

## Colorado's Rollout of Legal Marijuana Is Succeeding A Report on the State's Implementation of Legalization

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### INTRODUCTION AND SUMMARY<sup>1</sup>



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In November 2012, Colorado voters decided to experiment with marijuana. Formally, they approved Amendment 64, modifying the state constitution.<sup>2</sup> This move was historic and did something which, to that point, no other state or modern foreign government had ever done: legalize retail (recreational) marijuana.<sup>3</sup>

As part of the amendment, the state was required to construct legal, regulatory, and tax frameworks that would allow businesses to cultivate, process, and sell marijuana not simply to medical patients—as had been happening in Colorado for over a decade—but to anyone 21 and older. This change came despite existing federal prohibition of marijuana and opposition from the governor, state attorney general, many mayors, and the law enforcement community.

At its heart, this report is about good government and takes no position on whether the legalization of retail marijuana was the correct decision. Instead, it takes for granted that Amendment 64 and its progeny are the law and should be implemented successfully, per voters' wishes. The report examines what the state has done well and what it has not. It delves into why, and how, regulatory and administrative changes were made. Finally, it offers an evaluation of how effective the implementation has been. Key findings include:

1 I would like to thank the numerous individuals in Colorado and Washington, DC, who made themselves available for interviews for this research. I would also like to thank Jonathan Rauch, John Walsh, Philip Wallach, Beth Stone, and Christine Jacobs for feedback on this report. Finally, I have to acknowledge excellent research assistance from Grace Wallack, Ashley Gabriele, Charlie Dorison, Jared Milfred, MaryCate Most, and Conor Sullivan.

2 The final text of Amendment 64 can be accessed here: <http://www.leg.state.co.us/LCS/Initiative%20Referendum/1112initrefr.nsf/c63bdd6b9678de787257799006bd391/cfa3bae60c8b4949872579c-7006fa7ee/>

3 For clarity, "retail marijuana" serves as a shorthand (in regulatory language and for the remainder of this paper) for regulated, commercial, recreational marijuana.



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- It's too early to judge the success of Colorado's *policy*, but it is not too early to say that the rollout—initial implementation—of legal retail marijuana has been largely successful.
- The state has met challenging statutory and constitutional deadlines for the construction and launch of a legal, regulatory, and tax apparatus for its new policy. In doing so, it has made intelligent decisions about regulatory needs, the structure of distribution, prevention of illegal diversion, and other vital aspects of its new market. It has made those decisions in concert with a wide variety of stakeholders in the state.
- Colorado's strong rollout is attributable to a number of elements. Those include: leadership by state officials; a cooperative, inclusive approach centering on task forces and working groups; substantial efforts to improve administrative communication; adaptive regulation that embraces regulatory lookback and process-oriented learning; reorganizing, rebuilding, and restaffing critical state regulatory institutions; and changes in culture in state and local government, among interest groups, and among the public.
- Regulations address key concerns such as diversion, shirking, communication breakdowns, illegal activity, and the financial challenges facing the marijuana industry. However, some regulations were also intended to help regulators, as they endured rapid, on-the-job training in dealing with legal marijuana.
- Despite real success, challenges involving edibles, homegrown marijuana, tax incentives, and marijuana tourism remain, and the state must address them in a more effective way.

Recent failures at the federal level show Americans daily what happens when a government refuses to govern and is unwilling or unable to make changes in the face of policy realities. Colorado has made a conscious effort to preserve enough flexibility for its policy to remain effective over time. A strong rollout is important, but what happens after that is just as important. With its emphasis on flexibility, Colorado is taking out an insurance policy against unintended consequences.

## WHY IMPLEMENTATION MATTERS

In any policy area, the implementation of laws and regulations is essential for administration and governance. Legalized marijuana in Colorado is no different. In fact, this specific policy area is unique in many ways that make attention to implementation all the more important.

## General Implementation Demands

The implementation of a system of legalized marijuana is critical. Government failures are expensive, create market uncertainty, lower the morale of personnel, create inter- and intra-agency management problems, and cause costly public and political embarrassment. High-profile implementation failures such as the rollout of the Affordable Care Act's federal exchange website, the Federal Emergency Management Agency's response to Hurricane Katrina, or the management of the Vietnam War are ingrained in the minds of many Americans. In each of those cases, public officials faced tremendous backlash.

Implementation matters for more than headlines and political costs, however. The launch of any new program is often its most risky period. Failure rates can be high; politicians' patience can be limited; public skepticism is often substantial. Narratives about success or failure—regardless of the realities of administration—can take root and have dramatic effects on public and political support. This incubation period for public policies can lead to rapid reversal, as was seen in the 1980s after Congress passed the Medicare Catastrophic Coverage Act of 1988.<sup>4</sup>

Moreover, early implementation decisions are often the most important. The way in which a program is initially designed and executed will shape its subsequent development. Because of bureaucratic inertia and political entrenchment, righting the ship is often difficult after a course has been set.

For legalized marijuana, implementation matters for other, unique reasons. First, Colorado's experiment raises unusual federalism issues. While marijuana cultivation, distribution, possession, and use are legal in Colorado, all those activities remain in violation of numerous federal laws and regulations. In response, the Justice Department issued a memo in August 2013 (referred to as the "Cole Memo") that clarified federal government priorities in this area.<sup>5</sup> The memo says that the federal government expects states that "endeavor to authorize marijuana production, distribution, and possession" will "implement strong and effective regulatory and enforcement systems that will address the threat those state laws could pose to public safety, public health, and other law enforcement interests."<sup>6</sup>

The federal government, in the context of Justice Department enforcement, will take a hands-off approach to the enforcement of the Controlled Substances Act if, and only if, states implement regulation effectively and comprehensively. Shoddy implementation poses a risk that the federal government can step in, in a variety of ways, and shut down legalized marijuana in the state.

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4 For a brief discussion of the Act: <http://www.medicarenewsgroup.com/news/medicare-faqs/individual-faq?faqId=9afa2890-81dd-4620-b7ed-329162f5d88b>

5 The Cole Memo can be accessed here: <http://www.justice.gov/opa/pr/2013/August/13-opa-974.html>

6 Ibid at 5.

Beyond the federal question, Colorado's implementation efforts have consequences for other states. With public opinion changing,<sup>7</sup> public policy is moving toward legalization, but many states are waiting to see what the experience in Colorado will be.<sup>8</sup> If the Colorado model is a success, other states that consider retail legalization measures may well model their own legal and regulatory systems on Colorado's. Failure in Colorado will either deter states from legalizing or force them to chart a very different path in administering legalization policy.

In short, Colorado's early implementation decisions will be considered the Colorado Model; that model will inform and influence marijuana policy, potentially, for years to come.

## WHAT IS A "SUCCESSFUL" IMPLEMENTATION?

In the context of marijuana policy, implementation involves the design, construction, and execution of institutions, rules, and processes related to a system of legalized marijuana. Success occurs when those institutions, rules, and processes produce a system consistent with the goals of the policy. Some elements of the system are formal legal and regulatory actions; others may be informal efforts, such as outreach and coordination. In the case of marijuana, Amendment 64 sets the parameters of the policy: a legalized, regulated system for the cultivation and purchase of marijuana products, in controlled quantities, for individuals 21 and older. It also provides guidance on taxation, revenue allocation, and local control. Implementation, then, can be said to be successful if the state can construct a system that effectively meets the law's requirements.

It is important to note that implementation is based on *government* action and behavior, and that *implementation* success and *policy* success can be two very different concepts that should not be conflated. By analogy, imagine Congress passes a law that frees every federal prisoner in the U.S. The Bureau of Prisons then draws up plans to time and process prisoners' release, return personal items to inmates, transport inmates to drop-off points in towns and cities near federal detention facilities, and so on. The agency could empty the nation's federal penitentiaries flawlessly, without bureaucratic delays or mix-ups. Implementation, then, could be a rousing success. Nonetheless, the *policy* would most likely be an utter failure, releasing thousands of dangerous criminals onto the streets.

This is not to say marijuana legalization is the equivalent of a nationwide prisoner amnesty law. Instead, it is to emphasize that criticisms of Colorado's marijuana policy may be on point, even in the face of very effective implementation. The reverse can be true as well. Supporters of the Affordable Care Act deeply believe that the policy is a good one and will be successful,

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7 In May 2013, E.J. Dionne, Jr., and William Galston wrote about changing public opinion in this area: *The New Politics of Marijuana Legalization: Why Opinion is Changing* (Brookings). Available at <http://www.brookings.edu/research/papers/2013/05/29-politics-marijuana-legalization-galston-dionne>.

8 <http://www.cnn.com/2013/12/30/opinion/hudak-marijuana-2014/?c=&page=1>

even though the October 2013 rollout of the federal exchange website was an unmitigated implementation failure.

