if they are sold as discrete edible units, separately packaged where more than one unit is present in a container

There is a certain amount of confusion around the concept of cannabis potency – both what it means in technical terms, and what its implications are for the risks associated with the use of different cannabis products consumed in different ways. People are familiar with the concept of alcohol strength, expressed in percentage of alcohol content, and how this relates directly to the effects and risks of how much they consume. Standardised alcohol units are a good example, which cannabis regulation should aim to recreate. Key to their utility is that they can be readily translated between different alcohol products. However, the situation is less straightforward with cannabis, and cannot be directly compared for a number of reasons.

Cannabis potency¹ is usually measured in terms of the percentage of its key psychoactive ingredient, Δ^9 -tetrahydrocannabinol² (Δ^9 -THC or simply THC), but THC is only one of over 80 different cannabinoids found in the cannabis plant, key among these being cannabidiol (CBD). Because CBD interacts with and modifies the effects of THC, the ratio of the two is important not only as it shapes the nature of the subjective cannabis experience (CBD is thought to have a more sedative effect), but also because CBD is thought to have anti-psychotic properties, potentially reducing the risks of psychotic

¹ The term ‘potency’ is used here in preference to other terms sometimes used interchangeably, such as ‘strength’ or ‘purity’.

² Also known by its International Nonproprietary Name as ‘dronabinol’.

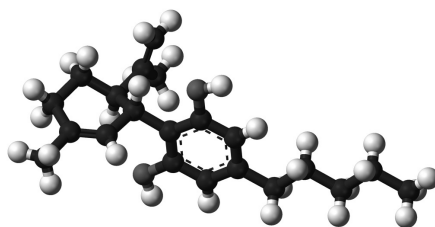
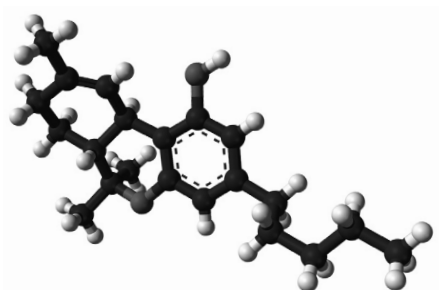
episodes or psychotic illness related to cannabis use.³ The many other cannabinoids present in cannabis are less well understood but their relative proportions may also have subtle influences on the variable effects (and possibly risks) of different strains.

Lower-strength, outdoor-grown cannabis tends to be less than 10% THC, while indoor-grown, 'premium' cannabis varieties are predominantly in the 10-25% range. The potency of lower-quality and premium-grade resin has historically been roughly the same as this in European markets, although newer techniques such as solvent or carbon dioxide extractions have produced oils and other concentrates, such as butane hash oil (BHO, the semi-solid forms sometimes known as 'wax' or 'glass'), that have extremely high potencies, some reaching concentrations of over 80% THC.

Another factor that complicates our understanding of cannabis potency is that the level of intoxication and the speed of onset of effects, which will determine the subjective experience, depend in large part on the particular preparation, method of consumption, and using behaviours.

A given amount of cannabis can be smoked (or vaporised) in different ways, in terms of how many inhalations the user takes, how deep the inhalations are and how long they are held in the lungs, so the amount of active content that different individuals actually absorb can vary quite considerably. With smoked or vaporised cannabis, the onset of the effects is very rapid, meaning that individuals are able to dose control relatively easily. If they have not reached the desired effect, they will continue. If they have reached it, they can stop. On this basis, potency would seem to be less of a concern for inhaled cannabis use, indeed higher-potency cannabis could mean fewer

3 Zuardi, A. W. (2006) *Cannabidiol, a Cannabis sativa constituent, as an antipsychotic drug*, Brazilian Journal of Medical and Biological Research 39.4, pp.421–429.



Δ^9 -tetrahydrocannabinol and cannabidiol Ben Mills

inhalations to achieve the same effect, thereby reducing respiratory risks. However, while such ‘*auto-titration*’ dose control behaviour is the norm,⁴ higher-potency cannabis can still potentially lead to higher total consumption and correspondingly pose greater risks. With more potent varieties a large dose of active content can be received in a single inhalation, and the larger such individual doses are, the harder it becomes to fine tune dosage control,⁵ meaning the potential to consume more than planned or desired is increased. This is particularly the case for novice users..

This risk of consuming more than planned (with potentially negative or undesirable effects) will be amplified when the potency of the cannabis being consumed is unknown. However, this problem can be reduced or effectively eliminated in a properly regulated system in which:

- Buyers are able to choose from a range of clearly labelled products of different potencies
- Buyers are able to take guidance from licensed, trained vendors
- There is relevant information on dosage, effects and safer use at point of sale and on all packaging

⁴ Mikuriya, T. H. and Aldrich, M. R. (1988) *Cannabis 1988: Old Drug, New Dangers. The Potency Question*, *Journal of Psychoactive Drugs* 20.1, pp.47–55.

⁵ Caulkins, S. et al. (2012) *Marijuana legalization — what everyone needs to know*, Oxford University Press, p.11.

In many parts of the world, notably in Europe, smoked cannabis is also often mixed with varying proportions of tobacco, effectively diluting its potency to levels below those that would be experienced if it were smoked pure, much in the same way that alcoholic spirits can be diluted with mixers to various degrees. While this may reduce some of the above risks relating to high-potency cannabis, any benefits are probably more than outweighed by the risks associated with smoked tobacco.

The increasing average potency of illegal cannabis is a genuine observed phenomenon in the US,⁶ and to a lesser extent in Europe, although what appears to be a long-term incremental rise in average potency has provoked many exaggerated ‘*reefer madness*’-style claims that have little basis in reality.⁷ In Western markets at least, the increasing market dominance of indoor-grown ‘*premium*’ cannabis, combined with likely actual increases in its potency (through selective breeding and developments in intensive growing technologies), has probably pushed average potency up to between two to three times what it was in the 60s and 70s. Such averages do, however, disguise a great deal of variety within markets and between different localities. There was of course very potent cannabis (particularly in resin form) available in the 60s and 70s, so the suggestion that what is being consumed today is a completely different drug is misleading: the observed trend is primarily due to there being a greater proportion of more potent varieties on the market.

6 Mehmedic, Z. et al. (2010) *Potency Trends of D9-THC and Other Cannabinoids in Confiscated Cannabis Preparations from 1993 to 2008*, *Journal of Forensic Sciences* 55:5, pp.1209-1217. <http://home.olemiss.edu/~suman/potency%20paper%202010.pdf>.

7 For example, John Walters, then US Drug Czar, said: ‘Parents are often unaware that today’s marijuana is different from that of a generation ago, with potency levels 10 to 20 times stronger than the marijuana with which they were familiar.’: Walters, J. (2002) *The Myth of ‘Harmless’ Marijuana*, *The Washington Post*, 1st May. <https://www.washingtonpost.com/archive/opinions/2002/05/01/the-myth-of-harmless-marijuana/>; King, L., *Understanding cannabis potency and monitoring cannabis products in Europe*, in EMCDDA (2008) *A cannabis reader: global issues and local experiences*, Chapter 14. www.emcdda.europa.eu/publications/monographs/cannabis; Claims of ‘super strength pot’ are also common. See: Sabet, K. (2020) *Arizona has good reason to be wary of Big Marijuana and the dangers today’s potent pot poses*, *AZCentral* 26th May. <https://eu.azcentral.com/story/opinion/op-ed/2020/05/26/wary-big-marijuana-dangers-today-potent-pot-poses/5215773002/>

The emergence of high potency concentrates like BHO is a comparatively recent phenomenon, so relatively little is known about their prevalence and impacts, particularly outside more established medical, and now non-medical markets in North America. But aside from these concentrates, if there is some truth in the *'it's not what we smoked in the 60s'* claims, it is due to the trend towards higher ratios of THC to CBD in intensively farmed higher-potency cannabis – with CBD content often falling to near zero as THC levels have steadily crept up. This change in the THC:CBD ratio results both from selective breeding that prioritises high THC content (which commands a higher price), as well some of the newer intensive growing techniques deployed to maximise turnover from a given grow space that can reduce CBD content.

The data on increasing potency is not especially reliable (based primarily on seizures which may not necessarily be a representative sample of markets) and conclusions are widely disputed. It is certainly the case, however, that both the general trend towards increasing potency of herbal cannabis and the parallel trend towards increasing THC to CBD ratios are not merely demand-driven, but are primarily manifestations of illegal market economics. There is an echo here of how, under US alcohol prohibition, the market shifted towards stronger spirits that provided significantly higher profits per unit weight for bootleggers. When alcohol prohibition ended, the market naturally shifted back towards sales of beers and wines. In many US and European markets it is now becoming hard to obtain anything except the more potent varieties, even when individuals would prefer something milder if given the choice.⁸ The same shift has yet to be shown for legal markets in North America, suggesting that economic dynamics in more commercial jurisdictions may

⁸ It has been suggested that this narrowing of the cannabis market may even be partly responsible for the fall in cannabis use observed across Europe in the past decade, as many do not care for the higher-potency products or have negative experiences with them as novice users.

similarly be more concerned with profit opportunities than public health concerns. This highlights the important role for regulation to play to curb these interests and ensure a careful balance, while protecting public health.

Recommendations

- **Ensuring the THC and CBD content of all retail cannabis products is routinely tested**

Although potency testing and monitoring of cannabis products can be relatively expensive (see [Section 2A: production](#)), a reasonable level is not an excessive burden. It is important to acknowledge that technical challenges of accurate testing have often been flagged – noting that potency can vary widely within a crop, batch or even plant (or differing challenges for testing of edibles and other preparations). But such challenges are hardly insurmountable given rapid developments in sampling and testing methodology, and realistic error margins can be built into monitoring systems and regulations.

Routine testing should be built into any regulatory framework, supported by random test purchasing, and be undertaken or commissioned independently by the regulating authorities – with cost burden covered by taxation and producer and vendor licensing fees. The intensity of testing required will become clear from levels of compliance but should err on the side of more rather than less at the outset, in order to establish clear norms and expectations for market actors. The production and in particular sale of products that diverge significantly from their stated potency should be considered a serious licence violation. Allowable error margins and penalties for violations should be clearly established. For instance, Canadian regulations establish

variability limits of 15–25% above or below the stated levels of THC and CBD depending on the type of cannabis product, and in some cases the stated potency.⁹

- **Ensuring consumers are aware of the potency of all retail cannabis products – and their related risks**

All retail products should be clearly labelled with potency information covering THC and CBD content.¹⁰ This should be supported with related information on risks, potentially with a simplified numerical (e.g. 1–5) strength guide. More detailed standardised information on cannabis potency and related risks should also be made prominently available at point of sale in all retail outlets. Vendors should be trained to give advice on potency and related risk issues.

Establishing a standardised THC unit

Standardised alcohol units have been an important tool to inform consumers of comparative potency across different alcohol products. Notwithstanding the issues discussed above (i.e. that, unlike alcohol, the amount of available active content in a given cannabis product is not necessarily the same as what actually enters the system, or more technically, there is highly variable bioavailability across products and consumption behaviours), as legal cannabis markets become a reality in more of the world, greater research capacity is being invested into the important question of how to establish a similar standardised unit for cannabis. The aim would be to replicate the utility of an alcohol units system – even if acknowledging certain shortcomings in the context of cannabis. However, establishing a standard unit is far from easy, owing to the increasing variety of cannabis products and ways that these are consumed.

An important aspect of any standardised unit is easy replication across product types. A ‘*standard joint*’, for instance, may be easy for consumers to understand, but does not provide any potency or dosage insight into other, increasingly popular, cannabis

⁹ See: Canadian Cannabis Regulations, s97, s98.1, s100. <http://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-144/>

¹⁰ More sophisticated testing and labelling of other cannabinoids and terpenes would be desirable (but as an option for retailers rather than legal requirement) and is provided by some of the more sophisticated legal medical and non-medical outlets in the US.

products¹¹—particularly edibles, which carry a heightened risk of overconsumption. Similarly, cannabis content by weight is an inadequate measure as ‘a typical gram of cannabis concentrate might contain 26 times more THC than a typical gram of outdoor-grown herbal cannabis’.¹² THC, as the primary psychoactive ingredient in cannabis, is the most important factor in measuring potency and, for this reason, research has moved towards calling for a standard unit for cannabis products based on THC content, by weight.

A vital component of early packaging regulations in North America has been requirements to specify THC content, as well as CBD content. However, informing consumers of THC content does not in itself guarantee knowledge of potency: novice users in particular are unlikely to understand how strong a product is purely based on the listed THC by weight, or by percentage. Further, listed packaging information is a relatively new phenomenon for consumers transitioning from unregulated illegal markets, meaning there are no established norms built on an understanding of what potency labelling on cannabis products means. Traditionally, understanding potency has been something left largely to the consumer. Research has indicated that consumers find it difficult to understand labelling that focuses on providing THC information in milligrams, and instead are far more likely to identify recommended serving sizes where packaging includes information on the number of doses (or servings) per package.¹³ A standard THC unit, therefore, may be understood as a single serving or dose which could be reflected on packaging¹⁴—reducing the risk of overconsumption and implementing a metric by which consumers can understand how much of a product they may wish to consume for their desired effect.

Where the threshold for such a THC unit should be set is another question. The 5mg THC unit has therefore emerged as a credible starting point in early research¹⁵ and a ‘reasonable justification based on our current knowledge’.¹⁶ While it has been argued that this sets too low a threshold, the importance of a standard unit is not to

11 Freeman, T.P. and Lorenzetti, V. (2019) ‘Standard THC units’: a proposal to standardize dose across all cannabis products and methods of administration, *Addiction* 115.7 pp1207-1216, p1209. <https://pubmed.ncbi.nlm.nih.gov/31606008/>

12 Ibid

13 Leos-Toro, C., Fong, G.T., Meyer, S.B. and Hammond, D. (2020) Cannabis labelling and consumer understanding of THC levels and serving sizes, *Drugs and Alcohol Dependence*. <https://doi.org/10.1016/j.drugalcdep.2020.107843>

14 Hammond, D. (2019) Communicating THC levels and ‘dose’ to consumers: Implications for product labelling and packaging of cannabis products in regulated markets, *Int J Drug Policy* Jul 25. <https://pubmed.ncbi.nlm.nih.gov/31351756/>

15 Freeman, T.P. and Lorenzetti, V. (2019) ‘Standard THC units’: a proposal to standardize dose across all cannabis products and methods of administration, *Addiction* 115(7) 1207-1216, p1213. <https://pubmed.ncbi.nlm.nih.gov/31606008/>

16 See: Volkow, N.D. and Weiss, S.R.B. (2020). Importance of a standard unit dose for cannabis research, *Addiction*. <https://doi.org/10.1111/add.14984>

restrict consumption beyond a certain point (though concomitant purchase limits could seek to do that) but instead to *'provide a metric for quantifying THC doses for users across the consumption spectrum'*¹⁷ The THC unit could also usefully inform taxation policy — taxing products based on THC by weight could be more easily understood as a taxation implemented based on standard units per product — as well as research.¹⁸ Similarly, the standard unit could be a relatively small dose, and health messaging and public education campaigns could be related directly to the number of units consumed over a given time period, as happens with alcohol units.

It is clear that this is a developing field of research, but the development of a standardised unit has important policy implications warranting close attention. The focus has, so far, been on establishing a standardised THC unit, but it is clear that in the long-term this alone may not be satisfactory; the potential role of CBD as a moderating factor in terms of subjective effects and risks is a variable not currently accounted for. It is clear that the evidence in this area is *'preliminary at present'*¹⁹ but some authors have instead suggested standardised ratios based on the proportion of THC to CBD.²⁰

- **Controlling the potency of retail products**

Having an upper limit on the THC content of retail herbal or resin/oil cannabis for non-medical use could be seen as a sensible precautionary measure, but is problematic for a number of reasons, particularly in a more open market model. Beyond what many consumers may view as an unfair or unnecessary imposition, the most obvious practical issues are exactly where such a threshold would be set and how it could be enforced.

In 2012 the Dutch government proposed a prohibition on sales of herbal cannabis over 15% THC, although this move was not approved and was opposed by almost every government office

17 Hammond, D. (2019) *Communicating THC levels and 'dose' to consumers: Implications for product labelling and packaging of cannabis products in regulated markets*, Int J Drug Policy Jul 25. <https://pubmed.ncbi.nlm.nih.gov/31351756/>

18 Freeman, T.P. and Lorenzetti, V. (2019) 'Standard THC units': a proposal to standardize dose across all cannabis products and methods of administration, *Addiction* 115.7, pp1207-1216, p1213. <https://pubmed.ncbi.nlm.nih.gov/31606008/>

19 Ibid

20 Hindocha C., Norberg M. M., Tomko R. L. (2018) *Solving the problem of cannabis quantification*, *Lancet Psychiatry* 4, pp643-8. <https://pubmed.ncbi.nlm.nih.gov/29580611/>

(including the police, prosecution, and forensic service) that would be involved in enforcing the limit.²¹ Research into the proposal suggested that, while the measure could *‘in theory [provide] a slight health benefit for specific groups of cannabis users (i.e., frequent users preferring strong cannabis...)*’ in practice it reflected a *‘political choice and based on thin evidence’*.²² The New Zealand 2020 draft Cannabis Legalisation and Control Bill proposed similar potency limits, marketed as a key way that regulation could take back control of the market and facilitate harm reduction aims.²³ This highlights that such measures continue to be politically useful, even in lieu of evidence as to their practical impact.

Even if most consumers are unlikely to be concerned by an upper limit at or near this level (which would still be considered strong herbal cannabis by most) the fact is that any such limit is inevitably quite arbitrary, and as such could lead to arbitrary enforcement outcomes. This is especially the case given the improving but still imperfect nature of both potency control among growers (even with the most carefully cultivated cannabis there will be a certain amount of potency variation between crops, and even within any given crop or sample) and potency testing technology.

If the aim is to encourage the use of lower-potency products as a way of moderating risks, then a more sensible approach would appear to be a combination of:

²¹ Blickman, T. (2013) *Restrictive government cannabis policies are defied by local initiatives and court rulings*, Transnational institute, 4th October. www.druglawreform.info/en/weblog/item/4960-majority-of-the-dutch-favour-cannabis-legalisation.

²² van Laar, M., van der Pol, P. and Niesink, R. (2016) *Limitations to the Dutch cannabis toleration policy: Assumptions underlying the reclassification of cannabis above 15% THC*, Int J Drug Policy 34, pp58-64. <https://pubmed.ncbi.nlm.nih.gov/27471078/>

²³ See: New Zealand Government (2020) Cannabis Legalisation and Control Bill, Exposure Draft for Referendum, PCO 22159/24.0, General Policy Statement: Schedule 8. <https://www.referendums.govt.nz/cannabis/summary.html>

- Strict product testing and labelling requirements that ensure buyers know exactly what they are consuming, enabling them to make informed choices
- Consumer education about potency-related issues/risks, supported by packaging and point of sale info, and training requirements for vendors
- Responsible retailing, which could be encouraged through licensing requirements for vendor training in how to provide potency and risk advice to purchasers
- Variable tax rates (or other price controls), which could be employed in order to encourage the use of less potent products, as is done with alcohol in many countries

If limiting the potency of retail cannabis under a relatively open market model is problematic, under a more regulated market model such as that found in Uruguay it is less of a challenge, as the regulatory authorities license producers to provide the specified products that will be available for sale. Even in this more restricted scenario, cannabis *'connoisseurs'*, or those who desire higher-potency strains, can still be catered for either by provisions on home growing or cannabis social clubs.

Restrictions on sales of high-potency concentrates are a more reasonable proposition if such products are shown to be associated with significantly increased risks, but again such restrictions face the challenges of where any potency threshold should be drawn and how it would be enforced. As discussed in the previous section on preparations, such decisions will be significantly shaped by the nature of existing demand and patterns of use. Certainly if there is little or no existing demand for high-potency concentrates, establishing a new framework for making them legally available is likely to be something regulators will naturally want to avoid (although some advocates for medical cannabis access have made the case that concentrates

may have specific medical utility). However, given the fast-rising popularity of concentrates in certain regions (particularly North America), prohibiting options for retail access where demand is already established would likely push many consumers back to the illegal market. In US states without regulated non-medical markets, 15% of cannabis consumers report using concentrates within the past 12 months (compared to 22% in legalising states).²⁴ Legal access to concentrates could be provided instead through membership-based cannabis social clubs, although this could lead to difficulties regulating safe production practices. Some of the newer production techniques for concentrates (such as CO₂ and butane extractions) are quite dangerous in inexperienced hands, so licensed production and availability is probably preferable if the alternative is risky home production. For these reasons, the Canadian Cannabis Act and Regulations prohibit at-home butane extraction, instead reserving the right to licensed cultivators, processors, testers and researchers.

If potency threshold limits are adopted for herbal cannabis and/or resin/concentrates, and it seems inevitable that some jurisdictions will choose to do so, it will be important to make sure they are set high enough to cater for the large majority of existing demand in a given jurisdiction. If they are set too low it will simply create an opportunity for unlicensed producers to meet the unsatisfied demand. There will need to be constant monitoring of impacts, and the flexibility to adjust (or abandon) such thresholds in response to evidence of their impacts and effectiveness.

Enforcement of any limits will also require a reasonable amount of tolerance, to allow for the imprecision of growers, and testing technology, as discussed above. Any sanctions for threshold

²⁴ Goodman, S. et al (2020) *Prevalence and forms of cannabis use in legal vs. illegal recreational cannabis markets*, Int J Drug Policy 76. <https://pubmed.ncbi.nlm.nih.gov/31927413/>

violations will also need to be proportionate. Such limits would sensibly be regarded more as a good practice guide for retailers or as a moderating influence on the potency of the products they sell. The aim should be to curb certain risky behaviours and prevent potency levels creeping up further, rather than to create a new form of prohibition that will needlessly penalise existing users or vendors in the future.

A different approach would be needed for edibles, with THC and CBD content by weight (and by standardised units if such a system is adopted) being clearly labelled on discrete single servings of any given edible product. What constitutes a single edible serving for an individual should be clearly defined and an upper limit on THC content per serving (by weight or standardised units) should also be established.

The approach taken in Canada has been to establish an upper limit on THC content per ‘*immediate container*’ (i.e. the outermost package), albeit with no corresponding limit on CBD. In practical terms, this means that where there is only one discrete edible unit in a product container, that unit is limited to 10mg of THC. However, where there are four discrete units in a product container, each unit must be no more than 2.5mg of THC (and the potency of each unit must be the same, in any event). In practice, research has highlighted that consumers find it difficult to understand cannabis labelling that merely provides potency information in terms of milligrams of THC, with similar issues in relation to percentages. Effectively communicating potency information to consumers may therefore require developing an easily understandable numerical, colour-coded or traffic light-type scale as well as a standardised THC unit (see [above](#)).

There is a parallel issue around possible regulation of CBD content, and THC:CBD ratios. Attempting to establish an enforceable

ratio limit would be even more problematic than THC content thresholds, not least as the scientific basis for judgements about the risks of any given THC:CBD ratio is not well established. For more restrictive regulatory models, it makes sense to ensure that licensed herbal or resin cannabis products all include a CBD ‘*buffer*’ – ranges of between 1–4% CBD, or a minimum 10:1 THC:CBD ratio, have been suggested as a starting point (albeit based on the limited available research). For less restrictive market models this will primarily need to be dealt with through clear product labelling, consumer education, and responsible retailing, all informed by the emerging body of knowledge on this particular question.

f Packaging

Challenges

- Ensuring packaging is child resistant to help minimise risk of accidental child ingestion and poisonings
- Ensuring key product content, risk and advice information is available on the packaging
- Ensuring packaging serves to preserve the freshness and quality of the product
- Ensuring packaging design is not used to encourage use, or appeal to young people
- Ensuring packaging is environmentally sustainable

Analysis

- Established packaging technology for food and pharmaceuticals can be easily adapted to meet the needs of cannabis packaging
- The small but real risk of accidental child ingestion and poisoning can be minimised through use of child resistant packaging
- Child resistant plastic containers offer an adequate level of protection for the majority of cannabis products, are relatively inexpensive and meet other packaging requirements
- Tamper-proofing measures could be included in packaging design if deemed necessary
- As with alcohol, tobacco and pharmaceuticals, packaging provides an ideal vehicle to display key product and safety information
- Packaging design and branding can be used to make products more or less attractive and encourage or discourage use
- Sustainable packaging practices can be required in regulations to promote sustainability

Recommendations

- All take-out retail cannabis products should be sold in opaque resealable child-resistant plastic containers with additional tamper-proofing measures included on products if deemed necessary
- Home-grown cannabis should also be required to be stored in child resistant packaging
- Information on packaging should be modelled on established norms for pharmaceutical drugs and recent lessons from tobacco packaging, with additional information and messages as appropriate
- The contents and prominence of packaging information should be determined by the appropriate public health authority and be legally enforced
- By default, packaging should be standardised and non branded
- Packaging regulations should be clearly outlined in law and properly enforced

Child resistant packaging

There is a risk of accidental ingestion of cannabis products by children, particularly under-fives. The medical literature suggests this is a real risk¹ but that such incidents are rare, certainly when compared to more conventional poisonings. Accidental ingestions of cannabis by children have risen in Colorado post-legalisation, although in real terms, the numbers remain low – for under-9s, the number rose from 19 in 2011, to 45 in 2014, all of whom made full recoveries (for perspective, the equivalent 2014² numbers for

¹ There are relatively few studies, most being case studies describing infant hospitalisations, sometimes involving coma. No deaths are recorded.

² Barker, E. A. et al. (2015) 'Marijuana Exposures Reported to the Rocky Mountain Poison and Drug Center'. <https://cste.confex.com/cste/2015/video gateway.cgi/id/826?recordingid=826>

under-5 pediatric exposures to painkillers were 2,178, and 1,422 for cleaning products³). The reduced stigma associated with attending A&E post-legislation may also go some way to explaining this trend.

There does, however, appear to be an increased risk with certain more concentrated preparations and, in particular, cannabis edibles that are more attractive to children and infants, such as cakes, brownies or sweets.⁴

Even if this risk is relatively small, measures that could reduce it should be adopted. We recommend that established ‘*child resistant*’ re-sealable opaque plastic containers (as used for medicines, some foods and domestic products) should be used by default for all retail cannabis products (even for herbal cannabis, which presents a lower-risk as it is not palatable to infants). This is a sensible precaution, and has the added political benefit of demonstrating a strong commitment to child safety. Such containers are mass-produced and inexpensive (costing only a few cents each) and therefore have little impact on total cost for either purchaser or retailer.

The risk of children accidentally ingesting cannabis-infused food products is another argument for restricting sales of edibles, at least in the early stages of any new regulatory model. Prohibiting edibles for take-out, as opposed to on-site consumption in a licensed venue, might be a reasonable compromise as a starting point, but permitting sales of products that obviously resemble sweets, such as lollies, gummi-bears or chocolates (particularly in packaging that resembles conventional candy products), is an exceptionally bad idea, and should be avoided. People who wish to consume edibles

3 Rocky Mountain Poison and Drug Center (2014) ‘*Colorado 2014 Annual Report*’. <http://rmpdc.org/Portals/23/docs/Colorado-Annual-Report-2014-Poison-Center.pdf?ver=2015-06-02-134623-980>

4 A 2013 paper describes a marked increase (from zero to 14) in emergency admissions for cannabis ingestion in under-12s in Colorado before and after 2009. Of the 14, half were for cannabis edibles. See: Wang, G. S. et al. (2013) *Pediatric Marijuana Exposures in a Medical Marijuana State*, *JAMA Pediatrics*, Vol.167, No.7, pp.630–633.

would of course be able prepare them at home with ease, using herbal or resin cannabis (and potentially concentrates or tinctures), so such a restriction should not be viewed as overly stringent. If, however, edibles are to be made available for take-out retail, any risks can, as mentioned, be minimised by the use of resealable child resistant plastic containers. Labelling on such packaging would need to have prominent warnings about potential risks of child ingestion, and the responsibility of the purchaser to prevent it (see [below](#)).

Home-grown cannabis, and obviously any home-made cannabis edibles, should also be stored in child resistant containers. Although legally mandating or enforcing specific rules would be problematic, failure to abide by storage guidelines might be taken into consideration by enforcement or prosecutors if accidental child (or indeed adult) ingestion occurred. This is probably more an issue for intelligently targeted education, highlighting potential risks and encouraging responsible storage in the home.

Tamper-proofing

Effective packaging can help to ensure quality, reduce the possibilities for tampering, and allow the purchaser or user to know if tampering has occurred. Established product packaging types used for pharmaceutical drugs can easily be adapted for use with cannabis products.

For example, existing medical-style containers featuring sufficiently secure seal mechanisms could be appropriate. Such mechanisms include breakable caps or inner seals of thermal plastic or foil over the mouth of the container. Packaging of this kind is already utilised by many suppliers in the medical cannabis industry and could be more widely deployed as needed.

Information on packaging, and packaging design

Experience with alcohol and tobacco packaging provides useful guidance here, mostly on how not to proceed. Over the past century, the design priorities of alcohol and tobacco packaging have been shaped by commercial interests. Reverse-engineering appropriate packaging that carries clear information on the risks of these two drugs has proved problematic, with voluntary efforts by the respective industries woefully inadequate, and legislators reluctant to mandate changes (see [p.40](#)). This situation has at least begun to change with tobacco packaging in recent years – firstly with the appearance of prominent health warnings, and more recently with the adoption of plain packaging in some countries.

Branding and design of packaging plays a key role in the appeal of a product. Alcohol and tobacco packaging is evidence of this, having been created with the specific intention of encouraging initiation of use, increasing use, and ensuring brand loyalties. Design can act as a marketing device by making the product more eye-catching and attractive, which in turn helps facilitate product placement in a range of media and associations with certain desirable qualities or aspirant lifestyles for target markets.

Recent years have witnessed growing calls from medical authorities for such marketing practices to be restricted, particularly for tobacco products, in line with already widely established controls on other forms of marketing (see [Marketing, p.159](#)). Research clearly demonstrates how design and branding influence purchasing behaviours in ways designed to encourage increased initiation and use.⁵ Claims to the contrary from the tobacco industry defy not only the vast body of expert research and opinion, but common

5 Moodie C. et al. (2012) 'Plain tobacco packaging: a systematic review', Public Health Research Consortium. http://phrc.lshtm.ac.uk/papers/PHRC_006_Final_Report.pdf.



Legal cannabis product packaging in a retail store, Vancouver, Canada.
Photo credit: Steve Rolles

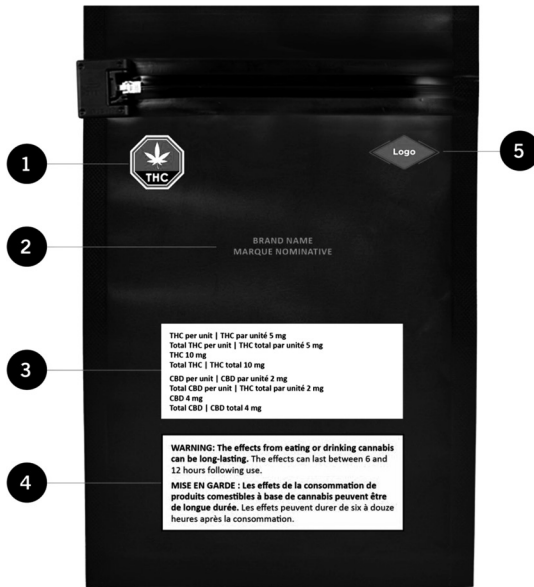
sense: why would the industry invest in such marketing and so passionately object to plain packaging if not for commercial self-interest? In 2012, Australia became the first country in the world to introduce plain packaging for tobacco products, and a number of other jurisdictions, including Scotland, England and Wales, Norway, Ireland, France, the European Union, India, Canada, New Zealand and Turkey are contemplating or implementing similar moves.

We propose that the design of packaging for cannabis products, and the information it carries, be more closely modelled on established norms for pharmaceutical drugs, with unbranded packaging, devoid of logos (or with very minimal brand identification – see Canada example on the left and described below) or any form of marketing-led design. Packaging design should be functional, restricted to only providing product and safety information on labelling (edibles having to additionally comply with local food and beverage labelling rules). The specific design content and prominence of packaging information should be determined by the appropriate public health authority and be legally mandated.



Canadian standardised cannabis symbol:
example of Canadian packaging requirements

Photo credit:
Government of Canada (2019)
Packaging and labelling guide
for cannabis products



Regulations can be highly detailed and prescriptive in their requirements, so as to reduce opportunities for desirable branding elements being incorporated onto products. In Canada, the Cannabis Regulations seek to prevent packaging from being bright or eye catching in a way that detracts from important health information. They require that each individual surface of a cannabis container must be ‘one uniform colour’, must not be fluorescent and must create a contrast with the yellow of the standard health warning message and the red of the standardised cannabis symbol. The texture of containers must be smooth, and must not emit any scents or sounds, or have features like heat-activated ink. The Canadian Regulations also require that the product brand name must be smaller than the health warning message, and the brand element must be smaller than the mandated red cannabis (THC) warning symbol. This is clearly aimed at ensuring the health information is more prominent to consumers and therefore draws more attention, and reflects a clear aim to reduce branding

opportunities and prioritise informing consumers as to potential risks and other information.

The detail will vary between jurisdictions, but in the box below we have proposed a guide to what packaging information should include. Clearly the volume of health, risk, and harm reduction information listed cannot fit on a single product package label. Solutions to this could involve one or more of the following:

- Rotating a series of key messages on package labelling (in a similar way to the health messages on cigarette packaging). Certain core safety information, such as reminders to keep out of reach of children or not drive under the influence of cannabis, should, however, always be included on packaging
- Inserts similar to those found in most pharmaceutical products could be used, with a single folded piece of paper with detailed product information inserted into even the smallest containers. A standardised insert, which would be inexpensive to produce, could be mandated for inclusion with all retail cannabis products for reference whenever needed
- A web-link to an appropriate online resource could be prominently signposted on the packaging. A QR code could also be included for smartphone users

Packaging information

Contents description

PREPARATION

- Herbal cannabis – with details on variety/strain
- Resin/oil/other concentrate – with details on variety/strain made from
- Description of edible product, and cannabis used in its preparation (other ingredients and allergens should be listed separately, in line with existing trades description rules for foods and beverages)
- Intended use of product (i.e. whether it is to be eaten, smoked or vaped)
- Net weight of product

POTENCY INFORMATION

- For herbal and resin cannabis – THC and CBD content as a percentage
- For edibles – THC and CBD content by weight in each standardised edible unit (and the number of discrete units in the container)
- A simple numeric potency scale (1-5 or 1-10) so that the strength of products is made as clear as possible
- Information on other cannabinoid and terpene content could potentially be also included (optional rather than mandated) with criteria for such labelling established by regulatory authorities

BEST BEFORE/USE BEFORE DATES

- While more of a priority for edibles (standard food rules would apply), these should be included on all cannabis products as they can degrade over time
- The product's packaging date, and storage guidance/information

Health/risk/harm reduction information

KEY EFFECTS AND SIDE EFFECTS

- Positive and negative effects
- Effects at different dosages
- Likely different effects on different users (age, experienced or novice users, body-mass)

GENERAL RISKS

- Dependence
- Respiratory health
- Mental health
- Motivation
- For people with existing medical conditions

SECONDARY RISKS

- Impaired driving, operating machinery and effects on workplace competence
- Pregnancy
- Accidental child ingestion

HARM REDUCTION: HOW TO MINIMISE RISK

- Safer methods of consumption
- Safer products and preparations
- How to moderate use
- Poly-drug use issues

CONTRAINDICATIONS

- Risks of consumption with other non-medical drug use or use with prescribed or non-prescribed medications

WHERE TO GET HELP AND ADVICE

- Links/contacts to relevant service providers

g Vendors

Challenges

- Ensuring regulatory requirements for vendors support the aims of policy
- Ensuring equitable vendor licence distribution, and promoting market access for disproportionately impacted communities
- Ensuring controls are in place to help prevent commercial priorities of vendors undermining key functions of the regulatory regime, including: purchaser access control, access to accurate product and health information, and minimisation of social and health harms
- Ensuring adequate enforcement of vendor regulation
- Ensuring staff are adequately trained
- Ensuring effective controls, including age access controls, for online retail sources

Analysis

- Licensing policies allow regulators control over who acts as vendors, allowing social equity aims to be pursued
- Hardwiring social equity principles into initial legislation can mandate regulatory bodies to pursue goals facilitating an equitable market
- Licensing may not be the only barrier for disproportionately impacted communities attempting to enter the market; social equity programmes can additionally help promote market access by providing training and mentoring opportunities
- Risks of corporate capture can be mitigated through limits on licences per applicant, and by promoting access to smaller businesses
- Vendors can be required to adhere to and enforce restrictions on sales relating to age, intoxication or other criteria

- Vendors in retail-only outlets can be a key means of educating consumers about risks of different products, harm minimisation, responsible use, and where to get help or further information
- Vendors working in venues that permit on-site consumption have additional responsibilities necessitating additional training requirements for dealing with customers who require care or monitoring
- Experience with tobacco and particularly alcohol suggests voluntary codes of practice for responsible service training are often inadequate and not universally adopted
- Experience with tobacco and alcohol demonstrates that commercial pressures may lead to vendors failing to meet their responsibilities voluntarily, so adequate enforcement is crucial
- With online vendors, product and harm reduction information can be contained on the website, but implementation of age access controls may be more challenging owing to lack of face-to-face contact

Recommendations

- Licensing policies should seek to promote market access for disproportionately impacted communities and smaller businesses to prevent corporate capture and ensure a diverse market space
- Social equity aims should be hardwired into initial legislation
- Wide-reaching social equity programmes should be developed that provide training and mentoring opportunities, and technical assistance to individuals from disproportionately impacted communities
- Performance against social equity aims should be proactively monitored and evaluated
- Basic training requirements, covering cannabis use and health, how to engage with consumers, as well as legal regulatory requirements and how to enforce them, should be mandated

by regulatory authorities for all vendors, with additional requirements for vendors in venues that permit on-site consumption

- Vendor requirements should be adequately enforced to ensure they are adhered to
- Failure to meet vendor licensing requirements should be dealt with using a hierarchy of penalties including fines and withdrawal of licence
- Key elements of age access controls for online purchases could include: identification and purchaser age verification and delivery to named individual, with signature required

The principles of vendor regulation are twofold: firstly, regulating *who* is licensed to retail cannabis. This allows for policies to promote social justice and equity aims, and prevent corporate capture. Secondly, regulation can control *what* licensed vendors can and cannot do. Vendors, whether online or bricks-and-mortar, are the public's first point of contact with any legally regulated cannabis market. They are the gatekeepers of access to cannabis, and must therefore be subject to policies, laws and training that help ensure cannabis is made available in as safe and responsible a manner as possible.

Discussion of vendor regulation in this chapter will therefore be divided into two parts: *'promoting market access'* and *'requirements on vendors'*.

Promoting market access

The dynamics of cannabis prohibition have been different throughout the world, but in each case there have been marginalised communities and vulnerable individuals disproportionately impacted by law enforcement. As non-medical cannabis markets have been rolled

out across the US, a key developing theme has been the role of social equity programmes and equitable licensing policies. *'Equitable licensing policies'* as defined here refers to policies that seek to promote market access to marginalised or impacted communities. Many states have sought to acknowledge the disproportionate harms of cannabis prohibition, faced predominantly by Black communities and people of Latin American descent, through measures that facilitate market access for these communities, and which are also reparative in nature. The impact of such measures so far has been limited,¹ but practice is still developing and it is clear that this is a key policy concern going forward. Licensing requirements in some Canadian provinces and territories have similarly sought to promote the interests of Indigenous communities, though US-style *'social equity programmes'* have not yet been well developed and both Black and Indigenous people remain underrepresented in the fledgling cannabis industry.²

Legal cannabis is a potentially lucrative industry – in terms of both corporate profit and tax revenue – and there is an opportunity, and we would argue a moral responsibility, for proactive measures to ensure these benefits are shared widely, and regulation does not simply recreate the inequities of prohibition. A key element of social equity programmes in the US has been the development of schemes to promote market access for communities disproportionately impacted under prohibition, predominantly at the retail stage at present. The aim of such schemes is to ensure that these communities are able to share in the profits of cannabis sales, rather than witness them accumulated by individuals who felt few if any negative effects of prohibition, yet are now in a

1 Lekhtman, A. (2020) *San Francisco's Cannabis Equity Program Hits Milestone But Still Falling Short*, Filter 20th October. <https://filtermag.org/san-franciscos-cannabis-equity-program/>

2 Maghsoudi, N. et al (2020) *How Diverse is Canada's Legal Cannabis Industry? Examining Race and Gender of its Executives and Directors*, Centre on Drug Policy Evaluation. <https://cdpe.org/publication/how-diverse-is-canadas-legal-cannabis-industry-examining-race-and-gender-of-its-executives-and-directors/>

privileged position to exploit new legal markets and reap the majority of rewards.

It is also the case that regulation should not seek solely to *displace* existing illegal markets – rather, it should, where possible and appropriate, subsume them. It is often marginalised communities who have relied on selling cannabis as an important source of income, reflecting deeper structural inequalities in society. However, early trends from new cannabis markets highlight the risk that it will not be these same communities benefiting from legal supply.³ Without positive regulatory action from the outset, market forces with no inherent sympathy for social justice will prevail and those who faced discrimination and criminalisation under prohibition will face exclusion from the regulated market.

Regulation should also seek to prevent risks of corporate capture (discussed further in [Section 3B](#)). Small businesses – which social equity applicants will, generally, be – may struggle to gain a foothold in new markets and compete against the economies of scale, market expertise, and legal, financial and lobbying resources of larger established corporate actors. Promoting access to smaller businesses is therefore desirable not only from an equity and social justice perspective, but also to ensure a diverse market space and reduce consolidated corporate lobbying power. These same principles are applicable throughout the supply chain, including at the production stage, where unfortunately patterns of problematic corporate capture are already beginning to develop in some cannabis production industries, notably in Canada. While the recommendations made here in relation to promoting social equity are discussed in the context of vendors, they are relevant more generally, and should provide principles and measures applicable to regulation throughout the supply chain.

3 See above footnote

Determining disproportionate impact⁴

Where legalising US states have sought to implement social equity measures, they must first decide which individuals or communities the measures should benefit – i.e. who has been disproportionately impacted by previous repressive cannabis laws and enforcement. This is complicated by the fact that, in the US, it may be unconstitutional to define this directly by reference to an individual's race, for instance through the implementation of quotas. An attempt to implement race-based quotas was struck down by judges in Ohio in relation to medical cannabis in late 2019.⁵ Those designing social equity programmes have therefore tended towards complex definitions of '*disproportionate impact*', with a variety of qualifying criteria.

One way to identify disproportionately impacted individuals is to pinpoint those who were arrested directly as a result of previous cannabis laws. In Illinois, for example, social equity applicants include businesses with majority ownership by individuals who were previously arrested for offences now eligible for expungement, or have a close family member who is now eligible for expungement (expungement is discussed in detail in [Section 3A](#)). Businesses where 51% of full-time employees have a prior cannabis arrest also qualify for social equity measures, however, this means that a business may be owned and run by individuals who experienced no disproportionate impact from criminalisation. Further, businesses are only required to meet these criteria on the day a social equity application is submitted, so there is nothing to prevent a subsequent reduction in the proportion of staff who were disproportionately impacted.⁶ This raises important questions about how meaningful implementation of equity programme goals can be guaranteed.

Most states adopting social equity measures apply a relatively wide definition of disproportionate impact. Residence (generally for five of the past ten years) in a '*disproportionately impacted area*' is the most common qualifying requirement

⁴ Adapted and edited from: Slade, H. (2020) *Altered States: Cannabis Regulation in Canada*, Transform Drug Policy Foundation.

