



Cannabis Public Health Advisory Council

As Required by 2021 Acts of Assembly, Chapter 551

September 12th, 2022

2:00 PM – 5:00 PM

—

East Reading Room – Patrick Henry Building

AGENDA – Revised on 9/12/2022

1. Introductory Remarks & Roll Call

Office of the Secretary of Health and Human Resources

2. Recap of 2022 Legislation

David May, Division of Legislative Services

3. Virginia Cannabis Control Authority – Current and Future Initiatives

Brianna Bonat, Virginia Cannabis Control Authority

Matt Prentice, Virginia Cannabis Control Authority

4. Update on Medical Cannabis Program

Caroline Juran, Board of Pharmacy, Virginia Department of Health Professions

5. Updates on Youth Cannabis Use Prevention & Education Efforts

Nicole Gore, Virginia Department of Behavioral Health and Developmental Services

Marge White, Virginia Foundation for Healthy Youth

6. Blue Ridge Poison Center – Cannabis Related Calls and Challenges

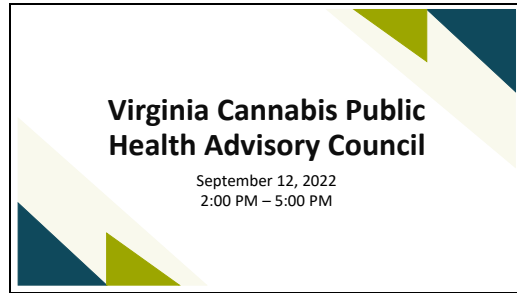
Christopher Holstege, UVAHS Blue Ridge Poison Center

7. Next Steps

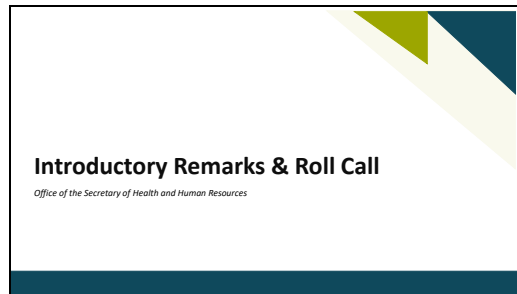
Office of the Secretary of Health and Human Resources

8. Public Comment

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Virginia Cannabis Control Authority – Current and Future Initiatives

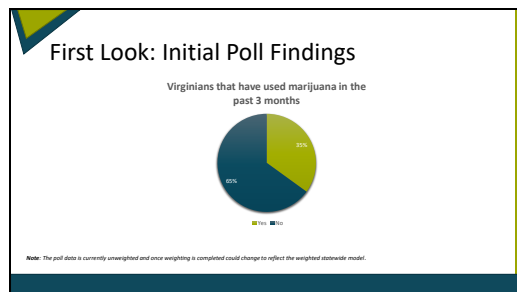
Brinna Bonat, Virginia Cannabis Control Authority
Matthew Prentice, Virginia Cannabis Control Authority

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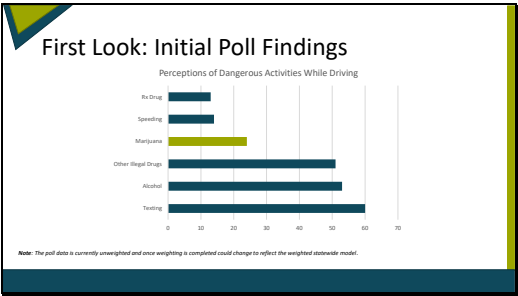
Overview of CCA Public Health Priorities

1. Assuming Oversight of Medical Cannabis Program – Starting FY24
2. Public Health Initiatives and Resources
 - Safe Driving
 - Health Risks, “Responsible” Consumption, “Ancillary Effects”
 - Fact sheets (e.g., medical registration, THC vs CBD)
 - High Potency THC – Researching Mitigation Practices
3. Outreach (e.g., SW VA Tour, Future Town Halls)

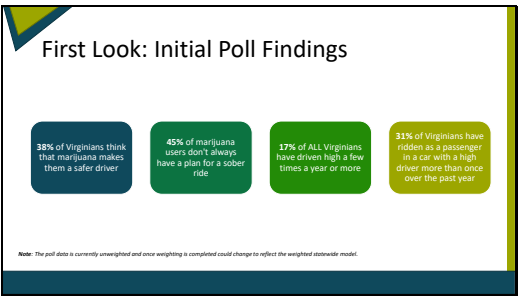
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Update on Medical Cannabis Program

Caroline Juran, Board of Pharmacy, Virginia Department of Health Professions

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Virginia Department of
Health Professions

Virginia Board of Pharmacy

Medical Cannabis Update
September 12, 2022

Caroline D. Juran, RPh
Executive Director

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Virginia Department of
Health Professions


Definitions

- THC
- Written Certification
- Cannabidiol oil
- THC-A oil
- Cannabis oil
- Botanical cannabis
- Cannabis product
- Pharmaceutical Processor
- Cannabis Dispensing Facility

www.dhp.virginia.gov

Law authorizes total of 30 dispensing sites – 1 processor and 5 cannabis dispensing facilities/ HSA and there are 5 HSAs

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Virginia Department of
Health Professions

Summary of Legislation

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Virginia Department of
Health Professions

- 2015**
 - Created affirmative defense for possessing CBD oil or THC-A oil for treatment of intractable epilepsy when physician issued written certification for this purpose.
- 2016**
 - Authorized Board of Pharmacy to issue 5 pharmaceutical processor permits, 1 per Health Service Area.
 - Directed Board to promulgate emergency regulations.
 - Required legislation to be re-enacted in 2017.
- 2017**
 - Bill re-enacted.
 - August: Emergency regulations became effective; established health, safety and security requirements for processors.

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Virginia Department of
Health Professions

- 2018**
 - Request for Application opens; 51 applications received.
 - December: Board awards 5 conditional approvals with 1 year to become operational.
 - Expands to any VA-licensed physician to treat or alleviate symptoms of any diagnosed condition or disease determined by the physician to benefit from such use.
- 2019**
 - 4 pharmaceutical processor permits issued; 1 conditional approval rescinded.
 - Authorized NPs and PAs to issue written certifications and wholesale distribution between processors.
 - Restricted dose to no > 10mg THC; created "registered agent".
- 2020**
 - Removed affirmative defense.
 - Replaced "cannabidiol" and "THC-A oil" terms with "cannabis oil"; removed 5% THC cap, but retained THC cap.
 - Allowed processor to acquire oil from industrial hemp extract for production.
 - Authorized telemedicine consistent with federal requirements for Rx drugs.
 - Allowed persons temporarily residing in Virginia to obtain patient registration.
 - Authorized up to 5 cannabis dispensing facility permits per HSA.

