Publicly accountable cannabis models: how do they work & what problems are they designed to solve.

April 25, 2024: House Health Committee & Liquor Control Committee. Chaired by Rep. Frankel.

[Rep. Dan Frankel]

Good morning. I'm going to call this hearing to order of the combined Pennsylvania House Health Committee and the Pennsylvania House Liquor Committee. This hearing is the sixth in a series that the Health Committee has been having a couple of them have been in collaboration with relevant committees, judiciary committee, and today with the liquor committee, committees that will have certainly significant input into whatever legislation we end up coming up with. I am pleased to be able to recognize my co-chair on the Health Committee, Representative Rapp, Republican Chair, and also the chairs of the Liquor Committee, the majority chair, Democratic Chair, Dan Deazey, and the Republican minority chair, Representative Mindy Fee. I don't think any of them at this point have any prepared remarks. With that, I'll ask my other colleagues on the committee to introduce themselves, whether they are here in person or virtually. So we'll start with those here in person. Good morning.

[Introductions of the legislators who are present at hearing]

I'm representative Tim Twardzik. I represent the 120 Third District in beautiful Schuylkill County. Morning, I'm Paul Schemel from Franklin County. Mary? I'm Mary Isaacson from Philadelphia County. Okay. And, who do we have with us, virtually? If we can I can't I really can't see it, from here? I'll jump in. Okay. I'm, representative Melissa Schusterman from Chester County. Thank you. And I'll hop in next. Representative Jessica Benham from Allegheny County. Representative Arvind Venkat from, Allegheny County. Morning. Van Stear from Cumberland, Schuylkill County. Good morning. Representative Dan Deasy from Allegheny County. Thank you, Dan, for putting us in in in the loop with the meeting with you guys. Heather, this is Delaware County. Hi. Good morning. This is Mindy Fee from Lancaster County. Good morning. Lisa Borowski, Delaware County. Good morning. State representative Robert Ledbetter, Columbia County. Good morning. This is, representative Kathy Rapp, from Warren Forrest Crawford, and I am the minority chair of the health committee. Thank you, representative Frankel, for conducting this hearing. I hope that we can gather some very significant information from our testifiers. And thank you to our

testifiers for being here today. This is Tim Bonner from Mercer And Butler Counties. Good morning. This is Brian Smith from Jefferson And Indiana Counties. Good morning, representative Rick Krajewski, Philadelphia County. Morning, representative Jim Rigby, Cambria, Somerset Counties. Anybody else? Good morning. Rep Rossi from Westmoreland County. Representative Gaydos from Allegheny County. Pretty robust virtual attendance here.

[Rep. Dan Frankel]

So, I'm going to ask my staff because I really cannot see names from here that as folks may raise their hands, can you please make sure you let us know up here so I can recognize them if they have questions or comments. This hearing is really focused on public health component of this issue of adult use cannabis, And we have really a very thoughtful, I think, group of panelists to help inform us today. And I'm going to bring up the first panel, panel one, which includes David Hammond, who is Doctor. David Hammond, University Research Chair, School of Public Health Sciences, University of Waterloo Francis Gagnon, senior I hope I have that right. Francois Gragnon, senior researcher and special policy advisor, Canadian Centre on Substance Use and Addiction. So I think both of them are with us virtually and I would turn this over to Doctor Hammond.

[Dr. Hammond]

Thank you very much. It's a pleasure to be with you this morning. I have some slides. Can I just ask that the tech person allows me to share my screen? Is that possible? Still not able to do that? Is that oh, I think something's happening here. Give it another minute here. Just need to be able to share my screen, or you can show the slides that I sent earlier this week, whichever is easiest. You should be able to share them now. Okay. It just says only meeting organizers and presenters can share. Is there any way you can make me a presenter? Try it now. Still not able to do that. Any chance you can throw up the slides that I sent the other day or is that possible? If not, I can just speak. If you give us a minute. Sure. I wish I had a Pennsylvania anecdote to share, but other than driving through your beautiful state, there's not much I can share.

[Rep. Dan Frankel]

I just add that the reason we have these two testifiers here, from Canada is to look at the Canadian model for adult use cannabis.

[Dr. Hammond]

Maybe while we try and sort out the technical problems, I'll just give a little bit of background on that note. Just so you know, I have no industry or commercial interest to declare. I'm an independent researcher and one of the things that I've done is is to try and understand the impact of legalization in Canada. So, Canada legalized non medical or adult use cannabis, just about five years ago in 2018. I've also worked with about a dozen of the states that have legalized adult use in The US to try and understand again, what the impacts are and specifically, do the regulations matter? So I've worked in tobacco for twenty years, and I always say that a lot of the emphasis is on whether something is legal or not. But, of course, the way we legalize tobacco now is much different than it was in the nineteen fifties. And that difference is not whether it's legal or not. It's always been legal. It's how we regulate it in a legal market. And as I understand it, those are some of the questions that, you may be addressing in terms of, what the nature of the legal market should look like. I'm okay. Great. You've got those slides. If you're able to bring those up, and I could just say next slide. Okay. Super. So if you could go to the next slide, please. Next slide again. And I'll just say that depending on who you ask, you're gonna get a much different answer about what, the impact of legalization has been and what it means for legalization to work or be effective. There are the industry has different opinions. Harm reduction advocates have different opinions. Consumers have opinions. I'm gonna be giving you a nonpolitical answer on what the best evidence is from Canada. Next slide. And next slide again, please. Okay. And I think what's important to point out is that we now have well over a decade of experience with different legal markets. Certainly you have a variety of them in The US. There's also legal markets in three other countries now that have taken a different approach to some of The US states. And this gives us a chance to figure out what aspects are working or not. Next slide. And just so you know, we have federal legalization in Canada. We have our provinces, which are like your states that bring in their own retail regulations. And overall, I think it's fair to say that Canada has more restrictive regulations. So we allow less advertising. We have more rules on products. We have more prominent health warnings on labels. Next slide. Now, the other thing that you should know and what I've sort of been asked to talk about is so called state models. Now every province, and again, that's like your state, actually serves as distributor. So that means all the products go through them before it goes out to the private stores. That gives them control over what products will be sold. That also gives them some influence in setting the price. And then you should also know that we actually, in terms of the stores themselves, we have some provinces where all the stores are private, which is similar to what you have in US states so far. We have some provinces that have both private and actual government run stores. So this is literally the government that runs the store. And then we have, a couple provinces where every store and every aspect of the retail is, run by the government itself. Next slide. Now, just to be clear, this doesn't mean that our state retailers don't engage in advertising

and marketing. This is actually, an online ad from the online store that's run by the province where I live, the Ontario government. This is the largest province in Canada. So you can see many of the practices are similar to private practices in terms of promoting tasty fun cannabis products. Next slide. I turned 50, this week. I never thought I'd live to see the day where we have governments teaching people how to roll joints. But that is in fact the case. This is the provincial, the province of New Brunswick and there again, state retailer, teaching people how to use different cannabis products. So, when it's state run, they still engage in many of the same activities and practices that you would see in a in a private model. Next slide.

Now having said that, it is true that if you look at the states that have a entirely public or state run retail model, they do tend to bring in more comprehensive restrictions, more regulations. And so what I've done here and one aspect is, well, how many stores are opened? There's a debate about having enough stores so that you'd displace the illegal market. But if you have too many stores, you might start to promote consumption. And what I've shown you here is this is just the stores per number of a hundred thousand people in each province. And the provinces at the bottom that are entirely private retail models have far more stores per capita than do the provinces that are a 100% public or state run, which is, for example, Quebec and PEI. It's a difference of almost 20 fold. So you do have the public state run models that have sort of fewer stores and typically some more comprehensive rules. Next slide. And that's particularly the case in our province of Quebec. Francois Daniel is about, I mentioned to speak to that, but Quebec is one of those where all the stores are government run. We have a higher minimum legal age than other provinces, fewer stores, stronger restrictions on marketing and advertising. And this and one of the few jurisdictions anywhere in the world that's really restricted product standards. So they do not sell any vaping products. There's a 30% limit on THC for everything, and they've only sold a few edibles. Next slide. And so you may know when people talk about dried flower being stronger than it was when I imagine most of the folks in the room grew up. Well, dried flower used to be about five percent. It's now about 20, but we have new classes of products that are, you know, orders of magnitude of hires. The average vaping THC level is about 75%. Quebec does not sell those products. Next slide. And I don't know how your French is, but, when you think of cannabis edibles, most people think about, you know, candies, gummies, cookies, brownies. Well, the Quebec, don't sell any of that. They sell dried cauliflower, dried beets. And I always say, I've never caught my kids sneaking, you know, beets or cauliflower out of the fridge. And so this is an example of Quebec putting greater restrictions on products that might appeal to kids. Next slide. And I so what we've seen in US states and Canada is that when you legalize cannabis, you have more manufacturing, more organized, production, and that typically leads to the use of higher

THC products. Next slide. I'm showing you this in Canada and just very briefly of the people who use cannabis. These, this is how the products they use have shifted. So dried flower is still the most popular product, but you can see it's been going down. What's gone up is edibles. What's gone up is vaping products, and those are typically higher THC products. So this is the shift we've seen in the market. We see that shift happen sooner and more in states and provinces that have legalized. Next slide. But we see it a lot less in Quebec. And this is probably too much for you, to grasp. But what I'm trying to do is I'm trying to show you that when Quebec sells products in their state run market, the use looks just like it does in every other province in Canada. When it restricts products, those are the products on the right hand side, edibles and vape boils. You can see that far fewer people in Quebec. Those are those little blue bars, are using them. And this answers an important question, which is if you restrict a product, is it the case that people just get it from the illegal market? No, in fact, what happens is that it looks like they're actually less likely to use the product and they'll instead turn to the products in legal stores. That gives regulators a bit more leeway and flexibility if they choose to restrict certain products. Next slide. And you see this argument come up a lot. It certainly came up in Vermont when they were considering THC limits, which is again, if you do anything to restrict the product market, you're just gonna push things to the illicit trade. Next slide. But actually, as I mentioned, that really doesn't seem to be the case. The best evidence we have is that the transition to the legal market, which is of course the objective, has been similar in provinces that have a purely private versus purely state or government run model. Next slide. So I'm not gonna go over this, but again, the best we can determine is that the number of folks that have shifted to buying from legal sources is very similar across Canadian provinces, regardless of whether they have product restrictions or they have state or privatized stores. Next slide. And I'm gonna skip over a couple in the interest of time. Next slide again. Next slide.

Okay. Just in terms of, what are consumers perceptions and public support? Or do they support one model more than another? Next slide. The answer is, is that, you know, the debate in Canada, some of the manufacturers in the industry have suggested consumers don't like some of the rules that we have. Consumers want, you know, for example, more advertising. And so I lead these big national surveys with thousands and tens of thousands of people every year. And I'm just showing you a snapshot of this. When we put it to people, once they've had experience with legalization, think about how much advertising is in the state or province where you live. How much do you think should be allowed? Most people in the general public believe there should be about the same or less advertising. Interestingly, when you ask people that consume cannabis, they say the same thing. They're just about as likely to say less or more advertising on most say about right. In other words, consumers don't think there should be more advertising. And what's important

about this is that Canada has among the strictest rules that you could imagine for advertising much stricter than any US state to date. Next slide. On the issue of restrictions and product restrictions, especially those that have been implemented to come back. And you might know that we have a federal restriction in Canada where every package of edibles can have no more than ten mg. Now, just for context, you might know that if I buy a brownie in New York or New Jersey or California, it'll probably say a hundred milligrams or one hundred and fifty. Sometimes it says up to five hundred or a thousand milligrams. So what do consumers think about this restriction? Next slide. Bottom line is, there's actually more support among consumers themselves for what is quite a strict product regulation than there is opposition and most folks are neutral. And I'm not gonna show you more and more data, but I will say this, that perceptions of the legal market are very positive. And there's actually more support for some of those regulations than is sometimes assumed. And I think that's part of the implicit contract, which is to say, okay, if we're gonna legalize cannabis, let's do it in a way, where it doesn't get out of hand and we still meet public objectives. The public and consumers themselves seem to be holding that. Now, by the way, we've asked these questions in US states that have legalized cannabis and you see a very similar level of support and that they're actually quite receptive to a lot of product restrictions and regulations. Next slide. And maybe the most important lesson is that, you know, we typically see some increases in cannabis use after states and provinces have legalized, but we've seen fewer increases in, in particular in Quebec and Francois might be speaking to this, but next slide. Just for context, again, Quebec is our second biggest province. They had the lowest cannabis use before Canada legalized, but it's remained very low after. And in fact, the change over time in Quebec has been less than, the rest of Canada. And it's notable. So many fewer people in Quebec are likely to use cannabis in a given year. They're about half as likely to use daily or near daily. And that's the important sort of threshold where we start to worry about some problematic and adverse outcomes. Next slide.

And I just wanna point out this, Canada did a sort of, it was mandatory mandated by our parliament that they do a legislative review of the entire federal Cannabis Act. They just released their report a couple of months ago. It's quite instructive in terms of reading about lessons learned. And I've certainly heard from different state regulators in The US that this is an interesting information source and you might wish to consider giving it a look.

Next slide. So just to wrap up, I would say this, that, the experience in Canada with different provinces is that state models do provide state regulators with a greater means of shaping the market. Of course, you can always pass new regulations after legalization, but the more the market that is run or controlled by the state, the easier it is to shift, including without having to go through a new legislative process. It looks like more state models may be more

effective in achieving some of those public health objectives. Those aren't the only objectives for legalization, but that appears to be the case. I would say that there are positive consumer perceptions for both the private and, the fully state run models in Canada. And one of the main arguments against, restrictions that is that people will just run to the illegal market. We haven't found that to be the case in Canada. Next slide. So thank you very much. I'm happy to answer any questions you might have, and whether that's now or after the next presentation.

[Rep. Dan Frankel]

Thank you, Doctor. Hayman. I think we'll wait till, we have Francois Gagnon's presentation and then have comments and questions for both of you. So with that, Mr. Gagnon.

