Haley Hartle, NAADAC: All right. Hi. Everyone Thank you for joining us for today's webinar

Haley Hartle, NAADAC: current trends in nicotine, Thc. And vaping

Haley Hartle, NAADAC: webpage and website this morning. So we apologize for that inconvenience. We are working on getting that resolved as soon as possible, and there may be some things that will change with accessing your ce quiz, so we'll go over that here in just a couple of minutes.

Haley Hartle, NAADAC: But we're super glad that you could be here with us today. My name is Healey Hartle and I’m. The training programs manager here at Needac. The Association for Addiction professionals. So i'll be facilitating today's training and then with me behind the scenes, who you all know, and love is our training and customer, care, specialist, Alison White.

Haley Hartle, NAADAC: She'll be addressing any issues or questions you may have that are not specifically for our presenter. So, in other words, you have a lot of support here. The permanent homepage for Nadak Webinars is nadak.org for slash webinars. So be sure to bookmark this web page and stay up to date on the latest in addiction education.

Haley Hartle, NAADAC: We are using Zoom Webinar for today's live events, and you'll notice the zoom control panel that looks like the one on my slide at the bottom of your screen. So there are a few things to be aware of. With that the first one is the chat box. So that is where you can communicate back and forth with all of

Haley Hartle, NAADAC: the attendees, and you can also message us host and panelists privately there. The other is the Q. A. Box. That's where we'll have you put any questions

Haley Hartle, NAADAC: for the presenter that way. They don't get lost in the chat box. Be sure to put those topic related questions there in that Q. A. Box you can up vote on those, so we'll make sure that feature is enabled.

Haley Hartle, NAADAC: and you can push any questions that you would like to hear answered towards the top, so we will get to those first

Haley Hartle, NAADAC: any of the questions we don't get to today. We will post. We'll share those with our presenter. We will have him send responses, and then we can post that on the web page for the Webinar, and then the live transcript button. The live transcript has been enabled. So you just have to click on the show subtitles button, and that will allow you to see the subtitles at the bottom of your screen.

Haley Hartle, NAADAC: Allison will be sharing the link to any handouts again. It may not work for you in the Education Center. If you have been unable to log in, we have had. Some people have success logging in

Haley Hartle, NAADAC: with the Firefox browser. So if you wanted to try that as a workaround, please feel free to do so, you can also, Allison, If you could post the link to the actual Webinar web page on the Nadak website, if you're not logged in that should work for you to access those materials there as well.
Haley Hartle, NAADAC: So on the Webinar page up here on my screen. That's where everything will be. It also looks this way, or very similar in the Education Center.

Haley Hartle, NAADAC: So if you want more information on the Education Center and the new instructions for accessing your cease, you can click on that button that says click here to learn more about the Needac education Center.

Haley Hartle, NAADAC: All of our educational content now lives there, including all of our live and on demand webinars, and that includes all the quizzes and ce certificates. Again, you may have some trouble accessing your ce quiz today, because the system is down, but we are working on that to get that resolved as quickly as possible.

Haley Hartle, NAADAC: and once you do register for a course, you'll find yourself redirected to this page. That's where everything will live for the Webinar, and then, as you accomplish each one of the steps, it will unlock the next step for you.

Haley Hartle, NAADAC: and after today's live event, or on a normal day you would be able to find the Ce quiz on the live event page in the learning management system, the Education Center.

Haley Hartle, NAADAC: and you would be able to click on that link to access the Ce quiz that way. You also should receive an email with a link to the quiz immediately after this Webinar ends. So what that looks like is if you cannot, if today, because the system is down, if you can't log in.

Haley Hartle, NAADAC: Then you won't be able to purchase the ce quiz. So again we're working on that as quickly as possible. Just be sure to check back, maybe half out every half hour or hour, just to see if that has been updated. And if you now have access.

Haley Hartle, NAADAC: As I mentioned before, some people, myself included, have had success logging in through the Mozilla Firefox browser. So if you have that browser, you can try it, and bypass the security measures. There is no data breach or anything like that. It's just a certificate issue on the back end. So we thank you for your patience. With that you can check out all of our events on the Education Center.

Haley Hartle, NAADAC: And now enough of me sharing these things. I can pass things over to our presenter. So today we have with us, Dr. Weiner. We're super excited to have him here. So Aaron Weiner is a board certified psychologist and addiction specialist, and speaks nationally on the topics of addiction.

Haley Hartle, NAADAC: behavioral health, and the impact of drug policy on public health. He earned his doctorate degree from the University of Illinois at Urbana Champagne and completed his fellowship and addiction. Psychology at the Va. Ann Arbor Health Care System

Haley Hartle, NAADAC: Miner is the president of the Society of Addiction Psychology, a member of the Physician Speakers Bureau for the National Safety Council, and a member of the Science Advisory Board for Smart approaches to Marijuana. So Dr. Weiner we're super excited to have you here with us today, and i'll turn things over to you.
Aaron Weiner: Thank you so much, and let me just share my screen.

Aaron Weiner: Hopefully, this looks right. If not, please flag me down. But thank you, everybody for coming. I've been watching the chat Folks from all over the country is amazing to be able to connect with you folks today, and I know that you're here because you care about this topic, and that makes something that we both definitely have in common in terms of teen health.

Aaron Weiner: in mental health.

Aaron Weiner: and that intersection with substance use it's. It's really, unfortunately, an area that I think we're going to see a huge expansion in in the next few years, because of the context that we're in right now around mental health, around the industry influence in this area, and we're going to talk about all of that today.

Aaron Weiner: So that being said, we do have a lot of content to go through. So i'm going to dive in in just a second. But we should have time at the end for some questions, so please feel free to put questions into the Q. And a. Section.

Aaron Weiner: If we don't, however. which is possible

Aaron Weiner: to forget how this goes. My email is here on the front slide here, and it will also be in the last aaron@winnerphd.com. So please feel free to drop me a line if you have questions. If you'd like any of the primary sources that i'm citing throughout the presentation today.

Aaron Weiner: Happy to provide those to you, or just if you have a question down the line. I'd love to present myself as a resource. So

Aaron Weiner: all that being said, let's do go ahead and dive in here because there is a lot

Aaron Weiner: to talk about in an area that feels like it's just

Aaron Weiner: constantly evolving. But before we get specifically into nicotine, Thc. And vaping, I do want to start by talking about mental health, which is, I know, a topic where

Aaron Weiner: today i'm preaching to the choir. Everybody here as an addiction counselor in some capacity, a counselor, social worker, a therapist psychologist, such as myself. And so this is a topic where we know how intertwined these issues are. And the problem is that

Aaron Weiner: 4 teens right now in particular, mental health has gotten a lot worse over the past 3 years. We're seeing we're seeing me not be able to advance my slide. There we go.

Aaron Weiner: but we're also seeing that about half of all parents reported a new or worsening problem. Claims went up by about 20% for mental health. Teen girls were a little bit harder hit than teen boys, but we're seeing this come across in a number of different ways now, one of them is that depression

Aaron Weiner: is much higher than it used to be before the pandemic. Almost half of all teams, as a study
released by the Cdc. Recently said that they felt persistent feelings of sadness or hopelessness over the past year 20% considered attempting suicide. Now, one of the moderating factors here

Aaron Weiner: that intervened or made it worse was how close someone felt to others. And so you can see here on the left that students who felt close to others at school.

Aaron Weiner: The closer the darker bars are the ones who felt closer. They agreed with that statement more, and you can see that they're shorter. That means that there was less depression. The same thing here you can see on the right, where virtual connection wasn't quite didn't show quite as much of an effect as in person connection.

Aaron Weiner: But the more connected the kids felt, the less depressed they felt. But these numbers are still really really high. And actually another study, looking at a different data set, found the exact same thing. This is the Youth Risk Behavior Survey. This just came out a month or 2 ago.

Aaron Weiner: but what I really want to point out here, because to me this is so alarming, and I have no idea why this is not front page news on every major news outlet, literally one out of every 10 kids, every 10 teenagers right now in America tried to kill themselves. Last year they attempted suicide. Only about a third of them made it to a doctor.

Aaron Weiner: so the attempt might have not been gotten them as as hurt in the process, but one out of every 10 kids is trying to kill themselves right now. That is a huge, tremendous, massive problem that we really need to be talking more about when we think about why young people use substances.

Aaron Weiner: Coping with problems is one of the major reasons more on that in just a little bit

Aaron Weiner: beyond depression, though we're also seeing the same thing happen with anxiety. Where, when you look at the level overall of anxiety over time in the United States, and this is here looking at earlier samples. This is looking again over the course of Covid, but you can see, as time goes on.

Aaron Weiner: the average anxiety in the sample starts drifting to the right as we get closer and closer to present day. And what this found was that 20% of teens had clinical levels of anxiety, and that's twice as high as pre-pandemic, and it was worsening over time.

Aaron Weiner: A recent study also that really underscore this for me very concerning this came out in December.

Aaron Weiner: looked at young people's brains, and found that compared so, if you say, looked at a 17 year old, their brain now compared to someone who is 17 in, like, say, 2,018, 2,017.

Aaron Weiner: Their brain right now has reduced cortical thickness, larger, hippocampal, and amygd volume in a more advanced brain age, so their brains are actually different. And how this is going to pan out over time what it means to have adolescent with a more advanced brain age in some ways.
Aaron Weiner: but not necessarily more mature in others.

Aaron Weiner: We, don't know. All we know is that this period has the chronic stress, the disconnection. All of it has impacted them in very significant and somewhat unknown ways.

Aaron Weiner: That's not just for kids. Of course, adults are feeling the same way, and the statistic for me again that that spoke strongest to me about this was the stress in America survey from the American Psychological Association.