⁵ Borchardt, J. (2019), *Ohio medical marijuana: Minority quota for dispensary licenses struck down*, [Cincinnati.com](https://eu.cincinnati.com/story/news/2019/11/07/ohio-medical-marijuana-minority-quota-dispensary-licenses-struck-down/2521347001/) 15th December.
<https://eu.cincinnati.com/story/news/2019/11/07/ohio-medical-marijuana-minority-quota-dispensary-licenses-struck-down/2521347001/>

⁶ For a business to qualify on the basis of 51% of employees meeting qualifying criteria, there must be at least ten full-time employees (which may include the principal officer). The other classification to qualify as a social equity applicant is residency in a '*disproportionately impacted area*' (either by the 51% of employees or the 51% of ownership). See: Illinois General Assembly (2019) *House Bill 1438*, Section 1-10, Definitions, Page 14.
<http://www.ilga.gov/legislation/publicacts/101/PDF/101-0027.pdf>; Illinois Department of Agriculture (Undated) *Adult Use Cannabis Social Equity Applicant FAQ*. <https://www2.illinois.gov/sites/agr/Plants/Pages/Social-Equity-Applicant-FAQ.aspx>

for social equity measures.⁷ This is important as disproportionate impact may not necessarily mean arrest or conviction, but also, for instance, being subject to stop-and-search drug policing measures, which have a significant racial and geographical bias. It is also the case that, partly as a result of drug law implementation, relationships between law enforcement and many communities have broken down. Implementing community-oriented approaches, however, does not preclude recognition that individuals may qualify through personal impact, even if they are not from a designated community. San Francisco, for example, requires individuals to meet three of six equity conditions: area-level household income being below 80% of the average; a prior cannabis-related arrest; prior arrest of a family member in relation to cannabis; having lost housing since 1995 through eviction, foreclosure or subsidy cancellation; having attended school in the area for five years; and having lived in an area for at least 5 years where at least 17% of the households *‘had incomes at or below the federal poverty level’*.⁸

In Massachusetts, disproportionately impacted areas are determined based on research (commissioned by the Massachusetts Cannabis Control Commission), which investigated the impact of drug arrests on local communities. Impacts were ranked, and communities scored, based on indicators including: cannabis-related arrest rates, poverty metrics and unemployment rates. These scores are used to select areas qualifying for the social equity programme.⁹ In Illinois, House Bill 1438 provides detailed parameters against which low income in an area can be measured. A *‘disproportionately impacted area’* is defined as an area that has: a poverty rate of at least 20%; 75% or more children participating in the federal free lunch programme; at least 20% of households receiving assisted under the *‘Supplemental Nutrition Assistance Program’*; or an average unemployment rate more than 120% of the national average. As well as meeting at least one of these criteria, however, the area must also have *‘high rates of arrest, conviction, and incarceration’* related to cannabis.¹⁰ No further definition is given for what qualifies as *‘high rates’*, meaning

7 E.g., see guidance from Massachusetts and Illinois: Illinois Department of Commerce & Economic Opportunity (Undated) Illinois Adult-Use Cannabis and Social Equity. <https://www2.illinois.gov/dceo/Pages/CannabisEquity.aspx>; Commonwealth of Massachusetts, Cannabis Control Commission (Undated) Guidance for Identifying Areas of Disproportionate Impact.

<https://mass-cannabis-control.com/wp-content/uploads/2018/04/FINAL-DRAFT-Areas-of-Disproportionate-Impact-1.pdf>

8 San Francisco Office of Cannabis (Undated) Equity Applicant: Equity Conditions.

<https://officeofcannabis.sfgov.org/equity/applicant>

9 Gettman, J.B. (2017) The Impact of Drug and Marijuana Arrests on Local Communities. <https://mass-cannabis-control.com/wp-content/uploads/2017/12/Impact-of-Drug-and-Marijuana-Arrests-on-Local-Communities-in-Massachusetts.pdf>. See also: Commonwealth of Massachusetts, Cannabis Control Commission (Undated) Guidance for Identifying Areas of Disproportionate Impact.

10 Illinois General Assembly (2019) House Bill 1438, Section 1-10, Definitions, Page 9-10.

<http://www.ilga.gov/legislation/publicacts/101/PDF/101-0027.pdf>.

there is still some vagueness over precisely how a disproportionately impacted area is defined.

Some states do not directly rely on the historical effects of cannabis law enforcement when determining disproportionate impact. Colorado, for instance, simply requires individuals to have lived in 'low-income areas', as defined by the Office of Economic Development, for at least five of the past ten years.¹¹ Although low income areas are likely to also have been disproportionately impacted by cannabis law enforcement, the correlation is not inevitable, which is why, in comparison, Illinois requires both low income and previously high levels of arrests. The kind of research conducted by Massachusetts is a strong benchmark for understanding how communities have been impacted by prior cannabis laws. Going forward, similarly systematic approaches should be undertaken by legalising jurisdictions to most effectively support social equity measures.

Having identified the groups that vendor regulation should seek to promote market access to, the question becomes what measures can be implemented to achieve this. Various barriers are in place to enter the industry, which may be relatively easy for larger corporate entities to overcome, but for small businesses or equity applicants represent substantial hurdles. Barriers may be regulatory, financial, or technical in nature. In each case, there are different measures that regulators can implement to help reduce barriers and promote industry access. Broadly, these can be split into the following:

- **Equitable licensing policies:** a certain number of licences, or the entirety of a specific licence classification, may be designated to a particular group. In the case of smaller businesses, licence caps per applicant may serve to promote access. Licence applications may also score applicants based on diversity criteria or other status as an equity applicant

¹¹ Mitchell, T. (2019) *Colorado Reviews New Social Equity Marijuana Business Licenses*, Westworld 16th September. <https://www.westworld.com/marijuana/colorado-setting-aside-marijuana-business-licenses-for-social-equity-11483633>

- **Removing regulatory barriers:** some licensing or regulatory requirements may be more challenging for smaller businesses to comply with – for reasons related to cost, capacity or experience. These requirements may be well-intentioned, or important mechanisms to protect public health or secure other legitimate regulatory objectives, but may come at a cost in relation to achieving social equity goals. Regulators should therefore carefully assess, monitor and evaluate the impact of regulatory requirements on market access, so as to balance key aims
- **Financial assistance:** regulatory costs (primarily licence fees) can be either reduced or waived based on status as a social equity applicant, while financial support such as interest-free business loans can be provided to help with start-up costs.
- **Training and technical assistance:** schemes may be introduced to provide training and technical assistance to ensure that individuals are able to thrive in challenging new business environments. These may be aimed at those seeking to secure employment in the industry, as well as those seeking to run a business.

It is worth clarifying that these measures may equally be applied, and are equally important at the production level of the industry. There are potentially greater technical and regulatory barriers in producing and preparing cannabis products to a certified regulatory standard, so different forms of support are required.

A greater challenge, perhaps, is transposing this framework from a private licensed framework (as exists in US states) to a model where elements of the market are solely in state control. In a Borland model (discussed in [Section 1](#)) with greater government control, similar to that operated in Uruguay, access for private actors is permitted at the production and retail level, meaning that social equity schemes as developed in the US could theoretically be

implemented to some degree. However, in Canadian provinces like Nova Scotia and Quebec, where only government-run retail stores are permitted, there is no space for private businesses acting as vendors – thus precluding retail market participation for small businesses or equity applicants. Of course, equity applicants can still seek employment in these government-run cannabis stores, including as managers, and equitable hiring policies could be implemented to ensure the representation of disproportionately impacted communities. But much of the power behind social equity programmes in the US has been the opportunity to *own* and profit from a cannabis business – which is, clearly, not possible within these regulatory models. In provinces like British Columbia, where both private and government stores are permitted, there is space for a mixing of both models. But more thinking is required on how social equity aims can be facilitated where the state is the sole retailer. A ‘*franchise*’-type model is a possibility, where governments retain sole ownership of the stores, including control over capital and location, but contract out day-to-day running of a number of stores to social equity applicants. Such a model may even reduce many of the barriers currently faced by social equity applicants associated with setting up a business (discussed [below](#)).

Equitable licensing policies

Regulators determine the amount of licences available, as well as the criteria against which licence applications are assessed.¹² These are important levers to influence the structure of the market and promote a diverse market space. For example, in Nevada, business diversity is ranked and scored when licence applications are assessed, while in Illinois, up to a fifth of points

¹² Government of Nevada (Undated) License application form, example available: [https://tax.nv.gov/uploadedFiles/taxnv.gov/Content/FAQs/Score%20Sheet%20-%20Organizational%20Structure%20\(Identified\).pdf](https://tax.nv.gov/uploadedFiles/taxnv.gov/Content/FAQs/Score%20Sheet%20-%20Organizational%20Structure%20(Identified).pdf)

in the application-scoring system for retail licences are available for ‘*status as a social equity applicant*’.¹³ In doing so, regulators are able to level the playing field somewhat and establish equity and diversity as important considerations for licensing. However, when ‘*social equity*’ is merely a single component of assessment in a scoring system it may be outweighed by other factors. In Nevada, for example, regulators are also required to score an individual on whether they have previously run a business.¹⁴ People from disproportionately impacted areas, or indeed individuals previously convicted of cannabis offences, may be less likely to have run a business previously. An alternative approach may be awarding licences via a lottery system – meaning equity applicants will not be discriminated against on the basis of previous business experience (although equally their application prospects won’t necessarily be preferred by equity applicant status). However, this may lead to other regulatory challenges, as experienced in Ontario, where the inception of a lottery system to distribute licences hindered the ability of regulators to prioritise licences for applicants demonstrating the most credible and robust business models.¹⁵ As discussed below, there is a balance to be struck between the needs of a licensing process that, by necessity, discriminates according to certain suitability criteria, and the needs of equity goals attempting to level the playing field to support historically disadvantaged individuals or communities.

Social equity ‘*points*’ can be taken one step further, by establishing the priority review of licence applications for qualifying equity

¹³ Illinois Department of Financial and Professional Regulation (Undated) License application information. https://www.idfpr.com/FAQ/AUC/FAQ%20-%20Adult%20Use%20License%20for%20New%20dispensing%20organizations_.pdf; Illinois Department of Commerce & Economic Opportunity (Undated) Illinois Adult-Use Cannabis and Social Equity. <https://www2.illinois.gov/dceo/Pages/CannabisEquity.aspx>

¹⁴ Government of Nevada (Undated) License application form, example available: [https://tax.nv.gov/uploadedFiles/taxnvgov/Content/FAQs/Score%20Sheet%20-%20Organizational%20Structure%20\(Identified\).pdf](https://tax.nv.gov/uploadedFiles/taxnvgov/Content/FAQs/Score%20Sheet%20-%20Organizational%20Structure%20(Identified).pdf)

¹⁵ Slade, H. (2020) Capturing the market, Cannabis regulation in Canada, Transform Drug Policy Foundation and MUCD, p14. <https://transformdrugs.org/product/capturing-the-market/>

applicants, as has been established in Massachusetts.¹⁶ For its delivery licence types introduced in 2020, Massachusetts blocked out a two year period during which only equity applicants would be able to have applications considered.¹⁷ Such schemes clearly provide a powerful means to allow equity businesses to establish themselves in the market, but may also create tensions with other commercial actors. A similar scheme was implemented in the Massachusetts municipality of Cambridge, introducing a two year initial period during which it would only allow licences for ‘*economic empowerment*’ applicants. However, this was legally challenged by a non-qualifying applicant hoping to expand to non-medical sales in the municipality, effectively being told that they had to wait. While the challenge was successful at first, it was later overturned in an appeals court in April 2020.¹⁸

Social equity schemes may alternatively place the onus on businesses to facilitate diversity. The Marijuana Regulatory Agency in Michigan requires all licence applicants to submit a social equity plan that details a ‘*strategy to promote and encourage participation in the marijuana industry by people from communities that have been disproportionately impacted by marijuana prohibition and enforcement and to positively impact those communities*’.¹⁹ However, it is not yet clear how successful this requirement will be in practice. While it may improve participation in entry-level roles, it does little to facilitate wider licence applications. Concerns have been raised that privileged licence applicants may have the

¹⁶ Commonwealth of Massachusetts, Cannabis Control Commission (Undated) Guidance for Equity Provisions. <https://mass-cannabis-control.com/wp-content/uploads/2018/04/FINAL-Social-Provisions-Guidance-1PGR-1.pdf>

¹⁷ Hanson, M. (2020) Massachusetts marijuana delivery license applications on track to launch in May, reserved for economic empowerment and social equity applicants, Mass Live 7/5/20. <https://www.masslive.com/marijuana/2020/05/massachusetts-marijuana-delivery-license-applications-on-track-to-launch-in-may-reserved-for-economic-empowerment-and-social-equity-applicants.html>

¹⁸ Levy, M. (2020) Appeals court judge smacks down an injunction, good news for city's favoring of small pot sellers, Cambridge Day 24th April. <http://www.cambridgeday.com/2020/04/24/appeals-court-judge-smacks-down-an-injunction-good-news-for-citys-favoring-of-small-pot-sellers/>

¹⁹ Government of Michigan (2019) Michigan's Marijuana Regulatory Agency Releases Emergency Rules. <https://www.michigan.gov/marijuana/0,9306,7-386-89871-501189--,00.html>

resources to ‘game’ equity plan criteria and win access without any genuine commitment to the underlying goals.

While Canada has not implemented ‘social equity programmes’ in the same way as many US states, some territories have sought to protect and enhance the interests of Indigenous peoples through licensing policies.²⁰ This has generally been done through ‘protective’ powers, i.e. provisions granting Indigenous groups the right to refuse the granting of licences on their land. In Alberta, for example, retail licences may not be granted on an ‘Indian reserve’ unless band council approval has been given, or on Metis settlement land without the settlement council’s approval.²¹ In British Columbia, Indigenous nations must first recommend to the Liquor and Cannabis Regulation Branch that a cannabis retail licence be issued before the Branch can consider whether to issue such a licence in an Indigenous area. This does not mean the Branch is obliged to license a retail store on the land, but it does prevent unwanted stores being licensed.²² Similarly, in Saskatchewan, ‘Indian bands’ may legally prohibit retail stores on a reserve.²³ Ontario, in contrast, has gone one step further; Ontario legislation makes clear that Indigenous groups are able to request that retail stores are not authorised on reserves²⁴ (a protective power), however, the province also sought to facilitate Indigenous

²⁰ In this context, ‘Indigenous peoples’ is a collective name for the original peoples of North America and their descendants. The Government of Canada outlines that ‘The Canadian Constitution recognizes three groups of Aboriginal peoples: Indians (more commonly referred to as First Nations), Inuit and Métis.’ Provincial legislation uses various terminology to refer to specific groups, and in this section the terminology used in provincial legislation and regulation is retained. See: Government of Canada (Undated) Indigenous peoples and communities. <https://www.rcaanc-cirnac.gc.ca/eng/1100100013785/1529102490303>

²¹ Province of Alberta (2018) Gaming, Liquor and Cannabis Act: Gaming and Liquor Amendment Regulation, s105(2). http://www.qp.alberta.ca/documents/orders/Orders_in_Council/2018/218/2018_027.pdf

²² Province of British Columbia (Undated) Cannabis Retail Store Licence. <https://justice.gov.bc.ca/cannabislicensing/policy-document/cannabis-re-tail-licence>; British Columbia (2018). Cannabis Control and Licensing Act. s33(1). <http://www.bclaws.ca/civix/document/id/complete/statreg/18029>

²³ Saskatchewan (2018) The Cannabis Control (Saskatchewan) Regulations, s3-16. <https://www.saskatchewan.ca/government/cannabis-in-sas-katchewan>

²⁴ Government of Ontario (2018) Cannabis Licence Act, 2018, S.O. 2018, c.12, Sched. 2, s43(1). <https://www.ontario.ca/laws/statute/18c12>.

participation in the market through positive means, by allocating 26 retail licences specifically for First Nations Reserves at a time when only a limited number of retail licences were available.²⁵

Limiting the number of licences available per applicant can also be an important way to restrict larger businesses from dominating the market and mitigate risks of corporate capture (conversely, limiting the number of licences available overall may hamper social equity efforts).²⁶ In Alberta, Canada, for example, individuals or ‘groups of persons’ are not allowed to hold more than 15% of total licences at any one time.²⁷ In Washington State and Massachusetts in the US, retailers are only allowed up to three licences.²⁸ Inevitably, businesses may seek to circumvent such rules by purchasing other companies or relying on subsidiaries to submit licence applications, requiring careful attention from regulators to monitor and police financial interests of larger corporate entities. But restricting the number of licences per applicant is an important base-level policy to ensure a more diverse market space.

Removing regulatory barriers

Equitable licensing policies will not, however, facilitate the access of smaller businesses by themselves; if financial or technical barriers are still in place, or other regulatory requirements are still too high, then they will still struggle to gain a foothold. Promoting market

²⁵ Alcohol and Gaming Commission of Ontario (2019) Stores on First Nations Reserves. <https://www.agco.ca/cannabis/stores-first-nations-reserves>

²⁶ Joint Legislative Audit and Review Commission (2020) Report to the Governor and the General Assembly of Virginia: Key Considerations for Marijuana Legalization, Commonwealth of Virginia, p75. <http://jlarc.virginia.gov/pdfs/reports/Rpt542.pdf>

²⁷ Province of Alberta (2018) Gaming, Liquor and Cannabis Act: Gaming and Liquor Amendment Regulation, s106. http://www.qp.alberta.ca/documents/orders/Orders_in_Council/2018/218/2018_027.pdf

²⁸ Washington State Liquor and Cannabis Board (Undated) Frequently Asked Questions about the Marijuana Rules. <https://lcb.wa.gov/mj2015/faqs-rules>; Commonwealth of Massachusetts, Cannabis Control Commission (Undated) Guidance on Types of Marijuana Establishment Licenses. <https://mass-cannabis-control.com/wp-content/uploads/2018/04/Guidance-License-Types.pdf>

access therefore requires utilising the full range of powers available to regulators. As outlined in the first chapter of this book, promoting social justice and equity should be a key aim of cannabis policy. There may be occasions, however, where legitimate regulatory measures aimed at promoting other key aims can directly or indirectly impact on equity goals. Balancing these key aims is essential, which requires proactively analysing, monitoring and evaluating policy impacts against robust indicators for each key aim. Such a holistic approach to performance-measuring acknowledges that goals will sometimes be in conflict, requiring trade offs and compromises between different stakeholders.

Other potential regulatory barriers may include: requiring individuals to obtain property space before a licence can be awarded; requiring applicants to demonstrate a minimum threshold of financial assets; and requiring applicants to have detailed technical operations and security plans.²⁹ While arguably justifiable (particularly during the cautious initial rollout of a new market, when regulators are negotiating uncharted new territory under intense political and public scrutiny), many of these regulatory barriers will be much easier for larger, established businesses to overcome – meaning these requirements are indirectly discriminatory against smaller market actors and new market entrants. Requirements for licence applicants to have specified previous retail experience are an example of how such discriminatory practices can become formalised into regulatory structures. Consideration should be given to less stringent requirements for smaller businesses, or providing for such barriers to be more easily negotiated where other regulatory objectives are not significantly compromised.

29 Joint Legislative Audit and Review Commission (2020) Report to the Governor and the General Assembly of Virginia: Key Considerations for Marijuana Legalization, Commonwealth of Virginia, p76. <http://jlarc.virginia.gov/pdfs/reports/Rpt542.pdf>

Again, this is all a balancing exercise for individual jurisdictions based on the information available to them. There is no right or wrong answer, nor is there an exhaustive list of potentially discriminatory regulatory requirements; *all* requirements may indirectly discriminate against smaller businesses to some extent, and the solution clearly cannot be enforcing no regulatory requirements whatsoever. Instead, this should be seen as an important aspect of performance-measuring, ensuring that policies are measured against *all* key aims, not simply the aim they purport to assist with.

Financial assistance

Financial barriers represent a significant challenge to setting up a business. These include practical costs, like obtaining inventory, securing real estate, hiring staff and implementing operations procedures, but they may also stem from regulatory costs associated with applying for or renewing a licence. If no steps are taken to help small businesses, including equity applicants, then the retail market is likely to become saturated with larger businesses with the financial backing to absorb these initial costs.

Regulatory bodies are able to reduce these barriers through different means of support. In relation to regulatory costs, this may be achieved by waiving some or all of the costs of applying for a licence for certain applicants. Illinois, for example, provides for licence fee reductions of up to 50% in disproportionately impacted areas,³⁰ while the Marijuana Regulatory Agency in Michigan has

30 Hansen, C (2019) *Illinois Lawmakers Approve Marijuana Legalization*, US News 31st May. <https://www.usnews.com/news/national-news/articles/2019-05-31/illinois-lawmakers-approve-marijuana-legalization>; Illinois Department of Commerce & Economic Opportunity (Undated) *Illinois Adult-Use Cannabis and Social Equity*. <https://www2.illinois.gov/dceo/Pages/CannabisEquity.aspx>; Government of Illinois (2019) *Adult Use Cannabis Summary*. https://www2.illinois.gov/ISNews/20242-Summary_of_HB_1438_The_Cannabis_Regulation_and_Tax_Act.pdf; Government of Illinois (2019) *House Bill 1438 Illinois Cannabis Regulation and Tax Act*, Article 7: Social Equity in the Cannabis Industry. <http://illinoiscannabisinfo.com/hb1438-article7/>

reduced licence fees by up to 60% in such areas.³¹ Action has also been taken at a municipal level: Portland, Oregon has implemented a scheme which allows small businesses to receive fee reductions when either 25% of their owners or 20% of their staff have a prior cannabis conviction.³² Full fee waivers are available in some other municipalities across the US.³³

The high start-up costs for new businesses are often consolidated through business loans. However, in the US, this has been complicated by the fact that, as cannabis remains illegal at a federal level, businesses are often prohibited from accessing bank loans. This absence of banking services has been reported as *'effectively blocking nearly everyone but the wealthy and well-connected from getting into and benefiting from what is the fastest-growing industry in the country'*.³⁴ Illinois has sought to mitigate this through a low-interest loan scheme in disproportionately impacted areas, with \$30 million of funding,³⁵ though similar measures are not available in most other states. While the absence of banking services may be a problem unique to legal cannabis jurisdictions in the US, it nonetheless highlights the importance of access to capital to front initial business costs. Smaller businesses are more likely to rely on business loans to overcome initial financial barriers,

31 Government of Michigan, Department of Licensing and Regulatory Affairs (2019) Michigan's Marijuana Regulatory Agency Announces Social Equity Program Expansion. https://www.michigan.gov/lara/0,4601,7-154-89334_79571_79784-508912--,00.html.

32 The City of Portland, Oregon (2018) Social Equity Program. <https://www.portlandoregon.gov/civic/article/698417>

33 See, e.g., Government of Long Beach (Undated) Open an Equity Business. <http://www.longbeach.gov/citymanager/cannabis-information/cannabis-social-equity-program/open-an-equity-business/>

34 Krane, K. (2018) Lack Of Cannabis Banking Hurts Average Small Business Owners, While Wealthy Entrepreneurs Flourish, Forbes 13th June. <https://www.forbes.com/sites/kriskrane/2018/06/13/marijuana-banking-constraints-disproportionately-harm-small-businesses/#675f41ce54ed>

35 Hansen, C (2019) Illinois Lawmakers Approve Marijuana Legalization, US News 31st May. <https://www.usnews.com/news/national-news/articles/2019-05-31/illinois-lawmakers-approve-marijuana-legalization>; Illinois Department of Commerce & Economic Opportunity (Undated) Illinois Adult-Use Cannabis and Social Equity. <https://www2.illinois.gov/dceo/Pages/CannabisEquity.aspx>; Illinois Government (2019) Adult Use Cannabis Summary. https://www2.illinois.gov/ISNews/20242-Summary_of_HB_1438_The_Cannabis_Regulation_and_Tax_Act.pdf; Government of Illinois (2019) House Bill 1438 Illinois Cannabis Regulation and Tax Act, Article 7: Social Equity in the Cannabis Industry. <http://illinoiscannabisinfo.com/hb1438-article7/>

and the availability of low-interest schemes helps ensure they are able to continue operating in the longer term.

Training and technical assistance

Given vendor regulation is seeking to promote access to groups who potentially have not had the opportunity to run a business before, the technical, management, and financial expertise required to operate effectively can present a significant barrier to market entry. Providing technical support and training can go some way to addressing these challenges. In Massachusetts, the Cannabis Control Commission is *‘charged by state law...with ensuring the meaningful participation in the cannabis industry of communities disproportionately affected by the enforcement of previous cannabis laws’*, as well as *‘small businesses, and companies led by people of color, women, veterans, and farmers’*.³⁶ It operates a broad social equity programme targeted at all levels of the industry – those seeking to run a business themselves; those looking for managerial work; as well as entry-level positions. Eligibility for the Massachusetts programme requires a past drug conviction (of any kind), residence in a disproportionately impacted area for five of the past ten years or being the spouse or child of someone with a past conviction. The programme provides training, technical assistance and mentoring, aiming to reduce barriers to entry³⁷ and is a leading example of how to provide a comprehensive and meaningful approach to promoting social equity in the cannabis market.

³⁶ Commonwealth of Massachusetts, Cannabis Control Commission (Undated) Guidance on Equitable Cannabis Policies for Municipalities. <https://mass-cannabis-control.com/wp-content/uploads/2018/11/Municipal-Equity-Guidance-August-22-1.pdf>; Commonwealth of Massachusetts, Cannabis Control Commission (Undated) Equity Programs. <https://mass-cannabis-control.com/equityprograms-2/>

³⁷ See above footnote

Los Angeles City has also developed a programme that offers priority application processing and business support to disproportionately impacted individuals.³⁸ However, it has been heavily criticised as leaving equity candidates on an ‘indefinite waiting list’, while *‘fewer than 20 of the 100 businesses on track to receive a license through the program appear to be black-owned, according to estimates from advocates’*.³⁹ This highlights that even the most well-intentioned schemes need to be effectively implemented, or risk providing little assistance at all. San Francisco has implemented a unique scheme where ‘Equity Incubators’ provide equity applicants with rent-free space or technical assistance.⁴⁰ However, the programme has also been heavily criticised as equity clients have had to wait on average 18–24 months to access the programme, during which time they may have to pay expensive commercial rents.⁴¹

Requirements on vendors

The requirements that will need to be met by cannabis vendors will, for the most part, mirror those that are currently applied to vendors of alcohol or tobacco, although lessons from the successes and shortcomings of these regulations should allow a more robust and effective system to be established from the outset. So the main aims of regulatory requirements on vendors should be:

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- 38 City of Los Angeles Department of Cannabis Regulation (2019) Social Equity Program. <https://cannabis.lacity.org/licensing/social-equity-program-2>
 - 39 Levin, S. (2020) ‘This was supposed to be reparations’: Why is LA’s cannabis industry devastating black entrepreneurs? The Guardian 3rd February. <https://www.theguardian.com/us-news/2020/feb/03/this-was-supposed-to-be-reparations-why-is-las-cannabis-industry-devastating-black-entrepreneurs>
 - 40 Lekhtman, A. (2019) Finally: A Black-Owned, Equity-Program Cannabis Dispensary in San Francisco, Filter 12th December. <https://filtermag.org/san-francisco-black-equity-marijuana/>
 - 41 Ruskin, Z. (2020) SF Cannabis Report Spells Trouble for Retail Hopefuls, SF Weekly 22nd January. <https://www.sfweekly.com/news/chemtales/sf-cannabis-report-spells-trouble-for-retail-hopefuls/>

- To promote health and wellbeing, and minimise harms to consumers and the wider public
- To protect children and young people from cannabis-related risks
- To prevent crime, antisocial behaviour and public disorder

The specific measures that must be taken in order to achieve these aims will depend on the type of outlet in which the vendor is operating (see [Section 2I, Outlets](#)). Public disorder problems, for example, will be more common in venues that permit on-site consumption rather than retail-only establishments, and will therefore require additional health and safety issues to be taken into account. Nevertheless, what follows is a discussion of the main regulatory challenges for cannabis vending and general proposals for how to address them.

The following section on purchasers and end-users ([Section 2H](#)) covers the specifics of some of the regulations vendors will be required to adhere to and enforce.

Socially responsible service training

Vendors are well placed to help minimise any negative social or health impacts resulting from cannabis consumption, and should be required to do so.

The primary responsibility of vendors of cannabis should be to ensure regulatory regimes are adhered to, by, for example, enforcing age restrictions or refusing sales to those who are intoxicated. Vendors should also act as a source of accurate, credible information and advice to customers on a range of issues, such as safer consumption methods, the risks of driving under the influence of cannabis, and where individuals can seek help or advice if they, or the vendor, have concerns about their cannabis

use. Information provided by vendors should complement that provided by other sources, such as packaging and point-of-sale displays.

Training programmes that educate both servers and management about the importance of responsible vending, and how it can be achieved, should therefore form a central element of any regulatory framework governing those who sell cannabis. Such programmes can be voluntary, but consistency of implementation and the adherence to quality standards would always be better served by making these a licensing condition. Evidence also shows that while server training by itself is a necessary element of responsible retail, it is rarely sufficient. Rather, it needs to be embedded in wider multi-stakeholder programmes that link outlets, health, policing, trading standards and local communities in effective partnerships.⁴² In many countries we would suggest such multi-component approaches be adopted as standard and made a mandatory condition of vendor licences.

Responsible beverage service (RBS) training provides one template for how cannabis vendors can be encouraged to serve responsibly. Effective RBS training seeks to:

- Put in place appropriate attitudes towards alcohol consumption by teaching vendors about its social and physical effects
- Teach techniques for checking identification, recognising signs of over consumption, and refusing service if necessary
- Make management and service staff aware of the penalties for violations of the law

⁴² Public Health England (2016) The public health burden of alcohol and the effectiveness and cost-effectiveness of alcohol control policies: an evidence review, pp143-9.
<https://www.gov.uk/government/publications/the-public-health-burden-of-alcohol-evidence-review>.

Equivalent training requirements for employees of outlets for the sale of cannabis should do the same. Colorado, for example, has made provisions for such training, as well as awarding a '*responsible vendor designation*', valid for two years from the date of issuance, to cannabis retailers that satisfactorily complete a training programme approved by the state licensing authority.⁴³ Similar programmes have since opened in other US states, including Massachusetts where all owners, managers and employees involved in the retail of cannabis are required to attend training courses within 90 days of hire. Staff are required to complete at least eight hours of the state's general training, of which two hours must be afforded to responsible vendor training. Those delivering responsible vendor training in Massachusetts are required to cover the following areas:

- The effects of cannabis on the human body;
- Preventing diversion and sales to minors;
- Seed-to-sale tracking compliance; and
- Operating in accordance with state laws, regulations, local rules, and other topics⁴⁴

More rigorous training for vendors operating in venues that permit on-site consumption will also be appropriate, as they are more likely to encounter intoxicated customers who may require monitoring or care.

Training that teaches a working knowledge of the effects of different cannabis products, and methods of use, should also be required, along with training in basic first aid and how to deal with people who have overindulged and are consequently in distress or

⁴³ Colorado Senate Bill 13-283, p.2. www.colorado.gov/ccjdir/Resources/Resources/Leg/EnablingBills/SB13-283.pdf.

⁴⁴ See, e.g., Commonwealth of Massachusetts, Cannabis Control Commission (2019) *Cannabis Control Commission To Open State Certification Process for Responsible Vendor Trainers* July 17. <https://mass-cannabis-control.com/cannabis-control-commission-to-open-state-certification-process-for-responsible-vendor-trainers-july-17-2/>

at risk. Such training has typically been seen as impractical for pub or bar staff, who are often low-paid and working on a temporary or informal basis. This reality should not, however, prevent at least basic training being mandated for cannabis retail staff. Indeed, the inception of a new industry allows new norms to be established.

While determining the content of cannabis vendor training programmes is relatively straightforward, ensuring that vendors go on to implement the requirements of such programmes presents more of a challenge. They are also unlikely, by themselves, to address all challenges around safe or responsible provision. This is why a partnership approach is vital: cannabis supply exists in the wider community context, and the needs and expertise of multiple stakeholders is needed to ensure appropriate retail practice.

Online vendors

Many people, for health or geographical reasons, will not be able to easily access traditional face-to-face vendors. For this reason, online sales are integral to provide an access point to the legal market. Failing to provide access to online sales would lead to some consumers favouring unlicensed suppliers, undermining the goals of regulation.

It is preferable to bring online markets within a regulated framework from the outset, to prevent unregulated informal online markets filling the void – as indeed they already are in some countries. In fact, as discussed below, online markets may be more important at the outset, to cater for the fact that the physical retail market may still be in development. We suggest that, as far as possible, any such online retailing should seek to maintain the key benefits of face-to-face vending outlined above. Clearly, there are additional challenges to facilitating these aims given there is

no face-to-face contact, meaning other methods may need to be employed in relation to enforcing age access controls and providing harm reduction information, for instance. Key elements of online vendor regulation could include:

- Appropriate methods for age verification at the point of purchase, as well as requiring delivery to a named (and identified – with photo identification/signature) purchaser
- Providing risk and harm-reduction information – with key messages supported by easily accessible, more detailed information on the purchase page, with a requirement that customers confirm they are aware of it
- Providing customers the opportunity to talk to a trained individual and trained health advisors about cannabis or their cannabis use, which may be facilitated by a live chat function
- Online vendors should, as a starting point, be subject to the same strict licensing requirements as face-to-face vendors (although inevitably some variations will be necessary to address specific challenges outlined here)
- Individual online businesses could be subject to licensing limits based on total volume of sales, or sales within specified geographical areas. Alternatively, government-run online stores are an option, (and the norm across much of Canada), allowing for more direct control to facilitate the overarching aims of regulation

Evidence from Canada suggests that online sales are particularly important at the initial rollout phase of legal markets, when many physical stores may not yet be open. However, as time goes on, it seems clear that the majority of consumers prefer to purchase

cannabis through bricks-and-mortar vendors. In October 2018, immediately after cannabis was legally regulated, 43.4% of sales were online – however, by September the following year this was down to less than 6%. A major reason for this is that very few offline stores were licensed in certain provinces in October 2018, severely limiting the opportunity for legal purchase.

h Purchasers

Challenges

- Determining the optimum age threshold for access to a legal cannabis supply
- Putting in place effective systems for enforcing age access controls
- Preventing bulk purchases of cannabis intended for re-sale on the illegal market or to minors
- Determining appropriate public locations where cannabis can be consumed

Analysis

- Age limits on access to legal cannabis are important, and alcohol and tobacco controls demonstrate they can be effective, if imperfect. If age thresholds are set too high then illegal market supply may be incentivised; if they are set too low then use may rise among vulnerable populations
- Existing age limits for tobacco and alcohol should help guide decisions on where to set thresholds for cannabis. If age limits are higher for cannabis, alcohol purchase may be incentivised and vice versa
- Enforcement of age limits is a key factor in their effectiveness
- Penalties imposed on vendors for underage sales should be proportionate. Markedly harsher penalties for underage cannabis sales compared to those for alcohol or tobacco are not legally consistent or proportionate
- Any sales limits imposed on purchasers will need to be set high enough to avoid encouraging additional purchases from the illegal market, but low enough to restrict bulk buying for secondary sales

- Limits on sales are potentially useful in political terms, demonstrating that regulation has been designed with the aim of promoting responsible levels of cannabis consumption
- While purchaser licensing systems may be politically useful, they are likely to be treated with suspicion, as many people will not wish to have evidence of their cannabis use recorded in a central database
- Experience from alcohol and, in particular, tobacco regulation suggests that considered restrictions on where cannabis can be consumed will be helpful in promoting socially responsible use, although restrictions should be proportionate and justified. Public consumption laws for cannabis have already tended to be more restrictive than those for tobacco

Recommendations

- While an essential component of any regulatory system, age restrictions on cannabis sales can only be part of the response to underage use and should therefore be complemented by evidence-based prevention and harm reduction programmes
- Given that age restrictions on alcohol and tobacco sales have historically been poorly enforced, the same restrictions on cannabis sales should be supported by a more stringent system for monitoring vendor compliance. In line with this approach, age restrictions on alcohol and tobacco should also be more proactively enforced
- Penalties for underage sales of cannabis should be proportionate, and guided by those currently in place for such sales of alcohol and tobacco
- Sales limits should be in place at the outset but could be relaxed or removed once legal cannabis markets expand and the incentive to bulk-buy for re-sale in illegal markets diminishes
- Controls over permitted locations for smoking cannabis should mirror those that currently exist for public tobacco smoking in

many jurisdictions. The same principle should apply for vaping cannabis, in relation to existing nicotine vaping laws, with possible exceptions for vaping-only consumption venues

Age restrictions on sales

Preventing access to cannabis by non-adults should be a key element of any regulatory model for cannabis. Any rights of access to psychoactive drugs and freedom of choice over drug-taking decisions should only be granted to consenting adults. This is partly because of the more general concerns regarding child vs. adult rights and responsibilities. More importantly, the specific short- and long-term health risks associated with cannabis use are significantly higher for children: the younger the person using cannabis, the greater the risks. This combination of legal principle and public health management legitimises a strict age control policy. In practical terms, stringent restrictions on young people's access to drugs, while inevitably imperfect, are more feasible and easier to police than population-wide prohibitions. Generally speaking, children are subject to a range of social and state controls that adults are not – leading to an expectation of certain forms of restriction. More specifically, drug restrictions for minors commands the near universal adult support that population-wide prohibitions conspicuously do not.

Under prohibition drug markets have no age thresholds, and it can be easier for young people to access illegal substances than legally regulated ones. One study found that, in US states where non-medical cannabis has been legally regulated, there was an associated 8% decrease in the likelihood of cannabis use (and 9% of frequent cannabis use) among young people. The authors observed that their findings were *'consistent with ... the argument that it is more difficult for teenagers to obtain marijuana as drug*

dealers are replaced by licensed dispensaries that require proof of age.¹ Evidence from Canada cautiously suggested that the number of 15-17 year olds consuming cannabis one year after legalisation actually *fell*.² Evidence among schoolchildren similarly suggests no great rise in consumption in Washington or Colorado associated with legalisation.³ This is not to say that regulation *will* lead to reductions in use among young people; but rather that fears of great rises in use are overstated, and in fact controls exist within regulatory models that can reduce access to young people.

There is an important debate around what age constitutes adulthood and/or an acceptable age-access threshold. Few people would argue that children should have free access to intoxicants. However, there is live debate on where, and how, age thresholds are set. For alcohol, this generally ranges between 16 and 21 depending on context (though in the UK the minimum age for consuming alcohol – as distinct from purchase – is just five). It also varies in places that have legalised non-medical cannabis, from 18/19 (Uruguay and most Canadian provinces), to 21 (in US states and Quebec, Canada). These decisions should be informed by objective risk assessments, contextualised within local social norms and political cultures, and evaluated by individual states or local licensing authorities, and balanced in accordance with their own priorities – a major one of which must be protecting health. As with all areas of regulatory policy, there needs to be some flexibility allowed in response to changing circumstances or emerging evidence.

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- 1 Anderson, D.M., Hansen, B., Rees, D.I. and Sabia, J.J. (2019) Association of Marijuana Laws with Teen Marijuana Use, *JAMA Pediatrics*. jamanetwork.com/journals/jamapediatrics/fullarticle/2737637
 - 2 Rotermann, M. (2020) *What has changed since cannabis was legalized?*, Statistics Canada. <https://www150.statcan.gc.ca/n1/pub/82-003-x/2020002/arti-cle/00002-eng.htm>
 - 3 For discussion of studies, see: Mosher, C. and Akins, S., *Recreational marijuana legalization in Washington State – benefits and harms*, in Decorte, T., Lenton, S. and Wilkins, C. (Eds) (2020) *Legalizing Cannabis: Experiences, Lessons and Scenarios*. Routledge.

Inappropriate, or unworkable, age access prohibitions can create unintended consequences, and undermine, rather than augment, social controls and responsible norms. Making the minimum age for cannabis purchase higher than for alcohol can, for example, preference alcohol for the intervening age period. In the US, the age threshold of 21 for cannabis is consistent with alcohol. In Canada, provinces were allowed to set a higher threshold than the federal minimum age of 18. A number of provinces chose 19 to match their provincial alcohol rules. However, Quebec (where alcohol can be bought at 18) raised the cannabis access age to 21 – potentially preferencing alcohol use for 18-21 year olds or pushing young adults who use cannabis towards unregulated supply. In Uruguay the age threshold has been set at 18, the same as it is in the Netherlands' cannabis coffeeshops. An age threshold at or near 18 would seem to be realistic starting point (the age below which the UN Convention on the Rights of the Child defines childhood), although this decision inevitably needs to be considered in the local cultural context.

While higher age limits may, if followed, delay first use (and thereby reduce longer-term harm) they can also encourage more risky behaviours. In the US, the Amethyst Initiative, supported by 136 chancellors and presidents of US universities and colleges, has argued that the alcohol age threshold of 21 has created *'a culture of dangerous, clandestine "binge-drinking" often conducted off-campus'*. Furthermore, *'by choosing to use fake IDs, students make ethical compromises that erode respect for the law.'*⁴

⁴ Amethyst Initiative (Undated) Statement: It's time to rethink the drinking age. Archived at: <http://web-old.archive.org/web/20200516125727/http://theamethystinitiative.org/statement/>

Preventing underage sales

Promisingly, age-restrictions for cannabis purchase in the US and Canada have shown high levels of compliance.⁵ However, within the goal of ensuring sales to minors are kept to an absolute minimum, sanctions should be proportionate. Some areas that have legalised cannabis have also introduced disproportionately harsh sentencing provision for supply of cannabis to minors. In Canada, for example, and the draft legislation proposed (and narrowly rejected by referendum) in New Zealand, maximum sentences for supply to children are dramatically higher than the equivalent sanctions for alcohol or tobacco.⁶

In order to be effective, age limits must be properly enforced and understood by vendors. Penalties for underage cannabis sales should be proportionate, and guided by existing penalties in place for underage alcohol and tobacco sales. If the existing penalties for alcohol and tobacco are inadequate, or too strict, then it is likely that penalties in each of these areas may need to be amended to ensure a greater degree of legal consistency; markedly harsher penalties for underage cannabis compared to underage tobacco or alcohol sales would never be justified. Penalties can account for the age of the child sold to, and can range from fines to licence suspension or revocation at the more serious end. Similarly, secondary sales of cannabis to young people should be subject to proportionate sanctions. Compliance with age controls is usually checked using test purchasing, though this is both costly and time-consuming. However, the level of reported compliance will give a useful indication of whether more enforcement is required. Early

⁵ Buller, D.B., Woodall, W.G and Starling, R. (2016) *Pseudo-Underage Assessment of Compliance With Identification Regulations at Retail Marijuana Outlets in Colorado*, J Stud Alcohol Drugs 77.6. www.ncbi.nlm.nih.gov/pmc/articles/PMC5088169/

⁶ Government of Canada, Department of Justice (2019) Cannabis Legalization and Regulation. www.justice.gc.ca/eng/cj-jp/cannabis/; New Zealand Government (2019) Cannabis Legalisation and Control Bill: Draft for Consultation.

evidence from the US suggests that vendor compliance with age access controls is actually very high; a study in Washington and Colorado found that an underage pseudo-buyer was asked for identification on all occasions, and 73.6% of the time upon entrance to the store.⁷

Training for vendors should include information on acceptable forms of identification and how to ask for it in a non-confrontational manner. In order to encourage vendors to comply with requirements, voluntary schemes such as the UK's '*Challenge 25*' can be developed to allow staff a greater margin of error when challenging customers for proof of age. Under the scheme, staff are encouraged to request ID from anyone who appears to be under the age of 25, even though the age restriction on the purchase of alcohol and tobacco is 18. Such a scheme has been adopted for cannabis sales in Alberta, Canada, where legislation requires vendors at licensed outlets to ask anybody who looks 25 or under for identification prior to purchase.⁸ Posters and labels alerting customers that such a policy is in place, or at least that ID will be requested, are displayed in outlets to reduce the likelihood of a hostile response when an individual is asked to show proof of age.

To remind vendors of the need to perform age checks, most modern electronic tills can be programmed to display an on-screen prompt when age-restricted products are scanned at the checkout. In outlets with the requisite technology, sales of cannabis could trigger such prompts, which would ask whether an ID has been checked and allow staff to select a reason why a sale is accepted or refused from a list of options.

⁷ Buller, D. et al (2019) *Compliance With Personal ID Regulations by Recreational Marijuana Stores in Two U.S. States*, J Stud Alcohol Drugs 80.6, pp679-686. <https://pubmed.ncbi.nlm.nih.gov/31829920/>

⁸ The Legislative Assembly of Alberta (2017) Bill 26: An Act to Control and Regulate Cannabis, s90.03(1). https://docs.assembly.ab.ca/LADDAR_files/docs/bills/bill/legislature_29/session_3/20170302_bill-026.pdf

The limitations of age controls

Age controls are inevitably imperfect, and can only be part of the solution in reducing drug-related harms to young people. They are able to limit availability to young people when properly implemented, but not to eliminate it. Effective regulation and access controls must be supported by concerted prevention efforts. These should include evidence-based, targeted drug education programmes that balance the need to encourage healthy lifestyles, including abstinence, while not ignoring the need for risk reduction and, perhaps more importantly, investment in social capital. Young people, particularly those most at risk in marginal or vulnerable populations, should be provided with meaningful alternatives to drug use, for instance through increased investment in youth clubs and activities.

While steps to restrict access and reduce drug use among young people are important, it is also essential to recognise that some young people will still access and take drugs – as is the case with tobacco and alcohol. It is vital that they should be able to access appropriate treatment and harm reduction programmes without fear.

How to deal with minors who are found in possession, found attempting to procure, or more seriously, who supply cannabis to other minors also requires consideration. Guidelines will need to be clearly defined between law enforcers, prosecutors, social services and other relevant authorities. Again, these should be guided by how comparable offences involving alcohol and tobacco are dealt with, while ensuring that each of these are proportionate, even if this means altering the level of interventions currently in place.

Rationing sales

Imposing limits on the amount any individual can buy or possess has been a common element in cannabis regulation to date. In the Netherlands, an individual can only buy 5 grams from any outlet at one time (reduced from an earlier limit of 30 grams), although in theory there is nothing stopping them making multiple purchases from different establishments. In Uruguay, purchasers are limited to 40 grams per month, controlled via a registration scheme (see below). In Canada, purchase, public possession, and sharing limits are all set at 30 grams.