[Dr. Francois Gagnon]

Hi, everybody. Thank you for welcoming me. It's an honor to be talking to you today. And, of course, talking after David, he's already said many of the things I would have said myself, but I'm gonna go through my presentation, nonetheless. There's no need to go through the PowerPoints. I'm just going to be talking informally to you as I was asked to. So I'm now working for a nonprofit organization that's created by a law of parliament, which is called the Canadian Centre for Controlled Drugs and Substance Issues and Addictions. But I was formerly working for a public health organization in Quebec, which was a parapublic organization in public health, an expert for reference body in public health. So in that role, I was involved in making representations to our elected officials to adopt legal provisions and regulations that would be optimal for public health outcomes. And, so what you see as a product in Quebec today is, not the only influence of the INSPQ where I was working, but also of other actors. But most of the things that we said were important were included in the law. That's what I'm going to be talking to you today. So, on top of being an advisor adopting regulations and laws, I was also involved in a recent report and following the outcomes of legalization. And in this report, I compared the outcomes in Quebec to, six other jurisdictions across North America. Three were from Canada, Ontario, Alberta, and British Columbia, and three from the US, Colorado, Washington State, and Oregon. And in this report, I included the results or synthesized the results of 97 studies. What it showed, what the findings were, what was, similar to what David said. They suggested that the increase in cannabis use was less in Quebec than it was elsewhere. It suggested also that the increase in cannabis consequences on health and associated risk factors, such as driving under the influence were less in Quebec. It also suggested something that might

seem a bit distant, but is also important. There was a less decrease in the perception of risks of consumption of cannabis in Quebec. And that is important for two things. Obviously, for consumption decisions, people who perceive risk of cannabis consumption consume less, tend to consume less according to many studies, but also because it facilitates regulations. If products are not seen as being risky to use, people are not going to support strong regulations. Generally, we see this in alcohol, but if in tobacco, we think of tobacco, people perceive the risk of tobacco use, they support stronger regulation. So there's also this benefit that can be seen from that. And similar as to what David said, the report concluded that there were similar transfer from the clandestine markets to our public monopoly in our case, so to the regulated market. Question might be, David addressed many of the questions, but what was the key to that and how legal provisions and even business practices could be related to that. There are a few that David outlined, like he mentioned the regulations of products, stronger regulation of products. And I'm not gonna go more into that. In the PowerPoints I sent you, I gave an example also of promotion. You see that the promotion in Quebec is much more neutral. You have white colors, whereas in other provinces, because of the private stores, would see much more aggressive marketing, I would say, and promotion of products, you know, showing people which is not authorized by federal law. So promotional practices at the SQDC are much more easily controlled because it's a state model. And then, you know, elected officials by law or just by monitoring, can direct more what's going on. Whether they do it or not, that's another question. They gave you examples of public stores that are not doing so well, but in Quebec that's not an issue. We don't see these type of practices. In fact, there are explicit regulations that prohibit the SQDC from showing products outside of their neutral packages while doing promotion. And also, for example, you don't see price promotion on temporary rebates in Quebec because it's outlawed by law also. So the SQDC has been constrained by many regulations in what it can do as promotion. In terms of density of stores, you've seen what David said. I'm not going to add more on that, but that's a business decision that's been left to the QVC. But this QVC has been mandated, both to transfer, the consumption from the clandestine markets to the related markets, but also not to increase consumption though. So all of the business practices have to be within that frame. And one other key aspect of it, which is not often addressed is that in Quebec, it's the only place in North America where the Cannabis Act is actually the provincial or state level jurisdictions. The acts are enforced generally by finance ministry, finance departments in Quebec, the Ministry of Health and Social Services that's responsible for enforcing the provisions of the Cannabis Act. And that means that our public monopoly, when it wants to do promotion and when it wants to sell new products, it has to be evaluated for conformity and compliance by the Ministry of Health and not the Ministry of Finance, which traditionally has more of a business growth approach to things. So in terms

of governance, think it's a pretty important provision to put in and to consider maybe. So I was asked to do my introductory talk in five minutes. So that's how I did it. I'm going to conclude by saying, I think the public monopoly in Quebec has been working fine as anticipated by public health experts and certainly my organizations. But when I've discussed this with other people in public health in Quebec, everybody seems to be satisfied. The model also has been, you know, discussed in Switzerland. I've presented there for the public officials. And also, it's been referenced in many documents that say we have adopted many of the good practices or good policies that could lead to good public health outcomes. So of course, it's early days in terms of legalization. It's been only four or five years since we have legalized and got outcomes. So we'll see how this evolves in the future. But this to say that, you know, I encourage you, daily to go, towards the option of public monopoly, both on the the retail also on the retail sales side, not only, for buying from the producers, but also to think of legal provisions that will ensure that the public monopoly stays on course for public health. Like I said, provisions regarding maybe the governance of monopoly, making sure that the public health and safety paradigm is adopted to evaluate the business practices And also it may be constraining promotions a bit more than what it's been in most of Canada, but certainly as it has been in Quebec, preventing rebates, temporary rebates and preventing people the business from showing products outside of the packages, the neutral packages in which they must be sold. So I'm going to conclude here. Thank you.

[Rep. Dan Frankel]

Thank you both for your testimony. I ask my staff to keep a record of who's identifying. We'll start with those who are here in person. Let me kick it off. Dr. Hammond, you show a legal market the legal market in Canada capturing 80% of users. I think the statistics we see in The United States are that it's closer to 70%. How would you account for that?

[Dr. Hammond]

Well, I would say this, that the most important factor is the time since legalization. I mean, it takes years for stores to open to consumers to find and become comfortable with the stores. So some of it really depends on which state you'd be looking at in The US. One of the main differences is that some of the states that have legalized adult use have lots of counties or areas where where they've opted out of retail sales. In theory, we have that in Canada, but it's very, very rare. We do also have some other differences that might address, issues about access and convenience. So in every jurisdiction in Canada, you can buy cannabis legally online. And, you know, it's regulated, as our stores. But to my knowledge, I think is it Nevada that allows that? California allows some sort of third party shipping. But generally speaking, that's not permitted. That might be an important area in terms of

increasing the access of legal stores. So I think it's probably a few things. We've also seen major reductions in price. So I'll just say this in Canadian dollars. But when we we when Canada First legalized in 2018, it was about $10 a gram of flower. It got as low as about $3 to $4 per gram of flour three or four years. So we had you know, the industry got very excited about this federal legalization. We don't have some of the constraints with your federal banking laws, et cetera. So part of that is just the massive rush into the market and a lot of competition between stores. But I think the factor of access, no local opt outs or very few online purchasing and very low price together, are probably responsible for the high rates. And by the way, we haven't plateaued. So our legal retail sales have continued to go up almost sort of a straight upward line, and we're now, you know, five and a half years after the fact. So there is probably still some ways to go.

[Rep. Dan Frankel]

Thank you. And what are Canada's testing requirements? How do you ensure oversight of labs and prevent lab shopping and THC inflation?

[Dr. Hammond]

That's a great question. So, there are mandatory testing and reporting requirements, that do involve independent labs. I know this has been a big issue in some US states. It's something that folks have discussed in Canada as well. I'm not aware that it's the same issue. I'm happy to pass those on to one of your, staff members in terms of what the actual testing and reporting requirements are. I will say that there's been discussion about trying to balance the burden on the industry with the benefit. And so one of the recommendations in that legislative review I mentioned is making sure that we make robust standards for the things that do matter, as you say, like THC testing, but we don't put any more burden that doesn't really matter. And I would say that something like THC testing is in the interest of the consumer. Know, there's a principle that a well regulated drug market, whatever that is, it could be medicines, is one where consumers get a reliable, you know, amount of the substance from the product, and and part of that is product testing. Thank you. Thank you for that. Let me call on, Representative Isaacson.

[Rep. Mary Isaacson]

Thank you. I had a question with regard to the products that, and I guess advertising you said, but flower and vape on your PowerPoint are highlighted and, edibles and, oils are look apparently discouraged. What was the thought process with that, especially with regard to flower and we're going to teach everyone how to roll it?

[Dr. Hammond]

Well, I'm not sure if this is your question, but there's a lot of discussion about, well, how do you reduce harm and trying to discourage the products that are of greatest harm? I mean, the rule is with the cannabis market now is there is an incredible diversity of products. I mean, some of them didn't exist fifteen years ago, But I'll be honest with you. I mean, I worked in the public health community. There's some lack of clarity about what we want people to use or not. We don't want people to smoke products because smoking is bad. The problem with vaping is you don't have smoke, but typically those products are very high THC levels. A lot of them have flavors that are enticing to young people. You have edibles, which in The US can have very high levels of THC. And we end up in this absurd situation where people are trying to dose by saying, well, I'll just eat the legs off the gummy bear. And so I'm not trying to cast any one product as a bad product, but there's probably a general principle where ideally consumers wouldn't be using extremely high THC products that are out there. Just for context, hash is the historical concentrate. Hash typically has like 30, maybe 40% THC. With these other products, again, it can be, you know, close to a 100%. So it's not about trying to preference a product, but it is possible. For example, Canada, is still in the process of passing a regulation that says you can't have flavors in certain smoked products. And the idea being there that you're gonna decouple flavors from products that might have excess risk. The issue with edibles is very tricky. We have a federal law that says you can't sell a product that appeals to kids. Well, outside of Quebec, know, what have people use for edibles, chocolates and gummies and cookies? So this is an area where I'll be honest with you. I think the vast majority of jurisdictions have just said, well, whatever's on the illegal market, we'll just all put it out there. There's virtually no meaningful restrictions on what products can be sold outside of Quebec. That is a big question. I can't give you the perfect answer, but I think we're in a position to start asking, do we want all products? Should we curb certain attributes of certain products? Like, for example, capping the amount of THC in an edible so you don't have to nibble the arms off the gummy bear.

[Rep. Mary Isaacson]

Okay. And then just quickly, what's the legal age?

[Dr. Hammond]

It varies by province. It's 18, 19, or 21.

[Rep. Mary Isaacson]

Okay. Thank you.

[Dr. Hammond]

Whereas you will know that in every US state that's legalized adult use, it's 21 in all cases as it is for vaping and smoking in the US.

[Rep. Mary Isaacson]

Okay. Thank you.

[Rep. Dan Frankel]

Thank you. Representative Schemel.

[Rep. Paul Schemel]

Thank you. Thank you to both of you. In previous testimony from earlier hearings, we'd heard that Quebec was a model that we might explore. I'm curious, Quebec sounds like it started from a lower baseline. I think I'd heard correctly, Professor Hammond, that Quebec had lower usage before legalization. So I would think that that would then impact kind of the statistics coming out of Quebec today. So it's difficult for me to discern what out of Quebec from the data there, what is a result of the policies they have, and what may actually just be unique cultural phenomenon out of the province of Quebec to make it distinct from other provinces. So if either of you wanted to speak sort of on that and how we read the data in light of that.

[Dr. Hammond]

I'll speak very briefly and hand over to Francois, but you're absolutely right. And that's a very important question to ask. In the sort of analyses that we do, because we can look before and after legalization, The bottom line is the simplest way I can put it is Quebec started lower, but they've observed fewer of the changes in the products that people use, in the increases in use that we see in virtually every other province in US state. So they did start at a different point, but it's and it's very specific. Like, why I was trying to show you that product graph is if Quebec allows those products, it looks just like every other province. For the exact products that it doesn't allow, they look different. So we have some specificity. So you're absolutely right that that is an important point, but I think we can be quite confident that, some of the different regulations and approaches in Quebec have had an influence on, I will say moderating some of what we see as the typical effects of legalization. And I'll pass over to Francois.

[Dr. Francois Gagnon]

Yes. I'm gonna say again what David just said. The increase in, in relative percentage, like if you're thinking that in Quebec, it increased, like, 2% for last year prevalence. In other

provinces, it might be 5, 6, 7, 8%. So the so so the the the percentage of of augmentation would not withstanding the baseline has been less in Quebec. The second thing, and to your answer directly to your question, the increase the difference in cannabis consumption as as as best as we can figure in Quebec started to to be different from the rest of Canada when the legalization came from the commercialization of medical cannabis. So that was around 2011-2012. I'm sorry. I'm I'm a bit off in my years on this. But, in those years, if you look at the the historical tendencies, you're you're gonna see starting a difference in there. And the the the most plausible explanation for that difference is that in many other provinces, like in Ontario or BC, you would see, dispensaries opening up on the streets, and the police would just not intervene. So at some point in in Vancouver, for example, which is in British Columbia, you would see, like, a couple of hundred stores to the point where municipal, authorities were giving out licenses for an illegal product. So it was kind of a bit out of hand. I think it was seen as as out of control even by the the people in BC and Vancouver, certainly. In Ontario, if you think about Toronto, the biggest city, you would have a few hundred stores also. So that was one big thing. And when the one big explanation, I think, of the difference that began to show around the years 2010, 2012. And the other explanation is probable most probable is that our College of Physicians in Quebec instructed the physicians in Quebec to not deliver medical documents to people unless they had embarked on a scientific experiment. Like it was part of you wanted to give out a document as a medical doctor, you had to make sure your patient was a medical protocol, which was not the case elsewhere. And also that it was really a last line of treatment, like all the other treatment options had been attempted before. And this was the last resort option. And this was not the case also in most of the provinces. The College of Physicians were more hands off in that regard. And that led to very different patterns of medical documents being sent out to patients. And so in 2012 or 2013, when the big companies in Canada were put in place and were allowed to sell directly to a customer or patients, The differences came out of this too. As for the stores, I'm going to finish this story. In Montreal, there was maybe one or two operating for a few decades, but they were closed on and off. At the most, we had seven, but they operated for a month or two months, whereas in many other big cities in Canada, outside of Quebec, you would find more than that, obviously, a few hundred in in in some cases.

[Paul Schemel]

Okay. Then one more question. Professor Hammond, you had said that that that, utilization had been sort of on an upward plane since legalization five years ago. Do you have any data that indicates where the expansion of the market has been age wise or education level, anything like that?

[Dr. Hammond]

Yeah, good question. So, you know, one of the remarkable and I'd say perhaps surprising aspects, this is true in The US as well, is that we haven't seen much increase among young people, among youth. And that's obviously one of the number one concerns. I think it surprised folks. Now The US and Canada, as you might know, have the highest cannabis prevalence in the world. So I maybe the cat was already out of the bag there, and it's sort of just remained high among young people. But apparently, it's not increased. We've seen, you know, the increases have been dispersed over other age groups. So cannabis in North America is an interesting substance where it's similar across socioeconomic levels and income education, you know, other things like tobacco with trends much more to the lower, socioeconomic status. So it's been, you know, across age groups. You know, there are some notable bits where it was some older consumers that maybe hadn't used it in a long time that are coming back in the market. But as you're thinking about these things, would encourage you to think about when daily use or near daily use. A lot of us don't think about, well, if someone has an alcoholic drink once a year, that's a problem. But as soon as we and the same would be true of cannabis for the most part. But as soon as we start thinking about daily use, that's where most of the problems would occur. And, and we've seen modest increases in that as well, but not among young people.

[Rep. Danielle Friel Otten]

Thank you, Chairman. Thank you, gentlemen. I guess my question is around regulatory framework for advertising and marketing, both from the perspective of what companies are allowed to include in their advertising or disallowed to include in advertising, and also with packaging and labeling. Are there any best practices? Are there any things we should be thinking about in terms of how we set a framework for marketing these products?

[Dr. Hammond]

Well, I would just say that I actually think that's one of the most important factors, and that factor will probably only be appreciated over time. So whether you look at tobacco, for example, or vaping products, e cigarettes, the marketing of the product is fundamentally important in terms of promoting more consumption, and that's particularly true for young people. That's just what we've learned over one hundred years in one thousand different court cases. The same can be true of cannabis. What's fascinating is that if I ask you to name cigarette brands, you'll probably all be able to name a dozen or two. If I ask you to name cannabis brands, we are at the start of that market. And so we're not going to pick that up in year two, three, five or six. We're gonna see that when my 10 year old ages into the period of use. Canada has strict federal rules, very strict. Quebec has even stricter. And

what we've done is actually we've looked at how that compares to US states. And what you see is when US states legalize adult use cannabis, you see greater exposure. Stores themselves are a very important form of promotion. So in Canada, have rules about what can be on the outside of stores and things like that. You don't see, in fact, we didn't see any increase overall in exposure to cannabis ads after legalization in Canada. That's because of the strict rules. So, you know, that's important. And I would say that states have different regulatory objectives. If the objective is to avoid increased use among young people, that's a very important part of that. And I said, you know, two minutes ago that we haven't seen increase among young people. The test of that in terms of advertising and promotion will be, as I said, in about ten years. Once you have kids that grow up, they recognize brands, they walk past stores and billboards, etcetera. On your second question, packaging and labeling, that is an area--- What I've tried to do is say that some folks consider restrictions as being sort of anti consumer. In fact, there are some regulations that are very much in support of consumers. And I would suggest that packaging and labeling are one of those. One of the biggest problems we have with cannabis is adverse outcomes from overconsumption. People simply consume too much. And when you read about hospital admissions, these are mostly things that are only a day or two or five hours in length, but they take a lot of health care usage and costs. And it's because many consumers have trouble, I'll say dosing, figuring out again how much of that cookie to nibble. And what we have not done a good job of in Canada or in US states is helping people to understand THC amounts. Most people don't know what the numbers mean. Most people get confused with CBD. And so I would that's very much in the interest of consumers. One consumer may wanna have a huge amount. You know, my mother in law's friend that asked me about using a gummy to help her sleep might want a tiny amount. A a good packaging and labeling will let both those consumers identify and consume their desired amounts. And right now, consumers struggle. And we've asked consumers in The US. They want more information about how much THC is in products. So part of it is the labeling piece. A second aspect of that is, you know, edibles are really challenging for dosing. You have states like Colorado or Washington state that have tried to do serving sizes. Sometimes you have to stamp a leaf on each five or ten milligram serving. Canada's gone a step further, and said you can only have a certain amount in the package. There's a middle ground where you say, well, you can sell more in the package, but each individual piece, like each gummy can only be so much. But, actually, consumers are quite supportive of that. You might wanna eat 10 gummies. But what the average consumer does when they enter the market is say, I'll have one. Now one puff on a joint only gets you in so much trouble, but one cookie or edible can land you in the in the emergency room. And so that's a way of using packaging regulations. Not to say that you can't sell THC products or high THC, but to say you have to package them in individual units or make it easier for people to figure out how

much of the drops to issue. So that's an area where there are some emerging practices, and it would be great if a state like Pennsylvania were to really think about that prior to legalization.