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3 phases: submission of application, awarding of conditional approval, issuance of final permit.

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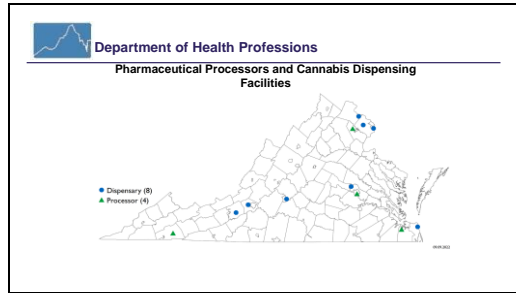


Virginia Department of
Health Professions

- 2021**
 - Authorized dispensing of botanical cannabis.
 - Eliminated restriction on number of patients issued written certification.
 - Eliminated pharmacist supervision of cultivation and production.
 - Authorized advertising.
 - Expanded allowance for telemedicine.
- 2022**
 - Removed requirement for Board registration for patients, parents/guardians, but authorized voluntary registration.
 - Removed minimum concentration of CBD or THC-A.
 - Authorized wholesale distribution of bulk cannabis.
 - Authorized use of hydrocarbon-based solvents.
 - Addressed marketing.

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PharmaCann Virginia, LLC

(Health Service Area I) –

Rescinded

Dalitso, LLC (Health Service Area II, Manassas)

Dharma Pharmaceuticals, LLC

(Health Service Area III, Abingdon)

Green Leaf Medical of Virginia, Inc. (Health Service Area IV, Richmond)

Columbia Care Eastern Virginia. LLC (Health Services Area V, Portsmouth)

Dispensaries:

Beyond / Hello Sterling Sterling

Beyond/Hello Alexandria Alexandria

Beyond/Hello Fairfax

Cannabist Virginia Beach

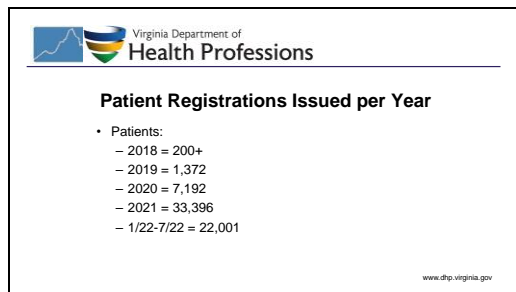
Green Leaf Medical of VA Glen Allen

Rise Christiansburg Christiansburg


Rise Lynchburg Lynchburg

Rise Salem Salem

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 Virginia Department of
Health Professions

Current Board Registration Totals


- Patients = 45,182
- Parents/Legal Guardians = 207
- Registered Agents = 177
- Practitioners = 899 Virginia; 134 Out of State
- Products = 1,835

As of 9/9/2022

www.dhp.virginia.gov

Since 2018, the Board has registered a total of 65,246 patients. Since July 1, 2022, we have seen an 85% reduction in patient applications. July 2022-3,308 patient registrations were due for renewal; 321 renewals were counted (10%). August 2022-3,948 patient registrations were due for renewal; 350 renewals were counted (9%).

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 Virginia Department of
Health Professions

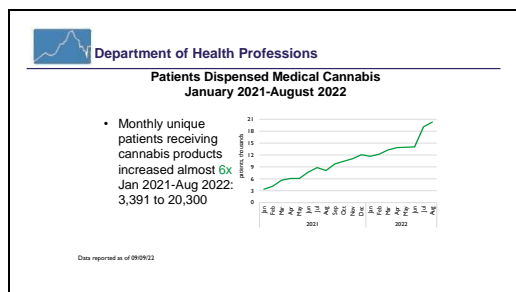
Documentation to Obtain Medical Cannabis

- 1) Current written certification from BOP-registered practitioner
- 2) Government-issued ID (Virginia resident or temporarily residing in Virginia)
- 3) Patient registration from BOP (optional)

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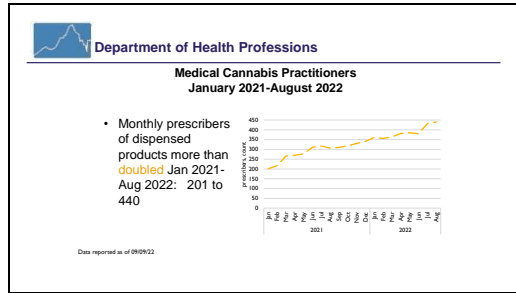
Valid for up to 12 months.

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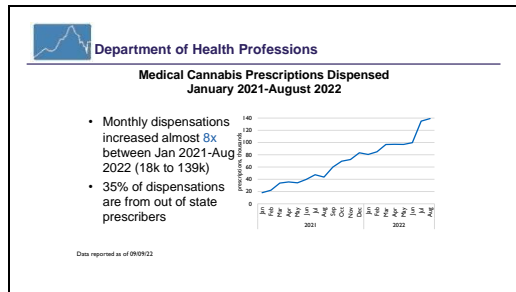


Number of unique patients receiving medical cannabis each month.

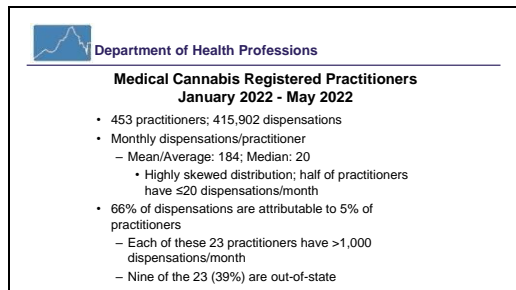
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 Virginia Department of Health Professions		
Cannabis Product Formulations		
Product Type	Combined THC/THC-A Range	Combined CBD/CBDA Range
Nasal Spray	3.46%	0.0%
Chewable/Edible	0.13% - 5.80%	0.0% - 6.9%
Suppository	0.25% - 0.35%	0.55% - 16.63%
Topical Gel/Lotion	0.17% - 0.56%	0.0% - 0.39%
Oral Oils	0.01% - 57.87%	0.0% - 18.10%
Vaped Inhalations from Oils, Wax Concentrates and Fokable Hash Concentrates	0.25% - 83.38%	0.0% - 48.47%
Tablet/Capsule	2.80% - 74.20%	0.18% - 3.80%
Lounging	0.26% - 0.47%	0.26% - 0.68%
Botanical cannabis	7.87% - 36.74%	0.0% - 12.72%

THC concentration much higher now; 1995 = joint was about 4%; 2018 = was about 16%

For the inhalant products (VAPED), the 0.25% total THC product is an outlier...99% of the products have a much greater total THC amount, with the majority falling between 30 and 80%.