## KEY ELEMENTS OF THE COLORADO MODEL

### A. Rapid Response: The Implementation Task Force

Policymakers, politicians, regulators, and bureaucrats are notorious for foot-dragging. As policies are implemented, delays are common, and missed deadlines are expected. The architects of Amendment 64 worried that sluggishness could set in and undermine legalization efforts after passage—a concern

that seemed not altogether unfounded. In a September 2012 statement, Colorado Governor John Hickenlooper formally opposed the amendment, saying, “Colorado is known for many great things—marijuana should not be one of them.”<sup>9</sup>

As a result, legalization proponents built very strict deadlines into the amendment to force the state government’s hand. For example, the amendment—passed on November 6, 2012—required the Colorado Department of Revenue to “adopt regulations necessary for implementation” by July 1, 2013. State and local licensing procedures had to be established by October 1, 2013. Essentially, the amendment required dramatic changes to state and local administrative procedures in less than a year—a tremendous task for any organization, public or private.

In what was a relief to Amendment 64’s backers, after its passage Hickenlooper announced that his personal opposition would not stand in the way of the implementation of the public’s mandate. In a November 2012 statement he noted, “The voters have spoken, and we have to respect their will. This will be a complicated process, but we intend to follow through.”<sup>10</sup> A month later, Hickenlooper issued Executive Order B 2012-004, establishing the Task Force on the Implementation of Amendment 64.

The creation of the task force was among the most important administrative actions in the implementation of legalized marijuana in Colorado. It was also among the most successful. The task force was comprised of 34 standing members and dozens of additional members assigned to working groups that engaged specific, relevant topics.<sup>11</sup> It was chaired by Hickenlooper’s

*In a September 2012 statement, Colorado Governor John Hickenlooper formally opposed the amendment, saying, “Colorado is known for many great things—marijuana should not be one of them.”*

<sup>9</sup> <http://www.colorado.gov/cs/Satellite/GovHickenlooper/CBON/1251630730489>

<sup>10</sup> <http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovHickenlooper%2FCBONLayout&cid=1251633686228&pagename=CBONWrapper>

<sup>11</sup> There were five working groups under the task force. They were the Regulatory Framework Working Group; the

chief legal counsel, Jack Finlaw, and the executive director of the Department of Revenue, Barbara Brohl, whose agency would be broadly responsible for implementation, regulation, and enforcement.

Membership on the Implementation Task Force was diverse and broad-based. It included some passionate legalization supporters, including those active in the Amendment 64 campaign, as well as staunch opponents of the measure from the medical and law enforcement communities and citizen groups. Stakeholder groups from government, business, health care, law enforcement, labor and other areas designed a set of recommendations for the state legislature to consider and the Department of Revenue to review.

Although task forces can be prone to delays, this one seemed motivated by the importance and scope of its mission, and by its ambitious deadline: the governor gave it less than three months to complete its job, and Amendment 64 mandated a strict constitutional timeline.

In March 2013, the task force completed its work and issued a nearly 200-page report on how the state of Colorado should implement Amendment 64. Many of the recommendations were approved by the state legislature and governor that spring. Implementation thereupon began in earnest, and a series of drastic changes and transformations ensued.

## **B. Signals from the Top: Gubernatorial Leadership**

Drastic administrative change cannot be successful without leadership that is committed to making it work. In Colorado, leadership at the top was absolutely critical. Hickenlooper set a tone from which many state officials took cues. He essentially told state workers, appointees and career staff alike: Whatever your personal opinions, we have a job to do.<sup>12</sup> The governor's conspicuous commitment ensured that the Department of Revenue and other state agencies would have backing from leadership to carry out the constitutionally required mission.

In interviews, state employees, including Brohl, the executive director of the Department of Revenue, noted that the governor's tone, approach, and support had an impact on the business of government. People inside and outside of government praised his willingness to accept the public will, uphold the constitution, and be supportive of the process. Christian Sederberg, a Denver attorney who helped lead the Amendment 64 effort (later serving on the Implementation Task Force), explicitly noted Hickenlooper's "good-government approach."

Leadership is contagious within government. Weak leadership, corner-cutting, bureaucratic resistance, and organizational strife can compound each other's ill effects. Alternatively, good leadership can breed good decision making and effective governance. Hickenlooper's style is

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Local Authority and Control Working Group; the Tax, Funding, and Civil Law Working Group; the Consumer Safety and Social Issues Working Group; and the Criminal Law Working Group.

<sup>12</sup> Similar signals came from other top state officials like Attorney General John Suthers, as well.

no magic elixir that guarantees success. However, if the governor had taken a more polarizing approach or one that reflected his personal opinion, the results would have been quite different.

### **C. Preventing Crossed Wires: Internal Coordination**

Hickenlooper's leadership went beyond setting a constructive tone and organizing a task force. Within his own office, he saw a need for better coordination and leadership on the marijuana issue. In response, in February 2014, he hired Andrew Freedman to be the state's first Director of Marijuana Coordination. Freedman works closely with state government and private stakeholders, organizing twice-monthly policy meetings with the governor's staff to help coordinate policy, identify problems that exist or may arise, and improve communication among policy staff.<sup>13</sup> Hickenlooper also organized monthly cabinet meetings that were described as "collaborative."

Although routine in the private sector (the background from which the governor hails), in state government these kinds of measures to foster internal coordination are not necessarily common. They should be, however, because they offer important advantages. Regular face-to-face coordination encourages stakeholders with diverse viewpoints and interests to communicate and collaborate. Director Brohl noted, "The task-force model has been used throughout the process...and keeps everyone at the table." Regular meetings can also increase morale, accountability, and rapport.

In Colorado, the emphasis on coordination reflects a reality: marijuana legalization affects more than just the Department of Revenue (the agency charged with regulating marijuana). The reform affects agriculture, transportation, public health, law enforcement, and more. Bringing leaders together regularly can help decrease the likelihood that communication and policy breakdowns will occur.

### **D. Administrative Reboot: Agency Reorganization and Staffing**

Changes within government occurred beyond the office of the governor. Initially, enforcement of legalized medical marijuana fell within the jurisdiction of the Department of Revenue's Medical Marijuana Enforcement Division (MMED).<sup>14</sup> MMED was established in July 2010 to bring regulatory order to what was widely seen as a chaotic and out-of-control medical marijuana system. The division was fraught with problems, from leadership to administrative inefficiency to funding, and a 2013 audit shed a very public light on the problems at MMED.

In response to the audit and the passage of Amendment 64, the Implementation Task Force

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<sup>13</sup> This kind of internal coordination is essential for good administration, but is often underutilized in government. Some of the most notorious recent scandals in federal and state governments involve failures of communication and coordination within government.

<sup>14</sup> Medical marijuana was approved by voters through Amendment 20 in 2000.

*“MED has facilitated a real partnership with industry, which is necessary because their success is intertwined.”*

recommended that the Department of Revenue dramatically redesign the enforcement division, both to overcome the problems at MMED and to prepare for retail marijuana. Ultimately, in May 2013, the legislature passed and the governor signed HB13-1317, which implemented many of the task force’s recommendations; created the new Marijuana Enforcement Division (MED), which oversaw the implementation and regulation of both types of legalized marijuana in the state;<sup>15</sup> and in conjunction

with HB13-1318 changed the manner in which the regulatory body was funded (more on this later).

The reforms at MED and the Department of Revenue came with some dramatic personnel changes. Two individuals were promoted from within to introduce new leadership. Ron Kammerzell was named Senior Director of Enforcement for the Department of Revenue, and Lewis Koski was named Director of Marijuana Enforcement. The division is also staffing below leadership positions in an effort to enhance its enforcement capacity.

Kammerzell and Koski have internalized the task force and working group, taking care to include a diverse set of opponents and proponents. This approach is used to promulgate rules, to engage in regulatory lookback, and to improve marijuana policy into the future. In a very real sense, they have sought to transform the manner in which the Department of Revenue works with and serves the public. They rely on what they called “a contemporary approach to regulation” and insisted that even though relying on working groups took more time, it produced better outcomes.

Kammerzell explained that “a new area [of regulation] without much information lends itself to diversity.” Koski noted that diversity allows people to “feel they’ve been heard” and “get to understand the opposition.” Inclusiveness is especially important in marijuana policy, where information asymmetry is a pressing concern: the government must rely on non-governmental stakeholder groups for much information about a product that, until recently, was illegal in Colorado for nearly a century.

The inclusive, consultative approach seems to be paying off. In my interviews, people on both sides of the debate offered very few positive reviews about the predecessor division—the MMED. By contrast, the new division—the MED—was broadly praised. Marco Vasquez of the Colorado Association of Chiefs of Police noted that “MED is light years ahead” compared to the previous division. Meg Collins, executive director of the Cannabis Business Alliance, said that

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<sup>15</sup> Some of the administrative authority over the medical program rests with the Department of Public Health and Environment.