In the US, purchase limits for herbal cannabis are broadly similar: mostly 1 ounce (around 28.5 grams), except for Maine and Michigan, where it is 2.5 ounces. In Maine, this limit expressly applies *‘at any one time, or within one day’*, whereas in Michigan, the limit applies to *‘a single transaction’*.⁹ The term *‘a single transaction’* has caused some difficulty with regards to enforcing purchase limits in the US. In Colorado, the owner of one business faced criminal charges for facilitating *‘looping’* (customers buying the maximum amount of cannabis, then simply returning later to purchase more).¹⁰ Some states have been clearer in their regulations: in Oregon the limit applies *‘at any one time or within one day’* while California’s regulations expressly state *‘in a single day’*.¹¹ However, this policy is more difficult to implement effectively without purchaser licensing (see below), or some other reliable means of tracking

⁹ State of Maine, Office of Marijuana Policy: Department of Administrative and Financial Services, *Adult Use Marijuana Program Rule 18-691 C.M.R.*, Chapter 1. s3.9.2.

Sales Limits. <https://www.maine.gov/dafs/omp/adult-use/rules-statutes/18-691-C.M.R.-ch.-1;> Michigan Marijuana Regulatory Agency (2019) Advisory Bulletin 22 October. https://www.michigan.gov/documents/lara/Daily_Purchasing_Limits_Item_Categories_in_METRC_11.16.18_-_Amended_638772.7.pdf

¹⁰ Foody, K. (2019) *Colorado Pot Owners Plead Guilty as a Result of ‘Looping’ Practice*, Claims Journal 29th January. <https://www.claimsjournal.com/news/west/2019/01/29/288944.htm>

¹¹ Oregon Liquor Control Commission (Undated) OLCC Marijuana Program: Frequently Asked Questions (all). https://www.oregon.gov/olcc/marijuana/Documents/MJ_FAQS.pdf, Page 3; Bureau of Cannabis Control California (2019) California Code of Regulations Title 16. § 5409 Daily Limits, https://bcc.ca.gov/law_regs/cannabis_order_of_adoption.pdf

individual purchases. Ultimately, such regulations may serve more to guide consumer behaviours.

The fact that many states have opted for limits of one ounce for herbal cannabis demonstrates a broad consensus on certain regulatory details, and evidence of policy mirroring. In relation to other cannabis products, practice has varied to a greater degree, which may be in part due to greater varieties in product types. States in the US have varying purchase limits for cannabis concentrates, ranging from 3.5g in Nevada to 15g in Michigan.¹²

In reality, rationing of cannabis is unlikely to significantly impact use. The purchase limits are already relatively generous, and people who seek to consume more than the limits may simply make multiple purchases, resort to secondary sales or illegal suppliers, or grow their own. Rationing is, however, likely to be more useful in preventing large-scale wholesale purchasing for illegal re-sale on secondary markets. It may also facilitate more frequent face-to-face contact with specialist vendors (depending how low the purchase limit threshold is set), thereby providing greater opportunities for consumer information. This nonetheless requires careful balancing, as being required to make more frequent purchases may discourage individuals switching from illegal suppliers.

In principle, the rationing of sales is a relatively minor imposition that may have some practical and political benefits, certainly at the outset of any regulatory system and especially if there are issues with bordering jurisdictions where cannabis prohibition is still enforced. Clearly, there is a balance to be struck in making

¹² Nevada has 3.5g (1/8 oz): State of Nevada, Department of Taxation (Undated) FAQs for Marijuana Establishments. https://tax.nv.gov/FAQs/Re-tail_Marijuana/; Michigan has 15g: Michigan Marijuana Regulatory Agency (2019) Advisory Bulletin 22 October. https://www.michigan.gov/documents/lara/Daily_Purchasing_Limits_Item_Categories_in_METRC_11.16.18_-_Amended_638772.7.pdf

sure the limits are not set so low that significant demand is unmet and unlicensed supply is encouraged, and not set so high that it facilitates problematic secondary sales.

Purchaser licences/membership schemes

A system for licensing or registering purchasers of cannabis would allow for stricter controls over availability. It would make enforcing purchase and age access limits far easier, as well as other conditions authorities may wish to impose (such as local residency). However, such a system also comes with significant drawbacks.

Uruguay's Government chose to adopt such a registration scheme for its cannabis retail model, with the aims of limiting access to Uruguayan residents over 18 and restricting the volume of individual cannabis purchases to 40 grams per month and 10 grams per week. In order to enforce this limit, those who wish to buy cannabis from authorised pharmacies are required to register with the country's dedicated regulatory authority. To register, individuals must submit their Uruguay identification card and proof of address, and register their fingerprint. At purchase, individuals are required to scan their fingerprint for proof of registration, and to confirm how much cannabis they are allowed to buy.¹³ Fingerprint scanning allows buyers to remain anonymous at the point of sale, but clearly highlights some of the privacy and data concerns surrounding purchaser licensing schemes.

The understandable concern related to purchaser licence schemes is that individuals may be wary of registering as a person who uses drugs on a centralised government-controlled database, the contents of which could in theory leak into the public domain (for

¹³ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p84.

example, to employers), or be exploited by future governments that oppose legal cannabis regulation. As well as these significant privacy and human rights concerns associated with a purchaser licence model, there are risks posed to social equity aims: how can social equity be guaranteed in regard to who is considered for a licence, who might such decisions exclude, and what might the consequences of such exclusion be? There is a real risk that already marginalised populations may find themselves excluded either directly or indirectly, or that the system provides a further means of surveillance and intrusion into private matters. We discuss the merits and drawbacks of a purchaser licence model in detail in our 2020 publication, *How to regulate stimulants: a practical guide*.¹⁴

Even if privacy concerns can be adequately addressed, if controls are perceived as too onerous, consumers are less likely to comply and purported benefits will be lost. In the case of Uruguay, mandatory registration has been linked to the establishment of a ‘grey market’ where cannabis obtained by registered consumers is shared with non-registered individuals, as well as a persisting illegal market.¹⁵ Seddon and Floodgate note that, ‘As of April 2020, there are 54,220 Uruguayan residents registered to obtain legal cannabis ... [representing] just over 1.5 per cent of the general population of Uruguay but almost a quarter of all cannabis users in Uruguay, according to estimates’.¹⁶ Over 41,000 of these registrations are through the pharmacy retail model but, even if pre-reform illegal supply has contracted, there are clearly a significant number of Uruguayans obtaining cannabis from outside of formal legal channels, albeit many from ‘grey market’ sales, or sharing via home growing and social clubs.

¹⁴ Rolles, S., Slade, H. and Nicholls, J. (2020) *How to regulate stimulants: a practical guide*, Transform Drug Policy Foundation. p84-87.

¹⁵ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p140.

¹⁶ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan p79.

Beyond the obvious privacy concerns, a purchaser licensing scheme linked to a centralised database is potentially bureaucratic and expensive. These are costs that would necessarily be passed on to consumers – or the general taxpayer. This could contribute to the exclusion of people on lower incomes (if costs are factored into any licence fee) or be politically untenable if folded into general taxation. This challenge could be mitigated by ensuring access is sufficiently low threshold (in terms of costs, time, or bureaucratic burden of application), and through proactive outreach and education. However, it seems difficult to envisage how this could support the most marginalised individuals, including the people who are homeless, or people who are displaced or with insecure residency status.

That said, it is important to consider the political context of the Uruguayan decision to adopt this approach. This was the first ever nationwide regulatory system for the production and supply of cannabis, so proceeding with caution was understandable given the international scrutiny they were under. Taking this cautious approach may also have facilitated the passage of the country's Cannabis Regulation Bill by assuaging some local political concerns. More immediately, there was political pressure from their far larger neighbouring countries, Brazil and Argentina, over concerns about cross-border leakage and '*cannabis tourism*'. It may be that, in the longer term, the model proves to be impractical and in need of modification. At the very least, the unique model adopted in Uruguay will be a useful experiment that they and other countries can learn from.

Importantly, the Uruguayan model also permits self-cultivation, and allows for the formation of cannabis social clubs, offering separate routes of legal access. This means that individuals who want access to a legal supply of cannabis but are wary of the registration scheme do at least have other options. The Spanish-style membership-based

club model will represent a more attractive system for many. Access is restricted and rationing is enforced, but details of members are held locally and securely by the club management rather than by a centralised government authority.

Another option available for jurisdictions seeking to make purchases residents-only is by requiring appropriate ID. This could help to reduce leakage to jurisdictions that have not chosen to legally regulate cannabis, and to reduce cannabis-related tourism. Such restrictions may, however, fuel illegal supply or *'grey-market'* secondary sales (see the chapter on cannabis tourism, [Section 3F](#)). Colorado initially only permitted residents to buy cannabis, but it has since dropped this restriction.

Permitted locations for use

Alcohol and tobacco licensing regimes have established clear precedents for defining and controlling permitted locations for drug consumption. A range of flexible controls exist for both, including:

- Licensed premises for consumption of alcohol
- Bans on smoking in indoor public spaces, and designated outdoor smoking areas, gardens, or smoking booths
- Zoning laws restricting alcohol use and smoking in specified public and private spaces

The functions of these restrictions differ. Smoking restrictions are usually justified on the basis of the environmental or secondary health impacts of smoke;¹⁷ public alcohol consumption is more often restricted for public order reasons, and to a lesser extent,

¹⁷ Although most public health benefits probably accrue from wider impacts on reducing levels of use.

litter issues. These restrictions are sometimes centrally, sometimes regionally, defined and driven. They are enforced to different degrees, usually through fines, and because they enjoy broad popular support, are generally well observed. Experience suggests that when effectively exercised such regulation can foster new social norms, ensuring that less onerous enforcement is needed as time passes.



No smoking cannabis in public – sign in Amsterdam, the Netherlands

The emergence of nicotine vaping has seen different regulatory responses in relation to public consumption laws, in some jurisdictions leading to treatment equivalent with smoking – though the rationale for this is not as clear in lieu of evidence in relation to health impacts of secondary vapour inhalation. The absence of smoke-related risks associated with vaping could justify a preferential treatment, with vaping potentially allowed in areas that smoking is not. There is a risk, however, that overly stringent controls on smoking could have negative impacts; banning all use of cannabis in public spaces, such as parks, for example, has the potential to lead to unnecessary and counterproductive sanctions or criminalisation. Public consumption laws, combined with ongoing federal prohibition of cannabis, have had disproportionate racial impacts in the US; federal illegality means that even in states where cannabis is legal, it cannot be consumed in public housing, where a higher number of lower income and people from marginalised communities live, while state-level laws prohibit everyone from consuming cannabis in public. Public consumption laws will also necessarily disproportionately impact people who are homeless. Zoning restrictions in outdoor spaces will need to be

carefully considered to balance what is acceptable to people who use cannabis, the wider community, and law enforcers.

Another context-specific consideration may be religious usage. In Jamaica, legislation expressly bans smoking of cannabis in public places – except for Rastafarian places of worship, and at certain events, deemed necessary in order to protect traditional practice of the Rastafarian faith.¹⁸

In the Netherlands, cannabis smoking is allowed indoors in coffee shops, while tobacco smoking is banned, a disparity created by the order in which these controls were introduced. Such a disparity is inconsistent with trends identified elsewhere, with cannabis consumption generally treated more restrictively. It is both reasonable and practical for new regulatory models to include, from the outset, restrictions on cannabis smoking that are consistent with those already in place for public tobacco smoking (though, depending on existing restrictions in place, less restrictive rules on cannabis vaping may be reasonable). Any restrictions beyond these are unlikely to be legally consistent or proportionate.

In Canada, public consumption laws are set differently across provinces and territories. As a starting point, provinces have generally sought to restrict smoking or vaping of cannabis in the same places – and in the same way – as existing tobacco legislation, as has been done in Alberta, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island.¹⁹ Beyond this, however, provinces have interpreted the public space to varying degrees of

18 See: Dangerous Drugs (Amendment) Act 2015.

https://www.japarlament.gov.jm/attachments/339_The%20Dangerous%20Drug%20bill%202015.pdf

19 The Legislative Assembly of Alberta (2017) Bill 26: An Act to Control and Regulate Cannabis, s90.28.

https://docs.assembly.ab.ca/LADDAR_files/docs/bills/bill/legislature_29/session_3/20170302_bill-026.pdf; Government of

Nova Scotia (Undated) Nova Scotia's cannabis laws. <https://novascotia.ca/cannabis/laws/>; Newfoundland

and Labrador (2018) Bill 20: An Act Respecting the Control and Sale of Cannabis, s75(1).

<https://assembly.nl.ca/HouseBusiness/Bills/ga48session3/bill1820.htm>; Prince Edward Island (2018) Cannabis Control Act,

s16. https://www.princeedwardisland.ca/sites/default/files/legislation/c-01-2-cannabis_control_act.pdf

restrictiveness. In Ontario, cannabis may be smoked or vaped on sidewalks and in parks, designated guest rooms in hotels (where the hotel allows) as well as controlled areas in care homes, hospices and supportive housing. These rules may, in turn, be restricted by municipalities.²⁰ In contrast, smoking is prohibited on sidewalks in Saskatchewan, and parks in British Columbia.²¹

In Ontario, there is a general restriction on smoking or vaping cannabis within 20m of where children gather (i.e. schools) or within 9m of a hospital entrance, a restaurant or a bar patio.²² Prohibiting consumption on (or near) school properties is a common restriction, although in Quebec it is also prohibited to possess cannabis on the grounds of schools, or universities (except student residences).²³

Some public consumption laws may prove over-restrictive in part owing to a political desire to keep cannabis use less visible. But such political desires, likely to be more acute at the outset of reform, should not override proportionality requirements when it comes to law-making; specifically, it is difficult to justify restrictions far beyond those for tobacco or nicotine vaping. Equally, the level of enforcement responses must be proportionate. Public cannabis consumption is generally considered a civil offence punishable only by a fine in US states, for example, but in Washington DC, public consumption of cannabis can result in up to 60 days of jail time.²⁴ Criminalising public consumption poses a very real risk that

²⁰ Government of Ontario (2019) Cannabis laws. <https://www.ontario.ca/page/cannabis-laws>

²¹ British Columbia (2018) Cannabis Control and Licensing Act, s63(3). <http://www.bclaws.ca/civix/document/id/complete/statreg/18029>; The Cannabis Control (Saskatchewan) Act (2018) s2-14. <https://www.saskatchewan.ca/government/cannabis-in-saskatchewan>

²² Government of Ontario (2019) Cannabis laws. <https://www.ontario.ca/page/cannabis-laws>

²³ Encadrement du Cannabis au Québec (Undated) The legislation on cannabis. <https://encadrementcannabis.gouv.qc.ca/en/loi/loi-encadrant-le-cannabis/>

²⁴ Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p75; Pardo, B., *The Uneven Repeal of Cannabis Prohibition in the United States*. In T. Decorte, S. Lenton, & C. Wilkins (Eds.) (2020), *Legalizing Cannabis: Experiences, Lessons and Scenarios*, Routledge.

law enforcement responses will disproportionately impact the same marginalised communities who carried the burden of wider criminalisation under prohibition.

i Outlets

Challenges

- Creating safe, controlled environments in which people can purchase and consume cannabis
- Establishing a level of availability via outlets that meets demand and reduces illegal market supply, while at the same time preventing over-availability and potential increases in use
- Preventing outlets from promoting consumption through advertising, signage or product displays

Analysis

- Evidence from alcohol and tobacco retail clearly shows how controls on the location, density, appearance and opening hours of outlets can impact on levels of consumption and using behaviours
- Evidence from cannabis coffee shops in the Netherlands, and early evidence elsewhere, should allay fears that the presence of commercial cannabis outlets will generate public disorder or lead to irresponsible consumption
- Licensing authorities can control the location of outlets, to prevent oversaturation in certain areas and ensure access in others

Recommendations

- The appearance of retail-only outlets should be functional rather than promotional. Outlets that permit on-site consumption should be allowed more scope to establish themselves as enjoyable destination venues where cannabis can be used, even if external appearance and point-of-sale displays are still controlled
- While potentially overly cautious, preventing the establishment of cannabis outlets near locations of public concern, such as

schools, may be politically useful to demonstrate that any new regulatory framework is being carefully and responsibly implemented

- Outlets should be limited to only selling cannabis products (specifically, no other drugs¹) and should enforce age restrictions on entry
- Licensing and responsibility for regulatory oversight should sit with equivalent agencies and tiers of government to those that currently deal with alcohol and tobacco outlets

Outlets can be retail-only, or for retail and on-site consumption, such as the Netherlands' coffeeshops (which also allow purchase for takeaway). These two types of outlets have common and distinct regulatory challenges, which are explored below. A third option is to have a home delivery model that does not require any outlets.

The decision as to which, or which combination, of these to opt for when developing a new regulatory model will depend on the local cultural and political context. A cautious starting point would be to opt for strictly regulated retail-only outlets with online delivery options separately available, exploring the options for retail and consumption venues at a later stage. An online delivery model does mean that consumers are not in direct contact with a vendor, but is a necessary option to ensure that consumers in more remote areas, or with health issues, retain legal market access.

¹ Caffeine may be naturally occurring in some ingredients used in edible products. This can specifically be catered for, as it is in the Canadian Cannabis Regulations, s102.2.

Location and outlet density

The concentration of legal cannabis outlets within a geographical area, whether retail-only sites or venues combining retail and consumption, can be regulated using local licensing authorities and zoning laws. Evidence on alcohol outlet density shows that a greater concentration of outlets can be associated with increased alcohol use, misuse and related harms.^{2,3} In a new regulatory regime, licensing authorities should seek to carefully control the location of cannabis outlets to prevent oversaturation, with the intention of positively influencing and moderating patterns of use.

Restrictions on outlet density would aim to help prevent over-availability, rather than achieve under-availability or zero local availability, which would potentially incentivise illegal markets to meet demand. Washington's first set of regulations, for example, limited both the total number of outlets to 334 stores (later increased to 556 in 2016),⁴ and distributed licences taking into account population consumption data across the state. A similar approach was adopted in Ontario; until March 2020 (when the limit on licences was lifted), regulations specified the maximum number of retail stores allowed in each area.⁵ This approach is borne out by experience from the Netherlands, where in municipalities with zero or a low density of cannabis coffee shops, individuals have historically been more likely to turn to the unregulated illegal market for their supply.⁶ Another way of addressing this may be

2 Popova, S. et al. (2009) *Hours and days of sale and density of alcohol outlets: impacts on alcohol consumption and damage: a systematic review*, *Alcohol and Alcoholism* 44.5, pp.500–516. www.ncbi.nlm.nih.gov/pubmed/19734159?dopt=Abstract&holding=f1000,f1000m,jsrcn.

3 National Association of State Alcohol and Drug Abuse Directors (2006) *Current Research on Alcohol Policy and State Alcohol and Other Drug (AOD) Systems*, p.5.

4 Seddon, T. and Floodgate, W. (2020) *Regulating Cannabis*, Palgrave Macmillan, p58.

5 Slade, H. (2020) *Capturing the market: Cannabis regulation in Canada*, Transform Drug Policy Foundation and MUCD, p19. <https://transformdrugs.org/product/capturing-the-market/>

6 EMCDDA (2008) *A cannabis reader: global issues and local experiences*, p150. www.emcdda.europa.eu/attachements.cfm/att_53355_EN_emcdda-cannabis-mon-full-2vols-web.pdf.

through reducing the cost of retail licences in areas where there is limited availability; in Saskatchewan, the provincial government has attempted to encourage the placement of retail stores outside of cities by offering reduced annual licence fees: \$3,000 for a store in a city, and \$1,500 for a store outside.⁷

Proximity to coffee shops in the Netherlands does not seem to be linked to the prevalence or intensity of cannabis use, or to the use of other illegal drugs.⁸ Studies in the US have similarly suggested that permitting non-medical cannabis stores in an area does not appear to affect youth cannabis use⁹ or lead to increased crime.¹⁰ One study has, however, suggested that perceived proximity to cannabis stores (rather than density of stores in a given area) is associated with a greater likelihood of youths admitting intention to use cannabis.¹¹

Regulation allows for restrictions to be placed around specific sites of public concern including schools or other places where young people gather. The impact of such controls for alcohol and tobacco sales is not particularly well established, but it can certainly serve to reassure the public that care is being taken in the rolling out of any legal regulatory framework. In the longer term, such reassurances may not be necessary. However such restrictions have been consistently incorporated in existing cannabis regulations. In the Netherlands, coffee shops are not permitted within a 250-metre

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- 7 Government of Saskatchewan (2018) The Cannabis Control (Saskatchewan) Regulations, s5-1(2). <https://www.saskatchewan.ca/government/cannabis-in-saskatchewan>
 - 8 EMCDDA (2008) A cannabis reader: global issues and local experiences, p.150. www.emcdda.europa.eu/attachements.cfm/att_53355_EN_emcdda-cannabis-mon-full-2vols-web.pdf.
 - 9 Peters, T. and Foust, C. (2019) *High school student cannabis use and perceptions towards cannabis in southcentral Colorado – comparing communities that permit recreational dispensaries and communities that do not*, Journal of Cannabis Research 1. <https://jcanabisresearch.biomedcentral.com/articles/10.1186/s42238-019-0002-0>
 - 10 Brinkman, J. and Mok-Lamme, D. (2019) *Not in my backyard? Not so fast. The effect of marijuana legalization on neighborhood crime*, Regional Science and Urban Economics 78. <https://doi.org/10.1016/j.regsciurbeco.2019.103460>
 - 11 Hust, S.J.T. et al (2020) *Youth's Proximity to Marijuana Retailers and Advertisements: Factors Associated with Washington State Adolescents' Intentions to Use Marijuana*, Journal of Health Communication. <https://doi.org/10.1080/10810730.2020.1825568>

radius of schools, and local governments have the power to decide whether to accept them in their area. In Washington, businesses are prohibited within a thousand feet of specific areas where children are likely to congregate, such as schools.¹² In Ontario, stores must be at least 150m from a school,¹³ while in Alberta, stores must be at least 100m from a health facility or a school, but municipalities are able to vary this distance.¹⁴

Appearance and signage

As explored below in the section on marketing controls, there is a well-established link between exposure to alcohol and tobacco marketing, branding and advertising and increased use of those drugs. It is reasonable to assume similar marketing as experienced in tobacco and alcohol markets would drive an expansion in use of cannabis. Early research from the US has also suggested that exposure to cannabis advertising is similarly linked to increased likelihood of use among adolescents.¹⁵ Appearance and signage for outlets are key elements of marketing for any business, so should be closely controlled to ensure that their purpose is functional rather than promotional.

Standardised descriptions, signs or symbols can be used to denote cannabis retail outlets, and restrictions or bans on storefront advertising put in place, to minimise the possibility of impulse purchases. Dutch coffee shops are subject to such restrictions,

¹² Washington State Liquor and Cannabis Board (Undated) Distance from Restricted Entities. https://lcb.wa.gov/mjlicense/distance_from_restrict-ed_entities

¹³ Government of Ontario (2018) Cannabis Licence Act, 2018, Ontario Regulation 468/18, s11. <https://www.ontario.ca/laws/regulation/180468#BK10>

¹⁴ Province of Alberta (2018) Gaming, Liquor and Cannabis Act: Gaming and Liquor Amendment Regulation, s105(3)-(4). http://www.qp.alberta.ca/documents/orders/Orders_in_Council/2018/218/2018_027.pdf

¹⁵ Krauss, M.J. et al (2017) Marijuana advertising exposure among current marijuana users in the U.S, Drug Alcohol Depend 174. <https://dx.doi.org/10.1016%2Fj.drugalcdep.2017.01.017>; Dai, H. (2017) Exposure to Advertisements and Marijuana Use Among US Adolescents, Prev Chronic Dis. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5716812/>



Official green and white sticker in the windows of Dutch coffee shops indicates they are licensed

forbidding advertising or making explicit external references to cannabis. Instead, Rastafari imagery, palm leaf images, and the words ‘*coffee shop*’ have become the default signage. Similarly, Washington State permits only two signs for non-medical cannabis stores, no larger than 1,600 square inches, identifying the outlet’s name, location and nature of the business. Signs may contain images or logos, but these may not contain depictions of plants

or products, depict cartoon characters or use any other image that may be appealing to children.¹⁶

Strict requirements on the external appearance of outlets can be relaxed for internal spaces of consumption venues. One of the main attractions of the Dutch coffee shops is that they are a pleasant environment to relax in. Hence restrictions on the internal appearance of on-site consumption venues should aim to prevent the promotion of cannabis products, rather than aiming to make the venues plain and unappealing. Making retail-only outlets more generic and functional, on the other hand, is less likely to deter people from using them, as customers will be purchasing cannabis for consumption elsewhere.

The extensive body of knowledge acquired from tobacco regulation clearly demonstrates that retail environments can significantly

¹⁶ Washington State Liquor and Cannabis Board (Undated) Frequently Asked Questions About Marijuana Advertising. lcb.wa.gov/mj2015/faq_i502_advertising

influence use.^{1 2 3} There is, for example, evidence that exposure to in-store, point-of-sale displays of tobacco products undermines impulse control among adult smokers and leads to an increased uptake in smoking among children and adolescents.^{4 5} The use of so-called ‘power walls’, vast rows of tobacco products placed directly behind checkout areas, clearly encourages impulse purchases. Their development illustrates how, in the absence of effective regulation, commercial interests will exploit opportunities to maximise sales. However, several countries are belatedly moving to regulate in-store tobacco displays, but without actually prohibiting sale. Finland, Iceland, the UK and Australia, among other countries, now require stores to keep tobacco products in opaque cabinets, or below the counter, from where they can be shown upon request from an adult customer.

While not necessarily appropriate in every scenario, the most cautious form of cannabis regulation would probably adopt a similar approach with cannabis products kept out of sight of potential customers until requested. Again, unlike conventional profit-motivated retail, the idea would be to make the retail experience functional rather than promotional. This kind of restriction is particularly crucial in a scenario, such as pharmacy sales, where other products are potentially being sold, or age restrictions are not applied for entry into the retail space. It is less important in a cannabis-only retail venue or retail and consumption venue, as both could enforce age access controls on entry. This distinction is

1 Wakefield M. et al. (2008) *The effect of retail cigarette pack displays on impulse purchase*, *Addiction* 103.2, pp.322–328.

2 Carter O.B. et al. (2009) *The effect of retail cigarette pack displays on unplanned purchases: results from immediate post-purchase interviews*, *Tobacco Control* 18.3, pp.218–221.

3 Germain D. et al. (2010) *Smoker sensitivity to retail tobacco displays and quitting: a cohort study*, *Addiction* 105.1, pp.159–163.

4 Paynter J. and Edwards R. (2009) *The impact of tobacco promotion at the point of sale: a systematic review*, *Nicotine and Tobacco Research* 11.1, pp.25–35.

5 Lovato C. et al. (2011) *Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours*, The Cochrane Collaboration. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003439.pub2/abstract>.

highlighted through regulations in Manitoba, where vendor licences are divided into a ‘*controlled-access licence*’ and an ‘*age-restricted licence*’. The former authorises the licensee to sell cannabis so long as it is stored behind a counter or shelving to prevent products being viewed until after purchase, while the latter authorises the licensee to sell cannabis so long as minors are prohibited from entering the store.⁶ If a ban on cannabis product displays is deemed overly prohibitive, regulation should at least act as a moderating influence, with displays required to be discreet, free from promotional messaging, and the products presented in standardised plain packages or containers (see the chapter on **Packaging, Section 2F**).

Opening hours

There is consistent evidence from alcohol regulation that restrictions on the days and hours of sale are an effective tool for moderating certain alcohol-related harms.⁷ Cannabis is different from alcohol, however. Although any increase in availability is liable to increase sales, for alcohol, late opening is especially linked to antisocial behaviour. This is less of a pressing issue for cannabis, so the purpose of controlling opening hours is different.

Nonetheless, local licensing authorities should seek to control when cannabis outlets may be open, under parameters set by overarching regulation, to ensure an appropriate level of availability (for more, see the discussion on **Getting the balance right in Section 1**). How this is interpreted may vary by region, as shown by varying requirements in Canada. In Ontario, stores can

6 Manitoba (2018) The Liquor, Gaming and Cannabis Control Act (as amended), s101.4(3). <https://web2.gov.mb.ca/laws/statutes/ccsm/t153e.php>

7 World Health Organization Regional Office for Europe, Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm, pp.68–69. www.euro.who.int/_data/assets/pdf_file/0020/43319/E92823.pdf.

open between 9am and 11pm.⁸ In Alberta, opening times are limited to 10am–2am, but may be restricted by individual municipalities.⁹ In Saskatchewan, this is 8am to 3am – or until 3.30am on New Year's Day. Stores in Saskatchewan are also required to open for a minimum of six hours a day for six days a week.¹⁰ A similar provision applies in Newfoundland and Labrador, where licences may be revoked owing to a period of inactivity.¹¹

Sales of other drugs

Outlets should, initially at least, be limited to the sale and consumption of cannabis products only. Such a restriction is commonplace in the Netherlands and the US, where prohibition on the sale of all other drugs, including alcohol and tobacco, is often a non-negotiable licence condition.

Although many people, particularly in Europe, smoke cannabis mixed with tobacco, such a policy would go some way towards more clearly delineating the markets for the two drugs. A greater separation of these markets has the potential to promote new social norms related to cannabis smoking, encouraging safer forms of consumption that would lead to public health gains.

8 Government of Ontario (2018) Cannabis Licence Act, 2018, Ontario Regulation 468/18, s17.
<https://www.ontario.ca/laws/regulation/180468#BK10>

9 Province of Alberta (2018) Gaming, Liquor and Cannabis Act: Gaming and Liquor Amendment Regulation, s121(2), Part 2, Schedule 3. http://www.qp.alberta.ca/documents/orders/Orders_in_Council/2018/218/2018_027.pdf

10 Government of Saskatchewan (2018) The Cannabis Control (Saskatchewan) Regulations, s3-6.
<https://www.saskatchewan.ca/government/cannabis-in-saskatchewan>

11 Newfoundland and Labrador (2018) Bill 20: An Act Respecting the Control and Sale of Cannabis, s34(1).
<https://assembly.nl.ca/HouseBusiness/Bills/ga48session3/bill1820.htm>

Responsibility for regulatory oversight

In keeping with existing hierarchies of regulatory control for alcohol and tobacco, cannabis outlets should be primarily overseen by licensing authorities, which are typically a tier of local government charged with managing and enforcing a series of centrally determined regulations, and by implication operating within the infrastructure of broader national and international law. Similar frameworks are already well established in a number of countries.

In the UK, for example, each licensing authority must review entertainment licences every three years and consult with the chief of police, fire authority, representatives of the licensees and representatives from local businesses and residents. In the US, alcohol policy is largely managed by the individual states, which control manufacturing, distribution and sale within their own borders, while the federal government regulates importation and interstate transportation. Similarly, in Canada, the federal government is responsible for regulating cannabis producers but retailers are licensed and regulated by provinces and territories.

Wherever responsibility for regulatory oversight sits, it is vital that sanctions for licence infringements are clearly defined and proportionate. In British Columbia, failure to comply with licensing conditions – for instance by allowing disorderly conduct, serving intoxicated persons, or allowing the display of cannabis in view of minors – is generally subject to fines of between \$7,000 and \$11,000 and a licence suspension of 7–11 days on first instance.¹² In Newfoundland and Labrador, sale in contravention of the Act as a first offence results in a fine of \$300–\$10,000, imprisonment of up

¹² British Columbia (2018) Cannabis Control and Licensing Act: Cannabis Licensing Regulation, Schedule 2.
http://www.bclaws.ca/civix/document/id/complete/statreg/202_2018#Schedule2

to six months, or both.¹³ A similar provision in Prince Edward Island in relation to unauthorised vendor sales allows for a fine of \$500 to \$10,000 on a first offence, with no corresponding provision for imprisonment.¹⁴ In Saskatchewan, breach of any provision without a specified penalty in the Act leaves an individual liable to a fine of \$25,000, imprisonment of up to 6 months, or both.¹⁵

Setting proportionality thresholds requires difficult considerations on whether, or where, the line may sit for establishing criminal responsibility in certain scenarios – which should be avoided unless absolutely necessary. The history of cannabis prohibition has involved both disproportionate punishments, and disproportionate burden of such punishments being carried by marginalised groups. The structural drivers of such dynamics will not simply disappear when regulation is implemented, but regulation does offer a rare and important opportunity to drastically reduce the scope through which cannabis-related activity is controlled through use of criminal law. It is vital that, where the criminal law does still apply, however, it is not imposed in an arbitrary, discriminatory or unnecessary manner. In particular, there is a risk that politically motivated ‘*tough sentencing*’ laws will be implemented, creating disparities with equivalent sanctions for alcohol and tobacco. This should be avoided, and such moves have already faced criticism in legalising jurisdictions like Canada.

¹³ Newfoundland and Labrador (2018) Bill 20: An Act Respecting the Control and Sale of Cannabis, s95(1). <https://assembly.nl.ca/HouseBusiness/Bills/ga48session3/bill1820.htm>

¹⁴ Prince Edward Island (2018) Cannabis Control Act, s32. https://www.princeedwardisland.ca/sites/default/files/legislation/c-01-2-cannabis_control_act.pdf

¹⁵ Government of Saskatchewan (2018) The Cannabis Control (Saskatchewan) Act, s5-2. <https://www.saskatchewan.ca/government/cannabis-in-saskatchewan>

j Marketing

Challenges

- Preventing the promotion of cannabis and cannabis use by commercial interests
- Negotiating political and legal obstacles to the implementation of adequate marketing restrictions

Analysis

- Experience with alcohol and tobacco demonstrates the capacity for marketing activities to influence levels and patterns of drug use
- If the overarching regulatory framework for cannabis allows private companies to dominate the trade, attempts to restrict marketing activities are likely to be met with significant resistance
- Evidence from tobacco regulation suggests that partial bans which prohibit only certain forms of marketing, rather than a comprehensive ban that covers all marketing activities, are unlikely to be effective in reducing the potential harms associated with cannabis use
- When subject to partial bans on marketing, tobacco companies maintain their level of promotional spending, simply diverting more money to those (often more subtle) marketing activities that are permitted. Partial bans should therefore be expected to lead to similar behaviour from private companies involved in the cannabis trade

Recommendations

- A ban on all forms of cannabis advertising, promotion and sponsorship should be the default starting point for any regulatory system

- Article 13 of the World Health Organization's Framework Convention on Tobacco Control provides a comprehensive blueprint for how to eliminate tobacco marketing that could easily be applied to cannabis

Advertising, promotion and sponsorship form the front line of most industries' efforts to maintain and increase their customer bases. Historically, the alcohol and tobacco industries have been no different, using a variety of marketing techniques to maximise consumption of their products and, consequently, their profits. Although recent decades have seen varying degrees of success in curbing the use of such techniques by these two legal drug industries (markedly more progress being made with tobacco than alcohol), these successes have been hard-won, with industry fighting against them at every turn.

Governments seeking to enforce adequate restrictions on cannabis marketing may face similar challenges from big business. However, unlike with alcohol and tobacco, newly-regulating jurisdictions will often have a '*clean slate*': if non-medical cannabis is regulated strictly enough from the outset, an ongoing conflict in this area becomes less likely and policymakers will not have to struggle to control a powerful and well-established industry seeking to aggressively promote its products. This clean slate is already muddled slightly by the established presence of medical cannabis markets in some areas, as well as the more recent development of producers operating transnationally. Existing practices among medical cannabis actors, and established transnational corporate dynamics, make implementing new standards for a non-medical market more complex. Nonetheless, this is a new area of regulation where domestic legislators and multilateral agencies have the opportunity to impose strict new standards from the outset to establish clear norms, including strict controls on marketing.

Lessons on the potential risks in this area can be learnt from examples of irresponsible and inadequately regulated marketing of medical and recreational cannabis products seen in some US states. Corporate capture, drawing particularly on recent experiences in Canada post-legalisation, is discussed in more detail in [Section 3](#).

Marketing has been one of the key battlegrounds between governments and alcohol and tobacco companies, and perhaps most clearly highlights the tension between the aim of reducing the health and social harms associated with drug use and the profit-seeking goals of private interests operating in a commercial marketplace. Policymakers considering cannabis marketing controls must be aware of these conflicting aims, and recognise the importance of marketing restrictions to the overall effectiveness of any system of legal cannabis regulation.

Lessons must be learned quickly, as the entrenchment of corporate dynamics following the establishment of early non-medical cannabis markets is already beginning. So far, however, research from Canada and the US suggests that brand identification remains low, in part as corporate branding strategies are still establishing what is possible and effective within the new regulatory frameworks.¹ Particular vigilance is needed regarding a rapidly evolving social media landscape that offers new and unique opportunities for cannabis companies to promote brand identities, potentially in ways that can, at least in the short term as regulators play catch up, evade broader efforts to control

1 Rup, J., Goodman, S. and Hammond, D. (2020) Cannabis advertising, promotion and branding: Differences in consumer exposure between 'legal' and 'illegal' markets in Canada and the US, *Preventive Medicine* 133. <http://cannabisproject.ca/wp-content/uploads/2017/09/Rup-Goodman-Hammond-2020-Cannabis-advertising-promotion-and-branding-Differences-in-consumerexposure-between'legal'and'illegal'markets-in-Canada-and-the-US.pdf>

such marketing.² Regulators should therefore make the most of the ‘*clean slate*’ that regulation offers to establish clear rules to prevent the recurrence of experiences with tobacco and alcohol – additionally including generic cross-platform marketing controls that can limit or shut down potential exploitation of social media marketing loopholes.

Lessons from the regulation of tobacco marketing

The World Health Organization (WHO) has stated that the elimination of all forms of tobacco advertising, promotion and sponsorship (TAPS) is essential for meaningful tobacco control. Article 13 of the WHO Framework Convention on Tobacco Control (FCTC), which requires all Parties to establish a comprehensive TAPS ban, is one of only two provisions in the treaty that includes a mandatory timeframe for implementation (five years after entry into force).³

For much of the 20th century, TAPS was subject to minimal regulation. The tobacco industry was allowed to advertise through all forms of media, and developed increasingly sophisticated techniques to promote its products. Direct and indirect marketing through sponsorship of sporting and music events, as well as product placement in films and television shows, helped to associate use of the drug with desirable lifestyles, and served to improve the public image of the companies that produced it. And as health concerns began to

² EurekaAlert! (2019) Survey: Most teenagers in legalized states see marijuana marketing on social media. https://www.eurekaalert.org/pub_releases/2019-11/uoma-sm112119.php; Brody, L. (2020) 5 Cannabis Brands That Are Crushing It On Instagram, Green Entrepreneur 23rd April. <https://www.greenentrepreneur.com/article/349545>; Gunelius, S. (2020) Instagram Marketing for Cannabis Businesses and Cannabis-Related Businesses, Cannabiz Media 22nd May. <https://cannabiz.media/instagram-marketing-for-cannabis-license-holders/>; Bourque, A. (2019) Under The Influence Of Instagram: Cannabis In The Age Of Social Media, Forbes 6th May <https://www.forbes.com/sites/andrebourque/2019/05/06/under-the-influence-of-instagram-cannabis-in-the-age-of-social-media/>.

³ World Health Organization (2003) Framework Convention on Tobacco Control. <http://whqlibdoc.who.int/publications/2003/9241591013.pdf>.

be raised over tobacco use, the industry then employed marketing ‘spin’ to brand a range of cigarettes ‘mild’ or ‘light’ to give the false impression that they were safer.

The considerable freedom afforded to tobacco companies in promoting their products is strongly linked to the increase in the rate of tobacco use that continued in most Western nations until the mid-1960s. There is, for example, conclusive evidence that TAPS is an effective method of recruiting new smokers,⁴ a fact that has been recognised by the US Surgeon General, who has stated categorically that *‘there is a causal relationship between advertising and promotional efforts of the tobacco companies and the initiation and progression of tobacco use among young people.’*⁵

Even after greater restrictions were imposed on TAPS, it is still believed to have been one of the key drivers of tobacco use and related harms.

Clearly the relative risks of cannabis compared to tobacco means that the health, social and financial costs of TAPS are of a magnitude far greater than those that might result from cannabis advertising, promotion and sponsorship (CAPS), yet such estimates highlight how, even when the marketing of a legal drug for non-medical use is subject to restrictions, it can still produce serious and avoidable harms. Hence WHO states that while comprehensive controls on all forms of TAPS can reduce smoking prevalence (and by implication smoking-related harms), partial restrictions *‘have little or no effect.’*⁶

4 Lovato C. et al. (2011) *Impact of tobacco advertising and promotion on increasing adolescent smoking behaviours*, The Cochrane Collaboration. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003439.pub2/abstract>.

5 National Center for Chronic Disease Prevention and Health Promotion (US), Office on Smoking and Health (2012), *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General*. www.ncbi.nlm.nih.gov/books/NBK99239/.

6 World Health Organization (2013) *WHO report on the global tobacco epidemic, 2013: Enforcing bans on tobacco advertising, promotion and sponsorship*, p27. http://apps.who.int/iris/bitstream/10665/85380/1/9789241505871_eng.pdf.

Taken together, experience from the regulation of TAPS indicates that the unrestricted marketing of cannabis is likely to be accompanied by an expansion in consumption and associated harms. Furthermore, while legal constraints in some countries may mean that partial marketing bans are the only feasible regulatory response, they are unlikely to adequately reduce the public health and safety burden, however big or small, that cannabis use poses. Where existing legal frameworks could allow it, a comprehensive CAPS ban represents the optimal form of control.

Lessons from the regulation of alcohol marketing

While considerable success has been achieved in limiting tobacco marketing, with many countries imposing bans on in-store displays, television advertisements, sponsorship of events, and the introduction of plain packaging, the alcohol industry has been left relatively free to promote its products across all media. The result is that exposure to marketing of a high risk drug is, in many places, simply a fact of everyday life. Such a high level of exposure, and its concomitant public health implications, should serve as a warning to policymakers contemplating allowing cannabis to be promoted in a similarly *laissez-faire* manner.

- In England, football fans see around two references to alcoholic brands every minute when they watch a match on TV in addition to the formal advertising during commercial breaks ⁷
- Alcohol marketing campaigns are increasingly being conducted via social networking sites such as Facebook and Twitter, as well as those which are disproportionately used by young people like

⁷ Graham, A. and Adams, J. (2013) Alcohol Marketing in Televised English Professional Football: A Frequency Analysis, Alcohol and Alcoholism. <http://alcalc.oxfordjournals.org/content/early/2013/09/10/alcalc.agt140.full>

Instagram and TikTok. Social media marketing is more easily able to traverse international boundaries and is generally less regulated⁸

- One study estimates that 10-15-year-olds in the UK see 10% more alcohol advertising on TV than their parents do. And when it comes to the specific sector of '*alcopops*' (sweetened alcoholic drinks marketed to appeal to children and young people), they see 50% more⁹

Article 13 of the Framework Convention on Tobacco Control — a template for cannabis

Article 13 of the FCTC could be adapted for cannabis relatively easily. Following the recommendations it contains, a comprehensive CAPS ban would cover all direct and indirect advertising promotion and sponsorship.

Legal or political constraints on marketing controls

Article 13 of the FCTC does recognise that in some instances a comprehensive ban on TAPS would violate a country or jurisdiction's constitution. In such cases, it still requires restrictions on TAPS that are as comprehensive as possible within constitutional constraints.

Again, this concession could equally be made for restrictions on CAPS, and would likely be necessary given that in some countries precedents have been set with regard to tobacco and alcohol

⁸ See, e.g. Room, R. and O'Brien, P. (2020), Alcohol marketing and social media: A challenge for public health control, *Drug and Alcohol Review*. <https://doi.org/10.1111/dar.13160>

⁹ See above footnote

marketing. The US Supreme Court, for example, has ruled that tobacco companies have a right to at least some form of advertising for their products under the First Amendment of the Constitution.¹⁰

However, although the so-called '*commercial free-speech*' of tobacco companies has been deemed worthy of legal protection in the US, TAPS is increasingly being subjected to restrictions. Among other things, the Family Smoking Prevention and Tobacco Control Act, which became law in 2009, prohibits event sponsorship by tobacco companies as well as brand-name non-tobacco promotional items.¹¹

Thus in countries or jurisdictions where commercial free-speech laws are likely to be in conflict with future CAPS regulation, there is potentially still significant scope for restrictions on cannabis marketing, even if evidence suggests these will be of more limited effectiveness compared to comprehensive bans. In the longer term, this more limited effectiveness should be highlighted by those in favour of a public health approach to regulation, in order to reduce the scope of commercial free-speech laws in the context of non-medical drug marketing.

In addition to legal constraints, there may be political opposition to effective CAPS regulation. Touching as it does on issues of freedom of expression, such regulation will inevitably be resisted in some quarters, including among existing cannabis companies looking to break into new markets. However, this viewpoint is unlikely to have much traction with the wider public. The distinct nature of drug risks relative to most other commodities, and the particular need to protect vulnerable groups from exposure to these risks, would for most people be considered sufficient

¹⁰ For more information see: Gostin, L. O. (2002) *Corporate Speech and the Constitution: The Deregulation of Tobacco Advertising*, *American Journal of Public Health* 92.3, pp. 352-355.

¹¹ US Food and Drug Administration (2013) *Overview of the Family Smoking Prevention and Tobacco Control Act: Consumer fact Sheet*. www.fda.gov/tobaccoproducts/guidancecomplianceregulatoryinformation/ucm246129.htm

justification for restricting standard commercial freedoms. Indeed, heavy restrictions on CAPS may be seen as politically necessary in order to ensure regulatory measures are amenable to the general public.

Current cannabis advertising, promotion and sponsorship (CAPS) regulation around the world

Uruguay

In Uruguay, all forms of publicity, indirect publicity, promotion or sponsorship of cannabis products are prohibited.

