The New Marijuana, CT’s Law, and You

Melissa McGarry, BA

John Daviau, MACP, CPS
This presentation provides information and research on the risks of underage cannabis use, and educates on the details of Connecticut’s cannabis commercialization law.
The cannabis plant is made up of many chemical compounds called cannabinoids. Two of these have become household names.

THC or delta-9-tetrahydrocannabinol which is the psycho-active component of marijuana produces the intoxicating effects.

CBD or Cannabidiol does not produce any euphoric effects.

Gaining Ground: Delta 8 and Delta 10 THC. Both are marketed as producing a milder intoxicating effect.

*Source: Prevention Training and Technical Assistance Service Center explainer video*
Marijuana Products Have Evolved

Not Just This...

Marijuana in the 1960’s-1980’s: 1-4% THC
Today’s Marijuana plants: Up to 40% THC
Marijuana Products that Appeal to Kids

...THC Vape Oils
THC Vape Oils

- Oil is infused with THC and other chemicals and flavorings
- Consumed with pre-filled disposable vapes, or pre-filled cartridges
- Discreet
- Users report easier on the lungs than smoking
- Same health risks as vaping nicotine
High Potency THC Concentrates

dabs, wax, shatter, amber, honeycomb, or budder
Marijuana Concentrates or “Dabs”

- THC is extracted using chemicals and solvents.
- Engineered for maximum potency – up to 95%+ THC – no longer a mild drug. *(Some have said the “Crack” of cannabis)*
- Consumed using “dab rigs” (special bongs) or dab pens (vapes).
- Effects felt almost immediately; acute impairment can last up to 10 hours.
Marijuana Edibles —
Candy
Gummies
Baked goods
Beverages
Alcoholic drinks

...Food and Drink
Look-alike products in other states that target kids
Edibles

- What’s a serving size?? THC content calculated by weight
- Wide range of potencies
- Can take up to 2 hours to feel the effects, which can last for 12 hours (with residual effects up to 24 hrs)
- Easy to accidentally consume or over-consume
Holiday Themed Marijuana Products that Appeal to Kids
Tinctures

- Made from cannabis plant material that has been soaked in a base liquid such as food-grade alcohol or glycerin and then strained
- Ingested orally, sublingually (under the tongue), or added to food
- Sublingual is more immediate high than edibles
- Long lasting high depending on potency
Products with synthetic THC have shown up at local stores, fairs, and farmers markets.
• Slight variation in the chemical structure between delta-8, delta-9, delta-10, and HHC.
• Contain psychoactive THC at different levels
• Some users and reliable sources report that Delta-8 is less potent than Delta-9, and Delta 10 is less potent than Delta 8
• Effects will depend on the product and the delivery system
• Delta 8 and Delta 10 come in very small quantities in the cannabis plant and can be synthesized from CBD or Delta 9, often using dangerous chemicals
• THC-O also knows as THC-O Acetate shares structural similarities to Vitamin-E Acetate which was linked to EVALI when inhaled

Source: FDA; Journal of Medical Toxicology
Marijuana Products that Appeal to Kids
What do researchers and scientists consider “high potency” cannabis?

**Anything over 10% THC**

- 95.91% of Colorado market is “high potency” cannabis (greater than 10% THC)
- 95.90% of California market is “high potency” cannabis
- 97.07% of Washington market is “high potency” cannabis
- 94.59% of Maine market is “high potency” cannabis

Remember:

Today’s Marijuana plants:  Up to 40% THC
Concentrates:  Up to 99% THC

Jason R. Kilmer, Ph.D., University of Washington
https://doi.org/10.1371/journal.pone.0230167
How is Marijuana Harmful?
Brief Review

CT YRBS data on high school marijuana use reports that 67,681 high school students in CT used marijuana. Using CT Data Collaborative demographic data for CT we estimate about 11,280 high school students in CT were addicted to marijuana in 2019; Daviau & McGarry 2022


It’s Addictive!!

- 1 in 6 teens who try marijuana become addicted.
- 1 in 10 adults who try marijuana will become addicted to it.
- Children and teens are six times likelier to be in treatment for marijuana addiction than for all other illegal drugs combined.

• 1 in 6 teens who try marijuana become addicted.
• 1 in 10 adults who try marijuana will become addicted to it.
• Children and teens are six times likelier to be in treatment for marijuana addiction than for all other illegal drugs combined.
Marijuana and Pregnancy

- THC crosses the placenta
- Marijuana smoking during pregnancy increases problems with neurological development in newborns especially in motivation, learning, memory, and movement
- THC exposure in utero compromises brain function and IQ in young children

Marijuana use is significantly linked with mental illness, especially schizophrenia and psychosis, but also depression, anxiety and thoughts of suicide, suicide attempts, and suicide.