“MED has facilitated a real partnership with industry, which is necessary because their success is intertwined.”

All told, what happened at the Department of Revenue and the new Marijuana Enforcement Division was a wholesale administrative reorganization—never an easy thing to achieve, especially in a political environment. The design of new administrative institutions and the overhaul of existing ones (both of which happened as part of the implementation of Amendment 64) are often driven by political compromise, not bureaucratic efficiency. In Colorado, fortunately, both the Department of Revenue and MED had a constitutional mandate, public and legislative support, industry cooperation, and the political space to reform a troubled institution in ways that improved governance, rather than simply satisfied politics.

## **E. Nuts and Bolts of Policy Change: The Regulatory System**

A long treatise could be written detailing all of the regulatory changes that have gone into effect statewide in response to Amendment 64 and associated legislative action. Below I highlight six regulatory actions<sup>16</sup> that are particularly significant. A more detailed discussion of each is available in the Appendix.

1. *Seed-to-Sale Tracking System*

In an effort to track and monitor supply and prevent diversion, the state requires a Marijuana Inventory Tracking Solution (MITS). The system tracks every plant in every cultivation facility with a barcode-tagging system that is computerized and accessible to MED regulators. Barcodes can remain separate or can be batched as plant product is combined, so that product can be tracked from planting to purchase (seed to sale). The tracking system is technologically advanced, comprehensive, and serves as the backbone for the regulatory regime's enforcement activities.

2. *Vertical Integration*

The Implementation Task Force recommended, and the legislature approved, a vertically integrated structure for the marijuana market (at least in its initial rollout). With vertical integration, “cultivation, processing and manufacturing, and retail sales must be a common enterprise.”<sup>17</sup> This system initially limits the complexity of the market—in size, scope, and activities of participants—in ways that reduce the early regulatory challenges for MED. Vertical integration and inventory tracking work in concert to limit diversion and to increase the enforcement capacity of regulators during the critical incubation period of

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<sup>16</sup> Note that “regulatory actions” are meant to include government actions that became part of the regulatory apparatus. That means not simply agency rulemaking.

<sup>17</sup> See the Implementation Task Force Report (p.16) accessible here: <http://www.colorado.gov/cs/Satellite/Revenue-Main/XRM/1251633708470>

implementation.

3. *Temporary Barriers to New Entry and Preferences for Existing Producers*

Colorado further reduced the complexity of the market by constructing initial barriers to entry for new marijuana firms. The legislature required that, for a period of time, all retail marijuana enterprises must come from or be part of existing medical marijuana enterprises. This move increased enforcement capacity, ensured higher levels of entrepreneurial experience at the start, and limited the size of the industry. It also ensured that as implementation began state regulators would be dealing only with enterprises and owners with whom they were already familiar, creating a key advantage for regulators adjusting to a new policy environment and learning along the way.

4. *Limits on Quantities Purchased*

Amendment 64 and subsequent state regulations put limits on the quantity of marijuana that could be sold to individuals: one ounce of flower for Coloradans and a quarter ounce for visitors. The goal was to limit diversion after purchase. While other regulations like vertical integration and inventory tracking seek to deal with diversion risks during production, quantity limits are a means of preventing consumer- rather than producer-based diversion. Purchase limits make hoarding more difficult and time-intensive. They are complemented by possession limits to discourage marijuana's resale on the Colorado black market or its transfer to other states.

5. *Video Surveillance Requirements*

MED regulators required that cultivation, processing and retail facilities be extensively monitored with video surveillance. The benefits of this regulation are twofold. First, video surveillance aims to prevent diversion and, in case of theft, help police investigate. Second, MED regulators expect the system to be cash-only for some time, and surveillance may reduce the risks that cash-dependent enterprises face. The surveillance requirements will not stop all crime or limit every risk, but they will reduce the incentives for illegal activity by increasing the odds of detection.

6. *Marijuana Revenue and Funding Distribution*

The state enacted dramatic changes to the tax revenue system surrounding marijuana. Under the old system, the former Medical Marijuana Enforcement Division endured nearly constant budget deficits and managerial challenges. The new system provides marijuana tax revenue to fund MED, as well as funding related policy areas like education, prevention, and public safety. It also delivers a portion of funds to unrelated policy areas like school construction.

The new system allows for more regulatory stability, creating an agency that is self-funded, while using the excess to ensure that other policy groups have a stake in the success of the new marijuana industry. The latter move is an effective means of building and maintaining public support for the new policy.

These and other formal rules promulgated by the MED have emerged from a cooperative process that involved government, industry, and other stakeholder groups—including proponents, opponents, and those offering no position on the policy.

Here again, inclusivity is a distinctive and important feature of Colorado's approach. Industry, for example, plays a central role in the regulatory process, because it has a wealth of policy-specific information. As Todd Mitchem, the chief revenue officer of O.penVAPE, a company that makes a marijuana vaporizer pen, noted, "The state needs help from industry." The state's experience with legal marijuana sales—via the medical market—was limited; private industry is able to fill in information gaps. Christian Sederberg, the Amendment 64 advocate, echoed several others in explaining what is necessary for regulatory success: "Especially in an area where it's all new [policy], there's a need for there to be a link between the regulator and the regulated."

Although relationships between regulators and industry can lead to accusations of coziness or capture, the diversity of marijuana supporters, opponents, and other experts consulted by regulators seems to allow an opportunity for all sides to be heard. Various stakeholders initially opposed to the policy, including law enforcement, told me they enjoy a good working relationship with both the governor's office and the MED.

## **F. Colorado's Change in Culture and Perspective**

Changes in Colorado have gone far beyond administrative reorganization, the creation of new regulations, and a new tone from state leaders. In many ways, legalization in Colorado has led to dramatic cultural changes among key groups in the state.

Overall, the perspective on legalization has remained quite stable among Coloradans. Amendment 64 was approved by about 55 percent of state voters in 2012, and a 2014 public opinion survey suggests that 57 percent of Colorado residents continue to support legalization; the results also show that 61 percent of voters believe legalization has made the state better or not made much of a difference.<sup>18</sup>

However, other groups in the state are undergoing significant cultural and attitudinal changes. In particular, the law enforcement community—a group that was largely opposed to

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<sup>18</sup> Public Policy Polling. "Colorado Happy with Marijuana Legalization, Supports Gay Marriage." March 19, 2014. <http://www.publicpolicypolling.com/main/2014/03/colorado-happy-with-marijuana-legalization-supports-gay-marriage.html>. Accessed June 12, 2014.

Amendment 64—is adjusting to the new law. Taking a cue from Hickenlooper, many law enforcement officials are seeking ways to acculturate officers to legal marijuana while simultaneously ensuring that other, related laws are enforced effectively.

Training is a central component of this task. Glenn Davis, the highway safety manager for the Colorado Department of Transportation and a member of the Interagency Task Force on Drunk Driving, explained that better training among police is important not just for officers but for the public with whom they interact.

Driving impaired, he pointed out, has always been against the law, but reliably detecting impairment may be more of a challenge if easier access to marijuana increases the incidence of driving under the influence. Davis said, “The best defense is well-trained officers.”

Changes in law enforcement, he said, have been coordinated at the state level, and state officials have worked with local law enforcement to help them better understand what changes mean for communities. Chief Marco Vasquez of the Colorado Association of Chiefs of Police explained that his group is trying to “develop a program that identifies best practices for law enforcement” regarding marijuana policy that could be used within Colorado and be “transmitted to other states as they legalize.” In this way, law enforcement leaders see the state’s vanguard status as an opportunity to get enforcement right and help their brothers in blue elsewhere deal with policy changes in the future.

Chief Vasquez cited a broader cultural change: the introduction of retail sales, he said, “was at least a more honest conversation than medical.” Even though the number of medical users has *increased* since legalization (more on this below), the introduction of legal retail sales has improved optics for those who felt the old system was a sham. By reducing the recourse to wink-and-nod circumventions of medical-marijuana rules, such “policy honesty” may temper resentment, improve the new policy’s perceived legitimacy, and encourage compliance.

Finally, changes have coursed their way through advocacy communities and the industry itself. Several respondents noted that the industry wants effective regulation and enforcement. Members of the industry realize that if inadequate regulation leads to serious public policy problems, public support may plummet. Moreover, the threat of federal intervention—however defined—looms large over the legal marijuana market in Colorado, and that threat induces members of the industry to push for and comply with regulations. “Industry has incentives to abide by the rules,” Michael Elliott of the Marijuana Industry Group explains.

A common observation in my interviews was that the federal threat improved compliance,

*The issue of marijuana-edible food safety is a complex one that state and local governments have only begun to address comprehensively.*

brought industry to the table, motivated firms to play by the rules, induced the industry to see the need for regulation, and facilitated communication between industry and regulators. The state's largely smooth and cooperative rollout of legalization has had an assist from the unlikeliest of places: Washington's war on drugs.