[Dr. Francois Gagnon]

If I might add to the regulation of promotions, the as David said, law in Canada, the federal law is quite strong, and the general logic is to allow informational promotion. And so generally speaking, what you would do typically to incentivize people to use is prohibited. The concrete understanding of this is, the legal understanding of this is a bit tricky. As I mentioned, you know, even public bodies, resellers in Canada understand this as not prohibiting rebates, but in Quebec, it's been said in the law that the SQDC or public monopoly cannot do promotional rebates or temporary rebates. So it cannot advertise rebates and it cannot do any, on this front. So if you're gonna go for a law that allows only, informational promotion, which would be typically, this is a product that contains this much THC or this much CBD, and it contains this many grams of products or, and it's dried flowers as opposed to another form of product. Make sure that you have more provisions. Would say that bans certain types of practices that could be understood as not incentivizing in Quebec. We have the same difference between this cannabis law on promotion and on cannabis and tobacco. We've done the same difference. So in tobacco, we prohibit also promotional temporary rebates. I think it's a good practice too. Also, issue of the deferral law with regards to it's the same issue with showing of products outside of the packages. What concretely that allows people to do, or business to do outside of Quebec, is to show the products outside of their package in which they must be sold, which are neutralized. It's not neutral package in the sense of tobacco, but you have a range of colors that are allowed and you can have a brand on the product, but you cannot see the products or you cannot use stylish packages. And this is prohibited explicitly in Quebec. So the SQDC, our public monopoly, can only show in promotions the products in their packages. When this is not specified in law, the promoters or the retailers can use stylist packages, alternative packages that are stylized and that can be appealing to youth. And they can also show, for example, gummies or chocolates outside of their packages, which might be appealing to kids too. And as David mentioned, you know, think of, you know, that's for media presentations like the promotions that go through media means. But if you think of public space, kids are circulating, youth are circulating in public space, so they will see things from the street. If you have billboards or if you have windows that allow people to see inside, will be able to so kids will be able to see through these or be exposed to promotions outside in these spaces. So we've disallowed that in Quebec too. I think it's pretty much the case in the federal law too. I think that's a good practice and that might

explain why there's not been much of an increase in exposure that's been mentioned David earlier.

[Rep. Lisa Borowski]

Thank you, chair Frankel. Thank you, gentlemen, for your presentation. My, question, David, you brought it up in your prior answer around the retail stores and, how I'm glad to hear that they can't have a lot of, you know, I guess, outward advertising and things like that on the store. How do you guys determine where your stores can be located? You know, I know here in Pennsylvania, have some strict laws around the medical marijuana, where those can be located, but, how do you guys determine that and where you are?

[Dr. Hammond]

Good question. It does vary by province by province. So some, the provinces, regulate the retail side of things and some provinces have rules about proximity to schools. Some provinces have been so basically, just, you know, it will be like in Pennsylvania where you apply for a license, and that license is associated with an address. And some provinces are more prescriptive about it or not. So one of our provinces, Alberta, which is entirely private, has largely taken a hands-off approach. They haven't worried about trying to space out the stores. You have again, Quebec at the other end, which they themselves are running the stores. So they decide where they go. We have other public models that have, you know, slightly different. So, I mean, really that's up to the state of Pennsylvania, both in terms of how many how prescriptive to be about the number of licenses. And as you say, where you would want to restrict them and, you know, starting with, I would imagine the same principles would apply to what you currently have, for medical cannabis dispensaries. You know, I I think it's typically uncontroversial to say they shouldn't be near schools, for example. But yeah, that's typically a part of it, but different jurisdictions, you know, use those restrictions to different extents.

[Dr. Francois Gagnon]

Most provinces I've set up rules around distances from schools, I would say. I've created a report on the differences between Ontario, Alberta and Quebec, if you're interested. There are even provisions in the law that allow municipalities to create stronger provisions or to create more restrictions. And you know, it's a bit difficult to go into the details now, but some municipalities have said we don't want stores close to detoxification centers, for example, or addiction treatment centers. These are municipal regulations, but the provincial laws allow them to do so. So that might be something you want to consider, to allow municipalities to have more restrictions. In Quebec, as David said, it's entirely up or most entirely up to SQDC, our public monopoly, to choose the locations of the stores and

the number of stores. That's their business decision, and they have to do this according to the mandate. There's one provision in the Quebec law that mentions that for most of the province it has to be 150 meters from, 250 meters, I'm sorry, from a school or up to university, but also in Montreal because it's a denser city. Montreal is the biggest city in Quebec and it's quite populated and dense in downtown area especially. And so there's been an amendment, an exception made for Montreal. It says that 150 meters should be the distance from schools because otherwise there would have been no room for for stores. Other than that, I think the SQDC has been directed to work with municipalities as to where they should locate the stores. And even if municipalities don't want stores, they can either pass a rule or just tell the SQDC they don't want one. And so far, what I've heard is that the wishes have been respected. One neighborhood in Montreal has said that they didn't want a store and the SQDC has not gone there. But it's led to different things. Like for in Montreal, the municipalities wanted the stores to be closed to metro stations or subway stations, maybe it's a better word, as that people would not have to move by car. So there's some flexibility in the law to respect municipalities and to show where their priorities are and align them, and so that might be something you want to consider, allowing municipalities to have some say in where the stores will go.

[Dr. Hammond]

And I'll just add to that. Remember that because we have online cannabis sales, that helps to cover geographic areas that don't have many stores. Look, is there is a certain happy place here where you do need a certain amount of retail density to ensure consumer access, easy access. You want it to be easier to access a legal store than an illegal dealer. I would say that the vast majority of Canadian jurisdictions have that and those that don't, you can have like next day delivery online. And so it's about balance. And there's no probably magic number. It's about how big geographically your state is, how many municipalities or counties might opt out. But it is about considering that in the balance, I think in terms of displacing the illicit market.

[Rep. Lisa Borowski]

Thank you for that answer. I would love to see the report that you have where you compare the different, I guess provinces and that you mentioned Francois. I would love, I would love to see that.

[Dr. Francois Gagnon]

Thank you very much. It's my pleasure. It's only in French for now, but I'm with David in June and I have to write up a short article about it in English. So I might find a way to send it to you.

[Rep. Lisa Borowski]

I'll have to brush up on my high school French but thank you very much. I appreciate it.

[Rep. Dan Frankel]

Thank you, Representative Borowski. I have three more members who have questions, and I would ask, we're running a little over, but this has been so really informative and helpful. I have Representative Krajewski, Representative Bonner, and we'll end up with Chair Rapp. And if everybody could kind of be as concise as possible both in questions and responses, that would be appreciated. Thank you. Representative Krajewski. Thank you.

[Rep. Rick Krajewski]

Thank you, Chairman, and thank you both for your presentation. It's been extremely informative for myself as a legislator. And my apologies if this has already been answered already. But one of the things that, you know, we've heard come up in the hearings regarding legalizing adult use is, one, concerns about usage and any kind of addiction or abuse problems that might arise from usage of cannabis and adult use cannabis, and then also the possibilities of that, you know, potentially being a gateway towards using other illicit or harder substances. And so I'm curious about what if any kind of wraparound services are provided by either the provinces or the federal level. In regards to, you know, the resources for treatment addiction, you know, responsible usage, any kind of public education around usage that is that was done and it is done as part of the legalization framework to try to just, provide that those support surface services, you know, if if the potential were to arise.

[Dr. Hammond]

Well, that's an excellent question. And to answer it very briefly, it varies. So that, I will tell you this, that one of the positive upshots of legalization is that most provinces or states feel that there's now a mandate to do this responsibility. And part of that mandate is conducting public education campaigns, making sure it's in curriculums with schools, etcetera. And that I can say that that's kind of happened. Like we had more discussions about cannabis and health effects and people showing up on the news to talk about it leading up to legalization and shortly after than ever before. And now some jurisdictions have been able to sustain that better. And in fact, there's one province that earmarked, and I think this is true of some US states, they earmarked some of their tax revenues to fund ongoing campaigns. And that is an excellent way. now nobody likes earmarks, but, it's an excellent way of of doing that in its fullest extent and to making sure it's sustainable. And, and you will know that cannabis is this really interesting substance where you have large groups of people that overestimate the health risks. You have large groups of people that

underestimate the health risks. And so you're absolutely right. I, my talking point was always that, you know, this is the beginning of a national or a state conversation about the role of cannabis and substances and what it means for something to be legal, but still harmful. So I guess I'm just echoing the points that you've raised. And there are ways of baking that in to an act or a set of regulations where you ensure funding and sustainability for some of those efforts.

[Dr. Francois Gagnon]

I don't have much to add to the point in Quebec specifically, to his point that nobody likes CE Marks. In Quebec, one hundred percent of the revenues of cannabis go to funding either cannabis prevention, harm reduction, treatment or research, or to, you know, prevention largely understood of psychoactive substances, other psychoactive substances. So 100% of the revenues, except for sales tax, are directed to the general fund, but the rest, all the profits, are going to these initiatives. And there are reports about this I can send you, they're in French again, but there are reports saying what type of activities have been funded. But in terms of cannabis on reduction, for example, you would have formulations of lower risk guidelines in many public health departments, regional public health departments. In terms of, it's been funding also low threshold housing for people in anomalous dire situations. So it's varied, it's even gone to law enforcement for driving under the influence. It's funded many different things that can be said to reduce or aim to reduce arms of cannabis and other drugs. I can see you do reports saying mostly where they have been. So that legalization of cannabis has actually been one point where elected officials have said, okay, we're going to take the revenues from that and earmark it for that, and leave that as such. The main issue has been the outgoing of funds, I would say that's been said by the Ministry of Health itself in the report on the implementation of the law. There's been, because there's been so much money, to spend, the issue has been to get it out and to find the good resources to fund, and the decisions on this have been a bit slow, it seems from this report. But other than that, people seem to be pretty happy. Even the Ministry of Finance of Quebec has said that this is a working model for alcohol and other substances that are sold in Quebec. For example, lottery gambling is also a monopoly in Quebec, and the Ministry Finance has said that this might be a model to replicate for alcohol and gambling. So it seems to have been working fine according to our officials.

[Rep. Rick Krajewski]

Okay. Thank you. Yeah. If you could send over any reports or documentation about the, yeah, the revenue or or any of those research, that'd be great. Yeah. Between between Duolingo and Google Translate, hopefully, I can figure it out. Thank you.

[Rep. Tim Bonner]

Thank you, Mr. chairman. As a follow-up question, are you aware of any studies that have been done to calculate the social, the medical, and legal costs regarding the implementation of the legalization of marijuana compared to the tax revenues that are being generated?

[Dr. Hammond]

Good question. Not to my knowledge in a formal sense. There are, of course, indications of it. We have very good data on revenues from states, provinces federally. I think it's fair to say that there's a fair number of upfront costs, and some of those upfront costs have been sort of, underappreciated just in terms of the work that's involved, regulatory, managing license fees. But certainly, the revenues have been substantial both, you know, through sales taxes in Canada. As I mentioned, the provinces are the distributors. So there's profit there as well. So I think it's safe to say that the revenues have far outstripped the costs. There are broader costs that you've referred to in terms of, for example, reduced, criminal sanctions. There are some increased costs in terms of health care costs, but, so that's an excellent question. But, again, my understanding would be the revenues would exceed the cost. And, Francois, I don't know if you have anything, more detail to add to that.

[Dr. Francois Gagnon]

Well, actually, my organization is creating reports together with another organization on on the cost and revenues in substance use across Canada and and details all these costs. But I'm not aware that it covers legalization per se, but, I I could send you, the links to see, how much things cost, both in terms of, for example, loss of productivity occurring to substance use. cannabis is one of the class of substances that's been looked at.

[Dr. Hammond]

Yeah. And I just add that would depend too on just what level of taxation you set, things like licensing fees and just the scope of the revenue that you, you know, you will apply in terms of, of, you know, fiscal measures.

[Rep. Tim Bonner]

Major concern that I have with legalization of marijuana is the similar road that has been traveled with tobacco. And that is, are we gonna find ourselves twenty to thirty years from now with the government heavily advertising informing the public, don't use this substance? So are we gonna end up at the same point we now regret the usage of tobacco, the health effects that it has on our population?

[Dr. Hammond]

Well, if anyone tells you they can give you the exact answer to that, I wouldn't trust them. I think that is a fundamentally important question to answer. Someone who spent twenty five years working on tobacco, including for your country and many of your states, I I would say that objectively, the health co op know, the health effects of cannabis are less than tobacco. And so I can tell you in Canada, for example, the two substances with the greatest health care costs are tobacco and alcohol. Now maybe that's a cautionary tale about what it means when you legalize a substance. But I think you are absolutely right. And to give you an unsatisfactory answer, I would say that that will be determined by how it's regulated. And that's why I say like, think about tobacco, always being legal in Pennsylvania, always being legal in The United States, but it's regulated much differently in 2024 than 1950. We have it's still a massive problem, but the consequences are much different today because of how it's regulated. And, you know, cannabis legalization, because it's often done through ballots and propositions, You have these regulators and states that just they've got like six, twelve, eighteen months to throw open the market. And we've not--- a lot of them have not had the time to do what you are doing and do this in a thoughtful planned way. And so I think going through that process typically leads to more questions about how can we have a legal mark that works for consumers, that works for industry, but also for public health in the long term interest of those consumers, and that probably will involve a few more restrictions than some of the early states. But I think your question's a really important one for everyone to ask.

[Rep. Tim Bonner]

Thank you. And I appreciate your testimony and, thank you, mister chairman.

[Rep. Dan Frankel]

Thank you. And, our last, last, member, to ask a question or make a comment is, Chair Rapp.

[Rep. Kathy Rapp]

Thank you, Mr. chairman. Thank you, gentlemen. Your testimony was very informative. And, Ashley, my, questions was, basically follow ups to the the last two questions. I was

surprised to see that 100% of the profits go to prevention treatment. And Doctor Gagnon, as you stated, it seems up to this point that the funds are there to cover those treatment plans for folks who are having addiction problems with marijuana use. But when you were speaking also something that's come up in other hearings, you mentioned DUIs. And so that has come up. I wanted to ask if there has been any, if Quebec specifically or the Canadian government has come up with any specific testing for, DUI.

[Dr. Francois Gagnon]

Yes. Yes. There is there are testing, mechanisms that have put in place, but it's variable from province to province. It's a difficult answer to give as a whole, but there are thresholds in the criminal code because it's the criminal code that sanctions these behaviors. And the thresholds are, if I remember well, two nanograms per milliliters of blood and five milliliters five nanograms of by milliliters of blood. And you have different sanctions that apply. And if there are conjunctions also with their sanctions for driving with alcohol and cannabis together, the threshold of two nanograms is used for cannabis. You know, it's but as for the testing procedures, it's basically the same as with alcohol, which is in Canada. I think it's pretty much the same in The US generally. It's roadside testing. You would have a first screen by a police officer that would try to assess the person for his behavior, his cognitive competence. And if it's suspected that the person was intoxicated by cannabis or alcohol, it could ask for roadside tests. I'm not aware how many police services do have testing devices for roadside testing, but I think there are some. And then afterwards you would have testing procedures that would bring the person to the police station, and then you would have a complete cognitive and behavioral assessment. And the testing of the substance in the blood would be one element of proof to bring to court. So that's the same procedure that's the same in alcohol in Canada generally and Quebec too.

