

WHY AND HOW WE SHOULD PROTECT YOUTH IN THE CONTEXT OF STATE MARIJUANA LEGALIZATION



MARIJUANA USE POSES SIGNIFICANT RISKS TO THE HEALTH AND SAFETY OF YOUTH

SUBSTANCE USE, SUBSTANCE USE DISORDER, MENTAL HEALTH AND BEHAVIORAL PROBLEMS:

- Marijuana use **begins in adolescence**, is one of the most **commonly used** substances among adolescents, and the **prevalence** of young adult marijuana use is increasing.
 - The majority (60.3%) of people who reported using marijuana for the first time in the past year were under 21 years old [1].
 - In 2023, over 8% of 8th-graders, 18% of 10th-graders, and 29% of 12th-graders reported using marijuana in the past year (12% say they do so daily) [2].
 - Marijuana use among young adults ages 19-30 is steadily increasing, with 37.8% of 19- and 20-year-olds and higher percentages of young adults reporting using it in 2022 [3].
- Early marijuana use increases the likelihood of **other substance use** and a range of **cognitive and mental health problems** [4].
 - Research has found that early-onset (before age 15) and frequent marijuana use was associated with greater health care utilization for both mental disorders and physical health conditions in young adulthood [5].
- Marijuana use **interferes with brain development**, especially parts of the brain responsible for decision making, reward seeking, and impulse control [6]. The risks of marijuana use persist well into early adulthood while the brain is still undergoing development [7].
- Compared to adolescents who don't use marijuana, those who do so sub-clinically (i.e., do not meet diagnostic criteria for marijuana use disorder) have 2-4 times higher odds of reporting **major depression, suicidal ideation, difficulty concentrating, truancy, poor academic performance, criminal involvement, and fighting or aggressive behavior**. The odds of these adverse consequences are even higher for those who do meet clinical criteria for marijuana use disorder [8].
 - Marijuana affects judgement and motor skills. Driving under the influence can increase the risk for car crashes, especially for young and inexperienced drivers [9].
 - Recent national research found an association between violent behavior and daily marijuana use among males, especially those ages 18-23 [10].
- Individuals in late adolescence and early adulthood who use marijuana are at the highest risk of developing **marijuana use disorder** (i.e., addiction to marijuana) [11].
 - Adolescents who use marijuana are at least twice as likely as adults who do so to develop marijuana use disorder [12].
 - Marijuana use is the main substance for which youth present for addiction treatment [13].
 - Youth diagnosed with a marijuana use disorder are significantly more likely to have co-occurring mental health disorders including depression, anxiety, and ADHD; to have made a suicide attempt; and to have other substance use disorders such as alcohol use disorder and nicotine use disorder [14].

ADDED RISK OF HIGH-POTENCY MARIJUANA PRODUCTS:

- Young people are at even greater risk of negative health effects due to the **increasing strength/potency of THC** [15] (the psychoactive and addictive ingredient) in marijuana and increasingly diverse ways they use highly concentrated versions of the drug [16]. Some marijuana products favored by young people (i.e., concentrated marijuana in vaping products and edibles) have upwards of 90% THC [17].
 - More young adolescents report using high-potency marijuana products than low-potency products, and use of high-potency marijuana in adolescence is associated with higher odds of reporting symptoms of depression, anxiety, and auditory hallucinations [18].
 - Use of high-potency marijuana is associated with increased risk of addiction, psychosis, depression, anxiety, sleep problems, memory loss, and other physical and cognitive impairments [19].
 - Poison control centers are reporting increasingly **severe medical outcomes in pediatric populations** that are associated with marijuana [20].
 - Unintentional ingestion by young children can have serious medical outcomes, including central nervous system depression and hospitalization [21].
 - The largest increase in youth exposures reported to poison control centers in recent years has been due to intentional ingestion of edibles among adolescents [22].
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LEGALIZATION AND COMMERCIALIZATION POSE ADDED & UNIQUE RISKS TO YOUTH

MARIJUANA LEGALIZATION IS ASSOCIATED WITH INCREASED NEGATIVE CONSEQUENCES FOR CHILDREN, ADOLESCENTS, AND YOUNG ADULTS:

- Marijuana legalization **normalizes use, reduces perceptions of harm, eases access, and is associated with higher rates of risky use**, especially among young people [23].
 - When young people believe using marijuana is low-risk, rates of use increase [24]. Conversely, when they have more knowledge about the risks of using marijuana during adolescence, they tend to use less and report lower intentions to use in the future [25].
 - Clinicians from diverse medical specialties report noticing increases in adolescent marijuana use, normalization of use, access, and health consequences, as well as reductions in perceived harm [26].
- Legalization generally is associated with higher rates of **adolescent marijuana use** [27], increased rates or intensity of **young adult marijuana and other substance use** [28], increases in **youth marijuana use disorder** [29], and increases in **adverse consequences** [30], including pediatric unintentional exposures leading to hospitalization [31], driving under the influence of marijuana [32], and marijuana use disorder associated with schizophrenia [33].
- In states that have legalized adult nonmedical marijuana use, **rates of initiation** of marijuana use among adolescents are higher than the national average in this age group [34].

