Carl Olsen
130 E. Aurora Ave.
Des Moines, Iowa 50313-3654

January 17, 2016

Representative Kevin Koester
Statehouse
Des Moines, Iowa 50319

Re: House File 2049

Dear Representative Koester:

Please file an amendment to House File 2049 (HF 2049). The amendment is Senate File 282 (SF 282, by Senator Bolkcom) and Senate Study Bill 1205 (SSB 1205, by Senator Sodders). These two Senate bills are identical. Also, see Senate Amendment S-3123, which is also the same.

As I understand it, HF 2049 essentially prohibits synthetic marijuana by placing it in schedule 1 along with marijuana. According to the National Institute on Drug Abuse, "Drug Facts: Synthetic Cannabinoids", November 2015:

> *[synthetic cannabinoids] may affect the brain much more powerfully than marijuana*
>
> *[synthetic cannabinoids] bind more strongly than marijuana to the cell receptors affected by THC, and may produce much stronger effects*

There is no schedule more restrictive than schedule 1 to put these substances in, so HF 2049 would classify them as if they had the same abuse potential as marijuana.

On December 17, 2014, the American Academy of Neurology (AAN) recommended the reclassification of marijuana to promote research.

> *The AAN, for research purposes, requests the reclassification of marijuana-based products from their current Schedule 1 status so as to improve access for study of marijuana or cannabinoids under IRB-approved research protocols*

On January 20, 2015, the American Academy of Pediatrics requested the reclassification of marijuana to schedule 2.

> *The AAP recommends changing marijuana from a Drug Enforcement Administration schedule I to a schedule II drug to facilitate this research*

I remember you telling a group in Ankeny that the medical profession does not support the medical use of marijuana and I corrected you by telling that group that the Iowa Board of Pharmacy, the Iowa Medical Society, and the Iowa Pharmacy Association, had all recommended the reclassification of marijuana in 2010.

Section 538 of the Consolidated and Further Continuing Appropriations Act of 2015, Pub. L. 113-235, 128 Stat. 2130 (2014) ("2015 Appropriations Act") (prohibits the Department of Justice from expending any funds in connection with the enforcement of any law that interferes with a state's ability to "implement its own State law that authorizes the use, distribution, possession, or cultivation of medical marijuana."). Section 538 was reauthorized for 2016 by Congress in mid-December 2015.

Thank you!

Sincerely,

Carl Olsen
Post Office Box 41381
Des Moines, Iowa 50311-0507
515-343-9933
carl-olsen@mchsi.com

Senate File 282 - Introduced

SENATE FILE 282
BY BOLKCOM

A BILL FOR

An Act reclassifying marijuana, including tetrahydrocannabinols, from a schedule I controlled substance to a schedule II controlled substance.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

Section 1. Section 124.204, subsection 4, paragraphs m and u, Code 2015, are amended by striking the paragraphs.

Sec. 2. Section 124.204, subsection 7, Code 2015, is amended by striking the subsection.

Sec. 3. Section 124.206, subsection 7, Code 2015, is amended to read as follows:

7. *Hallucinogenic substances.* Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances, or, for purposes of paragraphs "*a*" and "*b*", which contains any of its salts, isomers, or salts of isomers whenever the existence of such salts, isomers, or salts of isomers is possible within the specific chemical designation (for purposes of this paragraph only, the term "*isomer*" includes the optical, positional, and geometric isomers):

a. Marijuana ~~when used for medicinal purposes pursuant to rules of the board~~.

b. Tetrahydrocannabinols, meaning tetrahydrocannabinols naturally contained in a plant of the genus Cannabis (Cannabis plant) as well as synthetic equivalents of the substances contained in the Cannabis plant, or in the resinous extractives of such plant, and synthetic substances, derivatives, and their isomers with similar chemical structure and pharmacological activity to those substances contained in the plant, such as the following:

(1) 1 cis or trans tetrahydrocannabinol, and their optical isomers.

(2) 6 cis or trans tetrahydrocannabinol, and their optical isomers.

(3) 3,4 cis or trans tetrahydrocannabinol, and their optical isomers. (Since nomenclature of these substances is not internationally standardized, compounds of these structures, regardless of numerical designation of atomic positions covered.)

~~*b.*~~ *c.* Nabilone [another name for

nabilone: (+-) -
trans-3-(1,1-dimethylheptyl)-6,6a,7,8,10,10a-hexahydro-1-hydroxy-6,6-dimethyl-9H-dibenzo[b,d]pyran-9-one].

EXPLANATION

The inclusion of this explanation does not constitute agreement with the explanation's substance by the members of the general assembly.

