

Best practices for a successful regulatory framework for cannabis cultivation and sales

December 13, 2024: Subcommittee on Healthcare. Chaired by Rep. Frankel

Rep. Krajewski

Get to our speaker. I'll pass it to Chairman Frankel.

Rep. Frankel

Thank you, Chair Krajewski. I just want to thank Dr. Schauer for getting up at 6 A.m. to make herself available to answer our questions, And for my colleagues who were up late last night on the floor of the house. I know that after our last meeting, I walked away convinced that if our goal is to correct harms from the criminalization of cannabis while promoting health and safety -- is something that we are very much focused on and how we regulate legal cannabis, will play a huge role in the outcome in our success. I'm excited to talk to an expert on regulation of cannabis in North America and look forward to hearing all of the committee's questions. Thank you very much, Mr. Chair.

Rep. Krajewski

Thank you, Rep. Next, I will pass it to Chairwoman Rapp.

Rep. Rapp

Thank you, Chairman and Chairman Frankel, and thank you, Doctor, for being here today. I'm looking forward to your testimony. Thank you.

Rep. Krajewski

Thank you. Next up, we have Representative Schemel.

Rep. Schemel

Thank you, Chair Krajewski. We look forward to the testimony as well. Thank you.

Rep. Krajewski

All right. And so thank you again for attending today's health committee, subcommittee hearing on cannabis. As mentioned, we have one presenter, Dr. Jillian Schauer. And after last month's hearings, which we know was a very informative hearing and very, very informational, we heard a lot of extensive questions from members related to how cannabis is regulated in other states and provinces. What different regulatory structures can we use to make sure that we promote public health, safety, and equity? I'll say for myself, I am very curious about the question as to pertains to social equity. As Chairman Frankel mentioned, right, how do we address the previous criminalization of cannabis and the impact that it's had on our communities, and also the role of the state and government as it pertains to regulation --- and the different regulatory structures we might have and where does the state versus private entities play a role in that.

So Dr. Schauer is the executive director of the Cannabis Association of North America. She is an expert on the various regulatory structures for the United States and Canada and is making herself available to answer questions we might have about how different states and provinces have approached cannabis regulation and how this has led to different outcomes.

She is not here to advocate for any particular approach, but is here with her extensive background and policy experience in this issue and to be a resource for us as members as we continue to have this conversation about cannabis legalization in Pennsylvania. So with that, I will pass it over to Dr. Schauer to provide her opening remarks. Thank you.

Dr. Gillian Schauer

Thank you so much. Thank you, Chairman, Chairwoman, representatives, and subcommittee. It's an honor to be here with you. I hope I can provide some helpful insight this morning. So I am Dr. Gillian Schauer, Executive Director of the Cannabis Regulators Association. We are a nonpartisan association of government agencies engaged in regulating the cannabis and hemp industries across 44 states, the District of Columbia,

two U.S. territories, and Canada. We are not an advocacy group. We do not take a formal position for or against legalization. We are really focused on bringing together government agencies to convene, support, and educate them on this emerging issue.

So I myself have a PhD in behavioral science and a master in public health. I started my career working in tobacco control policy and more than 10 years ago came over to work on cannabis policy, first with state health officials and then moved to work with regulatory agencies directly. My testimony is my own. I do not want any of my comments to be construed as representing an official position of the Cannabis Regulators Association or any of our member jurisdictions.

With that said, what I hope I can do, and I'm going to start with some of my observations, but what I hope I can do today is answer questions for you about how other states have approached this. I think that can be the most helpful when you're looking at policy for your own state is to try to learn from what's out there. And I will try to keep it fact-based and not biased to share insight that other states would share if they could all be with you here today. And I would encourage you to reach out to other states in future hearings to be able to hear directly from them about their experience.

So I'm going to, oh, and I should also say I don't take any funding from the cannabis industry, the tobacco industry, the alcohol industry, the pharmaceutical industry. CANNRA is funded primarily through government agency membership dues.

So I put together late last night just a list of some of the most important takeaways at a high level that I think should be on your mind as you're thinking about what sort of policy you'd like to craft for Pennsylvania.

The first is allow regulatory flexibility in statute. We've seen some states that have very prescribed statute, and that can be extremely challenging for the regulator because anytime you want to make changes, you have to come back through the legislature to do so. And this is an extremely fast-moving, dynamic area. This industry is very innovative, and regulators need the tools to be able to respond to changes that happen in the field in real time.

The second would be to consider a single regulatory agency for medical and adult use and also for aspects of hemp, which I'll talk about later. We've seen some states that have bifurcated adult use and medical use and have left them in separate agencies. And that can be very difficult because effectively you're trying to regulate the same products, but through different agencies.

Cross-agency collaboration is essential. Cannabis legalization touches many parts of government, and the most successful states have been those that really have a dynamic where the state agencies work well together.

Educate the public and educate them early. Educate them about the law. Anytime an adult use law changes, it's a big change and there's a lot of misperception among the public about what that means and what's legal and what's not legal. So I strongly suggest funding education campaigns and funding those immediately, not waiting until there's money coming in from a market or taxes.

Educate consumers as well. Best practice would suggest educating consumers with a harm reduction approach, educating them about things like safe storage, don't drive high, start low, go slow, those types of messages. The timeline for implementation matters a lot. I think we're still learning where the sweet spot is, but just to paint sort of the stark picture, if a timeline for implementation of a new policy and opening of stores is too short, you may end up compromising on some of those public health and safety variables and sometimes those equity variables as well. If it's too long, you may end up having an illicit market that takes hold and, you know, take some time to diminish as stores open. So there is a sweet spot and I can, you know, share some information post hearing about what other states have done in terms of timelines. So you can see the variation there. That's something we track at CANNRA.

Design policy for the market you want to have in Pennsylvania. States have observed that different policy may be needed, for example, to support small business or equity operated business. And it's very important to be deliberate and to understand that the policies you're putting in place do have certain effects on certain types of market.

It's also important to think about the future of interstate commerce. It is not here now. It may not be here tomorrow, but it will be here. And you need to craft a policy that will set Pennsylvania up to have the market that you'd like to have in an interstate commerce reality, to think about what survives in Pennsylvania. Are you a growing state? Are you not a growing state? How can you make it so that the businesses that set up are successful, not just now and not tomorrow, but in the long run as well? Think about local control and the implications in particular of opt-outs. We have some states like the state of California, where more than 50% of the counties have opted out of having any retail stores. So in those counties, it's still effectively prohibition. And so the outcomes that you want to see affected by legalization can be impacted by whether or not counties opt in or opt out.

Focus on consumer safety as the priority. It's easy to lose sight of that, but if your consumers are not safe, you will have major issues in your state. And I can speak more in follow-up about some of the areas where I think you can shore up consumer safety.

And then the last point I would give is you have to address cannabinoid hemp. It does nothing to craft the most perfect policy for your state for adult use cannabis if you are not also addressing cannabinoid hemp. The 2018 Farm Bill had an extremely broad definition of hemp and has allowed for the prevalence of products that look very much like, and in fact, in almost all cases extend beyond what would be allowed in adult use states right now. And leaving those products out there will make it so that your adult use market will struggle to succeed. Your consumers will not be protected in the ways that you would like them to be. And you will basically have a parallel, unregulated market. So it's very important to think about cannabinoid hemp and what you do with adult use, so that you have cannabinoids being regulated in a similar way in your state, and you don't have the exact same molecule playing by one set of rules over here and another set of rules over there. And again, consumer safety is paramount.

