

Cannabis Prevention Education

Context and existing resources and materials

Youth Cannabis Use Concerns

Cannabis use in adolescence is associated with: risk for early onset of psychotic disorders, changes in memory and attention (even after abstinence) and increased rates of school absences, drop-out, and suicide attempts¹. One study in particular found that “persistent marijuana use was linked to a decline in IQ, even after the researchers controlled for educational differences,” and the impact of this was compared to that of lead exposure².

Current research allows us to make some reasonable conclusions:

- no drug use is safe for a developing brain;
- Cannabis use is associated with exacerbation of some other problems, such as psychotic disorders;
- Despite any promise that cannabis may show--for example, for reducing dependence on opioids or as an alternative to opioid analgesics--using it in the absence of something like opioid dependence or chronic pain actually increases the risk for future opioid use and health problems.
- The potency of present-day cannabis is much higher than it was decades ago
- Newer and increasingly popular methods of administration/ingestion (e.g., vaping and dabbing) present new risks and concerns

We need only look at our own 2019 Vermont Youth Risk Behavior Survey (YRBS) data to draw some concerning conclusions about cannabis use.

- Nearly one in five students believe there is no risk of harm from using marijuana regularly
- When asked to rate their perceptions of risk of using alcohol, cannabis and electronic vapor products (EVP), students rated cannabis the least harmful (see statistics below).

¹ U.S. Surgeon General’s Advisory: Marijuana Use and the Developing Brain

² Cannabis use and neuropsychological decline. Madeline H. Meier, Avshalom Capsi, Antony Ambler, HonaLee Harrington, Renate Houts, Richard S. E. Keefe, Kay McDonald, Aimee Ward, Richie Poulton, Terrie E. Moffitt. Proceedings of the National Academy of Sciences Oct 2012, 109 (40).

Contact Information:

If you have questions about this document or would like additional information, please contact:

Beth Keister, FESP, at Beth.Keister@vermont.gov or (802) 498-5126

High school students were asked to rate whether the following behaviors presented no risk, slight risk, moderate risk or great risk: binge drinking each weekend, using cannabis regularly and using EVP regularly.

- Binge drinking: 77% of students considered regular binge drinking to be of moderate or great risk.
- EVP use was rated as less risky with 68% of students assuming EVP use posed great or moderate risk.
- Cannabis use was rated less risky altogether, with only 52% rating it as moderately or greatly risky and 18% rating it as no risk.

Among current (past 30 day) cannabis users completing the 2019 YRBS, 17% reported that they most often vaped, rather than smoked, cannabis as compared to only 2% in 2017, and dabbing cannabis was also reported. This raises various concerns including: the potential for youth using more frequently throughout the day due to the more discreet nature of an EVP versus traditional smoking; the concentration and potency of the cannabis products used with the EVP, the likelihood of concurrent nicotine use and the increased risk of serious lung damage such as electronic vapor associated lung illnesses (EVALI) that can result from vaping rather than smoking cannabis³.

Past Vermont YRBS statistics have also shown concerning correlations between frequent cannabis use and mental health issues and risk behaviors: of “frequent” high school marijuana users in Vermont: 42% reported feeling sad or hopeless for at least a two-week period, 28% reported having bullied someone, 20% reported having attempted suicide and 55% reported using alcohol or other drugs in conjunction with last sexual activity (2015 YRBS).

Cannabis Education

With the passing of S.54, which legalized recreational use of cannabis for adults 21 and over, and which will allow for retail sales of cannabis starting sometime in 2022, public attitudes about cannabis will likely continue to evolve, potentially toward an even lower perception of harm than that evidenced by the 2019 YRBS.

S.54 was introduced through legislative process, not popular ballot. This potentially sends a powerful message that cannabis is a safe drug. As such, cannabis education efforts may naturally be met with suspicion and disbelief by youth, as compared to other drugs. If cannabis use is becoming a social norm, educational efforts must provide students with as much updated and research-based information as possible.

Although all comprehensive substance use prevention education curricula include information on cannabis, not all have been recently updated. Additionally, educators may prefer to have access to a stand-alone cannabis curriculum to use whether due to time constraints, goodness-

³ Carol J. Boyd, Sean Esteban McCabe, Rebecca J. Evans-Polce, Philip T. Veliz (2021). Cannabis, Vaping, and Respiratory Symptoms in a Probability Sample of U.S. Youth. *Journal of Adolescent Health*, 69 (1): 149-152.

of-fit or even staff and community education. As cannabis legalization has evolved in an inconsistent fashion across the country, the prevention education materials are still evolving, too. In the interest of sharing what resources are available, they are listed below. Also shared is an older report which summarizes the findings specific to cannabis use outcomes relative to older curricula which include cannabis education as part of a broader drug prevention scope and sequence. This will support educators in determining whether any existing curricula they may have access to will be sufficient for cannabis education or whether they'd like to pursue something different. Many educators around the state have taken pieces of these resources and combined them with their own to create materials that they felt more appropriately met the needs of their students. If you'd like to be connected with others who have experience implementing the Stanford toolkit in particular, contact Beth Keister beth.keister@vermont.gov.

Resources

[Preventing Youth Marijuana Use: Programs and Strategies](#)

This resource reviews the research specific to cannabis use outcomes for several well-known prevention curriculum, and includes tips for considering the needs of the target population relative to selecting a curriculum.

[The Stanford Cannabis Toolkit](#)

Developed by popular demand after the release of the tobacco and vaping toolkits, this is a free resource provided by Stanford University that covers all of the necessary information about cannabis. It can be used in a classroom (high school level) or with an adult audience.

This includes a [Remote Learning Curriculum](#) with various materials for download.

[Marijuana Education Initiative](#)

This is a curriculum developed in Colorado. Other than a cost-benefit analysis, there have not been studies conducted to determine the effectiveness of the program. However, it is one of the few dedicated curricula available right now and comes from a state which at this point is very experienced with how legalization has impacted youth cannabis use. It includes information for different grade levels including information about edibles disguised as candy. If interested, one can trial the program for three days for free in order to get a sense of what is taught.

Research

Anybody providing cannabis education as part of a comprehensive substance use prevention curriculum and/or health education program should consult current research on the topic. **The National Families in Action** group produces a regular newsletter compiling current research and news items pertaining to cannabis use and harm. You can sign up for the newsletter [here](#).