USA

As in other areas of cannabis policy, there has been a degree of ‘*policy transfer*’ between US states, with protection of young people a clear motivating factor in CAPS regulation. Most states have introduced similar regulations to prevent cannabis marketing from being targeted at children. This includes imposing negative obligations (those that simply require a business to refrain from a certain action), such as prohibiting advertising within a certain distance of areas where children are likely to be (such as schools and playgrounds); and from depicting characters that are likely to appeal to children or advertising that is designed in a way that would be especially appealing to children.¹² Similar restrictions are common in relation to depicting characters likely to appeal to children on packaging,¹³ though generally US states operate less restrictive rules in relation to branding than those established in Canada.

However, states have also sought to impose positive obligations on businesses – i.e., requirements that they take steps to ensure that their advertising is compliant. One such example is that advertising shall only be displayed after a licensee ‘*has obtained reliable up-to-date audience composition data*’ demonstrating that a high percentage of the audience viewing the advertising or marketing ‘*is reasonably*

¹² See, for instance, Washington, where this is set at 1,000 feet: Washington State Liquor and Cannabis Board (Undated) [Frequently Asked Questions About Marijuana Advertising](https://lcb.wa.gov/mj2015/faq_i502_advertising#advertisingrules). https://lcb.wa.gov/mj2015/faq_i502_advertising#advertisingrules; see also Maine, where this is set at 500 feet: State of Maine, Office of Marijuana Policy: Department of Administrative and Financial Services, Adult Use Marijuana Program Rule 18-691 C.M.R., Chapter 1. s5.2 (c)(4) — Prohibitions, p54. <https://www.maine.gov/dafs/omp/adult-use/rules-statutes/18-691-C.M.R.-ch.-1>

¹³ See, e.g., Alcohol and Marijuana Control Office (Updated 2019) 3 AAC 306 Regulations for the Marijuana Control board, 565 Packaging of marijuana products. <https://www.commerce.alaska.gov/web/Portals/9/pub/MCB/StatutesAndRegulations/3AAC306%209.18.19.pdf>

expected to be 21 years of age or older. This percentage is set at 71.6% in California, for example, and 85% in Massachusetts.¹⁴ Such positive obligations help ensure businesses are active in measuring the impact of their advertising; however, they also highlight that no advertising can ever be completely hidden from children – unless it is prohibited entirely, which in US states it is not – leaving opportunities for such loopholes to be exploited.

Similar measures have meant that, in Colorado, while advertising is permitted in adult-oriented newspapers and magazines (which essentially means all newspapers and most magazines), mass-market campaigns that have a *'high likelihood of reaching minors'* are prohibited. This extends to online advertising: *'Pop-up'* advertisements are banned, but *'banner ads'* are permitted on adult-oriented sites.

In Washington, advertisements on public transit vehicles or shelters, or on any publicly owned or operated property, are also banned. Historically, marketing activities that promote medical cannabis products in the US have often not been subject to regulation, with television, radio and print advertising commonplace in many states. This can offer another opportunity for indirect non-medical cannabis promotion to circumvent restrictions.

Canada

CAPS is heavily restricted at a federal level in Canada. Under the Cannabis Act, it is prohibited to promote cannabis by appealing to young persons, by means of an endorsement, or by associating cannabis use with *'glamour, recreation, excitement, vitality, risk or daring'*.¹⁵ The legislation clearly attempts to prevent cannabis from being marketed in the way that tobacco, alcohol or even energy drinks have been previously.

Sponsorship of persons, entities or events – to prevent certain positive associations, such as with someone's favourite sports team – are also expressly prohibited.¹⁶ Federal Cannabis Regulations further prohibit cannabis products from creating the impression of *'health or cosmetic benefits'* (except for licensed and relevant medical products), and prohibit promotion which implies that an edible cannabis product may meet dietary requirements.¹⁷ They also specifically prohibit promotion

¹⁴ See, e.g. California, where this is set at 71.6%: Bureau of Cannabis Control California (2019) California Code of Regulations Title 16. § 5040, Advertising Placement. https://bcc.ca.gov/law_regs/cannabis_order_of_adoption.pdf; See also Massachusetts, where this is set at 85%: Commonwealth of Massachusetts, Cannabis Control Commission (2019) 935 CMR 500.000 Adult Use of Marijuana, 500.105(4)(b) (2). https://mass-cannabis-control.com/wp-content/uploads/2019/11/935_CMR_500.000_Adult_Use_of_Marijuana_11.1.19.pdf

¹⁵ Government of Canada (2018) Cannabis Act (S.C. 2018, c. 16), s17(1). <https://laws-lois.justice.gc.ca/eng/acts/C-24.5/>

¹⁶ Canadian Cannabis Act, s17(20), (21). <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-144/>

¹⁷ Canadian Cannabis Regulations, s104.12, 104.14.

which may reasonably link a cannabis product to an alcoholic beverage, or tobacco or non-cannabis vaping products.¹⁸ This is also the case when such promotion is on packaging and labelling.¹⁹

Product branding is designed to maximise market share through the creation of a distinctive identity, but can also make the product itself (in this case, cannabis) more attractive. The Cannabis Act does not specifically exclude brand elements, so long as these elements are not associated with children (or where they could reasonably be believed to appeal to children), and do not seek to associate the brand with a life of glamour, recreation, or risk — see above.²⁰

While promoting consumption is certainly at odds with federal aims of regulation, promoting responsible consumption is not. The prohibition of promotion therefore expressly does not apply to ‘*informational promotion*’ aimed at a particular adult — i.e., promoting information about the risks or impacts of cannabis use.²¹ Equally, the Cannabis Act states that it does not apply to promotion ‘*at the point of sale if the promotion indicates only its availability, its price or its availability and price*’.²² This qualification is necessary, as otherwise almost anything done by vendors in retail stores could be classed as ‘*promotion*’.

Additional restrictions may be applied by provincial governments to further synchronise their own aims of regulation. In British Columbia, there is a prohibition on marketing, advertising or promoting cannabis to minors, unless reasonable steps were taken to ascertain that the individual was not a minor.²³ Legislation in British Columbia also uniquely provides for a ‘*marketing licence*’, which authorises the licensee ‘*to promote cannabis for the purpose of selling it*’.²⁴ This is subject to provincial controls, such as prohibitions on providing samples of cannabis, offering benefits to retail store licensees in return for the store buying or promoting products, and offering discounted products in exchange for marketing benefits. A licensee may, however, conduct market research surveys and invite retail store licensees to promotional events and pay for their travel, meals, accommodation and

¹⁸ Canadian Cannabis Regulations, s104.15, 104.16.

¹⁹ Canadian Cannabis Regulations, s132.28, 132.3, 132.31, 132.31.

²⁰ Canadian Cannabis Act, s17(6).

²¹ Canadian Cannabis Act, s17(2),(5).

²² Canadian Cannabis Act, s17(2),(5).

²³ British Columbia (2018) Cannabis Control and Licensing Act, s71.
<http://www.bclaws.ca/civix/document/id/complete/statreg/18029#section61>

²⁴ British Columbia (2018) Cannabis Control and Licensing Act: Cannabis Licensing Regulation, s3(1), 11.
http://www.bclaws.ca/civix/document/id/complete/statreg/202_2018#section3

entertainment expenses up to \$1,500 a year per retail licensee, in order to promote products.²⁵

On the one hand, this represents a pragmatic attempt at constraining inevitable commercial activities. On the other, it does raise questions given the level of corporate capture that is already happening in the legal market. In contrast, in Alberta, retail licensees are expressly prohibited from receiving gifts from cannabis suppliers or representatives, nor can they *'rent or borrow any furniture, furnishings, storage equipment, fixtures, decorations, signs, supplies or other equipment'* from suppliers.²⁶

Netherlands

Dutch coffee shops are not allowed to advertise; the only form of promotion that occurs is the use of Rastafari imagery, palm leaf images, using trade names such as *'Grasshopper'*, and the words *'coffee shop'* to identify the cafes. The ban on advertising therefore acts more as a moderating influence, rather than preventing the coffee shops from distinguishing or promoting themselves at all.

Spain

While Spain's cannabis social clubs are mostly run on a strictly non-profit basis, there have been moves by some to commercialise the operations. On the whole, however, CAPS does not occur, as those who run the clubs, as well as the members themselves, have no financial incentive to increase cannabis consumption through marketing.

²⁵ Province of British Columbia (2019) Marketing: Terms and Conditions. <https://www2.gov.bc.ca/assets/gov/employment-business-and-economic-development/business-management/liquor-regulation-licensing/guides-and-manuals/marketing-handbook.pdf>

²⁶ Province of Alberta (2018) Gaming, Liquor and Cannabis Act: Gaming and Liquor Amendment Regulation, s119. http://www.qp.alberta.ca/documents/orders/Orders_in_Council/2018/218/2018_027.pdf

k Institutions for regulating cannabis markets

Establishing a legally regulated market for cannabis will require a wide range of policy decisions to be made and new legal, policy and institutional structures to be established. It is important to define the level of governance at which such choices should be made and legislation be imposed, and to determine which existing or new institutions should be given responsibility for decision-making, implementation and enforcement of the various aspects of regulation.

In principle, these challenges do not significantly differ from similar issues in other arenas of social policy and law related to currently legal medical and non-medical drugs, the regulatory infrastructure around alcohol and tobacco again being most obviously relevant. On this basis, the proposal outlined below suggests how new cannabis legislation and decision-making could be integrated into and managed by different kinds of political bodies, international/multilateral (global and regional agencies), domestic (federal and devolved), and various tiers of local government (state, county, municipality, etc.). These suggestions are inevitably generalisations; the precise contours of decision-making structures will be shaped by the political realities of individual jurisdictions.

Because multilateral institutions have shown no inclination to lead, drug policy reforms around non-medical cannabis regulation have been driven almost exclusively by innovation at a national or subnational level. This process has inevitably created tensions between the different hierarchical tiers of government. Uruguay and Canada's cannabis laws are non-compliant with specific articles of the UN drug conventions; US state-level cannabis regulation is in conflict with federal law; and an array of local initiatives on cannabis regulation, including in Copenhagen, more than 60 municipalities in the Netherlands, and a number of regions

and autonomous communities in Spain,¹ are challenging national legal frameworks. Such tensions are, however, an inevitable manifestation of a bottom-up leadership process, rather than a long-term structural problem. Sustained challenges of this sort will inevitably lead to reform at national, federal and UN levels, as has happened previously with other drug policy reforms: notably the emergence of harm reduction as a dominant policy paradigm, and more recently decriminalisation of people who use drugs. At this point, tensions will diminish, even if, to some extent, they remain part of the landscape.

International

There is a clear and important role for the various UN legal structures and agencies. Key functions for the UN would be:

- Overseeing issues that relate to international trade (discussed in **Section 2A**), particularly issues around the provision and transit of cannabis-based medicines. International trade and border issues would also naturally come within the purview of relevant regional agencies such as the European Union, or emerging regional or bilateral cannabis trade agreements
- Maintaining responsibility for oversight of relevant human rights, labour laws, development and security issues. UN agencies already play an important role in these areas more generally, but historically there has not been sufficient engagement through a drug policy lens, due to constraints created by the overtly prohibitionist UN drug control system. This prohibitionist focus has led to a lack of coherence between the UN drug control regime

¹ Marks, A. (2020) *The Legal Landscape for Cannabis Social Clubs in Spain*, Transnational Institute. <https://www.tni.org/es/node/17274>

and the wider health, human rights and development aims and institutions of the UN. The UN's role would inevitably transform from one of overseeing a global prohibitionist system to one more like its role with regard to alcohol and tobacco, with UN agencies providing the foundation, ground rules and international legal parameters within which individual States, or groups of States, can or should operate. This role would include oversight and guidance on sovereign State rights, as well as responsibilities to neighbours and the wider international community

- Acting as a hub of research on cannabis health issues and best practice in cannabis policy and law. This research and advisory role would mirror the World Health Organization's (WHO) existing role regarding tobacco and alcohol policy,² and would work in partnership with equivalent regional and national research bodies, such as the EMCDDA. At a later stage this analysis and best practice guidance could potentially be formalised in an international agreement similar to the Framework Convention on Tobacco Control.³

Aside from the necessary bureaucratic and legal reforms, the change in focus from punitive enforcement towards pragmatic public health management clearly indicates that lead responsibility for cannabis- related issues should move from the UN Office on Drugs and Crime to the WHO and sit alongside its existing role for alcohol and tobacco.

It is likely that, at a UN level, cannabis reforms will necessitate greater consideration of drug policy-related human rights standards within key treaty regimes, and wider engagement of relevant UN agencies in monitoring the impacts of member state drug policies

² For more on WHO's work on tobacco, see: www.who.int/topics/tobacco/en/.

³ World Health Organization (2003) Framework Convention on Tobacco Control. <http://whqlibdoc.who.int/publications/2003/9241591013.pdf>

on the realisation of the sustainable development goals. These developments are likely to have global implications in relation to ending the criminalisation of cannabis possession for personal use, and potentially cultivation for personal use. It is important to make clear, however, that international law reforms that demand an end to the criminalisation of people who possess or use cannabis (or cultivate for personal use), and that introduce flexibility for States to explore regulatory models, would not mandate either the nature of non-criminal penalties, or the establishment of legally regulated availability. International law would instead provide an overarching legal infrastructure within which national governments would operate, making their own decisions on whether and how to regulate cannabis.

Clearly, comprehensive reform requires either an overhaul of the UN drug control treaty framework, or a geopolitically viable course of action by which individual states, or groups of like-minded states, can navigate beyond existing treaty obligations. For further discussion on this, see Section 3G on cannabis and the UN drug conventions.

National government

In contrast to the current prohibitionist infrastructure, the reformed overarching framework of international law would neither impose nor preclude particular options relating to legal access and supply, or internal domestic drug markets. Similar steps to reform may need to be taken at a national level in some countries to ensure that more local tiers of government (e.g. state or provincial level) do not in turn have their own regulatory options precluded, or undermined, by criminal laws at a national level. For example, the regulatory options available to US states that have legalised cannabis have been curtailed because it remains illegal at

the federal level – something the MORE Act proposed in 2020–21 seeks to change. As a result, state employees cannot be required to be directly involved in cannabis production or supply because they could have federal criminal charges brought against them. Access to banking services has also been heavily restricted, and consuming cannabis remains prohibited in public housing.

National governments must be empowered to determine their own drug policies, within broad parameters established under international trade and human rights law. In a reformed legal landscape, responsibility for cannabis policy should sit primarily within health, rather than home affairs departments. Although government will retain essential responsibilities of regulatory oversight and enforcement, it is a fundamental principle that drug use (insofar as it poses a risk) is primarily a public health issue, and should be treated as such. Many existing regulatory frameworks have sought to add further responsibilities to existing agencies with oversight of alcohol policy; in the US, this has led to the expansion of existing agencies (in name and function) including the Alaska Department of Commerce, Community and Economic Development, Alcohol and Marijuana Control Office and the Washington State Liquor and Cannabis Board.

Nevertheless, because of its complexity (and as is the case for alcohol) drug policy will always be profoundly cross-departmental. Home affairs departments will still have a key role in enforcing new regulations; treasuries will look to tax generation; education departments will have a role in prevention and harm reduction, and so forth. This multifaceted nature of cannabis policy is highlighted by the designation of regulatory functions within state departments in California, which has three different agencies overseeing its cannabis licensing: manufacturing licences for cannabis products are overseen by a branch within the Department of Public Health; cultivation licences are overseen by a branch of the Department

of Food and Agriculture; and all other licences (including retail and distribution) are overseen by a branch of the Department of Consumer Affairs.⁴ For this reason, a distinct, co-ordinating body with a cross-departmental brief will be essential in ensuring consistency of approaches across policy domains.

Models for this already exist. This can be implemented through expanding existing agencies, as discussed in relation to Alaska and Washington above, and many Canadian provinces. However, it may also involve the establishment of a new dedicated agency via legislation; in Uruguay, this led to the establishment of the Institute for the Regulation and Control of Cannabis, while in Massachusetts this led to the Cannabis Control Commission. This is preferable as the organisation can be designed with cannabis legislation specifically in mind, and new expertise brought in to ensure a wide breadth of relevant knowledge is guaranteed. In Mexico, campaigners were critical of Congress' move to remove an obligation to create a dedicated cannabis body to regulate the market, instead vesting responsibility in the National Addictions Agency which lacks the regulatory expertise and 'human, financial, or legal resources' to be an effective regulator.⁵

Local/municipal government

The street-level implementation and enforcement of regulation invariably falls to local authorities. Licensing generally allows local authorities to determine the number, density, and operating practices of outlets in their area, and to tailor those decisions to local need. It is important that decisions on such issues are made at the political level most local to them.

⁴ See: California Cannabis Portal (Undated) Licensing. <https://cannabis.ca.gov/apply-for-a-license/>.

⁵ Transform Drug Policy Foundation (2021) Cannabis Legalisation in Mexico: An Explainer, 23rd March. <https://transformdrugs.org/blog/cannabis-legalisation-in-mexicoan-explainer>

It may be that some communities do not wish to see legal sale of cannabis in their areas, even if supply is legalised nationally. This ‘*local option*’ has been applied historically in ‘*dry*’ (alcohol-free) counties in the US and Australia, and more recently with cannabis outlets in the US counties and municipalities, and cannabis ‘*coffee shops*’ in different Dutch municipalities. In the US, all states that have legally regulated recreational cannabis allow local authorities flexibility on zoning laws or the option to prohibit retailers entirely. This has, however, led to issues in states such as California, where widespread implementation of the ‘*local option*’ has led to 76% of cities rejecting cannabis stores, fuelling criticism that ‘*patchwork prohibition*’ is undermining state-wide regulation efforts in combating the illegal market.⁶

In the city of Compton, which has its own history of being disproportionately impacted by the war on drugs, 76% of voters rejected proposals to allow non-medical retail. Reasons given included trying to clean up the city’s image, and a desire to build an economy without the lucrative potential of cannabis.⁷ As a result, legal cannabis is less accessible, and consumers may default to buying from the unregulated illegal market.⁸

The level of regulatory autonomy left to individual communities requires careful balancing. It is critical that local areas have a degree of control over how cannabis regulation manifests in their communities. However, patchwork availability can also make the legal market difficult to access for some communities, and encourage a continuing unregulated illegal market, or informal

6 McGreevy, P. (2019) *California now has the biggest legal marijuana market in the world. Its black market is even bigger*, LA Times 15th August.

<https://www.latimes.com/california/story/2019-08-14/californias-biggest-legal-marijuana-market>

7 Fuller, T. (2018) *Oakland Embraces Marijuana Sales. Compton Bans Them. How Is Justice Best Served?* New York Times 17th March. <https://www.nytimes.com/2018/03/17/us/california-marijuana-oakland-compton.html>

8 See: Slade, H. (2020) *Altered States: Cannabis regulation in the US*, Transform Drug Policy Foundation, p10-12. <https://transformdrugs.org/product/alterd-states-cannabis-regulation-in-the-us/>

secondary sales. Online retail and delivery services may offer a partial solution but come with their own set of regulatory challenges. A relatively neat solution has been implemented in Massachusetts, where municipalities are permitted to pass bylaws or ordinances limiting the number of cannabis retailers to 20% of total liquor licences issued in the area (so, for instance, one store might be appropriate for a small rural town with only five liquor outlets, but much more would be needed for a big city like Boston). In order for a municipality to restrict store licences further than this (including an outright ban), however, they must put the question to a local referendum – unless a majority of voters in the municipality voted against legalisation in 2016.⁹

Such provisions offer municipalities an important degree of local control over the changing nature of business in their area. Importantly, they also protect against local officials banning access to the regulated retail market against the wishes of residents. Going forward, such measures will have to be closely monitored to ensure legal supply is able to meet demand in local areas. Perspectives of local residents may also soften over time, and areas choosing to ‘opt out’ of cannabis sales may, later on, wish to opt back in. It is therefore important that any measures allow for re-evaluation over time, in line with the developing evidence base, or evolving views of local communities.

⁹ Commonwealth of Massachusetts, Cannabis Control Commission (2019) Guidance for Municipalities. Updated 25 February.
http://mass-cannabis-control.com/wp-content/uploads/2019/03/Final-Draft-Municipal-Guidance-Update-02.25.19_1.pdf.

Section 3

Key challenges

a Past criminal records

Challenges

- Acknowledging the past harms of cannabis law enforcement
- Removing stigma and practical barriers faced by individuals with criminal records
- Designing a process to remove criminal records through which the highest number of affected individuals are likely to benefit

Analysis

- Criminal records provide a lasting stigma, reducing employment and life opportunities
- Simply removing criminal penalties for certain activities around cannabis going forward does nothing to respond to the legacy of criminalisation of individuals prior to regulation

- There are multiple ways to remove criminal records, which may be dependent on an individual jurisdiction's wider legal system
- Expunging records is the most effective way of preventing disclosure and removing stigma
- Record sealing may still result in disclosure in some limited instances, but remains preferable to pardons or no action at all
- More individuals are likely to benefit from criminal record removal if the process is automatic – i.e. the onus is on the state, not the individual, to initiate the process
- New technology and algorithms may help facilitate automatic record removal

Recommendations

- Ideally, expungement schemes should be mandated through legislation
- Legislation should require criminal record removal to be automatic, obliging the relevant state department or court to identify and remove all eligible records within a prescribed timeframe (not more than 2-3 years after legalisation, depending on the scale of eligible records and the size of a jurisdiction's infrastructure)
- The agency arranging automatic expungement should be required to confidentially notify impacted individuals and effectively communicate the implications of their record expungement to them
- Expungement is always preferable, but where this is not possible within an individual legal system (for instance, only record sealing is permissible), legislation should ensure that all the same practical benefits are obtained and that records will not be disclosed

Moving to a system of regulation, where the scope of criminal law is dramatically reduced, is a tacit acceptance of the failures and injustices of past cannabis policy. It turns out, after all, that mass criminalisation was a flawed policy choice, not a moral necessity. Yet the past failures of criminalisation are not simply erased through this volte-face; the disproportionate impacts of cannabis law enforcement have ravaged entire communities, and the wider legacy of mass criminalisation is etched into millions of criminal records. This substantial realignment of the criminal goalposts inevitably poses the question: what about all those who were criminalised beforehand?

For decades, cannabis law enforcement has been disproportionately targeted at marginalised communities. It is, therefore, these communities who have borne most of the brunt of criminalisation. Black people are nearly four times more likely to be arrested for cannabis possession than white people in the US¹, and nearly nine times more likely to be stopped and searched for drugs in the UK (a third of such searches being for suspected cannabis possession).²

Criminal records create an enduring stigma, perpetuating the trauma of unjust criminalisation by drastically reducing employment and life opportunities. For immigrant communities, they can fuel insecurity of residency status, reduce access to social support, or can be used to initiate deportation proceedings. The ongoing criminalisation of people who committed cannabis offences *before* we moved the goalposts inevitably appears arbitrary, unfair and undermines vital social justice goals underpinning regulation. It is both inconsistent and unjust to only seek the end of mass criminalisation going forward, and do nothing

1 ACLU (2020) A Tale of Two Countries: Racially Targeted Arrests in the Era of Marijuana Reform. <https://www.aclu.org/report/tale-two-countries-racially-targeted-arrests-era-marijuana-reform>

2 Shiner et al (2018) *The Colour of Injustice: 'Race', drugs and law enforcement in England and Wales*, Stopwatch, LSE and Release. <https://www.stop-watch.org/news-comment/story/the-colour-of-injustice>

about the continuing criminalisation of those caught under past laws we have now accepted were wrong.

“Criminal history record” means all information documenting an individual’s contact with the criminal justice system, including data regarding identification, arrest or citation, arraignment, judicial disposition, custody, and supervision.’³
(Definition in the Vermont expungement Bill)

It is necessary, therefore, for regulating jurisdictions to respond to this issue from the outset: by removing criminal records for activities previously criminalised but now perfectly within the scope of the law. However, there are different ways that legalising jurisdictions have sought to go about achieving this. Many of these are indicative of the wider legal framework within which states are acting, and are bound by, but the variety of approaches taken provide important lessons for regulating jurisdictions going forward.

There are three key mechanisms through which criminal record removal has been addressed: expungement, record sealing and criminal pardons. This chapter addresses each of these approaches in turn. A second question relates to the implementation of these mechanisms, which may rely on individual petition from an affected individual, or may be ‘automatic’ and be conducted by government or state apparatus. The merits of these contrasting approaches are analysed following discussion of the different record removal mechanisms.

³ Vermont General Assembly (2020) Senate Bill 234, s31(a)(2). <https://legislature.vermont.gov/bill/status/2020/S.234>

Expungement

'Expungement' quite literally means to strike out, eliminate, delete, or efface entirely. In the context of criminal records, it refers to the destruction or deletion of an individual's criminal record, though is often used more generally (and less accurately) to encompass the broad range of measures that may be taken to deal with criminal records (including the sealing, rather than deletion, of records – see [below](#)). In Massachusetts law, expungement is defined as:

*'[T]he permanent erasure or destruction of a record so that the record is no longer accessible to, or maintained by, the court, any criminal justice agencies or any other state agency, municipal agency or county agency. If the record contains information on a person other than the petitioner, it may be maintained with all identifying information of the petitioner permanently obliterated or erased'*⁴

Expungement is, therefore, the most effective mechanism to remove past criminal records. Criminal records encompass a broad range of interaction with the criminal justice system, but expungement measures may specifically require the court to *'issue an order to expunge all records and files related to the arrest, citation, investigation, charge, adjudication of guilt, criminal proceedings, and probation related to the sentence'* (Vermont).⁵ The effect of expungement is (or can be) that *'the person whose record is expunged shall be treated in all respects as if he or she had never been arrested, convicted, or sentenced for the offense'*,⁶ and that they *'shall not be required to acknowledge the existence of such a criminal history record'* in relation to employment

⁴ Massachusetts Government (2018) General Laws: c.276 § 100E <https://malegislature.gov/Laws/GeneralLaws/PartIV/TitleII/Chapter276/Section100E>

⁵ Vermont General Assembly (2020) Senate Bill 234, s31(c). <https://legislature.vermont.gov/bill/status/2020/S.234>

⁶ Vermont General Assembly (2020) Senate Bill 234, s31(c). <https://legislature.vermont.gov/bill/status/2020/S.234>

questionnaires or other circumstances (Vermont). The affected individual ‘may answer “no record”⁷ with respect to an inquiry herein relative to prior arrests, criminal court appearances, juvenile court appearances, adjudications, or convictions’ and expunged records shall not be admissible ‘in evidence or used in any way in any court proceedings or hearings before any boards or commissions or in determining suitability for the practice of any trade or profession requiring licensure’ (Massachusetts).⁸

The danger with keeping criminal records in existence, but simply sealed, or hidden, is that they may still serve to create stigma for individuals subject to them – as explored below. Completely eradicating evidence of interaction with the criminal justice system is the most effective way to erase this stigma and decriminalise individuals previously subject to law enforcement under prohibition. Of course, there may be procedural issues related with expungement – how can you be sure your record has actually been expunged? – which may be addressed through issuance of confirmatory documents. In Vermont, for instance, a certificate is issued to affected individuals confirming that their records have been expunged.⁹ For the court’s own records, to be able to validate that expungement has taken place, they are also required to keep a ‘special index’ of expunged cases, as well as copies of the certificates sent to affected individuals.¹⁰ There is, however, no parallel requirement for this in other jurisdictions operating expungement procedures, like Massachusetts. There remain questions over whether continued record keeping of this nature is procedurally necessary, and whether it is still liable to cause enduring stigma related to criminalisation. However, it is

⁷ Vermont General Assembly (2020) Senate Bill 234, s31(d)(2). <https://legislature.vermont.gov/bill/status/2020/S.234>

⁸ Massachusetts Government (2018) General Laws: c.276 § 100N. <https://www.mass.gov/info-details/mass-general-laws-c276-ss-100n>

⁹ Vermont General Assembly (2020) Senate Bill 234, s31(c). <https://legislature.vermont.gov/bill/status/2020/S.234>

¹⁰ Vermont General Assembly (2020) Senate Bill 234, s31(f)(1). <https://legislature.vermont.gov/bill/status/2020/S.234>

certainly important that affected individuals are notified (and fully informed) of the implications of their record being expunged.

On a practical level, the most important effect of expungement is allowing individuals to truthfully deny the existence of any offence, and the lifting of the practical barriers that individuals burdened with criminal records face. It may facilitate greater access to employment, for instance. However, on an individual level, it may also act as important personal recognition that an individual's actions were not *wrong*, and to remove their branding as a *criminal*. In this sense, expungement is also an effective way to acknowledge the errors of previous repressive cannabis laws and provide some symbolic reparation.

Record sealing

Expungement is technically different from '*record sealing*', a process whereby the criminal record isn't deleted, but is hidden from the public record. Record sealing can offer some similar benefits as expungement: for example, Colorado legislation makes clear that an individual whose record has been sealed '*may say that he or she "has not been criminally convicted"*'.¹¹ Practically, however, sealed records remain in existence. Indeed, sealed records may still create problems; where judicial officials or police see that an individual has a sealed record, they may assume the worst for their past behaviour, or may come to negatively associate sealed records with past drug offences. Further, while searches of individual records will not reveal charges or convictions in most cases, they may be revealed by other searches, such as for security clearances. In Washington, despite the fact that an individual

¹¹ Denver Government (2019) Turn Over a New Leaf Program. <https://www.denvergov.org/content/denvergov/en/denver-marijuana-information/DenverMarijuanaEquityandSocialJustice/TurnOverANewLeafProgram.html>.

*‘may state that he or she has never been convicted of that crime’, record sealing legislation specifically maintains that ‘nothing in this section affects or prevents the use of an offender’s prior conviction in a later criminal prosecution’.*¹²

Nonetheless, ‘expungement’ and ‘record sealing’ are regularly conflated. Media coverage of schemes in California, for example, often refer to ‘expungement’ although they involve the sealing of records rather than their deletion.¹³ Similarly, Senate Bill 420 in Oregon is headed ‘*Relating to expungement of marijuana-related convictions*’, but specifically only requires the Court to ‘*issue an order sealing the record of conviction and other official records in the case, including the records of arrest, citation or charge*’ (emphasis added).¹⁴ The effect of the order remains that an individual is ‘deemed not to have been previously convicted’,¹⁵ but records are explicitly sealed rather than destroyed. While special indexes may be kept by courts in expungement cases, as in Vermont, this does not amount to the retention of the entire record in the same way as record sealing does; indeed, in Vermont, the index may only detail ‘*the name of the person convicted of the offense, his or her date of birth, the docket number, and the criminal offense that was the subject of the expungement*’.¹⁶

Record sealing is, therefore, less optimal than expungement, but many states in the US exploring cannabis criminal record removal do not have expungement available within their legal systems, meaning record sealing is the best mechanism available.

¹² Washington State Legislature (2019) Senate Bill 5605, s1(6)(a). <https://app.leg.wa.gov/billsummary?BillNumber=5605&Chamber=Senate&Year=2019>.

¹³ California Legislative Information (2018) AB-1793 Cannabis Convictions: Resentencing. https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=20170180AB1793.

¹⁴ 78th Oregon Legislative Assembly (2015) Senate Bill 364. <https://gov.oregonlive.com/bill/2015/SB364/>; 80th Oregon Legislative Assembly (2019) Senate Bill 420. <https://gov.oregonlive.com/bill/2019/SB420/>.

¹⁵ 78th Oregon Legislative Assembly (2015). Senate Bill 364 <https://gov.oregonlive.com/bill/2015/SB364/>; 80th Oregon Legislative Assembly (2019) Senate Bill 420. <https://gov.oregonlive.com/bill/2019/SB420/>.

¹⁶ Vermont General Assembly (2020) Senate Bill 234, s31(f)(1). <https://legislature.vermont.gov/bill/status/2020/S.234>

Pardons

Record-sealing and expungement remain distinct from a ‘*pardon*’, a more limited measure that is present alongside record sealing measures in some US states. Generally, a pardon signifies formal *forgiveness* for a prior crime, but does not allow an individual to legitimately deny such a crime ever took place, as record sealing and expungement measures do.¹⁷ In Colorado, for instance, an executive order automatically pardoning nearly 3,000 individuals previously convicted of simple possession offences was issued in October 2020 – but crucially, the pardon leaves criminal records intact, merely referencing on the records that the individual offence in question has been pardoned.¹⁸

In Canada, ‘*pardons*’ are available for certain cannabis offences, and are variously referred to as ‘*record suspensions*’.¹⁹ Legislation requires that suspended records ‘*shall be kept separate and apart from other criminal records*’ and that ‘*no record of a conviction is to be disclosed to any person, nor is the existence of the record or the fact of the conviction to be disclosed to any person, without the prior approval of the Minister*’.²⁰ The requirement to keep a record ‘*separate*’ is, notably, less restrictive than sealing where the record is hidden from view, or expungement where it is deleted – though the process is not exactly a ‘*pardon*’ in the same sense as identified in Colorado. The Canadian government notes that suspended records would ‘*not normally be disclosed in a background check, such as*

¹⁷ See: Norcia, A. (2020) *How to Expunge Your Record for Cannabis Crimes: Illinois*, VICE 16th January. <https://www.vice.com/en/article/7kzb7e/how-to-expunge-your-record-weed-illinois>.

¹⁸ Awad, A.M. (2020) *Polis Issues New ‘Narrow’ Pardons For 2,732 Marijuana-Related Convictions*, CPR News 1st October. <https://www.cpr.org/2020/10/01/gov-polis-issues-new-narrow-pardons-for-2732-marijuana-related-convictions/>.

¹⁹ Public Safety Canada (2019) Bill C-93 – No-fee, Expedited Pardons for Simple Possession of Cannabis. <https://www.canada.ca/en/public-safety-canada/news/2019/06/bill-c-93--no-fee-expedited-pardons-for-simple-possession-of-cannabis.html>.

²⁰ Statutes of Canada (2019) Chapter 20: Bill C-93, s6.1. <https://parl.ca/DocumentViewer/en/42-1/bill/C-93/royal-assent>.

*for employment, housing or a passport’ (emphasis added).*²¹ The Canadian record suspension/pardon *‘removes any disqualification or obligation to which the applicant is, by reason of the conviction, subject’* except for certain listed legislative requirements, for example related to obtaining firearms in some instances.²²

What to do with historic criminal records was clearly an afterthought in the Canadian regulatory process. Post-legalisation, new legislation (Bill C-93) was passed to provide easier access to the record suspension measures, but only after the tireless advocacy of civil society groups.²³ The Bill sought to expedite and remove cost-barriers from the criminal records suspension process; however, it has been highly ineffective and very few affected persons have benefitted as a result. As of August 2020, one year after the Bill’s introduction, only 257 Canadians had received pardons for cannabis offences,²⁴ considerably less than the 10,000 Canadians the government had estimated were eligible and barely touching the more than 500,000 Canadians who continue to live with criminal records for minor offences, and the stigma stemming from prior cannabis convictions.²⁵ Bill C-93 has been heavily criticised by campaigners for not providing a fair and effective amnesty as it only provides for expedited pardons for a limited number of simple possession cases and retains restrictive applicant requirements

²¹ Public Safety Canada (2019) Bill C-93 – No-fee, Expedited Pardons for Simple Possession of Cannabis. <https://www.canada.ca/en/public-safety-canada/news/2019/06/bill-c-93--no-fee-expedited-pardons-for-simple-possession-of-cannabis.html>.

²² Statutes of Canada (2019) Chapter 20: Bill C-93, s3(2)(b). <https://parl.ca/DocumentViewer/en/42-1/bill/C-93/royal-assent>.

²³ Transform Drug Policy Foundation (2019) Cannabis Legalisation in Canada — One Year On. <https://transformdrugs.org/wp-content/uploads/2019/10/Canada-1-Year-on-Briefing-2019.pdf>; See: the work of Cannabis Amnesty <https://www.cannabisamnesty.ca>.

²⁴ Harris, K. (2020) *Just 257 pardons granted for pot possession in program’s 1st year*, CBC News 9th August. <https://www.cbc.ca/news/politics/cannabis-record-suspension-pardon-pot-1.5678144>

²⁵ McAleese, S. (2019) *Canada’s new lacklustre law for cannabis amnesty*, The Conversation 27th June. <http://theconversation.com/canadas-new-lacklustre-law-for-cannabis-amnesty-119220>

(such as having to obtain supporting documents from local police forces or courts).²⁶

The complex variation in how criminal record removal mechanisms operate in different jurisdictions is highlighted by the process in Illinois. Illinois legislation requires local law enforcement to automatically expunge records for offences up to 30g possession or possession with intent to deliver that did not lead to conviction (individual petition is available beyond this). However, for offences in the same range that did lead to conviction, Illinois legislation provides for an automatic ‘*pardon by the Governor which specifically authorizes expungement*’. The process is quite convoluted and involves a number of different bodies, but crucially it is not a ‘*pardon*’ in the sense identified in Colorado, or Canada, and involves a mixture of records being sealed and expunged. Following the issuance of such a pardon, an individual is entitled to have their record of arrest expunged and ‘*the records of the court clerk and the Department ... sealed until further order*’. Their name shall be ‘*obliterated*’ from the official index ‘*kept by the circuit court clerk... in connection with the arrest and conviction*’. The sealed records may then only be disseminated by the Department ‘*to the arresting authority, the State’s Attorney, and the court upon a later arrest for the same or similar offense or for the purpose of sentencing for any subsequent felony*’.²⁷ Clearly, then, this *does* allow for some dissemination of sealed records – though the destruction of others. The complexity of this procedure highlights why, in practice, ‘*record sealing*’, expungement and pardons are often confused and highly dependent on a jurisdiction’s existing legal framework.

²⁶ Cannabis Amnesty (2019) Statement on Bill C-93. https://www.cannabisamnesty.ca/statement_on_bill_c_93; Government of Canada (2019) Bill C-93 – No-fee, Expedited Pardons for Simple Possession of Cannabis. <https://www.canada.ca/en/public-safety-canada/news/2019/06/bill-c-93--no-fee-expedited-pardons-for-simple-possession-of-cannabis.html>.

²⁷ Illinois General Assembly (2019) House Bill 1438. 900-12, s5.2(e) Expungement, sealing, and immediate sealing (Page 395). <http://www.ilga.gov/legislation/publicacts/101/PDF/101-0027.pdf>.

All US states to legalise cannabis prior to November 2020, bar Maine and Alaska, operate procedures to allow for removal of criminal records for certain offences.²⁸ Sales in Maine began in 2020, but (as of November 2020) no expungement Bill has yet been passed. Alaska, in contrast, has had a retail market for a number of years, but with no expungement or record sealing procedure. Despite pressure on both states to implement procedures, it is unclear whether this will happen.²⁹ It is worth noting that record removal procedures are not dependent on legal regulation, and have also been implemented in jurisdictions where personal cannabis possession has simply been decriminalised – though these jurisdictions are not the subject of this chapter.

Approaches to criminal records in different legalisation jurisdictions

Jurisdiction	Type of criminal record removal available	Automatic?
Canada	Pardons/record suspensions ³⁰	No
Uruguay	None available at present ³¹	N/A
Alaska	None available at present ³²	Yes
California ³³	Record sealing	Yes

²⁸ As discussed below, four new states successfully voted through non-medical cannabis ballots in November 2020, with some explicitly planning expungement procedures and the situation in other states remaining unclear. New York also moved to legalise cannabis in 2021, with more states likely to follow in the coming months and years.

²⁹ See: Marijuana Policy Project (2019) Alaska lawmakers considering expungement bill, 8/3/19. <https://www.mpp.org/states/alaska/>.

³⁰ Government of Canada (2019) What is a Cannabis Record Suspension?. <https://www.canada.ca/en/parole-board/services/cannabis-record-suspensions/what-is-a-cannabis-record-suspension.html>

³¹ Government of Canada (2019) What is a Cannabis Record Suspension?. <https://www.canada.ca/en/parole-board/services/cannabis-record-suspensions/what-is-a-cannabis-record-suspension.html>

³² Efforts are ongoing by civil society to encourage the state to pass an expungement bill: Marijuana Policy Project (2019) Alaska lawmakers considering expungement bill. <https://www.mpp.org/states/alaska/>

³³ California Legislative Information (2018) AB-1793 Cannabis Convictions: Resentencing. https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1793.

Colorado	Record sealing ³⁴ Pardons ³⁵	No Yes
Illinois ³⁶	Expungement ³⁷	For certain offences ³⁸
Maine	None available at present ³⁹	N/A
Massachusetts ⁴⁰	Expungement	No
Michigan	Record sealing ⁴¹	For certain offences ⁴²
Nevada ⁴³	Record sealing Pardons ⁴⁴	No Yes

³⁴ Colorado General Assembly (2017) HB17-1266: Seal Misdemeanor Marijuana Conviction Records. <https://leg.colorado.gov/bills/hb17-1266>.

³⁵ Government of Colorado (2020) Gov. Polis Grants Historic Pardons for Marijuana Convictions. <https://www.colorado.gov/governor/news/3126-gov-polis-grants-historic-pardons-marijuana-convictions>.

³⁶ Illinois Government (2019) Adult Use Cannabis Summary. https://www2.illinois.gov/ISNews/20242-Summary_of_HB_1438_The_Cannabis_Regulation_and_Tax_Act.pdf.

³⁷ Law enforcement are required to automatically expunge all eligible records that did not result in a conviction by specified dates. Governor will grant pardons authorising expungement for convictions for possession and manufacturer or possession with intent to deliver for up to 30g. For more than this, individuals and State's Attorneys may file motions to Court for vacation (up to 500g).

³⁸ See: Government of Illinois (2019) Adult Use Cannabis Summary. https://www2.illinois.gov/ISNews/20242-Summary_of_HB_1438_The_Cannabis_Regulation_and_Tax_Act.pdf; Norcia, A. (2020) *How to Expunge Your Record for Cannabis Crimes: Illinois*, VICE 16th January. <https://www.vice.com/en/article/7kzb7e/how-to-expunge-your-record-weed-illinois>.

³⁹ A bill was proposed which would have required 'the Department of Public Safety to expunge, by July 1, 2020, all records relating to criminal convictions for conduct now authorised by the adult use of marijuana provisions. However, the bill has subsequently been declared "dead"': Maine Legislature (2019) Legislative Document No. 991 Resolve, To Expunge Criminal and Civil Records Related to Marijuana Activities Legalized by the Voters of Maine. https://legislature.maine.gov/legis/bills/bills_129th/billtexts/SP028101.asp; Maine Legislature (2019). Summary of LD 991. <http://legislature.maine.gov/LawMakerWeb/summary.asp?ID=280072057>.

⁴⁰ Massachusetts Government (2018) c.276 § 100K Expungement of record resulting from false identification, an offense no longer a crime at time of expungement, error or fraud. <https://www.mass.gov/info-details/mass-general-laws-c276-ss-100k>.

⁴¹ House Bill 4982 allows for certain offences to be set aside. However, despite widely being reported as expungement, the Act provides for the 'retention of certain nonpublic records': Michigan Legislature (2019) House Bill 4982. <http://legislature.mi.gov/doc.aspx?2019-HB-4982>.

⁴² House Bill 4982 requires individuals to apply, but a separate House Bill 4980 aims to automate a record clearing process for certain misdemeanour offences more broadly in the longer term: Michigan Legislature (2019) House Bill 4980. <http://legislature.mi.gov/doc.aspx?2019-HB-4980>.

⁴³ Nevada Electronic Legislative Information System (2019) Assembly Bill No. 192. <https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6296/Text/>.

⁴⁴ Government of Nevada (2020) Nevada State Board of Pardons Commissioners passes resolution pardoning those convicted of minor marijuana offenses. https://gov.nv.gov/News/Press/2020/Nevada_State_Board_of_Pardons_Commissioners_passes_resolution_pardoning_those_convicted_of_minor_marijuana_offenses/.

Oregon	Record sealing ⁴⁵	No
Vermont ⁴⁶	Expungement	Yes
Washington	Record sealing ⁴⁷ Pardons ⁴⁸	No No

Table is as of November 2020. Ballot measures legalising cannabis passed in Arizona, Montana, New Jersey and South Dakota in November 2020 – with more set to follow in 2021 (including New York and New Mexico) and later. In Arizona, expungement was on the ballot paper (though it is not clear if this would be automatic); in Montana, non-automatic expungement was on the ballot paper; in New Jersey, certain record sealing processes already exist for cannabis offences, but it is unclear if they will be expanded; expungement was not referenced on the ballot paper in South Dakota. Where states intend to authorise expungement or record sealing, this will likely be dealt in initial legislation but, as of November 2020, full details are unclear.

‘Automatic’ record removal

The process for criminal record removal can be initiated by the affected individual, or by the state apparatus. The most wide-reaching legislative measures *require* the state apparatus to identify and remove eligible criminal records within a certain timeframe – known as ‘automatic’ record removal. This is always preferable. When the onus is on individuals to apply to have their own records sealed, pardoned or expunged, fewer eligible people are likely to benefit. Court filing fees may apply, alongside other administrative requirements, creating barriers to application. In Canada, for example, Bill C-93 removed the \$631 application fee that individuals were previously required to pay in order to have a record pardoned/suspended – recognising the calls of campaigners

⁴⁵ 78th Oregon Legislative Assembly (2015) Senate Bill 364. <https://gov.oregonlive.com/bill/2015/SB364/>; 80th Oregon Legislative Assembly (2019) Senate Bill 420. <https://gov.oregonlive.com/bill/2019/SB420/>.