MARIJUANA COMMERCIALIZATION ALLOWS INDUSTRY TO TARGET AND DISPROPORTIONATELY AFFECT YOUTH:

- In the U.S., **legalization takes the form of commercialization** [35], which allows profit-driven industry players to produce, package, advertise, and sell marijuana to consumers in a way that will maximize the products' appeal.
 - Industries selling addictive substances that are legal for adult use (i.e., alcohol, cigarettes, vaping products) commonly target young people through product design, marketing, and locations of sale [36].
 - The marijuana industry, which often includes many of the same companies as the tobacco and alcohol industries, is using similar tactics, including the packaging, advertising, and sale of products targeted to young people [37].
- Greater exposure to and availability of marijuana through commercialization are associated with **more use and more negative health consequences, especially among young people** [38].
 - Among California high school students, legalization was associated with increases in the co-use of marijuana and alcohol, particularly in areas with high densities of marijuana retail outlets [39].
 - Adolescents in jurisdictions allowing storefront and delivery retail had a higher prevalence of psychotic disorders than those in jurisdictions prohibiting it, and greater retailer density was associated with a greater prevalence of anxiety disorders, depressive disorders, and depression symptoms [40].
 - Research suggests hospital encounters for psychosis among youth increased in Colorado after the legalization of marijuana for adult nonmedical use [41].

GOVERNMENTS HAVE A CRITICAL ROLE TO PLAY IN PROTECTING YOUTH IN THE CONTEXT OF MARIJUANA LEGALIZATION

- There are **concrete steps policymakers can take** to reduce the likelihood that marijuana legalization and commercialization increase marijuana use and its associated harms among adolescents and young adults – and to avoid repeating the mistakes of the past that made underage drinking a generally accepted norm and youth nicotine vaping a crisis to be contained.
 - Government can **leverage its expertise and resources to exert more control over the public narrative and over public policy**, to ensure that accurate, objective information is being conveyed to the public and is driving policy and regulatory decisions.
 - Policymakers should **base their decisions and policies on science, not public pressure or business interests**; carefully consider how regulations have succeeded and failed to protect youth from alcohol and nicotine/tobacco; study the impact and experiences of states that have already legalized marijuana for adult non-medical use; and prioritize the protection of children, adolescents, and young adults in drug reform laws.
 - Laws and regulations allowing use and sale of marijuana should include **restrictions on the types of products that can be manufactured, how they are packaged and marketed, and where and how they are sold** to limit products, access, and exposure that can be harmful to youth. ***This means adopting a regulatory structure similar to tobacco.*** Tobacco regulations are more focused on public health than alcohol regulations, which helps to reduce population-level harm. Tobacco regulations rely more on government mandates than industry voluntary standards, which primarily guide the practices of the alcohol industry (e.g., advertising/marketing rules). A public-health-based regulatory framework for marijuana would designate a health department, with a mandate to protect public health, to minimize all use, and better insulate the regulatory agency from industry influence [42].
 - Congress should coordinate with the Office of National Drug Control Policy (ONDCP) to implement a **science-based public education campaign** about marijuana use, including the unique risks to youth of using the drug, and to do so from a research-based, health promotion and strengths-building perspective, rather than through scare tactics. It should correct misinformation spread by the marijuana industry that minimizes perceptions of risk among youth and that conflates arguments regarding decriminalization, medical use, and widespread commercialization and associated social justice and health implications. It should put the onus on the adults who are charged with protecting the well-being of youth to shield young people from exposure, access, and use rather than on young people themselves. This includes manufacturers, retailers, advertisers, the media, community leaders, health professionals, schools, and parents. We cannot expect young people to shun an addictive substance that is widely marketed as safe, fun, harmless, and healthy.
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RECOMMENDED RESEARCH-BASED REGULATORY PROVISIONS TO PROTECT YOUTH [43]



PRODUCT COMPOSITION

1. Prohibit the manufacture and sale of marijuana products that are designed in a way that is attractive to minors, such as those that can easily be confused with non-marijuana candy/food products that do not contain marijuana and those that resemble non-marijuana products that can reasonably be expected to appeal to youth (e.g., humans, animals, fruit, cartoon characters). These typically include:

- flavored products,
- edible products, and
- vaping products.

2. Limit THC content (milligrams per serving and percent concentration) to reduce risks associated with high-potency marijuana products.

