The Regulation of Medical Cannabis: Bureaucracies and Policy Implementation Challenges

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Abstract

This chapter focuses on the enforcement of cannabis legislation from the perspective of enforcement agencies. The recent wave of cannabis regulations for recreational or medical purposes has deeply challenged those agencies. Authorities have to meet the promises of the post-prohibitionist turn, and to adapt the policy delivery system accordingly. However, this issue remains an under-studied aspect of cannabis legalization. This chapter opens the black box of the bureaucratic structures of cannabis policies. Lessons are drawn from a mixed-methods study on the regulation of medical cannabis in Switzerland, a country known for its leading harm-reduction policies regarding heroin consumption. Based on this case, the chapter identifies six key challenges of cannabis regulations that have to be taken into account in designing and implementing legalization policies. These challenges are the following: 1) *law obsolescence*, which characterizes the risk of a rapid mismatch between on-the-ground realities and a particular legislation formulated at a specific point in time; 2) from a policy-learning perspective, the *evolving medical and empirical evidence* require the constant adaptation of cannabis policies to a complex set of factors, to ensure the achievement of their objectives; 3) *litigation threats*, which affect several types of players involved in cannabis policy implementation: the referring physicians who risk litigation by patients and the public agencies that face attacks from economic players; 4) *clashes of professional ethos*, which may arise from the sudden changes in cannabis policy priorities that affect the previously established balance of power among actors involved in policy delivery such as law enforcement or economic agencies 5) *organizational challenges* that further arise from the need to adapt intra- and inter-agency processes to the requirements of the new policies; 6) and finally the *risks of politicization* that characterizes cannabis policies as morality issues constantly put them in jeopardy.

Introduction: Opening the Bureaucratic Black Box of Cannabis Policies

Since the beginning of the worldwide wave of legalizing medical or recreational cannabis that was initiated by US states (starting in 2012), Uruguay (2013), and Canada (2018), numerous studies have been carried out to shed light on this turning point in contemporary drug policies. Crucial questions regarding the effects of the legalization on consumption levels and patterns (Smart & Liccardo Pacula, 2019), the public health impact (Hall & Lynskey, 2016), the effects on social justice (Adinoff & Reiman, 2019), and the economic consequences (Shanahan & Ritter, 2014) have received priority interest from both the authorities and scientific researchers. This chapter examines the roles of governments and the bureaucratic agencies responsible for the implementation of cannabis policies—a still under-studied yet crucial dimension of these endeavors. The focus is on public agencies as a key factor in shaping the content of these policies across time. More specifically, the chapter examines the dilemmas faced by the public servants in charge of the implementation of the medical cannabis policy and how they addressed them based on their professional ethos. It is based on the results of a policy

evaluation of the Federal Act on Narcotics and Psychotropic Substances in Switzerland (Mavrot et al., 2018).

As research tradition on public administration has long shown, the study of bureaucratic behavior in public policy implementation is crucial because civil servants are key players of the policy process, able to steer policy implementation in various directions—sometimes far away from the original political intent. Public administration research has therefore been extensively discussing the dilemma between discretion and accountability with regard to the constitutional role of public service (Rhodes, 2014). Street-level bureaucracy literature has particularly insisted on the leeway bureaucrats and their implementation partners enjoy in redefining a policy during its everyday implementation. However, the necessary leeway granted to public servants is not arbitrary, as "discretion is filled by rules professionals impose upon themselves" (Hupe & Hill, 2007: 282). These observations call for a strong focus on the policy implementation nexus, which is far from just being a residual step subordinated to higher-level political decisions (Hupe & Hill, 2015). Moreover, not only do bureaucrats have the latitude to move a policy away from initial expectations, but it might also happen—more often than expected—that politicians show a great deal of indifference as to the actual implementation of a policy, thus leaving its success or failure in the hands of the bureaucrats (Mavrot and Hadorn, 2021). In that regard, the policy implementation phase entails a whole array of players who carry their own values, norms of action, and agendas, which might differ from the ones prevailing during the public deliberations or legislative debates. In addition, important responsibilities are also placed on administrations, which are expected to remain true to the policy objectives of these sensitive regulations, such as fulfilling patients' rights in the case of medical cannabis, while having to constantly adapt to rapidly changing and unexpected realities.

Given these considerations, this chapter proposes to open the bureaucratic black box of cannabis legalization from a policy implementation perspective. Based on a case study on the regulation of the use of cannabis for medical purposes in Switzerland, it analyzes the role of the public agency responsible for the policy enforcement over a seven-year period. The Swiss Federal Office of Public Health, which is the Swiss national public health department, has the exclusive enforcement competence regarding medical cannabis. In the rest of the chapter, it is referred to it as the public health agency. It identifies six particular challenges bureaucrats face during policy implementation regarding various legal, ethical, medical, and political dimensions and forms some lessons for the future of cannabis regulation. Although based on the Swiss case, the results can be of a more general interest because of the similarities of the challenges faced around the world regarding cannabis policies—which are quickly evolving from criminalization to legalization in a global prohibitionist context.

Theoretical Framework, Data, and Methods

Bureaucratic Discretion and the Implementation of Cannabis Policies

This evaluation was a formal study commissioned to an interdisciplinary research team of the University of Bern by the Swiss Federal Office of Public Health. The study aimed to assess various aspects of the enforcement of the Narcotics Act, especially the policy that followed the regulation of medical cannabis in the country in 2011. Unlike in the United States, the medical cannabis policy in Switzerland is defined by the federal government at the national level. The study was based on the policy cycle evaluation model, which aims at analyzing the different steps of a public policy, including its conceptualization by various social, political, and administrative actors, the delivery system, the implementation process and the policy outcomes (Bussmann et al., 1997: 69-70). The rationale of this model is to consider a public policy as a whole, while assessing each component with precise evaluation

criteria (*op. cit.*). The main evaluation criteria defined here were the legal conformity, the adequacy, and the relevance of the implementation praxis in relation to the policy's goals regarding the medical coverage of patients in need of cannabis for therapeutic reasons (Mavrot et al., 2018: 4). The fact that the study was a commissioned policy evaluation granted the research team excellent access to confidential data and information.