People who use marijuana are more likely to develop temporary psychosis (not knowing what is real, hallucinations, and paranoia) and long-lasting mental disorders, including schizophrenia (a type of mental illness where people might see or hear things that are not really there).

The association between marijuana and schizophrenia is stronger in people who start using marijuana at an earlier age and use marijuana more frequently.

Substance Abuse Journal, Mar. 2015: Bagot, Milin, & Kaminer, Neurotoxicol Teratol.
1987:Fried, Makin
CDC 2020
Use of every other drug among youth is going down except for marijuana

Lifetime use of marijuana is the #1 risk factor for opioid misuse

Almost 22% of high school students report marijuana use

More than half of Colorado high school students who use marijuana reported they **dab marijuana** to get high

The Surgeon General reported that the scientific evidence indicates that heavy marijuana use can be detrimental to cognitive functioning and mental health

Source: CDC YRBS 2020
Healthy Kids Colorado Survey August 2020
Marijuana Vaping

- Cannabis vaping is on the rise among adolescents, and more young people appear to be using cannabis oil, which typically has a much higher THC content.
- Teen vaping of marijuana doubled between 2013 and 2020, indicating that young people are swapping out joints, pipes or bongs for vape pens.
- Adolescents who reported vaping cannabis within the last 30 days increased 7-fold — from 1.6% to 8.4% — between 2013 and 2020.
THC Effects on the Brain

- Hippocampus
  - Attention, concentration, and memory
- Research with college students shows impacts on these even 24 hours after last use (Pope & Yurgelun, 1996)
- After daily use, takes 28 days for impact on attention concentration and memory to go away (Pope, et, al., 2001)
- Hanson et al. (2010)
  - Deficits in verbal learning take two weeks before no difference with comparison group
  - Deficits in verbal working memory take three weeks after use before no difference with comparison group
  - Deficits in attention still present at 3 weeks

*Source: Jason R. Kilmer, Ph.D., University of Washington, NEPTTC presentation, February 2022
A 2012 Duke University study demonstrated an average 6-8 point permanent drop in IQ among teens who use marijuana 3-5 times per week.

Individuals who are daily users of cannabis before age 17 are over 60% less likely to complete high school or obtain a degree compared to those who have never used the drug.

Source: Meier, M.H., et al., 2012; MacLeod, J., et al., 2004
Source: The Lancet Psychiatry, Silins & Mattick Sept. 2014 The study was funded by the Australian Government National Health and Medical Research Council.
Relationship Between Cannabis Use and Academic Success

- A longitudinal study of 6509 middle school students were surveyed from age 11.5 to 17 years old (high school).
  - Greater alcohol use predicted greater academic unpreparedness and delinquency.
  - Greater marijuana use predicted greater academic unpreparedness and delinquency, and in addition poorer academic performance and mental health conditions.

- More frequent cannabis use is associated with lower GPA, skipping more classes, less current enrollment, and being less likely to graduate on time.

Arria, et al., 2013, 2015; Suerken, et al., 2016
Cannabis Use Impairs Driving

A 2020 MADD survey found 1 in 8 adults admitted to driving within 2 hours of using marijuana and 41% believe it's safer than driving drunk.

Effects on driving:
• **Slows reaction time and impairs coordination and interferes** with the ability to make quick decisions.
• **Distorts perception** of time and distance.
• **Impacts concentration**, which can lead to poor speed control and inability to read signs.

Users may not realize how long they are impaired.
• Inhaled - effects can last up to 5 hours.
• When consuming edibles, the effects can last up to 12 hours
• High potency marijuana in any form can cause impairment for up to 10 hours

Source: https://www.madd.org/the-solution/drugged-driving-prevention/
CDC.gov and NHTSA.gov
Cannabis use prompts need for more anesthesia and postop opioid use

A Cleveland Ohio Study on elective surgery patients showed that patients who used cannabis prior to surgery:
• Experienced 14% more pain during the first 24 hours after surgery.
• Consumed 7% more opioids after surgery

A Colorado study on patients with tibia fractures showed patients who used cannabis prior to surgery
• Required 50% more anesthetic
• Reported higher pain scores while in recovery: an average of 6 vs. 4.8, a statistically significant difference
• Received 58% more opioids per day while in the hospital

