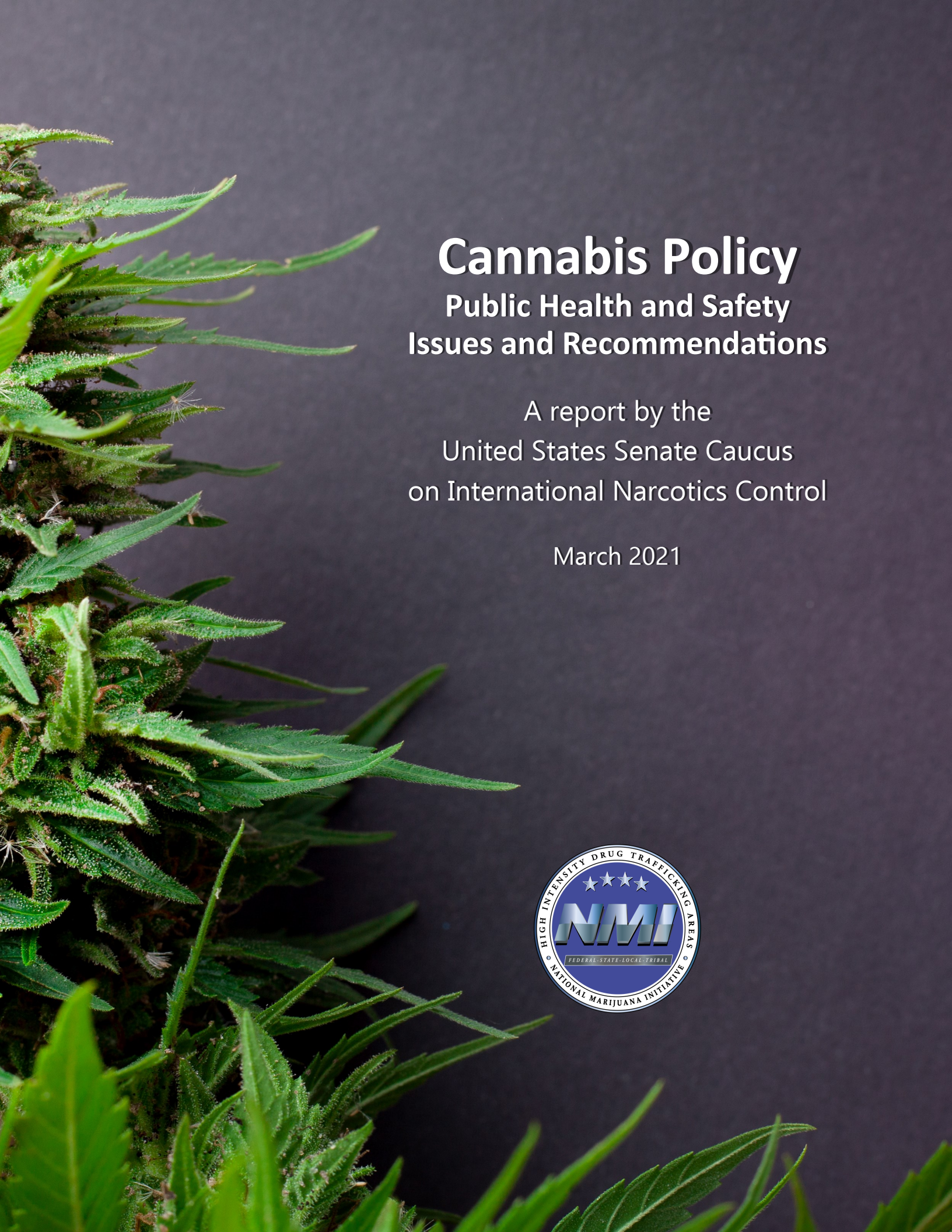

Cannabis Policy

Public Health and Safety Issues and Recommendations

A report by the
United States Senate Caucus
on International Narcotics Control

March 2021

The National Marijuana Initiative (NMI) is a federally funded initiative of the High Intensity Drug Trafficking Areas (HIDTA) program in the United States. The NMI is a prevention and educational initiative focused on the sharing of emerging information and factual data regarding marijuana, potency and public health/safety impacts.

To learn more about the NMI and its mission please visit the website:
www.thenmi.org.

Cannabis Policy: Public Health and Safety Issues and Recommendations

A REPORT BY THE UNITED STATES SENATE CAUCUS ON INTERNATIONAL NARCOTICS CONTROL

Marijuana in America is one of the most misunderstood, misrepresented and misinformed substances in our collective pharmacopeia. This Senate Caucus report helps address some of those issues and with justifiable concern.

The National Marijuana Initiative (NMI) prepared this summary of the Senate Caucus's report of March 2, 2021 to simplify its content. In the report, the Caucus identified five (5) key areas of concern concerning marijuana. Specifically,

1) Barriers to research;
2) Marijuana potency;
3) Marijuana's impact on the developing brain;
4) Unregulated cannabinoid products and
5) Expanding testing in marijuana impaired driving cases.

Following, by topic, you will find a summary of the findings, recommendations of the Caucus and key information/"talking points" for consideration by the reader. A page number reference can be found in blue at the end of each bullet point.