So I will leave it at that, and I'm here to answer as many questions as I can, and I will be very forthcoming and honest if I don't feel like I'm the best individual to answer those. I can follow up and recommend other states that you might follow up with as well.

Rep. Krajewski

Excellent. Thank you, Dr. Schauer, for your testimony. Now we're going to open up to members who may have questions. I did have one question that I wanted to put out there. We talked a lot about the necessity of collaboration between state agencies when it comes to legalization and regulation. And I just wanted to see if you could speak more about in other states, what are the state agencies that are involved in the regulatory and legalization process? And what does that relationship look like? How do they communicate with each other? Because I think your point about if we don't figure out that collaboration and regulatory structure in a really efficient way, that it could create more problems. So if you could just explain how that looks like in other states, that'd be great.

Dr. Gillian Schauer

Yep, certainly. So we see in other states a lot of different agencies serving in that primary regulator role. We see departments of health, departments of revenue, consumer protection in your neighboring state of Connecticut, alcohol and beverage control boards,

or standalone regulatory agencies. But aside from those primary regulatory agencies, there are many agencies that will need to touch cannabis for some reason. Departments of Transportation, Departments of Public Health, Departments of Mental Health and Substance Use, Departments of Children and Families, you know, revenue if they're not the primary regulator for tax collection, in many states, Departments of Justice or, you know, departments that are involved in equity and expungement. And the states that have, that would, if they were here, would say that they have had more challenges are the states where small pieces of regulatory authority are distributed throughout many, many agencies. It is important to have a central regulatory agency, but it is also important to have a convener of all of your state agencies so they can all be talking and working together on the pieces that do touch them. So my recommendation, my personal recommendation would be have a primary regulatory agency, but recognize that all of these other agencies I've just listed will have a role in cannabis and cannabis will touch their work in some way and that there's a benefit to having, whether it's the governor's office or the primary regulatory agency itself, convene all of those agencies so that they are talking and working together. Departments of Agriculture, I mean, I could list virtually every agency in your state and probably tell you some way that cannabis will touch their work.

Rep. Krajewski

That makes a lot of sense. And generally, what has been that primary convening agency in other states?

Dr. Gillian Schauer

So I think we've seen a lot of models. We've seen some states, as states have moved to standalone regulatory agencies that report into the governor's office, we have seen those agencies with the governor's office convene other agencies together. But I think the earliest example of this that really put this on the map as a successful strategy is the state of Colorado, where very early on their governor openly said, you know, whether you wanted this or not politically, this is coming to our state, theirs was a ballot measure. referendum, and we need to work together to do this. And so the governor's office really spearheaded bringing agencies together to work collaboratively, and that has lasted 10 years. And the agencies in Colorado generally collaborate very well. Many of them are involved in the Cannabis Regulators Association, I will just say. We convene not just the primary regulator, we also convene ancillary agencies that may be involved, and Colorado is one of the states that has folks from five different agencies that regularly participate in our committees and

our work, and it shows that they do work together. So that's the earliest example I can think of to sort of show how that could be approached.

Rep. Krajewski

Thank you. Next we have Representative Borowski.

Rep. Borowski

Great. Thank you, Chair. And thank you, Dr. Schauer, for your presentation. I'd like to say I appreciate you putting everything right at the top so that we know exactly what we need to focus on. I appreciate that style. So my question is going to be around your addressing the cannaboid hemp, cannabinoid hemp, am I saying that correctly? So I'm assuming that that means like delta-8 and kratom and things like that. So when you have a very unregulated market like that, how do you bring that kind of into the regulated fold? We've tried, I think, or there's been attempts just to even do that on its own without having the adult-use marijuana legislation move forward. So how do you do that? What does that look like?

Dr. Gillian Schauer

We've seen a lot of different models in states, and I will be open in saying that there are a dozen states or so that have been sued or are being sued by parts of the hemp industry for trying to take action. So we're hoping that the Farm Bill will provide clarity about what states can do. I think the models we've seen range from everything from complete bans on these to trying to move these under the same framework. And I think the latter is where we've seen states go most recently. So they're trying to identify intoxicating compounds that are coming from hemp, and they're saying, we have a framework that we are setting up for how to regulate intoxicating cannabinoids in our state, and these intoxicating compounds from hemp need to follow that same framework. They need to be licensed. They need to have oversight over processing. They need to be tested. They need to follow the same packaging and labeling. In some cases, they need to be available on the same marketplace. And adult use states, in almost all cases, have adult-only marketplaces that have very high compliance with adult-only sales.

In most states, you have to show an ID just to get in the door. That's the case in my home state of Washington. That's the case in Colorado. And that's not true with cannabinoid

hemp products. You can buy them at the grocery store or gas station. They're not age-gated. So there's really a focus in an increasing number of states on how do you have parity.

That parity typically involves bringing those products into the regulatory agency for cannabis. But in some cases where that's not been possible, and again, I'll raise up Colorado as an example of a state that's taking a different approach, they are being regulated through a separate agency, but with a parallel structure. So in Colorado, the cannabis regulator is the Marijuana Enforcement Division.

The cannabinoid hemp regulator is the Colorado Department of Public Health and Environment, but they work very closely together and they follow a lot of the same regulatory structures.

So it doesn't have to be one way, but I think the takeaway is you do not want to end up with a situation where you literally have the same compounds that are falling into different regulatory pathways based on what they come from. That becomes extremely challenging for a regulator to say, well, is this Delta-8 from hemp or is this Delta-8 from cannabis? What was the origin of it and therefore it follows, you know, XYZ regulatory structure. You want to try to have a unified approach for how you're regulating the same compounds. And just because you're, so we increasingly also see a number of states that have hemp, medical and adult use all under the same regulatory agency. And there are a number of states, you know, in the Northeast corridor that are following that pathway, New York, Rhode Island, Maryland,

And so what we see there is you don't have to take the exact same approach for all of the cannabinoid hemp products. There's a spectrum of risk. You can take a different approach. But it means that the same regulatory agency is aware of what's happening with all of them and can adjust as needed versus having different regulatory agencies that are at play for different pieces of effectively the same plant, you know, leading to effectively similar consumable cannabinoid products, if that makes sense.

Rep. Borowski

That totally makes sense. Do you mind if I ask one other quick question? Okay. So I thank you very much for that. As a commissioner in a local municipality, we tried to implement, well, we did implement an ordinance about where it could be sold just to try to put some control around it. We modeled it after the way our medical marijuana dispensaries are situated in communities, and we are being sued for that, so. But I would just one other

thing. Because I come from a local government, can you expand a little bit on thinking about the local control? I'm very interested in that as well.

Dr. Gillian Schauer

Yeah, and I will be very careful not to put forward opinions here. I think my statement was just to mention that if you want to curtail the illicit market as part of your regulatory approach, which most states do, you want to bring consumers into a market where products are legal, regulated, you know, tested, et cetera, allowing local opt-out can make that extremely challenging, especially depending, and forgive me for not being totally familiar with the county structure in Pennsylvania, But depending on the county structure, that can make it really challenging, because you can have entire swaths of the state that don't have legalization, where folks are still operating in an environment where the illicit market is their only option, or where folks are being required to drive out of county, purchase product, and drive back in county.