Aaron Weiner: They do a stress in America survey every year, and in their most recent version the one that came out in 2,022 They found that a quarter of all adults said that most days they are so stressed

Aaron Weiner: that they can't function. That's just all adults in America, one out of every 4 and younger adults actually endorse this even more strongly. Essentially about, You know, between 40, 42, and 46% of younger adults under the age of 45

Aaron Weiner: Endorse this. So, for you know we're at edging up to almost half.

Aaron Weiner: and that has a very significant effect on their behavior, as well as on how they behave as parents. And that's another really significant factor. When we think about kids being in the home, what they're soaking up what they're experiencing. If their parents are so stressed they can't function most days.

Aaron Weiner: Now, as again, most of us know, preaching the choir here. When people are feeling a really strong mental health burden. They tend to use substances more. And this is a trend that we've seen across the board in the pandemic. We've seen alcohol sales go up by a very significant amount, particularly online sales.

Aaron Weiner: those as much as 500%.

Aaron Weiner: We've seen a Thc. And cannabis sales go up and stay up in some places by as much as 50. Then this has driven a higher drug positivity rate across a bunch of different categories. Quest diagnostics releases their aggregate data every year, and the most recent

Aaron Weiner: version that they they released in 2,022. So this shows data up through 2,021 found that right now drug positivity rates are at their highest point in 20 years

Aaron Weiner: that 16 out of the 17 industry breakdowns they look at found

Aaron Weiner: this this increase post. Accident. Rates are also up significantly over the past 5 years, and one of the main drivers for this is Thc. Or marijuana use, and we're going to talk a lot more about the implications of this over time as well.

Aaron Weiner: But the the market that's picking up the advertising that's coming out. The commercialization is driving use in in a very significant way.
Aaron Weiner: We've also seen a massive uptick in opioid overdoses again. I'm sure many of you here are aware of all overdoses have now hit. I think they're higher now than 107,000. But the last full year data that we have was 107. Right now, I believe opioid overdoses in the past 12 months. Rolling

Aaron Weiner: number is about 80,000

Aaron Weiner: right now. And actually the Age group that was most strongly impacted by this was kids. This is what you're looking at here on the left

Aaron Weiner: the illicit fentanyl and synthetic overdoses, which is right now, accounting for 90% of all opioid overdoses the fastest growing demographic for those were teens and the adults.

Aaron Weiner: And if we bring this back to what's going on right now

Aaron Weiner: with with vaping, which we're talking a lot about Today we are seeing an uptick in vaping again. We saw a dip over the course of the pandemic kind of as you'd assume that when kids aren't able to get out, they don't have their extracurriculars. They're not necessarily going to school in person, they're around their parents a lot more. We'd see that dip.

Aaron Weiner: And now that much of their lives have returned to normalcy, we are seeing these, you know, 21% year over year increase kind of what we were seeing beforehand.

Aaron Weiner: We are also seeing, and this is going up one age bracket into young adults. So 19 to 30,

Aaron Weiner: quite literally historic highs in marijuana use, and then also in hallucinogen use, which also, not coincidentally, is another area where there's a tremendous amount of venture capital, a lot of commercialization aspects going on over there as well.

Aaron Weiner: So when we ask ourselves, where are all these trends coming from? A lot of it, as I mentioned, has to do

Aaron Weiner: with coping. And how do we cope with our problems, and the way that I, the the metaphor I like to use when talking about this to non-clinician audiences. But this is a useful metaphor. So i'd like to present to you you folks as well is that I like to imagine our brain under stress as having

Aaron Weiner: 2 halves that are sometimes in this image. This is my anatomically correct

Aaron Weiner: picture of the human brain with a dog driving a Tesla here a very advanced car.

Aaron Weiner: And the reason why I like this metaphor is that

Aaron Weiner: under stress in particular, you can kind of imagine the brain as having these 2 main parts, the thinking side, which is very advanced. That's our prefrontal cortex. That's the Tesla in this image that can do all of these really advanced things right? All of our executive functions, our ability to plan and moralize
Aaron Weiner: and think, you know, is this worth it in the long run.

Aaron Weiner: All that stuff logic

Aaron Weiner: that's there.

Aaron Weiner: But it's actually not the most powerful part of our brain, our limbic system.

Aaron Weiner: our more primal animals side, if you will, is what tends to grab the wheel of our car when we are under stress, because what our limits system are, the animal part of us wants the most more than anything else is to not be in pain. We don't like to be uncomfortable. That's kind of like

Aaron Weiner: that is our operating principle do not feel pain. Let's get that taken care of. The second thing that it likes is pleasure.

Aaron Weiner: And so, when it's thinking about, what should I do right now and then? You think about Well, how do substances fit into this equation?

Aaron Weiner: There's that, really, you know, quote unquote, nice dovetail between something that seems to just wash all your problems away right now. and something that feels good.

Aaron Weiner: Right? So it seems to do both. Now, of course, as we all know that is a trap, because I like to think about substances as being kind of like

Aaron Weiner: It's. It's a very strange hot stove, right because it is burning you when you touch it. It it is problematic, but it's like you instead of the stove burning you and you being like, oh, ouch! That hurt. I don't want to do that again. Instead, it's like the people touch the stove, and it's like, Wow! This

Aaron Weiner: This helped. This feels better. This feels good, or in gaining social acceptance or whatever it is, and they don't get burned until later, maybe the next day, or until after they've done it for a few months, or until some

Aaron Weiner: not entirely likely, but risk of substance use happens. Like, say they are drinking, they are drinking, and now they get a dui

Aaron Weiner: right it. But up until that point maybe they thought it was worth it. And so that's one of the difficult parts about how substances work with the way our brain works is that when we get uncomfortable our our vision narrows right like anytime you get activated. You're angry.

Aaron Weiner: You're depressed. You're anxious or panicking. It's really hard to think holistically or spherically, or see all sides of an issue.

Aaron Weiner: because right, we we want to get more comfortable right now.

Aaron Weiner: So when we think then about teens where their brain isn't even fully developed yet, anyway, and that's part of why we see that more
Aaron Weiner: higher rates of addiction when using substances amongst young people than amongst full-grown adults. Their prefrontal cortex is even fully developed. Right that doesn't happen it's all about the age of 25, so that means their dog is extra strong. The car part of their brain

Aaron Weiner: is not even fully developed. It's weaker. It's a lot easier for them to fall into this trap. particularly if it's modeled in their family or in their community. And they think that this is, you know they've got a permission structure for how they're going to go about doing it.

Aaron Weiner: And that actually is when we ask young people and adults the primary reason why folks use. It is to deal with internal problems or internal stressors, things like depression, things like trauma.

Aaron Weiner: anxiety things where they're feeling something that they don't want to feel anymore, and they see this as a possible solution.

Aaron Weiner: Another main reason why we see young people use has to do with external sources of stress, and as we just talked about, kids are very high in depression right now, they're very high on anxiety and stress right now, and just generally there's a lot of pressure put on kids in and youth right now. I mean, when I think back to when I was a kid

Aaron Weiner: school's shootings were basically unheard of

Aaron Weiner: right mass. Mass shootings did not happen often. School shootings did not happen. Ap classes were, you know, not not what they are now. There's all sorts of political unrest that at least to per my memory. Isn't the way it is. Now. There, there's so much swirling around young people right now that they've got to think about, You know, cyber bullying and

Aaron Weiner: social media downward social comparison upward social comparison. Things are very complicated, and so the desire to escape is arguably a lot more for young folks now than it was when any of us were young.

Aaron Weiner: and then, of course, social acceptance. And this is huge for teams teens, but oftentimes it's, you know there's a few different reasons why this happens where folks want to fit in. Sometimes their friend group is growing up and drifting in this direction, and they don't want to be left behind. They don't want to be left out. They don't want to lose their friends. They feel like they have to do it to continue to fit in.

Aaron Weiner: They may also want to gain acceptance into a new peer group, and if everybody in that group is vaping. It's really hard not to do it. If you want to gain acceptance there.

Aaron Weiner: They may also be trying to form an identity which is one of the primary

Aaron Weiner: primary developmental stages. If I cast you y'all back to psych, you know developmental psych 101, and Eric Erickson. But right. You're trying to figure out your identity.

Aaron Weiner: You're trying to figure out who you are, who you're not. It's part of why we see all that rebellion and push back, and so trying to see like, what, what what subcultures do I fit? Into? What sort of
niches, what sort of groups do I belong? There can be this really strong poll to to do the things and engage in the behaviors

Aaron Weiner: the people you would like to fit in with for any reason are doing.

Aaron Weiner: And so all this drives towards by their senior year. About 70% of young people have tried alcohol. 50% have used some illegal substance, and I am including Thc. In that category

Aaron Weiner: 40% have used nicotine of some sort. 20% will have misused a prescription, and this all leads into about 8% of the general population having a diagnosable substance use disorder.

Aaron Weiner: 90% of these folks start during their teenage years, and I I should have put this slide in the presentation. I I didn't. But there was a very interesting study that came out about a year ago that showed the average age at which people, if they're going to develop a substance, use problem with a substance when they do it.

Aaron Weiner: and for alcohol and Thc. In particular, and most of it being nicotine. It is over 90% start using this when they are kids when they are teenagers. Before the age of 20. Nicotine is pretty close. Some of the other ones, like opioids, have a more even distribution across the lifespan.

Aaron Weiner: But the reason why we talk about young people so much with in particular

Aaron Weiner: nicotine, and in particular with Thc. Is that this is when they start

Aaron Weiner: so with that is the backdrop. Let's talk about how we got into this mess with nicotine and with Thc. We are seeing these historic highs where we're seeing particular with nicotine this growth year after year after year, with our young adults, and with our adolescents.

Aaron Weiner: Well, the the really the the origin of all of this started truly with Joule, and actually very appropriate. Today they lost another massive lawsuit where they or they didn't lose it. They settled, for I think it was about another 600 million dollars. I think that brings their total

Aaron Weiner: lawsuit settlement a mound up to like 2.4 billionnow for intentionally going at kids. But before we even talk about the advertising, they developed nicotine salts where you add benzoic acid

Aaron Weiner: to nicotine, and what that does is deliver a stronger nicotine hit to the brain than cigarettes and a stronger hit much stronger hit than any earlier. So e-cigarettes that had come before.