⁴⁶ Vermont General Assembly (2020) Senate Bill 234. <https://legislature.vermont.gov/bill/status/2020/S.234>.

⁴⁷ Washington State Legislature (2019) Senate Bill 5605. <https://app.leg.wa.gov/bills/summary?BillNumber=5605&Chamber=Senate&Year=2019>. Individuals may apply to the sentencing Court to vacate their conviction records for misdemeanour cannabis offences. Washington law does not allow court records to be expunged, however, so vacation will not amount to expungement: Seattle Municipal Court (Undated) *Vacating a Conviction*. <https://www.seattle.gov/courts/programs-and-services/vacating-a-conviction>.

⁴⁸ Washington Governor (2019) Marijuana Justice Initiative. <https://www.governor.wa.gov/marijuanajustice>.

that this made the process more arduous for affected individuals, and may deter people from applying. However, individuals may still be required to pay to obtain certain key documents to complete their application from the courts or police,⁴⁹ which are indirect prohibitive costs and still constitute a serious barrier to records being pardoned/suspended.⁵⁰

Even if such documents were available free of charge, the administrative process of obtaining these documents may still be prohibitive and result in a highly reduced number of applications. People may also be *'so traumatized from the system'* that they do not want to put themselves through court processes to clear their names.⁵¹ Criminalisation is a trauma, and requiring affected individuals to make all the effort to clear their names seems disrespectful. The individuals most likely to be deterred are those from poorer backgrounds, meaning those from areas disproportionately impacted by cannabis prohibition (and likely to be targeted by social equity schemes; see the chapter on vendors, **Section 2G**) are less likely to benefit from expungement provisions. Record sealing in Colorado has been heavily criticised as, of 10,000 potentially eligible individuals, Denver received only 176 applications in the first three months of 2019 – only 38 of whom were actually eligible.⁵² Similarly, as discussed above, Canada had implemented only 257 pardons in the first year they were made available.

49 Public Safety Canada (2019) Bill C-93 – No-fee, Expedited Pardons for Simple Possession of Cannabis. <https://www.canada.ca/en/public-safety-canada/news/2019/06/bill-c-93--no-fee-expedited-pardons-for-simple-possession-of-cannabis.html>.

50 Cannabis Amnesty (2019) Statement on Bill C-93. https://www.cannabisamnesty.ca/statement_on_bill_c_93.

51 Krishnan, M. (2019) *A Notorious Ex-Cocaine Trafficker Is Helping Black People Sell Legal Weed*, VICE 26th November. https://www.vice.com/en_uk/article/wjwmk5/a-notorious-cocaine-trafficker-freeway-rickross-is-helping-black-people-sell-legal-weed.

52 Pampuro, A. (2019) *Colorado Makes Slow Move to Erase Old Pot Convictions*, Courthouse News Service 12/3/19. <https://www.courthousenews.com/colorado-makes-slow-move-to-erase-old-pot-convictions/>

Jurisdictions should seek to remove all such administrative and cost barriers to ensure more equitable and comprehensive accessibility of criminal record removal processes. After a campaign for reform, Oregon introduced legislation to reduce administrative burdens, and remove court filing fees for record sealing, at the start of 2020.⁵³ Automatic record removal, however, lifts these barriers entirely: requiring no action on the part of the affected individual, and instead placing the onus on law enforcement, the courts, justice department or relevant designated agency. Removing barriers completely is the most effective way to maximise the number of people benefitting, but such automatic record removal is also desirable from a symbolic standpoint; it is the state that has harmed these individuals, and it should therefore be the state that takes the first steps to redress these harms. Record removal should not rely on affected individuals to come forward and apply to the same courts that criminalised them. Similarly, affected individuals should be able to expect the expunging agency to contact them to confirm the records have been expunged, rather than having to reach out for confirmation themselves.

Automatic record removal is comparatively rare in jurisdictions to have already legalised cannabis. As well as Illinois, which, as discussed above, operates automatic expungement for offences up to 30g possession for personal use, or with intent to deliver, Vermont has legislated an automatic expungement Bill, which requires the Criminal Division of the Superior Court to expunge all records by 1 January 2022.⁵⁴ Automatic expungement in Illinois appears to have been one of the most successful US schemes, with 500,000 records expunged by early 2021 – far ahead of the 2025 deadline the state

⁵³ ACLU Oregon (2019) Expunge and reduce Cannabis Criminal Records — SB 420 & SB 975. <https://www.aclu-or.org/en/legislation/expunge-and-reduce-cannabis-criminal-records-sb-420-sb-975-2019>.

⁵⁴ Vermont General Assembly (2020) Senate Bill 234, s31(b). <https://legislature.vermont.gov/bill/status/2020/S.234>.

was set.⁵⁵ The proposed MORE Act at a federal level in the US (which would decriminalise and deschedule cannabis, meaning cannabis would no longer be ‘illegal’ at a federal level, and removing barriers to state-level legalisation) also foresees automatic expungement schemes. It would require each federal district, within one year, to ‘conduct a comprehensive review and issue an order expunging each conviction ... for a non-violent federal cannabis offense’, as well as ‘any arrests associated with each expunged conviction or adjudication of juvenile delinquency’. The Act would require individuals to be notified, as well as providing them with a right to petition the courts for expungement (presumably, in case they are missed out by the automatic measures). Records relating to the conviction, however, are actually only required to be sealed rather than expunged, albeit they may only be made available by further order of the court.⁵⁶

California has also initiated a relatively well-publicised automatic record sealing scheme. In California, Assembly Bill 1793 required the Department of Justice to review past cannabis convictions to determine all cases which were eligible for recall or dismissal of a sentence, dismissal and sealing, or redesignation, by 1 July 2020.⁵⁷ This is clearly a positive measure, as the duty to seal individual records fell on the Department of Justice, rather than on affected individuals. However, Californian experiences also highlighted difficulties organising an automatic process, as the onus in this instance is on District Attorneys – who would have been prosecuting affected individuals previously – to remove criminal records. From a symbolic standpoint, this may be quite powerful, but from a conflict of interest standpoint it may be sub-optimal.

⁵⁵ Massie, G. (2021) *Illinois erases 500,000 low-level cannabis charges*, Independent 2nd January. <https://www.independent.co.uk/news/world/americas/illinois-cannabis-drugs-charges-legalisation-b7781569.html/>

⁵⁶ US Congress (2019-2020), H.R.3884 — MORE Act of 2020, Sec.10: Resentencing and Expungement. <https://www.congress.gov/bills/116th/congress/house-bill/3884/text>.

⁵⁷ California Legislative Information (2018) AB-1793 Cannabis Convictions: Resentencing. https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1793.

There are also inevitably capacity issues with such large-scale record sealing processes, which may hold the process up. In some areas of California, therefore, technological solutions have helped streamline the process of identifying eligible individuals. For instance, Yolo County was able to automatically seal 728 convictions with the assistance of a non-profit tech partner, Code for America. This programme was made available to District Attorneys across California, but owing to inconsistencies in data collection across courts and prosecutors' offices, there were issues with state-wide implementation.¹ In February 2020, Los Angeles worked with Code for America to dismiss 66,000 cannabis convictions, meaning the non-profit helped seal 85,000 cannabis convictions across five counties in California.² Such technological solutions will no doubt prove valuable as other jurisdictions with large catalogues of criminal records implement decriminalisation and legal regulation.

Conclusion

Despite being much-lauded, and highlighting innovative practice for other jurisdictions to learn from, the California scheme remains less-than-ideal as it only amounts to record sealing, rather than expungement. Likewise, automatic pardon schemes in Colorado³ and Nevada⁴ bring important benefits for a limited number of individuals, but ultimately are less beneficial than if the individuals in question had their records expunged entirely. States may be restricted in what they can offer; in Colorado, drafters

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- 1 Cowan, J (2019) *Thousands of Californians Could Get Their Marijuana Convictions Cleared. But It's Complicated*, California Today 5th September. <https://www.nytimes.com/2019/09/05/us/marijuana-proposition-64-code-for-america.html>.
 - 2 The Guardian, Staff and Agencies (2020) *Los Angeles to dismiss 66,000 marijuana convictions*, The Guardian 14th February. <https://www.theguardian.com/us-news/2020/feb/14/los-angeles-marijuana-convictions-dismissed>.
 - 3 Government of Colorado (2020) *Gov. Polis Grants Historic Pardons for Marijuana Convictions*. <https://www.colorado.gov/governor/news/3126-gov-polis-grants-historic-pardons-marijuana-convictions>.
 - 4 Government of Nevada (2020) *Nevada State Board of Pardons Commissioners passes resolution pardoning those convicted of minor marijuana offenses*. https://gov.nv.gov/News/Press/2020/Nevada_State_Board_of_Pardons_Commissioners_passes_resolution_pardoning_those_convicted_of_minor_marijuana_offenses/.

acknowledged that pardons were more limited than record sealing or expungement, but were limited by the fact that expungement doesn't exist within Colorado legal apparatus⁵ — likewise, Washington law does not allow for court records to be expunged.⁶ Expungement is therefore the most desirable mechanism, but may not be possible within all legal systems: in which case, legislators should seek to implement the strongest possible measures to provide all the same practical benefits, while preventing any records from being disclosed. In all cases, legislators should aim for record removal to be automatic, and for all eligible individuals to be notified of their record expungement and its implications; it should not be left up to affected individuals to redress the harms they experienced, action should instead be taken directly by the Department of Justice, or most appropriate state apparatus.

⁵ Awad, A.M. (2020) *Polis Issues New 'Narrow' Pardons For 2,732 Marijuana-Related Convictions*, CPR News 1st October. <https://www.cpr.org/2020/10/01/gov-polis-issues-new-narrow-pardons-for-2732-marijuana-related-convictions/>.

⁶ See: Seattle Municipal Court (Undated). *Vacating a Conviction*. <https://www.seattle.gov/courts/programs-and-services/vacating-a-conviction>.

b Corporate capture

Challenges

- Ensuring equitable access to the market, promoting the interests of smaller businesses, and preventing the emergence of corporate monopolies
- Learning from the experiences of alcohol and tobacco, where corporate lobbying has weakened legislation
- In applicable jurisdictions, transitioning from medical cannabis markets in a way that is consistent with social equity aims

Analysis

- Corporate capture of the policy process and the emergence of corporate monopolies and oligopolies can reduce the likelihood of effective public health legislation being developed
- Mitigating risks of corporate capture must be done from the outset, before problematic market dynamics are established, to minimise friction with corporate lobbying interests – which will only become more ingrained, and resistant to change, over time
- Experiences in North America suggests that there will be great speculative investor interest in large emerging legal cannabis markets as legalisation gathers momentum
- Greater focus on product development in legal cannabis markets is leading to increasing cross-sector investment, including from tobacco and alcohol corporations
- Without adequate protection, the development of lucrative national markets will lead to the emergence of powerful multinational entities, able to exploit emerging markets in developing regions. This may be at odds with sustainable development goals and warrants action at national and international levels

- Equitable licensing policies can help prevent the monopolisation of retail by powerful market actors

Recommendations

- Equitable licensing policies should be hardwired into legislation from the outset to ensure fair market access to small businesses, local providers and communities historically impacted by drug prohibition
- Restrictions should be made on the number of licences available per applicant, or the amount of cannabis a single applicant is able to cultivate, to prevent corporate capture
- Close attention should be paid to experiences with alcohol, tobacco and emerging cannabis regulation, to ensure that mistakes are not repeated. Regulation should seek to reduce or prevent the influence and involvement of alcohol and tobacco actors in the cannabis industry – effective implementation of the above two recommendations will go a long way to achieving this
- Mechanisms should be established to ensure full transparency and accountability regarding corporate lobbying and other forms of influence over policymakers and officials.
- Effective international coordination will be needed to ensure cannabis legalisation supports sustainable development goals

In **Section 1**, we outlined seven key aims of cannabis policy, including the protection of public health, promotion of social justice and equity, and reduction of drug-related crime. As discussed throughout this book, cannabis policy making should be evidence based; policymakers should monitor, evaluate performance against, and improve outcomes in relation to these identified key aims. Cannabis policy that adopts such an approach, while seeking to promote social justice and protect public health, should naturally guard against excessive corporate influence – which will generally,

if not inevitably, preference profit maximisation over public health or social justice, and is only concerned with externalities where profits are threatened.

The concept of ‘*corporate capture*’ refers to the means by which corporate entities pursue profit and power by ‘*exerting undue influence over domestic and international decision-makers and public institutions*’.¹ Such ‘*corporate capture*’ may weaken regulatory powers, as well as ‘*undermine the realization of human rights and the environment by exerting undue influence over domestic and international decision-makers and public institutions*’ more generally.² The mechanisms by which such influence is exerted can include: overt and behind the scenes and ‘*soft*’ lobbying (including provision of hospitality); direct and indirect funding of politicians or political parties; influencing provision of expertise through funding of think tanks, civil society organisations and academia; membership of government committees or task forces; and ‘*revolving doors*’ movement of staff between corporate and government posts.

Guarding against excessive influence in policy making necessitates constraining corporate power more generally, to prevent the emergence of corporate monopolies or market dominance by a few large actors. The history of both alcohol and tobacco regulation illustrate how difficult this can be. Starting from scratch, as would be the case in many jurisdictions for cannabis, offers an opportunity to learn from the lessons in other regulated drug sectors, as well as emerging experiences in cannabis markets, which are discussed in this chapter.

1 International Network for Economic, Social and Cultural Rights (Undated) Corporate Capture Project.
<https://www.escr-net.org/corporateaccountability/corporatecapture>.

2 International Network for Economic, Social and Cultural Rights (Undated) About Corporate Capture.
<https://www.escr-net.org/corporateaccountability/corporatecapture/about>.

It may, however, already be too late to ‘*start from scratch*’, or at least to start *completely* from scratch (something also discussed in [Section 2A](#)). Legal regulation in Canada has already led to the establishment of several multinational cannabis producers valued in multiple billions of dollars. While the overwhelming majority of non-medical market space is concentrated in North America, the similarity between medical and non-medical products means that Canadian market actors in particular have been able to seamlessly shift attention to, and obtain a stake in, medical markets elsewhere. The existence of multinational corporations also means that powerful entities are already waiting in the wings to capture emerging non-medical market space as it develops. Relatedly, the emergence of medical markets in a number of jurisdictions means that market dynamics favouring larger, more established businesses are already evident – given that many of these medical producers and retailers will inevitably seek to expand to serve the non-medical market once it is legalised.

This may not, therefore, be a complete blank slate. However, the first steps of legal regulation remain a vital opportunity to set goals and parameters, establishing the controls necessary to protect against corporate capture from the outset – through initial legislation and regulations. This includes the adoption of equitable licensing policies and social equity programmes, as discussed in the chapter on vendors ([Section 2G](#)).

The discussion in this chapter assumes that some level of corporate involvement in the market is permitted. However, as made clear in Section 1, state monopoly control over elements of the market remains a viable and important option – and one that would, by removing the involvement of corporate actors, thoroughly deal with concerns over corporate capture (at least in those monopolised elements of the market). For this, and other reasons, state monopolies over parts or all of the market (or other

regulatory models with increased government control, like the Borland model) should be given serious consideration, and are recommended, at least as a strategy for the commencement of the legal market while new norms are established.

Moving from a medical market

As discussed above, the *'blank slate'* of legal regulation can be muddled by existing medical cannabis markets. For jurisdictions with existing medical markets that wish to promote equitable market access, there is an inevitably unequal playing field, given some businesses are already well established, licensed and experienced at producing or retailing cannabis products. New actors looking to break into the market will face a strong competitive disadvantage, potentially requiring intervention to re-level this playing field. This is a key tenet of promoting *'equity'* and ensuring a diverse market.

Most US states that have legalised non-medical cannabis have done so with pre-existing medical markets in place. Since legal regulation creates new administrative burdens, some states have implemented strategies which either directly or indirectly favour existing medical businesses. Such strategies simplify the administrative process; however they also create significant barriers to diverse participation in the market, and limit access for local small businesses, who may well represent the local communities more closely than the larger operators.

As discussed in [Section 2A](#), Colorado's initial regulatory model indirectly preferenced existing medical actors by requiring that retailers produced at least 70% of cannabis that they sold. This requirement was pushed for by existing medical businesses as it was already in force to regulate medical cannabis sales, meaning these

businesses had already achieved compliance with this regulatory hurdle, potentially prohibitive for smaller market actors. Indeed the requirement had the effect of delaying market access for new businesses, which had to develop capacity to overcome this hurdle.

Legalising states in the US have also pursued direct preferencing of existing medical businesses in initial licensing procedures. In Illinois, an ‘*early application*’ scheme for non-medical licences was implemented for established medical cannabis businesses in January 2020 – albeit for application fees of \$30,000 plus 3% of the organisation’s annual sales revenue.³ In Michigan, the Marijuana Regulatory Agency made it a requirement for a number of its licence types that primary applicants already possess a medical cannabis operating licence. This included all licences retailing and processing cannabis, as well as the majority of cultivation licence types. Michigan also established equivalent licence types between medical and non-medical cannabis regulations, and allowed medical businesses to transfer 50% of their product for non-medical sales to streamline the transition.⁴

There is clearly some merit to preferential treatment from an administrative perspective. In some states, such as Michigan, this approach allowed non-medical sales to begin relatively quickly once licence applications opened. But, unless social justice and equity were key goals in medical licensing undertaken beforehand, the favouring of existing licence holders is unlikely to promote these outcomes. This is likely to be a bigger problem where medical markets are more established, have existed for longer, or are larger in size. Similarly, larger, well-established medical markets may lead to other licensing

3 Illinois Department of Financial and Professional Regulation (Undated) Instructions for Early Approval Adult Use Dispensing or Organization License — Same Site. <https://www.idfpr.com/Forms/AUC/F2365.pdf>.

4 Michigan Department of Licensing and Regulatory Affairs (2019) Marijuana Regulatory Agency Releases Adult-Use Application. <https://www.michigan.gov/lara/0,4601,7-154-89505-509160--,00.html>; Mauger, C (2019) Michigan issues first license to sell recreational marijuana, The Detroit News 19th November. <https://eu.detroitnews.com/story/news/local/michigan/2019/11/19/michigan-issues-1st-recreational-marijuana-license/4237643002/>.

challenges; the long-established nature of Californian medical market actors has been linked to an enduring ‘grey’ market – whereby relatively light-touch state regulation or tolerance policies meant medical provision often acted as a retail proxy for non-medical consumers. In this context the aim of legal supply chains to ‘capture the market’ has proved challenging even after licensed non-medical sales were able to begin. Where established ‘grey’ markets already exist, licensing procedures are almost retroactive in nature; sales have already been tolerated for long periods of time, but now market actors are required to engage with often complex licensing procedures – with little incentive other than the sudden threat of enforcement – to perform the same activities.

As cannabis markets develop worldwide, many large cannabis companies are seeking to establish themselves in existing medical markets, speculating that future legal regulation may offer lucrative opportunities for those first through the door.⁵ Experiences in the US suggest that this may be a worthwhile strategy from a business perspective. From a regulatory perspective, however, these experiences highlight the need to pursue strong and effective licensing policies from the outset. Allowing established players to entrench and corner these markets, especially ahead of full legalisation, risks negating social equity measures later on.

Experiences from Canada

As touched on above, there is a long and well-documented history of powerful alcohol and tobacco industry actors deploying legal, PR

5 Connexion Journalist (2020) *French medical cannabis trial sparks market battle*, The Connexion 7th February. <https://www.connexionfrance.com/French-news/French-medical-cannabis-trial-sparks-market-battle-between-Canadian-and-European-firms>; Pascual, A. (2019). *Netherlands to expand cannabis production, potentially creating competition for Bedrocan*, Marijuana Business Daily 24th April. <https://mjbizdaily.com/netherlands-to-expand-cannabis-production-potentially-jeopardizing-bedrocans-monopoly/>; Aurora Cannabis Inc (2018). *First License to Import, Manufacture, Store, and Distribute Medical Cannabis Containing THC in Mexico*, Cision PR Newswire 10th December. <https://www.prnewswire.com/news-releases/aurora-cannabis-to-acquire-mexicos-farmacias-magistrales-sa-300762402.html>.

and lobbying resources to undermine efforts to restrict or regulate their activities, and seeking to undermine research evidence that supports stricter regulation. Any regime of regulated drug markets has to be designed to mitigate this risk, and be robust enough to resist the intense pressure that powerful commercial players are able to exert. Indeed, many of the largest alcohol and tobacco companies are seeking to become key players in future cannabis markets. This should be resisted, with regulatory measures in place to prevent or limit their involvement.

The experiences of Canada are instructive for a number of reasons. Firstly, Canada – with a population of nearly 40 million – was the largest nationwide cannabis market at the time of its inception; while Uruguay regulated cannabis beforehand, it has one tenth the population size. Federal illegality in the US (although presently being challenged through the MORE Act) means that, despite the existence of multi-state operators, cannabis is effectively managed in a series of internal markets, with import and sale between states remaining illegal. Secondly, it is Canadian businesses more than any other that presently dominate international cannabis markets. Finally, it is clear that Canadian regulation did not do enough to guard against corporate capture from the outset, or maximise the opportunity to ‘*start from scratch*’ with a new market commodity – in part, perhaps, because so many actors already operated in the existing medical market – and that this has led to the concentration of market share (and, accordingly, power) among a select few actors.⁶

⁶ A direct consequence of this is the lack of diversity among executives and directors, see: Maghsoudi, N. et al (2020) *How Diverse is Canada's Legal Cannabis Industry? Examining Race and Gender of its Executives and Directors*, Centre on Drug Policy Evaluation. <https://cdpe.org/publication/how-diverse-is-canadas-legal-cannabis-industry-examining-race-and-gender-of-its-executives-and-directors/>.

Background⁷

The emergence of the Canadian cannabis non-medical market in 2018 contributed to the so-called ‘*green rush*’ among stock market investors, with huge investment pouring into what was seen as a potentially profitable new commodity. Following legal regulation, a number of federally-licensed producers benefited from large (mainly speculative) investments. Heavy early investment was scaled back once the market picture became clearer, however, and stock prices dropped dramatically in the second half of 2019. The value of Canopy Growth and Cronos Group, two of the largest producers, more than halved between April and November 2019, while Aurora Cannabis dropped by around three quarters in the same period. There has since been an upturn in the market, but the cannabis industry speculator ‘*bubble*’ has seemingly burst. This resulted in reduced investment as well as significant job losses by October 2019.⁸

Demand for cannabis remains high, and the market is likely to grow again (particularly as the illegal market continues to be subsumed). Indeed, cannabis sales in 2020 grew substantially from 2019 despite store access being reduced due to COVID-19.⁹ This was in direct contrast to other industries, with general retail sales in all Canadian sectors falling 10%.¹⁰ But in Canada, there certainly appears to have been initial overestimation of potential profitability, resulting in the realignment of market perceptions in late-2019.

7 The below text is extracted and adapted from: Slade, H. (2020) Capturing the market: Cannabis regulation in Canada, Transform Drug Policy Foundation and MUCD. <https://transformdrugs.org/product/capturing-the-market/>.

8 Gaviola, A. (2019) Major Weed Companies Are Cutting Hundreds of Jobs as the Industry Struggles, VICE 25th October. https://www.vice.com/en_ca/article/zmjk7w/major-canadian-weed-companies-are-cutting-hundreds-of-jobs-as-the-industry-struggles; McBride, S. (2019) Aurora Cannabis Is Dumping Its Pot, Which May Be A Sign It's All Over, Forbes 21st October. <https://www.forbes.com/sites/stephenmcbride1/2019/10/21/aurora-cannabis-is-dumping-its-pot-which-may-be-a-sign-its-all-over/#329811305775>.

9 Statistics Canada (Undated) Cannabis Stats Hub: Sales from Cannabis Stores. <https://www150.statcan.gc.ca/n1/pub/13-610-x/cannabis-eng.htm>.

10 Canadian Centre on Substance Use and Addiction (2021) Cannabis Retail During COVID-19. <https://www.ccsa.ca/cannabis-retail-during-covid-19-policy-brief>.

The beneficiaries

Despite hopes that the introduction of ‘*micro-cultivation*’ licences would open the market to smaller producers in Canada, this has not been the case. In 2019, the federal government announced that, in order to apply for a licence, potential suppliers were required to already have a production facility in place.¹¹ This meant that those unable to risk the initial investment costs, running to tens, if not hundreds of thousands of dollars, were deterred from applying. This contributed to an emerging market dominated by a relatively small number of large corporate actors.

The majority of money in the market is being made by large producers, who are licensed at a federal level and whose products can be sold by retailers across the country. In comparison, retail is managed by individual provinces and territories, some of which do not allow private retail actors at all. However, Canopy Growth (one of the largest producers) in particular has also made moves in provincial and territorial retail markets. In Nunavut, as of 2020, cannabis could only be purchased online from the Nunavut Liquor and Cannabis agency’s ‘*approved agents*’, Canopy Growth and AgMedica, meaning the two in effect already had a retail market duopoly.¹² In January 2020, Canopy was also reported as a frontrunner to take over Cannabis New Brunswick, the agency overseeing all retail sale in New Brunswick, which would have marked a shift from a government monopoly to a corporate monopoly in the region.¹³ In other provinces, however, the potential for cannabis corporations to dominate the market at a retail level

11 Government of Canada (2019) *Cannabis duty — Apply for a cannabis licence*.
<https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/excise-duties-levies/apply-cannabis-licence.html>.

12 Nunavut Liquor and Cannabis (Undated) Cannabis Purchasing.
<https://www.nulc.ca/news/?id=adff6310-40ce-e811-a979-000d3af49637>; Government of Nunavut (2019) Buying cannabis legally in Nunavut.

13 Magee, S. (2020) *Eight companies seek to take over Cannabis NB*, CBC 13th January.
<https://www.cbc.ca/news/canada/new-brunswick/cannabis-pot-new-brunswick-companies-1.5424992>.

is limited by regulations: in Alberta, for instance, individuals or ‘groups of persons’ are not allowed to hold more than 15% of total licences at any one time.¹⁴ This kind of licence limitation is vital to prevent monopolies and to facilitate wider market access.

International corporate capture

In recent years, Canadian companies have established a strong base for international expansion. So far, this has mostly involved capturing medical cannabis market space. Nevertheless, diversifying from one to the other is relatively simple. This is particularly the case given that many of the Canadian producers were, prior to October 2017, already licensed producers in the Canadian medical market. We are therefore seeing Canadian companies, flush with speculative capital investment, globalising quickly: Canopy Growth already has established a medical presence in Australia, Europe, Africa and South America, largely through its subsidiary, Spectrum Therapeutics, while Cronos Group similarly operates across five continents.¹⁵

This has left Canadian companies in a strong position to take first advantage over potential cannabis legalisation. In France, for example, a market battle was sparked in early 2020 between Canadian companies and French producers ahead of a French trial of medical cannabis.¹⁶ In 2019, Aurora Cannabis bought facilities in the Netherlands following news that the Dutch government was potentially expanding scope for medical cannabis beyond the Dutch monopoly-holder Bedrocan (which, in turn, previously operated a

¹⁴ Province of Alberta (2018) Gaming, Liquor and Cannabis Act: Gaming and Liquor Amendment Regulation, s106. http://www.qp.alberta.ca/documents/orders/Orders_in_Council/2018/218/2018_027.pdf.

¹⁵ Spectrum Therapeutics (Undated) Global Footprint. <https://www.spectrumtherapeutics.com/international/en>; Cronos Group (Undated) Brands. <https://thecronosgroup.com/brands.php>

¹⁶ Connexion Journalist (2020) *French medical cannabis trial sparks market battle*, The Connexion 7th February. <https://www.connexionfrance.com/French-news/French-medical-cannabis-trial-sparks-market-battle-between-Canadian-and-European-firms>.

joint licensing agreement with Canopy Growth in Canada).¹⁷ In 2018, Aurora Cannabis acquired the first Mexican company to obtain a medical cannabis distribution licence in 2018 (Mexico is legally regulating cannabis for non-medical consumption in 2021) while, in June 2019, Canopy announced a \$3.4 billion deal to purchase US-based cannabis company Acreage, with a specific requirement being that the US legalises non-medical cannabis at the federal level within the next 7.5 years.¹⁸ Canopy reportedly has at least two other similar deals with US companies.¹⁹

Market capture by Canadian companies in South America has drawn particular criticism. The Colombian Association of Cannabis Industries has estimated that medicinal cannabis companies in Colombia are nearly 75% owned by foreign investors. Over \$600 million was invested in the Colombian market between January 2018 and June 2019, mainly by Canadian companies.²⁰ In 2018, Canopy Growth purchased Colombian company Spectrum Cannabis for \$60 million, which it has since rebranded into its international medical subsidiary, Spectrum Therapeutics. Through Spectrum, it is licensed to produce cannabis over 13.6 million square feet in Colombia.²¹ Meanwhile, Cronos Group has established a joint venture with an affiliate of Colombia's leading agricultural services provider to *'develop, cultivate, manufacture and export cannabis-*

¹⁷ Pascual, A. (2019) Netherlands to expand cannabis production, potentially creating competition for Bedrocan, Marijuana Business Daily 24th April. <https://mjbizdaily.com/netherlands-to-expand-cannabis-production-potentially-jeopardizing-bedrocans-monopoly/>.

¹⁸ Aurora Cannabis Inc (2018) First License to Import, Manufacture, Store, and Distribute Medical Cannabis Containing THC in Mexico, Cision PR Newswire 10th December. <https://www.prnewswire.com/news-releases/aurora-cannabis-to-acquire-mexicos-farmacias-magistrales-sa-300762402.html>; Dorbian, I. (2019) Canopy And Acreage Shareholders Approve \$3.4 Billion Deal, But Don't Party Yet, Forbes 21st June. <https://www.forbes.com/sites/irisdorbian/2019/06/21/canopy-and-acreage-shareholders-approve-3-4-billion-deal-but-dont-party-yet/#22ff1cda26d0>.

¹⁹ Linnane, C. (2019) Cannabis stocks higher as Canopy shareholders meet, CannTrust unveils California venture, Market Watch 20th June. <https://www.marketwatch.com/story/cannabis-stocks-higher-as-canopy-shareholders-meet-canntrust-unveils-california-venture-2019-06-19>.

²⁰ Rivera, N.M. (2019) The Challenges of Medicinal Cannabis in Colombia: A look at small — and medium — scale growers, Transnational Institute, p16. https://www.tni.org/files/publication-downloads/policybrief_52_eng_web.pdf.

²¹ See above footnote; Troup, R. (2019) Canopy Growth Provides International Update on Latin America, Australia, Europe and Africa, Signs Multi-Year Colombia Deal, Cannabis Investor 17th June. <https://www.thecannabisinvestor.ca/canopy-growth-provides-international-update-on-latin-america-australia-europe-and-africa-signs-multi-year-colombia-deal/>.

based medicinal and consumer products for the Latin American and global markets.²² Elsewhere in South America, Aurora Cannabis, which has investment in 25 countries, purchased ICC Labs in 2018, obtaining over 70% market share in Uruguay in the process.²³

While South America has drawn the majority of attention at present, this will no doubt be an issue elsewhere going forward; Canadian companies have also been quick to exploit the opportunity created by the legalisation of medical cannabis production in Lesotho, with multi-million dollar investments in local farms and companies.²⁴ All of this raises important questions going forward on how markets should be structured, how traditional cannabis growing communities can be protected, and how fair trade and sustainable development can be guaranteed.²⁵ Without positive action at an international level, there is a real risk that long term outcomes will benefit corporates located in the Global North over the interests and wellbeing of communities working in the Global South.

Cross-sector investment

New cannabis markets have presented opportunities for actors in other sectors, including alcohol and tobacco companies, to diversify into the cannabis space. This raises obvious concerns, especially given the long history of the tobacco and alcohol industries lobbying against public health regulation. Tobacco and alcohol

²² NCV Newswire (2018) Cronos Group Enters Latin America with Colombia Joint Venture, New Cannabis Ventures 29th August. <https://www.newcannabisventures.com/cronos-group-enters-latin-america-with-colombia-joint-venture/>.

²³ Paley, D.M. (2019) *Canada's Cannabis Colonialism*, Toward Freedom 8th October. <https://towardfreedom.org/story/canadas-cannabis-colonialism/>; Trefis Team (2018) *Aurora Cannabis Makes Inroads Into South America With Latest Acquisition*, Forbes 11th September. <https://www.forbes.com/sites/greatspeculations/2018/09/11/aurora-cannabis-makes-inroads-into-south-america-with-latest-acquisition/#34cf2f7c4ca1>.

²⁴ Vickers, E. (2019) *The small African kingdom that's perfect for growing cannabis, but maybe not for regulating it*, Quartz Africa 9/11/19. <https://qz.com/africa/1744366/lesotho-is-perfect-growing-cannabis-but-not-regulation/>.

²⁵ See: Jelsma, M., Kay, S. and Bewley-Taylor, D. (2019) *Fair(er) Trade Options for the Cannabis Market*, Swansea University and Transnational Institute. https://www.tni.org/files/publication-downloads/fair_trade_options_for_the_cannabis_market.pdf.

not only bring enormous financial muscle, but decades of lobbying and PR expertise which can be deployed against regulation geared towards both public health and social equity.

Altria, one of the world's largest tobacco producers, has invested over a billion US dollars into Cronos Group, where it now owns a 45% stake and has three out of seven seats on the board.²⁶ Altria's work with Cronos has included investment in Cronos' research and development centre, focused on vaping devices – investing both resources and Altria employees to assist in the research.²⁷ In March 2021, British American Tobacco bought a £126m stake in Canadian producer OrganiGram, also with a focus on product innovation.²⁸ Constellation Brands (the third largest market share holder of all beer companies) owns a 38% share in Canopy Growth and has four out of seven seats on the board, while AB InBev and Molson Coors (two of the largest alcohol companies in the world) have joint partnerships with Canadian cannabis companies Tilray and HEXO respectively, to create drinkable cannabis products.²⁹

Cannabis companies have also diversified into other sectors. For instance, Canopy Growth has purchased a majority stake in BioSteel Sports Nutrition, which is claimed to be bought by 70% of teams across North America's four major professional sports leagues, with plans to introduce a CBD sports nutrition drink.³⁰ Similarly, Aurora Cannabis operates a research collaboration with

²⁶ Hirsch, L. (2018) *Altria to invest \$1.8 billion in cannabis company Cronos Group, exits some e-cig brands*, CNBC 7th December. <https://www.cnbc.com/2018/12/07/altria-to-invest-1point8-billion-in-cannabis-company-cronos-group.html>.

²⁷ Peters, B. (2019) *Why An Analyst Calls This Cannabis Stock The 'New King In The North'*, Investor's Business Daily 18th October. <https://www.investors.com/news/cronos-group-stock-king-in-north/>.

²⁸ Khan, S. and Cavale, S. (2021), *BAT looks beyond tobacco to Canadian marijuana*, Reuters 11th March. <https://www.reuters.com/article/bat-agreement-organigram-hldg/update-3-bat-looks-beyond-tobacco-to-canadian-marijuana-idUSL4N2L9306>.

²⁹ Canopy Growth (Undated) *Governance*. <https://www.canopygrowth.com/investors/governance/board-of-directors/>; Lewis, A.C. (2019) *Drink up, stoners*, The Verge. <https://www.theverge.com/2019/7/30/18639829/weed-beer-drinkable-marijuana-cannabis-drinks-alcohol>.

³⁰ LoRé, M. (2019) *Canopy Growth And BioSteel To Introduce CBD Products To Sports Nutrition Market*, Forbes 23rd October. <https://www.forbes.com/sites/michaellore/2019/10/23/canopy-growth-and-biosteel-to-introduce-cbd-products-to-sports-nutrition-market/#5b6edbbef9b7>.

the Ultimate Fighting Championship (UFC) to research potential uses of CBD products for MMA (mixed martial arts) fighters.³¹ By creating brand associations with health, wellbeing and sports through non-psychoactive CBD products, companies can prepare the ground for more effectively promoting psychoactive cannabis-based products in the future. The CEO of Molson Coors has said that drinkable products could *'soon make up 20 to 30 percent of cannabis sales'*.³² A large amount of spending by cannabis companies is focused on product development; Canopy Growth CEO, Mark Zukelin, has stated that *'the IP [intellectual property] moat around our business'* is one of the company's greatest assets, boasting over 110 patents and 290 patent applications.³³

Cannabis investment has now become mainstream – with big shareholders in Canopy Growth including Morgan Stanley and the Bank of Montreal.³⁴ Major shareholders in Aurora Cannabis include JP Morgan and the Norges Bank's Government Pension Fund Global, which invests revenue from Norway's oil and gas resources.³⁵ There has also been the development of cannabis exchange-traded funds (ETFs), like Alternative Harvest ETF, which invest heavily in Canadian cannabis companies across the board.³⁶

31 Button, A. (2019) *Why the Aurora Cannabis-UFC Partnership Is a Huge Deal*, The Motley Fool 29th May. <https://www.fool.com/investing/international/2019/05/29/why-the-aurora-cannabis-ufc-partnership-is-a-huge.aspx>.

32 Lewis, A.C. (2019) *Drink up, stoners*, The Verge. <https://www.theverge.com/2019/7/30/18639829/weed-beer-drinkable-marijuana-cannabis-drinks-alcohol>.

33 Paley, D.M. (2019) *Canada's Cannabis Colonialism*, Toward Freedom 8th October. <https://towardfreedom.org/story/canadas-cannabis-colonialism/>.

34 Fintel (Undated) *CGC / Canopy Growth Corporation — Institutional Ownership and Shareholders*. Accessed 20 February 2020. <https://fintel.io/so/us/cgc>.

35 CNN Business (2020) *Aurora Cannabis Inc*, Accessed 19 February 2020. <https://money.cnn.com/quote/shareholders/shareholders.html?symb=ACB&subView=institutional>; *Norges Bank Investment Management (Undated) About the fund*. <https://www.nbim.no/>.

36 Wathen, J. (2018) *5 Things You Should Know About the Hottest Marijuana ETF*, The Motley Fool 5th January. <https://www.fool.com/investing/2018/01/05/5-things-you-should-know-about-the-hottest-marijua.aspx>.

Lessons for other jurisdictions

A theme throughout this book, and in Transform's work more generally,³⁷ has been to learn lessons from the early adopters of cannabis regulation in order to improve later regulatory practice. While the US states, Canada and Uruguay operated largely from a regulatory blank slate, future regulatory models have their experiences to learn from. We have seen how quickly the combination of massive capital investment, and weak or naive regulation, can lead to suboptimal outcomes. Future regulation needs to create a better balance between lifting the restrictions of prohibition and ensuring the new markets promote social wellbeing.

If policymakers wish for an equitable distribution of market space – and we believe they should – then they must act from the outset, to prevent corporate capture, avoid monopolisation and actively promote market access to smaller and marginalised actors. The potential for equitable licensing policies, and the utilisation of social equity programmes, is discussed in detail in the chapter on vendors in this book ([Section 2G](#)), but is broadly applicable at a production level, too. The benefit of starting from scratch, or largely from scratch, should not be underestimated; and attempting to retrofit equitable mechanisms is much more difficult. Where larger corporate actors are involved in domestic and international markets – as is already happening and remains inevitable to some degree – it will be important to ensure minimum standards of transparency and accountability regarding corporate lobbying and other forms of influencing policy makers, to prevent undue influence. Measures should include: fully transparent registers of

³⁷ See: Slade, H. (2020) *Altered States: Cannabis regulation in the US*, Transform Drug Policy Foundation. <https://transformdrugs.org/product/altered-states-cannabis-regulation-in-the-us/>; and Slade, H. (2020) *Capturing the market: Cannabis regulation in Canada*, Transform Drug Policy Foundation and MUCD. <https://transformdrugs.org/product/capturing-the-market/>.

all lobbying of policy makers and officials; strict rules for lobbyists and think tanks — including transparency of funding sources; comprehensive freedom of information rules; and restrictions on corporate political funding and hospitality.

There has been a great deal of public health research in recent decades highlighting the failures of regulation in relation to corporate capture of tobacco and alcohol. Generally, we have been too late to learn our lessons in these areas, and realigning markets towards a public health focus has been all the more difficult as a result. We must ensure the same does not happen for cannabis.

C Cannabis-impaired driving

Challenges

- Minimising instances of cannabis-impaired driving and associated risks
- Avoiding non-impaired drivers being unjustly penalised

Analysis

- The risks associated with driving while impaired, to the driver, passengers and other road users, justify its designation as a specific offence and a hierarchy of legal sanctions for offenders
- The degree to which cannabis consumption impacts on driving risk remains difficult to establish precisely, but it is clear that acute intoxication impairs driving safety, with the level of impairment related to dosage and time since consumption
- The relationship between blood THC levels and impairment is less clear than the equivalent relationship for alcohol
- Greatly increased risks are posed by combined alcohol and THC impairment, which need to be factored in to enforcement parameters and complement existing frameworks focused on minimising alcohol-impaired driving
- Demonstrating recent cannabis use and actual impairment are two different things
- There is some dispute in the scientific literature regarding the threshold limit beyond which THC levels in the blood represent an unacceptable level of impairment (which could then be used to trigger or inform legal sanctions). Proposals range from blood serum THC concentrations of 1-2 nanograms per millilitre (ng/ml) of blood through to 16-20ng/ml
- If thresholds are too low, non-impaired drivers will potentially be penalised; too high and impaired drivers may escape penalties, potentially causing harms to others

- Due to the distinctive way in which cannabis is processed by the body, the automatic use of *per se* laws (i.e., those that make it illegal to drive upwards of a specific level of recorded THC) is likely to lead to prosecutions of drivers with residual levels of THC in their blood but who are nonetheless safe to drive

Recommendations

- There is a simple and clear message: people should not drive while significantly impaired by cannabis and should, as with alcohol or other drugs, expect a proportionate legal sanction if they are caught doing so
- In this context, clearly highlighting behaviours that are likely to result in penalties for impairment, and how this can be measured becomes important for public education
- Given the lack of scientific consensus regarding a blood THC concentration that correlates with an unacceptable level of impairment, *per se* limits that automatically trigger a legal sanction when exceeded are inadvisable
- In order to be proportionate, impaired driving laws should require establishing actual impairment as a separate requirement to establishing recent cannabis use
- Blood testing should only be carried out following a recorded driving infraction or once evidence of impairment has been derived from a standardised field sobriety test that has been validated for cannabis-induced behaviour. Blood tests should only be employed to confirm that a driver has recently used cannabis (and that cannabis use is therefore the likely cause of the failure of a field sobriety test). The results of a blood (or any other body fluid) test should not, on their own, trigger a legal sanction
- Establishing a threshold THC level beyond which prosecutors can reasonably assume that a driver has recently used cannabis is problematic, but a blood serum THC concentration in the range 7-10ng/ml appears to be a sensible point at which such a

threshold might be set. This should, however, be reviewed in the light of any emerging evidence, and the possibility of two or more thresholds associated with different burdens of proof could also be considered

- The greatly increased risks of driving while under the influence of both alcohol and cannabis simultaneously means that in such cases prosecutors should consider lower blood THC and alcohol levels as sufficient evidence of recent use
- While some elements of current standardised field sobriety tests are effective in detecting cannabis-induced impairment, research and funding should be devoted to the development of a comprehensive field sobriety test that is sufficiently sensitive to identify all levels of such impairment

Driving while impaired, for any reason, involves avoidable and potentially serious risks to the driver, any passengers they may have, and other road users and pedestrians. The degree of risk involved means that impaired driving is considered a punishable offence in all jurisdictions, one usually subject to a hierarchy of punitive sanctions depending on the seriousness of the offence or harm caused, often ranging from civil sanctions such as fines or disqualification from driving for a fixed period of time, through to more serious penalties resulting in a criminal record and potentially imprisonment.

People are more familiar with issues around alcohol-impaired driving, which is tested to a generally accepted level of accuracy using inexpensive ‘breathalyser’ technology that measures blood alcohol content.¹ Other causes of impairment, generally less well catered for by both technology and law, include consumption of certain prescription drugs, currently illegal drugs including cannabis,

¹ Positive breathalyser tests are usually then confirmed with a more accurate blood test.

poor physical health and condition of the driver (most obviously tiredness and impaired vision), and certain mental health issues.

Studies have long shown that cannabis use impairs, in a dose-related fashion, various cognitive processes associated with safe driving, such as attentiveness, vigilance, and psychomotor coordination (although evidence of its effects on reaction time is mixed). These findings have been borne out in experimental settings such as driving simulator or on-road tests,² which have demonstrated that cannabis has a clear, although modest, negative impact on driving performance.³

Unlike experimental studies, which are more likely to downplay any impairing effects because test subjects are aware of being observed, epidemiological studies use population data to establish actual crash risk and so can offer a better indication of how, in reality, drivers will be affected by cannabis consumption. Such studies have, however, historically produced mixed results, with some finding that cannabis use was associated with an elevated risk of collision, but others not. These discrepancies have been attributed to various methodological challenges inherent in this area of research, including difficulties in obtaining sufficiently large sample sizes, the problem of accurately measuring levels of impairment (as opposed to simply measuring whether an individual has used cannabis recently), and the need to rule out confounding variables such as age, sex, and poly-drug use (in particular alcohol use).⁴

² Berghaus G. and Guo B. *Medicines and driver fitness — findings from a meta-analysis of experimental studies as basic information to patients, physicians and experts*, in Kloeden, C. and McLean, A. (eds.) (1995) *Alcohol, Drugs, and Traffic Safety T95: Proceedings of the 13th International Conference on Alcohol, Drugs and Traffic Safety*, NHMRC Road Accident Research Unit, University of Adelaide, pp.295–300.