***Scope note*:** The reader is encouraged to explore the specific source citations that can be found in the complete report by the United States Senate Caucus on International Narcotics Control. Data in the report is richly source cited. This document is provided solely as an overview of the content of the Caucus's report of March 2, 2021.

Findings, Recommendations and Key Points Summary

1. Barriers to Researching Cannabis

FINDING

- The public health implications of marijuana use and increased THC potency are not understood and research is lacking. P 3

RECOMMENDATION

- Reduce barriers to conducting valid research. P 3

KEY POINTS

- Valid research will provide a better understanding to the impacts of marijuana use to public health. **P 10**
- Researching a Schedule I drug, like marijuana, is a cumbersome process and can take 12 months just to get the approval from federal authorities to conduct the research. **P 3**
- The Drug Enforcement Administration (DEA) should update their guidance and regulations regarding researching a Schedule I controlled substance. **P 12**
- There has to be a balanced approach of reducing "bureaucracy" while maintaining the best interest of public health and safety. **P 10**
- Research will help identify any potential benefits or harms associated with marijuana. **P 14**
- Researchers do not have access to the array of marijuana products in the open marketplace; as such there is a gap in understanding the properties of these products and impacts to public health. **P 14**
- The Senate Caucus believes that, "science should inform policy." **PP 15, 16**

2. Impacts of Increased Cannabis Potency

FINDINGS

- The levels of tetrahydrocannabinol (THC) found in marijuana has increased by over four (4) times since the 1990s to over 20% in potency. P 4
- Products such as concentrates can have THC levels of 80% potency. P 4
- High potency THC products are associated to public health issues such as dependence and adverse physical and mental health issues. P 4

RECOMMENDATIONS

- Intensify research by the National Institutes of Health (NIH) into both the long and short-term effects of high potency THC. P 4
- NIH and the Food and Drug Administration (FDA) should work together to determine if there should be limits to the THC potency levels in consumable products available for sale in the public marketplace. P 4

KEY POINTS

- In 2019, an estimated 13.8 million Americans were using marijuana on a daily basis. P 17
- Daily use of marijuana, with a THC potency level of 10% or higher, increases the risk of adverse mental or physical health outcomes at a rate five (5) times higher than non-users. P 22
- Researchers hypothesize that if potency levels of THC were capped, the incidence of adverse outcomes would decline. P 22
- Limiting the amount of THC in a serving (milligrams) is not the same as limiting the potency of the THC in the product. P 23
- Based upon existing research as THC potency levels increase, the risk of developing a Cannabis Use Disorder (CUD) or other adverse outcomes also increases. PP 21, 22
- High potency marijuana has been associated with causing a level of psychosis in some people, with behavior changes such as paranoia and anxiety. P 19
- Marijuana infused edible products can take from 30–180 minutes (3 hours) before the individual feels the maximum effect from the THC. This delay can cause those less experienced with this delivery system to consume "too much / too soon" and result in a level of intoxication requiring medical treatment due to cannabis toxicity (poisoning). P 19
- Admission to Colorado Emergency Departments (EDs) for cannabis poisonings increased by 236 percent from 2011 to 2017. During that same time, admissions for marijuana dependence, abuse or issues associated with use increased by 163 percent. P 21
- Due to public health concerns over high potency marijuana products, other countries and some states in America have sought to limit the percentage of THC in commercial products. Currently there is no federal standard for THC levels in commercial marijuana products in the United States. P 23

3. Impacts of Cannabis Use on the Developing Brain

FINDINGS

- Additional research is needed to understand the following areas:
- The effects of marijuana to the developing brain during adolescence and long-term consequences. P 4
- How marijuana use by a pregnant woman impacts a developing child (in utero). P 4
- Current research into adverse effects marijuana can have prompted the former U.S. Surgeon General (Vice Adm. J. Adams) to issue warning that no amount of marijuana is safe for adolescents or pregnant women. P 4

RECOMMENDATIONS

- Current public health officials at all levels of Government should "amplify" the warning issued by Vice Adm. J. Adams. P 4
- Implement effective marijuana prevention and awareness programs focused on youth and pregnant women so they understand the potential adverse impact the drug can have to the developing brain and unborn child. P 4

KEY POINTS

- Recent studies indicate that marijuana use by adolescents can adversely affect the development of their brain and cognitive abilities to process information. The human brain does not fully develop until an individual is in their mid-20s. P 25
- Early and persistent use of THC products by youth is associated with negative outcomes such as poor memory, inability to problem solve and impairment to judgment and life choices. P 25
- Some developmental issues are believed to possibly be permanent and additional research is needed. P 26
- Adolescent marijuana use has been linked to decreased educational performance and increased likelihood of not completing their education. P 28
- Long-term marijuana users, now in their 30–50 years age brackets, reported lower salaries levels, lower educational achievement and a decreased level of financial stability. P 28
- The association between marijuana usage and adverse mental health outcomes (e.g., psychosis or schizophrenia), increases with early onset of use as an adolescent. P 29
- One out of six adolescents that use marijuana risks developing a cannabis use disorder (CUD). P 29
- Prevention efforts need to be focused on educating youth and women who seek to become mothers. P 30
- Marijuana is the most common illicit drug used by women during their pregnancies. P 25
- Both the American Academy of Pediatrics and American College of Obstetricians and Gynecologists recommend abstention from marijuana use while pregnant, based in part from the adverse developmental impacts noted above. P 25