Aaron Weiner: And so what that meant, and part of why they're losing these lawsuits is they were informed that this would mean that the chemical draw of a jewel would be even stronger when combined. What would be even stronger rather than that of a regular cigarette, and they knew that yet did not put any safeguards in place.

Aaron Weiner: Not just that, actually, but they, along with everybody else, infused it with flavors, and this is something that is still going on right now that you can buy vapes and blueberry and mango and pineapple, you can get them in disposables like you're seeing here. You could buy them from
Aaron Weiner: Joule, which were cartridge-based models back when you can get them in liquids right now as well. And what, what all this? But the reason why this matters is that studies have shown us that 85% of kids who vape say that they vape because of the flavors.

Aaron Weiner: and what they tend to prefer. When you take studies that look at this are they prefer fruit. They prefer menthol and mint. They prefer candy and dessert, but they don't like.

Aaron Weiner: the most recent debt I found on this was from 2,019, but what they don't like are tobacco flavored vapes, which again, if you're thinking of, if you were trying to get an adult to switch from vaping to smoking, what flavor might they tolerate that kids might not probably be Virginia tobacco, which is the study.

Aaron Weiner: you know, which is what the kids don't like. But again, we've known that this is how this works. You flavor nicotine, you flavor tobacco. You get kids onto it for years. That's why no one's seen these on the shelves since 2,009 when they were banned. And that's another element. When we talk about.

Aaron Weiner: When you look at policy, when you look at you know the way the nation is going with a bunch of different substances. We know that when you limit access you limit, use that's why the when you talk about, why do we make it tobacco 21 instead of 18, because it limits access.

Aaron Weiner: Why did we Ban flavoured cigarettes? Because now it's a lot harder, if not pretty much impossible these days for kids to get flavored cigarettes, which is how they used to be indoctrinated into nicotine.

Aaron Weiner: So the flavors are a big part of it. But then there was the marketing, and that's a big part again of why Jul is losing all these lawsuits.

Aaron Weiner: Because

Aaron Weiner: when you look at these models and you ask yourself, do these look like 55 year old chain smokers? You can't stop.

Aaron Weiner: or do they look like young people and the young people that even younger people look up to. It's the latter one right like that's clearly what they're doing, and a lot of these lawsuits. This one was pulled from the Massachusetts Attorney General's complaint that she filed include

Aaron Weiner: really interesting reading. By the way, if you'd like to read everything that was compiled.

Aaron Weiner: When you look at these models and their ages, where this gentleman with the time is no more than 18. And just again, when you're asking like, who is this going to appeal to. I mean, like I'm I'm 37, and I can't bend like that anymore. I can. I can't jump like that right? So like who Who are they? Who are they trying to? Who are they trying to to loop it?

Aaron Weiner: And this is something again. This is not new. This is an old playbook. We've seen it before. The Master Settlement agreement from the big tobacco. When they had to release all their internal documents, we got to peek under the hood and see that they know that tomorrow's teenager.
Aaron Weiner: Today's teenagers, tomorrow's regular customer. They would call them replacement smokers as well. That was literally what they would call teenagers. They are, by the way, also investing in THC. And cannabis companies, and more on that very shortly. But this again wasn't just Marlborough, when you think about like? Why does Joe Camel exist? Right? That's what Edgy was back then, and they knew it right. We want this to look as

Aaron Weiner: they are Nonconformist self confident. We know that kids wanting to be cool is really important; that you know, when we think about the 14 to 18 year old group. They are an increasing segment.

Aaron Weiner: This is part of why we had to shut down big tobacco, and part of why all this happened was because it was really predatory. And we're seeing the same thing happen right now with some of these other commercial industries, vaping, being one of the primary offenders, which is why they are losing

Aaron Weiner: these lawsuits. This is very much one of those ask for forgiveness rather than permission. Paradigms. They are making more money, making as much money as they can, and then settling lawsuits than not doing this in the first place.

Aaron Weiner: Now, why does all of this matter well? Because it's actually very detrimental to kids health. That's why we care right, not just because, like we're adults and we want to tell kids what to do, which is a tactic. That, of course, is famously, very effective, right and just telling them that they shouldn't. But giving them

Aaron Weiner: actual information is really helpful. I find, particularly when you lead with talking about how essentially the industry is trying to manipulate them and then talking about, because, even though there's a lot of kids who will really brush aside a lot of what we're going to talk about in this slide when you start by saying, hey! There are rich people trying to take advantage of you because you're young, and they think that they can, because one of the things that High schoolers generally want more than anything else is to be treated with respect and like they're adults.

Aaron Weiner: And so when you again pull back the curtain and show like, No, no, vaping is cool right now, because they want you to think like. These companies made it cool, but they're advertising with their product. This is the way all trends work.

Aaron Weiner: and then you show them what we're about to talk about that that tends to land a little bit better.

Aaron Weiner: But what we know about vaping is that it is addictive through the nicotine. We know there is a lot of toxins in there other than nicotine, including heavy metals. The different components have different levels of those toxins, so because there is still not good, if any regulation on a lot of the vaping market.

Aaron Weiner: You don't really know what you're inhaling, and it's also very complex. How this works
more in that in a slide or 2, but you also can use the pens in different ways. You can overheat them, and when you overheat the heating element. It can flake and deliver nicotine and nicotine, rather toxins, and then metals

Aaron Weiner: into your lungs. We also know that vaping aerosol causes DNA mutagenesis and DNA mutagenesis causes cancers. So while we don't have those really long term studies that show that vaping causes cancer.

Aaron Weiner: we know that vaping causes the thing that causes cancer, so you know, Give it some time, and we'll probably get there. I also just want to point out vaping even the name, and you think about like. Why is it called vaping?

Aaron Weiner: You're not inhaling vapor? Right? It's not which. It sounds like water, right water Vapor. That's usually what we think of. When we think of what does vapor mean? You're inhaling an aerosol. You're inhaling chemicals suspended in air, but aerosoling sounds really bad for you, which

Aaron Weiner: and not coincidentally, is exactly what vaping is. It's very bad for you. But

Aaron Weiner: vaping sounds a lot better. Which is Why, again, why do these words exist? Why do these terms exist?

Aaron Weiner: That's that's ultimately what is driving at now, what's in there at Berkeley lab when searching for some chemicals found 31 of them. There's some of them there on the right. There's other studies that have looked at this this one from the center for Tobacco Control Research and education found a a few more, including our heavy metals like cadmium and lead and nickel.

Aaron Weiner: But

Aaron Weiner: there's one principle here that I think, is really important to point out about toxins and vaping, and that's that. Whenever you superheat something, or whether or not you're vaping it or it's combusting.

Aaron Weiner: it goes through pyrolysis or a thermal degradation, and breaks down into a bunch of different stuff.

Aaron Weiner: So, for example, you may notice on these graphs formaldehyde of, you know, a preserved frog that you dissect in, you know, biology, class, and high school of fame, and also famously in cigarettes

Aaron Weiner: and young people say, Well, that's not on the ingredients. It doesn't say that's in there. So like. Where? Where does that come from? Well, the answer is that formaldehyde is one of the chemical byproducts. When you superheat propylene glycol, or Pg. For short.

Aaron Weiner: and Pg. Is one of the 2 main liquid bases in all vape, liquid, or, as is more colloquially known, they juice. The other one is vegetable, glycerin, or vg.
Aaron Weiner: But when you superheat PG, it breaks down into a bunch of different stuff and formaldehyde is one of those things now, how many things do these flavors and do these bases break down into? The answer is a whole bunch.

Aaron Weiner: There was a study that came out in the chemical research and Toxicology Journal last year that looked at what's in vape aerosol through liquid chromatography, mass spectrometry, which means that they basically splatter it out there by molecular weight, to see what's inside.

Aaron Weiner: and what they found was that there are between 1,000 2,000 separate chemicals in vape aerosol depending on the brand that they look that they were looking at.

Aaron Weiner: and most of them are completely unknown. We don't have names for them. We don't know what they do. We don't know what their safety profile is. However, everything in this graph. On the left

Aaron Weiner: a chemical that bears resemblance to a carcinogen, something that causes cancer

Aaron Weiner: in this graph on the right. Everything in that oval bears resemblance to a lipid or a fat, and that's really important.

Aaron Weiner: because fats or oils are what caused the vaping epidemic that happened right before a Covid hit, if you remember, back to 2,019 early 2,020. We had this wave of kids

Aaron Weiner: being and young adults being admitted to the hospital, and I think about 120 of them died before the Cdc. Stopped tracking it because they they pivoted over to Covid.

Aaron Weiner: But this came because of a contaminant

Aaron Weiner: called a. T. H. C. Or rather vitamin E Acetate was the primary chemical of concern.

Aaron Weiner: and that was a very oily substance. And in particular, when you superheat

Aaron Weiner: vitamin the acetate, it breaks down into something called key teen, and that's what ended up doing a lot of the damage in the lungs. That, by the way, we're going to come back to that on a later slide

Aaron Weiner: with a different substance.

Aaron Weiner: But that oil was what was causing. When you put oil in the lungs it can cause a lot of damage. And so when you're looking at lipids going into the lungs, that is, that is a very big deal, and something we really need to to think hard about

Aaron Weiner: now in terms of just the nicotine side of this, beyond the formaldehyde and the lipids and the 2,000 chemicals going into their lungs. Nicotine itself has an impact on adolescence when they use it long term it disrupts serotonin signaling in the brain and
Aaron Weiner: limbic system development. And again, I like to think of the limbic system is that dog who can take control of the wheel of our car and take us places that maybe we don't really want to go.