The patients treated with cannabis are the main policy targets. Policy stakeholders are understood as players involved in the policy or having an interest in it. They can be policy-makers, policy implementers or other policy beneficiaries (Mehrizi et al., 2009: 431). In this study, the focus is on the agencies and professional groups participating in the policy's enforcement—for instance, the federal public health agency or referring physicians—as well as other third parties taking a direct part in the policy, such as cannabis growers, producers, and providers. Moreover, cannabis legalization usually requires complex policy mixes spread among various public agencies and administrative divisions. Hence, the coherence of the implementation of policy packages is also crucial (Kern et al., 2019), and cross-sectoral policy coordination efforts are a key factor in policy success (Trein et al., 2020). Policy success can be defined a minima as the effective implementation of the policy and the achievement of its objectives without generating adverse side effects. These coordination efforts were therefore also part of the study. Finally, cannabis policies can be considered as morality policies, implying specific policy dynamics linked to the nature of this disputed topic (Engeli et al., 2013). The effects of the moral nature of the cannabis issue on policy formulation and policy implementation must be taken into account, and can be approached through the political debates, the media controversies, and implementation struggles.

Hence, this policy evaluation takes a close look into the bureaucratic structures and processes involved in cannabis regulation policies. Insightful observations on cannabis legalization can be made through a focus on policy implementation from within the state. In a particularly useful study, Wesley and Salomons (2019) review what they call the "government machinery" in various Canadian provincial and territorial governments. The authors detail what kind of committees were introduced within public agencies in the wake of legalization, in particular to tackle the challenge of cross-departmental coordination (*op. cit.*, 590-591). They propose to classify cannabis legalization policy models in a typology including market-based (i.e., based on the delegation of some aspects of the policy to private corporations), network-based (i.e., based on horizontality and on cooperation flows between a multitude of cross-sector players), and hierarchical approaches (i.e., based on structured organizational frameworks and on vertical accountability). This typology helps sorting through the different models of cannabis legalization according to their dominant pattern, and to be aware of their respective strengths and weaknesses (e.g., responsiveness vs. accountability, diffusion of responsibilities vs. inflexibility). Kilmer (2019: 666) notes that regardless of the adopted model however, the "power to regulate" remains in the hand of the government. Within this context, however, whether the regulatory authority is attributed to public health agencies or other bodies such as liquor control commissions will greatly influence the orientation of the policy (*op. cit.*). Indeed, legalization automatically implies governmental arbitrations between various players. The use of the government's regulatory capacity is notably crucial for protecting public health from corporate interests when it comes to the choice of the economic model underpinning cannabis legalization (Shover & Humphreys, 2019). At the dawn of a new era regarding legalization, some have underlined the importance to "place regulatory control in the hands of a public-health minded agency that views its job as protecting consumers from being abused by industry" (Caulkins, 2019: 283). The discussion here is about whether the commercialization of a product like cannabis should be put in the hand of for-profit corporations, or if public organizations might take better care of the consumers in case of state-based markets (e.g., avoiding aggressive marketing, integrating cannabis policies into a more

general harm reduction policy framework, being in touch with health organizations). In some models, special task forces have been set up to help develop public health-oriented regulations building on decades of tobacco and alcohol prevention experience (Ghosh et al., 2016), for instance regarding advertising restrictions, packaging and product access for youth.

Moreover, cannabis legalization requires a fundamental rethinking of the related regulatory regimes, because new agencies are called to perform "governance tasks that were previously undertaken by the criminal justice system" (Aaronson & Rothschild-Elyassi 2021: 2, citing Beckett & Murakawa, 2012: 231). Stohr et al. (2020), for instance, investigated cannabis legalization from the perspective of the police as key implementation players whose practices will have to be adapted on the ground. If the authorities fail to carry out a profound reform of the prohibitionist system, which is still deeply entrenched in the state, cannabis policies will be at risk of remaining within the scope of "carceral paradigms of policing" (Aaronson & Rothschild-Elyassi 2021: 11). This is even more the case when those policies are historically anchored in decades of a repressive approach to drug consumption, such as in the United States where Reagan's "war on drug" took over from Nixon's "war on crime" approach, strongly directed against African American and Latino minorities (Anguelov, 2018: 51). This targeted repressive approach combines with a focus on youth arrests, creating long term adverse effects within age groups. As Bender notes, "marijuana use by youth of color has been the focal point of the War on Drugs from its inception"; most arrests for cannabis possession are found among the groups of young African Americans and Latinos despite the fact that white youths consumption rate lies at the same level (2016: 691).

Whether a society is really prepared or put in motion the promise of social reparation through a genuine turn in the cannabis policy path will also have to be reflected in the administrative structures set up to materialize the legalization (Moyers, 2020: 1). Finally, some specific governance issues arise in countries where the legalization is undertaken at an intra-national level, especially regarding the question of policy coherence between states as well as inter-state interactions (or interprovincial in the case of Canada) in a context where different regulatory regimes coexist (Bear, 2017). This chapter adds to the reflections on legalization enforcement by analyzing the policy delivery system established for medical cannabis in Switzerland. As medical cannabis is exclusively regulated at the national level in the Swiss federal system, and as the states are not involved in the policy implementation, the case does not specifically allow to make observations on federal dynamics in matters of cannabis. However, it provides an example of a suboptimal policy concept that provoked implementation crises and required considerable adjustment over the years. It can therefore be of interest with regard to any national of subnational process of cannabis regulation, both for policy designing and policy implementation.

Evaluation of The Swiss Medical Cannabis Policy

The study is based on five methodological modules that allowed qualitative triangulation of different sets of data, in the sense of "corroborating evidence from different (…) types of data (…) or methods of data collection (Creswell, 2005: 252, cited in Carter & Baghurst, 2014: 456). To contextualize the policy reform, we first performed a qualitative analysis of parliamentary debates on the topic at the federal government level from 2004 to 2018 (i.e., from the beginning of the medical cannabis regulation debate to the time of the study). This context analysis was completed with an analysis of media reports on the topic from 2000 to 2017 (i.e., from the first press articles about a possible future reform to the last complete year before the analysis) in the two main national languages (German and French). Second, we conducted a quantitative analysis of the authorizations for medical use of cannabis granted by the responsible agency—the federal public health agency—between 2012 and 2017 (from the beginning of law enforcement to the time of the study), to analyze trends in the

authorization-granting praxis. We coded the 8,400 authorization requests received by the public health agency according to the International Classification of Diseases (ICD-10) of the World Health Organization to determine for which medical indications (conditions and symptoms) authorizations were granted.