3. Prohibit additives that make marijuana products more addictive, such as nicotine, alcohol, and caffeine.



PACKAGING & LABELING

4. Prohibit the sale marijuana products that are packaged or labeled in a way that is attractive to minors, such as those that mimic the branding, appearance, or packaging of products sold by established candy or other commercial food companies.

5. Require the use of plain and opaque packaging for marijuana products.

6. Require marijuana products to include clear warnings on their packages, including:

- that the product is meant only for use by adults ages 21 or older
- that the product contains THC, preferably presenting the warning in pictorial form (i.e., a universally recognized symbol)
- the need to keep the product out of sight and out of reach of children
- the risks of using marijuana products (i.e., the risks of using marijuana products (e.g., the risk of addiction, cognitive deficits, impaired driving, use while pregnant or breastfeeding or alongside alcohol or other drugs)

7. Require marijuana packaging to clearly label the THC content of the product in a manner that is easily understandable to the consumer, if possible, by using symbols to clearly depict THC levels and potency.

8. Require marijuana products to be encased in child-resistant, resealable, single-serving packaging.

9. Prohibit marijuana product naming and labeling that imply health benefits, curative or therapeutic effects, or other health claims, such as by using terms like "health," "wellness," and "natural."



ADVERTISING & MARKETING

10. Prohibit advertisements of marijuana and marijuana products that target or can reasonably be expected to appeal to minors, including those:

- mimicking the advertising of products sold by established candy or other commercial food companies
- depicting cartoons and other child-oriented imagery

11. Restrict advertisements of marijuana and marijuana products to limit exposure to minors, by prohibiting advertisements:

- within a given distance from where minors can be expected to congregate (e.g., within a certain number of feet from schools including college/universities, parks and playgrounds, day care centers, libraries, youth centers, houses of worship)
- on billboards, public transit, and retail stores' outdoor signs and advertisements
- on TV, radio, print, online/digital/social, and other media likely to be seen or heard by minors (e.g., programs or sites with 10% or more of an audience of individuals under age 21)

12. Prohibit marijuana retailers from selling branded clothing and other branded merchandise.

13. Prohibit promotions, free samples, and coupons for discounted marijuana products.

14. Require marijuana advertisements to contain clear warnings, including:

- that the product is meant only for use by adults ages 21 or older
- that the product contains THC, preferably in pictorial form (e.g. a universally recognized symbol)
- the need to keep the product out of sight and out of reach of children
- the risks of using marijuana products (i.e., the risk of addiction, cognitive deficits, and impaired driving, and the risks of using while pregnant or breastfeeding or alongside alcohol or other drugs)

15. Prohibit sponsorships by marijuana companies and retail outlets of any athletic, entertainment, or charity event, unless branding is not required, the marijuana company is not promoted at the event, or the event audience is restricted to individuals ages 21 and older.

16. Prohibit marijuana product manufacturers and retailers from advertising marijuana and marijuana products in a manner that implies health benefits, curative or therapeutic effects, or other health claims, such as using terms like "health," "wellness," and "natural."

17. Prohibit advertisements of marijuana and marijuana products that depict any individual under the age of 35 as models or actors in the advertisements.



MANUFACTURE & SALE



LOCATIONS OF MARIJUANA USE



SALE & DISTRIBUTION TO YOUTH

18. Prohibit the operation of marijuana retail businesses within a given distance from where minors can be expected to congregate (e.g., within a certain number of feet from all schools including colleges/universities, parks and playgrounds, day care centers, libraries, youth centers, houses of worship).

19. Limit the number of marijuana retail businesses in relation to the population density of a given county/city (e.g., 1 per 19,000 people), in relation to each other, or within a given state/locality.

20. Prohibit the online sale of marijuana and marijuana products.

21. Prohibit home delivery of marijuana and marijuana products.

22. Require that cultivation (including home grow), display, and transportation of marijuana products are out of public view.

23. Limit the amount of marijuana that can be sold to an individual within a single transaction/day.

24. Require a minimum age of 21 for employment in the manufacture, distribution, or sale of marijuana products.

25. Enact clean air laws that prohibit marijuana use in public indoor and outdoor spaces.

26. Prohibit the use of marijuana within a given distance from where minors can be expected to congregate (e.g., within a certain number of feet from all schools including colleges/universities, parks and playgrounds, day care centers, libraries, youth centers, houses of worship).

27. Prohibit the use of marijuana in private vehicles.

28. Prohibit the sale and distribution of marijuana and marijuana products to minors, including:

- requiring individuals seeking to purchase marijuana or marijuana products to present a valid form of identification to prove they are age 21 or older at the time of purchase
- requiring retail outlets to check customer identification for entry to ensure that only customers ages 21 and older are permitted to be on the premises

29. The burden of responsibility for restricting sale of marijuana and marijuana products only to those of legal sale age (21 and older) should fall on the retailer, not the buyer. If the retailer does not properly verify identification, the retailer should be penalized for sale of a marijuana product to a minor.

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