This bill reclassifies marijuana, including tetrahydrocannibinols as a schedule II controlled substance instead of a schedule I controlled substance and strikes references to the authority of the board of pharmacy to adopt rules for the use of marijuana or tetrahydrocannabinols for medicinal purposes.

A schedule I controlled substance is a highly addictive substance that has no accepted medical use in the United States and a schedule II controlled substance is a highly addictive substance that has an accepted medical use in the United States. The reclassification of marijuana from a schedule I controlled substance to a schedule II controlled substance would allow a physician to issue a prescription for marijuana under state law. However, federal regulations may prohibit such prescriptions.

The penalties remain unchanged for violations involving marijuana under the bill. The penalties under Code section 124.401 range from a class "B" felony punishable by up to 50 years of confinement to a serious misdemeanor punishable by up to six months of confinement depending on the amount of marijuana involved in the offense.

Senate Study Bill 1205 - Introduced

SENATE FILE _____
BY (PROPOSED COMMITTEE
ON JUDICIARY BILL BY
CHAIRPERSON SODDERS)

A BILL FOR

An Act relating to the reclassification of marijuana, including tetrahydrocannabinols, under the controlled substance schedules.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

S.F. _____

Section 1. Section 124.204, subsection 4, paragraphs m and u, Code 2015, are amended by striking the paragraphs.

Sec. 2. Section 124.204, subsection 7, Code 2015, is amended by striking the subsection.

Sec. 3. Section 124.206, subsection 7, Code 2015, is amended to read as follows:

7. *Hallucinogenic substances.* Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances, or, for purposes of paragraphs "*a*" and "*b*", which contains any of its salts, isomers, or salts of isomers whenever the existence of such salts, isomers, or salts of isomers is possible within the specific chemical designation (for purposes of this paragraph only, the term "*isomer*" includes the optical, positional, and geometric isomers):

a. Marijuana ~~when used for medicinal purposes pursuant to rules of the board~~.

b. Tetrahydrocannabinols, meaning tetrahydrocannabinols naturally contained in a plant of the genus Cannabis (Cannabis plant) as well as synthetic equivalents of the substances contained in the Cannabis plant, or in the resinous extractives of such plant, and synthetic substances, derivatives, and their isomers with similar chemical structure and pharmacological activity to those substances contained in the plant, such as the following:

(1) 1 cis or trans tetrahydrocannabinol, and their optical isomers.

(2) 6 cis or trans tetrahydrocannabinol, and their optical isomers.

(3) 3,4 cis or trans tetrahydrocannabinol, and their optical isomers. (Since nomenclature of these substances is not internationally standardized, compounds of these structures, regardless of numerical designation of atomic positions covered.)

~~*b.*~~ *c.* Nabilone [another name for

nabilone: (+-) -
trans-3-(1,1-dimethylheptyl)-6,6a,7,8,10,10a-hexahydro-1-hydroxy-6,6-dimethyl-9H-dibenzo[b,d]pyran-9-one].

EXPLANATION

The inclusion of this explanation does not constitute agreement with the explanation's substance by the members of the general assembly.

This bill relates to the reclassification of marijuana including tetrahydrocannabinols.

The bill reclassifies marijuana, including tetrahydrocannabinols, as a schedule II controlled substance instead of a schedule I controlled substance and strikes references to the authority of the board of pharmacy to adopt rules for the use of marijuana or tetrahydrocannabinols for medicinal purposes.

A schedule I controlled substance is a highly addictive substance that has no accepted medical use in the United States and a schedule II controlled substance is a highly addictive substance that has an accepted medical use in the United States. The reclassification of marijuana from a schedule I controlled substance to a schedule II controlled substance would allow a physician to issue a prescription for marijuana under state law. However, federal regulations may prohibit such prescriptions.

Text: S3122 Text: S3124

Senate Amendment 3123

PAG LIN

Amend Senate File 484 as follows:
#1. Page 1, before line 1 by inserting:
<Section 1. Section 124.204, subsection 4, paragraphs m and u, Code 2015, are amended by striking the paragraphs.
Sec. ___. Section 124.204, subsection 7, Code 2015, is amended by striking the subsection.
Sec. ___. Section 124.206, subsection 7, Code 2015, is amended to read as follows:
7. Hallucinogenic substances. Unless specifically excepted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of the following substances, or, for purposes of paragraphs "a" and "b", which contains any of its salts, isomers, or salts of isomers whenever the existence of such salts, isomers, or salts of isomers is possible within the specific chemical designation (for purposes of this paragraph only, the term "isomer" includes the optical, positional, and geometric isomers):
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(3) 3,4 cis or trans tetrahydrocannabinol, and their optical isomers. (Since nomenclature of these substances is not internationally standardized, compounds of these structures, regardless of numerical designation of atomic positions covered.)
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1 43 trans=3=(1,1=dimethylheptyl)=6,6a,7,8,10,10a=hexahydro=1=
1 44 hydroxy=6,6=dimethyl=9H=dibenzopyran=9=one>.>
1 45 #2. Title page, line 1, by striking <creating> and
1 46 inserting <relating to>

STEVEN J. SODDERS
SF484.1457 (3) 86
rh/rj

Text: S3122 Text: S3124

National Institute on Drug Abuse
DrugFacts
www.drugabuse.gov

Synthetic Cannabinoids

What are synthetic cannabinoids?