Third, we performed an online survey of all referring physicians who had submitted authorization requests for their patients to the public health agency for a cannabis-based treatment during the eighteen months prior to our study (N=353). This survey assessed the physicians' practice related to the medical use of cannabis and their opinions regarding the policy delivery system (special authorization and double-gatekeeper systems, relationship with the public health agency, effectiveness of the process, evolution of the context). The fourth module consisted of an organizational study of the administrative processes of the public health agency through a document analysis and 21 semi-structured qualitative interviews with all players involved in the policy. These interviews comprised jurists, physicians from the public health agency responsible for the authorizations (formerly or currently in office) and their administrative hierarchy, a member of the public health agency's external advisory board for medical cannabis (medical experts), the Swiss Agency responsible for the surveillance of therapeutic products (Swissmedic), the representative of the medical authorities at the state level (president of the cantonal physicians), cannabis producers, and cannabis providers (heads of the drugstores certified for medical cannabis delivery). Fifth, one member of the evaluation team produced a legal opinion on the legality of the law enforcement practice and potential needs for adaptation. The whole analysis in this chapter is based on data retrieved from this study (Mavrot et al., 2018).

Case study

The Swiss case is familiar to drug policy specialists because of its groundbreaking model of harm-reduction policy. The so-called "four-model" pillar is a policy mix relying on prevention, repression, harm reduction, and therapy as the key elements of the approach to drugs. Especially interesting is the harm-reduction component of the mix, which was developed in the early nineties after Switzerland had become a major European epicenter of drug consumption. Its images of impressive open-air consumption scenes in the city of Zurich were circulated around the world. The strong political and public prominence of the issue in the midst of the devastating AIDS epidemic forced the local and national governments to react. Actively pushed by experts from public agencies and professionals in the field, an audacious harm-reduction model including supervised injection rooms and medically prescribed heroin programs was set up (Kübler, 2001), inaugurating a new era for the drug policy of this otherwise highly conservative country. Since then, the federal public health agency and its administrative experts have played a central role in the definition and implementation of drug policies in Switzerland.

Interestingly, the liberalization of cannabis policies occurred much later, starting with the regulation of cannabis use for medical purposes. The recreational use of cannabis is still banned at the moment, although some cities have recently been temporarily authorized by the federal government to organize pilot testing the effects of different legalization models on a small scale.[1] Cannabis, however, remains a strongly controversial topic in Switzerland. One of the reasons it did not enjoy the same flexibility as opioid consumption is related to the fact that cannabis never generated as a visible and a dramatic public problem as heroin. In 2011, however, after years of heated parliamentary debates, the paragraph 5, article 8, of the Federal Act on Narcotics and Psychotropic Substances, allowing the restricted use of cannabis for medical purposes, entered into force. This new statutory provision states

[1] https://www.admin.ch/gov/fr/accueil/documentation/communiques.msg-id-82917.html

that the federal public health agency can issue exceptional authorizations for the cultivation, importation, manufacturing, and use of i) opium; ii) diacetylmorphine (i.e., synthetic heroin); iii) lysergide (LSD-25); and iv) cannabis for research, drug development or limited medicinal purposes.[2] This national legislation is applicable in all 26 Swiss states (cantons). Law enforcement began in 2012; the use of cannabis for medicinal purposes was banned prior to this legislative change. Under the new regulatory regime, cannabis for medical purposes can be obtained under a set of specific criteria: the use of cannabis must be supported by the referring physician, who has to submit an authorization request to the federal public health agency; it must concern medical indications that are scientifically recognized; all other existing therapies must have been tried before moving to the cannabis option; and the authorization is granted on a temporary basis and must be regularly renewed.

The Swiss regulatory model for medical cannabis has two crucial characteristics. First, it was defined by the legislature as a juridical regime of exceptional authorizations. This means that a request meeting all the criteria does not automatically require the public health agency to grant the authorization. The regime of exceptional authorizations foresees that the public health agency enjoys discretionary power in its decisions to accept or to decline patients' requests. The system is purposefully made to keep the use of cannabis for medical reasons occasional and to avoid cannabis becoming a regular therapeutic option. It is therefore a case of medical cannabis regulation and not of full legalization. Second, double gatekeeper system is utilized in which both referring physicians and experts from the public health agency must agree on the use of the product for a specific patient. In Wesley and Salomons' typology (2019), this places the Swiss medical cannabis system among the hierarchy-based models. However, after policy evaluation and following recurrent criticisms related to the cumbersome nature of the process, the system is currently being revised and will evolve toward a single gatekeeper process, with referring physicians being directly allowed to prescribe cannabis like it is commonly the case in the US American and Canadian models.[3] In the timespan studied by the evaluation, medical cannabis was used mostly for medical conditions related to diseases of the nervous system (40.3% of the authorizations) and diseases of the musculoskeletal systems (27.8%). The symptoms mostly considered for medical cannabis authorizations were chronic pain (51.1%) and spasticity (i.e., spasms, for instance in Parkinson's conditions) (33.8%) (Mavrot et al., 2018: 15-16).

The enforcement of the new medical cannabis policy has been assigned to two groups of bureaucrats within the public health agency that have different professional backgrounds: physicians and jurists. Both are civil servants employed by the government and belong to the federal administration. Contrary to the physicians working in the public health agency, all referring physicians, including those who submit medical cannabis requests for their patients, are private market actors. The public health agency's physicians review the authorization requests and decide whether to grant them, while a group of agency jurists is responsible for ensuring that the policy's enforcement of the policy remains within the juridical framework. Although the physicians are specialists on the medical cannabis policy, the jurists also work on other policies. None of these bureaucrats was involved in the topic of cannabis prior to the medical cannabis legislation. Before this regulation, cannabis was fully banned (although possessing small amount for personal consumption was decriminalized in 2012) and mostly fell within the scope of police, security, and justice agencies at the state level. A strong conflict quickly arose between the physicians and the jurists of the public health agency regarding the degree of severity to adopt for authorizations. In the years following the regulation of medical cannabis, a sharp increase in authorization requests occurred, jumping from 291 in 2012 to 2'309 in 2017 (Mavrot et al., 2018: 14).