And if you're concerned about things like potential impaired driving, you want to make it accessible to folks in a way where you're not requiring behaviors that might make that more risky. There are states that I would suggest you hear from directly on this that have a lot of local opt-outs, California being the primary one, but not the only one. And I'm happy to follow up. I believe Massachusetts has a number of local opt-outs as well. So they're a northeastern state that has been at this for a while that you might want to hear from.

Rep. Lisa Borowski

Thank you.

Rep. Krajewski

All right, thank you. Next we have Chairwoman Rapp.

Rep. Rapp

Thank you, Chairman. Thank you, Doctor, for your testimony. I have several questions, but I really didn't receive any information as far as other than, you know, your brief bio. But I do have some questions regarding the black market and how that is controlled in other states. With the increase in fentanyl and other drugs being laced with fentanyl, I would have to

believe that that would happen most on the black market. And so we are hearing stories, of course, from other states regarding the black market. The state is very concerned about fentanyl, especially the massive amounts of fentanyl flowing through our border. So what are other states doing as far as controlling the black market? No matter how we regulate, if it's legalized, it appears that even with legalization, there's always a black market for Drugs.

Dr. Gillian Schauer

Yeah, so I prefer the term illicit market, and I'm not an expert on illicit market.

Rep. Rapp

I prefer the term illegal. So go ahead.

Dr. Gillian Schauer

OK, illegal market. I'm not an expert on illicit or illegal markets. I can speak to some of the tracking and what we've seen over time for cannabis, but I admit where I'm not an expert, and while I followed the opioid epidemic closely as a public health PhD, I'm also not an expert on that. So what I'm prepared to speak to is on the cannabis side. We have not seen issues with cannabis-laced fentanyl, and there are some...or cannabis that's laced with fentanyl. There's some states that have fact sheets on this that I can share after the testimony. But in terms of the illicit market, it is very difficult to figure out how to capture it. I think it's a confluence of many, many things that are at play here. One is access, which I just talked about. If you're not providing access to a regulated legal market, folks are going to be left with the illicit market.

One is the price point of the products. And states, I think, are constantly trying to figure out, you know, how taxes and fees and weigh into the price point of legal products, if the illicit market continues to have much less costly products, that will be a spot where a number of folks will go.

Carrying the products that people want is also important. You know, if you look to ban entire categories of products, then you will see folks get those from a non-legal market. And I think we generally see an ebb and flow of how the illicit market changes over the course of legalization. So as I mentioned, when a state legalizes, you will need some sort of on-ramp for putting in place legal stores. During the time that you are putting in place legal stores,

but they are not yet open, if you have legalization with no access point, you may see your illicit market increase slightly.

What has happened in most of the states, though, is when their stores get opened, you start to see that illegal market decline. And the longer the stores are open, provided they are offering the products, they are accessible, et cetera. you see that illegal market decline quite a bit. So data from the International Cannabis Policy Study, which is a study out of University of Waterloo that collects data from virtually all U.S. states and many Canadian provinces as well, has found in states like my home state of Washington, for example, you know, after a decade, the capture of the illicit market is, you know, upwards of 85%.

So There's always going to be an illicit market, but I think a well-structured, regulated market over time does capture that illicit market in a big way.

Rep. Rapp

Thank you. And what are other states, Canada, how are those entities, governments using their revenue? What are they just In general, what are you seeing the revenue going to as far as the states or the budgets?

Dr. Gillian Schauer

Yeah, so we do some tracking on this. I'm just opening my tracker. It's really varied. We have seen revenue go towards things that state legislatures think could be externalities of legalization. So we've seen revenue go towards mental health and substance use treatment, public health, education campaigns.

We've also seen revenue go towards community reinvestment. And I was waiting for somebody to ask me about equity, but increasingly we see, especially on the northeastern corridor, states putting a big portion of revenue into reinvestment in communities that have been disproportionately harmed by the past criminalization of cannabis.

So as a public health person, I can tell you the data show that once an individual has been justice involved, that engagement impacts not only their entire health an economic landscape of variables, but their families and their communities. And so as many states have sought to legalize to try to repair some of the harms of past criminalization of cannabis, they have put big portions of money and are putting big portions of money into this community reinvestment, which can look a lot of different ways.

California and Illinois are some of the first examples of states to do that. They have had a participatory process California has a list of things that qualify for reinvestment. It's everything from trauma-informed care, system navigation services, mental health and substance use treatment. Illinois has let communities be directly engaged in deciding where funds go and funds have gone to things like housing and, you know, resources and needs for the community, job retraining, et cetera.

So this can be really broad and I think can have a huge impact on disparities that you may see in your state and is an emerging area that we're seeing folks put money. We also see states put things towards the general fund. We see some states that are funding their programs out of tax revenue. We see states that are using it for education and roads and all of the things. But my advice as a public health person would be to think first and foremost about where you may have disparities that you need to try to repair and where you may have additional services or needs as folks that are consuming cannabis move into what will be a commercial market. And have you seen across the board an increase in mental health after legalization, mental health issues, addictions.

Dr. Gillian Schauer

I've not tracked that as closely. I've tracked the use patterns and generally what we see across states mirrors what we see nationally. So in the face of legalization, we don't see youth use increase. That's been true nationally. That's also been true, you know, in states like Colorado and Washington that have been at this for a while. I know folks will share other data, but I'm looking at the national surveys and the pinnacle primary surveys in states to gather this information. We do sometimes see youth using, youth who use cannabis using higher quantities of cannabis, which can have potential risks for the youth. And so it is important to have funding go to mental health and behavioral health services to try to intervene with people that have problem usage.

In general, we've not seen, to my knowledge, an uptick in cannabis use disorder. It has been around, you know, nine or 10% nationally. And continues to be around that. What I think legalization provides an opportunity to do, though, is put some funding into better treatment resources for folks that have cannabis use disorder. Treatment for cannabis use disorder has tended to historically be in line with treatment for other substance use, where it's, you know, in residence or, you know, it's following sort of traditional behavioral treatment approaches. And we've seen some states like Washington state say, hey, we wanna use some of our money to try to modernize the treatment approach. You know, I

come from tobacco control policy. We have free tobacco quit lines that are available to anybody that wants help quitting tobacco.

So Washington State, 10 years ago, their ballot measure included some money to go towards a treatment helpline that was not allowed to be abstinence only. It had to be a harm reduction focused model. But there is some literature out of Australia to suggest that that might be a more accessible treatment approach for people that have cannabis use disorder and want to seek treatment. So that's certainly an area where we see states putting money, and Washington State in particular, put money very specifically for a treatment approach they thought might be more accessible to folks.

Rep. Kathy Rapp

And I'll have one more question. In Pennsylvania, we have several government contractors and manufacturing, and so they have very frequent drug testing. And I know that that was a concern. I was here when the state did medical marijuana. And that was an issue that was raised about the use of medical marijuana, but if we, and I understand people, you know, smoke, they drink, and we have laws, you know, that curb and obviously businesses have that control and the right to do drug testing.

And have other states taken into considerations or passed anything within their laws regarding the protection of government contractors who do the frequent drug testing so that they're not liable in any way. They're protecting their businesses because the drug is still not legal federally. And these contractors. And the employees work in environments where they need to be drug-free, which is why the manufacturers test on a very frequent basis. So have states looked at anything in legislation to protect the business community, specifically government contractors, where if you are an employee, you still have to go through that strict drug testing on a regular basis to make sure that you're not in an environment that could be harmful to others if you're under the influence of any type of drug.