The American Society Of Anesthesiologists 2022
Accidental Overdose Deaths and Hospital Data in CT

33% of 2020-2021 accidental drug overdose deaths have tested positive for marijuana

Recap of hospitalization data 2016 to 2019:

- Admissions for Marijuana Intoxication
  - Kids under 18 years: up 491%
  - Adults 19 years and older: up 391%
- Those addicted to marijuana having a mental illness: up 200%
- Marijuana users having a mental illness: up 29%
- Marijuana abusers diagnosed with a psychotic disorder (includes schizophrenia) increased 300%

Children aged 0-9 started showing up in hospitals for cannabis-related issues in 2018, and their numbers almost tripled in 2020

Source: CT Dept. of Public Health, Hospital and ED data
• Calls regarding children ingesting edible cannabis increased from about 20 to more than 100 between 2017 and 2020

• The Center expects the number of calls in Connecticut to double or triple based on what has happened in other states

• Poison control centers nationwide saw a 6-fold increase in cases involving marijuana from about 500 in 2018 to 3,125 as of August 31, 2021
What Have We Learned from Other States?

- 32.4% of CO youth who use marijuana drove a vehicle after using marijuana in the past month, up from 9% in 2017
- CO Teen visits to the ED for marijuana increased post legalization, 71% for psychiatric events
- Among youth who use weekly or daily, 33% are Cannabis Dependent
- There was a 25% increase in Cannabis Use Disorder among 12-17 year-olds in “legal” states (Cerda et. Al. 2019)

Healthy Kids Colorado Survey, August 2020
Kenneth Finn, MD, editor of Cannabis in Medicine, 10/19 SAM Webinar
SB-1201 “AN ACT CONCERNING RESPONSIBLE AND EQUITABLE REGULATION OF ADULT-USE CANNABIS” or RERACA was signed by Governor Lamont on June 22\textsuperscript{nd}, 2021

The bill contains 303 pages, with 173 subsections
Possession and consumption of Marijuana is legal for adults 21 years and older as of July 1, 2021.

- Adults 21 and older may possess up to 1.5 oz. of marijuana in public, and up to 5 oz. in a locked container or at home

  1 oz. of plant matter ≈ 75 joints

- 1 oz. of plant matter = 5 grams of concentrate = any other product with < 500 mg of THC

- Allows cannabis plant matter, concentrates (extracts, oils, tinctures, shatter and waxes), infused food and beverages

- Use is prohibited in any place where smoking cigarettes is not allowed, banned in state parks and beaches.
Sale of Retail Marijuana

- Sale of all THC products (including Delta 8, 10, and 11) requires state cannabis license, as of 7/1/21
- Seller is required to ensure customer age prior to sale
- Delivery allowed

Caps THC at 30% (plant), 60% (concentrates)

Specifically excludes Pre-filled Vape Cartridges from potency caps.
Sale of Retail Marijuana

• Edibles are limited to 5mg of THC per serving; servings need to be individually demarked.

• Prohibits products that appeal to children; requires child-proof packaging.

• Only requires basic age warnings. Not required to detail specific types of harm to teens, pregnant women, risk of impairment (less detailed than alcohol or cigarette labels).
Sale of Retail Marijuana

- DCP issued retail licenses to 9 hybrid retailers; sales began on 1/10/23
- Initial sales limited to 1/4 ounce of cannabis flower, or its equivalent, per transaction:
  - Up to 7 pre-rolled cigarettes that weigh 1 gram each, or 14 pre-rolled cigarettes that weigh 0.5 grams each. Or any combination up to 7 total grams, which equals 1/4 ounce.
  - Two to four vape cartridges, which come in .5 mL and 1 mL sizes.
  - Edibles vary by type and size. A standard-sized brownie or cookie can be the equivalent of .08 grams of cannabis flower. One edible serving limited to 5 mg of THC.
  - A combination of different product types that collectively amount to no more than 1/4 of an ounce.
Underage Possession Penalties

<table>
<thead>
<tr>
<th>Age</th>
<th>Amount Possessed (on your person)</th>
<th>0-1.5 oz.</th>
<th>1.5-5 oz.</th>
<th>5 oz.+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juvenile</td>
<td>CGS Sec. 21a-279a(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1&lt;sup&gt;st&lt;/sup&gt; offense: Written warning; optional referral to YSB/IRB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; offense: Mandatory YSB/IRB referral, no arrest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3&lt;sup&gt;rd&lt;/sup&gt; offense: Delinquent act</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CGS Sec. 21a-279a (e) Juv- Delinquent act</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>CGS Sec. 21a-279a(c)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sign health statement and:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1&lt;sup&gt;st&lt;/sup&gt; offense: $50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; offense: $150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21+</td>
<td>CGS Sec. 21a-279a(a) Legal</td>
<td>CGS Sec. 21a-279a(d)</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; offense: $100</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; offense: $500; 2&lt;sup&gt;nd&lt;/sup&gt; offense: Class D misdemeanor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; offense: $250</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; offense: Class C misdemeanor</td>
<td></td>
</tr>
</tbody>
</table>

Remember 1 oz ≈ 75 joints!