[2] https://www.fedlex.admin.ch/eli/cc/1952/241_241_245/de. The medical use of synthetic heroin was already allowed under other legislative provisions.

[3] https://www.bag.admin.ch/bag/de/home/medizin-und-forschung/heilmittel/med-anwend-cannabis.html

The figures cover only the time span from 1 January to 15 September for the year 2017 (the data available at the time of the evaluation). While the public health agency's physicians thought this evolution should have no impact on their authorization-granting practice, the jurists felt it endangered the nature of the system, which was based on the principle of exceptional authorizations. According to the referring physicians (i.e., the ones requesting authorizations for their patients), this sharp rise in the number of requests occurred because of the increased notoriety of cannabis as a therapeutic product. The media analysis performed as part of the policy evaluation also showed increased social acceptance of cannabis in the public discourse across the study period, especially in the wake of the 2016 authorization of low-THC/high-CBD cannabis products in Switzerland (Anderfuhren-Biget et al., 2020: 330) and the boom in related businesses.

In addition, almost all authorization requests were accepted by the physicians of the public health agency. According to them, this fact showed that the referring physicians did a good job of selecting the patients for whom to grant a request, while the jurists accused the agency's physicians of being too loose. The rationale behind the attitude of the public health agency's physicians was double: they trusted the judgement of the referring physicians submitting requests on the one hand, and they prioritized patients' rights to access a therapeutic product on the other. A point of contention was the criterion that authorizations should be granted only for patients who have tried all other available therapeutic options (i.e., authorized medications). For the jurists, this criterion should have been closely verified by the public health agency before granting any authorization. However, the agency's physicians were against a close monitoring of this aspect for several reasons. They thought this would be unnecessary micromanagement since the referring physicians could be trusted and were best placed to know their patient's therapeutic best interests. They were also overwhelmed with the drastic increase in authorization requests they had to manage with the same human resources as at the beginning of law enforcement and deemed it impossible to check this aspect within the deadline attributed to them for reviewing each request. These points led to a serious clash of professional ethos between the public health agency's physicians and jurists. The physicians underlined the patients' rights to be treated and the autonomy of medical knowledge, while the jurists invoked respect for the legal order and the lack of legitimacy of bureaucrats to overlook the will of democratically elected politicians who originally defined the system of exceptional authorizations. In addition, whereas the quantitative analysis showed that the authorization practice indeed remained fairly consistent across time as far as cannabis was concerned, there was flexibility regarding the granting of exceptional authorizations for the use of LSD for medical experiments in university hospitals, which began in 2014 (Mavrot et al., 2018: 18).

Interestingly, the policy evaluation results showed that the main cause of the mismatches between the legal provisions and the reality was that the members of the legislative commission in charge of drafting the law worked under the assumption that a cannabis-based legal medication having undergone all necessary trials would be put on the market in the following years by pharmaceutical companies. However, this turned out not to be the case because of the pharmaceutical industry's limited financial interest in developing a drug based on cannabis (Mavrot et al, 2019: 59). Hence, the double-gatekeeper system of exceptional authorizations was initially conceptualized as a temporary solution until better options were developed. However, this system was ultimately maintained because of the lack of alternatives and turned out not to be viable in the medium term. Not only was the bureaucratic system in charge of the policy's implementation maintained, but it also was never fundamentally updated to face the challenges that came up with the time, especially the sharp increase in authorization requests that was not in line with an exception system anymore. This can be explained by the fact that although the dispute between the agency's jurists and physicians was strong within the office, they also feared publicizing their conflict and thereby attracting unwarranted political

attention to a topic they knew was highly sensitive. The physicians feared that some politicians would take the opportunity to attack medical cannabis regulation and attempt to take it a step backward, and the jurists feared that the legality of the agency's behavior would be questioned.

Crucial to this deadlocked situation was that while the physicians had the power to make the authorization decisions, the jurists felt they were the ones who would be legally responsible for them. This decoupling of implementation and legal capacity increased the tensions between the two parties. Another disagreement was highly representative of the legal ambiguities around the regulation of medical cannabis. The referring physicians and the physicians from the public health agency themselves wished that the federal agency had published more information on various aspects of the therapeutic use of cannabis, including a continually updated list of indications for which the use of the product had been scientifically recognized. The public health agency's jurists were skeptical about the idea, arguing that the federal government shouldn't advertise the use of a still banned product (except in cases of special authorizations). The continuous adaptation of an indication list to current medical evidence was also contentious. The legal division of the agency instead insisted on limiting the indications to those that were explicitly mentioned during the political debates that led to the regulation, especially within the legislative commission in charge of the law's formulation of the law. For their part, the referring physicians would have welcomed the publication of official information on the use of medical cannabis as its indications, posology, and effects are less well-known than those of manufactured medications that would be on the market for a long time (Mavrot et al., 2018: 24). The medical division of the public health agency had the same opinion because they wanted to grant authorizations for new medical indications if scientifically relevant.

The institutional design of the policy and the administrative processes between the physicians and jurists of the public health agency were not optimally conceptualized, which worsened the conflicts. The two groups of bureaucrats answered to distinct parallel hierarchies within the public health agency's organizational chart. The physicians responded to public health managers while the jurists were subordinated to managers with legal backgrounds. The first common hierarchical level was high up in the organization, where only the most sensitive dissentions were escalated. This resulted in two distinct hierarchical lines with a lack of common mutual transparency. The jurists wanted to be virtually able to have a look into each special authorization case, while the physicians wanted to involve them only in the most complex and questionable cases. From an organizational perspective, no procedure was established regarding the workflows between them. The division of tasks was neither precisely defined nor formalized. Moreover, no conflict resolution procedure was put in place, which resulted in ad hoc conflict management among the two parallel line of hierarchies.