Aaron Weiner: And so how this manifests is a reduced attention, span increased impulsivity and enhanced anxiety and fear responses the depressive symptoms in adulthood, and then is correlated with as well that kids are more likely to use other drugs high-risk sexual behavior, and also have a bunch of different psychiatric disorders, Anxiety being the one that comes to mind the most.

Aaron Weiner: But quick note, the more likely to use other drugs. This is something we can talk a lot about that, and and we will in a couple of different ways, and in future slides. But nicotine and Tc. In particular, have the distinction as drugs that chemically prime your brain to be more receptive to the positive impact of other drugs. And so, when we talk about when we talk about, what does it mean for something to be the first in drug sequencing. Or when we talk about, for example, quote unquote, a gateway drug, and again more on that in a little bit, when nicotine primes the brain to be more receptive to the positive attributes of other drugs.

Aaron Weiner: that sets you up to. If you take a light of cocaine, if you're using a pill or another substance for the first time. That means that, statistically speaking, you're more likely than to continue using it when you look at it from a population halted level.

Aaron Weiner: so something to consider there as well. It doesn't just impact, though brain structures, and how they work it. Also, even when you go down to the neurochemical level impacts how the brain works. And we're not going to dive into this whole diagram right now. And I guess to be perfectly honest. I can't entirely. I I don't know what all of these abbreviations mean.

Aaron Weiner: but it does impact prefrontal cortical synaptic plasticity during adulthood which is something that we can understand right, that this is something that actively impacts the way that our brain works when we get exposed to it in adolescence.

Aaron Weiner: This is a comparison between adolescents and adults how nicotine affects them.

Aaron Weiner: The long story short of this is that adolescents tend to feel more of the positive, less of the negative compared to adults. So when they start sliding into it, it's a lot easier for that to happen because they're getting more of the good and less of the bad.

Aaron Weiner: Now, when it comes to vaping, the only area of benefit that we found in the research is for current smokers, it does have fewer chemicals. So vapes have between one in 2,000 secrets have about 7,000, so it is less, and there's no tar in vapes in the second-hand, smoke if you will. The second hand of ape. The secondhand aerosol.

Aaron Weiner: has fewer chemicals as well but that's, not none right. So if you're not putting anything in your lungs. And now you're putting something in your lungs. That is a heck of a lot worse. If you were
getting no carcinogens. And now you're getting carcinogens and toxins. But if you're stepping down, that is better.

Aaron Weiner: completely substituting, vaping for smoking is less harmful, but doing both is actually worse than either on its own. And we've seen that in several studies, particularly on cardiovascular health. So if you have someone who is smoking and is like starts dabbling with vaping, and then ends up just doing both.

Aaron Weiner: That is actually worse for their health than if they were just smoking, and a lot worse than if they were just vaping.

Aaron Weiner: There is some evidence that indicates that you can use vapes to assist with smoking cessation, but I think it really depends on the person.

Aaron Weiner: I've seen it go both ways where vaping is honestly just a lot more convenient. And so, although you can use it to adjust your dose down over time you can control vaping and the nicotine delivery a little bit more. It's also something that is potentially addictive on its own. It's very reinforcing with the flavors.

Aaron Weiner: So you know, it really depends on the frame. There there are also, by the way, a lot of FDA approved and or evidence-supported ways to quit smoking or nicotine that Don't potentially have carcinogens and toxins and things in them. And so those, you know, when we're thinking about

Aaron Weiner: like, do we need vaping as a smoking cessation tool. I would argue that the collateral damage to kids is probably more important right now, but that's more of just like an opinion on on my part. You know where it's. That's up for debate.

Aaron Weiner: But if someone is not already smoking, vaping is actively harmful to their health, which is what I was speaking to earlier. So if someone stepping down yes, it's helpful

Aaron Weiner: again to that point. You know we we don't need to have a blueberry vape for someone smoking to switch over to vaping, you know. That might potentially split the difference. But another point I want to make is that I try to avoid using the words safer, and certainly not safe.

Aaron Weiner: when it comes to vaping, because when you evoke the words safe, that brings up different ideas, different heuristics, then less harmful. And so, even just as is picking what we, what we use vaping is less harmful than smoking, and that's pretty objectively true. At this point I don't think anyone would debate that.

Aaron Weiner: but I would personally not call it safe. I would or safer. I definitely would not call it safe.

Aaron Weiner: and it's something where again, if if you're going from no toxic chemicals and carcinogens into your lungs to toxic chemicals and carcinogens in your lungs.

Aaron Weiner: it's definitely worse. So
Aaron Weiner: what is keeping us here, then? Why are we selling blueberry and pineapple and candy, and all these vapes? And we are seeing 20% up ticks. So the answer is money, and there is a lot of money to be made here. It is a multi 1 billion dollar industry. And again, specifically, with

Aaron Weiner: kids I want to point out. And you you may have heard about this if you haven't happy to to fill you in. So joule again today who lost about a half 1 billion dollar, or settled the half 1 billion dollar set of about 3,000 lawsuits.

Aaron Weiner: They are a shell of the company they once were. There was a vaping ban that was touted as actually going to help with this with flavors. But literally all it did was basically whack jewel with a club. It basically only affected cartridge based

Aaron Weiner: models

Aaron Weiner: which was joule. And so at the time that they were, their valuation

Aaron Weiner: was about 13 billion dollars at the height of their popularity in 2,019. They are worth about 250 million dollars, I believe. Now, today is what they're valued at. So they've completely just combusted no pun intended because they couldn't flavor their products.

Aaron Weiner: and that came from the fact that most of their users were kids using flavors. There was a study put out by the Truth initiative that found that again in Joule's heyday 17,

Aaron Weiner: it was either 16 out of 17 or 17 out of the 18 people who used Joule were teenagers. So if you think from a business model, if 95, or so, 94% of your customers or teams, and then teams. Don't want your products anymore. What's gonna happen to your business? Exactly what happened to Joule

Aaron Weiner: Now, unfortunately, all of these other vape companies can still keep doing their thing, which is why you can buy all these different brands. The most common right now in the United States. The most popular is Puffbar, and in Europe right now it is a

Aaron Weiner: elfbar. Elf Bar is even more dominant in Europe than Puffbar is here.

Aaron Weiner: but how they've continually evaded the FDA is, they made a pivot to using tobacco free nicotine. So they use synthetic nicotine now and have continued to basically exist in this loophole where the FDA can regulate tobacco, but they can't regulate nicotine. Now that said they have been able to do this for about a year. Now, actually the

Aaron Weiner: definition of what they can regulate has expanded. I don't know the current state then, of why this sort of stuff Hasn't stopped, but that's where we are now, most kids are using disposables who are vaping. Vaping is still on the rise. You can go online and order these delivered to your house. Id Checks are not what they need to be.

Aaron Weiner: you know. Fake ids get them from gas stations.

Aaron Weiner: We're still in the era of flavors.
Aaron Weiner: Now, this is not just for vaping right where we see these tactics that are clearly designed to ensnare kids. You've probably again. I know i'm preaching. You know you guys are all my colleagues. We're all in the field of addiction. I'm sure we're all aware of rainbow Fentanyl, which is something where I can not even imagine

Aaron Weiner: how you can sleep at night creating this stuff. It's like

Aaron Weiner: this is like what I mean. I it's completely inexplicable. You know how you can be raised, and think that even even as a drug dealer, how you can think that this is something that's okay to do

Aaron Weiner: when it's killing so many people.

Aaron Weiner: But this sort of thing is also going on in the Thc. World. And when we look at how these products are being marketed, what they allude to, we we've got to talk a bit about Thc. As well, and I want to start what when we, when we look at this from the lens of what's going on with Thc. And what's the impact on kiss and teens

Aaron Weiner: first by defining terms? Because i'll use a few different ones as we talk about the industry today

Aaron Weiner: at the top level is cannabis, and cannabis is the name of multiple different plans within the cannabis family.

Aaron Weiner: One of those plants is hemp, hemp is a cannabis plant that has less than 0 point, 3% Thc. By volume, and since 2,018 is federally legal, it has low Thc. And has very high. Cbd. And so when you see Cbd sold all over the place.

Aaron Weiner: that is, 99.9 9 9 9 of the time coming from hemp, and our part, because they legally couldn't sell it if it didn't come from help.

Aaron Weiner: But that is, that is, one side more on some less positive things going on with hemp

Aaron Weiner: in about 2030 min.

Aaron Weiner: On the other side. Another type of cannabis plant is marijuana. Marijuana is a cannabis plant that has over 0 point, 3% Thc. By volume that tends to have a lot more than that. And again more on that in just a second.

Aaron Weiner: That is, of course, to see is the psychoactive chemical that gets you high. That is addictive. So on and so forth.

Aaron Weiner: Thc is a cannabinoid. It is a chemical one cannabinoid that gets you high intoxicated and is addictive. And the reason why it's important to break that out is that there are a lot of products these days that

Aaron Weiner: really don't bear any resemblance to a cannabis plant or a marijuana plant anymore. It
concentrates wax, shatter, butter

Aaron Weiner: just straight up, concentrates that you they

Aaron Weiner: out of vape pens that is just distilled. Thc. Or the Tc. That goes into edibles, and so it's. I think it's very important that we start talking about different parts of the industry with with accurate terms, because even in in research literature people will say they're researching cannabis when they're actually researching Thc and marijuana.

Aaron Weiner: which I think can be very confusing, particularly to the public, You know, if you're researching Thc. That's what we should be calling it right, because we don't really care too much about Cbd. On its face Cbd is not addictive. It is not intoxicating. It's basically an anti inflammatory.

Aaron Weiner: That's what the research is pointing towards. So, anyway.