Dr. Gillian Schauer

That's not an area that we have focused on at the Cannabis Regulators Association. I think we're focused more on the regulatory variables and less on the workplace variables. And so I'm sorry to say that I can't answer that, but I will add that it's a very confusing time because many of the intoxicating cannabinoid hemp products that are out on the market can cause

a positive drug test. They contain THC and other cannabinoids that can yield a positive drug test. So it would be very confusing for employers right now to understand exactly what products might be leading to positive drug testing. But it's not an area that we have focused on at CANNRA. It's not, it's a little bit outside of the scope of what the agencies that we typically work with are focused on.

Rep. Rapp

Thank you. One last question. I have a big concern regarding edibles, especially in regards to our youth. And I think there was a news article just recently about a child who ingested something, and unfortunately it was laced with fentanyl. And so I have grave concerns about the edibles that seems to come along with legalization of marijuana. Have any states looked at, or does every state that has legalization also allow for edibles that can be in easy reach of children?

Dr. Gillian Schauer

So again, a lot of the media stories are covering accidental ingestion of cannabinoid hemp products. The regulated cannabis market, I think, has... Regulators have put in place a lot of safeguards against accidental ingestion by children. I will just point out that all the list of things I'm about to go through do not pertain to cannabinoid hemp edibles. And all those pictures you see in the paper of Stoney Patch Kids and Stoneos and that mimic commercial foods, those are cannabinoid hemp or illicit market products. Those are not regulated legal cannabis products. None of that would be allowed in any state that currently regulates adult use cannabis. That That said, states have taken a couple different approaches to try to protect youth. All states have child-resistant packaging that's required. States have looked very carefully at the packaging, and in fact... you know, one of your neighboring northeastern states, Connecticut, will be having plain and uniform packaging for edibles. So they will not be able to, you know, they will look plain and uniform in the package. There will be nothing fancy or splashy about them. Other states have taken a plain and uniform approach as well, or have said no cartoons, no bright colors, no fonts that could appeal to kids, no mimicking existing food products. They've taken things like that into consideration in their statute or rule.

States-- We also looked carefully at the types of edibles that are being manufactured, as well as the shape of edibles. So we now have a growing list of states that say edibles can't be in a human shape or shape like an animal or a sports figure or whatever it may be. And some states have a review process in place for every edible item, or in some cases, like the

state of Nevada, every menu item, to look at that item to make sure that the packaging complies with statutes and rules and that the packaging does not appeal to children.

So there's been a lot of thought put into that. Oh, the other thing I should mention is serving size. So early on, it became evident from some things that were covered in the media in Colorado in the very early days that a serving size was needed, not just to prevent accidental ingestion by children of large amounts of THC, but also by adults who might not know that a product contained THC. Folks that might, you know, come upon a packaged item and open it up and think that it was a regular cookie or brownie and that it contained cannabis or THC.

So a couple of things happened in the wake of that. One was the serving size, and we now see all states have generally a five milligram or 10 milligram serving size for THC in an edible with 50 or 100 per package, typically. We also see states include the universal symbol, a symbol that denotes this product contains THC or this product is marijuana, to help alert even folks that are adults but may not speak English, may not you know, take time to read the package. Hey, this is something different. Pay attention here. So I think there have been a lot of advances in this space in cannabis. And I see the same poison center data that you're seeing. And we do see child ingestion, accidental ingestion of edibles increasing, but it's hard for me to say how much of that is from the legal regulated market and how much of that is from intoxicating cannabinoid hemp products that are not, you know, poison centers can't track that. Most consumers don't know if their child has consumed something that is regulated state marijuana or intoxicating cannabinoid hemp. That's beyond the level of knowledge that many consumers would have when they're calling a poison center.

Rep. Krajewski

Thank you. I'm going to move on to our next question. Representative Khan. Thank you, Mr. Chairman.

Rep. Khan

Thank you, Chairman, and thank you to the subcommittee. Dr. Schauer, I have a question about sort of along the lines of Representative Borowski's question about altering the cannabis leave. In our last subcommittee meeting, the issue of changing the concentration of cannabis to very high levels was one of the issues that was causing a lot of the side effects that when they were looking at, I think 40 to 60 times in some cases of the actual concentration of what you would find if you just consumed it as it was.

So my question is, Can you talk about what some other states are doing and what we should consider if we move forward with this in terms of regulation of concentration? What have other states done to kind of tamp down on that? And have they been successful on the illicit market in preventing that use, that selling of it if it was controlled? Thanks.

Dr. Gillian Schauer

Yeah, thanks. That's a really important question. And I will just say at the onset of my response, a very challenging question. You know, I'm a researcher by training, so I try to think about all of the variables that are at play. And I worry a lot with this question that the policy options that have been put out in legislative sessions across states can have unintended consequences. So I'll say more about what I mean. The solution we've generally seen to address high concentration THC products has been, and only a few states have this in place. have THC in the product, have it be no more than 60% THC.

What I worry about, I worked on this issue through the vaping lung injury outbreak, which, you know, we went right from one pandemic into another. So the vaping lung injury outbreak in 2019, of course, was, you know, the lung injury that sickened people across all states that was due to vaped products primarily in the illicit market. And the data that came out of CDC suggested that THC was not the problem in those products. It was an additive, vitamin E acetate. There's no federal agency right now helping states determine what additives are safe. And anytime you aerosolize an additive, it can change the composition of the additive and cause concerning health effects. And vitamin E acetate is not the only additive where we would expect to see that. In the wake of the vaping lung injury outbreak, we saw a number of states take initiative to ban another list of additives that were beyond vitamin E acetate that they were concerned about.

So my worry about the caps is if you say no more than 60% of this product can be THC, what is the other 40%? My worry is that that other 40% is going to be a bunch of additives and diluents and excipients that we don't know the safety of that could change in the composition of aerosolization. And I personally believe that for vaping products, the safest product is one that is as pure in cannabinoid content as you can get. But at the same time, you don't want to have products that are so high in THC that it creates potential mental health problems, psychosis, et cetera.

So I would point to New Jersey as a state that I think has taken some approaches that are more nuanced, and I'm very anxious to see where they go. New Jersey does not have a cap. What New Jersey has done, they've done a couple different things. One, they've said the serving size approach that we take for edibles applies across the board, and they've set an

equivalent serving size for concentrates. So I liken this to food. Maybe that's a more relatable thing for all of you. If I buy a Costco-sized pack of Oreos, it's very easy for me to just go through a lot of that package. If I buy the Halloween candy Oreos where it's two in a package, if I eat more than two, I feel horrible about myself. So some of this is behavior change for consumers, helping them understand this is the serving size. And if you are consuming more than this, you're actively choosing and you know you're choosing to consume more than this serving size. So that's one thing New Jersey's done.

New Jersey also has a required warning that is different for any product that I don't have their policy right in front of me. I believe it may be more than 40% THC. They have a specific warning about the potential for psychosis and mental health effects that has to go on any product that has more than that proportion of THC. And then New Jersey's also doing something they call chemotyping, where all of the products on the New Jersey market, based on the ratio of THC and CBD, they have to say, this is high THC, this is low CBD, this is high CBD, this is low THC, so that consumers are getting more information. So I'm very interested to see how those approaches work.

