In November 2012, residents of Colorado and Washington voted to legalize marijuana in those states. Since that time, both states have worked to establish state-level regulation of marijuana. Many of these regulations are based on the extensive experience states have with regulating tobacco and alcohol. Because the retail availability of marijuana is still relatively new, however, an evidence base for what works best to protect the public's health has yet to develop.

**CURRENT STATUS**

To date, the seminal article addressing retail marijuana regulation was published in the American Journal of Public Health (AJPH) in June 2014 and was also the topic of discussion in an April 2014 Network for Public Health Law webinar. In the article, Pacula, Kilmer, Wagenaar, Chaloupka, and Caulkins identify five objectives for marijuana regulation and draw on lessons from decades of alcohol and tobacco regulation to propose potential marijuana policies that address these objectives. The five objectives identified are:

1. Minimize access, availability, and use by youths
2. Minimize drugged driving
3. Minimize dependence and addiction
4. Minimize consumption of marijuana products with unwanted contaminants and uncertain potency
5. Minimize concurrent use of marijuana and alcohol, particularly in public settings

An additional area that is relevant to Counter Tools’ work is the concurrent use of tobacco and marijuana (i.e., vaping devices that are used for both tobacco and marijuana that are not regulated). The seven areas of regulation proposed and explained by Pacula et al. are summarized on the following pages.
Developing Public Health Regulations for Marijuana

1. Keep Prices Artificially High

Alcohol and tobacco studies show that raising prices reduces consumption and related health and social harms. Any strategy that involves keeping the price of regulated marijuana high will need to include mechanisms that reduce the incentive for tax-evading underground markets. This can be done by:

- Designing the regulatory structure around tax collection (e.g., banning home production and issuing few production licenses).
- Having strong enforcement and sanctions for those operating outside the regulatory structure.

2. Adopt a State Monopoly

A state-run monopoly on production, distribution and sale of marijuana is recommended, however, a state monopoly would be impossible at this point because of the federal prohibition on marijuana. This should be considered in the future if circumstances change. A state-run monopoly would:

- Allow state governments to more aggressively pursue violators who pretend to be legitimate distributors or retailers because they could be more easily identified as nongovernment employees.
- Set prices higher than otherwise possible without competition to push prices lower.
- Facilitate messaging concerning quality and content of marijuana products sold, warnings about risks of use, and adherence to point-of-sale advertising restrictions
- Make it easier to monitor and conduct frequent enforcement checks of sellers.

3. Restrict and Carefully Monitor Licenses and Licensees

In the absence of a state-run monopoly, a strong licensing system is recommended. Licenses would be required to participate in any part of the supply chain: grower, producer or processor, wholesaler or distributor, and retailer. Licensing would:

- Limit competition (which can keep prices high)
- Enable effective tax collection
Reduce the potential for diversion.

Allow for restrictions on the types of businesses that can sell marijuana, location of retailers (e.g., distance from schools, parks, and other youth venues), density of retailers (on the basis of e.g., population and geography), and modes of sales (e.g., bans on vending machines and self-service).

Licenses allow the government to trace all products and ensure they meet quality standards required by law. They also allow for monitoring of the sale of products in terms of excess or insufficient supply. In addition, strong licensing provisions that are actively enforced are effective at limiting sales to minors.

Keeping the number of licenses small helps control the cost of regulating these new businesses and enforcing compliance. Fees collected through the licensing system provide steady revenues to support active oversight and enforcement by regulatory agencies.

4. Limit the Types of Products Sold

Potential regulations that address the products sold include what is allowed to be in the product (e.g., additives, flavorings), methods of production (e.g., to reduce pesticides, mold, or other contaminants), “bundling” of marijuana with other inputs (e.g., edibles, nicotine), and limits on THC content.

Similar to restrictions imposed on the alcohol and tobacco industries, it is recommended that restriction be imposed on marijuana products targeting youth (e.g., THC-infused chocolate bars, peanut butter cups, Rice Krispies treats, hard candies, and lollipops).

5. Attempt to Limit Marketing

Marketing restrictions may be justified because there is to maintain antismoking norms and keep risk perceptions high to reduce youths' initiation and use of marijuana. In addition, they be more likely to be upheld because of the threat of sanctions from the federal government if the federal ban on marijuana legalization remains.