Synthetic cannabinoids refer to a growing number of man-made mind-altering chemicals that are either sprayed on dried, shredded plant material so they can be smoked (herbal incense) or sold as liquids to be vaporized and inhaled in e-cigarettes and other devices (liquid incense).

These chemicals are called *cannabinoids* because they are related to chemicals found in the marijuana plant. Because of this similarity, synthetic cannabinoids are sometimes misleadingly called "synthetic marijuana" (or "fake weed"), and they are often marketed as "safe," legal alternatives to that drug. In fact, they may affect the brain much more powerfully than marijuana; their actual effects can be unpredictable and, in some cases, severe or even life-threatening.

Synthetic cannabinoids are included in a group of drugs called "new psychoactive substances" (NPS). NPS are unregulated psychoactive (mind-altering) substances that have become newly available on the market and are intended to copy the effects of illegal drugs. Some of these substances may have been around for years but have reentered the market in altered chemical forms or due to renewed popularity.

False Advertising

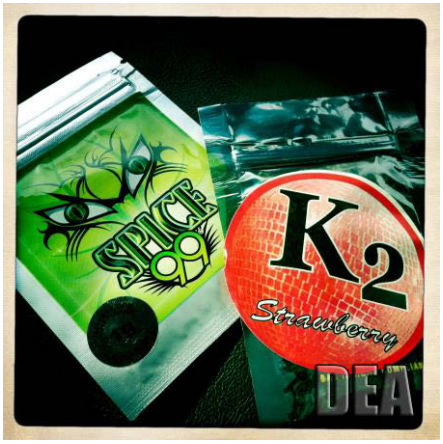
Synthetic cannabinoid products are often labeled "not for human consumption." Labels also often claim that they contain "natural" material taken from a variety of plants. However, the only parts of these products that are natural are the dried plant materials. Chemical tests show that the active, mind-altering ingredients are cannabinoid compounds made in laboratories.

Manufacturers sell these herbal incense products in colorful foil packages and sell similar liquid incense products, like other e-cigarette fluids, in plastic bottles. They market these products under a wide variety of specific brand names; in past years, K2 and Spice were common. Hundreds of other brand names now exist, such as Joker, Black Mamba, Kush, and Kronic.

For several years, synthetic cannabinoid mixtures have been easy to buy in drug paraphernalia shops, novelty stores, gas stations, and through the Internet. Because the chemicals used in them have a high potential for abuse and no medical benefit, authorities have made it illegal to sell, buy, or possess some of these chemicals. However, manufacturers try to sidestep these laws by changing the chemical formulas in their mixtures.

Easy access and the belief that synthetic cannabinoid products are "natural" and therefore harmless have likely contributed to their use among young people. Another reason for their use is that standard drug tests cannot easily detect many of the chemicals used in these products.

How do people use synthetic cannabinoids?



Users usually smoke the dried plant material sprayed with synthetic cannabinoids. Sometimes they mix the sprayed plant material with marijuana, or they brew it as tea. Other users buy synthetic cannabinoid products as liquids to vaporize them in e-cigarettes.

How do synthetic cannabinoids affect the brain?

Synthetic cannabinoids act on the same brain cell receptors as *delta-9-tetrahydrocannabinol* (THC), the mind-altering ingredient in marijuana.

So far, there have been few scientific studies of the effects of synthetic cannabinoids on the human brain, but researchers do know that some of them bind more strongly than marijuana to the cell receptors affected by THC, and may produce much stronger effects. The resulting health effects can be unpredictable.

Because the chemical composition of many synthetic cannabinoid products is unknown and may change from batch to batch, these products are likely to contain substances that cause dramatically different effects than the user might expect.

Synthetic cannabinoid users report some effects similar to those produced by marijuana:

- elevated mood
- relaxation
- altered *perception*—awareness of surrounding objects and conditions
- symptoms of *psychosis*—delusional or disordered thinking detached from reality

Psychotic effects include:

- extreme anxiety
- confusion
- *paranoia*—extreme and unreasonable distrust of others
- *hallucinations*—sensations and images that seem real though they are not

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What are some other health effects of synthetic cannabinoids?