I also think price is something that could be played with a bit here. You could set up a tax structure whereby there's a tax based on the amount of THC in the product, which would make higher concentration THC products more expensive and thus more likely to be accessible to youth. So these are all ideas that are out there. New Jersey put in place some of them. You're also surrounded by a couple states, Connecticut and Vermont, that do have caps in place. And I know the regulators in those states are very interested in studying how those work. Interestingly, in both states, those caps exempted vape cartridges. I don't know exactly why, but my hope would be that they were thinking along of how I was thinking that we do not want to create another vaping lung injury outbreak. We do not want to give any more incentive for the use of excipients and diluents that could be unsafe for consumers.

And cannabis is, THC is very different than nicotine. You cannot just look at the list of approved additives in a nicotine vape cartridge and say, great, this is what we use in THC. THC is lipid soluble, so it needs fatty additives, and that can create issues in aerosolization with the lungs.

So I think there are a lot more nuanced policies. I'll also point to a report that came out of the Addictions, Drug, and Alcohol Institute at the University of Washington. I did not work closely on the report, but full disclosure, I do have an affiliate researcher position with them. But they were tasked by the state legislature in Washington to look at all the different policy options that could exist to address high concentration products.

And the caps are just one of many. And I think it's important to look at the breadth of what you have available and to consider potential unintended consequences from whichever approaches you take.

Rep. Krajewski

All right, thank you. Next we have Representative Schemel.

Rep. Schemel

Thank you, Mr. Chair. Thank you, Dr. Schauer, for your testimony today. In light of your own background, actually, I have a couple of questions that really relate to some of those particulars. You said you represent 44 states, or at least your agency does. So I presume that you represent some states that have not legalized adult use. Perhaps they only have medical use. One of the things I am interested in, you described the importance of having a singular agency to regulate it all. How do you differentiate in those states that have legalized adult use, the regulations and availability and so forth of medical products versus those that are adult use products? And I live very close to the Maryland state line, and this is a particular concern that I've heard from individuals who are Marylanders who seek medical cannabis and now have been challenged in getting medical cannabis because of the new growth in the legal adult use market there.

Dr. Gillian Schauer

Thank you, that's a very important question, and I really appreciate you raising the importance of patience in this whole equation, 'cause that cannot get lost. And virtually every state that has moved into adult use, with the exception of Alaska, had a pre-existing medical use market. And I think we've learned a lot about what some of the policy levers might you know, need to be to protect patients and their access. So first I would say there needs to be some thought about what products patients are using and whether or not those products will have broad commercial appeal. I don't know that any state has gotten this perfect yet, but Considering potential incentives to require or motivate operators in your adult use industry to continue to manufacture products that patients need will be important because patients may need products that do not have mass commercial appeal. And when left to market forces, it would be easy for an operator to think, you know, these are not selling, we're not going to manufacture these, but those products will be very

important for patients. So thinking about what are incentives that can keep the products on the market that patients need is important.

Thinking about the environment that patients want to purchase and access products is also important. So you're surrounded by some states, you know, Connecticut, New York, that have moved into adult use and have had a, sort of pharmacy-based model for how patients have accessed products. Both of those states have required a pharmacist in the dispensary, and in moving to adult use, I think both of those states would say they have...They have heard loud and clear from patients that that continues to be important and continues to be a priority. So I understand that's part of the model in Pennsylvania. That's something that you may look to preserve so that patients have a point where they can access products and be able to talk to a clinician, talk to a pharmacist. That's not going to be something that, you know, the average adult use consumer will want, but that's something that will be very important to patients.

I think thinking about price point and fees is also important. So we typically see states that have both waive the taxes for patients that have a medical card so they don't pay tax. We've also seen states put in place incentives to keep patients in the medical program, you know, waiving any card renewal fees or anything like that. So I think it's providing patients with the benefits they need to keep this medical for them, making sure patients have access There's some states that provide delivery for patients and the medical program, and they don't offer delivery for the adult use program. Making sure you have the right products. And, you know, I think those are some of the major things that can help on the patient front.

But it would be great for you to speak with some of the surrounding states. Connecticut's a state that I would recommend connecting with closely because their medical program had such a medical focus and they have looked at preserving that. Connecticut is one of the only states that's also said they're only going to allow certain products in the medical market. So if you want to get a medical product like a transdermal patch or a nasal spray or a suppository or an inhaler, those are only available on their medical cannabis marketplace. Those are not product forms that are available on their adult use marketplace.

Rep. Schemel

Okay, thank you. Next question. You had talked about a few different things that we should consider, access, price, and the product type, so the products that people want to purchase, as factors that help to mitigate some of the ills that come from the illicit market.

Previous assessment that we had indicated that THC levels, which I would assume would be product types, there are certainly consumers who would want to purchase higher THC levels, that states that have attempted to regulate THC to regulate or have available low THC products tended to find more activity on the illicit market---Is that also your experience from the regulators that you have dealt with other states, that there's a corresponding---there is a correspondence between attempting to regulate the level of THC and the illicit market.

Dr. Gillian Schauer

So I'm assuming that some of the data you're talking about is from Canada, which I'm less familiar with. But in the US, we don't really have any adult use states that have regulated the concentration or amount of THC beyond Vermont and Connecticut, both of which are fairly new markets. And I think it's hard to say at this juncture what the impact of that has been on the illicit market. The geography of the U.S., especially the northeastern corridor, is very different than Canada.

So I don't know if you heard testimony from anybody about Canada. There is a province in Canada, Quebec, that has opted basically not to have any high concentration THC products at all, to have very limited edible access. If you look at the geography of Canadian provinces compared to the geography of the Northeastern corridor, it could not be more different. And, you know, folks can drive across the state in an hour or two and easily access another market. So I think what we will see from policy experiments like that in the Northeastern corridor would be very different than what they've seen in Canada. But I feel like it's too early to comment on the effect of that. The states to watch, though, again, would be Vermont and Connecticut, both of which have concentration limit of 60% THC in products, which basically means you can't manufacture concentrates -- So those markets will not have, unless, you know, there's some innovation that allows for folks to manufacture them with some additives or diluents, they will not have, you know, the kind of shatter, you know, wax, crumble, et cetera. They won't have those products on those markets.

But will consumers still access those? I think we need to look at data very carefully. I know both of those states are leveraging the international cannabis policy study, which asks cannabis consumers about exactly which products they're consuming and where they access those products to try to understand what the cross-state market might look like.

Rep. Schemel

Thank you. Another part of your testimony, you discussed the cannabis use disorder and how some states that have legalized adult use have put resources toward those programs. Is there a recommendation from your agency as to how much a state should dedicate toward addressing cannabis use disorder?

Is there any data to indicate how much additional cannabis use disorder we would anticipate were we to legalize adult use in Pennsylvania?

Dr. Gillian Schauer

No, that's not. So first of all, we don't put forward any recommendations at the Cannabis Regulators Association. I'm trying to just sort of give you a narrative of what states have taken what approaches. That's what we do is really track policy across states and help them learn from each other. And there are lots of different approaches that I think we're still evaluating. So there are very few areas where we have best practices. I am not the best person to speak on the data about cannabis use disorder. There are other agencies within states that I think are tracking that more closely, and I'd be happy to follow up and suggest some that you might reach out to.