[Rep. Kathy Rapp]

Thank you so much. And then just real quick, going back to the prevention. So from what I'm hearing from both of your testimony, have you seen at all an increase in treatments and harm to adolescents or children who may accidentally be able to, you know, their parents are using marijuana or if there are edibles in their home. We've and I've seen written, reports about an increased, danger to children, more children, more cases being referred to poison control centers here in The United States. Have you seen with legalization more of an increase of a negative impact on small children and adolescents as far as the treatment component?

[Dr. Hammond]

Sorry, do you mean treatment for like adverse outcomes or?

[Rep. Kathy Rapp]

Yes, for marijuana.

[Dr. Hammond]

Is there a more increase in adolescents and, small children, having access to marijuana or edibles? The short answer is yes. And that one of the clearest indicators of problematic use in the states and provinces is an increase in calls to poison centers, visits to ERs. Again, those are typically for acute problems to two ways. Consumers taking on too much and then what I'll call accidental ingestion for kids. Virtually all accidental ingestion is associated with edibles. They are inherently appealing. It's just not the same risk as other products. So look, that has happened in states that have not legalized canvases, you know, or only have medical cannabis as well, but not to the same extent. Have we seen that in Canada? We have. The number of accidental ingestions among kids is it remains relatively low, but it's obviously a huge concern for folks. And I would suggest that that is one of the rationales for why, well, it is the rationale why, for example, the province of Quebec does not sell candy related edibles. That a joke I made is that there's not too many kids sneaking, you know, broccoli and beets and cauliflower. That's not an area most jurisdictions wish to go. There are, campaigns, education campaigns that encourage folks to keep their cannabis hidden or ideally locked up from kids. You could make the same argument about alcohol and cigarettes and other substances as well. So, yes, that is a general phenomenon that's occurred and and it does look like it's been exacerbated by legalization, which means people are more likely to use those heavily manufactured products. The solution isn't simple, but it's probably some combination of the measures that I just mentioned. Francois, do you want to add?

[Dr. Francois Gagnon]

I would just add that in Quebec, at least, the consumption, declared by youth before legalization was going down and legalization didn't change anything on this pattern for less than 18 years old. So there's been a reduction continuing after legalization. And to speak to the point of edibles and accidental ingestions that lead you to hospitals, to hospital admissions or calls to poison centers, there's been an increase in Quebec. There's been one study that has tried to show or see if there was a difference between Quebec and other provinces. And from this study, you could think that the increase has been less in Quebec. As David mentioned, in Quebec, to protect youth, not only ingestions, but you know, the idea was also to be less attractive to youth in general, not only small kids, but to youth in general. We decided that there would be no chocolate candies, confectioneries, pastries or desserts. So pretty much everything that's appealing to kids is not sold in Quebec. And

typically you would see like cauliflowers or lately there's been sausages, dried sausages that have been sold or things like this, you know, but they would be not on these four categories. The other restrictions around products that might be important is for vaping liquids. We followed actually, I think it was Washington State that allowed only the sale of extracts or concentrates that would have the characteristic taste of cannabis. And that's a good practice, I think. So a ban, a complete ban on added flavors or flavors that would conceal the taste of cannabis, it might be a good idea because there's a lot of the expectations around vaping liquids because they have so much high content. So if you can ban at least the attractive part of it, which is to young people, it would be maybe an option to consider. So banning flavors in liquids and other extracts might be a good idea.

[Dr. Hammond]

Right. Ten more seconds. I forgot to say childproof, packaging. Secondly, we have rules about you can't see through the packaging. So if I have a package of edibles, you can't see the cookie. It's not a clear package. And then the third one is that's also the rationale with our ten milligram limit on edibles, which is if someone does get in there, they're not consuming forty, fifty, a hundred milligrams of THC. It's 10. Sorry. Just forgot to add that.

[Rep. Kathy Rapp]

Thank you, gentlemen. Your testimony was very informative. Thank you, Mr. Chairman.

[Rep. Dan Frankel]

Thank you, Chair Rapp. With that, that concludes. I want to thank both David and Francois. This was an extraordinarily helpful, informative hearing. And thank you for being with us and sharing so much time. We are running a little bit over time today, and we have our next panel here, which is Rodrigo Diaz, Executive Director of the Pennsylvania Liquor Control Board Douglas Hitts, Deputy Executive Director Andrew Collins, Chief Operating Officer. We are under a pretty tight time constraint, so I'm hoping that we can get through your testimony and some questions by 11:40 because we have to break and restart at twelve noon precisely. So we have your testimony. You know, if you can just summarize, that would be great.

[Mr. Rod Diaz]

Sure. We can be fast and give us give you some time for questions at the end. Again, my name is Rod Diaz. I'm the Executive Director of the Pennsylvania Liquor Control Board. Some of you look very familiar. Been with the agency for thirty years. I have with me our Executive Deputy Director, Doug Hitts and our Chief Operating Officer, Andrew Collins.

First, thank you to all the Chairman and Chairwomen for inviting us to speak on this issue. I'll start off by simply saying we as an agency don't normally take a position on legislation. We do what you all tell us to do. The other important thing to emphasize is we don't sell cannabis. We've never sold cannabis. You've got liquor questions for us, we feel very comfortable giving you specific answers. We're here to tell you a little bit about how we do alcohol, but we have no special knowledge in regards to cannabis. So with that in mind, we operate about 580 specific wine and spirit stores throughout the Commonwealth, thirteen licensing service centers, which are basically locations that focus on licensees And we have a website, fwgs.com. We make a lot of money for the Commonwealth between profits and taxes. For the last several years, we've in addition to the taxes, forwarded $185,000,000 a year to the general fund. That being said, we're strongly committed to the responsible sale of alcohol. So, know, people have to be 21 years old to possess, purchase, or consume alcohol. Our policy is to ask every customer who appears under the age of 35 for a form of identification. The liquor code tells us what kinds of identifications we can look at. Our personnel are trained to look for counterfeits. We have scanner ID device scanner devices to at our point of sale, as an additional level of protection. In fact, in our last fiscal year 'twenty two-'twenty three, we scanned 2,500,000 IDs. In addition to not being able to sell to minors, you can't sell to VIPs, visibly intoxicated persons. And we have training associated with that. If one of our employees were to do that, there are serious ramifications, including up to termination of employment, depending on the circumstances. In addition to that, the private manufacture and sale of alcohol in Pennsylvania is not legal unless you have a license issued by us. We have an entirely different bureau, a licensing bureau, which processes its applications. And, you know, the process consists of reading the application, making sure they meet all the statutory requirements in terms of whether they can hold a license or permit. So for example, you have to be a person of good refute. If you have felonies in your background, may preclude you from getting certain types of licenses. In addition to that, while day to day enforcement of the liquor code is handled by a different agency, the Pennsylvania State Police Bureau of Liquor Control Enforcement, We do review each licensee and permittee's operational history at renewal time. And, if we have concerns as to whether or not there's been abuse of the licensing privilege, we will object to the license. The three board members will then decide it at a public meeting. And depending on your history, you may lose your license. There is an appeal process in the local courts, but that is one way that we help regulate the industry. And one of the issues that matters very much to us is sales to minors, sales to visibly intoxicated. That gets our attention. In addition to the regulatory responsibilities, we are specifically authorized to issue grants for purposes of alcohol education. We do it in a two-year cycle. I think we're up to $4,000,000 every two years to various groups, law enforcement, educational groups, to help peer training, social norm campaigns, increasing police patrols, college alcohol

assessment surveys, to help those communities that have to deal with the issues associated with alcohol abuse.

In addition, licensees are required to undergo certain training. So if you're an alcohol beverage server, you have to go through mandatory training. If you're an owner or a manager of a licensed premise that has a retail side, such as a restaurant or hotel, you have to go through training. We provide the owner training, sorry, the owner manager training free to licensees. We license the entities that provide the seller server training to licensees. If you don't comply with that, you can get cited by the state police for violating those provisions. We also support alcohol efforts in controlling the bad effects of alcohol through funding. So by statute, we provide to the Department of Drug and Alcohol Programs transfer amount equal to 2% of our profits. So in fiscal year 2022-2023, we provided 5.2 million dollars to the Department of Drug and Alcohol Problems for their funding. We also are responsible for all the costs associated with BLCE and alcohol enforcement. Last year that was about $32,000,000 And we also pay for all the costs associated with the Office of Administrative Law Judge, which is the entity that processes all the citations. So if you're cited for something, entitled to an administrative hearing. Those hearings are held in front of the Office of Administrative Law Judge. So in a nutshell, that's what we do.

We did have a couple issues you know, that kind of caught our eye from our experience with alcohol, that we thought we would just bring to your attention. So the liquor code allows municipalities to ban state stores. We have, I think, about 17 municipalities that have done that. In addition, we can't put a state's open 300 feet of a high school or elementary school. And in Philadelphia, there's actually an additional process where the city of Philadelphia and neighbors can actually protest. So there are all these--- allow for some kind of neighborhood input on whether there should be a location there that sells alcohol, something you might want to consider.

The liquor code, as I mentioned earlier, mandates training for certain people. If you're serving alcohol, if you have an ownership interest, you might want to consider that. I'm not sure what that training would consist of, because again, we sell alcohol, we don't sell cannabis. I'm sure there's some similarities, but I'm also sure there's going to be some things that are different. As I mentioned before, the Liquor code authorizes us to issue grants to community groups. You might want to consider that. We fund enforcement. We fund the Administrative Law Judges. Again, if you do legalize this, you're going to have enforcement issues. You're going to have to fund that so that's something you should consider. And then some of the other stuff, which is different than us, right? We get most of our product from outside the state. Most of our sales are credit card sales. Cannabis is still illegal at the federal level, so those are issues you are going to have to address, right? It's a

cash business. The product doesn't cross state lines because of the federal issues. Not our issues, but we just want to something you all would have to address. And just kind of the last thing is we do have private partners who are involved in our supply chain. We have a warehouse, a large warehouse in Philadelphia. We have a warehouse outside in Allegheny County. Don't know what those companies' positions are in terms of being involved in cannabis. So that's another issue you would have to deal with. And that's the quick summary. Again, happy to answer any questions, but we don't sell cannabis, so best we can.

[Rep. Dan Frankel]

Thank you. Sure. But as you probably heard, we were looking at models that have similar operations. What's the process for a new business being able to sell in state stores? And also, along those same lines, I want to ask you, how do you determine what kind of shelf space a product gets in a state store?

[Mr. Rod Diaz]

All right. So it's all on our website. There is a procedure if you want to list a new product. You typically will give us a sample. We will ask some information about the product. Is it being sold in other states or other jurisdictions? What's the sale through? Are there reviews of the product? And then we have buyers who will look at the product. The committee gets together and tries to make a determination, hey, this is something we're interested maybe as a one time buy, this is something we're interested to list on a regular basis. And they consider all those factors such as sell through rate, such as the price point, such as how it's doing in other jurisdictions when making that decision.

We have a slightly different process if you're a Pennsylvania producer. We do want to we will consider Pennsylvania products independently. We will allow any Pennsylvania licensed manufacturer, and we are close to 1,000 of those between wines, wineries, distilleries, breweries, but we don't sell beer. And we'll allow them to place products in up to 10 stores, Andy, is that right? Yeah, okay. And then we'll see how that does, if it's a product that sells well, then we might consider it for a one time buy or regular listing. Shelving is done through planograms. We have some industry input on that. We actually have a contract for where the services are provided free of charge. Unlike other industries, you can't pay for shelf space in the alcohol world. Slotting fees are illegal. So we just have to make a determination based again on what we think we're going to sell, what the sale through is, and how we're schematically setting up that particular story.

[Rep. Dan Frankel]

Thank you. Representative Isaacson.

[Rep. Mary Isaacson]

Thank you. Two quick things I wanted you to touch upon. Could you speak with regard to tax collection on behalf of the Commonwealth? I think, the way the way you, the LCB handles that on our behalf. And also, could you speak to your leases and the terms of them? Because if as you were just talking about product selection, it's product spacing also, and so how many leases and the terms that you do them? And do you understand the two things I wanted you to touch upon?

[Mr. Rod Diaz]

No, sure. Thank you. Andy, you want to talk about the leases since that's your area?

[Mr. Andrew Collins]

Sure. I'll start with the leases. So each one of our stores are independent leases that stand on their own, and they're negotiated through DGS in partnership with us. So while they are independent, they are different in every single location. And it really depends on the situation, the space that we have and the community that we're servicing that will determine the size, what we're willing to pay, fair market value in those areas. So that's how our leases work.

[Mr. Rod Diaz]

And if I could just add one thing, You know, one of the things we consider since we are [unintelligible exchange through hand motions I think? Hard to tell because legislators are all moving their mouths and talking to each other but only one has a mic on. Time stamp is 1:39:13]

[Mr. Andrew Collins]

They vary. They vary by the store or location that we're in. So for instance, if it's a new market that we're going into, we may go for a shorter lease term in that area to understand what the area is, how we'll be able to grow. In other areas more established, where we have a good presence and it's a solid store, we may go longer lease terms in those locations. So it could be from three years to ten. It just really varies.

[Mr. Rod Diaz]

And leases will often have an option year or years afterwards. It again just depends on the location. The one thing I did want to add is because we are still somewhat of a monopoly, we will sometimes put stores in locations just so that the people in that area have access to alcohol. So in the more rural areas where we may not be making much money at all, we'll still have a store so that people have to drive five miles to a state store, not 25 miles. And

that's one of the factors we consider. You'd also asked about tax collection. Obviously, collect all the taxes. There's an emergency tax of 18%, which has been in effect for decades. So I think the emergency is over, but the tax is still there. We collect all that. We obviously collect all the sales tax. Private industries do that a little bit differently. We have cash revenue what their collection rate is.

[Rep. Mary Isaacson]

Exactly. That's the testimony that I wanted to point out to everybody that you in your establishments collect our tax revenue and it goes right into our coffers, we're not waiting for quarterly remittals from the private entities. Thank you. Sure.

[Rep. Paul Schemel]

Thank you, Mr. Chair. I know the LCB does some amount of advertising now to advertise the state stores. Is that done to increase or to sustain sales? Or what is the motivation in the advertising that you do?

[Mr. Rod Diaz]

Part of it is to promote sales, part of it is, to inform people of the availability of alcohol, and what our product selection we do have. So I mean, when I started here thirty years ago, we really didn't do that. And that was a criticism we got, right? Who wants to get to the stores? They're not consumer friendly. And it's always a balancing act, between being consumer friendly and being responsible. And that's what we try to be reasonable in our advertising. Their liquor code does have restrictions on what licensees can advertise. We have First Amendment, so they're not particularly onerous. Under the liquor code, licensees aren't supposed to be marketing towards minors, really. They're not supposed to be marketing in proximity to schools. We try to follow the same rules for ourselves.

[Rep. Paul Schemel]

One of the models that I'm sure you're aware of that's being explored is to have cannabis sold through state stores, perhaps LCB stores. If that were the case, how does the state balance requiring employees to work in an environment where they would have to violate federal law?

[Rep. Rod Diaz]

We will do what the legislature tells us to do. I mean, you're going to provide us some guidance on those issues. When I mentioned toward the end in passing, there are certain things we do. We accept credit cards. If you decided to do that, you know, we would ask

you to provide guidance to us on how to address those issues. So, again, we don't advocate. We will do what you tell us.

[Rep. Timothy Twardzik]

Thank you so much for your testimony. Appreciate the information. With the size of your stores, I'm not sure you really have room to open a whole new business, and I would not want my four queens affected in Schuylkill County because we'd be upset.

[Mr. Rod Diaz]

I suspect my chairman will not let any bad things happen to Schuylkill County.

[Rep. Timothy Twardzik]

We agree. But it's an interesting program that it just doesn't seem to fit the stores because Schedule one would require probably $1,000,000 in security in each of the buildings. So, know, I'm not sure where $580,000,000 are going to come to get your stores ready to sell this product. But there's also the issue of twenty-one years old works, but we've had prior testimony that talks about marijuana should not be used by people under 25 or 26 years old. So would a dual system work in your store that we would require youth to be aged 26 before they could purchase marijuana?