³ Smiley A., *Cannabis: On-Road and Driving Simulator Studies*, in Kalant H. et al. (eds.) (1999) *The Health Effects of Cannabis*, Addiction Research Foundation, pp.173–191.

⁴ For more on the conflicting evidence from epidemiological studies, as well as their methodological challenges, see: Mann et al., *Cannabis use and driving: implications for public health and transport policy*, in: Sznitman et al (2008) *A cannabis reader: global issues and local experiences*, EMCDDA. https://www.emcdda.europa.eu/publications/monographs/cannabis-volume2_en

Combined use of alcohol and cannabis

While cannabis use has an adverse effect on the psychomotor skills necessary for safe driving, this effect is significantly worse when the drug is combined with alcohol. There is significant evidence,^{5 6} that alcohol has an additive effect on the crash risk of those who have also consumed cannabis – in other words, the effects of using both drugs are the sum of the effects of using either on its own. When used together, the two drugs cause impairment even at doses which would be insignificant were they of either drug alone. This far greater level of risk therefore necessitates a stricter regulatory response.

As more rigorous epidemiological studies are now being conducted, the emerging evidence convincingly suggests that recent cannabis consumption does increase collision risk. Generally, a modest increased risk has been documented, with drivers who have recently used cannabis estimated to be, on average, 1.5–2 times more likely to be involved in a crash.⁷

In light of the growing body of research demonstrating the increased risks of driving under the influence of cannabis (DUIC), and in keeping with this guide's emphasis on using regulation to promote responsible consumption, there is a clear need to ensure that sufficient legal and policy measures are in place that are effective at minimising such risks.

5 Ramaekers et al. (2004) *Dose related risk of motor vehicle crashes after cannabis use*, *Drug and Alcohol Dependence* 73, pp.109–119.

6 Sewell R. A. et al. (2009) *The effect of cannabis compared to alcohol on driving*, *American Journal on Addictions* 118, pp.185–193.

7 EMCDDA and CCSA (2018) *Cannabis and driving: Questions and answers for policymaking*.
https://www.emcdda.europa.eu/system/files/publications/8805/20181120_TD0418132ENN_PDFA.pdf.

Defining and testing impairment

The key challenges to designing effective policy on cannabis-impaired driving are ascertaining the degree to which cannabis consumption impairs driving, and then determining the parameters within which to legally designate or classify a driver as sufficiently impaired to have committed a DUIC offence. There are three ways in which this has been done for both cannabis and alcohol:

- Making a behavioural assessment of the driver using recognised criteria for impairment (sobriety testing)
- Testing body fluids (urine, saliva, blood or a combination of these) and applying a zero tolerance '*per se*' law: i.e. the presence of any amount of a given drug is an automatic offence
- Testing body fluids and applying a *per se* law (establishing it as illegal to drive above a set recorded limit, for instance 5ng/ml) based on an established threshold quantity of a given drug that is deemed to correlate with an unacceptable level of impairment

There are shortcomings associated with each of these approaches.

Behavioural assessments

Behavioural assessments of intoxication, often called roadside or field sobriety tests, are more likely to be incorrectly administered due to human error and, while sensitive to heavy impairment, are less effective in detecting modest impairments that could still be a legally significant factor in road accidents. A further problem, particularly with more modest or borderline levels of impairment, is that the results of even more sophisticated computer-based impairment tests would arguably need to be compared against a non-impaired, baseline measurement of the individual being tested,

using the same assessment criteria, if relative impairment from cannabis consumption were to be established. Some people are just not particularly good at impairment test tasks, even though they are acceptably safe drivers, and may register a false positive. It may also be difficult to implement behavioural assessments on a wide scale because adequately training staff is costly, while waiting for trained staff to perform a test may waste valuable staff time if the individual making first contact is not suitably trained.⁸

While some individual components of standard field sobriety tests, such as the one-leg-stand test, have been shown to be fairly consistent predictors of cannabis-impaired behaviour,^{9 10} a comprehensive test is yet to be developed and approved. Further research is therefore needed in this area, but even the best roadside impairment testing is unlikely to be robust enough to form the sole basis of a legal sanction in many cases. As a result, such testing should be complemented by a more scientific assessment (e.g. a blood test) that can establish whether recent cannabis use has occurred, and is therefore the probable cause of any apparent impairment. This may be supported by other physical evidence of cannabis use, such as joint butts or smoking paraphernalia.

Zero tolerance laws

Zero tolerance *per se* cannabis laws, on the other hand, are by their nature too sensitive, penalising the presence of any active drug ingredient or its by-products (known as ‘*metabolites*’), regardless of whether they have in fact caused impairment. This is a particular

8 EMCDDA and CCSA (2018) Cannabis and driving: Questions and answers for policymaking, p8. https://www.emcdda.europa.eu/system/files/publications/8805/20181120_TD0418132ENN_PDFA.pdf.

9 W.M. Bosker, et al. (2012) A placebo-controlled study to assess standard field sobriety tests performance during alcohol and cannabis intoxication in heavy cannabis users and accuracy of point of collection testing devices for detecting THC in oral fluid, *Psychopharmacology* 223.4, pp.439–446.

10 Stough, C. et al. (2006) An Evaluation of the Standardised Field Sobriety Test for the Detection of Impairment Associated With Cannabis With and Without Alcohol, Australian Government Department of Health and Aging, Canberra.

concern with cannabis, as the drug's main psychoactive ingredient, THC, quickly passes out of the blood and into fat cells in the body, from where it is gradually released over time. Hence, although the impairing effects of cannabis will have typically worn off roughly three hours after inhalation,¹¹ in people using cannabis infrequently, THC is still often detectable by blood tests 8-12 hours after smoking.¹² In those using more heavily, this window of detection can last for several days.¹³

Similar effects are observed for THC's primary metabolites. In infrequent users, blood tests can usually detect 11-hydroxy-THC, a psychoactive metabolite, up to around 6 hours after inhalation. But one of THC's non- psychoactive metabolites, 11-carboxy-THC, can be detected in blood serum for several days in occasional users and for several weeks in people using heavily (11-carboxy-THC is also the main metabolite used by urine tests to indicate cannabis use, and in people using heavily can be detected even longer, several months after consumption, via this method of testing).¹⁴

Consequently, depending on the method of testing used, THC and its metabolites can be detected days or even weeks after use, long after any impairing effect has completely dissipated. In contrast, alcohol is not stored by the body, meaning its presence is a better indicator of recent use and thus impairment. As a result, the attraction of adopting a clear zero THC threshold that is easy to enforce and easily understood by drivers is drastically undermined by the disproportionate inclusion of non-impaired drivers within

11 Sewell R. A. et al. (2009) *The effect of cannabis compared to alcohol on driving*, *American Journal on Addictions* 18.3, pp.185–93.

12 Huestis M. A. et al. (1992) *Blood cannabinoids. I. Absorption of THC and formation of 11-OH-THC and THCCOOH during and after smoking marijuana*, *Journal of Analytical Toxicology* 16.5, pp.276–82.

13 Karschner E. L. et al. (2009) *Do Delta-9-tetrahydrocannabinol concentrations indicate recent use in chronic cannabis users?* *Addiction* 104.12, pp.2041–2048.

14 Musshoff F. and Madea, B. (2006) *Review of biological matrices (urine, blood, and hair) as indicators of recent or ongoing cannabis use*, *Therapeutic Drug Monitoring* 28.2, pp.155–163.

enforcement parameters, individuals who may reasonably have expected to be no longer impaired or for the THC to have left their system.

Fixed threshold limits

A *per se* law associated with a threshold blood THC limit at a specific point above zero is potentially more reasonable, since it could, at least in theory, be set high enough to only implicate people who have used cannabis recently, while avoiding capturing non-impaired drivers who give a positive test due to their having used cannabis at some point during the previous days or weeks.

The challenge then comes in trying to determine the threshold THC limit beyond which a driver is impaired to such an extent that he or she presents an unacceptable level of risk. To this end, studies have proposed a blood serum THC concentration limit in the range of 7–10 nanograms per millilitre of blood (ng/ml).^{15 16} This, it is suggested, would safely avoid misclassifying sober drivers, as at 5ng/ml driving skills are impaired to roughly the same extent as an individual with a blood alcohol concentration (BAC) of 0.5g/l (the standard *per se* limit for alcohol in most jurisdictions), and 10 hours after smoking, THC concentrations typically decline to below this level in people who use cannabis occasionally, and even in frequent cannabis users.

However, this threshold is not universally accepted. One prominent study has proposed that a lower blood serum THC concentration of 3.8ng/ml in fact produces impairment equivalent to that observed

15 Grotenhermen, F. et al. (2007) *Developing limits for driving under cannabis*, *Addiction* 102.12, pp.1910–1917. www.ncbi.nlm.nih.gov/pubmed/17916224.

16 Wolff, K., et al (2013) *Driving under the influence of drugs: making recommendations on the drugs to be covered in the new drug driving offence and the limits to be set for each drug*, Report from the Expert Panel on Drug Driving, Department of Transport, London. <https://www.gov.uk/government/publications/driving-under-the-influence-of-drugs--2>.

at 0.5g/l BAC.¹⁷ Furthermore, many studies have attempted to establish a precise threshold beyond which an elevated crash risk occurs and, at present, little consensus has emerged from the scientific literature. Estimates range from blood serum THC concentrations of as low as 1ng/ ml, to as high as 16ng/ml, with a number of studies proposing limits at various points in between.^{18 19 20 21 22}

The lack of agreement on an empirically sound non-zero *per se* threshold is in large part because the effects of cannabis relative to blood THC content vary far more between individuals than the effects of alcohol do – particularly between heavy and novice users.

Establishing an empirical basis for a non-zero *per se* limit is further complicated by the distinctive pharmacokinetic profile of THC. Blood serum THC levels are at their highest up to approximately fifteen minutes following cannabis inhalation, yet maximum levels of impairment occur after this period, when THC begins to leave the blood and is absorbed by the body. Following inhalation THC levels in the blood rise rapidly, typically reaching a peak value of more than 100ng/ml 5 to 10 minutes after inhalation before falling rapidly to between 1 and 4ng/ml within 3–4 hours. Thus cannabis-induced impairment can be at its peak while levels of THC in the blood are

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- 17 EMCDDA (2012) Driving under the influence of drugs, alcohol and medicines in Europe – findings from the DRUID project. https://www.emcdda.europa.eu/publications/thematic-papers/druid_en.
 - 18 Ramaekers, J. G. et al (2009) *Neurocognitive performance during acute THC intoxication in heavy and occasional cannabis users*, *Journal of Psychopharmacology* 23.3, pp.266–277.
 - 19 Grotenhermen, F. et al. (2005) Developing Science-Based Per Se Limits for Driving Under the Influence of Cannabis (DUIC): Findings and Recommendations by an Expert Panel, Marijuana Policy Project.
 - 20 Ramaekers, J. G., Commentary of *Cannabis and Crash Risk: Concentration Effect Relations*, in *Transportation Research Board of the National Academies* (eds.) (2006) *Transportation Research Circular: Number E-C096*, Woods Hole, Massachusetts, pp.65–66.
 - 21 Drummer, O. H. et al. (2004) *The involvement of drugs in drivers of motor vehicles killed in Australian road traffic crashes*, *Accident Analysis and Prevention* 36.2, pp.239–248.
 - 22 Ramaekers, J. G., et al (2004) *Dose related risk of motor vehicle crashes after cannabis use*, *Drug and Alcohol Dependence* 73, pp.109–119. <https://pubmed.ncbi.nlm.nih.gov/14725950/>.

still relatively low. This is unlike blood alcohol concentration, which does positively correspond to levels of impairment.

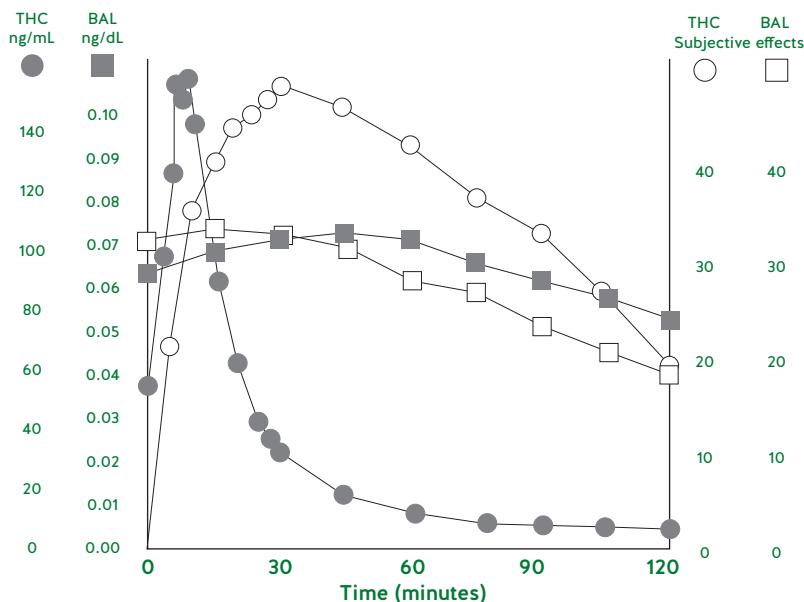


Figure 3

Serum levels of ethanol (solid squares) lag behind subjective effects (open squares) because tolerance develops very quickly. Subjective effects of THC (open circles) lag behind serum levels (solid circles) because THC moves into the brain more slowly than alcohol does. (BAL=Blood Alcohol Level).²³

The lack of close correspondence between blood THC levels and impairment has been acknowledged by the US National Highway Traffic Safety Administration (NHTSA), which in 2004 declared:

²³ Science Review, Erowid, and uses graphs/data adapted from Portans I. et al. (1989) *Acute Tolerance to Alcohol: Changes in Subjective Effects Among Social Drinkers*, *Psychopharmacology* 97, pp.365–369; Cocchetto, D. M. et al. (1981) *Relationship Between Plasma Delta-9-Tetrahydrocannabinol Concentration and Pharmacologic Effects in Man*, *Psychopharmacology* 75, pp.158–164; and Huestis M. et al. (1992) *Blood Cannabinoids. I. Absorption of THC and Formation of 11-OH-THC and THCCOOH During and After Smoking Cannabis*, *Journal of Analytic Toxicology* 16, pp.276–282.

It is inadvisable to try and predict effects based on blood THC concentrations alone, and currently impossible to predict specific effects based on THC-COOH [a non-psychoactive metabolite of THC] concentrations. It is possible for a person to be affected by marijuana use with concentrations of THC in their blood below the limit of detection of the method.²⁴

Blood testing

The actual process of blood testing also potentially confounds the use of *per se* limits (see box, right, for more on why blood, rather than saliva or urine, should be tested). Collecting whole blood or serum samples is an invasive medical procedure, one that can generally only be performed legally by trained medical personnel. Samples also need to be transported and stored in special low-temperature conditions to prevent degradation and avoid any risk of infection.

There are good indications that an alternative method of collecting blood samples, dried blood spot analysis (DBS), could offer a solution to this problem, as it is less invasive and produces results with a level of precision that does not significantly differ from that of traditional blood testing methods. DBS uses capillary blood taken from a finger or heel prick and can be carried out by non-medical personnel. A spot of whole blood is dried onto a custom-made card, which is then folded and left to dry at room/ambient temperature for three hours.²⁵

Although DBS has the potential to be a more practical method of field testing of blood THC levels, law enforcement officers are

²⁴ US Department of Transportation National Highway Traffic Safety Administration (2004) Drugs and Human Performance Fact Sheets. www.nhtsa.gov/People/injury/research/job185drugs/drugs_web.pdf. Graph is taken from: Sewell, R.A. (2010) Is It Safe to Drive While Stoned? Cannabis and Driving

²⁵ The potential of DBS to be used in roadside drug testing is discussed in: EMCDDA (2012) Driving under the influence of drugs, alcohol and medicines in Europe – findings from the DRUID project, pp.36-37. https://www.emcdda.europa.eu/publications/thematic-papers/druid_en.

currently unable to collect blood samples at the scene in a timely manner, meaning that there is often a significant delay between when a driver is stopped and when they are actually tested. This delay is again problematic due to the complex pharmacokinetic profile of THC, meaning it is not possible to accurately infer an individual's previous level of impairment from the results of a blood sample taken potentially as long as several hours later.²⁶

Drug testing – different fluids, different results

Blood

Blood testing can be used to analyse the concentration of THC and its metabolites in either whole blood or of blood serum, however the latter contains approximately twice the THC concentration of the former. Hence if a driver was found to have a THC blood serum concentration of 10ng/ml, he or she would have a whole blood THC reading of around 5ng/ml. While the presence of metabolites can be detected by blood tests for several weeks after cannabis consumption, THC is detectable for a shorter period of time. In occasional users, THC can be measured in blood serum for around 8–12 hours after cannabis use,²⁷ with this detection window lasting longer for moderate and heavy users – sometimes for several days.²⁸

Despite promising methodological advances in blood testing, drawing blood for analysis is an invasive procedure and should only be carried out by a trained medical professional. Because blood tests are difficult to administer, they are generally only used once a road accident has taken place, rather than in routine checks. Delays between when a driver is stopped and when a blood test is actually performed can also complicate measurements of impairment.

Despite these shortcomings (as well as the lack of scientific consensus on a specific THC blood serum concentration that correlates with impairment), the US Department of Transportation National Highway Traffic Safety Administration

²⁶ Wille, S. M. et al. (2010) *Conventional and alternative matrices for driving under the influence of cannabis*, *Bioanalysis* 2.4, pp.791–806.

²⁷ US Department of Transportation National Highway Traffic Safety Administration (2013) *Cannabis/Marijuana (Δ9 -Tetrahydrocannabinol, THC)*. www.nhtsa.gov/people/injury/research/job185drugs/cannabis.htm.

²⁸ US Department of Transportation National Highway Traffic Safety Administration (2003) *State of Knowledge of Drug-Impaired Driving*, Chapter 3. www.nhtsa.gov/people/injury/research/stateofknwlegedrugs/stateofknwlegedrugs/pages/3Detection.html.

(NHTSA) acknowledges that, *[i]n terms of attempting to link drug concentrations to behavioral impairment, blood is probably the specimen of choice.*²⁹

Urine

Urinalysis is the most widely used method of drug testing, particularly in workplaces. Despite being a relatively non-invasive form of testing (although there are long standing privacy concerns about samples being collected under direct observation, etc.), standard urine tests are of little use in the enforcement of DUIC laws as they can only identify whether an individual has previously used cannabis – not whether an individual is impaired due to cannabis consumption.

This is because, rather than looking for THC, urinalysis only looks for the presence of THC metabolites, which can take at least several hours to become detectable in urine. As the NHTSA has stated: *‘[This] detection time is well past the window of intoxication and impairment.’*³⁰ In addition, once the detection period comes into effect, it lasts for such a long time that urine tests pose a significant risk of registering false positives.

Saliva

Saliva testing is quick, non-invasive, and looks for the presence of ‘parent drugs’ (in this case THC), rather than metabolites. Saliva testing can also only detect THC up to several hours after use, therefore making it a better indicator of recent consumption and thus impairment. But while these advantages mean such tests may in the future be used effectively for measuring cannabis-related impairment, the accuracy of saliva testing is limited. One of the key problems associated with the use of such devices is that only a minute amount of THC is excreted into saliva, making it difficult to detect. Some countries, however, do now employ saliva testing, although as is the case in France and the UK, such tests are used to provide a preliminary ‘drug detected’ indication, which can be used as the basis for an arrest, with any prosecution then based on the results of a subsequent blood test.

Despite these issues, it could be argued that *per se* limits may simply have to be tolerated given the widespread acceptance of their use in policing drunk driving. Such limits could certainly

²⁹ US Department of Transportation National Highway Traffic Safety Administration (2003) *State of Knowledge of Drug-Impaired Driving*, Chapter 3. www.nhtsa.gov/people/injury/research/stateofknowledgedrugs/stateofknowledgedrugs/pages/3Detection.html.

³⁰ US Department of Transportation National Highway Traffic Safety Administration (2004) *Drugs and Human Performance Fact Sheets*, p.9. www.nhtsa.gov/People/injury/research/job185drugs/drugs_web.pdf.

be useful in political terms, at least in the short term, allowing policymakers and politicians to demonstrate that they are taking a hard line with those who drive under the influence of cannabis. The politicisation of cannabis impaired driving laws has been a trend in Canadian regulation efforts, where the federal government sought to assuage concerns about impaired driving by investing heavily to assist smaller provinces and territories in enforcing impaired driving laws³¹ – many of which have updated impaired driving laws to include cannabis zero tolerance rules specifically for young and novice drivers.³² *Per se* limits also make it easier for law enforcement to detect and process such drivers, and for prosecutors to convict them. However, neither of these arguments are legitimate justifications for a potentially unjust system.

The pharmacological properties of cannabis do present unique challenges that simply do not exist with regard to alcohol: above all, the possibility of THC being detectable for an extended period after consumption, long after any psychomotor impairment has passed. But even if policymakers decide that some prosecutions of non-impaired cannabis users are a price worth paying for safer roads, current evidence is inadequate to support a conclusion that *per se* limits are an effective means of achieving them.³³ Establishing firm conclusions on the effects of cannabis policy on road accidents is difficult, whether this involves changes in DUIC enforcement approaches, or wider law reforms such as decriminalisation or

31 Government of Canada (2019) Government of Canada invests \$2 million for Prince Edward Island to tackle drug-impaired driving. <https://www.canada.ca/en/public-safety-canada/news/2019/08/government-of-canada-invests-2-million-for-prince-edward-island-to-tackle-drug-impaired-driving.html>; Government of Canada (2019). Government of Canada invests \$2 million to keep Yukon's roads safe from drug-impaired drivers. <https://www.canada.ca/en/public-safety-canada/news/2019/07/government-of-canada-invests-2-million-to-keep-yukons-roads-safe-from-drug-impaired-drivers.html>; Salloum, A. (2019) Feds announce \$5.4M to combat drug-impaired driving in Sask, CBC 30th August. <https://www.cbc.ca/news/canada/saskatchewan/drug-impaired-driving-money-from-federal-government-1.5266367>.

32 See, e.g.: Government of New Brunswick (2018) New measures to reduce drug-impaired driving take effect Dec. 18. https://www2.gnb.ca/con-tent/gnb/en/news/news_release.2018.12.1322.html; Government of Ontario (2019) Cannabis and driving. <https://www.ontario.ca/page/cannabis-and-driving>.

33 Rees, D. and Anderson, D. M. (2012) *Per Se Drugged Driving Laws and Traffic Fatalities*, IZA Discussion Paper No.7048. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2189786.

legalisation of cannabis. The changing nature of DUIC enforcement, such as the intensity of testing, or deployment of new testing technology can itself make longitudinal comparisons based on testing outcomes problematic. Even if robust data establishing longer term trends in DUIC and related outcomes before and after a given reform were available – and currently this is not the case – there are also methodological challenges in determining which of, and to what extent, the multiple legal, policy, cultural, demographic or other variables are responsible for any observed behaviour changes. Going forward, establishing more methodologically robust monitoring and evaluation of trends in DUIC behaviours and related outcomes will be essential to developing better policy responses.

Given current knowledge, it must be accepted that, although appealing in their simplicity, *per se* limits establishing automatic liability are simply not appropriate as a blanket policy covering all instances of drug impaired driving. Many psychoactive pharmaceuticals such as various antidepressants and anti-anxiety drugs cause a degree of impairment far greater than that associated with THC,³⁴ yet none of these are subject to *per se* limits of any kind. To enforce such limits would be impractical and most likely arbitrary given the wide variations in effects that these drugs can have on different users.

DUIC and opposition to reform

It is important to make clear that driving while impaired by cannabis consumption should be an offence regardless of the legal status of the drug (in terms of its production, supply or possession). The

³⁴ EMCDDA (2012) Driving under the influence of drugs, alcohol and medicines in Europe – findings from the DRUID project, p.21. https://www.emcdda.europa.eu/publications/thematic-papers/druid_en.

issues discussed above simply concern how to fairly determine that impairment. Although legalising and regulating cannabis will not alter the fundamental nature of the DUIC offence, it may change the political context in which responses to it are devised. DUIC laws are likely to be reviewed in any given jurisdiction as the transition towards legally regulated markets takes place. Opponents of such reforms have often focused on DUIC accidents following any such transition.³⁵ Nevertheless, the emotive and politicised discourse that pervades this issue means there may well be a greater acceptability for potentially unfair zero-tolerance or fixed threshold *per se* laws for cannabis-impaired driving (as highlighted in Canada), and a risk of disproportionately harsh sentencing for offenders. Caution will be needed to make sure that decisions are driven by evidence, not political imperatives.

Recommendations

Given this array of technical challenges, and the tensions between exercising a precautionary principle and the potential for injustice relating to over-zealous enforcement, we make the following set of recommendations for what a workable DUIC enforcement policy could look like. It should, however, be noted that the constraints and complexities of various jurisdictions' legal systems, and the differences between them, mean it is difficult to make policy prescriptions that will be applicable everywhere. Hence these recommendations should be viewed more as general guiding principles, rather than concrete and comprehensive policy responses to the problem of cannabis-impaired driving.

³⁵ This is despite there being some evidence that making cannabis legally available can reduce traffic fatalities, as people substitute the drug for alcohol, leading to fewer drunk drivers on the road. See: Rees, D. and Anderson, D. M. (2011) *Medical Marijuana Laws, Traffic Fatalities, and Alcohol Consumption*, IZA Discussion Paper No.6112. <http://ftp.iza.org/dp6112.pdf>.

- A fair and pragmatic policy would be one centred around effect-based standards. This would require establishing both: 1. recent cannabis use; and 2. actual, or a dangerous level of, impairment. Actual impairment is a separate test to be met beyond establishing the mere presence of a given level of THC in blood or other body fluids. Blood THC concentration would nonetheless still be measured to enable prosecutors to meet the requirements of the first test, by establishing recent ingestion of cannabis. A positive test above a certain threshold would therefore function as supporting evidence of impairment, rather than act as an automatic trigger for the application of a penalty
- Initial evidence of impairment, and thus the probable cause required for a subsequent blood test, should ideally be derived from the failure of a reliable and accurate field sobriety test that has been validated for cannabis use. While some of these tests are still in their infancy and will require development, they present a more promising avenue of research and are a more worthwhile target for investment than impairment testing based on body fluid analysis. Additional evidence of impairment from an actual driving infraction may also be used to support prosecutions
- Although *per se* limits are not recommended, they are clearly an attractive option for policymakers given that several US states and Canada (at a federal level) have chosen to implement them. In light of their appeal, it is worth urging those jurisdictions that are intent on enforcing such limits to exercise care in setting them sufficiently high so as to minimise ensnaring of non-impaired drivers. It is therefore important for policymakers and prosecutors to be aware of the evolving evidence base in this area, and be committed to adjusting policy accordingly. The use of zero-tolerance *per se* laws is strongly discouraged

Establishing recent use

- Evidence shows that people using cannabis heavily are likely to have residual levels of THC in the blood long after they have consumed cannabis and long after any impairment has dissipated. The challenge therefore lies in setting an empirically sound blood THC limit beyond which prosecutors can reasonably assume that a driver has recently used cannabis and that this was therefore the most likely cause of the observed impairment (rather than, say, a driver's general poor coordination or a simple human error)
- As more studies are conducted and more meta-analyses are performed, a clearer picture of where to set this limit should emerge. Based on the best currently available evidence, it would appear that prosecutors might reasonably assume a driver who fails a field sobriety test and is also found to have a blood serum THC concentration of around 7-10ng/ ml was driving while impaired due to recent cannabis use. Such a limit should, however, be subject to regular review in light of emerging research
- In light of consistent findings that the use of cannabis in conjunction with alcohol has an additive effect on crash risk, consideration should be given to separate, lower blood THC and blood alcohol limits in cases where both drugs are detected

Enforcement

- DUIC laws, how they will be enforced, and the penalties for DUIC offences should be clearly defined in order to avoid misunderstandings among people who use cannabis or law enforcers, over what is and what is not allowed
- Penalties for different DUIC offences should be determined by local jurisdictions, with equivalent DUI alcohol sentencing reasonably providing a guide. Sentencing should be proportionate, and sentencing judges should be granted the flexibility to take aggravating and mitigating circumstances into account within

clear guidelines. Mandatory minimums should be avoided; they are invariably politically driven rather than evidence-based

- While the use of cannabis-based medicines should not be an excuse for driving while impaired, it could be a mitigating factor for decisions on both DUIC prosecutions and sentencing. Clear guidance on this issue should be established for both people using cannabis-based medicine and for sentencing judges
- Consideration should also be given to the observed margins of error in blood testing procedures, forensic testing services should themselves be subject to regular testing to establish variability with identical samples (for an individual service and between rival services). These error parameters need to be appropriately incorporated into the enforcement framework
- Enforcement of DUIC laws should be supported by public education campaigns that explain the risks of DUIC, as well as how DUIC laws work. There is good evidence from experiences with alcohol to show that such public education, supported by clearly understood and fairly but vigorously applied enforcement practices is effective at reducing levels of DUI and related accidents. If done well, it should be possible, as has happened with alcohol, to foster a culture in which DUIC is widely regarded as unacceptable. Basic messages, which would naturally need to be tailored for local or target audiences, could include:
 - Driving under the influence of cannabis increases the risk of injury or death, to you and other road users
 - Driving under the influence of cannabis is illegal and can result in serious penalties
 - If you are using cannabis, regard it as you would alcohol: arrange for a designated driver or use public transport or a taxi
 - Don't let your friends use cannabis and drive
 - You are unsafe to drive and likely to fail a blood test for at least three hours after smoking cannabis. This unsafe period can be much longer if you have used heavily, eaten cannabis edibles, or consumed cannabis with alcohol or other drugs

Evaluation

As with any new or revised policy and legal frameworks, it will be important to monitor how effective DUIC laws and their enforcement are at actually achieving a reduction in injuries or deaths stemming from cannabis impairment, as well as a reduction in driving while impaired. At the same time, unintended negative consequences of the law also need to be monitored. These include: the potentially expanded use of intrusive testing procedures, false positives/ negatives resulting from insufficiently robust testing technology or methodology, and unjust punitive sanctions against non-impaired drivers who have consumed cannabis in previous weeks.

d The interaction of regulatory systems for medical and non-medical uses of cannabis

Challenges

- Making a clear distinction between the political and regulatory challenges associated with medical and non-medical cannabis products
- Ensuring that the parallel and overlapping research and policy development processes support rather than hinder each other

Analysis

- The emerging evidence and support for cannabis-based medicines has made cannabis less politically threatening in many jurisdictions, and combined with medical cannabis regulation acting as a '*proof of concept*' has helped promote reform of non-medical cannabis policy
- Pursuing the two reform processes in tandem has arguably been politically effective, particularly in the US, but it also carries some political risks
- In the context of highly politicised debates around both access to medical cannabis and regulation of non-medical cannabis, the two issues have often become unhelpfully conflated and confused

Recommendations

- Unless there is a specific reason to explore the crossover, it is best to separate, as far as possible, the issues and political campaigning relating to the reform of non-medical cannabis policy and the issues relating to cannabis-based medicines
- This book is not making recommendations on how to regulate medical cannabis products, and our proposals are only in relation to the regulation of non-medical cannabis products

The debate around access to medical cannabis (or ‘*cannabis-based medicines*’, a more useful term here as it incorporates a wider range of products) has long been intertwined with the debate around the legalisation and regulation of cannabis for non-medical or recreational uses. The same is true, albeit to a lesser extent, with regard to the many potential uses of the cannabis/hemp plant for food, fuel, fabric, construction materials, plastics and so on.

This guide is not considering or making recommendations on policy for cannabis-based medicines (or industrial hemp products), except where it relates to recent developments in policy for the regulation of non-medical cannabis. These are certainly important issues, but are a largely separate debate; indeed the key point we wish to make here is to emphasise this separation.

This is in no way dismissive of the issue. The medical use of cannabis has a long history and has been subject to extensive research, and while generalisations are difficult (given the range of products, medical conditions being treated, and quality of research), this substantial and growing evidence base clearly demonstrates how many cannabis-based medicines have established or potential uses in treating a range of medical conditions.

This being the case, it is important that the often polarised and emotive politics concerning non-medical cannabis do not interfere with research into cannabis-based medicines or doctor and patient access to them. Unfortunately, such interference has tended to characterise the post-war period, and to this extent there is a clear crossover between the two issues.

However, from Transform’s perspective this is a reason to try and decouple the issues, rather than bring them closer together. In the US in particular, medical and non-medical cannabis debates have become increasingly interwoven at the coalface of the cannabis

law reform debate, and some have accused medical cannabis campaigners of in fact having a primary agenda of normalising and legalising cannabis for non-medical use. There is, of course, nothing sinister or inconsistent about supporting reform on both fronts, and most of the high-profile cannabis reform groups do so, seeing the issues as being mutually supportive in two key ways.

Firstly, highlighting some of the beneficial medical uses of cannabis has helped make it appear less socially threatening, undermining the '*reefer madness*' scaremongering of the past. This has undoubtedly helped increase support for non-medical cannabis reforms to some extent.

Secondly, medical cannabis developments, particularly in the US (but also elsewhere around the world), have helped to advance non-medical cannabis reform by demonstrating how cannabis can be legally produced and made available in a responsible and regulated fashion. Indeed this guide has drawn quite extensively on the lessons of legally regulated medical cannabis production and supply.

But with the progress that both of these closely related policy areas have helped to promote, also come some conceptual problems and political risks.

While challenging some of the historical misconceptions about the risks of recreational cannabis use is important, using the medical benefits of cannabis to do so is an unhelpful conceptual error. The efficacy and risk profile of cannabis-based medicines for certain medical conditions has, for the most part, little or no bearing on the risks posed by cannabis to recreational users. They are quite different things; conflating the two does not stand up to scrutiny, and reform advocates can leave themselves vulnerable to criticism when they do so.

The lessons from medical cannabis regulation that can be applied to non-medical cannabis regulation are less problematic, but there are still vulnerabilities here, and care should be taken when discussing or implementing them. One challenge is that in the absence of a clear international legal framework, or in the US, a federal regulatory model, the implementation and practice of medical cannabis regulation has varied enormously, so generalisations are usually unhelpful. Some models have very usefully demonstrated what effective, controlled production and responsible prescribing or retailing can look like. Elsewhere, medical cannabis regulation has been inadequate, leading to over-commercialisation and irresponsible sales practices and promotions. So when talking about learning from medical cannabis models it is important to point to lessons from both the good practice and the mistakes that have been witnessed. We should not hesitate to be critical of poor regulation or irresponsible retailing.

The fact that in some jurisdictions a proportion of medical cannabis provision was clearly being used non-medically is something that needs to be addressed carefully. On the one hand the outcome of *de facto* legally produced, supplied and consumed cannabis may be viewed as a positive, not least as it has not had any disastrous consequences. On the other hand many will be intrinsically uncomfortable at the dishonesty involved; the undermining of regulatory systems for medicines and the potential threat to the probity of the medical profession is something many are understandably defensive about. The debate about means and ends is one for history – given this guide is about how to regulate cannabis, we are merely highlighting the issue as a risk in the unfolding debate, and as a consideration for policymakers when exploring the evidence of what would work best in their jurisdictions.

Our position is that unless there is a very specific crossover between the respective issues relating to medical and non-medical cannabis, they are probably best kept separate. As regulatory models for both uses of cannabis continue to advance this may become less of a challenge in the future, and many of the specific problems may prove largely unique to the US political environment and the evolution of the debate in that country. In the Netherlands, for example, where prescribed medical cannabis effectively appeared after the drug became *de facto* legally available via the coffee shop system, it is, compared to the US, a political non-issue.

e Synthetic cannabinoids

Challenges

- Integrating controls over the production, supply and use of synthetic drugs that mimic the effects of cannabis within a system of legal cannabis regulation
- Discouraging use of more harmful synthetic products in favour of less harmful cannabis products

Analysis

- Synthetic cannabinoids make up a significant proportion of the number of new psychoactive substances (NPS) originally produced as legal alternatives to more ‘traditional’ illegal drugs
- The risks of synthetic cannabinoid use are considerably higher than those associated with cannabis use. This is due to their relative toxicity and potential to be considerably more potent than cannabis, as well as the wide variations in the products containing synthetic cannabinoids
- The prevalence of synthetic cannabinoids use has increased over recent years, although changes in legal status have impacted patterns of use in different jurisdictions. Use is still considerably less prevalent than for cannabis, and largely concentrated among vulnerable populations including people who are homeless, or are in prison
- The market opportunity for synthetic cannabinoids was to a large extent created by the ongoing prohibition of cannabis. Legally regulated cannabis markets have the potential to shift use away from more risky synthetic products to safer, traditional cannabis products

Recommendations

- Under a system of legal cannabis regulation, the default position should be that synthetic cannabinoids would not be made legally available for non-medical use.
- Penalties for the possession/use of synthetic cannabinoids would be removed
- For those who have developed heavy, problematic or dependent patterns of use of such substances, appropriate tailored harm reduction and treatment responses should be available

Recent years have seen a significant growth in the manufacture, sale and use of products containing synthetic cannabinoid receptor agonists more commonly known as ‘*synthetic cannabinoids*’. These represent ‘*the largest group of substances currently monitored by the EU Early Warning System*’, with a total of 169 synthetic cannabinoids being identified between 2008 and 2016.¹ Synthetic cannabinoid products emerged as alternatives to traditional cannabis, intended to mimic its effects. Typically sprayed onto a smokable herbal mixture, synthetic cannabinoids are functionally similar to the active ingredient of cannabis, THC, binding to the same cannabinoid receptors in the brain.

Synthetic cannabinoids such as JWH-018, JWH-073 and CP-47,497-C6 are the active ingredients of many products marketed under more consumer-friendly names such as ‘*Spice*’ and ‘*K-2*’. The increase in the variety and popularity of such products in the early 2010s was mostly attributable to their existence as a legal alternative to cannabis that was easily available (yet subject to virtually no regulatory control) via online and highstreet retailers. While many synthetic cannabinoids have now been prohibited

1 EMCDDA (2017) Synthetic cannabinoids in Europe. <https://www.emcdda.europa.eu/topics/pods/synthetic-cannabinoids>.

under the UN drug conventions, the volume and rapid emergence of new variants means it has been impossible for drug control bodies to keep up. Many synthetic cannabinoids have also been prohibited under national drug control legislation. In some cases, such as in the UK,² Poland, and Ireland, a ‘catch-all’ blanket ban on any psychoactive substance has been implemented in an attempt to avoid successive bans being thwarted by new variants.

Risk profile

While there is an established body of knowledge regarding the pharmacology and toxicology of cannabis and THC, there is significantly less similar information about synthetic cannabinoids or the products that contain them. Only a few formal human studies have been published, although there is strong evidence to suggest that synthetic cannabinoids are riskier than cannabis/THC.³ A 2019 review acknowledged that synthetic cannabinoids ‘*can be more potent at the cannabinoid receptors and in turn have greater toxicities*’.⁴ This, combined with the considerable variability of synthetic cannabinoid products, both in terms of the type and quantity of substances present, means there is a considerably higher potential for overdose and acute adverse events than with cannabis. Different synthetic cannabinoids also have different risk profiles so generalisations become more problematic.

2 Psychoactive Substances Act 2016, s2 and Schedule 1. <https://www.legislation.gov.uk/ukpga/2016/2/schedule/1/enacted>.

3 Hermanns-Clausen, M. et al. (2013) *Acute toxicity due to the confirmed consumption of synthetic cannabinoids: clinical and laboratory findings*, *Addiction* 108.3, pp.534–544. www.ncbi.nlm.nih.gov/pubmed/22971158.

4 Alipour, A. et al (2019) *Review of the many faces of synthetic cannabinoid toxicities*, *Ment Health Clin.* 9.2, pp93–99. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6398358/>.

Prevalence of use

The relative paucity of information on synthetic cannabinoids extends to levels of use. The limited amount of survey data available, however, suggests that in most countries, particularly those in Europe, prevalence of synthetic cannabinoid use is very low.¹ The exception is the US, where at least among young people, prevalence appears to be relatively high (although declining). In the 2020 US Monitoring the Future survey of students, last year prevalence of use for 17- to 18-year-olds was recorded at 2.4%, down from 5.8% in 2014, 7.9% in 2013 and 11.3% in 2012.^{2 3}

In contrast, in the UK, the Crime Survey for England and Wales covering 2014/2015 found a total of 0.9% of adults (16–59) had used NPS in the last year, of which 61% had used synthetic cannabinoids.⁴ By 2018/2019, only 0.5% of adults reported using NPSs, including synthetic cannabinoids, in the past year.⁵ Most individuals strongly prefer natural cannabis to synthetic cannabinoids, with the former described as producing more pleasant effects and the latter associated with more negative effects.⁶ Synthetic cannabinoids have, however, now established a market amongst some more vulnerable and economically marginalised populations of people engaged in high risk or dependent drug use, for whom they can now offer a potent and relatively inexpensive alternative to other available drugs.

1 EMCDDA (2016) Analysis: synthetic cannabinoids in Europe.
<http://www.emcdda.europa.eu/topics/pods/synthetic-cannabinoids>.

2 NIDA (2020) Monitoring the Future Study: Trends in Prevalence of Various Drugs.
<https://www.drugabuse.gov/drug-topics/trends-statistics/monitoring-future/monitoring-future-study-trends-in-prevalence-various-drugs>.

3 EMCDDA (2016) Analysis: synthetic cannabinoids in Europe.
<http://www.emcdda.europa.eu/topics/pods/synthetic-cannabinoids>.

4 UK Home Office (2015), Tables for drug misuse: Findings from the 2014 to 2015 CSEW.
<https://www.gov.uk/government/statistics/tables-for-drug-misuse-findings-from-the-2014-to-2015-csew>.

5 UK Home Office (2019) Drugs Misuse: Findings from the 2018/19 Crime Survey for England and Wales.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/832533/drug-misuse-2019-hosb2119.pdf.

6 Winstock, A. R. and Barratt, M.J. (2013) *Synthetic cannabis: a comparison of patterns of use and effect profile with natural cannabis in a large global sample*, *Drug and Alcohol Dependence* 131.1-2, pp.106–111.

Regulatory response

Many synthetic cannabinoids are currently banned under domestic drug laws, and under a system of legal cannabis regulation their legal status would not automatically change. In fact, we recommend that within a legal regulatory framework to control cannabis, no new, functionally similar synthetic substance would be made legally available for retail. While it seems unlikely, if specific synthetic cannabinoid products can subsequently demonstrate a level of risk equal to or less than that of traditional cannabis products, regulators could re-evaluate this position and potentially make these specific products available for retail – under strict regulatory requirements.

While all penalties for the possession and use of such products would be removed, proportionate penalties for unauthorised production or supply would still be enforced. Given cannabis would be made available through a legally regulated market, a default prohibition on the production or retail supply of any synthetic cannabinoid products is justified. Use of synthetic cannabinoids would instead be managed through a harm reduction model, as envisaged for higher risk stimulant preparations and outlined in Transform’s 2020 book, *How to regulate stimulants: a practical guide*.

A regulatory system has been developed in New Zealand, under which the manufacturers of novel psychoactive substances including synthetic cannabinoids can – in theory at least – legally sell them under strict conditions if they are able to demonstrate that they meet specified low risk criteria. The aim of such regulation is to protect people who use drugs by guiding them towards safer products whose risks have been properly established, a concept that developed from earlier efforts to regulate a synthetic stimulant,

BZP.⁷ However, while this regulatory system remains technically in place, it has run into political opposition and a number of technical challenges – crucially, how to establish ‘low-risk’ harm thresholds without using animal testing (which is specifically prohibited). So, while New Zealand is the only country in the world with a comprehensive piece of legislation for regulating NPS for non-medical use in theory (with certain synthetic cannabinoids seen as the most likely first candidates for consideration), in practice no NPS are currently regulated under the system.

Although New Zealand has attempted to develop a pragmatic approach to dealing with existing synthetic cannabinoid demand and established markets, the need for such regulated supply will naturally diminish once cannabis has been made legally available. Demand for synthetic cannabis is already relatively low and would only shrink further: consumers would have little incentive to buy synthetic cannabis when they can legally purchase the real thing. Remaining challenges are likely to include use in prisons and for people on probation subject to testing (as synthetic cannabinoids are not consistently identified by conventional testing regimes), and for the small population of people with heavy or dependent patterns of use who are not interested in substituting back to cannabis. A dedicated harm reduction model targeting problematic or high risk use, including among people who are homeless, will help reduce these harms while synthetic cannabinoid use naturally falls over time.