Finally, beyond the intra-agency organization and processes, several issues also came up regarding external players involved in the policy's delivery. The agency responsible for the surveillance of therapeutic products—Swissmedic—must ensure national compliance with international treaties. The process of determining whether the new legislation and its implementation were still in line with international drug treaties was complex and required a lot of coordination with the public health agency. Other key players were the drugstores specialized in the preparation and delivery of medical cannabis. In the Swiss case, they buy cannabis oil from cannabis producers and prepare the final product for the patients according to the indications of the medical prescription (based on a magisterial formula). Over the years, the public health agency's legal division pushed to strengthen several inspection and documentation requirements of these drugstores to ensure the proper law enforcement regarding the cannabis' traceability. Among other changes, the duration of the drugstores' licenses to prepare and deliver cannabis products was shortened from two years to six months. The review of renewal requests for these licenses was performed extremely thoroughly by

the public health agency, which led to dangers of product shortages in the field, according to the drugstores. Hence, the question of inspections raises important issues related to their frequency and degree of severity, which led to further disagreement between the involved players. Cannabis producers—that is, the companies buying cannabis flowers from the growers and extracting and formulating its oil—were also in an argument with the public health agency at the time of the study. The producers wanted to be granted authorization to produce cannabis for exportation because a neighboring country, Germany, had recently legalized cannabis for medical purposes. However, the agency's interpretation of the law was that only production for domestic use was allowed. As a consequence, the producers threatened the public health agency with court litigation on this point.

Results and discussion

Based on this case study, six major challenges of the cannabis policy implementation are identified from the perspectives of the implementing public agencies. In the following, each of these challenges is presented and discussed.

Law obsolescence, legal uncertainty and legislative incoherence

One major challenge policy implementers faced in the case of cannabis regulations is the obsolescence of the law. Although not specific to cannabis policies, an increasing mismatch between quickly evolving realities on the ground and rules decided at a given point in time is a major problem for cannabis policies. This is exacerbated by decisions on cannabis usually being taken in contexts of political polarization and uncertainty. The case of medical cannabis in Switzerland provides an example of the kind of problems that may result from law obsolescence. When the law was decided, policymakers expected that the special authorizations system would be a temporary solution before the development of legal and manufactured cannabis-based drugs. The development of such drugs by pharmaceutical companies ultimately did not occur as expected because the return on investment for such products was deemed too low. Public agencies in charge of issuing the special authorizations consequently faced an unsustainable situation, with a dramatic increase in authorization requests from patients meeting the attribution criteria, but within a legal framework foreseeing an exceptional use of cannabis. This led to vivid conflicts among implementation players disagreeing on how to react to this contradiction.

Legislative incoherence can be an issue at the domestic level (e.g., between narcotics laws and laws on therapeutic products). In addition, a risk of law incoherence—or at least of legal uncertainty—exists across governance levels. This is the case in the United States, with the uncertain reaction of the federal government after the introduction of the first state-level cannabis legalization (Mallinson & Hannah, 2020: 347). In fact, the incoherence affects several governance levels, to the point that "the inconsistency in marijuana laws between the federal government and many states, among the states, and between the states and Native American tribes raises serious and often unprecedented federalism issues" (Chemerinsky, 2017: 859). Moreover, the question of the compatibility of national cannabis legalization policies with international drug treaties has also been raised in various countries. It seems that the initial tendency "turning a blind eye to the conflicts with international treaties" is still pretty much part of the policy path (Room, 2013: 346). While national legislation is quickly evolving in various countries around the globe, international treaties remain in line with the prohibitionist paradigm to this day (see for instance the United Nations Single Convention on Narcotic Drugs of 1961). Finally, differences in legislation across jurisdictions are also a challenge regarding many aspects such as the fear of out-of-state cannabis tourism (Santaella-Tenorio et al., 2020). There can be a legislative patchwork even within a state, where local governments may issue more restrictive legal provisions in their jurisdictions like for instance experienced in Colorado (Ghosh, 2016: 25). All these tendencies will have to be closely monitored to ensure as much legal certainty as possible for the future developments

of cannabis legislation. In fact, these legislative uncertainties and incoherencies have not been resolved yet almost a decade after the first regulations—for instance, for medicinal and recreational cannabis in numerous US states and for medicinal cannabis in Switzerland.

Evolving medical and empirical evidence

Closely related to the problem of law obsolescence is the question of the evolving medical and empirical evidence. In a matter such as cannabis policy, which has high public health stakes (e.g., public health consequences of the criminalization of consumption, access to a therapeutic option in the case of medical cannabis) and social stakes (e.g., social justice, stigmatization), the periodic adaptation of the policies to up-to-date evidence would be crucial. However, the dynamics and temporality of policy-making are not always compatible with continuous and rapid policy adjustments. Implementing agencies can consequently be trapped in outdated models with regard to a changing reality. Medical cannabis regulatory regimes raise specific challenges in this regard. The scientifically recognized list of medical indications for a therapeutic use of cannabis—for instance spasticity and pain in neurodegenerative diseases—might evolve according to new trials and scientific results. Policymakers can be torn between the willingness to define a catalogue of indications for which medical cannabis is authorized—to maintain control over the use of this product—and the necessarily changing medical evidence. Such contradictions are difficult to resolve as long as medical practice is constrained by laws. This situation is representative of the paradox in which cannabis regulations are caught, at the crossroads of morality and medical considerations.

Beyond the medical aspects, many kinds of evidence are also highly relevant to cannabis regulations. Numerous studies analyzing the first effects of the various cannabis regulatory models are being conducted. Valuable lessons will undoubtedly be drawn about the comparative advantages and drawbacks of each policy mix; for instance, regarding their consequences on youth consumption (Hammond et al., 2020), racial inequalities (Tran et al., 2020) or the criminal justice system (Fischer et al., 2021). Behind these key issues, some specialized subsets of questions will also require close inquiry, such as the effects of various advertising or pricing regulations on levels of consumption (Stockwell et al., 2020) or the possibility to incentivize consumers toward reduced-risk consumption modes (Fischer & Bullen, 2020). Both intended and unintended consequences arise from the new cannabis policies and each must be examined. The possibility of inter-state policy variations in federal systems such as the United States provides interesting prospects for experimentation and innovation (Pierson, 1995), which may be used at the advantage of policy learning in novel and uncertain regulatory areas such as cannabis legalization (Mallinson & Hannah, 2020). Comparative research designs taking advantage of inter-state differences in federal contexts can be used for this purpose (Vatter & Rüefli, 2003). Therefore, policy-making processes will have to allow room for policy-learning processes (Dolowitz and Marsh, 2000) that help regulatory models to adapt to upcoming evidence. In that regard, the Canadian approach that foresees a legislative review of cannabis legalization every three years to check upon the achievement of its goals might constitute a good model.[4] Regular and early legislative reviews are especially crucial that it has been shown that commercial interests and corporate players tend to quickly grow within the system and become powerful parties steering the agenda away from public health (Jesseman, 2019, cited in Zwicky et al., 2021: 65).