Rep. Schemel

Great. And I have one last question. And this relates actually to your background in tobacco cessation or tobacco policy. Based upon that experience, is there anything from states that are looking at adult-use legalization that you think we should learn from what states have done in the past with regard to tobacco?

Dr. Gillian Schauer

Yeah, when I present to public health groups, I have a whole slide about where I think tobacco and cannabis are similar and different. I think they're different in a really important way.

We would not say that there's any accepted medical use for commercial tobacco. There is no evidence to suggest that commercial tobacco has medical use. There's lots of evidence to suggest that cannabis has medical use. So I think that is an important difference. Some of the areas where I see states borrowing from tobacco control policy really has to do with youth appeal and marketing and advertising and packaging. Because one of the similarities that we've seen across both markets is they're both commercial marketplaces. And those

commercial marketplaces, you know, have profit motives. And so regulation can help ensure that those products are not being marketed to youth and not accessible to youth.

I think there's a lot where folks try to apply lessons from tobacco control, and it's not a perfect fit. I talked earlier about vaping products and how there's a different structure because nicotine is liquid soluble or water soluble rather, and THC is fat soluble. So there are big differences there.

The other one is flavors. You know, I've often heard state legislatures talk about flavor bans for cannabis, you know, and things like that.

Cannabis is more akin to wine in that regard. There are terpenes that are naturally occurring in the cannabis plant that cause different flavor profiles. And so usually the flavor from cannabis products is not from added flavorings like you might find in a nicotine vape cartridge. It's from naturally occurring flavoring profiles. So it makes it makes that policy area substantially different. So I think there are things we can borrow, but I do think that cannabis is its own entity and necessitates a very unique and different approach than what we've taken for tobacco or for alcohol, for that matter.

I think there are substantial differences and would encourage you to learn from those other domains, but to create policy that's different and unique for cannabis.

Rep. Krajewski

All right, thank you. Next we have Representative Frankel.

Rep. Frankel

Thank you, and thank you. This has been extremely helpful. I want to return to the issue of social equity, which is a concern of many of us, many of my colleagues. And you talked about the use of how revenue would be directed from the taxes generated from adult use. But the other aspect of social equity that I think many of my colleagues would like to address is the business opportunities that might be available and how other states have been able to do that.

One of the things that we have seen from our medical marijuana cannabis marketplace is that, initially, we have separation of grower processors from dispensaries. It was intended to stay that way. But we saw rapid consolidation take place very quickly in vertical integration in this business, really kind of pushing out the viability of independent processor growers and dispensaries. And, you know, it seems like it's ultimately inevitable that you're

going to have this vertical integration. So, and in addition to which, The business model doesn't seem to be, particularly in the medical marijuana marketplace here in Pennsylvania, particularly profitable at this point. And we're seeing nationally that it's, you know, there's some real problems with the business model itself.

So I'm concerned about, you know, how we do social equity, provide opportunities beyond how we allocate tax revenues to address social equity. in terms of how we do the business modeling as we move to an adult use, recognizing the problems that we've had with our medical cannabis businesses.

Basically, if you got in the business early here in Pennsylvania, you flipped your grower processor and made a lot of money initially and nobody else is making money at this point and the businesses seem to be really floundering and, you know, and energizing the illicit marketplace.

Dr. Gillian Schauer

Yeah, that's a great question. So I'll just back up and say a couple things. First of all, there are many qualified people, more qualified than I am, to speak with you about social equity. I would love to give you a list of other regulators that are implementing policy in their state that would be very articulate on this topic. I think there are three things that are important to consider for promoting social and economic equity.

One is equity in the marketplace, which is what you're talking about, and I'll come back to that in a second. The second is expungement and record clearance. And we know that expungement needs to be automatic. It shouldn't require a petition process, You know, it needs to be funded.

And then the other is community reinvestment, which I talked about. Equity in the market. I'll just be frank and say, I think has been a challenge for a lot of different reasons.

One of which is that adult use is often overlaid over a medical program that has not had equity as a focus. And so that creates a challenge. I think we're learning some of the variables--I'm channeling states that, you know, are part of our CANNRA social and economic equity committee here. I think we're learning some of the variables that matter a lot here.

One is access, early access. the states that have provided access to everybody at once or access to licenses to medical operators, first and foremost, have had a harder time with equity. I think you're seeing an increasing number of states that are prioritizing equity applicants as the first round of applicants for adult use licensure. But giving a license is not

sufficient. You have to provide technical assistance to make sure that folks can be successful in their business. So we've seen states allocate money to technical assistance.

You have to think about access to capital. The banking system itself has, you know, inherent biases in it. And so access to capital may be harder for some of the small business and equity applicants that you're trying to lift up with licensure. So we've seen states put together funds that can be accessed by social equity applicants for starting capital. We've seen support on everything from business plans to implementation of their businesses be important. So those wraparound services are really critical to think about.

And I don't take credit for this at all. One of our collaborators with the Justice Foundation, Cheryl Murray Powell, said you have to think about the life cycle of an equity applicant. And I think so often policy is just focused on getting them the license.

But there's a whole life cycle. There's a lead up to can they get the license? Do they have what's needed? And do they have the services to be successful when they have that license? And a lot of those would be analogous to small business services that you might have in place in other areas for your state.

Location has been a big barrier as well. A lot of policies have historically required that applicants for a license have a location to get that license. And that means that they are holding on to real estate in potentially expensive markets for a long period of time, which can be very costly and can disadvantage equity and small business applicants.

And then vertical integration, you know, is another thing that I think it's a complex variable. So in talking to, you know, small craft businesses, which can also be equity businesses, some of them would like vertical integration. They would like to be the only entity in the state allowed to vertically integrate, to have access to grow, process, and sell to their consumers on a small scale or at a farmer's market or whatever it may be.

Vertical integration on a large scale can make it more difficult for equity applicants to make it because it requires a lot of resources and knowledge and capital basically to succeed. So I would think about small business, craft business and equity and the policies that they need to be successful and how those policies are differentiated from the larger businesses in your state. And I think a healthy economy probably has businesses in all of those areas, but you've got to do more and have more deliberate policy to have a successful social equity applicant and successful small business in the state.

Rep. Frankel

Thank you, Dr. Schauer. On a totally different topic, we've seen other states deal with lab shopping, where cannabis organizations will contract with labs that produce the results that are favorable to the organization rather than accurate. What is the best method for state oversight of labs?

Dr. Gillian Schauer

So we have ended up, because of the federal prohibition on cannabis, we've ended up with every state having effectively a third-party lab system where the states are licensing third-party labs that have as their customer the industry.

And so that has created you know, sort of voting with your feet where states with these third-party lab systems are seeing industry often go to the lab that will give them the highest THC level because they think that that's what consumers want.

So there are a couple different things that states have put in place to try to rein this in. The first area I'll talk about is sampling. You know, many states now require either their own inspectors to supervise a sample pull or the lab to be on site for the sample pull to make sure that the initial sample for testing is pulled from something that is reflective of the actual batch of cannabis, not something that the licensee provided that is an, you know, extenuating example of what that batch contains. So that's become, I think, an increasing best practice.

And then a number of approaches to realign incentives using multiple labs, using a state reference lab, or using sort of a round robin approach to lab testing for auditing. So first and foremost, So a state reference lab is one of the most valuable tools for cutting down on lab shopping. A state reference lab means this is a lab that is part of your state infrastructure that is able to test cannabis.