## **THE CHALLENGES OF IMPLEMENTATION: PRESENT AND FUTURE**

Although much has gone well in Colorado, implementation has not come without difficulties. The challenges facing Colorado are diverse, but a few stand out. This section will assess them.

One topic this report does not address is banking. Marijuana enterprises lack access to financial services—a severe problem both for marijuana businesses and for law enforcement. While Colorado has sought state-level remedies,<sup>19</sup> the problem is not one of implementation at the state level. A solution is federal in scope,<sup>20</sup> lying outside the compass of this paper.

Before jumping into an analysis of other challenges, I offer one caveat. Implementation problems do not necessarily equal failure. Such problems can lead to failure, of course. But they no more doom Colorado's legalization policy than sound implementation ensures the policy's success.

### **A. Edibles and the Path to Overindulgence**

In interviews for this report, observers again and again raised the problem of edibles. This issue worries supporters and opponents of legalization alike.

Why are edibles such a big concern? The reasons are multiple. The title of the new Product Potency and Serving Size Working Group points to significant issues the state faces. In many cases, serving sizes can lead to overconsumption of THC, because naïve users do not have a complete grasp of product dosing and because self-regulation in the consumption of standard food is so different than what is required with marijuana edibles. In some cases, serving sizes are clear and intuitive; in others they are not.

In my own trip to a retail marijuana dispensary, I observed a couple interested in purchasing a marijuana brownie. The “budtender” explained in detail to the buyer that the brownie contained six servings and that proper consumption involved dividing the brownie or biting off a small chunk. The information was correct and clear, but who eats a sixth of a brownie or a quarter of a candy bar? Moreover, people who smoke, dab, or vape marijuana experience the effects quickly. However, edibles can take 30 to 60 minutes before the consumer feels a “high.” As a result, an individual—particularly one unfamiliar with marijuana edibles—may

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<sup>19</sup> For example, the state passed HB 14-1398 which sought to establish marijuana financial cooperatives. However, most people are skeptical that the Federal Reserve will approve those entities, as is required by the legislation itself.

<sup>20</sup> Proposals such as this exist. For example, Colorado's own Ed Perlmutter (D-07) introduced H.R. 2652, “Marijuana Businesses Access to Banking Act of 2013.” The bill has 31 cosponsors and has effectively died in committee.

overconsume, believing the product is ineffective. Overconsumption can have negative consequences.<sup>21</sup>

Inconsistent potency is also a serious problem. Recent reporting from the *Denver Post* examined THC levels in a series of marijuana edibles, testing samples labeled 100mg per edible package.<sup>22</sup> The results were alarming. In some cases, 100mg edible packages contained less than half of one milligram of THC. In others, 100mg packages had nearly 1.5 times the stated amount of THC. Potency errors make even responsible consumption a challenge. When there is substantially more THC in an edible than is labeled, overconsumption can occur even when the consumer follows directions carefully. When THC content is lower than labeled, the user may be lulled into overconsuming a subsequent edible. Either way, the result is a dangerous miscalculation.

Edibles also come in forms—including candies, chocolates, brownies, cereals, and the like—that pose serious risks of accidental consumption by children and others. The look of some edibles, reminiscent of candy cigarettes, also *appeals* to children. The difference, of course, is that candy cigarettes have no tobacco; edibles contain cannabis extracts. Labeling, packaging, and products themselves present serious concerns, and ones which, to date, the state has failed to deal with in a comprehensive and effective way.

A final, often under-discussed concern about edibles emerged in my discussions with Dr. Larry Wolk, the executive director of the Colorado Department of Public Health and Environment. He noted that edibles pose food-safety concerns. In Colorado, the state has regulatory authority over edibles; yet food safety is often regulated at local levels. Trying to systematize food-safety rules thus is difficult in this area. With limited federal guidance,<sup>23</sup> scant research and testing, and a regulatory environment complicated by dual state and local jurisdiction, the issue of marijuana-edible food safety is a complex one that state and local governments have only begun to address comprehensively.

The state's initial implementation efforts in the context of edibles have been lacking. Issues with serving sizes, potency, and the nature and look of edibles continue. MED has had the regulatory authority to address such problems, but emergency and subsequent regulations have led to a system in which industry insiders as well as legalization opponents have frequently echoed each other in arguing that more should and must be done.

How is the state responding? Because of the obvious weaknesses in the state's initial rules

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21 Overconsumption is associated with tremendous fatigue and an upset stomach. Fears in the medical community also exist that such consumption can lead to serious psychoactive effects. The challenge, of course, is that research on the effects of overconsumption of THC is quite limited, often stymied by federal marijuana prohibitions.

22 The *Denver Post* article can be accessed here with links to the full report: <http://www.thecannabist.co/2014/03/09/tests-show-thc-content-marijuana-edibles-inconsistent/6421/>

23 The US Food and Drug Administration considers any food with cannabis concentrate to be "adulterated."

surrounding edibles, the state organized an Edible Product Production Safety Working Group, seeking better health and safety regulations surrounding the production of edibles. But those efforts, likewise, were not comprehensive enough to solve the problems.<sup>24</sup> Subsequently, the state took legislative and regulatory actions to deal with edibles in a more direct and comprehensive way.<sup>25</sup>

First, the Department of Revenue organized the Retail Marijuana Product Potency and Serving Size Working Group, chaired by Ron Kammerzell and Lewis Koski. Like other, similar groups, this working group is comprised of a variety of members from different stakeholder communities. It began meeting in April of 2014.<sup>26</sup>

Second, MED organized a Mandatory Testing and Random Sampling Working Group, which put in place a more comprehensive product testing program. The goal is not just to check product potency, but also to set up laboratory certification processes and standards for testing facilities. Those rules took effect in the spring of 2014.

Those efforts are unlikely to be final. Good regulation often requires a trial-and-error approach until the institutions and rules surrounding a policy are effective. Colorado has already shown a willingness to adapt as it learns, a flexibility it should strive to maintain.

Some interpret the need to revise earlier regulatory efforts as a problem, a sign that implementation has failed. In reality, regulatory lookback is a sign of agency accountability. Lookback is a common, effective, and necessary part of the administrative process, and it strengthens the ability of the state to deal with public policy problems. Lookback, and particularly an agency's awareness of the need to do it, is a sign of a regulatory system that is working, not one that is broken.

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24 This working group eventually promulgated Rule E 604, "Health and Safety Regulations: Retail Marijuana Product Manufacturing Facility." This regulation was targeted to work-site health requirements surrounding sanitary environments and production processes.

25 In May 2014, two important pieces of legislation (HB14-1361 and HB 14-1366) were signed into law. They require MED to promulgate rules that will address concerns about edibles—establishing equivalency standards between marijuana flower and edibles and to expand potency testing—by January 2016.

26 As this report was being written, the working group had not yet produced draft or proposed rules on the topics that fall under its jurisdiction. The decision to begin the process with an open discussion that will search for common ground, rather than with a draft rule that would serve as a starting point, was heralded as an effective approach by Kammerzell and Koski in interviews with them.

## B. Homegrows and the Limits of the Regulatory State

Amendment 64 gives individuals the constitutional right to grow marijuana plants at home.<sup>27</sup> The practice, commonly referred to as “homegrows,” was, in part, an effort by advocates to shore up political support among legalization advocates who wanted to begin (or likely, in many cases, continue) the home cultivation of marijuana.<sup>28</sup>

At the same time, homegrows provided additional benefits for advocates by widening the scope of marijuana cultivation in the state, in a way that allowed residents living in jurisdictions that opted out of commercial production to have access to marijuana. In this way, homegrows allow Coloradans a legal (constitutional) basis for growing marijuana in communities in which it cannot be purchased or for individuals who prefer home cultivation to commercial marijuana.

Some restrictions concerning homegrows were written into Amendment 64.<sup>29</sup> Yet, beyond those provisions, the state has done little to regulate homegrows, in large part because the amendment’s language is clear.<sup>30</sup> However, the clarity of the constitutional provisions does not mute some serious problems associated with homegrows.<sup>31</sup>

*One way or another, the issue will need to be addressed. Legalized marijuana in Colorado was not supposed to drive retail users toward the medical market.*

The law enforcement community and the marijuana industry both worry about homegrowers’ potential to skirt the law. Chief Marco Vasquez said, “Homegrows are problematic because they are a bit outside of MED’s jurisdiction.” Michael Elliott of the Marijuana Industry Group bluntly assessed the situation: “Homegrows are where the black market has gone to.” Many worry that homegrowers may grow more marijuana than they are allowed and present an opportunity to divert product to illegal markets in Colorado or markets across state lines. Such activities remove customers and revenue from the legal retail market, and risk federal intervention.