Litigation threat: Physicians' liability and economic freedom

[4] https://highgreennews.com/article/cannabis-industry-needs-step-canada-prepares-review-effects-legalization

On the legal side, cannabis regulations also raise a series of issues that have to be disentangled regarding litigation risks. At this level, professionals and agencies in charge of policy implementation are likely to be torn between contradicting requirements. First, in the case of medical cannabis, patients' rights to be treated are a core issue that needs to be seriously considered. When it comes to alleviating pain for patients for whom therapeutic alternatives have failed, referring physicians are likely to consider the cannabis option because of its pharmacological properties, regardless of the product's sometimes-ambiguous legal status. However, physicians also express important medical concerns when it comes to prescribing these products because their use and effects might be less predictable than that of drugs that have received marketing authorizations and have undergone extensive medical trials. Such uncertainty places great responsibility on physicians with the use of non-standardized and non-manufactured products such as cannabis. Depending on the legal arrangement in place for the use of medical cannabis (i.e., whether a procedure exempts physicians from any liability), referring physicians could be vulnerable to litigation in cases of medical complications. This may in turn decrease the physicians' willingness to open the door to that therapeutic option. Second, public agencies in charge of the policy are at risk of lawsuits from the various economic interests invested in the cannabis market. The question that arose in the Swiss case was the authorization of the concerned companies to expand towards international business. This legal uncertainty is also an issue in the United States at the domestic level, with the uncertainties regarding the future of inter-state commerce.

Professional conflicts and clashes of professional ethos

Cannabis legalization implies arbitration between a wide array of competing political, economic, and social interests. With the legislative U-turn they involve, those policies also alter deeply rooted professional routines and practices within governmental structures. Although adapting to new political orders is an intrinsic part of administrative duties, such changes carry the risk of causing professional conflicts among bureaucrats in charge of the policy. The case study of medical cannabis showed how far such professional conflicts could go toward provoking disputes within implementation agencies but also toward creating problems on the ground. Because of the historical categorization of the product as an illegal psychotropic, medical cannabis policies lie at the crossroads of medical and juridical expertise. This double nature is likely to be reflected in the policy delivery system, bringing together bureaucrats with different professional ethos and dramatically diverging priorities. In the case at hand, jurists prioritized the letter of the law and the strict respect of the political will as originally formulated, to guarantee the constitutional order and the separation of state powers. On their part, the physicians acted primarily according to patients' rights and claimed a certain degree of medical autonomy. In the short run, such disputes run the risk of leading to implementation incoherence and delays. From a wider perspective, they can have consequences of more importance, including prolonged administrative dysfunctions and enhanced risks of politicization.

Although the professionals analyzed here were physicians and jurists, the same type of conflicts can occur with different professional groups such as social workers or law enforcement agents. This issue also bears repercussions regarding implementation partners and policy targets. Various groups of professionals having a conflicting understanding of the legislation are likely to disagree on key dimensions of the policy. The degree of strictness in law enforcement is likely to be a matter of disagreement as in the Swiss case and as underlined in the US context (Kilmer, 2019: 667). The degree to which controls and inspections have to be deployed—for instance regarding cannabis production, selling arrangements in retail outlets or consumption in the streets—and which consequences will occur therefrom is a salient dimension of policy enforcement. The freedom granted to field actors is also a point for discussion: in the states where cannabis is authorized only for medical use, are the

referring physicians completely entrusted with the right to decide for their patients, or does a review process exist like in the case study? The answer to these questions requires anticipating the potentially conflictual patterns of policy implementation among policy stakeholders.

Organizational challenges: Intra- and inter-agency processes

The experience with changes in cannabis regulations also bears some lessons from an organizational perspective. Expecting that the implementation of new regulatory arrangements can occur within the previously existing policy delivery systems is a mistake. The division of tasks and responsibilities that were relevant within the previous legislative paradigm—for instance, the preponderant role of the criminal justice system—has been fundamentally altered and must be reflected in the decisional and enforcement structures. A decoupling of implementation capacities and responsibilities (Mavrot & Hadorn, 2021) such as the one observed in the case study must be avoided. To avoid such mismatches, not only the new responsibilities have to be clearly defined, but corresponding and effective hierarchical lines must be put in place. Similarly, in a context of legalization, public authorities have to establish cooperation with new range of players such as cannabis growers, producers and retailers, and pharmaceutical companies or physicians in the case of medical cannabis, which might require the involvement of agencies that were not previously involved in the prohibitionist legislative framework. This finally raises the question of inter-agency cooperation. With legalization, consequent shifts are likely to occur regarding the location of the policy among agencies due to the emergence of new stakeholders (e.g., offices in charge of the licensing system and the economic aspects of the enforcement). Public authorities have to conceptualize these critical aspects ahead of the enactment of new legislation. In the United States, the picture is completed by the social equity and racial justice objectives of cannabis legalization, which includes additional crucial policy stakeholders. These policy objectives imply radical changes in law enforcement practice or the attribution of exploitation licenses to members of the communities that have primarily suffered from the effects of unequal implementation of prohibitionist policies. The equity and justice objectives of cannabis policies will therefore require the establishment of adequate structures and procedures within the state to enable their fulfillment. It is otherwise likely that the implementation of fundamentally new policies within old enforcement structures is bound to fail.