For the edibles, the majority of the products have both a THC and CBD content of less than 1%

For botanicals, the majority of the products have a THC amount from 13%-28%, and a CBD amount of less than 1%.

Since the July 1st Code change removing the required 5 mg minimum of THC-A or CBD in all concentrate products, there has been a significant reduction in those amounts in this type of product.

Since 9/1/2021, 623 botanical products have been approved.


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 Virginia Department of Health Professions	
Additional Information	
<ul style="list-style-type: none"> • Board requires FBI criminal background check on material owners; • Facility performs background checks of employees; • Practitioner recommends use, patient works with pharmacist to determine optimal product and dosing; • Products must be tested for content and quality by independent laboratory, labeled accurately with expiration date; • Lab results available upon request to patients, parents/guardians, practitioners; 	

microbiological, mycotoxin, heavy metal, pesticide chemical residue, residual solvent test, active ingredient analysis (CBD, CBDA, THC, THC-A)

6 month expiration date or based on stability testing, if longer

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Virginia Department of
Health Professions


Additional Information, cont.

- Facilities inspected prior to issuance of permit, change of location, remodels, and unannounced routine inspections performed annually;
- Dispensations reported to PMP;
- Board acquiring new licensing software;
- Board guidance document 110-32 [Potential Drug Interactions](#)

www.dhp.virginia.gov

Continuous expansions primarily driven by industry;
Each year GA has directed board to promulgate emergency regulations.

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Virginia Department of
Health Professions


Contact Information

Virginia Board of Pharmacy
Perimeter Center
9960 Mayland Drive, Suite 300
Henrico, VA 23233
(804) 367-4456

cbd@dhp.virginia.gov – CBD, pharmaceutical processor – related questions
pharmbd@dhp.virginia.gov - General board questions

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**Updates on Youth Cannabis Use
Prevention & Education Efforts**

Nicole Gore, Virginia Department of Behavioral Health and Developmental Services
Marge White, Virginia Foundation for Healthy Youth

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Marijuana Legalization in Virginia: What it Means for Prevention & Behavioral Health

What is marijuana and how is it used?

Marijuana is the dried leaves, flowers, and stems of the *Cannabis sativa* or *Cannabis indica* plant and is used as a mind-altering or psychoactive drug. It can be cultivated in outdoor or indoor settings. Although there are over 100 chemicals in cannabis plants, **tetrahydrocannabinol (THC)** is known to be the main ingredient that produces the mind-altering effects. The higher the amounts of THC, the stronger the effects on the brain. Most commonly, marijuana is smoked, vaped, or mixed into food or drinks (edibles). Additionally, some people inhale the oil concentrates and other extracts from the cannabis plant, which is known as dabbing.

Language Matters

Marijuana versus Cannabis

The terms cannabis and marijuana are often used to describe the same thing. The word **cannabis** refers to all products derived from *Cannabis sativa* or *indica* plants, and **marijuana** refers to parts of or products from the plant that contain substantial amounts of THC. As the use of language for this substance evolves, it is important to use terms that will avoid confusion and are specific to the situation.

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Timeline of Marijuana Legalization in the United States

1930s: 1937 Marijuana Tax Act
1950s: 1953 Boggs Act
1970s: 1970 Medical Marijuana
1980s: 1986 Medical Marijuana
1990s: 1990 Medical Marijuana
2010s: 2012 Medical Marijuana

The Legalization of Marijuana in Virginia

Virginia Cannabis Control Act (enacted in 2020)

The Cannabis Control Act established the Cannabis Control Authority (CCA), giving the CCA the power to develop, issue, and enforce rules pertaining to the existing medical cannabis market and a future retail market. The CCA is charged with developing guidelines and publishing health-related regulations. Additionally, Virginia's Cannabis Control Act created a Cannabis Public Health Advisory Council to advise the CCA on all health-related matters.

What became legal?

- Adult 21+ possession
- Homegrown amount of marijuana for personal use
- Use marijuana in private residences
- Grow up to four plants per household
- Share or transfer up to one ounce of marijuana between persons who are 21 years or older without reimbursement

What remains illegal?

- Consuming, purchasing, or possessing marijuana under 21 years of age
- Possessing more than one ounce of marijuana
- Distributing or selling marijuana
- Using marijuana while driving or being a passenger of a vehicle
- Possessing marijuana on school grounds
- Consuming or offering marijuana to anyone in any public place

* The 2022 General Assembly did not reject the legislative framework for creating an adult-use retail market. It is possible the General Assembly may address this issue in the 2023 session, which begins January 2023.

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Office of Behavioral Health Wellness, DBHD

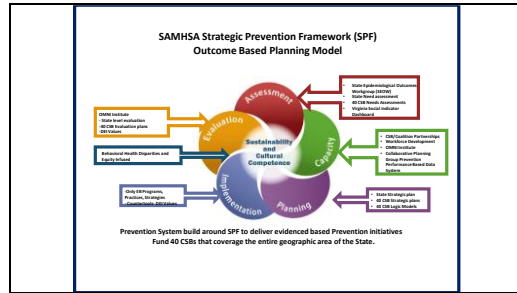
wellness: Redefining Prevention

"...promoting behavioral health wellness through a comprehensive array of strategies proven to reduce substance use and promote mental health."

Virginia 2025 Behavioral Health Wellness Virginia Prevention Vitality

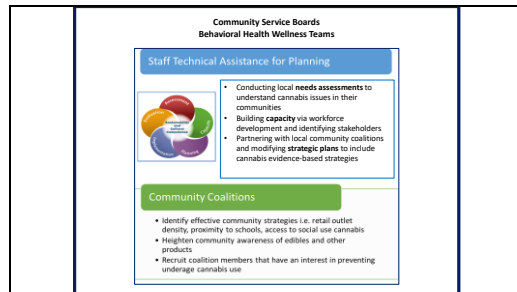
Substance abuse and mental illness share some common risk and protective factors. As a result of reducing risk factors and increasing protective factors for substance abuse, not only will substance abuse prevalence consumption and related consequences be reduced, but prevention of mental illness may be impacted as well.