People who have used synthetic cannabinoids and have been taken to emergency rooms have shown severe effects including:

- rapid heart rate
- vomiting
- violent behavior
- suicidal thoughts

Synthetic cannabinoids can also raise blood pressure and cause reduced blood supply to the heart, as well as kidney damage and seizures. Use of these drugs is associated with a rising number of deaths.

Are synthetic cannabinoids addictive?

Humannet/Shutterstock

Yes, synthetic cannabinoids can be addictive. Regular users trying to quit may have the following withdrawal symptoms:

- headaches
- anxiety
- depression
- irritability

Behavioral therapies and medications have not specifically been tested for treatment of addiction to these products.

Points to Remember

- Synthetic cannabinoids refer to a growing number of man-made mind-altering chemicals sprayed on dried, shredded plant material or vaporized to get high.
- Synthetic cannabinoids are sometimes misleadingly called "synthetic marijuana" (or "fake weed") because they act on the same brain cell receptors as *delta-9-tetrahydrocannabinol*, the mind-altering ingredient in marijuana.
- The effects of synthetic cannabinoids can be unpredictable and severe or even life-threatening.
- The only parts of synthetic cannabinoid products that are "natural" are the dried plant materials. Chemical tests show that their active ingredients are man-made cannabinoid compounds.
- Synthetic cannabinoid users report some effects similar to those produced by marijuana:
    - elevated mood
    - relaxation
    - altered perception
    - symptoms of psychosis
- Synthetic cannabinoids can also cause serious mental and physical health problems including:
    - rapid heart rate
    - vomiting
    - violent behavior
    - suicidal thoughts
- Synthetic cannabinoids can be addictive.
- Behavioral therapies and medications have not specifically been tested for treatment of addiction to these products.

Learn More

For more information about synthetic cannabinoids, visit:

www.dea.gov/druginfo/drug_data_sheets/K2_Spice.pdf

Updated November 2015

Position Statement: Use of Medical Marijuana for Neurologic Disorders

FOR MORE INFORMATION

memberservices@aan.com

OR

(800) 870-1960 • (612) 928-6000

Background Information

The American Academy of Neurology (AAN) is a professional organization of over 28,000 practicing neurologists and neuroscientists with a deep and abiding interest in assuring the best possible care of patients with all types of neurologic disorders. With officials at state and federal levels adopting policies regarding the use of medical marijuana, it is important for the AAN to have an official position on the issue that can assist policymakers.

Description of the Issue

In this position statement, the term "marijuana-based products" refers both to marijuana and to products derived from it. The current medical marijuana legislation being passed by policymakers across the country, which promotes marijuana-based products as treatment options for various neurologic disorders, is not supported by high-level medical research. In addition, there is concern regarding the safety of marijuana-based products, especially for long term use in patients with disorders of the nervous system. The interaction of these compounds with prescription medications is also unknown. Therefore, further research is urgently needed to determine the safety and medical benefit of various forms of marijuana in neurologic disorders, especially those where anecdotal evidence is available. Anecdotal evidence may engender public support for the use of these products but such evidence must be substantiated by rigorous research, which will in turn inform legislative policy.

The AAN's Position

The AAN supports all efforts to conduct rigorous research to evaluate the long-term safety and effectiveness of marijuana-based products. The AAN, for research purposes, requests the reclassification of marijuana-based products from their current Schedule 1 status so as to improve access for study of marijuana or cannabinoids under IRB-approved research protocols. The AAN does not advocate for the legalization of marijuana-based products for use in neurologic disorders at this time, as further research is needed to determine the benefits and safety of such products. This is of paramount importance when marijuana-based products are used in patients with underlying neurologic disorders, or in children whose developing brains may be more vulnerable to the toxic effects of marijuana.

The AAN recognizes that there may be potential use for these agents in the treatment of some neurologic disorders.[1] However, there is not sufficient evidence to make any definitive conclusions regarding the effectiveness of marijuana-based products for many neurologic conditions.[2] Many of the cannabis preparations used in studies are not available in the United States. It is not appropriate to extrapolate the results of trials of standardized preparations to other, non-standardized, non-regulated cannabis products

which may be commercially available in states with laws supporting the use of medical marijuana. Effectiveness of a non-standardized product is not equal to that of standardized products that are studied in clinical trials. Additionally, most currently available marijuana-based products are not regulated by any agency and may not contain the products mentioned by labeling. Quality control is therefore impossible, raising further safety questions. Each product and formulation of cannabis should demonstrate safety and effectiveness via scientific study similar to the process required by the Food and Drug Administration (FDA).