Risks of politicization: Policy implementation under pressure

Finally, as morality policies, cannabis regulations are particularly salient in the public debate and at constant risk of politicization. This has an effect on the enforcement practice, especially for public agencies. In the Swiss medical cannabis case, this pressure had a perverse effect. Fearing unnecessary public attention, the involved agencies carried on implementing legislation that had become misadjusted to the reality. Key implementation problems such as production shortfalls threatening to deprive patients of treatment or the quick increase in requests in a system of exceptional authorizations remained long undeclared. Public agents dealt with those problems on a case-by-case basis and were reluctant to escalate them to the political level because of negative experience with political overreaction concerning the issue. Consequently, the original mismatch remained and the gaps between field needs and the law continued to be widen. This dynamic also made it consistently more difficult to denounce the original problem without revealing what had been done by the administration to deal with it during the past implementation phases—for instance stretching the law. Such effects should be anticipated, and effective problem-resolution procedures should be put in place. The early creation of stakeholder panels commissioned with the task of supervising policy implementation and helping to solve ongoing problems could be a useful approach. The experience

also shows the difficulty of keeping the debates between medical and recreational cannabis separate in countries and states that have only legalized consumption for medical purposes. The frequent confusion between these two topics puts cannabis policies further at risk of political polarization during the debates.

Conclusion

While bearing the promise of a shift toward a less repressive state presence, legalization does not necessarily mean a decreased importance of governments in cannabis policies, the role of which deserves close analytical attention. Depending on the chosen regulatory and economic model, the roles of public agencies vary greatly between states and countries that have chosen to move toward some form of cannabis legalization—be it for medical or recreational purposes. Reflecting upon the evolution of the implementation of a cannabis policy over a ten-year period may hold some useful lessons in a context where numerous countries in the world are taking an ambitious turn towards legalization policies. Despite being a less spectacular aspect of the recent cannabis legalization wave, the question of policy implementation by public agencies is worthy of analytical interest. Opening the black box of bureaucratic action in that regard can shed light on some major success or failure factors for cannabis policies during these first post-prohibitionist steps. Governments oversee various coordination, enforcement and reviewing activities that are central to these reforms. Thus, their capacity to adapt their structures and processes to tackle this emerging issue is crucial, from an intra- and inter-agency perspective as well as regarding their interactions with external policy stakeholders. Whether we want it or not, governments play a central role in these policy pathways, if only by their centralizing and redistributive capacity regarding the choice of an economic model, the attribution of retail licenses, and the taxation of cannabis products. They also play a key role in setting regulatory limitation to preserve consumers' health. Finally, governments are central to the repressive historical legacy of cannabis policies that led to a strong reproduction of social and racial inequalities (Owusu-Bempah & Luscombe, 2021). From a historical institutionalist perspective, given the tendency toward path dependency in policy implementation processes (Bali, 2020), bureaucratic behavior in this new era must therefore be closely scrutinized to determine whether if it matches the new promises of legalization. In that regard, a comprehensive research agenda that more systematically links studies focused on the public health and social effects of cannabis policies and close analyses of policy enforcement processes would offer promising perspectives.

References

Aaronson, E., Rothschild-Elyassi, G. (2021). The symbiotic tensions of the regulatory–carceral state: The case of cannabis legalization. *Regulation & Governance*, early online.

Adinoff, B., Reiman, A. (2019). Implementing social justice in the transition from illicit to legal cannabis. *The American Journal of Drug and Alcohol Abuse*, *45*(6), 673-688.

Anderfuhren-Biget, S., Zobel, F., Heeb, C., Savary, J-F. (2020). Swiss cannabis policies. In T. Decorte, S. Lenton & C. Wilkins (Eds.), *Legalizing Cannabis: Experiences, Lessons and Scenarios* (pp. 323-336). London/New York: Routledge.

Anguelov, N., McCarthy, M.P. (2018). *From Criminalizing to Decriminalizing Marijuana. The Politics of Social Control*. Lanham, Boulder, New York, London: Lexington Books.

Bali A.S. (2020). Navigating Complexity in Policy Implementation. In H. Sullivan, H. Dickinson & H. Henderson (Eds.), *The Palgrave Handbook of the Public Servant* (early online). Cham: Palgrave Macmillan.

Bear, D. (2017). From Toques to Tokes: Two challenges facing nationwide legalization of cannabis in Canada. *International Journal of Drug Policy, 42*, 97-101.

Bender, S. (2016). The Colors of Cannabis: Race and Marijuana. *U.C. Davis Law Review*, *50*, 689-706.

Bussmann, W., Klöti, U., Knoepfel, P. (Eds.). (1997). *Einführung in die Politikevaluation***.** Basel/Frankfurt am Main: Helbing & Lichtenhahn.

Carter, D., Baghurst, T. (2014). The Influence of Servant Leadership on Restaurant Employee Engagement. *Journal of Bussiness Ethics, 124*, 453-464.

Caulkins, J. (2019). Legalising drugs prudently: the importance of incentives and values. *Journal of Illicit Economies and Development*, *1*(3), 279-287.

Chemerinsky, E. (2017). Introduction: Marijuana laws and federalism. *Boston College Law Review*, *58*(3), 857-862.

Creswell, J. (2005). *Education research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River, New Jersey: Pearson.

Dolowitz, D.P., Marsh, D. (2000). Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making. *Governance*, *13*(1), 5-23.

Engeli, I., Green-Pedersen C., Larsen L.T. (2013). The puzzle of permissiveness: understanding policy processes concerning morality issues. *Journal of European Public Policy*, *20*(3), 335-352.

Fischer, B., Bullen, C. (2020). Emerging prospects for non-medical cannabis legalisation in New Zealand: An initial view and contextualization. *International Journal of Drug Policy*, *76*, 102632.

Fischer, B., Daldegan-Bueno, D., Reuter, P. (2021). Toward a "Post-Legalization" Criminology for Cannabis: A Brief Review and Suggested Agenda for Research Priorities. *Contemporary Drug Problems*, *48*(1): 58-74.

Ghosh, T., Van Dyke, M., Maffey, A., Whitley, E., Gillim-Ross, L., Wolk, L. (2016). The Public Health Framework of Legalized Marijuana in Colorado. *American Journal of Public Health*, *106*(1), 21-27.