They have to have a DEA license, but they're able to test cannabis products and they can be an arbiter if there is, you know, confusion about what the actual result of the test would be. Very few states have state reference labs, but we're seeing more and more figure out how to do it and go through the process. And there's certainly states I can connect you with, but that's something I would recommend, including in statute and funding. And it does cost money to have that.

We're seeing states use interlab comparison or round robin testing as well through audits. So Missouri is setting up an inter-lab comparison program. Oregon has round robin testing. I believe Maryland also has it.

What that means is the state can go in, just to oversimplify, the state can go in through an audit process and say, we're going to take part of a sample that's left in one lab, and we're going to require it to be sent to another lab to verify that the test was accurate. And in the case of Oregon, if the verification leads to a different result, they can require that that product be relabeled, which is a huge expense to the industry as well.

So that should start to incentivize a move towards accurate results versus the highest THC results to have some of those audit programs in place.

The state of Oklahoma, I believe, is setting up a secret shopper program where they would be able to, through the regulatory agency, purchase and test products that are already on the shelf to see, or do they actually contain what they say they contain?

So I think it's having these abilities for the regulator to have a check and balance on the system, and then also having that state lab that can really be an arbiter, that can test products randomly, that can be a state resource, you know, with state-run personnel to make sure that the test results are what they say they are.

And then I think the last thing here, which is unrelated to lab testing, but would be educating consumers. Consumers still in most markets, even mature markets, go in asking for the highest THC product. But in studies, it shows that that doesn't always lead to the best effect or the desired effect.

There's a lot of other factors that should go into what consumers are looking for in a product. And so some education for consumers that it's not all about THC might also be valuable and helpful in sort of moving away from this incentive of THC inflation and lab testing.

Rep. Frankel

Thank you very much.

Rep. Krajewski

Thank you, Chairman. Just for the information, we have about 20 minutes left in the hearing. We do have a couple more members with questions, so folks can just keep their questions fairly succinct so we can work through the flow. Thank you Next we have Representative Twardzik.

Rep. Tim Twardzik

Thank you, Mr. Chairman. Thank you, Doctor, for your input. It's been very educational. One of the things that everybody seems to be driving legalized marijuana in the state is the magic marijuana money tree, that we are going to make so much money on this product that it's a chance of a lifetime, and you're responsible, you have to bring all this money into the state.

I guess my question is, who is the best at bringing money in, and do the states actually end up getting the money that they thought they would get out of this product launch?

Yeah, so I'm definitely not the best one to speak to that either. I would suggest an economist for that. States are definitely getting a lot of tax revenue in. I think I've yet to see a good analysis that takes into account all of the different variables of inputs and outputs to see where things net.

So I would point to the Washington State Institute of Public Policy. Washington State's ballot measure required a review of legalization broadly, including broad set of variables, education, economics, social justice, et cetera, to look at what is the net cost benefit of legalization. I believe they've produced four or five reports at this juncture, but those reports would be valuable to look at and they might be a group to bring in to hear sort of the overall equation.

Again, my association is focused really on the implementation of the regulatory variables, not on the broader economics of legalization. We don't take a position for or against legalization. So that's not a question that we've looked carefully at, but there are some states that have.

Rep. Tim Twardzik

Okay, thank you. know, from the research that we've been doing, we are always compared, I guess, to Illinois. That we'd be the same size state, would be the same opportunity to bring money in. And their last quarter they made \$80 million. So multiplied by four, that's \$320 million for the year.

And that is not the giant windfall that I think the state can count on. A lot of people are saying we'll make a lot more, but if Illinois is our best comparison, that's all we make. We unanimously passed a tobacco settlement bill and got \$350 million into the state. So I think

there's a lot more harm coming from legalizing marijuana than continuing the support we work with the tobacco companies to do the education and health.

Dr. Gillian Schauer

Can I make one quick comment on it? The other thing I think you have to look at is the tax structure. So the revenue that comes into the state will be based on the tax structure as well. And every state has a different tax structure. And Illinois has one of the most unique tax structures. They actually have a tiered approach for how they're taxing products based on the percentage of THC. So they may land in some different places than other states that have a different tax structure.

Illinois has also had a marketplace that's taken a bit of time to open because of litigation. So you would also want to look at is their market fully open and operating or not to determine, you know, whether or not that's a full representation of the revenue?

Rep. Tim Twardzik

Okay, thank you. Another question is, have states that have legalized marijuana seen an increase in crime? Is that something you can find in statistics with?

Dr. Gillian Schauer

That is also not something that that we track, but again, you know, groups like the Washington State Institute for Public Policy, I think Colorado's also done some reporting on this. Some of the states that have asked for more holistic reports on the impacts of legalization would be states that you want to look to, with Washington and Colorado having arguably the most data on this, having been at this for more than a decade.

So I would encourage you to hear from academics in those states and to look at some of the reports that might be out from those states.

Rep. Tim Twardzik

Okay, thank you very much. One last comment. Spoke to a representative this morning about the medical marijuana program. He was here when it started and implemented. And in Pennsylvania, our program has kind of failed. Again, it's not, people aren't making money

at it, we're losing people. But our problem is we haven't fixed labeling, we don't have doses right, we don't have the assistance for our patients who come in and have a product that disappears from the market because it hasn't been popular and no one can help them find out what's in that so they can find a similar product.

If you have a prescription drug and it goes off, a pharmacist can help you find something that will help you, your doctor can help you find that. Any other challenges, how we even turn the medical program into a 1-800 number to get a doctor and get your card.

It doesn't seem to have a follow-up and we have not done the clinical studies. So if we failed to run our medical marijuana, why are we going to jump into a legalized, let's fix what we have right now. Give the federal people a chance to fix their role. If they legalize marijuana, then we can follow in with a lot less trouble. But right now it's premature, there's too much risk and I appreciate hearing from you. Thank you.

Rep. Krajewski

Thank you, Representative. Next we have Representative Venkat.

Rep. Venkat

Thank you, Dr. Schauer, for your testimony today. Two questions for you. You mentioned about opt-outs in certain states. Has that filtered to the municipal level in terms of opt-outs for dispensaries? And the reason I ask is that Some of our counties in Pennsylvania, including where I am in Allegheny County, has 140 plus municipalities, and so a county decision is very different than a municipal decision. So can you comment on that?

Dr. Gillian Schauer

I think we've seen both across states, depending on how they've structured their local control. And local control is broader than opt-outs, too. So we typically see states give local control over things like time, place, manner, and zoning, as well as, in many states, opt-out. And it depends on the structure of the statute, whether the opt-out is municipal or county or the potential for both. So I can't speak to the details of which states have which scenario. But there are a number of states surrounding you that have had both county and municipal opt-outs.

Rep. Venkat

Okay. The second question I had was something you mentioned earlier in your testimony about with legalization, there has been a reduction in the illicit market. But when I've looked at some of the tax revenue figures, and I know it's not perfectly analogous, what we've seen is this spike in revenue when there is legalization, and then a decline in the levels of that revenue over time.

in states that have legalized, presumably because the illicit market is under pricing or, you know, whatever the other issues are.

Can you comment a little bit about the differences there between what we might expect as legislators if we were to go through the legalization route and revenue expectations versus what you testified to earlier?

Dr. Gillian Schauer

Again, I am not an economist and I don't play one on TV either. I think one of the factors in some of the declining revenues to states might also be the price point of products.