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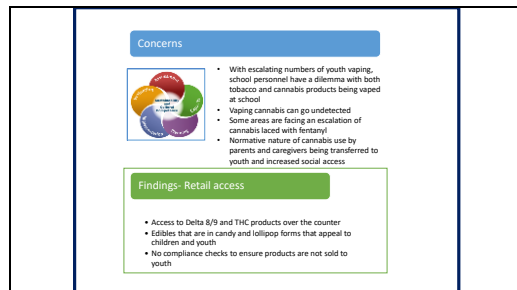
Our process includes state and local needs assessment, capacity building, planning, implementation, and evaluation. This guides data-driven decision making and evaluation for continuous quality improvement and ensures responsible stewardship of state and federal funds.

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Supported collaborations between behavioral health prevention professionals, community coalitions and their communities to strengthen our interventions.

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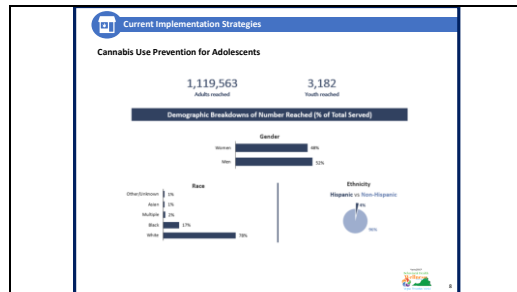


Environmental Scans

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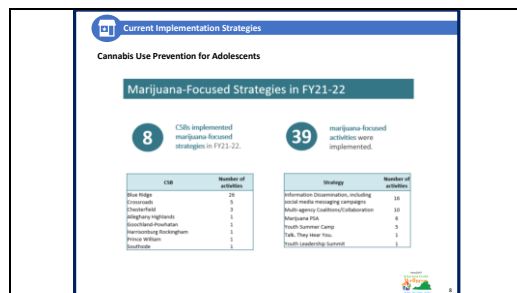
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Cannabis Use Prevention for Adolescents

A broad array of effective and affordable approaches exists for preventing future cannabis use and reducing existing patterns of cannabis use. Effective prevention programs fundamentally shift perceived norms surrounding cannabis use, enhance important psychosocial skills, integrate community-wide efforts, or engage in all of the above.

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Cannabis Use Prevention for Adolescents

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What's Next for Virginia

Considerations and Resources for Prevention and Community Supports

There are a variety of prevention efforts to consider from other states with lower reported retail marijuana. Below are some suggestions for effective public health prevention efforts that can be tailored to your community needs.

Partner with Community Resources

Engage with substance use prevention community-based coalitions and support schools and public safety campaigns in their prevention efforts.

Educate About Lowering Risk

Provide information to adults in your community about how to lower risk factors when using marijuana. Emphasize the importance of avoiding driving while under the influence.

Correct Norms

Correct misperceptions among young adults around their peers' use norms. Studies have shown that when misperceptions are corrected, behavior tends to change.

Involve Parents and Caregivers

Youth are less likely to use marijuana if they believe their parents think it's wrong for them to use. Help parents shift the conversation with these resources: [Spot Talking Points](#) & [Parent Guide to Preventing Marijuana Use](#).

Check out these resources to learn more about different marijuana prevention strategies and interventions.

Preventing Marijuana Use Among Youth

A resource guide to prevention programs, strategies, and policies from Substance Abuse and Mental Health Services Administration.

Colorado-Based Marijuana Education & Prevention Resource Guide

A community-based organization to find the best tool for your education and prevention efforts.

Let's Talk Cannabis Community Toolkit

County health agencies and other partners to make awareness of participation in their communities.

Note: This slide may be deleted pending how much our prevention teams are currently doing across communities.

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About the Virginia Foundation for Healthy Youth

Established in 1999 by the Virginia General Assembly, the Virginia Foundation for Healthy Youth (VFHY) empowers Virginia's youth to make healthy choices by reducing and preventing youth tobacco and nicotine use, substance use, and childhood obesity. VFHY is solely funded by a small share of Virginia's annual payments from the nation's major tobacco manufacturers through the Master Settlement Agreement (MSA).

VFHY: Empowering Virginia's youth to make healthy choices

VFHY.org

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Marijuana Prevention

Virginia Youth Survey (2019)

- High School Current Use: 17.3%
- Middle School Ever Use: 7.4%
- Students who tried before age 13: 5.2%

Prevention education with youth

- Marketing campaign
- Direct prevention education
- Community policy, systems, and environmental changes

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Marketing Campaign

Research

- Environmental scan of 17 states' work
- Focus groups, asynchronous interviews, quantitative data collection statewide
- Tested brands, storyboards, and other states' ads to guide our message development

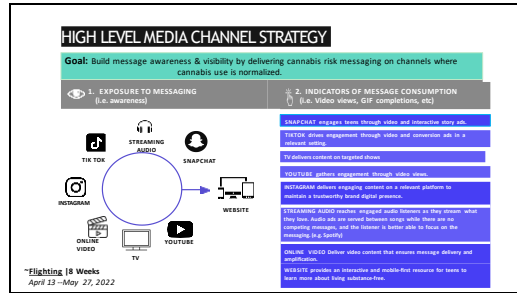
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Marketing Campaign

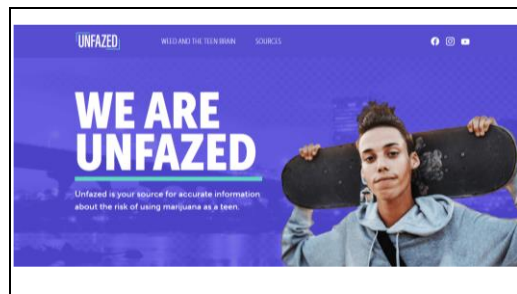
- Key Theme: Science
- Key Message: The impact of marijuana use on the developing brain

Campaign Name: UnfazedVA

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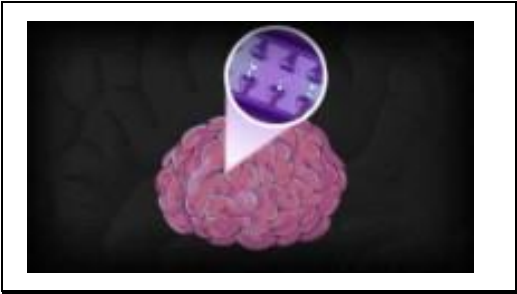
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<p>Website</p>	<p>www.unfazedva.com</p> <p>63,324 Users 78,732 Sessions 2 Minutes 37 Seconds Avg. Time on Page</p>
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FLAGSHIP VIDEO ENGAGEMENT

Flagship video ads proved to be successful as completions of videos accounted for 73% of total exploratory engagements. When compared to Rescu's benchmarks, Youtube, TikTok, and Snapchat met or exceeded expectations in terms of video completions.