27 The Colorado Constitution, Art. XVIII, Sec. 16 (3)(b), affirms the right of “possessing, growing, processing, or transporting no more than six marijuana plants, with three or fewer being mature, flowering plants, and possession of the marijuana produced by the plants on the premises where the plants were grown, provided that the growing takes place in an enclosed, locked space, is not conducted openly or publicly, and is not made available for sale.”

28 Advocates, such as Christian Sederberg, also asserted that the inclusion of homegrows into the language of Amendment 64 could further buffer the state from federal intervention. Their argument was that the federal government would be less interested in enjoining or otherwise stopping the regulated system, while being ill-equipped to stop homegrows across a state without state-level marijuana prohibitions.

29 Art. XVIII, Sec. 16(3)(c), limits how much personal harvest can be transferred and to whom (one ounce to an individual 21 or older), for example.

30 In order to deal with homegrow operations and the issues surrounding them, local governments have used zoning authority to create additional regulations.

31 It does, however, highlight the possible challenges posed when using the constitutional route to legalize marijuana. The stability that constitutional changes offer can also lead to unintended inflexibility when problems arise. Colorado’s legalization experiment demonstrates both.

Because homegrows rest outside the jurisdiction of the MED, the division is unable to prevent other types of risky problems that it seeks to regulate. Those include product safety, production quality, and environmental issues like black mold that can invade production spaces. Law enforcement also echoed concerns that crimes like burglary and larceny may affect homegrow operations and could create additional, localized crime problems.<sup>32</sup>

A final concern that several respondents echoed with regard to homegrows involves hash oil extraction, which produces THC- and/or CBD-rich oils from marijuana, for dabbing, vaping, edibles, and other uses. Extraction relies on the use of a solvent, one of which—the highly flammable gas butane—has led to widely publicized explosions causing property damage and bodily harm. Some states, including Washington and California, have banned or substantially restricted hash oil extraction. Colorado has not yet caught up in an effective way.

How has the government responded to homegrow concerns?

For first responders, state and local governments have been expanding training and information about homegrow hazards and hash oil extraction incidents. Second, state and especially local government efforts have tried to address problems surrounding homegrows, particularly in the context of hash oil extraction.<sup>33</sup> For example, local zoning and environmental regulatory authorities have been used by jurisdictions to place restrictions on homegrows.

Such efforts should be expanded and refined. A coordinated effort to rein in homegrow operations and make them safer is critical. Efforts like the oft-used working-group model, bringing together state and local officials with experience dealing with homegrows, would foster a discussion of best practices.

Because homegrows are protected under the state constitution, the Colorado Supreme Court may ultimately need to step in and define regulatory boundaries.<sup>34</sup> If those boundaries are inconsistent with sensible, effective homegrow regulation, a last resort may be to propose and pass a second constitutional amendment. That may be quite feasible, because proponents of a regulated, legal marijuana marketplace would likely join *opponents* of legalization to regulate

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32 It is still early to judge crime statistics, and time will tell whether there are systematic relationships between homegrows and crime rates in the longer term. In fact, proponents of Amendment 64 argued that the inclusion of homegrows in the language of the amendment would hedge against federal intervention into the regulated market in ways that would leave only home operations in existence.

33 The limited statutory language in this context offers local governments the option to regulate processes. C.R.S. 9-7-113 notes, “A local government may ban the use of a compressed, flammable gas as a solvent in the extraction of THC or other cannabinoids in a residential setting.”

34 The legal test approach to homegrow regulatory expansion is not an easy one. There are functional issues that limit the state’s ability to regulate homegrows. Primarily, state and local governments do not have the funding, personnel, or capacity to regulate homegrows and conduct monitoring and enforcement operations. Moreover, regulating homegrows raise serious constitutional concerns not just from the provisions of Article XVIII of Amendment 64 but constitutional provisions surrounding search and seizure.

or otherwise deal with homegrows.<sup>35</sup>

Homegrows pose legal as well as logistical challenges for Colorado's regulators. Coping with them, however, is unavoidable, for the sake of public safety, good government, and keeping the federal government at bay.

### C. Medical Marijuana and Pot Tourism: The Problem of Misaligned Incentives

Throughout this report, I discuss some of the ways in which laws, regulations, and informal policies create behavioral incentives inside and outside the marijuana market—both for consumers and producers. Realigning incentives was, indeed, a major rationale for legalization in Colorado. By bringing the market under state power, the state could reduce the risks and challenges that black markets create.

Under the new regime, however, a few incentives remain problematic. One involves medical marijuana; another, marijuana tourism and public use.

It is no secret in Colorado that some medical marijuana users use that market without a legitimate medical need. The state has an obvious interest in moving some “gray-market” medical consumers to the new retail market. Unfortunately, the tax and fee structures for medical and retail marijuana did nothing to limit gray-market activity. The medical marijuana tax is quite low—2.9 percent—and recently the fee for a red card, the document a medical marijuana patient needs in order to access the market, was reduced. When the retail market came online, it featured substantially higher taxes—due to a voter-approved ballot initiative. Some in the industry also noted that medical marijuana pricing, in many cases, is lower than that of retail.

The result is not surprising: the goal of pushing “gray market actors” away from the medical market and toward the retail market failed. In fact, Wolk of CDPHE—the agency that maintains the medical marijuana registry—noted that, since legalization of retail marijuana, the number of registered medical patients has *increased*. Thus the effort to shrink medical marijuana rolls—and collect the retail-market tax revenue that comes with it—has not borne fruit.

One possible solution is to adjust tax rates, by raising

*To be sure, it was not a kumbaya moment across Colorado, but the maturity and professionalism shown by both sides facilitated what has been an impressive implementation rollout.*

<sup>35</sup> Such a political coalition has a recent example. When Proposition AA passed in November 2013, creating a tax framework for retail marijuana, some of the opponents—aside from anti-tax purists—were a group of legalization proponents who found such taxation unfair. Supporters of regulated, taxed, and legalized marijuana joined opponents of legalization who desired to reap the revenues from an already-approved marijuana marketplace. It is hard to imagine that a similar coalition could not be forged with regard to homegrow regulation.

medical rates, reducing retail rates, or some combination of the two. Such proposals, however, would either be ineffective or would infuriate medical-marijuana users, who would claim that legitimate medical patients are being punished for others' actions—a cause with poor political optics. Wolk suggested tightening access to the medical market, for example by requiring doctors to demonstrate medical necessity rather than merely issue a recommendation. A medical-necessity system would require better-defined rules from CDPHE and the medical community about which symptoms, conditions, and medical situations would qualify for medical marijuana.

One way or another, the issue will need to be addressed. Legalized marijuana in Colorado was not supposed to drive retail users toward the medical market. A good-government approach should do all it can to rectify these misaligned incentives, while remaining sensitive to the healthcare needs of legitimate medical patients.

Another odd incentive structure involves tourists' access to retail marijuana—especially in the form of edibles.<sup>36</sup> Perversely, if unintentionally, current policies drive tourists to the edibles market, creating risks for public health and safety.

For a visitor to Colorado—even one who did not purchase marijuana—those incentives are clear. Upon arriving in Denver, I checked into my hotel, where staff explained I would have to pay a fee of several hundred dollars if the scent of smoke was found in my room. Moreover, the public use of marijuana remains illegal in the state. Denver also bans smoking clubs. Thus, if I went to Denver with the hope of smoking marijuana, I would need to use someone's home. On the other hand, I could have easily purchased an edible and consumed it in my hotel room without incurring any penalties at all. And when it comes to edibles, tourists tend to be naïve users—the highest-risk group.

Regulatory implementation could modify these inverted incentives. Notably, it would be helpful for the state (and localities) to think through the consequences of defining what it means for a venue to be “public,” a murky subject that has been the source of much controversy. In one well publicized case, the Denver Symphony organized a fundraiser to which guests were encouraged to bring their own marijuana. The city of Denver attempted (unsuccessfully, in the end) to bar the event on the grounds that it qualified as “public.” Todd Mitchem, of O.penVAPE, faced a similar problem recently. His company wanted to host a Vape and Vinyasa event at the company's headquarters, focusing on yoga and introducing prospective customers to O.penVAPE's vaporized cannabis product. City officials forbade the event on the grounds that it, too, was “public.”<sup>37</sup> One result of such rulings may be to steer users toward more dangerous,

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36 Tourism is a significant element of the retail marijuana market, as was indicated in a recent study of consumer marijuana demand commissioned by the Department of Revenue. It can be accessed here: <http://www.colorado.gov/cs/Satellite/Rev-MMJ/CBON/1251592985115>

37 Mitchem's response, though certainly one of disappointment, was to say that the approach moving forward should be, “Let's guide this thing; let's work with the city to get it right,” as opposed to simply fighting.

less supervised forms of consumption.