Rationale

Currently, the federal government classifies marijuana products as a Schedule I drug, defined as having no currently accepted medical use and a high potential for abuse. Therefore, state law does not protect an individual who prescribes such products from federal prosecution unless the individual obtains a Schedule I license from the Drug Enforcement Agency (DEA). Some states have enacted bills allowing medical providers to prescribe marijuana-based products, but only if they contain non-psychoactive ingredients. Reclassification by the DEA will expedite future research on marijuana-based products as it will reduce barriers to study participation by investigators who do not possess a schedule I license.

History and Basic Science

Use of marijuana-based products to treat neurologic disorders dates back to the 1800s.[2] Marijuana is derived from the plant Cannabis sativa, which contains over 60 different pharmacologically active compounds referred to as cannabinoids.[3] Delta-9-tetrahydrocannabinol (THC) is the major psychoactive compound which causes the euphoric effect. Other cannabinoid compounds such as cannabinol and cannabidiol (CBD) are not known to have psychoactive properties. Cannabinoid compounds have the potential for therapeutic benefit in a number of neurologic diseases. However, the psychoactive effects can acutely alter a patient's cognition and inhibit normal functioning. Long-term effects on learning and memory may occur. Thus, from a safety perspective, the use of products with a high THC component is controversial. Research is necessary to develop marijuana-based compounds that have minimal psychoactive properties while retaining other desirable, therapeutic pharmacologic effects.

Laws and Regulations

Several agencies and organizations have provided position statements calling for more research on marijuana-based products.[4-6] As of this writing, Minnesota and Colorado have funded studies to assess the efficacy of marijuana-based products. Several states also have passed legislation supporting decriminalization of marijuana based products when used for medical purposes. The legislation typically requires patients to possess a valid registration, based on letters from a physician stating that they have a debilitating medical condition. The legislation also provides for registration of centers to cultivate and sell marijuana products for medical use. The legislation does not usually specify what symptoms of the condition are expected to be improved by medical marijuana. Therefore, patients with one of the medical conditions listed may request letters from their physicians supporting their medical use of marijuana without clear information regarding what exactly is being treated. The legislation does not differentiate between different forms of marijuana, such as oral, smoked, or other marijuana-

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based products, which may have different effectiveness and safety profiles.

Available Studies

Case reports and limited studies have addressed the efficacy of marijuana-based products in treating various neurologic disorders.[7-10] A recent evidence-based guideline by the AAN provided support for the use of specific oral and oromucosal forms of cannabis to improve some symptoms in patients with multiple sclerosis.[1] A subsequent AAN systematic review of medical marijuana for neurologic disorders concluded that oral cannabis extracts are probably ineffective for treating levodopa-induced abnormal involuntary movements in Parkinson's disease, but it did not find evidence for or against the use of oral cannabinoids for several other conditions.[2] These and other reviews emphasize the need for further research. Importantly, there is no evidence to support the use of smoked cannabis.

In clinical studies, side effects of cannabis have included nausea, dizziness, mood changes, hallucinations or suicidal ideation, feeling of intoxication, and increased weakness.[2] Seizures have been reported rarely.[1] The safety of long-term use remains uncertain. Addiction to recreationally used marijuana is controversial, but there is some evidence of tolerance and dependence related to long term heavy use.[11-13] Evidence also suggests that chronic recreational use of marijuana may cause impairment in memory, concentration, and executive functioning. It is unclear how long these effects persist after stopping marijuana use or whether there may be permanent nervous system toxicity.[14-17] One study[18] found that cannabis extracts were associated with memory and verbal learning deficits. The psychopathological and cognitive side effects of marijuana-based products are of concern in patients who may be more vulnerable because of their underlying neurologic disorders. Safety concerns are even greater when considered for use in children.

Position Statement History

Drafted by Anup Patel, MD; Dominic Fee, MD; John C.M. Brust, MD, FAAN; Sarah Song, MD, MPH; Timothy R. Miller, AAN staff; Pushpa Narayanaswami, MBBS, DM, FAAN.

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The Impact of Marijuana Policies on Youth: Clinical, Research, and Legal Update

COMMITTEE ON SUBSTANCE ABUSE and COMMITTEE ON ADOLESCENCE

Pediatrics; originally published online January 26, 2015;
DOI: 10.1542/peds.2014-4146

POLICY STATEMENT Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

The Impact of Marijuana Policies on Youth: Clinical, Research, and Legal Update

COMMITTEE ON SUBSTANCE ABUSE and COMMITTEE ON ADOLESCENCE

abstract

This policy statement is an update of the American Academy of Pediatrics policy statement "Legalization of Marijuana: Potential Impact on Youth," published in 2004. Pediatricians have special expertise in the care of children and adolescents and may be called on to advise legislators about the potential impact of changes in the legal status of marijuana on adolescents. Parents also may look to pediatricians for advice as they consider whether to support state-level initiatives that propose to legalize the use of marijuana for medical and nonmedical purposes or to decriminalize the possession of small amounts of marijuana. This policy statement provides the position of the American Academy of Pediatrics on the issue of marijuana legalization. The accompanying technical report reviews what is currently known about the relationships of marijuana use with health and the developing brain and the legal status of marijuana and adolescents' use of marijuana to better understand how change in legal status might influence the degree of marijuana use by adolescents in the future.