A comprehensive marketing ban would encompass all forms of advertising (e.g., print, television, radio, transit, billboards, point-of-sale, Internet, and social media outlets), promotion (e.g., price discounting, coupons, free sample distribution), sponsorships, and other indirect forms of marketing (e.g., brand stretching, branded merchandise).
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6. Restrict Public Consumption

Limiting consumption in public would:
- Reduce secondhand exposure to smoked marijuana.
- Reduce the extent to which marijuana use is seen by youths as socially acceptable or normative, perhaps making it more likely that youths delay initiation or never start at all.

Restrictions on where marijuana can be consumed could also reduce the probability that marijuana and alcohol be used concurrently.

7. Measure and Prevent Impaired Driving

Those under the influence of both marijuana and alcohol are at a much greater risk of a crash than are those under the influence of either by itself. Next steps on regulating impaired driving are less clear because of the difficulties in measuring impairment. Current testing methods (blood and urine) are invasive and the detection of use of marijuana can occur well outside the window of impairment.

A comprehensive campaign against impaired driving could follow the alcohol model, which includes per se laws, higher mandatory fines and jail times for offenders, sobriety check points, graduated licensing and safety belt laws, visible enforcement and media campaigns.

SUMMARY OF REGULATORY APPROACHES AND PUBLIC HEALTH OBJECTIVES

![Table 1: Linking Regulatory Approaches to Public Health Objectives](image)

<table>
<thead>
<tr>
<th>Regulatory Choices</th>
<th>Public Health Objective to Minimize</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Youths’ Access and Use</td>
</tr>
<tr>
<td>Increase prices</td>
<td>X</td>
</tr>
<tr>
<td>Create state monopoly</td>
<td>X</td>
</tr>
<tr>
<td>Restrict and monitor licenses and licenses</td>
<td>X</td>
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<tr>
<td>Limit products sold</td>
<td>X</td>
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<tr>
<td>Limit marketing</td>
<td>X</td>
</tr>
<tr>
<td>Restrict public consumption</td>
<td>X</td>
</tr>
<tr>
<td>Measure and prevent impaired driving</td>
<td>X</td>
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</tbody>
</table>

*It is impossible to predict how concurrent use will influence social welfare under legalization, but because of the existing evidence it seems appropriate, at least initially, to minimize the concurrent use of marijuana and alcohol in public.

Source: Pacula et al., 2014
Developing Public Health Regulations for Marijuana

POINTS OF CONSIDERATION AND AREAS FOR FUTURE RESEARCH

- Pacula et al. argue that it is prudent from a public health perspective to open up the marijuana market slowly, with tight controls to test the waters and prevent gross commercialization of the good too soon. They assert that a Laissez-faire approach could generate a large increase in misuse of marijuana and consequent health and social problems.

- Public health experience with tobacco and alcohol point to the need to restrict marijuana before or at the time of legalization because options may exist at that point that will no longer be possible after marijuana sales have become well established. Tobacco and alcohol industries have shown it is difficult to expand the regulatory scope later on.

- It is unknown how concurrent use of alcohol and marijuana, as well as concurrent use of tobacco and marijuana, will play out. It is possible that use of marijuana may decrease use of alcohol and/or tobacco, or may increase use. This should be tracked to determine actual health behaviors and determine how they should be addressed.

- Because regulation of marijuana is so new and we lack a policy evidence base, it is critical that proper data collection occurs in states adopting legalization. Data should measure the impact of regulations and how they are enforced on the use of intoxicating substances, including marijuana prices, potency, other cannabinoid constituents, methods of consumption (e.g., smoking a marijuana cigarette vs using e-cigarette-like devices with hash oil), youths’ exposure to advertising, commerce among youths, etc.

- Counter Tools should stay abreast of the changing landscape of marijuana regulation. There is likely to be a need for a Counter Tobacco-like website that shows policy options and resources, but the limited evidence base does not facilitate a comprehensive website at this time.

RELEVANT DOCUMENTS AND RESOURCES

- Developing Public Health Regulations for Marijuana: Lessons from Alcohol and Tobacco (Pacula et al., AJPH, 2014)
- Colorado Article 18, Section 16
- Washington Initiative 502
- Regulating Non-Medical Marijuana: Lessons Learned and Paths Forward (Network for Public Health Law Webinar)
- Department of Justice Memo to US Attorneys on Marijuana Enforcement (August 29, 2013)
- Identifying Emerging Public Health Issues in States with State-Level Marijuana Legalization (National Attorneys General Training and Research Institute, 2013)