Indoor use presents further challenges for the state beyond the definition of “public.” First, the Indoor Clean Air Act prevents the use of smoked products inside establishments like businesses, restaurants, public buildings, and so on. In addition, the use of marijuana can have second-hand intoxicating effects for non-smoking patrons or even first-responders dispatched to a complaint.

One path forward may well be modified smoking clubs that rely on smokeless or smoke-limited alternatives with cutting-edge ventilation systems or open-air smoking spaces. Additionally, allowing closed events where customers or attendees understand that marijuana use will occur can provide a middle ground for Colorado residents and tourists.

As reports continue to surface about people using edibles and landing in emergency rooms, the government will need to implement realistic changes that seek to redirect incentives. Striking a balance between public health and safety on the one hand and personal prerogatives on the other is essential, and the rules for edibles, tourism, and public use have yet to get the incentives right.

## **IS COLORADO SUCCEEDING—AND WHY?**

Much of this report has praised the innovation, professionalism, competence, leadership, and execution of the implementation of marijuana legalization in Colorado. The broad success of the state in putting into effect a policy that had no true precedent was a difficult task, and Colorado largely did well.

As I noted, shortcomings and challenges exist, and they cannot be overlooked or dismissed. Just as important, however, is that the state government has met the most basic standard of success: it has done what Amendment 64 instructed it to do. Colorado has effectively created regulatory and administrative apparatuses that facilitate the legal retail marijuana market.

On January 1, 2014, retail marijuana dispensaries opened. Consumers from Colorado were able to purchase state-regulated marijuana. Businesses are thriving. Tourism around the marijuana industry is growing. New license applications for marijuana enterprises are being readied and evaluated. The market is expanding in compliance with the regulatory features of the new system. Through a series of legislative, executive, and administrative actions, the state has allowed product to come to market; ensured that monitoring and enforcement processes were in place and functioning; collected revenue from marijuana sales; and sought to build, maintain, and improve the ability of the state to continue to regulate the market effectively. None of this would be possible in a state that failed to implement the law in an effective and successful way.

What were the elements of successful implementation?

First, policy implementation cannot be successful without *effective leadership*. That is true in any area of policy, but particularly so for marijuana legalization—a unique and complex issue. State leaders—from the governor to agency heads to legislators, as well as a variety of actors throughout the system—did something nearly unheard-of in an era of policy gridlock and political polarization. They set aside their personal views and coalesced around the idea that Colorado wanted legalized marijuana and it was their duty to make that a reality.

What this leadership amounted to was a commitment to good government. That is, many state leaders pushed to ensure that agencies, officials, and state employees had the support to do what was necessary to implement the law. Support from political leadership may seem tangential to the wonkish work of implementation. Yet those serving in the trenches of state bureaucracy know well the barriers to success created by political opposition and administrative foot-dragging. Colorado effectively avoided both.

Yes, opposition to the policy still exists, but stakeholders with diverse views—on both sides—took cues from the governor and others and worked to make implementation a success. To be sure, it was not a kumbaya moment across Colorado, but the maturity and professionalism shown by both sides facilitated what has been an impressive implementation rollout.

Another element of Colorado's implementation success is *inclusive planning*. Amendment 64 required rapid construction of an elaborate regulatory apparatus, in a complicated environment. The state relied on task forces and working groups to prepare and ultimately implement the change and were responsible for many of the regulatory and institutional measures the state undertook.

The success of task forces and working groups grew not simply out of their existence but also from their missions and memberships. Each was given a specific jurisdiction and set of goals. Vague missions or wide-ranging jurisdictions can be short paths to gridlock. By focusing each group, the state made success more attainable. As a result, each task force met its expectations and did so on schedule.

Organizers also made sure that groups' memberships included diverse perspectives. This approach ensured that issues received a balanced airing and that debates (and ultimately outcomes) were not driven by pre-existing arrangements. Instead, diversity in membership facilitated compromise and cooperation.

The use of broadly inclusive task forces is certainly not unheard of in state government. What is distinctive is the extent of Colorado's commitment to this technique. The state's consistent and repeated reliance on task forces and working groups signals a real interest in deliberative and cooperative implementation. It also generates political support for outcomes, even giving

opponents a stake in the process. It thus makes for good politics and good policymaking—both of which help implementation.

*Competent management* has also helped greatly. Part of that management came from changes within the Department of Revenue, in terms of both institutional organization and personnel. The state legislature and the department responded both to the recommendations of the Implementation Task Force and the 2013 medical-marijuana audit by reorganizing oversight of marijuana enforcement and creating a new division—the MED—to address retail marijuana. Agency leaders also hired new staff and promoted talented individuals from within the division.

Although bureaucratic reorganizations are easy to dismiss as merely moving the boxes on flow diagrams, they can have a profound impact on effectiveness. In Colorado, the result has been a regulatory regime that has met the deadlines required by statute and the constitution; has implemented many of the recommendations of the Implementation Task Force; and, as a result, has positioned both the market and the MED to capitalize on the experience of existing market actors and met new demand from retail consumers. Despite some regulatory shortcomings, the MED's managerial effectiveness signaled to consumers, producers, advocates, opponents, and the general public that the new division, unlike its predecessor, was both a credible and competent administrative institution.

Another powerful contributor to implementation success has been the state's focus on *effective communication and coordination*. Some of the biggest government failures in the nation's history have come about because of failures to communicate and coordinate (think about Hurricane Katrina). Colorado has gone to great lengths to avoid such failings in the context of marijuana policy.

The task force and working group model has contributed importantly to the effective exchange of information. Many people in industry, people in government, and even opponents of Amendment 64 reported that, although their specific interests did not always become policy, they felt they had been listened to and that the state often—though not always—kept them informed. Communication between the Department of Revenue and stakeholders on both sides was not perfect, and the department should seek to identify weaknesses in information flows. However, the two-way flow of information has been substantial and beneficial.

The governor's office has spearheaded communication efforts, hiring a marijuana policy coordinator—effectively a marijuana czar—who works internally and externally to identify policy and implementation challenges, communication breakdowns, and other needs across the state. The office works closely with those involved in implementation as well as stakeholders outside of government. Colorado's use of an official liaison, particularly one housed in the executive office, helps break down barriers between agencies and actors that often plague policy implementation.

Finally, implementation has been effective because the state has been committed to *flexible administration*. Regulators, legislators, and other officials see implementation of marijuana policy as a fluid process in which early efforts must be continually reassessed and, if need be, revised to ensure effectiveness.

The state has shown its flexible approach in many ways. First, state regulatory decision making processes, at times, have begun without draft rules, and instead commenced with an open discussion of what effective regulation should accomplish. Second, the state has sought to be proactive in the design of rules, using big data, enforcement and compliance knowhow, and communication with industry to help make its policies consistent with the latest information. These efforts make the state willing to respond to new information to produce new policies. Third, the state has been willing to learn from the past. Thus far, the state has engaged in regulatory lookback to address implementation problems that it either missed or that arose as the market matured.

To say that early implementation has proven successful is not to say it is perfect or future-proof. Nor is it to say the policy is without problems. State leaders should use data in the future to evaluate fully the impact of marijuana legalization on society in the context of crime, health, addiction, public safety, and so on. Because legalization is experimental, the state should be committed to understanding what effects—positive and negative—are associated with the policy change. Effective implementation should not mask the need for high-quality, robust, systematic policy analysis, which is as important to good government as implementation itself.

Still, a strong launch, built on a capable and flexible administrative infrastructure, gives Colorado a leg up as events unfold. If the state can maintain the flexibility, administrative competence, inclusiveness, coordination, and sense of mission that have marked legalization's rollout, it will be well positioned to continue its success for some time.

## APPENDIX

### Colorado's Regulatory Recipe for Retail Marijuana: Six Essential Ingredients

#### 1. Seed-to-sale tracking system

Part of the legislative mandate surrounding the implementation of Amendment 64, at the behest of the Implementation Task Force, was to use a state-of-the-art “inventory control and tracking” system. In response, the Colorado Department of Revenue promulgated Rule R 309, outlining the new system, formally called Marijuana Inventory Tracking Solution (MITS) and often referred to as the seed-to-sale tracking system.

MITS is a web-based system that interfaces with a system of plant-based tags that rely on a radio frequency identification system. Every plant in the market must be individually tagged and tracked as it moves through the commercial growth and distribution chain.<sup>38</sup>

The system is widely considered one of the most advanced in the marijuana industry and is used to track product, limit diversion, improve regulatory compliance, and discourage improper market behavior.