Crucially, it is important to acknowledge the role of the current prohibitionist legal environment in driving the emergence of synthetic cannabinoids and other NPS in the first place. From the

7 New Zealand Government (2013) New Zealand Psychoactive Substances Act. www.legislation.govt.nz/act/public/2013/0053/latest/DLM5042921; Rolles, S., Slade, H. and Nicholls, J. (2020) How to regulate stimulants: a practical guide, Transform Drug Policy Foundation, p169-177. <https://transformdrugs.org/product/how-to-regulate-stimulants-a-practical-guide/>.

outset, the key attraction of synthetic cannabinoids was their legal status – which gave them a competitive advantage over traditional cannabis – rather than their effects *per se*. It is notable, for example, that no significant market for synthetic cannabinoids emerged in the Netherlands, where there is *de facto* legal cannabis availability. The inevitable bans of synthetic cannabinoids only fueled the emergence of even more, often more risky, products with minor molecular variations. More comprehensive ‘*crackdowns*’ or blanket NPS bans may have arguably had the positive impact of pivoting some current or potential consumers back towards less risky traditional cannabis – even if this was not what those implementing the bans intended. But even if the synthetic cannabinoids market now contracts (whether through prohibitions or due to a legal regulated cannabis availability), cannabis prohibition has unleashed more than 100 risky synthetic cannabis mimics into the market, and the entrenchment of their problematic use amongst key vulnerable populations suggests that there is no easy solution.

f ‘Cannabis tourism’

Challenge

- Identifying and minimising potential problems associated with cross-border trade and tourism between jurisdictions with differing regulatory approaches to cannabis

Analysis

- Destination tourism related to cannabis is relatively non-problematic and can bring economic benefits for the destination
- Localised cross-border trade between jurisdictions that have legally regulated cannabis and others that maintain cannabis prohibition may present greater problems, but these can be mitigated through regulatory responses
- Border enforcement responses are likely to be expensive, ineffective and counterproductive
- Rationing sales and/or restricting market access to residents only (with membership or ID-based access controls) may help moderate cross-border trade, but if overly restrictive may incentivise a parallel illegal market
- For the most part, this is likely to remain a marginal and localised problem that will diminish over time as more jurisdictions move to regulate cannabis, and it should not be overstated in the policy debate

Recommendations

- Cannabis tourism is a problem that can only be fully addressed by legalising and regulating cannabis on both sides of a border
- In the absence of this, the focus should be on responding to any real social harms that emerge, rather than targeting people who use cannabis through punitive enforcement measures

The potential problem of '*drug tourism*' is often raised by opponents of cannabis regulation, frequently implying that, post-reform, legions of people from other jurisdictions will descend on any newly legalised cannabis market, bringing an array of social problems with them. This proposition is generally ill-defined, and often heavy with misplaced hyperbole that taps into a rather unpleasant streak of prejudice against people who use drugs, foreigners, youths, and 'otherness' more generally. However, experiences with some pioneering cannabis regulation models, as well as experiences with alcohol and tobacco, demonstrate that there is potential for real problems to emerge when jurisdictions that share borders adopt different regulatory approaches to drug markets, particularly when this difference is as stark as legally regulated vs. prohibited.

When thinking about this problem, it is first important to try and put the likely scale of the potential challenges in perspective. Cannabis is already cheaply and easily available in most jurisdictions via the illegal market. In this context, relatively few people who use cannabis would expend significant resources travelling to neighbouring jurisdictions, let alone travelling further afield, just to buy or consume cannabis. Of those who would do so, experience from the Netherlands suggests they are comprised of two fairly distinct groups, associated with quite different challenges.

The first are those who are drawn to the Netherlands' cannabis coffee shops, primarily in Amsterdam. For this group, it is not the access to cannabis *per se* that is the attraction – they will mostly be people who already use cannabis and have access to the drug at home – but the novelty of the coffee shops themselves (for those who have never experienced a range of cannabis products legally available in a licensed venue), specifically in the context of a vibrant and beautiful European capital. Surveys suggest that roughly one in three visitors to Amsterdam visit a coffee shop during their stay, and approximately one in six visit the city specifically because of

the coffee shops.¹ The question then is: what are the costs and benefits of this '*cannabis tourism*'?

The main cost is the potential for social nuisance. However, among such visitors problems are marginal, with issues that do arise largely confined to a relatively contained and manageable area in and around the city's red light district. In fact, most problems are related to alcohol rather than cannabis consumption. People who use cannabis are rarely violent, and these '*cannabis tourists*', if they can really be called that, are only temporary visitors, staying for a few days at most.

The obvious benefit from such tourism is increased revenue, not just for the cannabis coffee shops, but for the hotels, shops, restaurants, and other businesses that make up the local tourist economy. This benefit is a substantial one, and it explains why the authorities in Amsterdam have resisted the imposition of the residents-only '*wietpas*' scheme (see [below](#)). For them, cannabis tourism is not a problem; it is a net benefit. A comparison can easily be made with similar forms of legal '*drug tourism*', such as tours of Amsterdam's famous Heineken beer factory, Scottish whisky distilleries, or vineyards in France or the Napa Valley. Indeed, tourist boards routinely promote cities on the basis of their drinking establishments. Here again, it is not the drug itself that is the primary draw (people can buy Heineken or Californian wines in their local supermarket, just as coffee shop tourists can buy cannabis on their local street corner) but the cultural environment.

The second, and potentially more problematic, form of cannabis '*tourism*' is among those who cross borders between prohibitionist and legalised cannabis jurisdictions for the sole purpose of

¹ Amsterdam Tourism and Convention Board (2012) Amsterdam Visitors Survey 2012.
http://www.iamsterdam.com/ebooks/ATCB_Amsterdam_Bezoekersonderzoek_2012/magazine.html#/spreadview/0/.

procuring the drug. The Netherlands again provides a useful example of this phenomenon, with some buyers visiting from neighbouring countries (mostly Belgium, Germany, and France) simply to buy cannabis from the coffee shops and then return home. This process has been facilitated by the nature of the European Union, with freedom of movement between countries resulting in reduced or non-existent border checks.

The scale of this problem again needs to be put into perspective. The advantage of being able to buy cannabis from a Dutch coffee shop rather than from a local illegal market in Belgium or Germany has its limits: people will only be willing to travel so far, especially given the restrictions on sales (5 grams) from any one retailer. The phenomenon is therefore largely contained to those Dutch cities with coffee shops near the border, such as Maastricht, and the area foreign tourists come from does not stretch far into mainland Europe. The same analysis can be applied to legal markets in the US, although a separate, related issue appears to have emerged in relation to cannabis sent in the post in some legalising states (see [below](#)).

The problems created for these cities should also not be overstated. In some cases, complaints have been quite parochial, such as a lack of city or town centre parking due to a high number of coffee shop visitors. There have also been issues with some assertive unlicensed suppliers who, spotting a market opportunity, have gravitated towards these locations in order to sell to cross-border visitors outside the constraints of the coffee shop system for example, on the lay-bys of major roads between the border and coffee shops in the destination cities. Despite the money that such visitors contribute to the economy via coffee shop sales, the fact that they mostly purchase cannabis and then leave reduces local economic benefits (relative to the more conventional forms of tourism).

As a response to this problem, the Dutch government introduced the '*wietpas*' scheme, which requires that access to coffee shops be restricted to residents of the Netherlands. Not all municipalities with coffee shops have implemented this policy; indeed, Amsterdam has notably chosen not to. Where the scheme has been implemented, and even where the total number of visitors seeking to buy cannabis is reported to have fallen, there have been increased problems with social nuisance relating to the street dealers who have moved in to sell to visitors no longer allowed access to the coffee shops. Clearly, part of the problem with the *wietpas*, aside from the overtly political dimension of the decision-making process, is that it was an attempt to reverse-engineer a '*solution*' into an already well-established market. Rather than eliminating the market, it has largely displaced it from licensed and taxed premises to unlicensed street markets.

The town of Venlo, in the south of the Netherlands, instead made the decision to move some coffee shops closer to the border, situating them in a less residential area. This significantly reduced levels of social nuisance caused by drug tourists. In some neighbourhoods in Amsterdam, coffee shops employ street-based staff to minimise public disturbance.

By contrast, Uruguay's model of cannabis regulation is unlikely to allow such problems to emerge. By enforcing a residents-only restriction on cannabis sales from the outset, there has been less expectation from cross-border visitors that they will have access to the new legal market, meaning less pre-existing demand to shift to another source. In addition, a system of rationed availability via licensed pharmacies is much more functional and intrinsically less attractive to potential visitors than the Dutch coffee shop system. Legal regulation in Canada similarly does not appear to have resulted in a great deal of cannabis tourism from the US – although the number of import offences recorded in Canada has actually

increased post-legalisation. Statisticians have put this down to the fact that many of the public may have misunderstood laws, thinking that purchasing cannabis in the US and bringing it into Canada was legal² (half of the US border states – and counting – are also now legal cannabis jurisdictions).

The extent of issues in the US in relation to cannabis tourism between states remains to be fully seen, but it is clear that this poses a greater challenge than the notion of cannabis tourism across national borders. Not only are there greater near-border populations to contend with, and relatively few border controls between states, but non-residents are allowed access to the markets. Sales in Colorado to non-residents were initially limited to a lower volume than for residents, however the allowance has since been equalised at one ounce per transaction, suggesting the authorities do not view this as a major problem.

The numbers of seizures reported to the El Paso Intelligence Center for Colorado-sourced cannabis diverted out of state grew in 2014 and 2015 after the establishment of the legal non-medical market. Reported seizures more than doubled within two years of legal markets opening, but subsequently fell in 2016 and 2017. Like many trends associated with legalisation, this may be put down in part due to the '*novelty*' of new legal markets wearing off slightly (and seizure statistics may also reflect changes in enforcement practice as much as changes in the market). However, it may also be related to wider trends of cannabis reform elsewhere in the country; Colorado now representing less of an outlier in relation to its cannabis policies. Unsurprisingly, the vast majority of seizures in each year were reported in neighbouring states Kansas and

2 Statistics Canada (2020) Table 3: Police-reported crime for selected drug offences, Canada, 2018 and 2019. <https://www150.statcan.gc.ca/n1/pub/85-002-x/2020001/article/00010/tbl/tbl03-eng.htm>.

Nebraska, although the profile of cannabis products seized has changed over time.³

Out of state seizures of Colorado-sourced cannabis, by type, 2010–2017

Year	Herbal cannabis	Concentrates	Edibles	Other	Total number of seizures
2010	216	9	0	0	225
2011	299	24	0	3	326
2012	257	26	2	1	286
2013	265	38	4	2	309
2014	373	86	9	0	468
2015	503	160	103	2	768
2016	444	129	97	3	673
2017	351	157	100	0	608

Source: Colorado Information Analysis Center⁴

A greater problem in Colorado appears to have been diversion out of state via the postal service. Unlike those reported at the El Paso Intelligence Center (above), postal seizures have continued to rise each year since legalisation, with over 1,000 parcels and 2,000 pounds seized in 2017 (compared to 207 and 493 pounds in 2013). Postal seizures have been rising dramatically since before legalisation, however; only 15 parcels were seized in 2010, rising fourteen-fold by 2013, suggesting that this trend pre-exists the regulated non-medical market.⁵ Using the postal service to

³ Colorado Division of Criminal Justice (2018) Impacts of Marijuana Legalization in Colorado: A Report Pursuant to Senate Bill 13–283, p60–61. http://cdpsdocs.state.co.us/ors/docs/reports/2018-SB13-283_Rpt.pdf.

⁴ Reported in: Colorado Division of Criminal Justice (2018) Impacts of Marijuana Legalization in Colorado: A Report Pursuant to Senate Bill 13–283, p60–61. http://cdpsdocs.state.co.us/ors/docs/reports/2018-SB13-283_Rpt.pdf.

⁵ See above footnote, p62.

distribute drugs is not new, and is not by any means unique to legally sourced products. It is not clear how much of this upward trend is due to improved technology, training, or capacity, nor how much of the cannabis was originally purchased from legal markets, by visitors.

Postal diversion from legal markets would appear to be a much bigger problem within US states than it is across country borders. While it is a live issue for legalising jurisdictions to contemplate, it will either be for personal use (in which case only a marginal concern), or if for resale it will only be cost-effective for individuals diverting products if prices on the legal market remain significantly lower than illegal markets in the destination state (inclusive of cost of postage, risk of the product being seized, and allowing for a profit margin over these additional costs). For this reason, while in the longer term legal regulation is needed on both sides of the border, price controls can be utilised to help mitigate the risk of diversion in the short term.

Problems with diversion have long been witnessed at borders between jurisdictions that maintain alcohol prohibition and those that do not, and the reality is that relatively little can be done to reduce them. The cost-benefit analysis of instructing border customs officials to use increasingly heavy-handed enforcement responses is no better than with enforcement responses to drug markets historically. It would be expensive, interdiction is likely to be marginal at best, and there would be various negative impacts, above all a counterproductive expansion in the criminalisation of small-time users and buyers. In the context of US state or internal EU borders, it would also potentially represent a dramatic change in the nature of what are currently very open borders, with wider cultural and economic impacts.

Rationing sales to small-scale purchases for personal use may serve to moderate the problem, and residents-only or membership club-based sales could also help if put in place from the outset, even if for a limited time. Like Uruguay, this is a precaution Luxembourg is planning as it moves towards becoming the first EU country with formally legalised non-medical cannabis retail availability. But caution is needed with these options: any model that restricts legal-market access in too arbitrary a fashion is likely to lead to parallel illegal markets emerging to fill the void, with all the attendant negative consequences that would involve.

In conclusion, *'cannabis tourism'* and associated diversion activities are a relatively marginal problem, but one that is inevitable while cannabis prohibition continues in some jurisdictions. The obvious solution, for once a genuine 'silver bullet', is of course to legalise and regulate on both sides of the border. Until this happens, a degree of pragmatic tolerance combined with cross-border coordination and intelligent regulation of emerging markets will help moderate any problems.

g Cannabis and the UN drug conventions

Challenges

- Addressing the political and procedural dilemmas in reforming the outdated, inflexible and counterproductive international drug control system to make it *'fit for purpose'*
- Weighing up the pros and cons of different courses of action in the context of each jurisdiction's domestic and geopolitical priorities
- Designing a new international system rooted in the core UN principles of security, development and human rights that is flexible enough to allow for national innovation; capable of regulating international trade and business interests to ensure safety, protection of minors, labour rights and other concerns; and able to balance national concerns and priorities with responsibilities to neighbouring countries
- Negotiating a highly differentiated political landscape in which some members of the international community remain committed to punitive prohibitions, while others are keen (and able) to explore alternative regulatory models
- If taking unilateral or collective action to reform cannabis laws at a national level in advance of reforms to the international framework: identifying the potential political risks (and how to mitigate them), and the necessary careful legal analysis, clarity and transparency of goals and justifications that will be required

Analysis

- The history of international cannabis control is a story of the drug's ill-considered inclusion in the international drug control system at the beginning of the last century. This was driven by a range of political agendas largely unrelated to a proper understanding of cannabis and its use. As a result, many countries that, at the time,

were experiencing no issues relating to cannabis approved the system from a position of limited experience or information

- There is now an urgent need for evidence-based reform of the international cannabis control system, in order to reflect current realities. Specifically: the long-term counterproductive failure of prohibitionist policy models, expanding global cannabis markets, and the emergence of actual or *de facto* market regulation models in a growing number of national and sub-national jurisdictions
- There will remain a need for an international control system to oversee trade and legal issues as they emerge in a post-prohibition environment. Reform of the international system is needed to allow flexibility for states, or groups of states, to explore regulation models
- There are various formal mechanisms by which the drug control treaties can be reformed: they can be formally modified, amended, or terminated; they can fall into irrelevance and disuse; and/or can be superseded by new treaties
- Cannabis reforms and further-reaching system-wide reforms will need to be driven by a group, or groups of like-minded states collectively pressing for change; the Organization of American States '*Pathways*' scenario provides one realistic template of how this may play out
- Action by national and sub-national jurisdictions is already challenging the UN drug control system and driving the debate on reform at the multilateral level
- If States wish to move beyond the '*soft defections*' – such as decriminalising possession (and potentially home growing and cannabis social clubs) – which are allowable under the treaties, there are a range of mechanisms through which reforms to the treaty framework can occur:
 - Amendments to the treaties are allowed but generally require a consensus – creating an effective power of veto on the necessary reforms for prohibitionist member states

- The treaties can also be modified; following a recommendation from the World Health Organization, individual substances can be rescheduled (or removed from the treaties altogether) by vote at the Commission on Narcotic Drugs
- Treaty law also allows for groups of states to modify a treaty between themselves – with states not party to the group modification remaining bound by the original treaty obligations. Such '*inter se*' treaty modification is an under-explored option, but one that offers a potential way forward for a grouping of like-minded reform states unable to find a broader consensus
- For individual states, the simplest option from a legal perspective is to withdraw from the treaties – but this would likely incur significant political costs, and could also be seen as undermining the wider treaty system and international law
- An alternative approach is to withdraw and immediately re-accede with a reservation on the specific articles that mandate cannabis prohibition. Many states have reservations on articles within the drug treaties, and there is a specific precedent for this with Bolivia's recent denunciation and re-accession with a reservation on traditional use of coca
- The challenges of these options may lead states to decide to proceed with domestic reforms in a situation of treaty non-compliance; as has been the case with the US, Uruguay and Canada – raising a set of new challenges on how to resolve the tensions such a move creates
- While open non-compliance with international legal obligations is undesirable, the system is not served by dogmatic adherence to dysfunctional laws – which should be challenged

Recommendations

- States that are considering a legally regulated system for cannabis will need to weigh up legal and political pros and cons of different

options in the context of their own domestic and geopolitical priorities. The political landscape of this debate is shifting rapidly

- States should make efforts to promote a high level dialogue on how to resolve the tensions that are emerging between the need for reform, and obligations under an outdated and malfunctioning treaty regime; supporting the creation of an expert advisory group, perusing formal treaty reform mechanisms (which will stimulate dialogue even if unsuccessful), and engaging in informal dialogues with like-minded states
- Unilateral domestic reforms, or reforms between groups of states are encouraged, but should run in parallel with multilateral dialogue and reform processes; this demonstrates a clear desire to resolve emerging challenges
- If reforms move a state into a situation on temporary non-compliance, the challenges raised should be minimised by:
 - Acknowledging temporary '*respectful*' or '*principled*' non-compliance and providing reasoning for doing so, rooted in the health and welfare of citizens, and wider UN Charter commitments
 - Avoiding sidestepping or denial of non-compliance by offering implausible legal justifications
 - Actively promoting multilateral debate and reform efforts in parallel with any domestic reforms
 - Establishing a cannabis regulation model that clearly places public health and wellbeing as a central goal, operates under a national agency, and minimizes negative impacts for neighbouring states
 - Ensuring a framework for comprehensive monitoring and evaluation with regular reporting to national legislatures and relevant UN agencies and stakeholders
 - Ensuring all reform efforts and high level dialogue are facilitated by collective action of like-minded reform states, working in coordination rather than isolation

Introduction

The international drug control system, in the form of the three United Nations (UN) drug conventions (1961, 1971 and 1988), and related UN agencies, presents a challenge to any jurisdiction seeking to explore regulated cannabis markets. The conventions represent a long-established consensus which very specifically prohibits the legal regulation of cannabis markets for anything other than medical and scientific purposes.

As developments in cannabis policy have progressively weakened this consensus (with recent legalisation moves in Uruguay, Canada and US states representing a decisive break), the question of how individual states should meet the challenge the treaties represent has come to the fore. This section lays out the key options for multilateral reforms of the treaties, and the options for unilateral action by individual states, or collective action between groups of states. Challenges to the underlying prohibitionist tenets of the drug treaties are a relatively new phenomenon. As a result, there remain significant uncertainties around the legal technicalities and political repercussions of some courses of action. Any jurisdiction, or grouping of jurisdictions, approaching this issue will need to weigh up the pros and cons of different courses of action in the context of their own domestic and geopolitical priorities.

An obvious tension exists between, on the one hand, respect for international law and the preservation of a wider treaty system built on consensus, and, on the other, the need to challenge a failed legal structure in ways that inevitably undermine consensus. There is no easy answer to this, and change will inevitably involve political and diplomatic wrangles that most would wish to avoid. However, a growing number of jurisdictions have weighed up the costs of prohibition against the benefits of legal regulation, and are willing to endure the political costs involved in shifting

policy approaches (albeit costs that are reducing rapidly as more countries embrace reform).

It is important to stress that no laws are written in stone, and all treaties contain mechanisms for their reform. Indeed, the ability to reform laws is key to maintaining their viability, relevance and effectiveness. A process of reforming the international drug control system to allow greater flexibility for jurisdictions to explore alternatives to prohibition is essential if the system is to survive and continue to be *'fit for purpose'* in the future.

Background to international cannabis controls

The history of how cannabis came to be included in the international drug control system has important implications for how policy will develop in the future. At the turn of the last century patterns of cannabis use bore little resemblance to the global ubiquity of the drug today and, correspondingly, knowledge about and concern with cannabis as a policy issue was highly localised. More pressing issues about how to address emerging markets in opiate and cocaine-based products dominated international debate (soon to be formalised within the League of Nations, the forerunner to the United Nations). Cannabis was drawn into these discussions at the 1912 Hague International Opium Convention only due to pressure from a small number of countries with concerns relating to North African cannabis markets, Egypt chief among them.

While this initial effort did not result in cannabis being brought under international controls, the issue was raised again at the second International Opium Convention of 1924 in Geneva, at the urgings of South Africa, which had prohibited cannabis (or *'dagga'*) among Indian immigrants in the 1870s, extending the prohibition nationally in 1922.

During this period there were, in fact, a variety of policy responses to cannabis across the world. These included early experiments with prohibitions in and around Egypt,¹ as well as early efforts to regulate legal markets in India, Morocco and Tunisia. Related to the Indian experience, there had also been a remarkably detailed and nuanced policy analysis in the form of the seven-volume 3,281-page Indian Hemp Drugs Commission Report of 1895, commissioned by the UK Parliament. It is striking how closely many of the Commission's recommendations, even though written 125 years ago, echo the rationale espoused in this book:

1. *Total prohibition of the cultivation of the hemp plant for narcotics, and of the manufacture, sale, or use of the drugs derived from it, is neither necessary nor expedient in consideration of their ascertained effects, of the prevalence of the habit of using them, of the social and religious feeling on the subject, and of the possibility of its driving the consumers to have recourse to other stimulants or narcotics which may be more deleterious*
2. *The policy advocated is one of control and restriction, aimed at suppressing the excessive use and restraining the moderate use within due limits*
3. *The means to be adopted for the attainment of these objects are:*
 - a. *adequate taxation*
 - b. *prohibiting cultivation, except under license, and centralizing cultivation*
 - c. *limiting the number of shops*

¹ Perhaps the first punitive cannabis prohibition was a penalty of three months' imprisonment imposed by Napoleon on his soldiers in 1800, following his invasion of Egypt, fearful that it would provoke a loss of fighting spirit. The cultivation, importation and use of 'hashish' was prohibited in Egypt in 1868, and in some near neighbours, including Greece in 1890, that also had higher levels of use.

d. limiting the extent of legal possession... the limit of legal possession [of Ganja and charas] or any preparation or admixture thereof [would be] 5 tolas (approximately 60 grams), Bhang, or any preparation or admixture thereof, one quarter of a ser (a quarter of a litre)²

The careful analysis of the Indian Hemp Commission, however, did not feature in the deliberations of the 1924 Geneva Opium Convention, remaining unmentioned even by the UK representative. Discussions were instead driven by a hard-line Egyptian delegate who asserted that cannabis was ‘at least as harmful as opium, if not more so’, and that ‘the proportion of cases of insanity [in Egypt] caused by the use of hashish varies from 30 to 60%’. If it were not included on the list of controlled drugs alongside opium and cocaine it would, he stated, ‘become a terrible menace to the whole world’.³ His heated rhetoric caused a stir among other delegates with little or no domestic knowledge of the drug. While the Egyptian push for a total prohibition was prevented (notably due to the efforts of the UK, the Netherlands, and India) the first international cannabis controls (a prohibition of exports to countries where it was illegal) were ultimately included in the 1925 International Opium Convention.

Cannabis had also increasingly become an issue in the US during the 1920s, closely associated with hostile attitudes to Mexican immigrant labour and their use of ‘marijuana’. This simmering xenophobia, combined with the prohibitionist/temperance sentiments of the time, fuelled pressure for moves towards first state-level, then federal and international prohibitions in 1937 and

² ‘Ganja’ is a term used for cannabis, ‘charas’ is a type of cannabis resin, and lower-potency ‘bhāng’ is a preparation of the cannabis leaves and flowering tops, often consumed in a beverage.

³ UNODC (2009) A century of international drug control pp.54–55.
www.unodc.org/documents/data-and-analysis/Studies/100_Years_of_Drug_Control.pdf.

1961 respectively. The political destiny of international cannabis controls was effectively guaranteed when the US fully entered the fray in the mid-1930s, decisively wielding its global superpower might to ensure its desired prohibitionist outcome. The political approach adopted by the central figure of Harry J. Anslinger, who headed the newly founded Federal Bureau of Narcotics from 1930 until 1962, is reflected in the language he often publicly adopted, even more extreme than his Egyptian forebears. In testimony to the House of Representatives in 1937 he stated that:

*'Most marijuana smokers are Negroes, Hispanics, jazz musicians and entertainers. Their satanic music is driven by marijuana, and marijuana smoking by white women makes them want to seek sexual relations with Negroes, entertainers and others. It is a drug that causes insanity, criminality, and death – the most violence-causing drug in the history of mankind.'*⁴

After World War II, the US, under Anslinger's guidance, consolidated its hegemonic grip on the emerging international drug control framework under the new United Nations, and during the 1950s a new '*single convention*' to consolidate the, now numerous, international drug control agreements began to take shape. These dynamics were strongly shaped by the hyperbolic narratives of cannabis's role in fuelling crime, violence and insanity, promoted by Anslinger and key allies, including the influential Secretary of the World Health Organization (WHO) Expert Committee on Drugs Liable to Produce Addiction, Pablo Osvaldo Wolff. Cannabis, according to one Wolff pamphlet, '*changes thousands of persons into nothing more than human scum*', hence: '*this vice should be suppressed at any cost*'. Cannabis was labelled '*weed of the brutal*

⁴ Quoted in: Gerber, R. (2004) *Legalizing Marijuana: Drug Policy Reform and Prohibition Politics*, Greenwood Press, p9.

crime and of the burning hell', and an 'exterminating demon which is now attacking our country'.⁵

Other voices challenging some of this anti-cannabis rhetoric did emerge, notably the La Guardia report of 1944⁶ (to which, in fact, the Wolff pamphlet quoted above was a response). This report was commissioned by the Mayor of New York, Fiorello La Guardia, to provide an impartial scientific review of the city's cannabis use, particularly among Black people and people of Latin American descent. It was the result of five years' study by an interdisciplinary committee comprised of physicians, sociologists, psychiatrists, pharmacists and city health officials. It challenged many of the prevailing narratives around cannabis and addiction, crime and violence stating that:

'There [is] no direct relationship between the commission of crimes of violence and marihuana...marihuana itself has no specific stimulant effect in regards to sexual desires'

and that:

'The use of marihuana does not lead to morphine or cocaine or heroin addiction.'

But the science and pragmatism of voices such as the Indian Hemp Commission and the La Guardia report, built on more objective evidence-based analysis, were progressively overwhelmed and marginalised by the political ideologies and agendas of the US and others. Ultimately this led to the prohibitionist grouping winning

5 Goode, E. (1970) *The Marijuana Smokers*, Basic Books, p231–32.
www.drugtext.org/The-Marijuana-Smokers/chapter-9-marijuana-crime-and-violence.html

6 LaGuardia, F. (1944) *The La Guardia Committee Report*, New York: USA.
 Summary here: www.drugtext.org/Table/LaGuardia-Committee-Report/
 Full text here: <http://hemphshare.org/wp-content/uploads/2012/12/laguardia.pdf>

the inclusion of cannabis alongside heroin and cocaine in the 1961 UN Single Convention. Cannabis was deemed to have no medical value that outweighed its risks of abuse, and was accordingly placed in the strictest schedule I, *and* schedule IV, which engages an additional tier of restrictions. As per the 1961 Convention, a Schedule I drug will also be added to Schedule IV if it is *'particularly liable to abuse and to produce ill effects ... [and] such liability is not offset by substantial therapeutic advantages not possessed by substances other than drugs in Schedule IV'*. Member State signatories were required to *'prohibit the production, manufacture, export and import of, trade in, possession of or use of any such drug except for amounts which may be necessary for medical or scientific research only'*.⁷

Remarkably, it took until 2019 for the WHO Expert Committee on Drug Dependence (ECDD), the body charged by the 1961 and 1971 Conventions with the scientific and medical review of scheduling proposals, to engage in a formal review of cannabis' risks and benefits, and its scheduling within the conventions.⁸ As the Committee itself noted in 2014, *'Cannabis and cannabis resin has not been scientifically reviewed by the Expert Committee since the review by the Health Committee of the League of Nations in 1935'*.⁹ Following this 85-year evidential void, the ECDD review finally recommended removing cannabis and cannabis resin from Schedule IV of the 1961 Convention, providing a formal acknowledgement of the significant medical utility of cannabis based medicines. The recommendation was narrowly passed by a vote amongst the 53 members of the Commission on Narcotic Drugs in 2020, although a series of other more technical recommendations (including

7 United Nations Single Convention on Narcotic Drugs, 1961.

8 Walsh, J., Jelsma, M., Blickman, T., Bewley-Taylor, D. (2019) *The WHO's First-Ever Critical Review of Cannabis*, Washington Office on Latin America (WOLA), Transnational Institute (TNI), Global Drug Policy Observatory (GDPO). <https://www.tni.org/en/publication/the-whos-first-ever-critical-review-of-cannabis>.

9 WHO (2014) Cannabis and cannabis resin: Information Document, WHO Expert Committee on Drug Dependence, 36th Meeting, Geneva, 16-20 June 2014. https://www.who.int/medicines/areas/quality_safety/8_2_Cannabis.pdf.

moving THC from the 1971 Convention to the 1961 Convention and adding a footnote stating that CBD products with <0.2% THC are not subject to international control) were all rejected.¹⁰

It was, however, notable that the ECDD made no recommendation to move cannabis from Schedule I (either to a less restrictive schedule, or to remove it from the scheduling system altogether), despite their scientific assessment clearly showing cannabis does not pose the same level of risk of other Schedule I drugs such as heroin and cocaine. The justification for this anomalous decision was *‘the high rates of public health problems arising from cannabis use and the global extent of such problems’*.¹¹ However, the basic test for recommending inclusion of a drug in Schedule I or II is the *‘similarity principle’* – that is, whether the drug is *‘liable to similar abuse and productive of similar ill effects as the drugs in Schedule I or Schedule II’* or is *‘convertible’* into one of those drugs.¹² Scheduling is supposed to be based on objective risk assessments, not prevalence measures. As the Transnational Institute observes, the decision *‘suggests that the formulation of the recommendations was influenced by political considerations and risk aversion, even if the scientific analysis of the ECDD was sound’*.¹³ Almost 100 years after the first international cannabis controls were introduced under the 1925 International Opium Convention, geopolitical dynamics still appear to prevail over objective scientific evidence when it comes to UN drug policy formulation.

¹⁰ IDPC et al (2020) UN green lights medicinal cannabis but fails to challenge colonial legacy of its prohibition. <https://idpc.net/media/press-releases/2020/12/un-green-lights-medicinal-cannabis-but-fails-to-challenge-colonial-legacy-of-its-prohibition>.

¹¹ World Health Organization (2019) Annex 1 — Extract from the Report of the 41st Expert Committee on Drug Dependence: Cannabis and cannabis-related substances. https://www.who.int/medicines/access/controlled-substances/Annex_1_41_ECDD_recommendations_cannabis_22Jan19.pdf.

¹² United Nations Single Convention on Narcotic Drugs, 1961, Article 3(3)(iii).

¹³ Transnational Institute (2020) The future of science-based cannabis scheduling NGO Statement for the Reconvened session of the 63rd Commission on Narcotic Drugs Agenda item 5. Implementation of the international drug control treaties. https://www.unodc.org/documents/commissions/CND/CND_Sessions/CND_63Reconvened/statements/02Dec_part1/NGO_Transnational_Institute_Longer_Statement_CND_Reconvened_for_submission.pdf.

Lessons and ways forward

An important observation in the process to initially schedule cannabis is that the vast majority of signatories to this convention knew little of cannabis use or policy during the decades when the prohibitionist framework was formulated. States either accepted the narrative supplied by those pushing for an absolute ban, or declined to spend political capital pushing back against this outcome on an issue that was, at that time, a marginal concern. There was some limited dissent (notably from India regarding lower- potency ‘*bhang*’ cannabis preparations), but it only served as a minor moderating influence on some details.¹⁴

It is also important to remember that the political dynamics that resulted in a total global prohibition on cannabis were not only playing out almost entirely behind closed doors, but also in a period of time between 60 and 100 years ago, in which the social, political and cultural landscape bore almost no resemblance to the world we live in today. Cannabis use has increased dramatically since this time: the UNODC estimates, probably conservatively, that as many as 192 million people use it annually worldwide,¹⁵ including in many parts of the world where little or no cannabis use existed before 1961.

The long-term failure of cannabis prohibition to achieve its stated goal of eradicating the drug, combined with the serious and growing ‘*unintended*’ negative consequences¹⁶ that have resulted from the attempt to do so, mean that today ignorance can no longer provide

¹⁴ Interestingly, the ‘*bhang*’ issue led to the leaves and seeds of the cannabis plant being left out of the 1961 convention, which only makes reference to the flowering tops (or buds as they would more commonly be referred to now). This raises the possibility, albeit a somewhat impractical one, that other countries could in theory legally produce, sell and consume cannabis products which are derived from the leaves, if the flowering tops were disposed of.

¹⁵ UNODC (2020) World Drug Report 2020: Drug Use and Health Consequences. <https://wdr.unodc.org/wdr2020/en/drug-use-health.html>.

¹⁶ Rolles, S. et al. (2012) The Alternative World Drug Report, the Count the Costs Initiative, Transform Drug Policy Foundation. <http://countthecosts.org/sites/default/files/AWDR.pdf>.

an excuse for failure to explore alternatives to prohibition. There is an urgent need for the international drug control framework more broadly to be reformed, and its legal instruments renegotiated, to make it *'fit for purpose'*. As even the head of the UNODC conceded in 2008:

*"There is indeed a spirit of reform in the air, to make the [UN drug] conventions fit for purpose and adapt them to a reality on the ground that is considerably different from the time they were drafted."*¹⁷

Reforms to allow experiments with models of legal market regulation are likely to be the driver of such a renegotiation, but it is important to be clear that cannabis reforms do not operate in isolation. In fact, they are likely to be the challenge to the system that precipitates a wider structural reorientation in how drug markets in different societies are managed at an international level. The challenge is to reform the international drug control infrastructure to remove barriers to individual or groups of States exploring regulation models for some currently illegal drugs, without destroying the entire edifice, much of which is unquestionably beneficial. For example, regulation of the international pharmaceutical trade is vitally important, and has obvious implications for cannabis-based medicines in the future. It is also important not to undermine international law, and the UN treaty system more broadly – which have been overwhelmingly positive, for instance, in the field of human rights. Furthermore, the consensus and shared purpose behind the need to address the problems associated with drug misuse that the conventions represent also holds great potential for developing and implementing more effective responses at an international level, guided by the principles and norms of the UN.

¹⁷ Costa, A. (2008) Making drug control 'fit for purpose': Building on the UNGASS decade, UNODC. www.unodc.org/documents/commissions/CND-Session51/CND-UNGASS-CRPs/ECN72008CRP17.pdf.

Dissatisfaction with the implications of cannabis's status within the treaty system is not a new phenomenon. Numerous national and sub-national jurisdictions have, right from the outset, questioned and increasingly moved away from the punitive prohibitions on cannabis encouraged by the conventions. This has manifested in successive waves of what might be regarded as '*soft defection*,' whereby authorities tried to remain within the flexibility afforded by the treaty framework,¹⁸ but deviate from the prohibitive norm at the heart of the regime.

As early as the 1970s, and despite President Richard Nixon's initiation of a '*war on drugs*', a number of US states formally decriminalised cannabis possession for personal use. At around the same time, Dutch authorities re-evaluated cannabis policies, leading to the development of the current cannabis '*coffee shop*' system. The International Narcotics Control Board (INCB, the '*independent, quasi-judicial expert body*' overseeing implementation of the treaties) has long criticized the Dutch model as falling outside the bounds of the conventions (although without providing the detailed legal reasoning behind that criticism).¹⁹

A second wave of reforms—which has been referred to as a '*quiet revolution*' of decriminalisation—has occurred more recently in multiple Latin American, African, Caribbean, and European countries and within US and Australian states and territories.²⁰

¹⁸ For a discussion of flexibility within the drug control treaties see D. Bewley-Taylor and M. Jelsma, *The UN Drug Control Conventions: The Limits of Latitude, Series on Legislative Reform of Drug Policies*, No. 18, March 2012. <https://www.tni.org/files/download/dlri8.pdf>; and D. R. Bewley-Taylor, (2012) *International Drug Control: Consensus Fractured*, Cambridge University Press.

¹⁹ See www.incb.org/incb/en/about.html. On the INCB's position on the Dutch '*coffee shops*' and cannabis policies more generally, and see: Bewley-Taylor, D., Blickman, T., and Jelsma, M. (2014) *The Rise and Decline of Cannabis Prohibition. The History of Cannabis in the UN Drug Control System and Options for Reform*, Transnational Institute and Global Drug Policy Observatory, p32-42. <https://www.tni.org/en/publication/the-rise-and-decline-of-cannabis-prohibition>.

²⁰ Eastwood, N., Fox, E., and Rosmarin, A. and Eastwood, N. (2016) *A quiet revolution: drug decriminalisation in practice across the globe*, Release. www.release.org.uk/sites/default/files/pdf/publications/A%20Quiet%20Revolution%20-%20Decriminalisation%20Across%20the%20Globe.pdf.

The cannabis social clubs movement in Spain has since pushed the limits of what is tolerated under a decriminalisation model further towards *de facto* legal production and supply.²¹

In addition, a range of medical cannabis systems has emerged in many parts of the world, notably in more than 35 US states. These systems have often been the focus of INCB criticism. While the INCB is on firm ground regarding its criticisms related to the 1961 Single Convention's requirements to establish national-level agencies in charge of medical cannabis, the INCB exceeds its mandate when questioning the medical usefulness of the substance.

Tensions also exist in relation to the traditional and religious use of cannabis. Acknowledging the challenges of eradicating the culturally and religiously ingrained use of cannabis within many societies, the Single Convention included a transitional reservation, allowing signatories to abandon such use gradually within 25 years of the Convention coming into force.²² With this deadline having quietly passed in 1989, it is clear that, unlike the more formalized policy shifts mentioned above, many countries—particularly in the Global South—are choosing to '*turn a blind eye*' to the cultivation and use prohibited under the conventions.²³ Furthermore, within the context of a greater appreciation of indigenous and religious rights, some countries, such as Jamaica, are finding themselves in an increasingly difficult position vis-à-vis the relationship between national legal instruments, the international drug control

²¹ Murkin, G. (2015) Cannabis social clubs in Spain: legalisation without commercialisation, Transform Drug Policy Foundation. <https://transformdrugs.org/blog/cannabis-social-clubs-in-spain-legalisation-without-commercialisation>.

²² Article 49, Single Convention on Narcotic Drugs, 1961; India, Nepal, Pakistan, and later Bangladesh made use of that transitional exemption with regard to cannabis.

²³ See for example the situation in Morocco. D. Bewley-Taylor, T. Blickman and M. Jelsma (2014) *The Rise and Decline of Cannabis Prohibition: The History of Cannabis in the UN Drug Control System and Options for Reform*, Transnational Institute and Global Drug Policy Observatory, p12-13. Also of note in this regard is India. Beyond the use of 'bhang' (cannabis leaves) that is permitted within the Single Convention, there remains widespread cultivation and use of cannabis within many parts of the country. See R. Bhattacharji (2015) *View from the Ground: Heading for the Hills; Cannabis in Malana*, Global Drug Policy Observatory. <http://gdpo.swan.ac.uk/?p=365>.

conventions, and other UN treaties on human and indigenous rights.²⁴ Jamaica has arguably taken a *‘clumsy legislative route’* to cannabis reform, legally regulating medical and religious use of cannabis, but not non-medical use more generally *‘because of the government’s need to balance the decriminalization of the widely-practiced smoking of marijuana [and] ...the protection of rights... while avoiding full legalization in order to remain compliant with international narcotics conventions’*.²⁵

Meanwhile at the multilateral level, sessions of the Commission on Narcotic Drugs (CND) – the UN’s central policy making body on drug issues—have increasingly seen Member States, including Argentina, Czechia, Ecuador, and Mexico, call openly for a re-evaluation of some aspects of the current treaty framework.²⁶

The tensions around cannabis within the treaty framework have come most dramatically to the fore in the Americas, with recent passage of laws that explicitly legalise and regulate cannabis for non-medical, non-scientific uses, a policy that is expressly forbidden by the UN drug treaties. The successful ballot initiatives in 2012 in the US states of Colorado and Washington to establish legally taxed and regulated cannabis markets were followed by initiatives in twelve more states by the end of 2020 (with, in addition, Vermont legalising non-medical cannabis but not presently permitting sales).

²⁴ For example, in a September 2015 report prepared as contribution to the 2016 UNGASS, the UN High Commissioner for Human Rights noted that: *‘Indigenous peoples have a right to follow their traditional, cultural and religious practices. Where drug use is part of these practices, the right of use for such narrowly defined purposes should in principle be protected, subject to limitations provided for in human rights law’*: United Nations High Commissioner for Human Rights (2015) *Study on the impact of the world drug problem on the enjoyment of human rights*, UNGA A/HRC/30/65. www.unodc.org/documents/ungass2016/Contributions/UN/OHCHR/A_HRC_30_65_E.pdf.

²⁵ Miller, D.J. (2015) *Jamaican Marijuana Reform, Rastas and Rights*, OxHRH Blog 18/3/15. <https://ohrh.law.ox.ac.uk/jamaican-marijuana-reform-rastas-and-rights/>.

²⁶ See, for example, International Drug Policy Consortium (2015) *The 2015 Commission on Narcotic Drugs and its Special Segment on Preparations for the United Nations General Assembly Special Session on the World Drug Problem: Report of Proceedings*. <https://www.tni.org/files/publication-downloads/cnd-proceedings-report-2015.pdf>.

At the national level, in December 2013, Uruguay became the first country in the world to legally regulate the cannabis market, with the passage of Law 19.172 granting the government control over the import, export, cultivation, production, and sale of cannabis through the newly established Institute for the Regulation and Control of Cannabis (Instituto de Regulación y Control del Cannabis, IRCCA).²⁷ This was followed by the legal regulation of cannabis for non-medical use in Canada in October 2018, with provinces and territories operating various degrees of government control over individual retail markets.²⁸ Legislative proposals for cannabis regulation are being developed and implemented in Mexico, Luxembourg, and Israel amongst others, with more countries likely to follow in the near future. The Netherlands, for so long finessing its treaty obligations by tolerating sales via the coffee shops but paradoxically maintaining prohibitions on production and supply to the coffee shops, is now exploring a formal system of cannabis production for non medical retail.²⁹

Clearly, tensions in the treaty regime around cannabis are long-standing and growing. The international community, including the UN drug control bureaucracy, has been well aware of these tensions for some time. Indeed, in a 2008 report, *Making Drug Control Fit for Purpose*, the Executive Director of the UN Office on Drugs and Crime (UNODC) wrote that *‘Cannabis is the most vulnerable point in the whole multilateral edifice. In the Single Convention, it is supposed to be controlled with the same degree of severity as cocaine and the opiates. In practice, this is seldom the*

²⁷ For a description of Uruguay’s cannabis regulation law, including its passage, contents, objectives, and challenges, see Walsh, J., and Ramsey, G. (2016) *Cannabis Regulation in Uruguay: Major Innovatives, Major Challenges*, Brookings. <https://www.brookings.edu/wp-content/uploads/2016/07/Walsh-Uruguay-final.pdf>.

²⁸ Slade, H. (2020) *Capturing the Market: Cannabis Regulation in Canada*, Transform Drug Policy Foundation and MUCD. <https://transformdrugs.org/product/capturing-the-market/>.

²⁹ Government of the Netherlands (Undated) Controlled cannabis supply chain experiment. <https://www.government.nl/topics/drugs/controlled-cannabis-supply-chain-experiment>.

*case, and many countries vacillate in the degree of control they exercise over cannabis.*³⁰

Since then, ‘*soft defections*’ with regard to cannabis policy have given way to direct breaches of the conventions’ ban on cannabis for non-medical or non-scientific purposes. As more jurisdictions appear likely to enact reforms to legalise and regulate cannabis, these treaty tensions have become the ‘*elephant in the room*’ in key high level forums, including the 2016 United Nations General Assembly Special Session (UNGASS) on drugs—obviously present, but studiously ignored in the official discourse (albeit not in informal discussions). The five years of political wrangling over the decision to remove cannabis from schedule IV, a symbolically important but in practical terms an obvious and relatively modest shift, show how problematic the issue remains. Different countries and international agencies have different reasons for seeking to avoid directly engaging the question of what to do about these tensions. But the kinds of treaty non-compliance that may have seemed merely hypothetical only a few years ago are already a reality today, and will not simply disappear. Even the INCB has recently called for ‘*reflection on possible alternative and additional agreements, instruments and forms of cooperation to respond to the changing nature and magnitude of the global drug problem*’.³¹ Governments and the UN system should give serious consideration to options for managing these policy shifts in ways that can help to modernise the drug treaty regime itself, and to thereby reinforce the UN pillars of human rights, development, peace and security, and the rule of law.