3.8MM* Actual Video Completions
2.8M Expected Video Completions



YOUTUBE
2MM Video Completions
Expected Video Completions: 999K
\$0.01 Cost per Video Completion (vs. \$0.01)

SNAPCHAT
404K Video Completions
Expected Video Completions: 275K
\$0.01 Cost per Video Completion (vs. \$0.01)

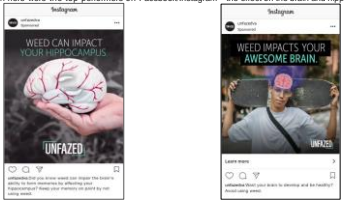
FACEBOOK/INSTAGRAM
235K Video Completions
Expected Video Completions: 583K
\$0.08 Cost per Completion (vs. \$0.08)

TIKTOK
63K Video Completions
Expected Video Completions: 21K
\$0.01 Cost per Video Completion (vs. \$0.01)

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STANDOUT PERFORMERS (FB/IG)

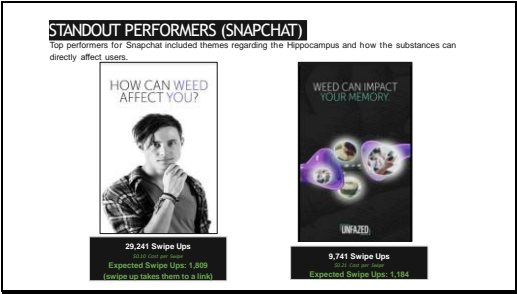
The ads shown here were the top performers on Facebook/Instagram – the effect on the brain and hippocampus specifically



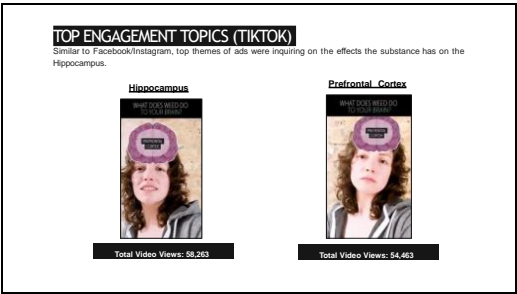
Total Engagements: 47,785
Expected Engagements: 47,000

Total Link Clicks: 1,589
Expected Engagements: 495

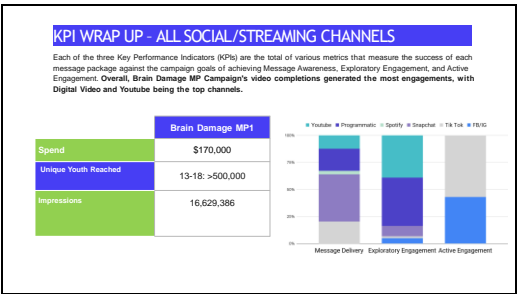
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KPI WRAP UP - TRADITIONAL CHANNELS	
	Brain Damage MP1
Spend	\$718,000
Unique Youth Reached	Ages 12-17: 510,000 Ages 6-11: 190,000
Impressions	2,500,000+

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<p>Nicole Gore, Director DBHDS Office of Behavioral Health Wellness nicole.gore@dbhds.virginia.gov 804-219-7531</p> 	<p>Marge White Deputy Director mwhite@vfhy.org (804) 225-3637</p> 
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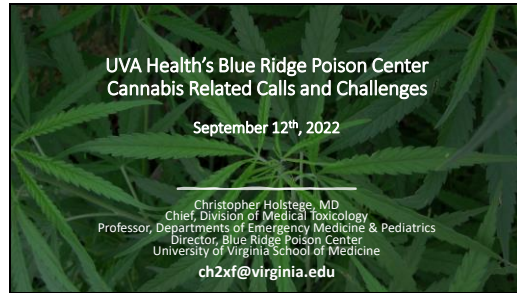
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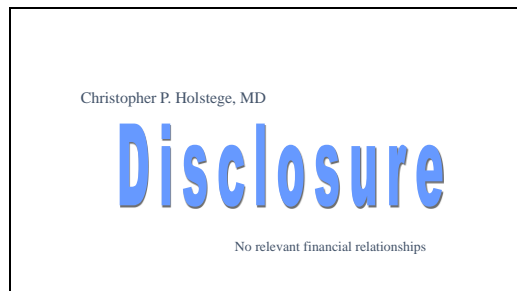
Blue Ridge Poison Center – Cannabis Related Calls and Challenges

Christopher Holstegel, UVAHHS Blue Ridge Poison Center

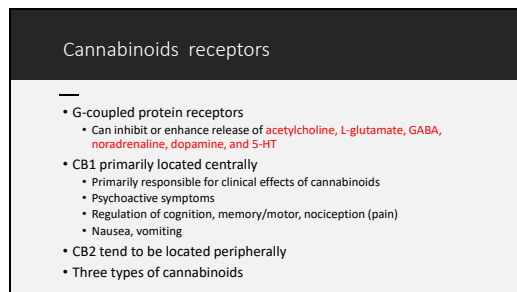
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1) Endogenous cannabinoids

- Examples
 - Anandamide, a-arachidonoylglycerol, n-arachidonoyl dopamine, 2-arachidonyl glyceryl ether
- Complex system
- Modulating of neurotransmitters



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2) Synthetic cannabinoids




- Synthetic cannabinoids
- Sold as incents
- Not for human consumption
- Sprayed with synthetic cannabinoids