The system, though technologically advanced, operates in a straightforward way. Plants are tagged in their initial planting. As each plant moves through the cultivation process, the tag stays with it from stage to stage. Eventually, flower is harvested and/or oil is extracted and plants are combined to make batches. Cultivation facilities batch product by combining MITS tag numbers so that the product in any container or retail product can be traced by the batch number to see which plants are included. Medical and retail plants use the same technology, but each type requires a different tag to distinguish which market a given plant is cultivated to serve (see Rule R 304-B.1).<sup>39</sup>

The MITS system helps the state in a multitude of ways. In general, it does not add large regulatory costs to an operation: tags are relatively cheap, and businesses are incentivized to use systems to track and manage product as part of good business practice.<sup>40</sup> Regulators and businesses have a general idea of how much a plant of a given strain will produce and can crosscheck expectations with actual harvest. The system offers the state the ability to track product in ways that far surpass product tracking in most other commodity markets in the U.S.

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38 The distinction here is an important one. The MITS system applies only to commercial production and distribution of marijuana, both medical and retail. It does not extend to homegrows or caregivers.

39 The rule on point here notes that cultivators “shall maintain either physical or virtual separation of the facilities, marijuana plants, and marijuana inventory. Record-keeping for the business operation and labeling of product must enable the Division and relevant local jurisdictions to clearly distinguish the inventories and business transactions of the Medical Marijuana Business from the Retail Marijuana Business.”

40 Some complaints have arisen over the costs of tags and the lack of alternative tagging companies. The state has contracted with a single company for MITS supplies and technology, which means price variation does not exist.

Careful tracking reduces the chance of diversion, one of the biggest risks to the legal marijuana market. Diversion of product can empower illegal operations, undermine the goals of Amendment 64, and reduce tax revenue to the state. At the same time, diversion could cause the federal government to determine that the Colorado experiment is a failure and intervene.

The MITS system also allows the state to collect and analyze data that help improve and streamline enforcement efforts and compliance investigations. In interviews, Marijuana Enforcement Division (MED) leaders noted that analysis of MITS data can show where weaknesses exist in the system, as well as which producers are most at risk of compliance violations. For example, if a given firm keeps producing unexpectedly low harvest numbers, or if batches are yielding lower quantities than they should, MED can target enforcement not just to the firm level but to the specific process in a firm. In this way, the MITS data help investigators identify possible compliance problems and, where necessary, resolve them in a cost-effective way.

Advances in both technology and data management and analysis allow for streamlined enforcement that can increase effectiveness and lower costs. Lewis Koski, the MED director, noted that one benefit of the comprehensive nature of the MITS system is that it allows the division to “switch from being reactive and implement risk-based proactive assessments.”

In many ways, the MITS system is the backbone of Colorado’s regulatory structure governing legalized marijuana. If effective, it helps businesses and regulators guard against shady practices, while helping keep at bay a federal government that is closely watching enforcement and compliance.

## 2. Vertical integration

The structure of the retail marijuana market in Colorado is heavily regulated. The Implementation Task Force recommends a vertical integration model for the industry. Vertical integration means that the supply chain for a given retail enterprise is maintained entirely within that same business. Specifically, a marijuana dispensary—retail or medical—must also cultivate the product within that company. Reflecting the importance of this regulatory structure, vertical integration is part of the first recommendation in the Implementation Task Force report: “Under this model, cultivation, processing and manufacturing, and retail sales must be a common enterprise under common ownership.”

The report also recommends that the vertical-integration model adopt a “70/30 rule,” which requires an enterprise to sell at least 70 percent of what it produces in its own retail outlets. It can purchase from other enterprises up to 30 percent of the product that it sells in retail outlets. Similarly, an enterprise can sell no more than 30 percent of its product to other enterprises. The goal of the model is “to regulate the adult-use marijuana industry and inhibit

the diversion of legal marijuana, both within Colorado and to neighboring states.”

The state heeded these recommendations. The Department of Revenue promulgated Rule R 402, “Retail Marijuana Sales: General Limitations and Prohibited Acts.” This rule formalizes the 70/30 vertical integration model, precisely as recommended by the Implementation Task Force, including various reporting requirements that were included in Recommendation 1.1. Rule R 402 specifically eschews the state-run model, which the task force considered and rejected.

However, vertical integration and the associated 70/30 rule were made temporary in the state—generally expiring by October 1, 2014. In part, the temporary nature of the rule and particularly the timing of its expiration came about as a result of political compromise, rather than policy planning. Nonetheless, the nature of the regulatory action had the clear benefit of reducing the pressure state regulators faced as they rolled out policy changes and a new regulatory apparatus. Staged or tiered rollouts are often employed as a means of decreasing pressure, confusion, and sheer workload that a government agency faces.

This is particularly true of a policy area as new as marijuana legalization. At the outset, vertical integration makes for a less complicated system, aiding regulators as they learn the ropes. During a period of low or limited regulatory capacity, a larger, more diverse market may have meant MED would need to hire more staff, initiate more enforcement actions, and likely face many false positives in investigating compliance. By contrast, an effort to scale up the market *after* regulators gain more experience will likely be more cost-effective. In fact, the wild-west-style, under-regulated medical marijuana market in Colorado from 2000 to 2009 served as a prime example of the costs (monetary and non-monetary) that can accrue when market expansion is unchecked during a period of limited regulatory capacity. In that respect, vertical integration is an example of policy learning on the part of state officials.

### 3. Temporary barriers to new entry; preferences for existing producers

As retail marijuana became legal in Colorado, the state granted legal preferences for existing medical marijuana enterprises to take the lead in expanding the market. Amendment 64 itself requires that “in any competitive [licensing] application process the Department [of Revenue] shall have as a primary consideration whether an applicant has prior experience producing or distributing marijuana or marijuana products pursuant to” existing medical provisions. Amendment 64 also reduces the fees that medical marijuana enterprises must pay in order to enter the retail market, relative to the fees that will be charged to new entrants in the future.

Preference for existing medical enterprises did not end with the text of the amendment. The Implementation Task Force recommended that the state “provide for a grace period of one year that would limit new application for adult-use marijuana license to medical marijuana license holders in good standing or applicants that had an application pending with the Medical Marijuana Enforcement Division prior to December 10, 2012.”

This recommendation was generally accepted by the state legislature, which codified it into law and spelled out the timing and terms of the moratorium on new entrants into the market. The legislature also set out licensing options for existing medical producers. Those three options were: remaining in medical, transitioning fully to retail, or holding dual licenses.<sup>41</sup> MED promulgated rules reinforcing preferences for existing medical marijuana producers and detailing and clarifying the rules by which initial licensing would occur.

In some regulatory contexts, carve-outs for existing industry participants would raise eyebrows about collusion or preferential treatment. In the marijuana industry, and especially among *prospective* market entrants, dissent certainly arose. Prospective entrants, hoping to jump into what some expected would become a booming industry, were denied. Although that exclusion was temporary—blunting criticism slightly—the policy advantaged firms that were able to move into the new market right out of the gate. The regulatory decision to limit the initial size of the market made clear choices about the distribution of those advantages.

Despite those concerns from prospective market participants, the decision was *administratively* astute for a few reasons. The Implementation Task Force explained that the preference recognizes and rewards “prior experience and compliance history...[and] recognizes this advantage and builds on the experience of existing medical marijuana licensees, who have operated within a similar regulatory model.”

There were additional benefits, as well. First, the special treatment of existing producers gave state regulators some breathing room to get the regulatory model right. The Implementation Task Force acknowledged this point, explaining that the preference “allows the state licensing authority to manage the transition and expansion from medical to adult-use marijuana in a predictable, orderly, and controlled manner, reducing the likelihood of federal scrutiny of Colorado’s new adult-use marijuana industry.” This was an important consideration. The expansion of the market was quite risky and regulators knew that failure would have implications across Colorado and at the national level. Regulators also realized they had a lot to learn, and an incubation period would involve on-the-job training with a steep learning curve.

Second, the moratorium on new entrants to the market allowed MED to deal largely with industry actors whom they already knew and had worked with (successfully or otherwise). Having institutional knowledge about every retail marijuana actor helped MED better identify actors who might need extra scrutiny. It thus allowed more-informed oversight of enforcement and compliance during the rollout of the new program. As the launch of the Affordable Care Act’s federal exchange website has shown, early implementation efforts can be quite rocky, and any efforts to reduce risks of problems or failure are helpful for regulators and administrators.

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<sup>41</sup> C.R.S. 12-43.4-104(1).

Third, advantaging medical marijuana providers reduced the paperwork pressure the MED would have faced—an issue that had plagued the Medical Marijuana Enforcement Division (MED’s predecessor) and caused substantial industry discontent. While paperwork delays may seem like a minor aspect of administrative procedure, they are often a magnet for citizen complaints (think of the DMV). In addition, Amendment 64 required very strict turnaround times for license application processing, background check procedures, and so forth, and the ability of the agency to reduce its initial procedural burden was critical.