Underage cannabis possession penalties ≠ underage alcohol penalties

Warnings are not tracked statewide

 Raises questions about how to engage youth and their families in the restorative system

Without meaningful penalties for youth in possession of significant quantities, increased black market sales (especially to other youth) is a concern.
Similar to CT’s Alcohol Social Host Law:

A person in control of a dwelling unit or private property:

(a) Shall not permit any person under 21 to possess cannabis; and
(b) Should make reasonable efforts to halt such possession

Penalty – Class A misdemeanor
School Policies

• Effective January 1st, 2022, penalties for use, possession, or sale of marijuana in school cannot be greater than the penalties for use, possession, or sale of alcohol.

• Drug test that yields positive result for THC cannot be the sole basis for discipline.
• Adults 21 and older will be allowed to grow up to 3 mature and 3 immature marijuana plants in their home starting July 1, 2023

• A household may have no more than 12 plants at one time (6 mature and 6 immature)

• Medical marijuana clients 18 yo+ allowed to home grow as of 10/1/21
Cannabis & Driving

- Use prohibited in vehicles
- Police face limitations on when they can pull drivers over
- Police to be trained in Advanced Roadside Impaired Driving Enforcement (ARIDE) and allows for Drug Recognition Expert (DRE) evaluations to result in license suspensions
- Trainings are expensive for police departments that are struggling with significant officer vacancies
- No easy reliable road-side test for cannabis impairment
CT’s 2021 law **prohibits:**

- Advertising paraphernalia, products, or services in ways that target or are designed to appeal to individuals under 21

- Advertising on TV, radio, billboards, signs, Internet, social media, mobile devices unless reliable evidence 90% of audience is 21 and older

- Event sponsorship unless no more than 10% of the event’s audience (including in-person, and those viewing or participating) is under the age of 21

- Advertisement within 500 feet of schools

- Cannabis products visible from the exterior of the retail establishment

- Advertising or logos that are similar to non-cannabis or illegal products
Show Me the Money!

Cannabis Revenue = CT Sales tax + additional tax based on THC content

| Funds and Accounts                      | FY 22 | FY 23 | FYs 24-26 | FYs 27-28 | FYs 29+
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis Regulatory and Investment Account</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>General Fund</td>
<td>-</td>
<td>100%</td>
<td>15%</td>
<td>10%</td>
<td>-</td>
</tr>
<tr>
<td>Social Equity and Innovation Fund</td>
<td>-</td>
<td>-</td>
<td>60%</td>
<td>65%</td>
<td>75%</td>
</tr>
<tr>
<td>Prevention and Recovery Services Fund</td>
<td>-</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Prevention and Recovery Services Fund for “(1) substance abuse prevention, treatment, and recovery services, and (2) collection and analysis of data regarding substance use” – doesn’t include mental health nor specify how much is allocated to each.
State Oversight

• Law gives the Dept. of Consumer Protection (DCP) responsibility for setting up regulations for packaging, warnings, other rules for sale.

• DCP tasked with protecting consumer health and safety AND ensuring adequate supply for the market.

• Protects the Medical Marijuana market

• Creates a Social Equity Council to oversee the Social Equity and Innovation Fund
Local Control

- Towns can act in the interest of the public health of residents
- Municipalities can decide where cannabis can be consumed and whether to allow marijuana business

**BUT**
- Municipalities with populations over 50,000 must designate a public place where consumption of cannabis is permitted
- A petition of 10% or more of a municipality’s electors can force a town referendum on retail marijuana sales
* Towns that allow retail sales can charge a 3% municipal tax on top of the CT sales tax

Added tax revenue can be used to:

(A) make improvements to the streetscapes and other neighborhood developments in and around community,

(B) fund education programs or youth employment and training programs,

(C) fund services for individuals released from the custody of the Commissioner of Correction, probation or parole,