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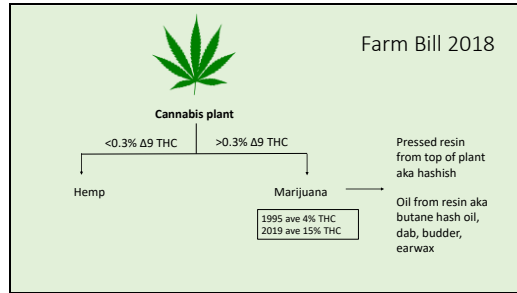
3) Phytocannabinoids

Found in the Cannabis plant
>100 types

Major: cannabinol, cannabidiol (CBD) and tetrahydrocannabinol (THC)

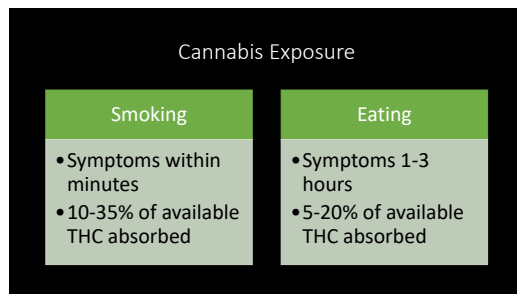


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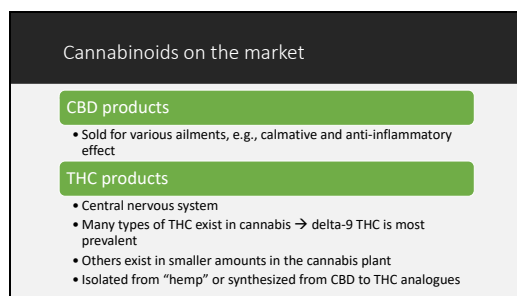


- Johnson R, Monke J. What Is the Farm Bill? *Congr Res Serv*. Published online September 26, 2019:17.
- https://en.wikipedia.org/wiki/Medical_cannabis
- Controlled substance act lists marijuana and previously hemp together
- Farm Bill in 2018 → excluded hemp from marijuana definition

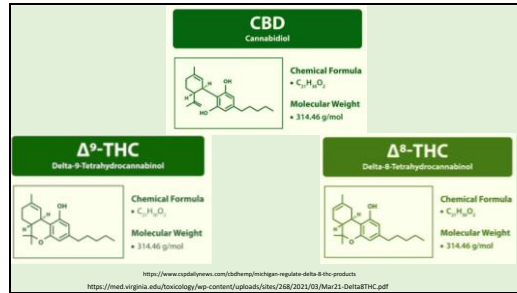
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- Delta 8 isolated from hemp (or marijuana) OR synthesized from CBD
- Legal loop hole
- Marketed as “Delta 8” so consumers may not know it is THC
- Does have psychogenic effects

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FDA News Release May 4, 2022

FDA Issues Warning Letters to Companies Illegally Selling CBD and Delta-8 THC Products

Violations include Marketing Unapproved New Drugs, Misbranding, Adding Delta-8 THC to Food Products

There are no FDA-approved drugs containing delta-8 THC. Any delta-8 THC product claiming to diagnose, cure, mitigate, treat, or prevent diseases is considered an unapproved new drug. The FDA has not evaluated whether these unapproved drug products are effective for the uses manufacturers claim, what an appropriate dose might be, how they could interact with FDA-approved drugs or other products, or whether they have dangerous side effects or other safety concerns.

Delta-8 THC is one of over 100 cannabinoids produced in the Cannabis sativa L. plant but is not found naturally in significant amounts. Concentrated amounts of delta-8 THC are typically manufactured from hemp-derived cannabidiol (CBD) and have psychoactive and intoxicating effects. Products containing delta-8 THC are available in varying forms, including but not limited to candy, cookies, breakfast cereal, chocolate, gummies, vape cartridges (carts), dabs, shatter, smokable hemp sprayed with delta-8 THC extract, distillate, tinctures, and infused beverages.

<https://www.fda.gov/news-events/press-announcements/fda-issues-warning-letters-companies-illegally-selling-cbd-and-delta-8-thc-products>

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Urine drug screen

- Immunoassay urine drug screen is looking for:
 - Delta 9-THC metabolite THC-COOH
- Other cannabis substances may trigger positive screen
 - Delta 8-THC → but confirmation testing is negative
 - Not enough information on other delta products
- Cannabis substances that do not trigger positive screen
 - Pure CBD
 - Synthetic cannabinoids (e.g., K-2, Spice)

- UDS can be positive for 2 weeks in casual user and longer in chronic user
- Positive screen does not mean acute intoxication
- <https://pubmed.ncbi.nlm.nih.gov/27883985/>

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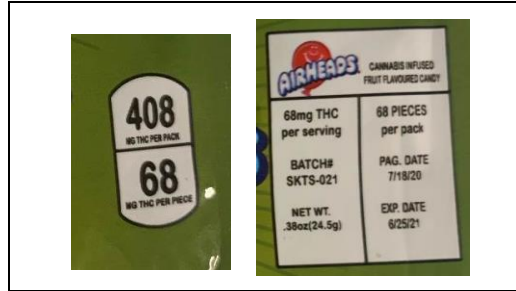
Case 1

- An 8 year old with a previous repair of his heart and his younger brother found a package of "candy".
- The patient reportedly ate 5 pieces and his younger brother ate 1 piece at ~2:30 pm.
- At ~3:30 pm both the patient and his younger brother began to appear sedate per the mother.
- The mother then reported the child collapsed on the floor, stating that he had a dusky, blue appearance around his mouth and eyes. She immediately started "performing CPR" including mouth-to-mouth as she wasn't sure if she felt a pulse. After one minute, he was became responsive but was somnolent. EMS was called.
- In the emergency department, patient and his brother were markedly somnolent, had fast heart rates, and had evidence of neuro excitability.
- Both he and his brother were admitted with cardiac monitoring.

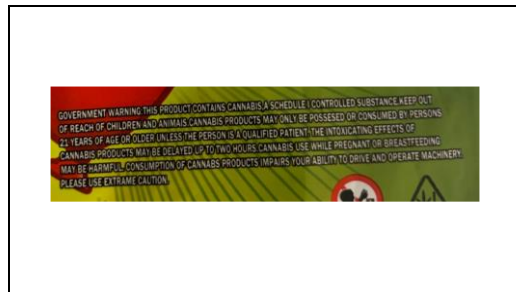
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Case 1

- He was seen again 6 days later in the emergency department with *continual adnominal pain, nausea, and anorexia*.
- He was seen 10 days later again in the emergency department with *intermittent episodes where he feels like everything around him is "fake", his "stomach drops", and his hands and feet start to shake*.