4. Unregulated Products

FINDINGS

- The Food and Drug Administration (FDA) is aware of the level of public interest in marijuana derived products, to include Cannabidiol (CBD) products. P 5
- Since the passage of ***The 2018 Farm Bill***, there has been a "massive proliferation" of cannabinoid-based products in the open marketplace. P 5
- Some companies have marketed these products in such a manner as to place consumers at risk. P 5
- Some of these products have been found to be contaminated dangerous and illegal substances or not contain the ingredients that they were advertised to have. P 5

RECOMMENDATIONS

- Federal authorities should continue to enforce laws and regulations into marijuana and its derivatives, such as CBD products. P 5
- The FDA and Federal Trade Commission (FTC) should continue their joint efforts to educate consumers on products being improperly or falsely being advertised for sale, with an emphasis on products with claimed therapeutic values. P 5

KEY POINTS

- The ***2018 Farm Bill*** removed hemp from the controlled substances act, provided the THC level did not exceed 0.3 percent. Any THC concentration above that would be considered marijuana and illegal under federal statute. P 32
- Since then, the hemp industry has been marketing their "hemp-derived" products, to include Cannabidiol (CBD) products, in a broad target market. P 31
- The projected market share value for CBD products is estimated at two billion dollars by 2022. P 33
- The FDA discovered that some producers were attaching false medical claims or the ingredient labels of some products were inaccurate, placing the consumer potentially at risk. P 31
- Some CBD products were found to contain synthetic cannabinoid or varying amounts of CBD inconsistent with labeling. PP 33, 34
- The FTC prohibits "unfair and deceptive advertising" especially when it comes to false and unsubstantiated claims of medical benefits. P 31
- To date, the only approved Cannabidiol (CBD) product for medical use is Epidiolex®, produced

by GW Pharmaceuticals, for the treatment of very specific neurological seizure disorders in toddlers and adolescents. PP 32, 33

5. Cannabis Impaired Driving

FINDINGS

- Impaired driving is a threat to public safety, this includes impairment from marijuana use. P 5
- There is no standard assessment to determine impairment like there is with alcohol. P 5
- The mere presence of tetrahydrocannabinol (THC) levels in the blood is not indicative of impairment. P 5
- For marijuana impaired driving, data collection is difficult for a variety of reasons, as such accurate data maybe skewed and the true scope of the issue unknown. P 5
- There is a need for research into developing accurate "roadside tests" for law enforcement to assist in identifying drivers who are impaired by marijuana. P 5

RECOMMENDATION:

- Government needs to expedite research into detection of marijuana impaired drivers, to include the development of standard field sobriety test ("roadsides" for marijuana). P 6
- Increase funding for specific educational programs in detecting impaired drivers for law enforcement and increase the number of officers trained in the skills. P 6
- Increase funding to require chemical testing, by law enforcement, to identify drivers impaired by marijuana during impairment investigations.
- Increase federal funding for state forensic and toxicology labs is support enhanced testing procedures. P 6
- Implement innovative programs addressing marijuana impaired driving issues. P 6

KEY POINTS

- Judgement, coordination and reaction times are essential skills when driving, marijuana impairs them all. P 37
- In America from 2013 and 2016, the rate of drivers involved in fatal crashes, testing positive for marijuana, has increased by 10 percent on average. P 37
- By 2004, federal regulations established where a blood alcohol level that exceeds .08, the driver was considered impaired. There currently is no such biomarker for impairment related to marijuana. P 37
- Laws for driving while impaired, by drugs, vary from state to state. P 37
- While alcohol is detected in impaired driving investigations primarily at night or on weekends, marijuana impaired cases can occur throughout the entire day. P 38
- The presence of THC can potentially be detected in a driver's blood for up to one month. However, that is not demonstrative of the driver being impaired. P 39
- The rates and manner of testing for marijuana in impaired driving cases are inconsistent from state to state. The same holds true for reporting such results. P 39
- Drug testing for some agencies can be cost-prohibitive. P 40
- Currently there is no accepted "roadside preliminary test" for marijuana, the use standard field sobriety test (SFST) maneuvers is under review for its effectiveness in marijuana cases. PP 40, 41
- More funding is needed to expand chemical testing to identify marijuana-based impairment cases. PP 41, 42

Summary

There is still much about today's marijuana that we do not fully understand. From its increased potency levels of THC, its lesser-known cannabinoids and its formulation in a variety of products in the public marketplace. More research is needed to identify and verify marijuana's potential benefits as a therapeutic agent, to its hazards as an addictive drug.

The concept of, "science should inform policy" is sound advice. Given the potential impacts to both public health and public safety concerns, a best practice approach would strongly suggest that we pause legalization to allow for science to catch up to accurate policy formation. This course of action will allow for valid and broadly accepted research to help guide future policy development.

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