Aaron Weiner: need to take a second to define terms there as we dive in. So, although we could talk about the plant matter side, and like is marijuana. A bad idea for kids. I really want to drill into Thc. In particular, because that compound, which again, if if they're smoking something, what they're smoking is marijuana

Aaron Weiner: is particularly bad for kids. Now one reason for that is, they are at increased risk for addiction. And again, I know i'm probably preaching to the choir here, but absolutely Thc. Is physiologically addictive. We have known this for years

Aaron Weiner: bunches of different studies. It is the second most common substance that we treat in our rehab centers behind alcohol.

Aaron Weiner: People do go through withdrawal from it. I actively treating a teenager, going through that withdrawal right now personally in my own practice it is, it is physiologically addictive about a 10% of users. And this is actually old data. I have a feeling. It's higher now because of increased Thc content.

Aaron Weiner: But about 10% of users overall use it about one in 8 of those who begin in adolescents, but between a quarter to a half of daily users have a have a use disorder, and again I just took a picture of my own dsm five-tr here, and I guess this is a real thing, and the myth that it's not addictive.

Aaron Weiner: persists. So we we hear this so often from people who might have commercial or political interest in it from people trying to justify their own behavior. It's just simply not true. I think part of the reason why this persists is that.

Aaron Weiner: but like with alcohol, most people who use Thc products don't become addicted to them. Just like most people who use alcohol are not addicted to alcohol. It doesn't mean it's not addictive, though, and so I think it's really important that we're very forward about that fact, and about the risk of that, because

Aaron Weiner: otherwise we are going to see this increase as overall use increases if we're seeing, you know, even if it say, 10% of all adults are using this more and more and more, but the absolute value, the
absolute number of adults increases.

Aaron Weiner: One thing that we've learned from Covid is that a very small percentage of a very large number is still a very, very large number that we need to pay attention to. So again, I know i'm probably preaching to the choir, but

Aaron Weiner: absolutely addictive.

Aaron Weiner: So second, this is not woodstock anymore. This is a much stronger product. The most recent data released by the dea shows us that the the

Aaron Weiner: the percentage of T. H. C. In what's being seized from Black market products has been going up and up and up and up over time at Woodstock, and all the way up until the mid 90 S. The average Thc. Content in a joint was about 3 to 4 in 2,021 that escalated to almost 16%.

Aaron Weiner: When you look at legal dispensaries, so dispensaries that are legal in a state. the vast majority of everything that's being sold is over 15% Thc: that's the green part of all of these different pigraphs from the study that came out in 2,020,

Aaron Weiner: almost nothing. That's the blue part is under 5% Thc. And the average that they found here. The average of the States that just had medical programs was 19.2 and recreational, was 21 and a half.

Aaron Weiner: Now, to be clear. First of all, there is actually no difference between medical marijuana and recreational marijuana, just like there is no difference between the

Aaron Weiner: like medical percocet and recreational percocet. It's all the same stuff. There's just a different distribution of what's being sold.

Aaron Weiner: But this means, if recreational products are 21, point 5% on average for the flower. That means that an average joint today is like lighting up 7 joints from the mid nineties and smoking them at the same time. And so the implications for harm for this are very different in much greater.

Aaron Weiner: and this does not even touch what you can get from concentrates, and how much you are taking in there. Those are 60, 70, 80, even in some cases over 90% pure Thc. That you're heading your brain with all at one time. So

Aaron Weiner: 3% to 90% is 30 times as strong.

Aaron Weiner: very concerning in terms of what this is doing to the brain, and honestly, largely unstudied.

Aaron Weiner: We know that it has a very clear impact on

Aaron Weiner: the outcome for young people in schools. So this goes at both the high school level, where you see lower grades, higher dropout rates, more school disciplinary problems. This could come from
cognitive disruptions and more on the brain itself in just a minute. So I won't. Talk about that too much here, but also the social social, functional impacts.

Aaron Weiner: If you have a young person who is choosing
to get high for fun and hang out with people who get high for fun, it is probably not the same group of kids who's out late at the library stuttering for a history test on a Thursday night.

Aaron Weiner: It's a very different group of kids, and we all know that the people we surround ourselves with have a huge impact on our behavior. That's part of why, when we're trying to get folks into recovery, we always recommend they at least check out pure support groups like 12 step Fellowships, or aa, or refugee, or a smart recovery or refuge recovery.

Aaron Weiner: It's important that they have a group around them that's modeling the behavior they want to pick up on. So if you are getting high for fun with people who get high for fun. You are self-selecting yourself into a group of people who are just, statistically speaking, less likely to achieve at the highest level.

Aaron Weiner: We know that earlier use of tac products leads to worse outcomes, and greater frequency leads to worse outcomes. And we see the same thing in college

Aaron Weiner: kids, college kids who are using. They have an increased chance to skip class lower Gpa potentially longer time to graduate. And we've seen that when you compare this to lifetime, earning potential over large samples.

Aaron Weiner: What you see is that the more Thc. Someone says they've used over time, the lower their overall lifetime earning potential becomes, because over time, if you're using it more and more and more frequently it starts to take a toll again on who you're hanging out with your level of achievement in school the type of job that you get.

Aaron Weiner: It's not a one-to-one right? And I think where a lot of people get hung up on some of these things, including what it means to be a gateway drug. More on that in a minute is that

Aaron Weiner: you you think about it as being almost like causal like. If you do this, you're going to earn less money, or this is going to happen to you.

Aaron Weiner: It's not how risk works right. We have speed limits, because we know the faster you drive, the greater the likelihood it is that you are going to get into a car accident, and a really bad one at that. But that doesn't mean that every time you drive over the speed limit you're going to get into a car accident. If that were the case literally, all of us would be dead

Aaron Weiner: right. No one would have cars anymore.

Aaron Weiner: But that's not how risk works. So you're talking here about risk and the trajectories and the likelihoods. Eventually you you flip a coin enough times.
Aaron Weiner: or you roll the days enough times. Something bad is going to happen.

Aaron Weiner: You know your number is going to get called.

Aaron Weiner: Now, what does this mean? In terms of their function in other ways, in terms of how do they actually function in the world? There was a longitudinal study that just came out. I believe it was at the end of last year that looked at this, it was saying.

Aaron Weiner: How much? How much do you see our kids using?

Aaron Weiner: This is another one of those that was, you know, calls at Cannabis. But honestly, what they're talking about here is Thc. And how does that relate to their their outcomes later in life? And so, if we look here in particular at this frequent versus no use category.

Aaron Weiner: What you see here without going too deep into all this statistical gobbledyook. and although for those that that that are attuned to this. Of course, PE less than 0 point 0. 5 means statistically significant, and the closer it gets to 0, the more significant it is, it is. It is significantly related to symptoms of psychosis. Again, more on that in the second very related. This is one of the strongest associated these strongest association to problematic substance use of any sort for

Aaron Weiner: it's also related very strongly to delinquency to debt, to lower general well-being to feeling more socially excluded, and in the other very strong association

Aaron Weiner: these would be young adults who are not in school, and who also do not have a job.

Aaron Weiner: So when we think again about that lifetime earning potential, and that folks who are frequently using Thc. Products in adolescents that they're more likely to have a substance use disorder, and to not be in school, and to be and to be unemployed. You can see how that association. You know how how these things start to get linked.

Aaron Weiner: Now, when we talk about the brain itself, there are both structural and functional issues in terms of T in the adolescent brain, and there is so much we could talk about here.

Aaron Weiner: This is there's been so much research done. But I want to point out to one meta-analysis and then another study that I think some of this up pretty well. But again, this is a really deep rabbit hole. If you want to go down it to read about. It's a very well studied area. One is this one here on the left.

Aaron Weiner: So the risks of cannabinoids in neuroanatomic alterations in cannabis users. So neuroatomic alterations means quite literally structural changes to the brain. And so what you're looking at here are for each of these lines. They're looking again a lot of studies. This is a meta-analysis. So they're saying.
Aaron Weiner: for those studies did it Look at a particular brain structure

Aaron Weiner: if they didn't, that's the great part of the line if they did, and they did not find a structural abnormality that's blue. And if they did find a structural change due to Thc. Use, that is red. So what we're looking at here is the proportion of red to blue.

Aaron Weiner: Now, if we magnify this, what we're looking at here in the top row is by dosage. And so the important point to note here is

Aaron Weiner: is that, remember

Aaron Weiner: the average Tc. Of marijuana flower right now rather is 7 times as strong as it used to be. So dosage right now, and those concentrates are extremely strong. So it's very easy for folks to be at high dosage right now.

Aaron Weiner: what you are looking at? Here are the 2 most studied brain areas, and the 2 that have the highest ratio. Are they are on the left the hippocampus hip.

Aaron Weiner: 85% of studies that looked at the brain and looked at the hippocampus found a structural abnormality to the hippocampus based on dosage of Thc. That a young person uses. So this does not have to do with frequency or duration. This is just a dose. How strong of a product they're taking

Aaron Weiner: the other brain structure.

Aaron Weiner: There's that Pfc. Again prefrontal cortex, the car part, which is already not developed

Aaron Weiner: fully for these adolescents. If we go down to duration. That's the second row of lines. The only 2 brain structures that show this in terms of Does it matter over time how much they are using is again the hippocampus and the prefrontal cortex, and it's not nearly as consistent finding an effect.

Aaron Weiner: But those, again, are the only 2 brain structures where we see it. So in particular it seems like Thc. Gets at the hippocampus and gets to the Pfc. Now here on the right side. What we're looking at is. Well, then, what does this mean in terms of someone's ability to use their brain? And so this is looking

Aaron Weiner: at the grade School grade over time and 4 different areas of cognitive function. You've got working memory here. You've got non-verbal reasoning here you've got long-term memory here

Aaron Weiner: and behavioral inhibitory. Control. So basically being able to control like knee-jerk reactions.

Aaron Weiner: And in each of these graphs you can see that the blue and red line are in opposite sides of the mean either the highest or the lowest. The blue is the no use category. The red is the most used category.