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Case 2

- UVA Health's Blue Ridge Poison Center called at 3:26 pm with a report of a 5 year old male who reportedly ingested an entire bag of THC "skittles" at approximately 1:30 pm.
- Parent of child reports child was "out of it" initially after exposure.
- In the initial rural emergency department, the patient was markedly sedate with a rapid heart rate.
- He was transferred to UVA Health's Pediatric Emergency Department at 8:40 pm for advanced care due to concern of potential airway compromise.
- He was subsequently admitted to a monitored bed.

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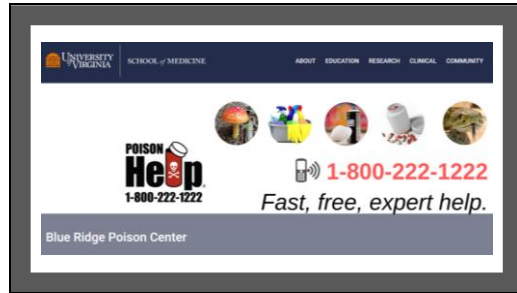


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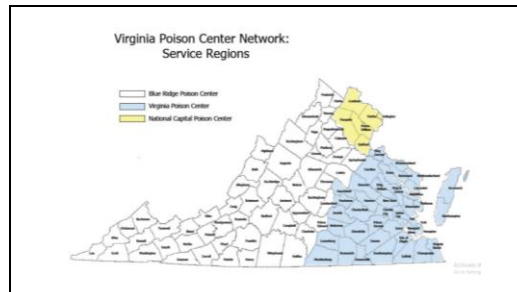


IMPORTANT WARNING: THIS PACKAGE CONTAINS CANNABIS, A SCHEDULE I CONTROLLED SUBSTANCE. KEEP THIS PRODUCT AWAY FROM CHILDREN AND ANIMALS. CANNABIS MAY IMPAIR YOUR ABILITY TO DRIVE OR OPERATE MACHINERY. PLEASE USE EXTREME CAUTION. THIS PRODUCT IS NOT INTENDED TO BE USED AS A MEDICATION. THE FDA HAS NOT EVALUATED THIS PRODUCT FOR SAFETY OR EFFECTIVENESS. THIS PRODUCT IS NOT A SUBSTITUTE FOR MEDICAL TREATMENT. THE FDA HAS NOT EVALUATED THIS PRODUCT FOR SAFETY OR EFFECTIVENESS. THIS PRODUCT IS NOT A SUBSTITUTE FOR MEDICAL TREATMENT.

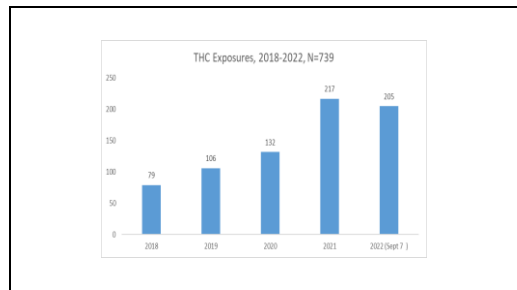
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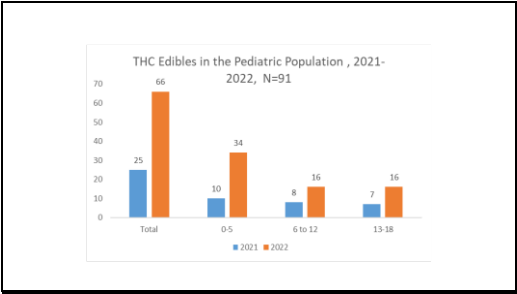
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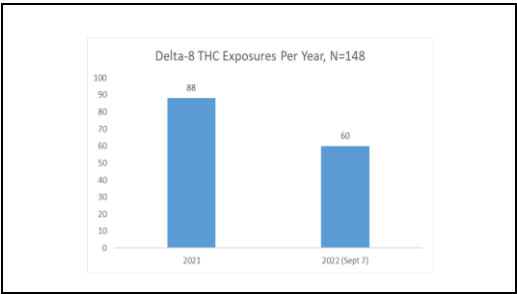
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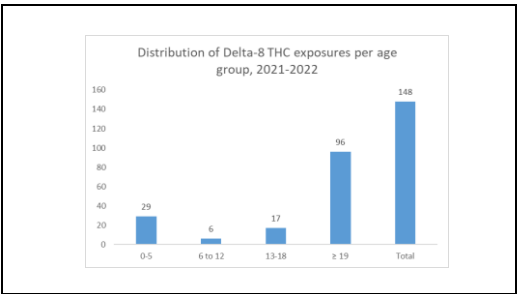
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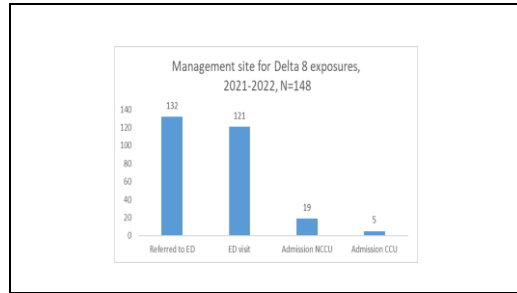
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Delta 8 THC Clinical Effects, N=148			
Neurological		Cardiovascular	
Moderate CNS depression	26 (17.6%)	Tachycardia	65 (44.0%)
Mild CNS depression	18 (11.2%)	Hypertension	17 (11.5%)
Dizziness	20 (13.5%)	QRS prolongation	4 (2.7%)
Agitation	21 (14.3%)	Bradycardia	5 (3.4%)
Confusion	18 (12.2%)	Dysrhythmia	2 (1.4%)
Tremor	12 (8.2%)	Chest pain	4 (2.7%)
Hallucinogenic		Gastrointestinal	
Ataxia	6 (4.1%)	Nausea and vomiting	36 (24.3%)
Seizure	5 (3.4%)	Ocular	
Slurred speech	5 (3.4%)	Mydriasis	11 (7.4%)
Myoclonus	4 (2.7%)	Nystagmus	4 (2.7%)
Psychotic		Respiratory	
Paranoia	4 (2.7%)	Hyperventilation/Tachypnea	5 (3.4%)
Syncope	4 (2.7%)	Respiratory depression	2 (1.4%)