[Mr. Rod Diaz]

Again, we will do what you tell us to do, right? We are as I said, we checked 2,500,000 IDs last year. If if you mandate to us that, we check everyone's ID and that for certain products, we have to follow a certain set of rules that we are your creation. you tell us what to do. What we are asking you, is to be cognizant of these issues that you're raising and address them so that we're not just making, you know, we're not making it up. We have clear guidance as to how you want us to address those kinds of issues.

[Rep. Valerie Gaydos]

Thank you. Thank you, mister chair. The question I have is, you know, marijuana is a schedule one substance. What are what are the plans for security at, at the various locations? And, of course, you know, at the cost of covering each of these stores, you know, where is that that money coming from?

[Mr. Rod Diaz]

We're back to you're gonna tell us. If you tell us that we're supposed to sell, cannabis, then we're gonna have to, as we do for various types of alcohol products, make determinations.

Okay. We have this additional mandate. How does this affect what location we're gonna be at? How does this affect, the security? We have, you know, we have a contractor that provides security to most of our stores, both in terms of cameras, in terms of security guards. We have the--- what's the safe? But we have SmartSafe. We have the SmartSafe system. When the money goes in, it doesn't ---it's very hard for it to come back out. If the legislature tells us that we have these additional duties, then we will look at the what those additional duties are, and we will, have to make determinations as to how to address those concerns. And we acknowledge that those are concerns that we would have to address.

[Rep. Valerie Gaydos]

Well, I guess then maybe my question is that, you know, your team runs these stores, so, these are things that we would certainly look to you to identify. and that's why we're here at this hearing is that we certainly want your thoughts on this. It is a concern, and, you know, we'd like to have you guys get back to us with either numbers or things like that, that if you were to have security, what do you think is appropriate? Because, I mean, we wanna do this as a team. So for I I'm kind of disappointed in your responses saying, well, you guys go ahead and make the decision. Well, you know, you're running the liquor stores. And, to be told – its on you is--- I just I'm kind of shocked at that answer. I would expect, you know, something more from your department to, help us kind of figure this out.

[Mr. Rod Diaz]

And we can and, you know, I apologize. I'm not trying to disappoint anyone here, but we have expertise in alcohol. I can give you what I would think are good, solid answers if you have alcohol questions. I'm not going to pretend I have experience in cannabis. So it's gonna be a learning process, and maybe that means we reach out to Maryland or some other state. But I'm you know, we don't have experience. So what is your what it would be your number one concern then for security if you were to add a schedule one substance?

[Rep. Valerie Gaydos]

Wait. Well, that that would we that would be something we would have to sit down and discuss.

[Rep. David Delloso]

Thank you, Mr. Chair. Executive Director Diaz, do you have any presumption that the sale of adult use cannabis at the state store level would preclude you or prevent you from being

able to generate enough revenue to incorporate the proper safety measures at the stores and expansion if needed?

[Mr. Rod Diaz]

We have no presumptions at this point because we're just not familiar with...

[Rep. David Delloso]

Exactly. And that's answer I anticipated. What we do know from other states is that it is a very, very lucrative business. And what we do know in Pennsylvania is that our seniors are being crushed by taxes and our schools are underfunded. And this might be an opportunity for the state to take control of some of these tax issues by distributing them in a safe environment such as the state store system. I have been a lifelong Pennsylvania resident, I could tell you every beer distributor and every bar that I could get served at at the age of 18 or 19. What I can tell you is that that was not a single liquor store in Pennsylvania that I could walk into and access alcohol until I was 21. As far as marijuana being a Schedule I drug, the absurdity of it is more indicative of the construct of the legislature in the federal government than it is anything else. I anticipate, I would love for my bill to go through. I would love to see the state of Pennsylvania take the any revenue derived from this and ultimately it's a syntax the same way cigarettes are a syntax and alcohol and casino gambling is a syntax and apply it where it belongs to the citizens of Pennsylvania, not monstrous corporate interest that sees the opportunity to make money on top of money when the citizens of Pennsylvania struggle. And I guess there's really no question mark at the end of that. Thank you.

[Rep. Dan Frankel]

Other members before we conclude this session? Chair Deasy.

[Rep. Dan Deasy]

I'll be very brief, Dan. I just wanna thank you guys for testifying, Rod. Obviously, a lot of hypothetical questions were asked of you, and we appreciate your time today. Again, we talked about security. There's a new store opening up within my district. I had an opportunity to tour that facility and the security measures in place and I was very impressed. So, I believe we have a good model right now and if we choose to go in this direction, I'm certainly confident in in your agency to provide that as well. So, again, thank you guys for being here.

[Rep. Dan Frankel]

Thank you, chair. With that, gentlemen, thank you for sharing your time with us today. Very much appreciated. And we may be back having conversations with you. Thank you. Take care. With that, we're going to take a break until we will reconvene at twelve noon. And we have two more panels for the afternoon session. So thank you, everybody. We'll see you back here at 12:00.

---Break --

[Rep. Dan Frankel]

Dr. Vandrey, are you online? Okay. I think we will reconvene at this point, and I know there will be probably members and audience members coming in, but we do want to be respectful of our panelists today who have been generous with their time. Our third panel today is actually one individual, Ryan Vandrey, Doctor. Ryan Vandrey, who is at Johns Hopkins University School of Medicine, the Behavioral Pharmacology Research Unit. So with that, let me turn it over to Dr. Vandrey to provide his testimony, and then we'll have some conversation. Thank you.

[Dr. Ryan Vandrey]

Yeah, thanks for having me. I kind of want to be specific. I was contacted by Dylan Lindbergh, given my expertise in the study of cannabis, acute effects, impairment, intoxication, things and the like. So, I'm not here representing Johns Hopkins or really advocating for anything personally, but rather offering my expertise to the committee as you kind of go through the process of thinking through adult use legalization in the state of Pennsylvania. My understanding is that there's a lot of concern and question about how to handle roadside determination of impairment, workplace safety and things of the like. I've done extensive research in, our laboratory here where we acutely expose, healthy adults to a variety of cannabis products, different, chemical makeup, different routes of administration, different doses, to investigate what the consequences of acute exposure to cannabis is. I think it's very important that we differentiate THC from CBD, from other cannabinoids, and that you evaluate the different risks of different product types, product categories. So, for example, topical cannabis products, even if they're predominantly THC, really have zero risk of causing intoxication or impairment in the individual using them. And then you have oral dosing, which can, and inhaled dosing, which is even more likely. The timing and how you, evaluate risk for impairment is going to be dependent on the dose, of the use of the individual, their tolerance, and things of that nature. And, how you determine or how you try to detect impairment, becomes important. And so I think based on my conversation with Mr. Lindbergh, I want to emphasize that, when you're thinking about

cannabis legalization for non-medicinal purposes, the products being used by those individual are not substantively different than the products many people are using under the current state law that allows for medicinal use purposes. So there's the THC is the chemical in cannabis that can cause impairment, can cause intoxication, makes people feel high. That chemical is in medical cannabis products that are being purchased and used by a large number of individuals through the state, dispensary program that's currently legal. With adult use, you're just expanding the population that can use those products. But I don't think having those products available uniquely changes the situation of the concerns with respect to impairment or intoxication. And in many cases, adult use intoxication is the intended endpoint. So, the other key point, that I think is important to consider is that cannabis isn't the unique drug in this case in that we do not have good objective measures that could be used roadside to determine if someone is acutely intoxicated or impaired at the moment. It's alcohol that's the exception. Alcohol is the lone drug that we can reliably determine with a reasonable level of confidence that someone is acutely impaired and intoxicated at the time when they're stopped on the roadside. There are a number of prescription medications and other drugs that could cause impairment for which we do not have a breath test, a reliable blood test, to determine in the moment that that person is acutely impaired and intoxicated as a result of using that medication or other drug. So cannabis is more similar than anything else than it is different. Specifically on the relation between, biomarkers of cannabis exposure and actual impairment in the moment, because the pharmacokinetics or the amount of the drug in any biological fluid or breath, in the body doesn't relate very well with impairment or intoxication---It can be one point of evidence, but it's not going to be reliable. Due to the nature of, of the kinetics, you have a high likelihood of both false positives and false negatives, depending on the frequency of use by the individual and the type of product being used. I'm happy to go into specifics if there are specific questions about that. But more than anything, I think, I'm taking my time here to answer questions that you all may have. And I'm happy to share data with you today if I can pull it quickly or describe scenarios where things might go one way or another. But I'm also willing to provide more detailed information at a later date if that's required.

[Rep. Dan Frankel]

Thank you, Doctor. Vandry. Let me ask you about, you know, what technologies are available, or on the horizon to measure, impairment?

[Dr. Ryan Vandrey]

So it's gonna be behavior testing. And I'm not sure if if the state of Pennsylvania law enforcement agencies are engaged in this. But here in Maryland, we have what's called green labs where law enforcement officers bring cannabis users into a certain place in a

certain safe setting. They allow the user to use cannabis to the point where they feel intoxicated. And then they conduct a battery of field sobriety tests to help train law enforcement in identifying individuals who are intoxicated at the moment and to further refine and develop field sobriety tests that are sensitive to the acute effects of THC. So that's probably going to be the best method moving forward. Now, you can still collect blood samples from an individual, but it's very limited what you can say with confidence about any blood level of THC relating to, impairment at the moment someone was pulled over. Because blood is not something that can be drawn at the roadside in the moment. And if you have to go through a field sobriety assessment, conduct a field evaluation, do you smell cannabis in the car? Do you see paraphernalia? Then you get the person to a point where you take them to the ER, you get consent, the blood is drawn. In many cases, an hour or more has gone by. And that could be the window where it's no longer detected. Or you have an individual who frequently uses cannabis, they were not impaired at the time. You can still take them in and draw their blood and detect cannabis or THC in their blood. But, an individual who frequently uses cannabis, maybe they use it every night before they go to bed. The next morning, they're not impaired, but you can still have concentrations of THC in their blood that would be the same or higher than someone who does not use cannabis frequently, just took an edible THC product and is highly impaired. You can't differentiate those two individuals, the responsible user versus the irresponsible user, in many cases, simply based on blood THC levels.

[Rep. Paul Schemel]

Thank you. Thank you, doctor. There are there are a few different questions actually that I'm hopeful that you can answer because I I don't I don't really have my arms around them. I've heard or I understand that the cannabis or THC can remain in your system for long term, you know, hours, days, and so forth, and can come back. So we only really care about this with regard to impairment. If it weren't an impairing drug, this wouldn't be a concern. So can someone take, you know, utilize cannabis in whatever form and be impaired, and then can they come out of impairment and can they be impaired again? Like, for example, if it's in the fatty tissue of their body and they work out or something like that. Does that happen? And then the second part of that, like how long does impairment typically last? Because we're concerned about obviously driving and working and things like that.

[Dr. Ryan Vandrey]

Yeah. So, again, there's a lot of nuance to this and it depends on the frequency of use and the type of product, how it's being used. So I'm not aware of any scenario where someone who has used a product even frequently stops use for several hours is no longer impaired and then goes and exercises and becomes impaired again. We do see changes in say blood

concentrations or urine concentrations of THC metabolites after vigorous exercise in someone who's been previously exposed, but that's never been related to the subjective feeling of intoxication and impairment of functioning. So typically in these cases, once someone acutely uses a THC product, depending on the dose, say they use a high enough dose, they become impaired. The window of impairment is going to depend on whether they inhaled it or orally ingested it. Topical application does not result in impairment at any level that I've seen, THC just doesn't get absorbed very well through the skin. The duration of impairment is going to be shorter for inhaled cannabis, but it's going to happen sooner compared with orally administered cannabis. So we get longer lasting, sustained peak effects, but there's a later onset with oral dosing. Oral dosing is a little less predictable because absorption of the drug depends a little bit on the gastric contents. It depends on the dose, depends on the individual's genetics and whether they ate something that's at some food at the same time, or if they're drinking alcohol or something else. So it's pretty complicated. But again, there's no scenario that I'm aware of that once they're no longer high or impaired, they become high or impaired again for something other than taking more THC. So I think that addressed both of your questions. If not, let me know.

[Rep. Paul Schemel]

It does. Yeah, thanks. So like with alcohol, a lot of us are more familiar with that. Someone goes on a bender and celebrates one night, they sleep it off, they wake up the next day and they go to work. With cannabis products, is that the same or can in some cases the impairment last longer?

[Dr. Ryan Vandrey]

So I think there's a lot of similarities between alcohol and cannabis in this respect. So yes, you sleep it off. And in most cases you wake up, you're fine and good to go. In the extreme circumstance, that may not be the case though. So three, four beers before one night, one evening socializing, you wake up the next day, you're typically fine. If you drink 18 beers, you're seriously hungover. You may have residual effects. It depends on when did you stop drinking? Did you stop drinking at three or four in the morning? Those effects can carry over into the next day. And the same thing is for cannabis. You know, if you use a reasonable amount of THC, socially, you go to bed, you wake up, usually you're fine. So in our laboratory experiments, typically about three to four hours after inhaling THC, people are back to a normal rate of functioning. And about six to eight hours after an oral dose, people are back to a normal level of function. Now, if they take ten times the normal dose and they take that at midnight, I would fully expect residual effects to carry over into the next morning. So there's going to be some gray area where you can't say with absolute certainty if you wait this number of hours after inhaling cannabis and this number of hours after

orally ingesting it, or if you use it at night, you're going to be fine the next morning, there's going to be circumstances of extreme use that may push the boundaries there. But generally speaking, about four hours after inhalation, six to eight hours after oral ingestion is typically a safe bet, on our side based on our science. But it's going to be pretty evident to the individual if they wake up feeling very groggy, very hungover. They need to recognize those circumstances and not drive a motor vehicle.

[Rep. Paul Schemel]

Okay, that leads in my next question, which has to do with kind of the nature of impairment. I've never utilized marijuana so I don't have this personal experience, but how does marijuana impact or the impairment from marijuana impact your motor skills and your reasoning skills? Is it similar to alcohol, different from alcohol?

[Dr. Ryan Vandrey]

A little of both. So the both substances can impair, there's overlap, I guess, in impairment of functioning, divided attention or complex cognition and thinking balance can be impacted. One of the, actually--- two of the kind of field sobriety tests that are used for alcohol, we're seeing some evidence of overlap in detection with THC and that's balance and eye tracking. So again, I think that law enforcement and drug recognition experts need to refine the exact clues that they're looking for on those tasks. But again, a lot of the field sobriety tests that are sensitive to alcohol, people under the influence of THC may be able to physically, capably do these things, walk in a straight line and such. But what you have to keep in mind is that drug recognition experts aren't always just looking for the physical capability of doing it. It's the remembering the instructions and how to actually execute the task that's being asked of them. And working memory is significantly impacted by THC. So while a person under the influence of THC might be able to walk a straight line, turn around and walk back without any issue, they may not remember which foot do I start with? How many paces do I take before I turn around? Which direction do I turn around? And those are clues that law enforcement look for that, that again, THC impairment may show good sensitivity to in the field.

[Rep. Paul Schemel]

Okay, thanks. My last question has to do just with the addictive principles, and this may or may not be in the line of your research. But there are certainly some people that seem to, in states that have legalized, they've noted that the rate of daily use has increased. Is that something what is addictive about THC that would cause that? And is it differentiatable

between maybe something similar with alcohol or I dunno, something more benign like coffee or...