DEFINITIONS

For the purpose of clarifying terminology, the following are definitions used in this policy statement and the accompanying technical report[1]:

Legalization

Allowing cultivation, sale, and use of cannabis (restricted to adults ≥21 years of age).

Legalization of Medical Marijuana

Allowing the use of marijuana to treat a medical condition or symptom with a recommendation from a physician.

www.pediatrics.org/cgi/doi/10.1542/peds.2014-4146

DOI: 10.1542/peds.2014-4146

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Decriminalization
Reducing penalties for cannabis-related offenses to lesser criminal charges or to civil penalties.

INTRODUCTION

Marijuana is the most commonly used illicit substance among adolescents.[2] Recreational sale and possession of marijuana by adults remain illegal in most states and remain illegal under federal law. However, a number of states and local jurisdictions have decriminalized the possession of marijuana for recreational use by adults, reducing penalties to misdemeanors or citations. Many states also have legalized medical marijuana for adults who receive recommendations for use by physicians. Almost all states with medical marijuana laws allow access by minors, though often with greater regulation. States in which marijuana is legal prohibit marijuana sales to and use by minors, but changes in the legal status of marijuana, even if limited to adults, may affect the prevalence of use among adolescents. Although the epidemiologic data are not consistent across states and time periods, with the exception of Michigan and New Mexico, in all states where medical marijuana has been legalized, marijuana use by minors has been stable or has decreased.[3] Youth substance use rates depend on a number of factors, including legal status, availability and ease of access of the substance, and perception of harm. For example, although tobacco is easily accessible, youth tobacco use rates have decreased substantially since the 1990s, in conjunction with aggressive public health campaigns warning of the medical consequences of smoking. In Colorado, the passage of the amendment to legalize recreational marijuana occurred in November 2012. Although sales of recreational marijuana did not start in Colorado until January 1, 2014, the postlegalization 2013 rates of youth use increased.[4] It is possible that public health campaigns that effectively communicate the harms associated with teen marijuana use could reduce youth use despite legalization. Legalization campaigns that imply that marijuana is a benign substance present a significant challenge for educating the public about its known risks and adverse effects. Therefore, it is unclear what the impact of legalization of marijuana for adults will have on the prevalence of marijuana use by adolescents, especially if the implementation of legalization includes messaging that minimizes the health and behavioral risks.

Substance abuse by adolescents is an ongoing health concern. Marijuana remains classified in the Controlled Substances Act (21 USC §801-971 [2012]) as a schedule I drug. This classification implies that it has a high potential for abuse, has no currently accepted medical use in the United States, and lacks accepted safety for use under supervision by a physician. Despite this classification by the federal government, marijuana has been legalized for medical purposes in a number of states, in direct opposition to federal law. Since the first policy statement from the American Academy of Pediatrics (AAP) on the legalization of marijuana was published in 2004, limited research has been performed to examine the potential therapeutic effects of marijuana for adults, specifically the class of chemicals known as cannabinoids, which are responsible for most of the medicinal effects of marijuana. This research has demonstrated that both the drugs approved by the US Food and Drug Administration and other pharmaceutical cannabinoids, such as cannabidiol, can be helpful for adults with specific conditions, such as increasing appetite and decreasing nausea and vomiting in patients with cancer and for chronic pain syndromes,[5,6] although side effects of dizziness and dysphoria may also be experienced. There are no published studies on the use of medicinal marijuana or pharmaceutical cannabinoids in pediatric populations.