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New England Journal of Medicine
August 25, 2022

THE NEW ENGLAND JOURNAL OF MEDICINE

CORRESPONDENCE



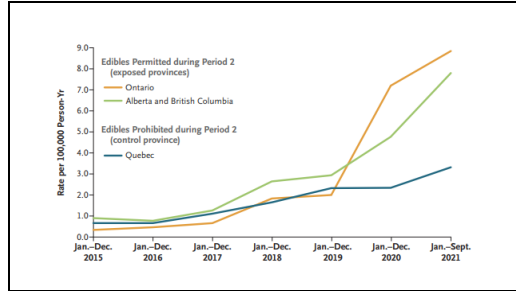
Editorial Cannabis Legalization and Unintentional Poisonings in Children

TO THE EDITOR: Unintentional cannabis poisoning in children may be a consequence of legalizing cannabis for adult use, although the effect of legalization with or without the sale of cannabis edibles on cases of ingestion in children is unclear.¹ In October 2018, Canada legalized the sale of adult cannabis. Please in light of the

though September 2021. Details of our methods are provided in the Supplementary Appendix, available with the full text of this letter at NEJM.org.

During the 7-year study period, there were 581 hospitalizations for cannabis poisoning in children 10 years or younger, most were 1 to 4 years

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New England Journal of Medicine
June 5, 2014

TO THE NEW ENGLAND JOURNAL OF MEDICINE

REVIEW ARTICLE

David C. Reardon, M.D.
Adverse Health Effects of Marijuana Use

David C. Reardon, M.D., Robert D. Klein, Ph.D., William M. Compton, M.D., and Susan M. Hall, Ph.D.

Abstract

Background: Marijuana use is increasing in prevalence, and its health effects are becoming more apparent. We reviewed the literature on the adverse health effects of marijuana use.

Methods: We conducted a systematic review of the literature on the adverse health effects of marijuana use. We searched for studies published between 1966 and 2013 in English, in the peer-reviewed literature, and in the gray literature. We included studies that reported on the adverse health effects of marijuana use in humans.

Results: We identified 10 studies that reported on the adverse health effects of marijuana use. The studies included 10,000 participants. The adverse health effects of marijuana use included impaired short-term memory, impaired motor coordination, impaired judgment, increased risk of sexual behaviors that facilitate the transmission of sexually transmitted diseases, high chronic pain and psychosis, addiction (in about 9% of users overall, 17% of those who begin use in adolescence, and 23 to 50% of those who are daily users), altered brain development, poor educational outcome, with increased likelihood of dropping out of school, cognitive impairment, with lower IQ among those who were frequent users during adolescence, diminished life satisfaction and achievement (determined on the basis of subjective and objective measures as compared with each subgroup in the general population), symptoms of chronic bronchitis, increased risk of chronic psychotic disorders (including schizophrenia) in persons with a predisposition to such disorders.

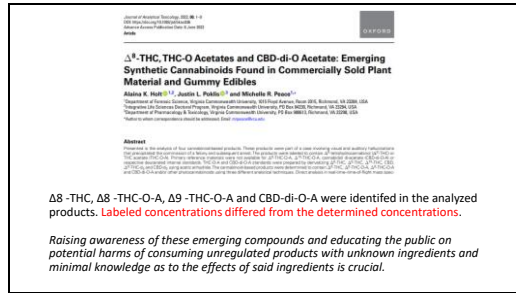
Conclusions: The adverse health effects of marijuana use are becoming more apparent. We need more research on the adverse health effects of marijuana use.

Keywords: Marijuana use, adverse health effects, systematic review.

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Table 1. Adverse Effects of Short-Term Use and Long-Term or Heavy Use of Marijuana.
Effects of short-term use Impaired short-term memory, making it difficult to learn and to retain information Impaired motor coordination, interfering with driving skills and increasing the risk of injuries Altered judgment, increasing the risk of sexual behaviors that facilitate the transmission of sexually transmitted diseases In high doses, paranoia and psychosis
Effects of long-term or heavy use Addiction (in about 9% of users overall, 17% of those who begin use in adolescence, and 23 to 50% of those who are daily users) Altered brain development* Poor educational outcome, with increased likelihood of dropping out of school* Cognitive impairment, with lower IQ among those who were frequent users during adolescence* Diminished life satisfaction and achievement (determined on the basis of subjective and objective measures as compared with each subgroup in the general population)* Symptoms of chronic bronchitis Increased risk of chronic psychotic disorders (including schizophrenia) in persons with a predisposition to such disorders
* The effect is strongly associated with initial marijuana use early in adolescence.

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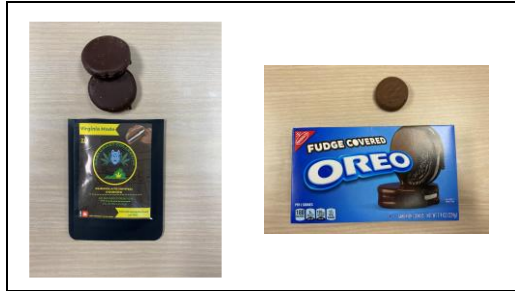


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- From local farmers market in Charlottesville

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<https://www.dazed8.com/collections>
<https://www.hippymood.com/products/delta-8-cereal>

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- Other new products (two pictured from a shop in Charlottesville)
 - Cannabigerol
 - THC-P
 - Delta-6a
 - 10a-THC

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Prescription cannabinoids		
Dronabinol (Marinol, Syndros)	Epidiolex	Nabilone (Cesamet)
<ul style="list-style-type: none">• Synthetic form of delta 9 THC• FDA approved for chemotherapy induced N/V and as an appetite stimulant for patients with AIDS• Schedule III substance	<ul style="list-style-type: none">• CBD, oral solution• FDA approved for epilepsy from Dravet, Lennox-Gestaut syndromes, and tuberous sclerosis• Schedule V substance	<ul style="list-style-type: none">• Oral mucosal spray with chemical structure similar to THC• FDA approved for chemotherapy induced N/V• Schedule II substance

<https://www.fda.gov/news-events/public-health-focus/fda-regulation-cannabis-and-cannabis-derived-products-including-cannabidiol-cbd#approved>

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Next Steps

Office of the Secretary of Health and Human Resources