RESOLUTION #9SA (18) – 2018 Annual Leadership Forum

TITLE: Visible Education by Settings Serving Pediatric Patients, Newborns, and Pregnant Women Against Exposure to Marijuana of Fetuses, Infants, Children, and Adolescents

SPONSORED BY: Michigan Chapter

DATE: November 15, 2017

DISPOSITION: ADOPTED AS AMENDED

Whereas, with rising popularity of the legalization of marijuana, marijuana usage has become widespread; and

Whereas, marijuana usage has been associated with adverse outcomes in children, therefore be it

RESOLVED, that the Academy encourage settings serving pediatric patients, newborns, and pregnant women to strongly and visibly promote education on the effects of the use of marijuana during pregnancy and around children and adolescents.

FISCAL NOTE: None

REFER TO: 2018 Annual Leadership Forum

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BACKGROUND INFORMATION: Background Information from the Author

In 2015, the American Academy of Pediatrics published a policy revision on the legalization of marijuana and delineated the evidence of marijuana’s behavioral and health risks on youth (1). Since then, more states have passed some form of marijuana legalization laws and it is evident that this trend is not likely to stop (2).

Marijuana is the most widely used drug of abuse among adolescents (3). Many young people begin to use marijuana in
adolescence, with recent national estimates of 15.6% on 8th graders, 33.7% of 10th graders, and 44.4% of 12th graders reporting any lifetime use of marijuana or hashish (4). In addition, 7.4% of youths ages 12-17 (1.8 million adolescents) reported use of marijuana during the past month. THC acts as a partial agonist of CBI cannabinoid receptors (CBIRs) (3). CBIRs are abundant in the CNS and are central components of the neurodevelopmental changes that occur during adolescence. Overactivation of CBIRs has the ability to dramatically alter brain maturation. Chronic marijuana exposure may be associated with a higher risk for neuropsychiatric diseases, including schizophrenia. There is greater vulnerability of the adolescent brain to the deleterious cognitive effects of cannabinoids, especially with regard to working memory, spatial working memory, and cognitive flexibility. Adults who smoked marijuana regularly during adolescence have impaired neural connectivity (fewer fibers) in the precuneus and fimbria (part of the hippocampus), reduced functional connectivity in the prefrontal cortex (important for executive function, including inhibition of inappropriate behavior) and subcortical regions, decreased activity in prefrontal regions, and reduced hippocampal volumes. Despite contentious debate in popular media regarding the addictiveness of marijuana, evidence clearly shows that marijuana use can lead to addiction (defined as compulsive use in spite of associated distress or adverse effects on adaptive functioning), occurring in approximately 9% of all users and approximately 17% of adolescent users (4).

Marijuana is the most commonly used illegal substance during pregnancy (5). Prenatal exposure to THC leads to changes in the endocannabinoid system (ECS), resulting in effects on the fetus such as disruption of the position, postsynaptic target selectivity, and differentiation of the developing axons. Over the long-term, these changes result in deficits in physical, cognitive, emotional, social, and motor functioning in the offspring that last into adulthood. Children with intrauterine exposure have demonstrated poorer scores on intelligence tests, increased impulsivity, hyperactivity, decreased attentiveness, increased rates of delinquency, and externalizing problems (6).

Marijuana exposure via breast milk may delay motor development at 1 year of age (4). THC reduces the quantity and quality of breast milk, but there is a dearth of research on effects on nursing infants.
Therefore, use of marijuana during nursing is discouraged in the absence of evidence that it is safe for the newborn. The benefits of breastfeeding may outweigh the negative side-effects of marijuana. Prenatal marijuana exposure is associated with offspring marijuana use during teenage years.

Plunk et al showed that medical marijuana laws (MMLs) were associated with a 0.40 percentage point increase in the probability of not earning a high school diploma or GED after completing the 12th grade (from 3.99% to 4.39%) (7). High school MML exposure was also associated with a 1.84 and 0.85 percentage point increase in the probability of college non-enrollment and degree non-completion, respectively (from 31.12% to 32.96% and 45.30% to 46.15%, respectively). Years of MML exposure exhibited a consistent dose response relationship for all outcomes. MMLs were also associated with 0.85 percentage point increase in daily marijuana use among 12th graders (up from 1.62%).

In light of the mounting evidence of the negative effects on youth of marijuana exposure and concomitant increasing acceptance by society of marijuana, it is imperative that more be done to educate the public about the many deleterious effects on youth of marijuana exposure pre- and post-natally, particularly by medical institutions that serve pregnant mothers, children and youth.

References


Background Information from the Committee on Substance Use and Prevention

This resolution is already being addressed by way of a clinical report jointly authored by the Committee on Substance Use and Prevention and the Section on Breastfeeding. The clinical report is titled “Marijuana use during pregnancy and breastfeeding: Implications for Neonatal and Childhood Outcomes” and is expected to be published early 2018.

Background Information from the Committee on Fetus and Newborn

At this time, the Committee on Fetus & Newborn is not addressing the issue raised by the resolution, however, the new edition of Guidelines for Perinatal Care manual does contain a section on Preconception counseling that includes the topic Substance Abuse, including alcohol, tobacco, and recreational and illicit drugs. (page 100)

Background Information from the Committee on Hospital Care

The Committee on Hospital Care has no additional background to provide.