So what we typically see is when markets launch, especially in the early days of Washington and Colorado, the price per gram was very high. And as the availability of product increased, we've seen that price decline dramatically. And so that will impact the tax revenue coming to the state as well so that initial tax revenues would be higher and you're getting less. Tax is usually an excise tax, a percentage of the total sale. If the product costs less, you're bringing in lower tax.

The data that I've seen is public health data, looking at hundreds of thousands of consumers across states that are reporting where they're purchasing their products and whether they're purchasing them from legal sources or illegal sources. And those data have tended to show across states that there has been good capture of the illicit market over time. But I've not looked at economic data, like what you're speaking to. That's a bit outside of the scope of what we do at the Cannabis Regulators Association as well. Again, we're focused on the nuts and bolts of how do you put a program in place in the state once it's been given to a regulator by a ballot measure or by a state legislature?

Rep. Venkat

And then the last question I have has to do with legislating and regulating the assessment of impairment by marijuana. I'm an emergency physician. I'm well aware of the limitations

of urine drug testing as well as the subjective nature of determining impairment. And obviously this is a critical issue both in the workplace as well as for law enforcement.

Is there any state that you would point to as having done this well?

Dr. Gillian Schauer

We have a traffic safety committee at CANRA that is focused on this exact question because I think most states would admit that they have not done this well in terms of defining impairment. That's something that, you know, even NHTSA in some recent reports have said the five nanogram level threshold that we've seen across a number of states is arbitrary, not based on good science.

We need to get better measures. I think the, you know, Cannabis impaired driving has also been challenging to study because of some infrastructure on the ground. So many states have a stop testing approach where if there's a traffic stop and somebody blows .08 for alcohol, they stop testing and they're not going to test whether or not that person has cannabis on board as well.

There's also a long delay because there aren't roadside tests, as you said, there's a long delay when they do test somebody for cannabis, unless they have a roadside phlebotomist, there's a long delay in getting somebody down to precinct for a blood draw, and that also greatly impacts the data. So we don't have the level of data that I think anyone would like to see about cannabis impaired driving. What has become best practice in the absence of a roadside test is funding for ARIDE and DRE officers, drug recognition experts. That's what they're doing at the roadside is trying to recognize impairment and recognize which substance may be on board that is causing impairment.

Those DRE and ARIDE training programs are costly. It is important to fund that and to think about that if that's a resource that you want in your state. But I regret to say that I don't think we have all of the data that folks need to really draw good conclusions about what the impact of legalization is on cannabis-impaired driving.

Rep. Venkat

All right. And then last question is, there's been a lot of talk at the federal level about descheduling. And can you comment about what the impact of descheduling or reduced scheduling would be on the regulatory framework that we should look at as a state?

Dr. Gillian Schauer

So I wish I could say more here, but we don't know exactly what the DEA's draft rule will be. And I think a lot of the details will matter greatly to the impact on the ground. If marijuana, so first of all, there are three things that are on the schedule. Marijuana, marijuana extract, and THC. It's unclear whether the DEA will reschedule all of those or just one of those. That will matter greatly. The most immediate impact to the industry would be 280E. They would be able to have business expenses deducted, which would, you know, greatly boost the, you know, financial outcome for the industry. But a lot of the details are unclear at this juncture. We don't know what this would mean in terms of, you know, implementation in states. We don't know if this would mean greater federal engagement on state programs and implementation and enforcement.

It is clear, though, that rescheduling from one to three still leaves us in the same boat where state programs are still federally illegal. It does not create, it's not a legalization of cannabis to move it from schedule one to schedule three. State programs would still be operating in the same vein that they've been operating in now.

The other thing I would raise is if, you know, if we if we don't see the farm bill make changes to address intoxicating hemp derive cannabinoids, rescheduling, you know, marijuana from one to three is going to be challenging for regulators to operationalize because you will have potentially the same compounds in schedule three if they're from marijuana and unscheduled if they're from hemp.

And I think the industry is in such a financial challenge right now that if we don't see the farm bill make adjustments, it will be hard for states to protect consumers and it will be hard for the regulated markets in states that are protecting consumers as we know them to survive. So I think we have more questions than answers on rescheduling and we'll be watching for the DEA's draft decision with everybody else.

And we don't weigh in for or against different federal policy, but we will be interested in commenting on areas where we think regulation at the state level will be complicated if there's not clear guidance for states in the event of rescheduling.

Rep. Venkat

Thank you.

Rep. Krajewski

Thank you, Rep. I just want to jump in with a couple questions based on some of the stuff you had said earlier. You had mentioned that as part of social equity, one of the things that's necessary is automatic expungement of records from past criminalization. Have you seen any states that have done that and done it effectively?

Dr. Gillian Schauer

Great question. Again, outside of the scope of what we typically focus on at the Cannabis Regulators Association. So I'm sad to say that I don't have a list of states at the top of my mind that have done that and done that well. There are a number of groups that can be great resources to states. We've had Code for America, for example, come speak about this broadly. So I would encourage you to reach out to some of those groups that are really focused on expungements of our discussions at the Cannabis Regulators Association have really just been insofar as if it's not funded and if it's not automatic, it can be very difficult to see the effects of.

Rep. Krajewski

Yeah, absolutely. Thank you. And then my second quick question is, I know we've talked a lot about the role of the state as it pertains to the regulation side of things. I was curious about any thoughts your organization may have about models regarding private or public at point of sale and the actual sale of products? And just have you seen that model in other states? What do you think are the pros and cons about having a private point of sale structure versus like a public structure?

Dr. Gillian Schauer

So are you talking about like state-run stores versus a commercial model? Yeah, so I mean, again, I'm speaking as myself, not as CANNRA for this testimony. You guys are asking a breadth of questions across a lot of different areas. And I want to be clear that these are not formal positions of CANRA. You know, there is some really interesting literature to suggest that there are a lot of different ways to approach legalization. And the way that we

have selected across every state so far is a commercial model that does sometimes put public health and safety outcomes in a more challenging light.

So I would love to see more experimentation across the policy landscape to see what the different outcomes can be from, you know, things like state-run stores or for benefit corporations or non-for-profit approaches. I think there's only one state to my knowledge, which is New Hampshire, that through their medical program, I believe they have a non-for-profit or for benefit structure. But other than that, we really have not seen variation across the models in U.S. states or in Canada.

Now we have seen Uruguay take a very different model. Uruguay has cannabis available through pharmacies without any advertising or marketing. So that's worth looking at and studying too. But unfortunately we've not seen the policy landscape to give me insight to comment on what the effects would be.

Rep. Krajewski

Understood, thank you. Next we have Representative Frankel.

Rep. Frankel

Oh, Chair, you asked a question I was interested in, and so did Dr. Venkat. But on the state-run store system, I thought there was a province in Canada that does use that model.

Dr. Gillian Schauer

There are some provinces in Canada that do. Quebec is one that does. I've not studied the outcomes there as closely, but you're absolutely right. Canada does have some variation there.

Rep. Frankel

Thank you.

Rep. Krajewski

Thank you. Do any other members have any questions? Nope. Okay. Well, with that, I think that concludes our informational hearing. Thank you, Dr. Schauer, for your testimony and for weathering the broad spectrum of questions we brought to you today. This has been really informative, and I know we as legislators will be using this as part of our decision-making going forward. So with that, the hearing is adjourned. Thank you very much.

Rep. Frankel

Thanks for having me.