[Dr. Ryan Vandrey]

So when you look at drugs of abuse, be it alcohol, coffee, nicotine, cocaine, heroin, or the variety of other drugs that are used in repetition will escalate to daily and loss of controlled use. There's a common neurobiological mechanism there. There's a reward pathway in your brain that all of those drugs independent of their pharmacological mechanism hits. We call them reinforcing drugs because they stimulate dopamine release in this one particular pathway in your brain. THC does that. Now there are different levels of magnitude in which certain drugs stimulate reward in that pathway, where heroin and cocaine kind of really hit those things hard. THC is somewhere in the middle. And you know, the abuse liability or the dependence potential for THC is there. And because of that, you're going to see people who use it and use it frequently and probably use it more than they should. But I don't think it's any worse or any different than alcohol or nicotine really. Or caffeine ---or or uh-uh cocaine for that matter. It's where you get into levels of dependence and abuse liability and concern from the public health standpoint when it comes to, addiction, you have to look at the consequences of the addiction. So, leading up to this, you're going to see in states that have legalized cannabis for non therapeutic purposes, the access to the drug is going to increase its use. The reduced stigma associated with its use is going to increase its use. People are going to substitute, alcohol use for cannabis use. And so while you have, you're going to have an increase of use due to the availability and all of that kind of stuff, the evaluation really needs to be what's the benefit, what's the harm of legalized versus maintaining criminalized access. And so that's where you have to look at the science and that's where I think our science is still on the younger side, even though it's been coming up on ten years now, or actually I think it is ten years since Colorado and, Washington State legalized non medical use for adults. I think we still need a better understanding of what the impact of that increased daily use is is the increased daily use of uh-uh akin to a glass of wine with dinner. Is it a toke before bed? Is it a small dose edible in the evening? What does that look like and what's the negative consequence? So do we see an increase of daily responsible use akin to what we would say is acceptable social alcohol use, or is it loss of controlled heavy excessive use that is then having a negative consequence to the individuals and their ability to work, to perform their daily duties, to take care of their children, to be productive members of society. And I don't think we have that level of understanding yet, but that's something that we should invest in more, research into. And how many of those people are substituting for alcohol? How many people were heavy alcohol users and are now heavy alcohol and cannabis users and are worse off for the case. So, those are the things that we have to grapple with and and better understand to

make informed policy decisions but I do want to again point out the fact that the state has already moved forward with a legal medical use but you currently have a zero tolerance driving policy. So, you have incongruent laws right now where you're allowing people to use THC as a medicine, but you're not allowing any of them to drive a motor vehicle in any situation. So I think resolving those kinds of things becomes an important thing where you don't create a situation where people can access it but then can get penalized for utilizing that access

[Rep. Dan Frankel]

Any other members? Questions, comments? Well, Doctor. Vandrey, let me turn and you may not have any additional, you know, same kind of issues with impaired driving and functioning. But, you know, one of the things that I think we're wrestling with and others states have wrestled with is workplace issues in terms of impairment in the workplace and how to measure that create an environment where people are safe and not wrongly accused of being impaired. I mean, have you seen any policies that you would suggest that we look at or that have been used in other states?

[Dr. Ryan Vandrey]

Yeah. So not policies per se. I think the the one policy issue that that that I'm aware of that becomes really important in an a legal adult use environment is can employers legally restrict employment to people who pass a negative THC drug test. So, that's something that I've been engaged in testimony here in the state of Maryland about and there's mixed bags in other states about whether they move forward with that or not. Workplace safety is a very important thing and again, I think because there's an initiative and a push to legalize cannabis access, there's the automatic, kind of feeling that, well, if we're going to legalize this and we know people can be impaired from it, we have to be able to protect, the workplace and drivers and all of this and everybody in cannabis is somehow special and different and unique. But the reality is, is that people are able to drive cars and go to work and be impaired for a variety of reasons, not just cannabis. And so what becomes really important is that workplace safety is determined in a fitness for duty manner that's kind of agnostic to why you might be impaired. And that's where I see things shifting. So there in the in the private sector. There's a lot of push towards developing ipad apps that do cognitive performance testing for example that you know, you show up for work, you need to perform this test that's going to determine whether you are fit for duty. You can meet your baseline that is determined at the time of hire. You know, if you're a forklift operator, you do this task and you score between a 45 and a 50 on it. When you show up for work, you need to be able to match that score. You come back from your lunch break, you'd be need to be able to match that score and there's some accountability in safety sensitive workplaces

that you are evaluating fitness for duty. Whether you're impaired due to cannabis use, alcohol use, other prescription medication use, or other illicit drug use, or sleep deprivation. Again, I encourage you to keep in mind and not hold cannabis to a higher standard that's not being held for everything else, but to recognize that cannabis is something that can cause problems and to invest in resources for research and education to make sure that we minimize public health harm. Thank you.

[Rep. Friel-Otten]

Thank you, Chairman. Doctor Vandry, I am sitting here, and as we're talking about cannabis, I'm thinking about all of the other unregulated, cannabinoid products that are currently on the market, continuing to come to the market, and curious about your thoughts on that in terms of, impairment. Do they cause, like Delta-eight, Kratom, these new kind of substances that are being sold at gas stations, vape shops, and I believe that they're being sold to anyone of any age, and there is no regulation whatsoever over that. And I just wonder how legalization may help capture that, and also, you know, what your thoughts are in terms of is it different in terms of impairment, and how should we be approaching that? Yeah, that's an standing question and that is one of the strongest arguments for broader legalization of regulated cannabis products is because there's been a proliferation of unregulated cannabinoid products that are essentially the same and in some cases even more even stronger or more impairing than Delta nine THC. So, you brought up Delta eight THC in particular. We actually are just finishing up a controlled research study on that here in our laboratory. And our data shows that Delta eight THC produces all of the exact same drug effects as Delta nine THC, including impairment. It's just half as potent. That just means you take twice as much of the drug and you get the same drug effect. The additional consequence of Delta eight THC products and other isomers is that because they're completely unregulated, they can be contaminated with other things that a regulated drug product would not have in it. These could be residual solvents. It could be other unidentified drugs. It could be heavy metals. It could be pesticides or other toxins. So, and in the case of Delta eight THC, well, that's less potent. There are other synthetic cannabinoids that are available at head shops, gas stations, and on the internet that can be twice as potent 10 times as potent and cause public health problems. So, the spice and K-2 epidemic that is largely out of the media now but still exists is still an issue and so the hope is that in a legalized adult use cannabis market, those products largely go away. I don't think they entirely go away, and they'll still exist as a market, but the market would be much smaller. So, again, it's something that is a research has showed that that's happened that those products are much less available and less likely to be used in states where adult use cannabis has been legalized. But it's something

where public education needs to be brought to the front and also policies surrounding the legality of those sales at the state level needs to be enacted.

[Rep. Friel-Otten]

That was my follow-up question was, are there other states that are bringing those products into the regulated market instead of letting them go unregulated? So, they're not being brought into the regulated market per se that I'm aware of. I think they could be pulled into the regulated market. I don't know that any state licensed cultivators are synthetically manufacturing any of those products. I don't know that side by side in a dispensary people are going to opt for a Delta eight THC versus the Delta nine THC. Now, that could happen and if you're going to keep those things around, that would be how to do it. What other states are doing is they're just outright banning those kinds of products. If you go that route, it's going to be very important that you differentiate these THC like analogs that are solely produced with the intent of producing intoxication and impairment versus other hemp derived products that are non intoxicating and intended for health benefit and therapeutic use. I've been in communication with several states about that recently where THC levels are being imposed on products that would eliminate the availability of seriously ill patients from getting full spectrum CBD products that are currently legalized and being utilized under the intent of the Farm Bill of 2018 federally that made hemp products legal. The downside is that people have latched on to the loose language in the farm bill and have proliferated use of of intoxicating products that are not in the spirit of that bill.

[Rep. Tim Twardzik]

Thank you, doctor. Just want to follow-up with what states are trying to outright ban the hemp derived synthetic marijuana? We can try to follow that lead because it's-

[Dr. Ryan Vandrey]

Yeah, so again, I don't know exactly where they are, but I've provided some letters and some testimony to the states of Maryland, Florida, California and Colorado on that recently.

[Rep. Tim Twardzik]

Okay, because it's a difficult thing. People coming into our offices and our prior hearings, we've heard about this taking over neighborhoods and because it's unregulated, it's not safe. We've heard that 60% of the items in there are grass clippings from around your lawn, that there's no potency at all and people are dumb enough to buy it because we're selling to a group of people who aren't educated consumers. And then 20% of it is hemp derived, the

delta eight, delta nine, and that 10% is probably real THC because nobody's watching it, they're getting away with it. So it's a problem that we need to try to fix, and I'm not sure, you know, we can't fix that before we have to legalize marijuana because it's a problem now we've identified, maybe that's something we could try to look at. I'd like to check-in those other states, see if they help us protect the consumers as we try to slow the train down. Thank you.

[Dr. Ryan Vandrey]

Yep. Agree completely.

[Rep. Dan Frankel]

Are there any other members who have a question? Online? Okay. Well, thank you, Doctor. Vandrew. I appreciate the opportunity to have this conversation with you. I think you've shed a great deal of light on our deliberations. So thanks again, and we'll move on to our next panel.

[Dr. Ryan Vandrey]

My pleasure. If I can be of any help in the future, just feel free to reach out. Sure. We appreciate that offer.

[Rep. Dan Frankel]

Thank you. Our fourth and final panel this afternoon is Dr. Lynn Silver, who's a senior advisor for the Public Health Institute Dr. Ken Finn, Vice President of Pain Medicine and Drug Policy at the International Academy of the Science and Impact of Cannabis and Doctor. Jennifer Unger, who's a professor of Population and Public Health Sciences and Vice Chair for Faculty Development at the University of Southern California. Welcome. I hope we have all three of you online.

[Unintelligible]

We Have Dr. Finn and Dr. Unger. So, Dr. Silver will be joining us. Okay. All right. Apparently, Silver will be joining us.

[Rep. Dan Frankel]

It's a little further into this panel. So let us start with excuse me, it's Doctor. She just joined us. Oh, Dr. Silver. I introduced you if you just joined us. You were going to be first up, so why don't you take it away?

[Dr. Lynn Silver]

Thanks. Thank you very much, Chair Frankel and Rapp and members. It's an honor to be here with you this morning. Can everyone hear me okay? Your loud and clear. Thank you. My name is Dr. Lynn Silver. I'm a pediatrician, senior advisor at the Public Health Institute, and a clinical professor at the University of California, San Francisco. In 2017, with passage of legalization in California, I founded something called Getting It Right From the Start, initiative where we work where cannabis has been or is being legalized to try to identify and test potential best policy practices, to protect kids, public health, and social equity. We carry out research to assess the policy impact on health and equity. We develop tools, model laws, and provide technical assistance to government and community partners. I really come at this problem, as a pediatrician, but also as a health policy professional and as a mother and soon to be grandmother. And lastly, also as someone who, loves somebody who developed psychosis and schizophrenia and is no longer alive. So that preventing every case of serious mental illness that is preventable is personal to me and also why I work on this issue. I believe that some of the most concerning harms from, cannabis involve, impacts that may be lifelong and not reversible, such as the cases of cannabis, induced psychosis and schizophrenia, harms to infants who are exposed in utero, and harms to teens who develop heavy use, in adolescence. For the 26 states that have not yet legalized, we believe that there really is a critical window to learn from our error from our errors in other states and to do much better. So like the previous speakers, I'm not here to tell you whether to legalize or not. There are very good arguments both for and against, but I believe that there are ways that if you do decide to move forward, you can greatly reduce harms from legalization, as you heard. And you heard some examples of that, this morning, from Canada. You can do that by following a more prudent middle road that is neither prohibitionist nor profiteering as other countries legalizing cannabis such as Germany, Uruguay, or Canada have done. I believe that we should start first by reducing the unjust burden of criminalization, to the maximum extent possible and by automatically expunging, nonviolent past criminal records. That is an equity benefit that can be obtained irrespective of whether or not you legalize adult use sales. You don't need to create a new for profit industry, to obtain those equity benefits. But when you're thinking of how to provide legal access, I recommend that you do not follow the path taken by my state, California, for example, and that you look more to examples, like Quebec. In general, I would endorse everything you heard from Drs. Hammond and Gagnon earlier, with one, possible exception. Our most recent data, is showing, not increases in use by teenagers, but increases in daily use. That came out in a recent national study. And then in our own work in California, that's what we're seeing also that while use, use declined a little bit in teens during the pandemic, that child who's using daily or almost daily, went up, and that's concerning. Similarly, with young adults, daily use has tripled in The US, over the past couple of decades to the point where one in ten US young adults, is now getting high, daily

or almost daily. As you've heard, the product that you're deciding how to treat is not the botanical plant from our college days. That joint your mother rolled had about three to 5% THC. It got you high, but it, more rare only more rarely made people seriously ill. Whereas over the last twenty years, the US cannabis market has been profoundly transformed, and changes in agricultural practice have led the flower to be about eight times stronger, clocking in at about 20 to 30% THC in our legal markets, and a vast array of manufactured, aggressively marketed, flashily packaged, inhalable concentrates and enticing edible products as well as the intoxicating, hemp products that were just discussed has emerged. And many of these are eighty, ninety, or a % THC. In California, we have products that imitate McDonald's, baby foods, Cocoa Pebbles, nachos, and Skittles. And some of these are legal products because of a lack of enforcement. In short, many of these bear about as much relationship to a cannabis plant as fentanyl does to a poppy or strawberry Pop Tart does to a strawberry. And we have allowed that market transformation to occur in many US states. So I'd strongly urge Pennsylvania not to repeat that mistake, to take a more cautious approach. Because the real dangers will come not so much from home grows or from pesticide residues, although those have their own problems, but they will come from what is intentionally put in the package and allowed. And what happens if you build a powerhouse of agricultural, industrial, and retail interests that profit from a harmful and addictive drug and develop increasing political impolits, in short, from building a new tobacco industry. That is what we are seeing in my state and in many other states in The Union, and I think it is a critical challenge to avoid. So our key recommendation, if you should decide to legalize, is to pursue a middle road to reap the criminal justice equity benefits without driving up the harms. As you heard, some of the best evidence supports something that resembles your fine wine and good spirits system, which has long served your residents. This can be accomplished through a public store system, as you heard about. But if you are concerned about public employees selling a federally illegal product, which is a legitimate concern that's been raised in some states. An alternative is to use, for example, an exclusive contracted nonprofit arrangement or other type of quasi public entity whose central goal should be to make cannabis legally available without driving up consumption or maximizing sales, just as we do with fire departments for ambulance services, for example. By using a public option or a strong exclusive contractual, relationship with a nonprofit, you can do things that you can't do with a for profit system easily. For example, you can strongly limit aggressive advertising and marketing in a way that is difficult under current commercial speech jurisprudence in The United States, but that's not a problem in Canada. That can be a long term solution for limiting aggressive marketing, for example, even if the product is federally legalized. You can better right size production in your state, and avoid the vast overproduction glut that we've seen and that is feeding the illicit market in California, Oklahoma, and other states. You can better shape a

safer cannabis supply of less potent products not designed to attract children and youth, as you heard from the Quebec experience. You can make sure that lower potency options and clearly dosed products are available, which they are not in California. You can also assure more accurate information for consumers, rather than the fire hose of misleading information that we are seeing on the market in most states. You can also more easily preserve, and respect local control and the desire of local communities. Like other alcohol state stores, you currently have about one state store per 22,000 residents. You don't need more cannabis stores than that, and you should probably only go there gradually, if at all. You could alternatively pursue a delivery dominant model without stores or with fewer stores. There are a few different approaches you can use. But our own research with hundreds of thousands of patients in California is showing that rates of use during pregnancy and in teens, as well as some, negative teen outcomes are directly proportional to the number of retail, cannabis stores within a fifteen minute drive of a person's home, which is why you should be moderate and cautious in how you set up, the, physical accessibility. In a public or quasi public option, revenue can be directly captured in a fund and distributed, or, can be taxed in a or a combination of the two, and the use of those resources can help build health and social equity in a variety of ways and prevent substance abuse. The data from Quebec that you heard earlier, I believe, suggests that their model is less harmful, does not drive-up consumption as rapidly as the for profit model, and still promotes the transition to the legal market as rapidly as for profit stores, even though that's not happening fast anywhere. Don't expect to have a full transition rapidly. It's gonna take time. In the material distributed, there's a one page summary of a set of specific policies that we strongly recommend in communities that are legalizing, from packaging to product considerations to avoiding conflicts of interest in any regulatory body that you create, and additional information.