Aaron Weiner: and if the blue is on the is lower. That means the lower is the better score. If the blue is higher, that means that higher is the better score.
Aaron Weiner: So you can see pretty consistently across all of these different areas

Aaron Weiner: that that there's an effect right? It's not like it's 0, somebody out. It's not like your brain goes completely down the toilet.

Aaron Weiner: But there's something that seems like it's taken off the top here fairly consistently, and in a way that very well might stick around, even after use is discontinued again, particularly if you're changing the physical structure of your brain. There's some areas that do rebound that we're seeing that we do see but other areas cognitively that do not.

Aaron Weiner: So let's pivot now. So impaired judgment does lead as well as we we found through studies to increase risky sexual behavior amongst kids.

Aaron Weiner: Psychotic breaks.

Aaron Weiner: This is a really important topic for us to touch on, because it again increases with higher percentage of Thc: and this is a real thing, guys. Again, I may be preaching to the choir here, but

Aaron Weiner: something that you hear very frequently for people in the industry

Aaron Weiner: Thc. Or cannabis evangelists as well as you know. They say, like oh, like cry reef for madness, right? It's like we're back to the fiftys again.

Aaron Weiner: That's not what we're talking about this. Isn't some scare tactic. This is highly replicated. Very clear medical literature that, to be honest with you, I've seen with my own eyes. I've treated people who have had this

Aaron Weiner: previously to going and starting my own business. I was the administrator over the addiction service line for a hospital system where we had an inpatient ward. We had a psychiatric hospital in the adolescent unit of about 40 beds at any point in time we had between 2 and 5 kids

Aaron Weiner: with cannabinoid induced psychosis. So i'm very aware of how common this actually is, but I think a lot of folks really downplay it a lot. What this study found, though this made national news back in 2,019. When it came out, what this study found was that across 11 different sites in Europe. If someone was using

Aaron Weiner: a flower T: you see flower products of the higher potency flower marijuana products these days.

Aaron Weiner: they had a 50% greater chance of having a psychotic break if they were using the concentrates, which again are incredibly powerful. Comparatively, they had a 500% greater chance, a 5 times greater chance of having a psychotic break than if they were not using anything at all.

Aaron Weiner: This study also really shocked me honestly, and in a certain way the part that wasn't shocking this one came out last year. What they were looking at is
Aaron Weiner: the marijuana legalization policies. So do they have recreational marijuana in a state. And if they do, does that have an impact on the amount of cannabinoid-induced psychosis in that state? And the answer to that question was. Yes, it does. That did not surprise me. But what did surprise me was the number.

Aaron Weiner: and what they found was that in 2,017,

Aaron Weiner: which there are fewer people using Thc. Products than they are right now. There were an estimated 129,000 hospital discharges for psychosis associated with cannabis in the United States.

Aaron Weiner: That comes to one case, one person having a psychotic break due to cannabis

Aaron Weiner: every 4 s, or I should specify due to Thc. I'm sorry

Aaron Weiner: i'm seeing all the wrong things.

Aaron Weiner: One psychotic break due to Thc. Every 4 min.

Aaron Weiner: which is a lot

Aaron Weiner: that in this country, every 4 min or more Frequently someone has a psychotic break due to Thc. But that is actually what the research is showing us.

We see that then trickle out into emergency departments, where in Colorado, after they legalized

Aaron Weiner: their their admits tripled for cannabinoid related reasons. The other main reason why people were being emitted was for something called cannabinoid hyper Emmesis syndrome, which is where, instead of Thc. Being an anti semitic, instead of it suppressing, vomiting, it actually causes you to vomit uncontrollably.

Aaron Weiner: and be in a very extreme pain if you Google, the term scrrammeting scrrammeting is a fake word that's a conjunction between screaming and vomiting because that's what happens when you have cannabis, chs, cannabinoid hypremesis syndrome. You are screaming, and you are vomiting. You can't stop for a long time.

Aaron Weiner: and it literally can kill you. This is something that I found back in 2,019 in U.S.A. Today, where this 19 year old vomited himself to death. He died of dehydration. So this so.

Aaron Weiner: and cannabinoid induced psychosis are the 2 main reasons why we're seeing increases in LED visits.

Aaron Weiner: We also need to talk particularly for teams about drugged driving.

Aaron Weiner: because before we dive into this graph right now, the data tells us the teens are 4 times more likely to drive high or be in a car with a with a high driver than to drive drunk or be in a car with a drunk driver. So there is a lot of misinformation about this.
Aaron Weiner: Now, part of why this happens is that THC behaves very differently in the blood than alcohol.

Aaron Weiner: So alcohol right? It goes in, and the amount of alcohol in your blood has some bearing on how impaired you are. THC works very differently. It goes into your blood, but then out of it again very quickly. That's what you're seeing in this pink line.

Aaron Weiner: When you smoke it or vap it, it enters very quickly, and then within 3 or 4 h. It's basically all gone.

Aaron Weiner: But

Aaron Weiner: instead of leaving your body and being metabolized, it enters your brain because THC is extremely lipophilic. It's attracted to fat, and your brain is about 70% fat. It's like a big blob of fat up there, so the THC shoots out of your blood and into your brain

Aaron Weiner: where it continues to affect you, and that's why you can see the subjective high, even though THC is out of the blood is not down to 0,

Aaron Weiner: and then the performance impairment is also not down to 0, and it and this is also really important. It does not decrease at the same level that the subjective high does so. People oftentimes are impaired by THC longer than they think that they are

Aaron Weiner: edibles pose an extra issue because they don't even hit your blood until about 3 or 4 h in.

Aaron Weiner: And that's because you have a lot less surface area in your stomach

Aaron Weiner: to absorb chemicals than you do in your lungs, which have all of those little alveoli right, all those little sex, to try to absorb all the oxygen it can. That's part of why chemicals are also absorbed very quickly when you inhale them. But what that means is that if you don't know how much THC is in an edible, or you're not very used to taking edibles.

Aaron Weiner: You might take one and then be like, oh, wow! That didn't work. I want to take another one or another one.

Aaron Weiner: and then it hits you. Perhaps once you're on the road given that it's going to be 3 or 4 h potentially for it to fully take effect.

Aaron Weiner: I hopefully even take effect or cause even more more issues. So there's a lot of room for error here when it comes to THC on the road.

Aaron Weiner: and it's not just that you're driving slower and more carefully either. This was a meta-analysis that came out in 2021 that aggregated all the different information that we have about how THC impacts your cognitive abilities here on the left that are related to driving. And then here on the right.

Aaron Weiner: the straight up studies that looked at driving specific tasks, and how THC impacts that?
Aaron Weiner: So? For sake of time i'm not going to read all this off for you guys today. But there, there's a lot of things that it impacts.

Aaron Weiner: What we know about Thc. In driving is that Peak impairment is about 20 to 40 min after inhalation. But again, that's much later for edibles, and that impairment is usually resolved after 3 to 4 h. If someone is either a low user or moderate user and is mostly resolved by about 4 and a half hours after use.

Aaron Weiner: Hmm. That said. That is a lot longer than say someone having a drink. There is a big difference between smoking a joint

Aaron Weiner: and then getting on the road and having a single drink and getting on the road, or even smoking a joint, and then getting on the road an hour later versus having a single standard drink and getting on the road an hour later. These are very different paragraphs. That's also part of why.

Aaron Weiner: you know, you hear the marijuana industry crying out like we should be able to have consumption lounges, we should be at the equivalent of bars. It's like well, actually, the safety issues around that are very different, you know, like getting people home afterwards, looks very different. It's not a one to one comparison.

Aaron Weiner: These are different products. These are different impairment paradigms.

Aaron Weiner: Cbd. Also does not diminish thc related driving impairment. That's another one of those myths that was examined and found out to not be true.

Aaron Weiner: Thc. Use is estimated to relate to an additional 6,800 fatalities on the road annually. This, by the way, is compared to about, I think, last year we had 12,000 alcohol-related motor deaths annually, so it's not to the same level. But it's not insignificant, either.

Aaron Weiner: More frequent use again. So if someone's using more frequently that means that statistically, what we're finding. There's a greater chance that they're going to

Aaron Weiner: choose to drive, drive, drive high, rather, and then get on the road. So

Aaron Weiner: we got to talk a little bit about marketing, because this is another area where the Thc industry, the marijuana industry, the cannabis industry, all of them, are marketing in ways that again, when you look at these sorts of products, and you ask yourself.

Aaron Weiner: who are they trying to to speak to with branding? Who are they trying to speak to with their products. You know you're probably not.

Aaron Weiner: you know, getting.

Aaron Weiner: And this was back when we even just had medicinal products

Aaron Weiner: here in Illinois, where i'm from like your your your lollipops, you know. Probably again
not getting at the most adult crowd. And I actually want to show you guys. I don't know if you know, if I
know we're here from all across the country. But i'd like to show you how dispensaries actually look

Aaron Weiner: online. And I want to specify here. I'm I'm. About to pull up a website of a dispenser we
have here in Illinois again, just to show you what this looks like I want to make it clear.

Aaron Weiner: This is very consistent across most of the United States who have dispensaries and
medical ones here in Illinois. This looked essentially exactly the same when we just had a medical
marijuana program. And, in fact, let's just go ahead and go over there right now. I'm going to click on it.
Quick disclaimer! I have not looked at this today. I don't know what we're going to see.

Aaron Weiner: but all of the the brand names and the products being sold here. This is exactly the same
as what it was before we legalized. We legalized recreational marijuana here in our State, back in 2,019.

Aaron Weiner: But let's take a look here. So the Max potency of a medical product is 94%.

Aaron Weiner: They're called things like afternoon delight, caramel, cream, dosey, do so. These are some
vape pens. You can see here that it's 82% Thc: this is 78% Thc.

Aaron Weiner: Let's pull up some flower and see what's being sold. So

Aaron Weiner: here's all flower. So just right up the top like here's a 30% durban's gittles at 30, you know
30% extreme cream, fat billy grape stomper, 30, 2328% Bub: a fat.