Hall, W., Lynskey, M. (2016). Evaluating the public health impacts of legalizing recreational cannabis use in the United States. *Addiction*, *111*(10), 1764– 1773.

Hammond, D., Goodman, S., Wadsworth, E., Rynard V., Boudreau, C., Hall, W. (2020). Evaluating the impacts of cannabis legalization: The International Cannabis Policy Study. *International Journal of Drug Policy*, *77*: 102698.

Hupe, P.L., Hill, M.J. (2015). 'And the rest is implementation.' Comparing approaches to what happens in policy processes beyond Great Expectations. *Public Policy and Administration*, *31*(2), 103-121.

Hupe, P.L., Hill, M.J. (2007). Street-level bureaucracy and public accountability. *Public Administration*, *85*(2): 279-299.

Jesseman, R. (2019). *What have we learned from one year of cannabis legalization?* Policy Options. https://policyoptions.irpp.org/magazines/december-2019/what-have-we-learned-from-one-year-of-cannabis-legalization/ [accessed 06/11/2021].

Kern, F., Rogge, K.S., Howlett, M. (2019). Policy mixes for sustainability transitions: New approaches and insights through bridging innovation and policy studies. Research Policy, *48*(10), 103832.

Kilmer, B. (2019). How will cannabis legalization affect health, safety, and social equity outcomes? It largely depends on the 14 Ps. *The American Journal of Drug and Alcohol Abuse*, *45*(6), 664-672.

Kübler, D. (2001). Understanding policy change with the advocacy coalition framework: an application to Swiss drug policy. *Journal of European Public Policy*, *8*(4), 623-641.

Mavrot, C., Hadorn, S. (2021). When Politicians do not Care for the Policy: Street-level Compliance in Cross-Agency Contexts. *Public Policy & Administration*, early online.

Mavrot, C., Hadorn, S., Sprecher, F., Sager, F. (2019). *Evaluation spezifischer Vollzugsaufgaben des BAG im Rahmen des Betäubungsmittelgesetzes (BetmG)*. Center for Public Management and Institute for Public Law, University of Bern. https://boris.unibe.ch/130600/

Mallinson, D.J., Hannah, A.L. (2020). Policy and Political Learning: The Development of Medical Marijuana Policies in the States. *Publius: The Journal of Federalism*, *50*(3), 344-369.

Mehrizi M.H.R., Ghasemzadeh, F., Molas-Gallart, J. (2009). Stakeholder Mapping as an Assessment Framework for Policy Implementation. *Evaluation*, *15*(4), 427–44.

Moyer, J. (2020). *Innovation through popular diffusion: Seeking social equity through cannabis legalization in Massachusetts* [Doctoral dissertation, University of Massachusetts Boston]. ProQuest Dissertations Publishing.

Owusu-Bempah, A., Luscombe, A. (2021). Race, cannabis and the Canadian war on drugs: An examination of cannabis arrest data by race in five cities. *International Journal of Drug Policy*, *91,* 102937.

Pierson, P. (1995). Fragmented Welfare States: Federal Institutions and the Development of Social Policy. *Governance*, *8*(4), 449-478.

Rhodes R.A.W. (2014). Public Administration. In R. A.W. Rhodes, P. 't Hart (Eds.), *The Oxford Handbook of Political Leadership* (pp. 101-116). Oxford: Oxford University Press.

Room, R. (2014), Legalising a market for cannabis. *Addiction*, *109*(3), 345-351.

Santaella-Tenorio, J., Wheeler-Martin, K., DiMaggio, C.J., et al. (2020). Association of Recreational Cannabis Laws in Colorado and Washington State with Changes in Traffic Fatalities, 2005-2017. *JAMA Internal Medicine*, *180*(8), 1061–1068.

Shanahan, M., Ritter, A. (2014) Cost Benefit Analysis of Two Policy Options for Cannabis: Status Quo and Legalisation. *PLOS ONE*, *9*(4), e95569.

Shover, C.L., Humphreys, K. (2019). Six policy lessons relevant to cannabis legalization. *The American Journal of Drug and Alcohol Abuse*, *45*(6), 698-706.

Smart, R., Pacula R.L. (2019). Early evidence of the impact of cannabis legalization on cannabis use, cannabis use disorder, and the use of other substances: Findings from state policy evaluations. *The American Journal of Drug and Alcohol Abuse*, *45*(6), 644-663.

Stockwell, T., Giesbrecht, N., Sherk, A., Thomas, G., Vallance, K., Wettlaufer, A. (2020). Lessons learned from the alcohol regulation perspective. In T. Decorte, S. Lenton & C. Wilkins (Eds.), *Legalizing Cannabis: Experiences, Lessons and Scenarios* (pp. 211-232). London/New York: Routledge.

Stohr, M., Makin, D., Stanton, D., Hemmens, C., Willits, D., Lovrich, N. et al. (2020). An Evolution Rather than a Revolution: Cannabis Legalization Implementation from the Perspective of the Police in Washington State. *Justice Evaluation Journal*, *3*(2), 267-293.

Tran N.K., Goldstein, N.D., Purtle, J., Massey, P.M., Lankenau, S.E., Suder, J.S., Tabb, L.P. (2020). The heterogeneous effect of marijuana decriminalization policy on arrest rates in Philadelphia, Pennsylvania, 2009–2018. *Drug and Alcohol Dependence*, *212*, 108058.

Trein, P., Biesbroek, R., Bolognesi, T., Cejudo, G.M., Duffy, R., Hustedt, T., Meyer, I. (2021). Policy Coordination and Integration: A Research Agenda. *Public Administration Review*, early online.

Vatter, A., Rüefli, C. (2003). Do Political Factors Matter for Health Care Expenditure? A Comparative Study of Swiss Cantons. *Journal of Public Policy*, *23*(3), 301-323.

Wesley, J.J., Salomons, G. (2019). Cannabis legalization and the machinery of government. *Canadian Public Administration*, *62*(4), 573-592.

Zwicky, R., Brunner, P., Caroni, F., Kübler, D. (2021). A Research Agenda for the Regulation of Non-Medical Cannabis Use in Switzerland. *Zürcher Politik- und Evaluationsstudien*, *20*. Zurich, Department of Political Science.