In summary, what you decide here will affect the health and well-being of Pennsylvania residents, both youth and adults, for generations to come. If you do it wrong, it can take as long to untangle as the harms of the tobacco industry. If you do it more carefully and do it right, I believe it can help you assure a healthier and more just future for your children and youth.

[Rep. Dan Frankel]

Thank you, Dr. Silver. We're going to go through all three of the testifiers and then open it up for questions and comments. Next, we'll hear from Dr. Ken Finn.

[Dr. Ken Finn and Rep. Dan Frankel]

Can you hear me okay? Yes, we can. Thank you. I'm trying to share my screen here. I just wanna make sure I have capacity to do that. Can you see my screen okay? Yes. Can you see those slides? Yes. Alright.

[Dr. Ken Finn]

Thank you, members, for allowing me to present today and you know, I just want a little background about myself. I'm a practicing pain medicine physician in Colorado Springs for nearly thirty years. Board certified in physical medicine and rehabilitation, pain medicine, and pain management. I'm certified through in cannabis science through the University of Colorado and a volunteer clinical instructor at our local medical school. The immediate past president of the American Board of Pain Medicine. I've served on the Exam Council for over twenty years. I served on our Colorado Governor's Task Force for Amendment 64 in the Consumer Safety and Social Issues Work Group and served four years in our state's medical marijuana scientific advisory council. I was an invited speaker to the United Nations Commission on Narcotic Drugs in Vienna last year. I've testified to the Canadian Senate on their marijuana bill as well as other state organizations like the New York General Assembly and I speak internationally on the health of marijuana including Mayo Clinic, UCLA, among many many others. I work nationally with other state leaders considering legalization for medical marijuana for both--- I mean from both a legal and medical purpose. I'm the editor of cannabis and medicine and evidence based approach and the co vice president of the International Academy on the Science and Impacts of Cannabis which is now a member of the Vienna NGO Committee on Drugs. As it relates to some of the data---and we don't have time and thank you again for for this amount of time. And I thank you Pennsylvania for trying to take the bull by the horns and learn from other states that have gone this road from a public health and safety perspective. I'll summarize some of the few what I feel important issues to take into consideration. One is the opioid crisis. This is the provisional data from 2023 and one of the platforms to legalize was this going to help our drug crisis and apparently going back to even to February when we went to medical, our drug crisis continue to worsen under the banner of legalization both medically and recreationally. Pediatric poisonings, think you've heard from those in Canada about putting some of the restraints on products that may be attracted to children, because in Colorado, there are no those the restraints are not as well in place and the largest percent of increase of exposures occurred when adult use cannabis retail and medical markets open to the public in the state of Colorado. And two thirds of the marijuana exposures are marijuana only in terms of other substance exposures. Nearly fifty percent of the exposures were children five years old or younger and more than fifty percent related to edibles. Just last month, the Journal of Adolescent Health demonstrated marijuana poisonings are steadily on the rise compared to other substances that children might ingest. They're also

on the rise in Canada but have a flatter curve in the province of Quebec because they don't allow edibles and have less pediatric poisonings. And here's a graphic on some of the the exposures to other substances and you can clear clearly see in the top right. The cannabis exposures are steady and strong over time. Then there's the the Canadian data. Here in Colorado, the number one substance found in completed teen suicide is marijuana would never use to be the case. I've been tracking this data over many years. Used to be alcohol and that trend shifted. So now, nearly forty three percent of teens that kill themselves in the state of Colorado, the presence of marijuana is there. States like Texas and most of the other ones that I work, with, do not test regularly on suicide. And I think it's important that that other states look at this data, very critically. And in Colorado, those that are younger than the age of 25, marijuana is still the most prevalent substance found in complete suicide. Geriatric population, this is data from Canada; There was a 1,800 percent increase in people over the age of 65 ending up in the emergency department with marijuana poisonings and so I think it's important that you track this data as well. In the state of Texas, the number one substance found in a confirmed child abuse or neglect fatality, either current user past use by the perpetrators marijuana, followed by nothing, and the presence of marijuana in a child abuse or neglect fatality case in the state of Texas, which represents about ten percent of The US population, marijuana is most prevalent and more than all the other substances combined.

So, I'm going to stop sharing there but a few other things I want to talk about is product integrity. The state of Oregon and I would look at the state of Oregon's twenty nineteen audit report. That showed that they were only able to inspect 3% of stores and one third of growers for compliance. And they concluded that the testing results were unreliable and the products may not even be safe for human consumption. Most states don't look at this. The data in Colorado shows that dispensaries in Colorado were inflating THC potency in order to make more money. Lab directors in states like California and Nevada were found purposely faking the test results putting consumers at the risk of safety. Colorado has not introspectively looked at its entire program for many years and recalls are made on a regular basis long after products are consumed. So, there's no requirement to sign up for these types of recalls in Colorado. So, in the interest of time, I'm going to summarize by generally speaking, we've not done a good job with the current legal drugs that we have such as tobacco, alcohol, and opioids. Now, we have another addiction for profit industry creating already established societal harms. It's critical that the appropriate safety measures are in place in Pennsylvania before access is available. I've been asked many times if Colorado could do it over again, what would be done differently? The retro scope is sometimes very good. One of the mistakes we made is not having a state run program initially where they could be tighter control on access and tighter control on products with

adequate tracking and safe and monitoring of data. Our state public health department is I think has done a very good job and I would lean on the state of Colorado's public health department to to see what data should be tracked and monitored because it's so it's a state in flux. So, other things to consider severely restrict access to youth, strong penalties to those providing to you. You know, the kids should not have access to this mandatory drug testing on all violent crimes and associated data published because we know there's a strong link between cannabis use and psychosis and acts of violence. Recommend consumers register on-site of the dispensary both medical and recreational for potential recalls and contaminated products. It's not that that doesn't happen in most states that I've worked in. If any, consumers are unaware of their product may be contaminated. Eliminate home grows, which are breeding grounds for legal activity and taxing law enforcement, discourage use during pregnancy and lactation, due to known negative impacts on the unborn. Screen mother and father for their cannabis use in children with ADHD and autism spectrum disorders. Canada does not recommend men use cannabis if they're wanting to start a family. Support a potency cap starting at 10% perhaps due to the risk of psychosis, discouraged smoking and vaping. I remind people we were in the middle of a vaping epidemic before COVID hit. Monitor marijuana related driving impacts including fatalities. Have a strong independent lab testing requirements and hold producers accountable for contamination with heavy fines. So I'm gonna leave it at that in the interest of time and more happy to open up for questions as well.

[Rep. Frankel and Dr. Jennifer Unger]

Thank you, Doctor Finn and we're going to move to Doctor Unger and then open it up for questions. Doctor Unger. Okay, thank you. Can you hear me okay? Yes, we can.

[Dr. Jennifer Unger]

Okay. My name is Jennifer Unger, PhD. I'm a professor of population and public health sciences at the University of Southern California. I'm speaking today in my role as a researcher who has done some research on the location of cannabis outlets. I've been working in tobacco and cannabis control research in California since 1998. I believe that the California experience with cannabis legalization demonstrates some challenges that Pennsylvania might face. Just to review, to refresh your memory about California, California legalized cannabis in 2016 and the retail stores were allowed to open in 2018. Retail stores had to obtain a license and follow all the rules for age verification, THC content and packaging. But unfortunately, a lot of retailers didn't obtain the license and just opened. So we had a lot of unlicensed retailers. And the problem in California was that they didn't have enough enforcement resources to shut down the unlicensed retailers. The unlicensed retailers were using much more dangerous practices like selling to minors, selling

unapproved high THC products, and selling products without the childproof packaging. So, the presence of these unlicensed retails was dangerous to youth.

And another issue is that the state law legalized cannabis retailers statewide but individual jurisdictions such as counties and cities could also pass ordinances banning the cannabis retailers. And we noticed that many high SES jurisdictions banned cannabis retailers whereas in low socioeconomic status jurisdictions, they didn't ban the retailers because they viewed it as a revenue opportunity. So, as of 2024, slightly under half, 44% of California cities and counties allow at least one type of cannabis business and 56 don't. We have this big patchwork of regulations, you know, where, you know, neighboring cities have different laws and residents of a jurisdiction that doesn't allow cannabis retailers can just drive across the border and purchase cannabis in the neighboring jurisdiction. What happened there was that the revenue, but also the crime and litter and need for an extra security became concentrated in low socioeconomic status locations. I'd like to highlight two of my published research studies that are relevant to Pennsylvania's decision about legalization. In our first study, we used data from the California Board of Cannabis Control and Weed Maps to map the locations of all licensed and unlicensed cannabis retailers throughout California. Then we merged those with census data. We found 448 licensed retailers and 662 unlicensed retailers. And this is several years ago that we did this research. So there might be even more unlicensed retailers now. Compared with the neighborhoods that only had licensed retailers, the ones with unlicensed retailers had higher proportions of Hispanics and African Americans and lower proportions of non Hispanic whites. This indicates that minority and low income populations in California are disproportionately exposed to the unlicensed retailers that are more likely to sell unregulated products or sell to minors. This just exacerbates health disparities. We also collected survey data from over a thousand adolescents throughout California to ask about their cannabis use. And we found that the ones who live near cannabis retailers were more likely to use cannabis than those who lived farther away. Even after we controlled for differences in socioeconomic status. For every five additional driving miles to the nearest cannabis retailer, the risk of past month cannabis use by adolescents was reduced by 3.6%. We also found that adolescents who lived in jurisdictions that allowed cannabis retailers were significantly more likely to report past month cannabis use and easy access to cannabis. So just the the presence of cannabis retailers, even if kids you know, regardless of whether kids are able to go into the retailers and buy, just that the presence of the retailers and the marketing and the ability for older people to go in and buy the products and maybe give or sell them to youth could increase health disparities.

We have a few recommendations. First of all, Pennsylvania should limit youth access to cannabis retailers by placing licensed retailers far away from residential areas, schools,

and parks, and strongly enforcing age verification practices. Second, Pennsylvania should devote significant resources to enforcement so that unlicensed retailers can be detected and shut down promptly. That was a huge problem in California where these new as unlicensed retailers were popping up every day and California just didn't have the power to find them all and shut them down quickly. And Pennsylvania should consider health equity in awarding the licenses to make sure that the low income and minority areas don't become saturated with cannabis retailers. So thank you very much.

[Rep. Dan Frankel]

Thank you very much. Appreciate your testimonies for all three of you. Mean, this issue of how you time legalization and decriminalization and then having the infrastructure to roll out the product seems to be really critical. Think, Doctor. Unger, you talked about this in terms of controlling the unlicensed marketplace. I mean, I'm familiar with, you know, going to Manhattan and seeing what took place there. And I know that the fact that, you know, they had decriminalization, and it took years before they were able to have the regulatory framework to do the licensing. And now you have retailers, you know, proliferating throughout Manhattan with food trucks, with selling cannabis and so forth, seems to me to be, you know, something that we have the opportunity to avoid. Addition to which, you know, based on some of what you've said, you know, looking at a state owned system would be, you know, an option to kind of help be able to control effectively the use of underage individuals that I think is of great concern to all of us. Anyway, you can comment on any of that.

[Dr. Lynn Silver]

You know, I think you would be incredibly wise to look at a system that is fundamentally different from what we did in California and what most US states are doing. You can do this much better. Have the courage that Quebec had, or that other places had, and you can set up something that will be a lot safer. It won't be perfectly safe, and it will still take time to transition from an illicit market, and you'll still need enforcement. But, I think you can have, a much safer result for the population. Creating, a heavily profit driven system with poor controls on the types of products and marketing may be worse than not legalizing at all because you create this huge new political force. I go to the legislature in California, you know, practically every month, And I can't tell you how dominated by the industry it is today, how rapidly and impressively their force as a lobbying group, and as a political group and as donors have grown, and how difficult it has become even to, pass legislation or regulation to control the most blatantly attractive to kid products. It's very, very distressing to me as a public health professional, as a pediatrician, a mother. And I just strongly encourage you to take your time, think about this, do this deliberately, do it cautiously if

you're if you're gonna legalize. You can do much better. And I think all of us who are speaking here today are very happy to help you and bring additional data and work with you and, try and address ideas and potential best practices to keep to do this more safely.

[Dr. Ken Finn]

I would I would echo that. As you know, the black market is alive and well in almost every single state that has already gone down this road. I think Oklahoma did a terrible job at implementing their marijuana program, and now they are one of the they're trying to compete to be one of the largest exporters of illicit marijuana in the country. Look at the Chinese cartels in the state of Maine. The Chinese cartels that are all over The US in these states that are legalizing. So I think it's very important that you also take a hard look on how you're going to manage and control the black market. It's never gonna go away, but how are you gonna reign it in, because it is alive and well in all the states that went down this road. I think it's a very important piece.

[Dr. Lynn Silver]

Thank you. And and the industry will tell you that anything you're gonna do is gonna favor the illicit market. That is their standard argument. You need to put that on a shelf and do what needs to be done and recognize that it will take time. Sorry. No. Thank you.

[Dr. Jennifer Unger]

I totally agree with all that's been said.

[Rep. Mary Isaacson]

I appreciate your testimony. And following up kind of what you were talking about, I have this document in front of me called the Principles for Protecting Youth, Public Health and Equity and Cannabis Regulations. And part of down at the bottom, you talk about limiting dangerous products, diversification and marketing, and use a specialized business model for retailers. Part of this discussion today is that we do have controlled state stores here for the distribution of alcohol. Are you say are you saying when to keep this away from food and other sales that we should or or should not be, going down this path of having it in a very regulated environment like our state stores are?

[Dr. Lynn Silver]

No. What I was saying in that document was that it should be a very regulated environment. There is, California started with its stores as specialized stores that just sold cannabis and cannabis accessories. There is a constant pressure to allow sale of food. Right now, the

state regulatory agency is allowing prepackaged food sales, which we believe violates state law, but that's what they're doing. They're trying to legalize cannabis restaurants now where you would have smoking and serving food. They're selling branded merchandise, sometimes clothing and things like that. So I think it should be a specialized business where you can get legal access to cannabis. Like, the Quebec stores are very attractive, nice environments. You can go and buy a product that's carefully packaged and labeled with accurate information, but you can't buy sweatshirts or backpacks or, or get a Coke there. So that that's what the intent of that, use of specialized business model was. Thank you.

[Dr. Lynn Silver and Dr. Jennifer Unger]

That's a really good point because kids can buy the sweatshirts and backpacks and hats and walk around advertising cannabis brands. And a lot of adults won't even know that that's what they're doing because they're not familiar with the brands. Yeah. Look at the Cookies website. Yeah. Oh, yeah. Yeah. It's one of the worst. Yeah. And that that's in regular stores like Spencer's, other places.

[Rep. Mary Isaacson]

I appreciate that. In our, in our state stores, you're not buying, any apparel or food. So that's why, I was just wondering about this, document and that point you were trying to make to make sure that it's highly regulated and selective. Thank you.

[Rep. Paul Schemel]

I have sort of a quick question, one for each of you, starting with Dr. Unger. Of the things that this panel has discussed in previous hearings is the equity component and particularly the disparate impact that law enforcement or enforcement of current laws have had on the minority community. I am curious by part of your testimony when you relate that at least experience in California where you've had a lot of unlicensed stores that have been run by minorities in minority neighborhoods, and then you advocate for increasing enforcement, doesn't that kind of perpetuate the problem we have already with over enforcement on those same communities? And if so, like what would you recommend as a remedy?

[Dr. Jennifer Unger]

Yeah. Well, think we need to get rid of the unlicensed stores completely. I mean, these are just fly by night operations that are operating below the law and they're selling dangerous projects. They're probably not doing very good age verification. I'm in favor of giving equity licenses to minority neighborhoods or minority owners. It's just that the unlicensed retailers have proliferated. So it's just it's become in in certain neighborhoods that it's just

become a case where you can drive down the street and see numerous unlicensed dispensaries. And I would rather see a few of them apply for licenses. So there would be just one or two licensed ones that are operating under the law rather than 10 unlicensed ones.