Aaron Weiner: 29% black Afghan, 27% animal sherbit. So again like this is what well over the the 21%
that you see. as even the average from 2,020. But but again, i'd encourage you. If you're in a state with
this, Go, go look at their website. It's all here how this is marketed. Looks like they have a 48% flower
that's really high. Let's see what that is. So

Aaron Weiner: this is a Goldie and V. 6 haze, a 47% infused supershake. I mean? Gosh! I don't even
know. Maybe it's infused with the Thc. Concentrate. I I thought that natural plants were. They topped out
at 30%. Honestly. So i'm kind of surprised to see this today, but again I didn't preview this, so we're just
you know i'll look at this together.

Aaron Weiner: But let's take a look down also. Let's let's take this off

Aaron Weiner: and let's just take a look over here at the concentrates that we've got, because again I think
it's helpful to. I always like to show rather than tell whenever I can.

Aaron Weiner: So let's look at the extracts.

Aaron Weiner: So here are their extra x. We clicked twice.

Aaron Weiner: So here. If we just again see what's being featured at the top. 84, 84% same names,
apparently, or maybe this is just by alphabetical order. captain crush 90% cam de meth, he so you could
call this up anything right. This is the medical menu. And again, in States, if you're from a state with just
a medical program. I encourage you to go. Look, there's one or 2 states that don't use these sorts of naming conventions where.

Aaron Weiner: when you look at it, You're like, Why does medicine like? Why is medicine called Fortune Cookie and Wise medicine? 72% Thc.

Aaron Weiner: You know. Good good questions to ask yourself. But again it's. This is how this is all being being marketed. Let's take one more look. Here is to go down to the edibles. Here we are. So this is again in the medical section. We've got gummies.

Aaron Weiner: you know. Snazier berries.

Aaron Weiner: It's nozzle chill. We've got mince. We we do have chocolates around here somewhere. We've got caramels, so things as well that if they're they're out of their bag, and even sometimes in their bad, it's kind of hard to tell, you know, like if a kid picks this up, what are they getting? Particularly what age? And so

Aaron Weiner: I don't have a slide about this in the presentation. But when you look at poisoning rates, what that looks like, that also is all going up very significantly.

Aaron Weiner: So hold on 1 s guys. Let me get us back to

Aaron Weiner: back to my slides. But that's so. That's what's going on. And again I encourage you to go. Look for yourself. If this is something you haven't seen before, and we're familiar with.

Aaron Weiner: This was just a a dispensary in in my state.

Aaron Weiner: But this is something again that's very systematic. There was a study that came out last year looking at marketing that found that pretty systematically cannabis companies use marketing that appeals to adolescents.

Aaron Weiner: The Daily Herald. This is a a local newspaper in my area.

Aaron Weiner: When when a dispensary was handing out their swag to kids at a summer fair, give them an opportunity to apologize. They didn't do it. There's another local dispensary to me where they used a raccoon wearing sunglasses, and you know, holding up rock on signs as their mascot. This is actually illegal. They were first to change this.

Aaron Weiner: but what made this particularly egregious was that they were literally right down the street from an elementary school. They used a raccoon as its mascot.

Aaron Weiner: Now you can't make this stuff up. Now, part of why this is really important

Aaron Weiner: around messaging and advertising is that the vast majority of what kids see on social media is positive. This study came out last year and looked at of drug mentions on social media. Is it positive, negative, neutral? What are we looking at?
Aaron Weiner: You can see here that for cannabis products, 80%, practically 79 and a half percent of mentions on social media are positive. Very few are negative.

Aaron Weiner: And this actually goes for all drugs. But three-fourths of all posts about drug use are positive, although that's driven very largely by by cannabis. You can see here that alcohol is also very positive.

Aaron Weiner: A Sigs are also very positive, so nicotine and vaping the only one that they suddenly here. That was negative and more negative than positive, were opioids.

Aaron Weiner: But even that 40% of drug mentions for opioids were positive.

Aaron Weiner: And all of this is driving into the fact that right now the perceived risk of use keeps going down and down and down and down over time. That was at its highest here in the late 80 S. Early 90 S. But you can see, as the industry like this pretty much coincides with when we started seeing medical dispensaries.

Aaron Weiner: and over time there's been this very shrewd marketing campaign, where the risk has been portrayed as lower and lower as it has objectively been getting more and more and more risky. And this is consistent across all different age groups. And again, this is not an accident, because there is a very clear connection

Aaron Weiner: between the amount of a substance or amount. Someone thinks your substance is risky, then how much they are going to use it.

Aaron Weiner: Patent. When you look at past month. Minute drinking and marijuana use amongst teens, and how risky they think it is!

Aaron Weiner: The folks who think it's a great risk. That's the dark line much lower than those that think that it's anything else. Moderate, slight, or no risk. If if they think that it's a great risk. Rather they are much less likely to use it, and in the case of marijuana is 15 times less likely to use.

Aaron Weiner: When you look at the current demographics as well. There's a big drop off between young people who use these products and older people who use these products. So you want to try to make this bar as high as it possibly can. If you're going to lose about 50% of your people over time.

Aaron Weiner: you want to make sure you get at the demographic that is predisposed to like your product the most. This is why one out of 4 twelfth graders said that if it were legalized in their state, they were more likely to use it.

Aaron Weiner: And part of this is because the presence of a dispensary, we found impacts. The behavior of the people around it at the local level. I'm going to start going pretty quick. I know. I've already been talking fast today, guys. I'm going to go even faster right now, because we have a hard cut off in 15 min.

Aaron Weiner: Unfortunately, still have a lot more to get through, so i'm going to go quickly. I encourage you to look back at these slides that basically what these slides are showing this one
Aaron Weiner: and this one

Aaron Weiner: and this one are showing that within about a 4 mile impact radius of a dispensary there's a greater likelihood of young people to use use more heavily and have stronger intentions to use and have more problematic use. This study found the exact same thing.

Aaron Weiner: So in terms of local control and the issues of where do you put these dispensaries where they go matters it's not just if a State makes a decision. There is an impact on the use rate in the state. If you have a dispensary in your neighborhood. There is actually an impact on use rates in your neighborhood.

Aaron Weiner: I don't have as long as i'd like to talk about What does it mean to be a gateway drug? What I do want to say, though, is this: People often think that being a gateway drug means you're going to use a harder substance if you use tac products. That's not what it means. It's all about likelihoods and what we know. Time and time again, is that

Aaron Weiner: kids who use this substance in particular

Aaron Weiner: at this national level data, they have a 10 times greater chance of using stronger substances.

Aaron Weiner: This longitudinal study found that occasional or very frequent Thc. Use

Aaron Weiner: create a much higher likelihood that they are going to within 3 years, be having a prescription opioid disorder. This study found the same thing a longitudinal study, looking at an urban cohort in particular.

Aaron Weiner: of young adults. If they didn't use T. H. C. At all. Here are the chances, the likelihood that they are going to use prescription, opioids a misuse, rather prescription, opioids or heroin.

Aaron Weiner: Here is what that looks like. If they are chronically using Thc. During adolescence. Look at that big jump for heroin. That's the dark line. All opioids as well. That's that that dotted line.

Aaron Weiner: This study actually just came out 2 weeks ago. They looked at this association, based on the product that young people are using, and what they found was that the most likely to go on to use harder drugs. Were were kids who were using concentrates. So if they're dabbing

Aaron Weiner: edibles were next vape Cartridges are next smoked

Aaron Weiner: single product use, and then more than one product use. But you can see there, even if they're only using one product.

Aaron Weiner: That means there's a over double chance they're going to use harder drugs if you look at this longitudinal, and what the statistics tell us is that 92% of people who use heroin at some point in their drug journey.
Aaron Weiner: Used the first, and that's because nobody starts with heroin again. I know i'm preaching to the choir. All you folks are addiction professionals. Nobody starts there. You start with something that you think Isn't going to hurt you as much that you think isn't as big of a deal. Then more people are using.

Aaron Weiner: and then your identity starts to shift. You give yourself a permission structure to do other things. Again, you guys are addiction professionals. I'm speaking to the choir here. You know how this works, but this is something where.

Aaron Weiner: when we talk about, what does a gateway mean?

Aaron Weiner: It means that you open a possible path forward. If you don't start, if you don't take step one you're not going to get to step 4, and I think that's a major misunderstanding when the public thinks about this concept, or even when young people do.

Aaron Weiner: Now the last part I want to touch on here before we talk a little bit again. Lightning around. I apologize for the gravity guys. More about treatment is, I want to talk about semi-synthetics. So those are things like Delta, 8, T. H. C. The reason why this matters is that they are derived from hemp.

Aaron Weiner: So they come from Cbd. Which means they do a. And around all Federal legislation and all existing State legislation for marijuana products because they are not a marijuana product. They are a hemp. Product They are less psychoactive, this particular one than a delta, 9, T. H. C.

Aaron Weiner: But it means that again that they can be sold. This is a picture from an Illinois gas station, where, technically speaking, you should not be able to sell psychoactive Thc.

Aaron Weiner: But here it is right advertised with cartoons. Now how this happens is because Cbd is a pro drug for even Delta 9 Thc. Little known fact. If you smoke or vape Cbd, it breaks down into a bunch of different things, including delta, 8 and delta 9 Thc.

So if you are vaping Cbd, you are not going to pass a drug test.

Aaron Weiner: Just wanted to put that out there too.

Aaron Weiner: but it's legal right now. In about 39 different States different States have different restrictions. It's worth knowing what yours are, because the access to these products is incredibly easy, because again, there is no regulation in a lot of places, they are completely unregulated as a product with no health and safety standards

Aaron Weiner: and made using toxic chemicals, which is why the FDA put out a warning about it. T. H. C. O.