Ultimately, the moratorium on new retail-market entrants may well have been one of the most important features of the new system. It helped improve the initial administrative capacity of the new agency, easing its entry into a new policy domain and thus contributing to early implementation success.

#### 4. Limits on quantities purchased

Not all regulatory decisions or administrative choices are grand in scale, and even smaller-scale decisions can have serious implications. MED promulgated rules limiting the quantity of marijuana that could be sold in a single transaction. Rule R 402(D) prohibits retail stores from selling more than one ounce of marijuana to a Colorado resident and more than one quarter ounce of marijuana to a visitor from out of state. Photo-identification requirements allow dispensaries to distinguish between Coloradans and others.

These limits were an effective way to maintain order, limit illegal redistribution from dispensary-purchased marijuana, and thereby further discourage diversion. Quantity limits were thus a sensible effort to help address the worry that people from other states—especially those bordering Colorado—would purchase marijuana in bulk, return home with it, and resell it.

What Rule R 402(D) does not prevent is an individual going to multiple shops in a single day and purchasing up to the limit at each—a term often referred to informally as “smurfing.” One possible means of combating such behavior is to create purchasing registries like the one the federal government implemented for pseudoephedrine (to discourage methamphetamine production). However, Amendment 64 Sec. 5(c) specifically prohibits the creation and use of a registry for retail marijuana (though a registry does exist for medical).<sup>42</sup>

With its hands tied by constitutional language, how can the state combat smurfing? The state maintains that possessing more than specified amounts of marijuana at any one time is unlawful for Colorado residents and for visitors.<sup>43</sup> Limits on purchase are an effective step toward preventing the hoarding of product and smurfing; however, the state should use any

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<sup>42</sup> This provision of Amendment 64 states, “In order to ensure that individual privacy is protected...the Department shall not require a consumer to provide a retail marijuana store with personal information other than the government-issued identification to determine the consumer’s age, and a retail marijuana store shall not be required to acquire and record personal information about consumers other than information typically acquired in a financial transaction conducted at a retail liquor store.”

<sup>43</sup> See C.R.S. 18-1 & 18-18-406.

available data in the future to try to quantify whether such behaviors are occurring and should work with industry and law enforcement to learn the best ways to prevent it.

## 5. Video surveillance

The MED issued Rule R 306 requiring all retail marijuana establishments to maintain comprehensive video surveillance systems. The rule applies to cultivation and processing sites and retail dispensaries. The rule in effect requires marijuana-related operation spaces to be recorded extensively. It even requires that all entry points be videotaped in grow rooms where lighting is turned off (R 306[C]5).

The rules surrounding video surveillance are comprehensive and precautionary. There are multiple reasons for them. As with many of the other regulations, surveillance is intended to prevent diversion. In the context of grow operations, diversion can happen internally (company employees might remove product and repurpose or resell it) or externally (thieves might steal plants or other product). The surveillance system helps investigators apprehend those involved in thefts or other diversion activities, and the existence of video surveillance can deter those considering theft or diversion.

In interviews, MED leadership noted another reason for comprehensive video surveillance. Regulators expected that the legal marijuana market in Colorado would likely be cash-only for quite some time. Financial institutions are reluctant to deal with marijuana-related businesses, fearing legal intervention under the Controlled Substances Act and other federal laws and regulations. As a result, MED regulators understood that marijuana-related enterprises would likely be handling large sums of cash, a tempting target for theft. This kind of crime, too, is something which expansive surveillance could help deter.

The rules surrounding video surveillance were innovative in design and multi-purpose in nature. They will not stop every illegal action in marijuana-related businesses, any more than surveillance in banks, shopping malls, or casinos stops every crime. However, the thoughtfulness of the multiple ways in which surveillance can improve prevention and detection of bad behavior reflect the careful regulatory work of the MED—and the influence of the law-enforcement background from which several MED staff members hail.<sup>44</sup>

In a related example of administrative innovation, the MED also designed video surveillance for its own purposes. Because the marijuana industry is largely cash-based, the MED takes in large sums of tax revenues in cash. Though largely unavoidable, cash inflow creates risks for the Department of Revenue and for the enforcement division. As a result, video surveillance and security at MED headquarters are substantial. Signs at the door indicate that armed peace officers are on site. Koski and Kammerzell indicated that their own facility is heavily monitored,

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44 For example Lewis Koski, the director of MED, is a former police officer and chief of investigations at MMED.

much as grow and retail facilities are.

The Department of Revenue has enforcement power over four major industries in Colorado: alcohol, tobacco, marijuana, and gaming. The latter proved to be quite helpful in this context. Enforcement officials at the department used surveillance methods from the gaming industry to design what is essentially a “cash count room” on site in order to prevent theft—another example of Colorado’s creative regulatory thinking.

## 6. Marijuana revenue and funding distribution<sup>45</sup>

The medical marijuana system that existed prior to the legalization of retail marijuana was fraught with financing problems. The revenue streams to the Medical Marijuana Enforcement Division were uncertain and often fluctuated. The division spent money quite quickly, and enforcement depended on the sometimes precarious process of legislative appropriations. Realizing that such funding problems caused administrative and enforcement headaches, legalization brought with it a series of changes in the financing of the new Marijuana Enforcement Division.

Amendment 64 dealt only in broad, undetailed terms with the way taxation and fees would work in the state, setting limits on licensing and application fees and charging the legislature with proposing a tax structure. To set up the tax framework, the legislature passed HB 13-1318, which placed Proposition AA on the November 2013 ballot.<sup>46</sup>

In outline, the taxation of retail marijuana is as follows. Localities can opt to set local sales taxes on marijuana. The currently existing 2.9 percent sales tax (on medical and now retail) would continue. The state imposed a 15 percent excise tax on unprocessed marijuana. Additionally, it imposed a special 10 percent marijuana sales tax on transactions (point-of-sale).

The amendment, initiative itself, and the authorizing language in HB 13-1318 required specific distribution schemes for marijuana revenue. For example, the first \$40 million collected through the 15 percent excise tax is to be used for public school construction. In addition, 15 percent of the revenue collected through the special 10 percent marijuana sales tax will be allocated to local governments that have marijuana dispensaries within their jurisdiction, based on the percentage of revenue that each jurisdiction collects. A substantial portion of remaining revenue will be used for enforcement (in large part to fund the MED). This provides the MED with a stable and consistent stream of funding, separate from the annual legislative appropriations process—a critical improvement over the prior funding model for medical-

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45 Although the structure of tax revenue and financing did not emerge from rulemaking at the agency level, it remains an important aspect of the regulatory apparatus surrounding marijuana policy in Colorado.

46 Proposition AA asked voters to approve what amounted to a tax increase, as it created new taxes on the purchase of retail marijuana. Under the Colorado Constitution, Art. X, Sec. 20, the “Taxpayer’s Bill of Rights,” any increase in taxes must be approved by a statewide ballot initiative. Formally, the language notes, “other limits on district revenue, spending, and debt may be weakened only by future voter approval.”

marijuana oversight.

The financing law also allows funds remaining after MED's set-aside to be divided and distributed for other, related purposes. In 2014, the state did just that. The legislature passed, and governor signed, SB 14-215, which specifies "other purposes" for fiscal 2014-2015. The law includes over a dozen specific appropriations from the Marijuana Tax Cash Fund.<sup>47</sup> Money flowed to schools, substance abuse treatment, public-health education campaigns, and law-enforcement training, among other things.

The structure of revenue and funding distribution is laudable because it serves important policy and political needs, among them schools, public health, and public safety—areas with near-universal support in the electorate. The funding system also acknowledges that the legalization of retail (and even medical) marijuana can create some new public policy needs. Funding those needs through the annual appropriations process builds in a way for the legislature to respond to an ever-changing policy space in a flexible way.

Finally, the structure of the funding system carries political benefits. By responding to the needs of the law enforcement, public safety, and public health communities, the state was able to build goodwill—and a stake—among constituencies that are traditionally opposed to legalization. State and local officials working in public health and law enforcement told me they were pleased that the state acknowledged their need for funding to address new policy concerns.

The purpose of distributing marijuana revenue is not and should not be to buy off skeptics. Instead, however, new revenues can play a valuable role in buffering legalization's impact on those who oppose it or who bear its costs—and political judgment plays an indispensable role in identifying those persons and weighing their claims. In that important sense, in order for the new policy to be effective and stable, politics is an essential component of implementation. By providing political shock absorbers, Colorado's marijuana-revenue system builds in sensitivity to the complex and shifting social realities within the state.

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<sup>47</sup> Under the new law, fees collected through the licensing process would be deposited into the currently existing Marijuana Cash Fund and be used to fund the Department of Revenue's regulatory and enforcement activities. All other tax revenues from marijuana would be deposited into the new Marijuana Tax Cash Fund. The Marijuana Tax Cash Fund would finance school construction and local government, MED enforcement costs, and other activities.

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