[Rep. Paul Schemel]

The next question for Dr. Finn. I believe that you use you I think you were in pain management in your practice. And Colorado has, I assume, a medical marijuana program, maybe that predated the recreational program. What challenges have you seen in utilizing cannabis or those practitioners that utilize cannabis for a medical purpose when you have legalization of marijuana strictly or exclusively for recreational purposes? Does that tend to cloud the use, the medical use, or in any way impact the medical use?

[Dr. Ken Finn]

Absolutely. I think a lot of people are medicinalizing their recreational use just because of the tax structure. People it's cheaper to get your medical marijuana than it is to buy the legal weed because of the the it's so heavily taxed. Like in the state of California, the people that are trying to follow the rules are struggling because it's so onerous to be an owner in following the rules in the state of California and that I think really helped give the illicit market a leg up because it was easier and cheaper to open just a dispensary without having to worry about following the rules. Our medical program predates our recreational program by about twelve years, and it was dormant for many years just because there was no infrastructure and there were no dispensaries. But after around 02/2009, we had, for lack of a better term, de facto legalization where the dispensaries opened across the state that even today, we have more marijuana shops than McDonald's and Starbucks combined. I mean, it's easier to get that weed than it is a latte in the state of Colorado. So yeah, I think think the lines got a little blurred just because of the tax structure. And then we have that little gap between the 18 and 20 year, 21 years of age population that they can get a medical marijuana card without parental consent and then get to the stores even though they might still be in high school. And our medical program is kind of weak. I mean, just as an example, I was able to secure my own medical marijuana card. Full disclosure, I don't use. I got my card in sixty seconds. And there are doctors in Colorado, the CDPHE issued a report last year that I think three doctors in the entire state wrote for 25% of all the cards. One doctor wrote between seven and eight thousand recommendations for medical marijuana in a year. That's one patient every twenty minutes. It's kind of very reminiscent of the pill mills of of before. So I think I think the medical and recreational markets did get a little blurred because of that tax structure. Okay, thank you.

[Rep. Paul Schemel]

My last question for Doctor Silver. Doctor Silver, you testified as to some of the statistics you've seen particularly relating to children. I was curious, as a pediatrician, what are you seeing in your own practice with regard to marijuana and youth use?

[Dr. Lynn Silver]

So I am currently full time in public health policy, but we have done a lot of research with practitioners and clinicians. Let's start with the infants. In California, we've seen almost a doubling of use during pregnancy over the last decade. And our findings in hundreds of thousands of pregnancies at Kaiser Permanente are, increases in low birth weight, prematurity, and requirements for neonatal care in infants who were exposed, during pregnancy. And then more concerning yet is, more new data that's emerging from a major national, NIH supported study of adolescent cognition called the ABCD study that's looking at about 11,000 children. They started when they were nine, and they're looking to understand what, influences, intellectual and brain development in in our children. And they're finding in the six or so six or seven percent of children who were exposed during their pregnancies, significantly higher rates of psychopathologies, attention deficits, social disorders, just very concerning findings on longer term potential harms. That's fairly new, so we're still understanding it better, but it's it's very concerning because a child can't unring that bell. So that's infancy. We're seeing nationally a 3000% increase in reported poisonings from cannabis. So our children's hospitals, like Rady Children's Hospital, saw a fourfold increase in, early child ingestions with an average age of two. We are seeing, incidents in schools just increasingly where schools are closing down their bathrooms because so many kids are vaping that kids can't go to the bathroom. We're seeing ambulances being called to schools from accidental ingestions of both hemp and cannabis products. And then when you get into teenagers, we're seeing not so much a global increase in use. If anything, we may have seen a slight decline, but we're seeing an increase in that heavy daily use. And our clinicians are reporting increased psychosis. Some of that's transient, but some of it's not. So some of it's triggering earlier onset of schizophrenia in young people, some of whom may have gone on to develop schizophrenia otherwise, but some of whom would not. So the data from Denmark, for example, showed a fourfold increase in, cannabis associated psychosis and schizophrenia. So all of those very concerning. I did wanna add one comment on the equity licensing. If you go with a for profit model, do a 100% or 80% equity licenses. Maryland's trying to do that now with their second round. New York tried, but it was a mess. California did not try at all at the state level. Just a few of our cities did a little bit of that. But overall, the, outcome has not been a profound, a successful route of creating economic equity in communities hurt by the war

on drugs. Only about 10% of our California retailers are equity operators. I would not justify a for profit model just to do equity licensing. I would say do a state store or a nonprofit model, use equity in hiring, and take the money and invest that money to make our communities healthier and more equitable. If you're gonna fund the business to promote economic equity, fund a healthy food store, fund a day care center, fund other kinds of small businesses in our communities of color. But don't go with a for profit route just to be able to do equity and licensing. But if you do go for profit, then make that a priority.

[Dr. Ken Finn]

I would also underscore her comment on the ABCD study. The data is somewhat frightening. More women are using during pregnancy. They're using daily or more near daily use. And the outcome data is is very concerning with autism spectrum disorders, attention deficit hyperactivity disorders, and the most the most the number one risk factor for early onset use in teenagers is having been exposed during pregnancy. I mean, so, there's a lot of very concerning data. And regarding the equity piece, if you look at Colorado, the dispensaries are concentrated in poor communities of color. So it almost seems like they're being targeted by the industry that says they want to help them because that's where they are. And so it's very difficult for those communities to do well when they're surrounded by liquor stores and tobacco stores and now a lot of marijuana dispensaries. So, and maybe looking at a geographic, say, you know, with this particular community, you have X number of stores and that's it. Monitoring the blossoming of the illegal stores that might occur like it did in Manhattan. Thank you.

[Rep. Friel-Otten]

Thank you, Chairman, and thank you to all the testifiers. The testimony that mentioned suicide and presence of THC in suicide autopsies, that's actually something that our local coroner has brought to my attention numerous times when we've talked about this issue. And so I do believe that it is real and present as a concern. And I guess my question on that, and you're probably great folks to answer that, is, is it a chicken or the egg kind of conversation? Are folks who are experiencing suicidal ideation experiencing other things that they may be self medicating? Or is THC causing a further depressive state? How does that work from a biological perspective? Similar to alcohol, oftentimes you'll find that folks who are dealing with mental illness use alcohol as a self medication. Is that similar with THC or is THC uniquely causing something that is further depressing the brain chemicals?

[Dr. Ken Finn]

It's probably a bidirectional relationship. I mean, they using because they're depressed or they depressed because they're using? We don't really know the answer. The fact of the

matter is, I mean, and they're not overdosing from marijuana. I think it's very important to understand they're not dying for marijuana unless you have a little child. I mean, they'd be at further risk because they don't metabolize cannabinoids like an adult does. But it is very concerning because that data has changed over time. It used to be number two or three on the list of toxicology reports and in 2012, it flipped and it was a smaller percentage and then every year, it seems to get higher and many states don't require testing. And I think in Colorado we have a mandate to test in adolescents completed suicide. And that's why the CDPHE is getting some very good valuable data. And I think states are learning. You know, the marketing piece, the things that are attractive to children or young adults or even because it's still the number one substance present in completed suicide those 25. So it's it's it is very concerning data and it's it is a probably a bidirectional relationship. I'd like the pediatrician to weigh in on that one.

[Dr. Lynn Silver]

I mean, I'd agree. NIH did a major study on this issue, I think, three years ago. Doctor Han, with hundreds of thousands of of people using, data on suicidal ideation and attempts, not on on suicide. But they tried to answer that question that you're asking. Is it the chicken or the egg? Even controlling for depression, they found higher rates of suicidal ideation and attempts in individuals who used cannabis. And if they used cannabis frequently, that was more likely. But as doctor Finn said in our qualitative work with adolescents, many of the, you know, kids are under the impression that they can safely if they're sad or stressed, they think they can safely treat their depression with this natural product, even though many of the products are no longer natural at all. And they're trying to do that. So I I, but there's also newer literature suggesting that it is increasing risk for mood disorders. It's it's clearer for psychosis and schizophrenia. The data on mood disorders is increasing. It's been a little more conflicting. You know, exactly how much is chicken and how much is egg is is still being sorted out, but it looks like it's both, as as Dr. Finn was saying. And, you know, you have to remember this substance is so widely used. So it's not fentanyl. It doesn't kill you, you know, with an immediate overdose. But it because it is so widely used, effects, on suicidality, effects on psychosis, even though they only affect a small, not a small, but a modest subset of users, can have very big population health impacts, you know, and that's, that's why we're so concerned about that these are not rare impacts. They're occurring a lot. Yes. The youth risk behavior survey from 2020 showed that the number one risk factor for an adolescent to misuse opioids was having ever used marijuana in their lifetime and there's data showing that adolescents that misuse opioids have a much higher risk of suicidal ideation and attempt. So we know there may be a direct pathway to negative mental psych mental psychological effects, but maybe there's an indirect pathway starting with their cannabis use.

[Rep. Kathy Rapp]

Thank you, mister chairman, and thank you, testifiers for being here. I, the issues that you talked about today are, been the biggest issues that concern me regarding legalization. And, I've been extremely concerned about the impact on youth, maternal health, mental health, which in Pennsylvania we've had long discussions on mental health, I do believe that legalization will just add to the problem. But Dr. Silver, you mentioned something, and I'm I would imagine that other states where they've, legalized cannabis that they're also looking at your reports, I'm hoping. But you did mention that, like, I believe Colorado, California, and we know as well right here in Pennsylvania that we have very powerful lobbyists out there for the industry and for any other industry that you could possibly name. We see lobbies daily when we're at at the capital. So but saying all of that, and I get even more concerned when I, hear testimony from, folks in in in your field, regarding our youth mental health, maternal health.

Are there other state legislators in other states who are truly attempting when we're starting to see these reports of the negative side, especially on the health, mental health, maternal health, the suicide rates, finding that THC is in many of the systems of our young people who commit suicide. Are there other lawmakers in other states who are listening and attempting as and not just the lawmakers, but the governors of those states who are listening and actually attempting, and do you think they can actually be successful in tightening up, the cannabis use, especially where it affects our young people, our children, mental health, everything you test about testified about today. Are there other state lawmakers who are listening? And do you think they will be successful in, when they see and hear your reports that they can tighten up this industry to better protect, our children, our youth, adolescents, and our future mom and dads?

[Dr. Lynn Silver]

Thank you for that excellent question, Chairwoman Rapp. I am not terribly optimistic. I think most US states went about this wrong from the start and created a system that has then become very, very difficult to modify. You know, if you have hundreds of products, thousands, tens of thousands of products that are, you know, 95% THC on the market, it's very hard to pull back, from that. So, we have states that have taken pieces of better policy. We have states that tax by THC content. We have four states that use some version of plain packaging. We have states that limit the numbers of dispensaries. We have states that have banned all the artificial cannabinoids that another, representative was asking about. So we have many states that have taken, you know, one or more positive steps, but most of them are doing that in the context of simultaneously building this, increasingly powerful for profit industry that makes it much more difficult. The, I go to the advisory committee

meetings, the regulatory meetings, the advisory committee to the state of California for the first year or two, five hundred industry representatives would show up and me and one equity licensing guy. And that was who the state was hearing from because the public health community was not mobilized on the issue. Educators were not mobilized, you know, pediatricians, the behavioral and mental health community was not mobilized. And that's still the case to a large extent. It's gotten a little bit better. But those voices that need to come to the table and engage to have balanced public policy are not yet there why why the cannabis industry is very much present. I think the only way you can avoid bad outcomes is to if you are legalizing, is to create a very different type of system right from the beginning as Quebec did. And then you have a chance at having something that cannot have the large scale negative impacts. If it's well managed and well regulated, you'll still have lobbyists.

[Rep. Kathy Rapp]

Yes. We will.

[Dr. Lynn Silver]

They will not, be as powerful as if they are controlling the jobs and the revenue flow and all of those other things. It'll be it'll be a different equation.

[Rep. Kathy Rapp]

Thank you. Dr. Finn or Dr. Unger?

[Dr. Ken Finn]

Yeah. In in Colorado, we, I agree with Dr. Silver. I think a lot of the stuff that's happening now has been reactionary because of our unintended consequences. For example, we had, I think it was House Bill thirteen seventeen a couple of years ago to try to restrict access to youth, restrict potency, and it was a battle to try to get that done. The industry and the lobbyists showed up and they fought tooth and nail to not have warning labels to restrict potency, especially knowing that those products are very dangerous to the developing brain. And I think we're kind of coming along. I agree with Dr. Silver. It's kind of piecemeal and we're trying to reel in some of the things that we thought were going to be. We didn't even think that we're going have these consequences. I think California, Oregon, Washington, Colorado had what we call unintended consequences. And other states going

down this road are are starting to learn. South Dakota, I think, is doing a really good job, and and the state legislators are listening to I mean, I've testified to them several times that there's other states that are trying to go down this road. I think Alabama is trying to protect women who are using. And the one thing they keep blaming the woman on the bad outcome. But I think like Canada says, if you are a young man and you want to start a family, they discourage use because we know that the cannabis use in the father may alter the autism gene. You might put your offspring at risk for having a bad outcome. So I think there's all these things that other states are trying to do, like Dr. Silver said piecemeal because we're like, oh crap, we didn't realize that was going happen. So let's try to address it.

[Dr. Lynn Silver]

Yeah. I chair California's high potency THC task force now, which is 14 scientists. We're gonna come up with a bunch of recommendations, but I don't know if the state regulatory agency will adopt any of them because since 2017, we've submitted those recommendations every time they've opened regulations for public comment. We gave them warning language, not just us, but others from, you know, the public health community, sending comments, said these are the lessons from tobacco control. These are the things you need to do to reduce harm. None of those recommendations were adopted because the count or almost not a couple, but the counter pressure from industry was so great and what, you know, was called in the sociology literature regulatory capture has been kind of dominant.

[Rep. Kathy Rapp]

So and as far as you know, I mean, as far as the tobacco industry, it was individuals who, who actually sued the tobacco industry, But there's been, no families or individuals suing in the states like California or and there's been no lawsuits against the cannabis industry like there has been in the past with the tobacco industry?

[Dr. Ken Finn]

Oh, they're coming. They're here.

[Rep. Kathy Rapp]

And that might be the only way to roll back some of this---some of these negative impacts that we're seeing is when we see the lawsuits.

[Dr. Ken Finn]

I'm aware of a couple of lawsuits in in the state of New York, New Jersey, and there's a federal lawsuit pending as well. And there's lawsuits against providers, because of bad outcomes as well, that are also coming down the pipe.

[Rep. Kathy Rapp]

Well, that's interesting to know because, I do believe that is one thing that legislators do look at is, potential lawsuits. So, I'll be interested in hearing more about that and maybe doing a little bit of research on that because I do believe that's when the tobacco companies starting, turning around their message. So, and down the road with everything we're seeing about the negative impacts on our youth and maternal health, and, maybe that's what it's gonna take to wake up legislators across this great country. Thank you.

[Dr. Lynn Silver]

And Pennsylvania giving a better example!

[Rep. Kathy Rapp]

Yes. If it's if it's possible, but I fear we're gonna rush into this like other states. I'm hoping not. I think we have had some great testifiers in these hearings. The three of you, you've done a wonderful, excellent job. But as far as where the legislation goes, that remains to be seen. But thank you so much. You are all three of you are very informative, and I really appreciated your testimony. Thank you. Thank you.

[Rep. Dan Frankel]

Thank you, Chair Rapp. Is there anybody else? I don't see anybody. I would say, in all due respect to my counterpart, Chair Rapp, I think we've been trying to do this in an extremely deliberative way. And her participation, we've been able to invite panelists at the suggestion of both sides of the aisle. And just today's hearing, every panel, I think, helped educate us in a very meaningful way. And we are taking this seriously as we develop a piece of legislation to look at adult use. Today's panels were very helpful in informing our work. So, thank you so much to my colleagues. A special thank you to every one of our panelists today that added to this deliberative process. That concludes our hearing for the day, and we will keep you posted as to how we move forward. Thank you.