EFFECTS OF MARIJUANA

The adverse effects of marijuana have been well documented, and studies have demonstrated the potential negative consequences of short- and long-term recreational use of marijuana in adolescents. These consequences include impaired short-term memory and decreased concentration, attention span, and problem solving, which clearly interfere with learning. Alterations in motor control, coordination, judgment, reaction time, and tracking ability have also been documented[7]; these may contribute to unintentional deaths and injuries among adolescents (especially those associated with motor vehicles if adolescents drive while intoxicated by marijuana).[8] Negative health effects on lung function associated with smoking marijuana have also been documented, and studies linking marijuana use with higher rates of psychosis in patients with a predisposition to schizophrenia have recently been published,[9] raising concerns about longer-term psychiatric effects. New research has also demonstrated that the adolescent brain, particularly the prefrontal cortex areas controlling judgment and decision-making, is not fully developed until the mid-20s, raising questions about how any substance use may affect the developing brain. Research has shown that the younger an adolescent begins using drugs, including marijuana, the more likely it is that drug dependence or addiction will develop in adulthood.[10] A recent analysis of 4 large epidemiologic

trials found that marijuana use during adolescence is associated with reductions in the odds of high school completion and degree attainment and increases in the use of other illicit drugs and suicide attempts in a dose-dependent fashion that suggests that marijuana use is causative.[11]

DECRIMINALIZATION EFFORTS AND EFFECTS

The illegality of marijuana has resulted in the incarceration of hundreds of thousands of adolescents, with overrepresentation of minority youth.[12] A criminal record can have lifelong negative effects on an adolescent who otherwise has had no criminal justice history. These effects can include ineligibility for college loans, housing, financial aid, and certain kinds of jobs.[13] In states that have passed decriminalization laws, marijuana use is still illegal, although the consequences of possession and use are less punitive. Although these laws are not applicable to adolescents in all states, the changes in the law are intended to address and reduce the long-term effects that felony charges can have on youth and young adults.[13] Continued efforts to address this problem are based on issues of social justice, given the disparate rate of adjudication for drug offenses for youth of racial minority groups compared with white youth. Advocates of decriminalization have also sought to increase the availability of drug treatment services.[14]

CONCLUSIONS

Ultimately, the behavioral and health risks associated with marijuana use by youth should be the most salient criteria in determining whether policies that are enacted are effective in minimizing harm. More information, including the legal status of marijuana for both recreational and medical use, the effect of legal status on rates of use by adolescents and young adults, research on medical marijuana and the adverse effects of marijuana use, the impact of criminal penalties particularly on minority teens and communities, and adolescent brain development related to substance use, is available in the accompanying technical report.[1]

RECOMMENDATIONS

1. Given the data supporting the negative health and brain development effects of marijuana in children and adolescents, ages 0 through 21 years, the AAP is opposed to marijuana use in this population.
2. The AAP opposes "medical marijuana" outside the regulatory process of the US Food and Drug Administration. Notwithstanding this opposition to use, the AAP recognizes that marijuana may currently be an option for cannabinoid administration for children with life-limiting or severely debilitating conditions and for whom current therapies are inadequate.
3. The AAP opposes legalization of marijuana because of the potential harms to children and adolescents. The AAP supports studying the effects of recent laws legalizing the use of marijuana to better understand the impact and define best policies to reduce adolescent marijuana use.
4. In states that have legalized marijuana for recreational purposes, the AAP strongly recommends strict enforcement of rules and regulations that limit access and marketing and advertising to youth.
5. The AAP strongly supports research and development of pharmaceutical cannabinoids and supports a review of policies promoting research on the medical use of these compounds. The AAP recommends changing marijuana from a Drug Enforcement Administration schedule I to a schedule II drug to facilitate this research.
6. Although the AAP does not condone state laws that allow the sale of marijuana products, in states where recreational marijuana is currently legal, pediatricians should advocate that states regulate the product as closely as possible to tobacco and alcohol, with a minimum age of 21 years for purchase. Revenue from this regulation should be used to support research on the health risks and benefits of marijuana. These regulations should include strict penalties for those who sell marijuana or marijuana products to those younger than 21 years, education and diversion programs for people younger than 21 years who possess marijuana, point-of-sale restrictions, and other marketing restrictions.
7. In states where marijuana is sold legally, either for medical or recreational purposes, regulations should be enacted to ensure that marijuana in all forms is distributed in childproof packaging, to prevent accidental ingestion.
8. The AAP strongly supports the decriminalization of marijuana use for both minors and young adults and encourages pediatricians to advocate for laws that prevent harsh criminal penalties for possession or use of marijuana. A focus on treatment for adolescents with marijuana use problems should be encouraged, and adolescents with marijuana use problems should be referred to treatment.
9. The AAP strongly opposes the use of smoked marijuana because smoking is known to cause lung damage,[15] and the effects of secondhand marijuana smoke are unknown.
10. The AAP discourages the use of marijuana by adults in the presence of minors because of the important influence of role modeling by adults on child and adolescent behavior.

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*The views expressed are those of the author and do not necessarily reflect the policy or position of the Department of the Army, Department of Defense, or the US Government.