Aaron Weiner: Acetate is another semi synthetic that is produced from Delta 8. It is produced from Cbd. So it's sold everywhere, but this one is rumoured to be 3 times as strong as Thc. That's because it's been acetalised. When you acetalize a substance, it passes more easily

Aaron Weiner: through the blood brain barrier.
Aaron Weiner: heroin is acetalized morphine. So this is acetalized. Thc

Aaron Weiner: It also happens to break down under heat into ketene, just like vitamin e acetate. This study just came out in December of 2022, pointing out, hey, vitamin e acetate. This is what caused that vaping epidemic.

Aaron Weiner: T. C. O.

Aaron Weiner: Does the exact same thing, but it doesn't stop there. There is H. H. C. Which is again about 80% as potent as Thc. You can even make Delta 9 T. H. C. From hemp

Aaron Weiner: and sell it in a gas station, and there's so many more like we could we have 0 peer-reviewed medical data, and so much of what's being sold right now, this is just one vendor you can find this all over the place. What you're looking at here is a vape

Aaron Weiner: with a cartoon on it that has a blend of delta, 8, delta 10, and enriched with T. H. C. H. And J. D. T. H. C. H. Is rumored again, is advertised as binding 25 times as strongly as Delta 9.

Aaron Weiner: So this is something that again.

Aaron Weiner: there's so much we don't know. It is incredibly available. We might see change in this very soon. The farm bill, which is what legalized hemp and is allowing for all of this is being revised this year in Congress. And so there's a chance They're going to close this loophole and say, you can't just sell this stuff online anymore.

Aaron Weiner: I don't know if that's going to happen, we will see. But right now this is very accessible to young folks.

Aaron Weiner: so

Aaron Weiner: what can we do? I am going to take the next 9 min. Unfortunately, with that hard cut off to talk about this content. So I apologize. I will answer all of the questions that will be submitted via email. So please put them in there or email me afterwards, but I want to make sure I get through as many of these slides as I can.

Aaron Weiner: So first thing that we can do is think about effective treatments. What are you using? And then what intervention should we use? So what I like to do? Oh, i'm sorry. First things first. Why are you using it's really important to know why a young person is using the substance. This goes for any age.

Aaron Weiner: If you don't, get at the root cause of substance use, which usually isn't just substance use it's usually a date.

Aaron Weiner: anxiety, or trauma, or any number of things. If you don't get to the root cause you're not going to fix the real problem. So you got to know that.

Aaron Weiner: And then, after that, what interventions should we use I always recommend
conceptualizing from a bio-psychosocial perspective. So that means there's a biological part, a psychological part, and a social part.

Aaron Weiner: the biological side. You want to think about reducing or ceasing sad behaviors and alignment to their goals. We don't have time to talk a lot about harm reduction today. What I will say, though, is, it can be a very useful step, and is a heck of a lot better than someone who's just using at their previous use rate. If that's what someone's ready for. See if you can meet them there.

Aaron Weiner: Consider psychiatric medications, if indicated, encouraged collaboration with medical that can help sometimes in ways that we, as psychosocial providers. Cannot you also want to evaluate mat options for treatment?

Aaron Weiner: There are a lot of smoking cessation, medications and options that are available, and that are FDA approved. These will be off label for anyone under 18.

Aaron Weiner: However, pediatricians oftentimes do make the determination that they're worth prescribing, because they are very useful. Again, Take a look at this chart in your own time, but the odds ratio of successful quit attempt does increase by to 2 to 3 times. If someone uses some of these pharmaceutical quit aids so definitely something to consider work with a pediatrician on or

Aaron Weiner: another medical provider. If you're working with someone older on the thc side we don't have, as we don't have any FDA-approved medications here's a quick round up of what's been studied? There is more data coming out all the time. Unfortunately, nothing that shows really great efficacy

Aaron Weiner: one, though, that I do want to point out as having, if there was one that was more consistent than others, is an acidde Cysteine. That's this one right here.

Aaron Weiner: This does require a prescription, but tends to be very well tolerated. Doesn't have many adverse effects. So if you have someone on Thc. Who is really struggling with cravings, and is looking for some edge, something to help have them talk to their doctor about whether or not this might be an option for them. It can be prescribed off label.

Aaron Weiner: and is worth looking into.

Aaron Weiner: So the psychological side of this you want to think about coping skills for craving strong emotions and any psychiatric diagnoses making sure folks are educated about the nature of addiction recovery. How to navigate common challenges there, and have a healthy structure and approach to daily life. I like to think about.

Aaron Weiner: The biological side is being like the body. Get the body right. Get the body straight as good as possible. The psychological and behavioral health side. I like to think about as internal supports

Aaron Weiner: the social side. I like to think of as external supports, making sure that folks have a healthy network around them to support them, to move them in a positive direction.

Aaron Weiner: Now the last thing that I want to touch on. And again my apologies for going quickly. But
I just want to put it out here. You will have these slides as reference, and you can contact me if you'd like.

Aaron Weiner: is what I like to talk to parents about, because particularly for kids having parents on board can be really helpful and important. The first thing that I like to do is tell them to stay connected to their kids and know the signs of use again. I'm just going to put these all up for you guys right now. But basically I like to ask

Aaron Weiner: parents to look at school functioning the peer group, the dynamics at home, and then certain changes in personal appearance and hygiene. Usually, if you have a kid using THC and or nicotine, you're going to start to see some changes here, because if you had to hide their use they are using it can be very tricky.

Aaron Weiner: I tell parents to make sure they're safe to talk to, including about difficulties and failures. If a child doesn't think that their parent is emotionally safe, they're not going to disclose problems to them.

Aaron Weiner: The method that I talked to parents about for this that I like to share with you is to communicate with love. And this is basically just based some basic motivational interviewing stuff. So if you've been trained in this, this should all look very familiar. I'd check out the center for motivation and changes handbook on this. That's where this acronym came from.

Aaron Weiner: but I always recommend parents use these techniques to talk with their kids to have the best chance of building that sense of emotional safety and to have persistence because safety, emotional safety. You can't tell that to someone you've got to show that to someone over time.

Aaron Weiner: I tell parents to emphasize healthy connections in the child's life. From a social standpoint a behavioral standpoint and an emotional standpoint have Kids be connected, know how their behaviors influence, how they feel, and then how their emotions work, and how they can influence them. So they're not moving around

Aaron Weiner: in the dark again. Apologies! I can't go deeper into that one today. We want to help promote healthy coping behaviors again. I know i'm speaking to the choir here. But I like to talk to parents about all these areas particularly, though I do a plug for meditation because it's such a good trans diagnostics, tool and mindfulness.

Aaron Weiner: and then also just modeling, talking through emotions and problems. Because that's a really healthy way to deal with those problems. If a child is acting out. They need consistent boundaries and limits. However, I also, always just to parents You have to.

Aaron Weiner: You have to promote the behaviors you want to see. You have to reward positive behaviors, not just consistent discipline or negative feedback. You need positive feedback in there as well. Parents have to be on kids, phones and mobile devices, those where the majority of drug deals go down that they're not being done in person.

Aaron Weiner: There's so many pitfalls there. We've got to have them on the mobile devices. I tell parents to be on the same page as their parenting partner for that consistency.
Aaron Weiner: if at all possible. This is really hard with divorced couples. Sometimes there's no good answer for that, unfortunately, other than if they both care about their child's well being, or if I can get them both in a room or on a call that can help sometimes in level setting, but being as consistent as possible, is really important.

Aaron Weiner: and then also to take care of themselves and their marriage. Because if your mental health is suffering that does trickle down to the kids. So to sum everything up and again, Thank you guys for sticking with me. I feel like a used car salesman up here going through these slides so quickly. I think I try to jam in a little too much today.

Aaron Weiner: but vaping and marijuana. They're both chronically misunderstood

Aaron Weiner: by the general public and this isn't an accident. There are companies and corporations addiction for profit industries that are making this the case from a health perspective. Nobody should be vape if they are not already smoking cigarettes, because there are toxins in there. There are heavy metals. If you make that complete switch

Aaron Weiner: you are reducing harm, but they are not safe, and if you are not already using them. You should not start.

Aaron Weiner: Marijuana is far from a benign substance, and is particularly harmful for youth. I encourage us all to continue, but conceptualising treatment from a bio- Psychosocial perspective, the biological, the psychological, and the social and parental involvement involvement is incredibly important for youth.

Aaron Weiner: You want to encourage them to stay connected, Be consistent, and just remember and help remind them they have an influence, and they should flex that.

Aaron Weiner: So

Aaron Weiner: thank you guys for sticking with me again while I went through all of this. If you want to get in touch, please do. I will answer questions. Please also feel free to follow me on Linkedin. I am very active there. Everything you saw here today at 1 point was a linkedin post from me. I'm also on a couple of other platforms.

Aaron Weiner: and on Youtube I frequently post commentary videos of my podcast Go up on there as well, so

Aaron Weiner: feel free to drop me a line.

Aaron Weiner: so i'll pass it back off. Thanks, thanks, Hayley.

Haley Hartle, NAADAC: Thank you so much for being here with us today. That was a phenomenal presentation. So everybody, if you have any last minute. Questions. We're open for about another minute. Go ahead and put those in the Q. A. Box. We'll send those over to Dr. Weiner and then post the responses.
Haley Hartle, NAADAC: Just a reminder. You will most likely not be able to access the Ce quiz right away. So I apologize for that inconvenience. We are working with our web, our web team as soon as possible to get that back up and running. Some individuals have had luck with Mozilla Firefox getting through

Haley Hartle, NAADAC: that security warning

Haley Hartle, NAADAC: again. It's not a data breach or anything like that. It's just a certificate issue on the back end. So if you have any questions feel free to email us@ceatnadak.org, and we'd be happy to help you there. So thank you so much, and I hope you all have a great rest of your day.

Haley Hartle, NAADAC: Thanks, Dr. Weiner.

Aaron Weiner: You care everyone be well, thank you.