³⁰ Costa, A. (2008) Making drug control ‘fit for purpose’: Building on the UNGASS decade, UNODC. www.unodc.org/documents/commissions/CND-Session51/CND-UNGASS-CRPs/ECN72008CRP17.pdf.

³¹ INCB (2021) Celebrating 60 Years of the Single Convention on Narcotic Drugs of 1961 and 50 Years of the Convention on Psychotropic Substances of 1971. https://www.incb.org/documents/Publications/AnnualReports/AR2020/Supplement/00_AR2020_supp_full_document.pdf.

Options for change

A difficult dilemma has thus entered the international drug policy arena. There is no doubt that recent policy developments with regard to cannabis regulation have moved beyond the legal latitude of the treaties. Initiating a formal procedure to review or amend the current treaty framework, however, would immediately trigger an avalanche of political frictions with some of the most powerful countries in the world. Indeed, even as many governments continue to tout the supposed global consensus on drug policy, officials are quite aware of the significant and growing policy differences among drug treaty Member States; to the extent that if a truly global consensus ever existed, it is now fractured, and there is no new consensus to take its place.

Under such conditions, it is not difficult to understand why many countries would prefer to avoid or delay confronting the treaty questions raised by cannabis regulation. Indeed, such concerns go far in explaining the attraction of the legally fallacious—but politically potent—stance that the drug treaties as they stand are flexible enough to accommodate the regulation of cannabis markets for non-medical use.

Different countries have different reasons for finding appeal in the notion of treaty flexibility. During the March 2016 negotiations in Vienna of the UNGASS Outcome Document, different strands of support for the idea of flexibility converged around language declaring that new challenges *‘should be addressed in conformity with the three international drug control conventions, which allow for **sufficient flexibility** for States parties to design and implement national drug policies according to their priorities and*

needs ...'³² (emphasis added). The same language was able to serve different, even contradictory, purposes.

The wording of '*sufficient flexibility*' originates from the European Union (EU) common position on the UNGASS, where it was accompanied by the EU's commitment to '*maintain a strong and unequivocal commitment to the UN conventions.*' For the EU then, flexibility applies to policies such as harm reduction, decriminalisation of possession and cultivation of cannabis for personal use, and alternatives to incarceration, but not to cannabis regulation, which the EU has considered as falling outside the scope of policy options allowed under the treaties.

However, for governments for whom it would be politically convenient to maintain that cannabis regulation fits within the boundaries of the conventions, '*sufficient flexibility*' could be read as covering cannabis regulation. During the negotiations, that paragraph also received support from countries at the other end of the policy spectrum, including Russia and China. After all, they argued, the Single Convention also says that '*a Party shall not be, or be deemed to be, precluded from adopting measures of control more strict or severe than those provided by this Convention*' (article 39); the treaties therefore provide countries with '*sufficient flexibility*' to continue with forced treatment or the death penalty. Attempts to rein in that line of argumentation achieved only a vague reference in the paragraph that national policies need to be consistent with '*applicable international law.*'³³

For countries like Jamaica or the Netherlands, implications of the term are very different. In those cases, where the principle of legal regulation enjoys broad political support, the fact that regulation

³² United Nations Economic and Social Council (2016) E/CN.7/2016/L.12/Rev.1, 22 March 2016. https://www.tni.org/files/publication-downloads/ecn.72016l.12.rev._1.draft_outcome_document.pdf.

³³ See above footnote.

would contravene international treaty obligations is considered an impediment for its implementation. As such, agreeing to language about ‘*sufficient flexibility*’ amounts to taking a political stance *against* cannabis regulation, because, with a concern for international law, it is based on an understanding (an accurate understanding, and one shared by the INCB) that the UN drug conventions expressly disallow legal regulation.

Lest there be doubt about the INCB's views, INCB President Werner Sipp directly addressed the issue of flexibility in his keynote speech at the March 2016 session of the CND, as the UNGASS document was under negotiation. Some proponents of new laws that permit the non-medical use of cannabis, he said, ‘*...pretend that the flexibility of the conventions allows such regulations. In fact, the debate on flexibility is at the core of the general debate on future drug policy because it regards the possibilities and the limitations of the conventions. Undoubtedly, there exists flexibility in the conventions—but not in each and every respect.*’ For example, Sipp explained, there is ‘*no obligation stemming from the conventions to incarcerate drug users having committed minor offences,*’ and they ‘*provide for flexibility in the determination of appropriate sanctions.*’ However, there is ‘***no flexibility*** in the conventions for *allowing and regulating any kind of non-medical use*’ (emphasis in the original).³⁴

The UNGASS document negotiators—in settling on language with such different and even contradictory meanings to different sets of countries—did achieve what most countries wanted: a way to avoid opening a debate on the adequacy of the treaties themselves.

³⁴ Statement by Mr. Werner Sipp, President, International Narcotics Control Board (INCB), Fifty-ninth session of the Commission on Narcotic Drugs, 14 March 2016, http://www.incb.org/incb/en/news/speeches/2016/ungass_cnd.html.

The fact remains, however, that the accelerating process of national reforms has already moved cannabis policies beyond the boundaries of what the conventions can legally accommodate. To move the debate forward, the following discussion aims to illuminate the available options for countries to ensure that their new domestic cannabis laws and policies are aligned with their international obligations, thereby modernising the global drug control system in ways consistent with international law and the overarching purposes of the UN system.

Mindful of the political tensions evident during the 2016 UNGASS process, it is important to emphasise that treaty reform does not necessarily require negotiating a new global consensus. This discussion therefore distinguishes four categories of reforms, acknowledging that the different options are often overlapping and not necessarily mutually exclusive:

- I. Treaty reform that applies to all signatory states, requiring consensus approval;
- II. Treaty reform that applies to all signatory states, requiring majority approval;
- III. Treaty reform that applies to a selective group of states; and
- IV. Treaty reform that applies to an individual state.

I. Treaty reform that applies to all signatory states, requiring consensus approval

Treaty Amendment

Any State party can notify the UN Secretary General of a proposed amendment, including the reasoning behind the move. The Secretary General then communicates the proposed amendment and the reasons for it to the State parties and to the Economic and Social Council (ECOSOC), which can decide to:

- Convene a Conference of all the Parties (COP) of the treaty to consider the amendment;
- Ask the Parties if they accept the amendment; or
- Take no action and wait to see whether any State party submits any objection.

In the event of no Party rejecting the amendment within 18 months (24 months for the 1988 Convention), the amendment is automatically accepted. In the case of the 1961 and 1971 Conventions, the amendment then immediately comes into force for all Parties (that is, no objections equals acceptance), while in the case of the 1988 Convention, the amendment only comes into force for those parties that *‘deposited with the Secretary-General an instrument expressing its consent to be bound by that amendment’* (that is, explicit notification of acceptance is required).³⁵

In the event State parties register objections to a proposed amendment, ECOSOC can decide to:

- Still approve the amendment (in which case it would not be applicable to the objecting states);
- Reject it (if multiple objections are raised that argue convincingly that such an amendment would compromise the object and purpose of the treaty); or
- Convene a COP to consider the amendment.

In addition, ECOSOC may also submit proposed amendments to the General Assembly for consideration.³⁶ Moreover, the General

³⁵ Treaty amendments that are adopted through this procedure do not apply to parties that have registered objections in the case of the 1961 and 1971 conventions, or those that have not notified their explicit consent in the case of the 1988 Convention. 1961 Convention (as amended) Article 47; 1971 Convention Article 30; 1988 Convention, Article 31.

³⁶ In accordance with Article 62, paragraph 3 of the UN Charter.

Assembly even has the power to discuss and adopt amendments to UN conventions by simple majority vote.

In theory, all three UN drug control conventions could be amended using these procedures. While many consider this to be a politically unlikely scenario for the foreseeable future, it is important to recall that the 1961 Single Convention was amended with the 1972 Protocol, after a COP was convened and agreed to substantial treaty changes. At that stage, the US government argued that it was *'time for the international community to build on the foundation of the Single Convention, since a decade has given a better perspective of its strengths and weaknesses.'*³⁷ Notably the latitude under the 1961 Single Convention with regard to alternatives to incarceration—which has been the focus of many recent debates—only exists due to a treaty amendment agreed in the 1972 Protocol.³⁸

For historical perspective, it is also useful to recall that many decisions in the process of negotiating the drug treaties were taken by majority vote. The false perception that the UN drug control system has always relied on full consensus is a more recent construct, intended to reinforce an image of universal agreement even as tensions were becoming ever more visible. Moreover, in the event that treaty amendments are approved, States can opt not to become part of the amended agreement. As the 1969 Vienna Convention on the Law of Treaties (VCLT) makes clear: *'The amending agreement does not bind any State already a party to the treaty which does not become a party to the amending*

³⁷ United Nations, Memorandum of the United States of America Respecting its Proposed Amendments to the Single Convention on Narcotic Drugs, E/CONF.63/10, in: United Nations (1961) Conference to Consider Amendments to the Single Convention on Narcotic Drugs, 1961 Geneva, 6–24 March 1972: Official Records, vol. 1, New York: UN, 1974, pp. 3–4.

³⁸ Article 36 of the amended 1961 Convention reads: *'Parties may provide, either as an alternative to conviction or punishment or in addition to conviction or punishment, that such abusers of drugs shall undergo measures of treatment, education, after-care, rehabilitation and social reintegration.'* See: Bewley-Taylor, D. and Jelsma, M. (2012) *Regime change: Re-visiting the 1961 Single Convention on Narcotic Drugs*, International Journal of Drug Policy 23, pp. 72–81.

agreement.' (Article 40.4). As such, States that do not wish to be bound by the treaty as amended may retain the older obligations.

Most modern treaties, including the 2000 Transnational Organized Crime Convention (UNTOC), the 2003 Convention against Corruption (UNCAC), and the 2003 WHO Framework Convention on Tobacco Control (FCTC) have an inbuilt COP mechanism that requires them to undergo periodic reviews and enables them to evolve and modernise if necessary. The international drug control treaty regime, however, with its roots predating the UN, lacks such a periodic review mechanism—which helps to explain its outdated nature and resistance to reform. The challenge of modernising the drug control regime via a COP mechanism is further complicated by the fact that the regime consists of three separate treaties, all of which would require amendment. A more rational course of systemic evolution could be to try and resolve the inconsistencies between the 1961 and 1971 Conventions by merging them, together with the precursor controls under the 1988 Convention, into a new Single Convention that featured:

- A structured periodic review mechanism;
- An improved scheduling procedure, striking a better balance between ensuring availability of controlled substances for legitimate uses versus preventing misuse;
- A more tolerant and legally consistent approach to traditional, spiritual, and non-problematic social uses; and
- Incorporation of the other elements from the 1988 drug treaty into the subsequent treaties addressing organized crime and corruption, with which the 1988 drug treaty is already closely aligned.

Discussions on more substantive reforms of this nature have yet to occur formally, although they have been suggested in the Organization of American States' 2013 report *Scenarios for the*

Drug Problem in the Americas.³⁹ Internal discussions around the possibility of treaty framework modernisation have also taken place within the UN system, in the context of inter-agency discussions in preparation for the 2019 review of the UN's 2009 10-year drug strategy.⁴⁰ These discussions did not, however, emerge into the public domain, with the increasingly polarised high level debate leading the UN agencies to err on the side of risk aversion, and once again retreat to the relative safety of the status quo position.

II. Treaty reform that applies to all signatory states, requiring majority approval

Rescheduling/modification

As noted above, cannabis first entered the international drug control system under the League of Nations on dubious procedural grounds, and it wasn't until 2019 that its position was formally reviewed by the WHO Expert Committee.⁴¹ As discussed, however, recent rescheduling decisions would not in any way allow regulated markets for non-medical cannabis.

The 1961 Single Convention allows for the WHO or any State party to initiate, at any time, the modification process that could reschedule a specified drug or delete it from the conventions. The WHO is the only body mandated to make scheduling recommendations, which must subsequently be agreed by the UN Commission on Narcotic Drugs (CND). Modifying schedules does not require consensus; these are the only decisions the CND takes by vote. New substances

³⁹ OAS (2013) *Scenarios for the Drug Problem in the Americas*.
http://www.oas.org/documents/eng/press/Scenarios_Report.PDF.

⁴⁰ Jelsma, M. (2020) *UN Common Position on drug policy — Consolidating system-wide coherence*, IDPC and Transnational Institute. <https://www.tni.org/files/publication-downloads/un-common-position-briefing-paper.pdf>.

⁴¹ Danenberg, E., et al (2013) *Modernizing methodology for the WHO assessment of substances for the international drug control conventions*, *Drug and Alcohol Dependence* 131.3, pp.175-181.
<http://dx.doi.org/10.1016/j.drugalcdep.2013.02.032>.

are routinely scheduled in this way, and the treaty system is thus constantly being modified. In the case of cannabis, scheduled under the Single Convention, a rescheduling decision would be taken by a simple majority of its *'members present and voting.'*⁴² Delta-9-THC (the main active drug in cannabis, or dronabinol, as the pharmaceutical extract is known), is scheduled as a *'psychotropic substance'* under the 1971 Convention, where a rescheduling decision requires a two-thirds majority; in fact, dronabinol has been recommended for de-scheduling several times already.⁴³

For cannabis, however, this process is further complicated by the fact that it (along with coca and opium) is also mentioned explicitly in specific articles within the 1961 and 1988 Conventions. Rescheduling or de-scheduling cannabis may therefore not be sufficient to allow for fully regulated markets along the lines of the changes now being enacted in various jurisdictions today. Most likely, some form of amendment, modification, or reservation to those treaties would also be required.

III. Treaty reform that applies to a selective group of states

'Inter Se' treaty modification

The 1969 Vienna Convention on the Law of Treaties (VCLT), which establishes comprehensive rules and guidelines for how treaty law is to be understood, also allows for the option to modify treaties between certain parties only, offering in this context an intriguing and under-explored legal option somewhere between selective denunciation and a collective reservation (see [below](#)).

⁴² UNODC (2014) E/CN.7/2014/10, p18.

https://www.unodc.org/unodc/en/commissions/CND/session/57_Session_2014/CND-57-Session_Index.html.

⁴³ For more details on scheduling, see: Hallam, C., Bewley-Taylor, D., & Jelsma, M. (2014) *Scheduling in the international drug control system*, Series on Legislative Reform of Drug Policies No. 25, Transnational Institute and IDPC. <http://idpc.net/publications/2014/06/scheduling-in-the-international-drug-control-system>.

According to Article 41 of the VCLT, ‘Two or more of the parties to a multilateral treaty may conclude an agreement to modify the treaty as between themselves alone’, as long as it ‘does not affect the enjoyment by the other parties of their rights under the treaty or the performance of their obligations’ and it is not ‘incompatible with the effective execution of the object and purpose of the treaty as a whole.’⁴⁴

In principle, both conditions could be met, on the provision that the ‘object and purpose’ of the 1961 Convention is reflected in the opening to its preamble: ‘The parties, **concerned with the health and welfare of mankind** [...]’. As discussed below, in relation to denunciation followed by reaccession, making a reservation exempting a particular substance from the treaty’s general obligation to limit drugs exclusively to medical and scientific purposes is explicitly mentioned in the Commentary on the Single Convention as an option that could be procedurally allowable, including for cannabis.⁴⁵ Indeed, India has such a reservation for bhang, (the leaves of the cannabis plant rather than the flowering tops) which has some traditional religious and medical uses. Given that it is permissible for such a reservation to in theory be made, there is no reason to believe that an *inter se* modification to the same letter would be incompatible with the effective execution of the treaty’s object and purpose.

Such a modification would require that the agreement include a clear commitment to the original treaty obligations vis-à-vis countries not party to the *inter se* modification agreement, especially concerning prevention of trade or leakage to prohibited jurisdictions. All the provisions in the treaties—including those pertaining to cannabis—would remain in force *vis-à-vis* the treaty’s

⁴⁴ Vienna Convention on the Law of Treaties, 1969, Article 41.

⁴⁵ United Nations (1973), *Commentary on the Single Convention on Narcotic Drugs*, 1961, p476.

States parties that are not part of the *inter se* agreement. Over time, such an *inter se* agreement might evolve into an alternative treaty framework to which more and more countries could adhere, while avoiding the cumbersome (if not impossible) process of unanimous approval of amendments to the current regime.⁴⁶

In theory, modification *inter se* could be used by a group of like-minded countries that wish to resolve the treaty non-compliance issues resulting from national decisions to legally regulate the cannabis market, as Uruguay, Canada and Mexico have already done. Such countries could sign an agreement with effect only among themselves, modifying or annulling the cannabis control provisions of the UN conventions. This could also be an interesting option to explore in order to provide a legal basis justifying international trade between national jurisdictions that allow or tolerate the existence of a legal market of a substance under domestic legal provisions, but for which international trade is not permitted under the current UN treaty obligations.

The drafters of the 1969 VCLT considered the option of *inter se* modification as a core principle for international law, and the issue was discussed at length at the International Law Commission in 1964: *'The importance of the subject needed no emphasis; it involved reconciling the need to safeguard the stability of treaties with the requirements of peaceful change.'*⁴⁷ From the very beginning, the evolutionary nature of treaties was seen as fundamental to the UN system—a system in which all Member States *'undertake to respect agreements and treaties to which they have become contracting parties without prejudice to the right of revision,'* according to

46 Jelsma, M. (2016) UNGASS 2016: Prospects for Treaty Reform and UN System-Wide Coherence on Drug Policy, Journal of Drug Policy Analysis. <http://www.degruyter.com/view/j/jdpa.ahead-of-print/jdpa-2015-0021/jdpa-2015-0021.xml>.

47 International Law Commission (ILC), Summary Record of the 745th Meeting: 15 June 1964, A/CN.4/SR.745, in: International Law Commission (1965) Yearbook of the International Law Commission: 1964, vol. 1, New York: UN, p144, paragraph 49.

the Egyptian delegate at the time. He underscored that it was therefore *'equally important to ensure that arbitrary obstacles were not allowed to impede the process of change. There had been many instances in the past of States, by their stubborn refusal to consider modifying a treaty, forcing others to denounce it.'*⁴⁸

A leading authority on international treaty law, Jan Klabbbers, describes the *inter se* option as *'perhaps the most elegant way out,'* but also notes that though *inter se* modification is based on an ancient principle of international law, *'practical examples are hard to come by.'*⁴⁹ It seems this is essentially uncharted legal territory. However, a good case could be made that the increasing tensions between cannabis policy trends and the frozen drug treaty system provides a clear example of circumstances for which this exceptional option was designed and deemed to be of crucial importance. Indeed, though its use has been rare, the *inter se* option has been understood since the outset of the UN system as a means of reinforcing treaty regimes, not undermining them. Where outdated regimes are exceptionally resistant to reform, and therefore liable to become brittle and antiquated, an option such as *inter se* modification could actually strengthen the regime by demonstrating that it is capable of modernisation.

IV. Treaty reform that applies to an individual state

a. Withdrawing from the Treaties

In light of the outdated nature of the drug control treaties and the seemingly insurmountable procedural and political obstacles to modernising them, the question is often raised why countries should not simply withdraw from the UN drug control treaty regime.

⁴⁸ See above footnote, paragraph 53.

⁴⁹ Klabbbers, J. (2006) *Treaties, Amendment and Revision*, in Max Planck Encyclopedia of Public International Law, pp. 1084-1089 <http://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e1483>.

The option exists for any signatory Member States to withdraw from the treaties via the process of denunciation; treaty exit would technically ‘*solve*’ the problems of breach or non-compliance from a legal perspective.

However, as mentioned, a key reason reform states may wish to remain party to the UN drug control treaties is that they also regulate the global trade in drugs for legal medical purposes, including substances on the WHO list of essential medicines. Inadequate access to controlled medicines is already a severe problem in many Global South countries, and withdrawing from the INCB-administered global system of estimates and requirements operating under the UN drug control conventions could risk making it even worse.

For countries receiving development aid or benefitting from preferential trade agreements, denunciation would also risk triggering economic sanctions. Being State party to all three of the drug control conventions is a condition in a number of preferential trade agreements or for accession to the European Union. The US government – though now more likely to be lenient towards cannabis reforms elsewhere due to the changes underway within US borders – still maintains the disciplinary certification mechanism, and withdrawal from the drug control treaties altogether would almost certainly lead to decertification and sanctions. Denunciation can therefore have serious political and economic implications, especially for less powerful and poorer countries. Even for countries that are less economically vulnerable, simply withdrawing from the drug treaties could carry the risk of reputational costs in key international fora.

b. Selective denunciation

The 1969 VCLT stipulates that a historical ‘error’ (Article 48) or a ‘*fundamental change of circumstances*’ (*rebus sic stantibus*, Article 62) are valid reasons for a Member State to revoke its adherence to a treaty.⁵⁰ However, recourse to the *rebus sic stantibus* doctrine and the option of ‘selective denunciation’ are rarities in international law. The Beckley Foundation’s Global Cannabis Commission report concluded in 2008 that ‘*taking this path might be less legally defensible than denunciation and re-accessions with reservations*’ (see [below](#)), which would have the same end result.⁵¹ And for a group of countries, the option of an *inter se* agreement seems to be the more elegant way out, with similar effect.

c. Denunciation followed by re-accession with a reservation

At the moment of signing, acceding, or ratifying a treaty, states have the option to make reservations regarding specific provisions, as many countries in fact did in the case of all three drug control treaties.⁵² Reservations or other formal unilateral ‘*interpretive declarations*’ are meant to exclude or modify the legal effect of certain provisions of a treaty for the reserving state.

Under the procedure of treaty denunciation followed by re-accession with a reservation, a country can withdraw itself from the treaty entirely, with the intention of rejoining with specific reservations. In the case of the 1961 Convention, if one third or

⁵⁰ According to one commentary, ‘[I]f the fundamental situation underlying treaty provisions becomes so changed that continued performance of the treaty will not fulfil the objective that was originally intended, the performance of those obligations may be excused.’ See Leinwand, M. (1971) *The International Law of Treaties and United States Legalization of Marijuana*, Columbia Journal of Transnational Law 10, pp.413-441.

⁵¹ Room, R. et al (2008) *Cannabis Policy: Moving Beyond Stalemate*, Global Cannabis Commission, The Beckley Foundation, p155.

⁵² Reservations can be found in the UN Treaty Collection database, <https://treaties.un.org/>.

more State parties object, the country would be blocked from re-acceding.⁵³ Denunciation and re-accession with a reservation is recognized as a legitimate procedure, although its practice has been limited to exceptional cases.⁵⁴

In the case of the drug treaties, there is a recent precedent: in 2011, Bolivia notified the UN Secretary-General that it had decided to exit the Single Convention, taking effect in January 2012, intending to re-accede with reservations regarding coca. The INCB condemned the move, and 15 countries—including every member of the G8 (now the G7)—submitted formal objections. But the number of objections fell far short of the 62 (one third of all State parties to the Convention) that were needed to block Bolivia from re-acceding. In early 2013, Bolivia's re-adherence to the treaty was formally accepted, with reservations upholding the right to allow in its territory traditional coca leaf chewing, the use of the coca leaf in its natural state, and the cultivation, trade, and possession of the coca leaf to the extent necessary for these licit purposes. (Bolivia had initially tried to amend the treaties, but was blocked by a small number of objections.) The procedure thus successfully resolved the legal tensions, at least for Bolivia, between the 1961 Single Convention's obligation to abolish its indigenous coca culture, versus Bolivia's obligations under the 2007 UN Declaration on the Rights of Indigenous Peoples and its national Constitution to protect it.

A reservation by which a state would exempt itself from implementing the Convention's obligations for cannabis could therefore be attempted following the same treaty procedure, but

⁵³ The 1988 Convention does not contain specific rules for reservations and is therefore governed by the general rules established in the 1969 Vienna Convention on the Law of Treaties, specifically articles 19-23, which do not establish a threshold of objections. Usually that means that reservations are accepted without having any effect for objecting State parties.

⁵⁴ Helfer, L.R. (2006) *Not fully committed? Reservations, risk and treaty design*, *Yale Journal of International Law* 31.

there are differences to be taken into account. The main legal issue relates to article 19 of the VCLT, which requires that a reservation must not be *‘incompatible with the object and purpose of the treaty.’* As discussed above, the overall aims of the Single Convention are expressed in the preamble’s opening paragraph regarding concern about *‘the health and welfare of mankind’*, facilitated through the treaty’s general obligation to limit controlled drugs *‘exclusively to medical and scientific purposes.’* Making a reservation exempting a particular substance from the treaty’s general obligation to limit drugs exclusively to medical and scientific purposes is explicitly mentioned in the Commentary on the Single Convention as an option that could be procedurally allowable, for coca leaf as well as for cannabis.⁵⁵ While the absence of any accompanying cautionary text seems to imply that exemption by means of a reservation of a specific substance from the general obligations would not in itself constitute a conflict with the object and purpose of the treaty as a whole, this would certainly be an important legal discussion to be had in the context of crafting reservations. The same issues would arise with an *inter se* agreement (see [above](#)), which comes close to a form of *‘collective reservation.’*

Implementing cannabis regulation in situations of treaty non-compliance

The treaty reform options described above—with their varying procedural and political considerations—all assume a decision on the part of at least one state to proactively alter its relationship to the current treaties with respect to cannabis. states might alternatively opt to sidestep the treaty questions that arise in the context of their cannabis reforms, or assert that the changes underway within their countries are allowable under the treaties as

⁵⁵ United Nations (1973), Commentary on the Single Convention on Narcotic Drugs, 1961, p476.

they stand, therefore denying that treaty reform options of any sort ought or need to be considered. Another option—acknowledging the fact of temporary non-compliance and working toward an eventual realignment of domestic law and treaty obligations—would open the door to deliberately pursuing some set of treaty reform options. These two further options are explored below.

Sidestepping or denying issues of non-compliance

The first two states to proceed with development and implementation of formal non-medical cannabis markets were the United States and Uruguay. Their situations are very different and they have provided contrasting commentaries on the implications of their moves, while both arguing that policy shifts within their borders do not put them in breach of the UN drug control conventions.

Uruguay has argued its policy is fully in line with the original objectives that the drug control treaties emphasised, but have subsequently failed to achieve—namely, the protection of the health and welfare of humankind. Uruguayan authorities have specifically argued that the creation of a regulated market for adult use of cannabis is driven by health and security imperatives and is therefore an issue of human rights. As such, officials point to wider UN human rights obligations that need to be respected, specifically appealing to the precedence of human rights principles over drug control obligations. As the first country courageous enough to take the step of regulating cannabis for all uses, it is enormously significant that Uruguay has explained its reform with reference to

its overarching human rights obligations under international law.⁵⁶ Moreover, while reluctant to acknowledge its cannabis regulation model represents non-compliance with the drug treaties, Uruguay has noted that it creates legal tensions within the treaty system that may require revision and modernisation. At the 2013 CND session, for example, Diego Cánepa, head of the Uruguayan delegation, declared: *'Today more than ever we need the leadership and courage to discuss if a revision and modernization is required of the international instruments adopted over the last fifty years.'*⁵⁷

US officials, for their part, have argued that since the cultivation, trade, and possession of cannabis taking place in multiple US states remain criminal offences under US federal law, the Federal Government as State party to the conventions is not in breach. This is despite the Federal Government's decision to accommodate the state-level developments, provided they proceed within certain parameters.⁵⁸ A 2015 US discourse, promoted by Ambassador William Brownfield (Assistant Secretary for International Narcotics and Law Enforcement Affairs), maintains that the extant treaty framework possesses sufficient flexibility to allow for regulated cannabis markets.⁵⁹ This argument is strained by any reasonable understanding of the treaties and their overtly prohibitionist obligations—and appears to reflect political

⁵⁶ In 2015, Uruguay co-sponsored a UN Human Rights Council resolution calling upon the UN High Commissioner for Human Rights (UNHCR) to prepare a report 'on the impact of the world drug problem on the enjoyment of human rights.' Uruguay's contribution to UNHCR's preparations laid out the country's stance regarding the primacy of human rights: 'We reaffirm the importance of ensuring the human rights system, underscoring that human rights are universal, intrinsic, interdependent and inalienable, and that is the obligation of States to guarantee their priority over other international agreements, emphasising the international drug control conventions.' See: Junta Nacional de Drogas (2015) Impact of the World Drug Problem in the exercise of Human Rights. <http://www.wola.org/sites/default/files/Drug%20Policy/AportedeROUalaUNGASS2016enDDHHENG.pdf>.

⁵⁷ Commission on Narcotic Drugs (2013) Intervención del Jefe de Delegación de Uruguay, 56° Período de Sesiones de la Comisión de Estupefacientes, Prosecretario de la Presidencia del Uruguay.

⁵⁸ See memo from Deputy US. Attorney General James M. Cole, August 2013, <https://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf>.

⁵⁹ Barrett, D. et al (2015) Fatal Attraction: Brownfield's Flexibility Doctrine and Global Drug Policy Reform, The Huffington Post, 11 November. http://www.huffingtonpost.co.uk/damon-barett/drug-policy-reform_b_6158144.html.

expediency rather than convincing legal reasoning.⁶⁰ A good case can be made that the main objective of Ambassador Brownfield's flexibility argument is to '*prevent clear treaty breaches of state-level cannabis legalization initiatives from triggering an open international debate on treaty reform.*'⁶¹ Nevertheless, such a debate is now inevitable, not least since the INCB has made clear statements that both Uruguayan and US cannabis regulation models are not in compliance with the treaties, and Brownfield has himself acknowledged the INCB's authority in determining whether or not state parties are in compliance.⁶² The questions of US treaty compliance are likely to come into sharper focus if, as seems likely, US federal reforms progress to deschedule and decriminalise non-medical cannabis nationally, providing a clear platform (far beyond the tactic acceptance that exists currently) for state-level legalisation.

An argument has also been made (although not by any state parties) that legal regulation is possible within the bounds of the treaties by interpreting the conventions' '*scientific purposes*' language to include experimentation with alternative regulatory options, so long as these are researched. This, however, misunderstands the meaning of '*scientific purposes*' within the treaties, confusing the uses to which substances may be put with the scientific or evidence base for policy. It also takes the phrase out of its context, both

⁶⁰ For more in-depth discussion of the U.S. stance that the treaties are flexible enough to encompass legal regulation of cannabis, see: Bennett, W., Walsh, J. (2014) *Marijuana Legalization is an Opportunity Modernize International Drug Treaties*, Brookings and WOLA, <http://www.brookings.edu/~media/research/files/reports/2014/10/15-marijuana-legalization-modernize-drug-treaties-bennett-walsh/cepmjlegalizationv4.pdf>.

⁶¹ See Jelsma, M. (2015) *UNGASS 2016: Prospects for Treaty Reform and UN-System-Wide Coherence on Drug Policy*, Journal of Drug Policy Analysis. <http://www.degruyter.com/view/j/jdpa.ahead-of-print/jdpa-2015-0021/jdpa-2015-0021.xml>.

⁶² Brownfield, W. (2016) Trends in Global Drug Policy: Roundtable with William R. Brownfield, U.S. Assistant Secretary of State, US Department of State 8 March. <https://2009-2017-fpc.state.gov/254116.htm>.

within the article concerned and the treaty as a whole, contrary to basic Vienna Convention rules on interpretation.⁶³

Proceeding in ‘principled’ or ‘respectful non-compliance’

Rather than attempting to argue why legally regulating cannabis would not constitute a compliance problem with the 1961 and 1988 Conventions, states that wish to proceed with legal regulation could instead openly acknowledge that doing so would result in non-compliance. Crucially, this option requires that the state sets out its reasons for national policy reform, how this affects compliance, and in particular why this is necessary for the realization of other international legal and policy commitments. Moreover this situation of non-compliance should be seen and presented as temporary, with the aim of ensuring the realignment of the country’s new domestic laws and practice with its treaty obligations as part-and-parcel of the reform initiative. The state should, in parallel, request multilateral discussions to resolve the situation, for example through supporting an expert advisory group on the reform of the conventions,⁶⁴ and supporting a later Conference of the Parties (COP). Pending those developments, the state would carry on in conformity with its remaining commitments under the treaties, report as usual to the INCB, and report to the CND on the outcomes of its policies.

This approach appears to have been taken by Canada. Of the countries that have already moved to regulate non-medical cannabis, Canada

⁶³ See, for example, All Party Parliamentary Group for Drug Policy Reform (2015) *Guidance on Drug Policy: Interpreting the UN Drug Conventions*. https://www.unodc.org/documents/ungass2016/Contributions/Civil/APPG_for_Drug_Policy_Reform/Guidance_print_copy.pdf; also see Collins, J., *Development First: Multilateralism in the Post-‘War on Drugs’ Era*, and Thoumi, F., *Re-examining the ‘Medical’ and Scientific Basis for Interpreting the Drug Treaties: Does the ‘Regime’ Have Any Clothes*, in: LSE Expert Group (2016) *After the Drug Wars: Report of the LSE Expert Group on the Economics of Drug Policy*, London School of Economics, pp. 9-29. <https://www.lse.ac.uk/ideas/publications/reports/after-drugs>.

⁶⁴ See Transnational Institute (2015) *UNGASS 2016: Background memo on the proposal to establish an expert advisory group*. https://www.unodc.org/documents/ungass2016/Contributions/Civil/Transnational_Institute/Background_memo_November_UNGASS_2016_final.pdf.

is the first to make a clear formal acknowledgement that it is ‘*in contravention of certain obligations related to cannabis under the UN drug conventions.*’⁶⁵ This would seem preferable to either sidestepping the issue (Uruguay), or falling back on dubious legal arguments (USA).

Conscious of the international scrutiny and their default leadership role on this question amongst reform oriented countries, Canada has assumed a status that could be described as principled, or respectful non-compliance.⁶⁶ Canada has acknowledged its non-compliance, but also made the case for reform rooted in UN Charter principles – the health and wellbeing of its citizens – as well as engaging in dialogue with the INCB and proactively seeking to resolve the obvious tensions between its domestic treaty commitments. Canada has also been open and active in dialogue in key international forums including the 2016 UNGASS, and annual Commission on Narcotic Drugs, as well as informal discussions with like minded states exploring or implementing cannabis reforms.⁶⁷

Clearly, open non-compliance with international legal obligations is not desirable, but all of the reform options set out in this chapter are driven by necessity. The problem here is not that countries are opting for regulatory approaches. Rather, outmoded and unworkable treaty provisions are the problem that gives rise to the need for a temporary and transitional period of principled non-compliance. In this context the recognition of the fact that a state can no longer fully comply with the conventions’ obligations regarding cannabis need not be seen as disrespect for the rule of

⁶⁵ Senate of Canada (2018) The Standing Senate Committee on Foreign Affairs and International Trade Evidence. <https://sencanada.ca/en/Content/Sen/Committee/421/AEFA/53882-e>.

⁶⁶ Global Commission on Drugs (2018) Regulation: The Responsible Control of Drugs. https://www.globalcommissionondrugs.org/wp-content/uploads/2018/09/ENG-2018_Regulation_Report_WEB-FINAL.pdf (English).

⁶⁷ See: Government of Canada (2016) Plenary statement for the Honourable Jane Philpott Minister of Health- UNGASS on the world drug problem. <https://www.canada.ca/en/health-canada/news/2016/04/plenary-statement-for-the-honourable-jane-philpott-minister-of-health-ungass-on-the-world-drug-problem.html>.

law. To the contrary, it confirms that treaty commitments matter. Indeed, treaty non-compliance as domestic laws and practice change is a fairly common feature of regime evolution and modernisation.⁶⁸ Waving away worries about non-compliance by resorting to dubious legal justifications is much more an expression of disrespect for international law. Many governments reforming their cannabis laws are doing so based on health, development, human rights, security, or other grounds, and out of a concern for the international legal commitments made in these areas, the realisation of which has been negatively affected by the implementation of the drugs conventions. As the Global Commission on Drug Policy has argued:

*'Unilateral defections from the drug treaties are undesirable from the perspective of international relations and a system built on consensus. Yet the integrity of that very system is not served in the long run by dogmatic adherence to an outdated and dysfunctional normative framework. The evolution of legal systems to account for changing circumstances is fundamental to their survival and utility, and the regulatory experiments being pursued by various states are acting as a catalyst for this process. Indeed, respect for the rule of law requires challenging those laws that are generating harm or that are ineffective.'*⁶⁹

Moreover, what we can now see is that it is not the case that states will face significant condemnation from the international community for cannabis reforms that are increasingly common practice across the world. Opting for reform and acknowledging non-compliance can help set the stage for treaty reform options

⁶⁸ Cogan, J.K. (2006) *Noncompliance and the International Rule of Law*, *Yale Journal of International Law* 31, pp. 189-210.

⁶⁹ Global Commission on Drug Policy (2014) *Taking Control: Pathways to Drug Policies That Work*. <http://www.gcdpsummary2014.com>.

that can be implemented collectively among like-minded States, such as the *inter se* option.

Discussion and recommendations

More and more states are acknowledging the powerful arguments for questioning the treaty-imposed prohibition model for cannabis control. For a range of reasons, multiple forms of soft defection, non-compliance, decriminalisation, and *de facto* regulation have persisted in countries where traditional use is widespread, and have since blossomed around the world to almost every nation or territory where cannabis has become popular in the past half century.

Decades of doubts, soft defections, legal hypocrisy, and policy experimentation have now reached the point where *de jure* (in law, as opposed to *de facto* – in practice) legal regulation of the whole cannabis market is gaining political acceptability, even if it violates certain outdated elements of the UN conventions. Tensions are likely to further increase between countries pursuing regulatory approaches and those strongly in favor of defending the status quo as well as the UN drug control system and its specialised agencies.

In the untidy conflict of procedural and political constraints on treaty reforms versus the movement towards a modernised global drug control regime, the system may go through a further period of legally dubious interpretations and questionable justifications for growing numbers of national and sub-national reforms. And the situation is unlikely to change until a tipping point is reached and a group of like-minded countries is ready to engage in the challenge to reconcile the multiple and increasing legal inconsistencies and disputes.

The inevitability of further cannabis reforms looks set to be the issue that opens the debate around the UN drug control treaty system, and questions around potential regulation models for other drugs are likely to appear on the table sooner or later. In fact, that debate has already started with regard to coca leaf and other psychoactive plants, and has regularly surfaced in the context of responses to New Psychoactive Substances (NPS). While the arguments driving the current dynamic towards cannabis regulation do not all apply in the same way to other controlled substances, ongoing reforms focused on cannabis are not the end of the story, but are likely to act as the catalyst for reviewing the efficacy of the international drug control system for other substances as well. Such a situation must be taken into account as discussions around cannabis develop.

Indeed, the question now appearing on the international policy agenda is no longer whether or not there is a need to reassess and modernise the UN drug control system, but rather when and how. The question is if a mechanism can be found soon enough to deal with the growing tensions and to transform the current system in an orderly fashion into one more adaptable to local concerns and priorities, and one that is more compatible with basic scientific norms and modern UN standards. Key elements of an effective strategy for moving forward should include:

- **Promoting high level dialogue on resolving the tensions between emerging State practice and outdated and counterproductive treaty obligations**

States seeking to explore, develop, or actively implement cannabis regulation models will all face different legal and political challenges, domestically and internationally. Whatever reforms are undertaken, States should ensure that the issue is explored, rather than ignored, in key multilateral fora. Leadership from reform-minded States in

promoting this debate will be vital. There are a number of ways in which this dialogue can be informed and encouraged:

- Supporting proposals for an expert advisory group to consider issues around emerging challenges—including cannabis regulation—and modernisation of the international drug control framework, and make recommendations to inform the UN debate. Such proposals were previously being actively promoted by a number of State parties in the lead up to the 2019 UN Political Declaration and Plan of Action, but have yet to come to fruition.⁷⁰
- Proceeding with **formal mechanisms for reforming the treaty system** – such as amendment, modification, reservation options, or more substantive change. Even if not initially successful, such actions will both ensure the question of treaty modernisation is meaningfully considered within established fora, and demonstrate the desire of reform states to resolve tensions and potential non-compliance issues using established legal mechanisms.
- Convening **informal drug policy dialogues** or intergovernmental conferences for like-minded States to discuss shared concerns and dilemmas outside of the institutional framework of the UN and regional structures such as the Organization of American States (OAS) and European Union (EU), and perhaps prepare resolutions for consideration in the CND and other UN or regional fora.

⁷⁰ For example, in May 2015, Jamaica also called for the establishment of an ‘expert advisory group’ during the ‘UN General Assembly High-Level Thematic Debate in Support of the Process towards the 2016 UNGASS’, <http://www.undrugcontrol.info/images/stories/documents/JamaicaStmt-HLTD-NY07052015.pdf>. Similarly, as part of its August 2015 input to the UNGASS process, Uruguay called for the creation of a ‘consultative group of experts’, http://www.infodrogas.gub.uy/images/stories/pdf/uy_ungass_2016_esp-eng.pdf. And during the 59th session of the CND in March 2016, Colombia called for the creation of an ‘expert-level group’, https://www.unodc.org/documents/commissions/CND/CND_Sessions/CND_59/Statements/08_Colombia_English.pdf.

- **Pursuing domestic reforms in parallel with multilateral dialogue and reform processes**

Modernisation of the treaty framework to accommodate the needs of reform States is now seemingly inevitable as the number of dissenting States grows. Unless the treaty system can begin to prove itself capable of modernising, it risks drifting into irrelevance, affecting not only those elements that are clearly outmoded and ripe for reform, but also elements upon which relative consensus still exists. Achieving formal multilateral reforms, however, is likely to entail a difficult and protracted process. Until these are concluded, reforms in the short term are likely to involve multiple States moving into technical, transitional non-compliance. The challenges this raises can be minimised by:

- Avoiding sidestepping or denial of non-compliance by offering implausible legal justifications.
- Acknowledging temporary ‘principled’ or *‘respectful non-compliance’* and providing reasoning for doing so, rooted in the health and welfare of citizens, and wider UN charter and treaty commitments, including obligations under international human rights law.
- Actively promoting multilateral debate and reform efforts (as above) in parallel with domestic reforms.
- Establishing a cannabis regulation model – as outlined in this guide – that clearly establishes public health and wellbeing as a central goal; operates under a national agency; minimises negative impacts for neighboring States; and is supported by

a comprehensive monitoring and evaluation framework –that reports back to relevant UN agencies.⁷¹

- **Pursuing collective action**

Any attempts to promote high-level dialogue, explore domestic reform, or achieve reforms of the multilateral framework will be facilitated by collective action of like-minded reform States working towards a common cause. By building on the diversity of the various countries, such an alliance of reform-minded States can lay the groundwork for a more effective approach to cannabis policy that, over time, can prove itself and attract more adherents. By working in coordination rather than in isolation, the initial reform States can learn from one another and also provide leadership in opening the political space for other countries to move beyond prohibitionist approaches that have proven so detrimental to human health, development, security, and the rule of law itself.⁷²

⁷¹ For a discussion of monitoring and evaluation frameworks, see WOLA/ACLU (2016) Evaluating Cannabis Legalization. http://www.wola.org/commentary/evaluating_cannabis_legalization.

⁷² For a discussion of like-minded groups within international relations and drug policy more specifically, see Bewley-Taylor, D. R. (2013) *Towards revision of the UN drug control conventions: Harnessing like-mindedness*, The International Journal of Drug Policy 24.1, pp. 60-68.

Acknowledgements

Written by

Steve Rolles
Harvey Slade

Additional material and editorial input by

Martin Powell
George Murkin
Danny Kushlick
Ester Kincová

Design

Tim Barnes 
www.herechickychicky.com

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For more information, please contact
Transform Drug Policy Foundation
(UK) on +44 (0)117 455 5408
info@transformdrugs.org

Contributors

Thank you to the many individuals who have contributed to the production of this publication, including:

Viv Ahmun
Paul Armentano (NORML)
Aram Bara
Damon Barrett
Ross Bell
Dave Bewley-Taylor (GDPO)
Paul Birch
Tom Blickman (TNI)
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Dale Gieringer (NORML)
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Mike Jay
Martin Jelsma (TNI)
Beau Kilmer (RAND)
Rick Lines
Phillipe Lucas
Donald MacPherson (CDPC)
John Marks
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Prof. David Nutt
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Nicholas Rochford
Chris Stevens
Henry Stewart
Prof. Harry Sumnall

“This guide is essential reading for policy makers around the globe who know that cannabis prohibition has failed. In comprehensive detail, it explores pragmatic, evidence-based approaches to regulating the world’s most widely used illicit drug.”

Professor **David Nutt**

Chair of the Independent Scientific Committee on Drugs

How to Regulate **Cannabis**: A Practical Guide

This is the third edition of our guide to regulating legal markets for the non-medical use of cannabis. It is for policy makers, reform advocates and affected communities all over the world who are seeing the legal regulation of cannabis move from the political margins, decisively to the mainstream. The question is no longer just ‘*Should we maintain cannabis prohibition?*’ or ‘*How will legal regulation work in practice?*’, but also ‘*What can we learn from legalisation efforts so far?*’

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