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The Impact of Marijuana Policies on Youth: Clinical, Research, and Legal Update

COMMITTEE ON SUBSTANCE ABUSE and COMMITTEE ON ADOLESCENCE

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H. R. 83

One Hundred Thirteenth Congress of the United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Friday, the third day of January, two thousand and fourteen

An Act

Making consolidated appropriations for the fiscal year ending September 30, 2015, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Consolidated and Further Continuing Appropriations Act, 2015".

SEC. 2. TABLE OF CONTENTS.

The table of contents of this Act is as follows:

grant guidelines or requirements to establish minimum riparian buffers.

SEC. 538. None of the funds made available in this Act to the Department of Justice may be used, with respect to the States of Alabama, Alaska, Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Illinois, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Vermont, Washington, and Wisconsin, to prevent such States from implementing their own State laws that authorize the use, distribution, possession, or cultivation of medical marijuana.

SEC. 539. None of the funds made available by this Act may be used in contravention of section 7606 ("Legitimacy of Industrial Hemp Research") of the Agricultural Act of 2014 (Public Law 113–79) by the Department of Justice or the Drug Enforcement Administration.

SEC. 540. (a) None of the funds made available by this Act may be used to relinquish the responsibility of the National Telecommunications and Information Administration during fiscal year 2015 with respect to Internet domain name system functions, including responsibility with respect to the authoritative root zone file and the Internet Assigned Numbers Authority functions.

(b) Subsection (a) of this section shall expire on September 30, 2015.

SEC. 541. (a) IN GENERAL.—During the period beginning on January 1, 2015, and ending on December 31, 2015, the provisions of chapter 3 of title II of the Trade Act of 1974 (19 U.S.C. 2341 et seq.), as in effect on December 31, 2014, shall apply, except that in applying and administering such provisions, section 256(b) of that Act shall be applied and administered by substituting "$16,000,000 for the period beginning on January 1, 2015, and ending December 31, 2015" for "$16,000,000 for each of fiscal years 2003 through 2007, and $4,000,000 for the 3-month period beginning on October 1, 2007".

(b) TERMINATION.—During the period beginning on January 1, 2015, and ending on December 31, 2015, section 285 of the Trade Act of 1974 (19 U.S.C. 2271 note), as in effect on December 31, 2014, shall apply, except that in applying and administering that section, subsection (b) of that section shall be applied and administered as if paragraph (1) read as follows:

"(1) ASSISTANCE FOR FIRMS.—

"(A) IN GENERAL.—Except as provided in subparagraph (B), assistance may not be provided under chapter 3 after December 31, 2015.

"(B) EXCEPTION.—Notwithstanding subparagraph (A), any assistance approved under chapter 3 on or before December 31, 2015, may be provided—

"(i) to the extent funds are available pursuant to such chapter for such purpose; and

"(ii) to the extent the recipient of the assistance is otherwise eligible to receive such assistance.".

Section 538 of the Consolidated and Further Continuing Appropriations Act of 2015, Pub. L. 113-235, 128 Stat. 2130 (2014) ("2015 Appropriations Act") (prohibits the Department of Justice from expending any funds in connection with the enforcement of any law that interferes with a state's ability to "implement its own State law that authorizes the use, distribution, possession, or cultivation of medical marijuana."). Section 538 was reauthorized for 2016 by Congress in mid-December 2015.

In 2010 the Iowa Board of Pharmacy recommended that the cannabis plant be transferred to schedule 2.

In May of 2014 Iowa enacted the Medical Cannabidiol Act which allows children with a neurological disorder (epilepsy) to possess an extract from marijuana. Iowa, SF2360, May 30 2014, 2014 Iowa Acts Chapter 1125.

In December of 2014, the American Academy of Neurology recommended that the cannabis plant be transferred to schedule 2.

In January of 2015, the American Academy of Pediatrics recommended that the cannabis plant be transferred to schedule 2.

Grinspoon v. DEA, 828 F.2d 881, 886 (1st Cir. 1987):
We add, moreover, that the Administrator's clever argument conveniently omits any reference to the fact that the pertinent phrase in section 812(b)(1)(B) reads "*in the* United States," (emphasis supplied). We find this language to be further evidence that the Congress did not intend "accepted medical use in treatment in the United States" to require a finding of recognized medical use in every state or, as the Administrator contends, approval for interstate marketing of the substance.

Grinspoon v. DEA, 828 F.2d 881, 887 (1st Cir. 1987):
Unlike the CSA scheduling restrictions, the FDCA interstate marketing provisions do not apply to drugs manufactured and marketed wholly intrastate. Compare 21 U.S.C. § 801(5) with 21 U.S.C. § 321 (b), 331, 355(a). Thus, it is possible that a substance may have both an accepted medical use and safety for use under medical supervision, even though no one has deemed it necessary to seek approval for interstate marketing.

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