(D) **fund mental health or addiction services**, 

(E) **fund youth service bureaus and municipal juvenile review boards**, or

(F) fund efforts to promote civic engagement in communities
PA 22-13: An Act Concerning Cannabis (May, 2022)

- Limits how cannabis may be gifted, sold or transferred
- Further restrictions on advertising:
  - Bans electronic or illuminated billboards from 6am – 11pm
  - Onus on cannabis business to demonstrate 90% of audience is 21+
  - Prohibits use of cannabis plant imagery in advertising
  - Only medical marijuana sellers can use “dispensary”
  - Only business with a CT cannabis license can advertise
  - Limits ads to more than 1,500 ft from elementary or secondary school, house of worship, recreation center or facility, child care center, playground, public park or library
- Removed the provision limiting the number of retailers or micro-cultivators to one per 25k residents in a municipality
For this session, legislators have submitted 20 bills that focus on the growth, sale, or use of cannabis

- Many look to further regulate the market, and expand health and safety safeguards.
- Others seek to support the industry by permitting on-site consumption, allowing hemp growers to cultivate cannabis, and expanding tax breaks for cannabis businesses.

Cannabis industry lobbying includes
- Eliminate potency caps and restrictions on packaging
- Cap # of licenses in the state
- More state tax deductions for cannabis businesses
Marijuana Prevention
Preventing Youth Cannabis Use

Kids Know Cannabis Use is **Harmful**

Kids Don’t Have Easy **Access**

Kids Know Peers **Don’t Approve**

Kids Know Parents/Guardians **Don’t Approve**
Keeping Our Kids Safe

- Talk Early and Often about the risks of cannabis use by youth to their health, academics, sports
- Establish family expectations that cannabis use is not acceptable, and enforce consequences
- Help your kids build an exit strategy from difficult situations
- Monitor your kids
- Prevent access to all cannabis in your home
- Talk with other parents and build a supportive community network
- Support your Local Prevention Council’s education and advocacy efforts
Talking to Children & Youth About Difficult Topics

• Take time to prepare yourself for the discussion.
• Express your concerns clearly, without anger, judgment, or strong emotion.
• Avoid power struggles!
• Give the child/youth time to talk or explain. Use Active Listening Skills.
• Assist them in problem solving, and make sure the solution is theirs and is realistic for them. Ask!
• Ask them what they need from you to support them.
• End the conversation with clear action steps for both the child/youth and you.
Local-level Community Advocacy

Encourage your town to restrict/ban marijuana businesses

Municipalities who allow marijuana businesses should consider:

• Proximity to schools, licensed childcare centers, churches, parks, libraries, and other places where youth congregate
• Signage and advertising
• Hours of operation
• Security, as cannabis remains a cash-only business
• Traffic
• Record-keeping
• Odor control
• Disposal of remnants and by-products
• Impact on utilities
• Environmental impact
Outreach to State Legislators

➢ Lower THC caps overall, and apply lower THC caps to pre-filled vape cartridges
➢ Stronger, comprehensive health warnings on all products, similar to tobacco and alcohol.
➢ Align consequences of youth possession with alcohol
➢ Restrictions on online sales
➢ Stronger laws and enforcement related to drugged driving
➢ Funding for prevention, mental health treatment, and substance use treatment from the beginning
CT Dept. Of Mental Health & Addiction Services
Cannabis Info https://beintheknowct.org/

SAMHSA’s Talk. They hear You. Campaign
https://www.samhsa.gov/talk-they-hear-you

Partnership to End Addiction
Playbook for Parents of Teens

Playbook for Parents of Tweens

How to Talk About Vaping: A Discussion Guide
https://www.tpaud.org/_files/ugd/d88c71_bf65ee02acd8441e94dd29a226f4bc7e.pdf
Smart Approaches to Marijuana (SAM)  
https://learnaboutsam.org/  

Partnership to End Addiction  
https://drugfree.org/marijuana-resource-center  
https://drugfree.org/article/marijuana-what-you-need-to-know/  

US Department of Health and Human Services, Substance Abuse Mental Health Services Administration  
https://www.samhsa.gov/marijuana  

Center for Disease Control & Prevention  
https://www.cdc.gov/marijuana/index.htm  

National Institute on Drug Abuse  
https://www.drugabuse.gov/publications/drugfacts/marijuana  

CT Association of Prevention Professionals, SAM’s Connecticut affiliate  
https://www.cappct.org/ct-sam
Contact Information

Melissa McGarry, BA
(203) 258-8519
melissamcgarry@sbcglobal.net

John Daviau, MACP, CPS
(203) 530-4314
john.daviau@gmail.com