March 14, 2022

Proponent Oral-Virtual Testimony to Senate Bill SB 560
The Medical Marijuana Regulation Act
Bryon Adinoff, M.D., President, Doctors for Cannabis Regulation (DFCR.org)
812 S Gaylord St, Denver, CO 80209 817-371-9798
Date of Testimony: March 16, 2022
Scientific Advisor, Kansas Cannabis Coalition

Dear Chair,

I am writing this letter in support of Senate Bill 560 at the request of the Kansas Cannabis Coalition.

I am presently a Clinical Professor at the University of Colorado School of Medicine. I retired in 2018 as the Distinguished Professor of Alcohol and Drug Abuse Research in the Department of Psychiatry at the University of Texas Southwestern Medical Center and as a psychiatrist for 30 years with the Department of Veterans Affairs, where I served as the director of substance use disorder treatment programs at both the Charleston, SC and Dallas, TX VA Medical Centers. I have published more than 200 articles, reviews, and book chapters on the biology and treatment of addiction and am the Editor-in-Chief of *The American Journal of Drug and Alcohol Abuse*. My research ($10,000,000+) has been funded by the National Institutes on Drug Abuse (NIDA), Alcohol Abuse and Alcoholism (NIAAA) and Department of Veterans Affairs. I have been recognized as a Distinguished Fellow by the American Academy of Addiction Psychiatry and the American Psychiatric Association and I am a Fellow in the American College of Neuropsychopharmacology.

Marijuana, or "botanical cannabis," has several known cannabinoids that are potentially useful in a number of additional debilitating conditions. In a recent report, the National Academies of Medicine, Engineering, and Sciences reported that there was *conclusive or substantial evidence* that cannabis or cannabinoids are effective for the treatment of chronic pain in adults and multiple sclerosis spasticity (1). A review in the *New England Journal of Medicine* by the director of NIDA states "clinical conditions with symptoms that may be relieved by treatment with marijuana or other cannabinoids" include chronic pain, inflammation, multiple sclerosis, AIDS-associated anorexia and wasting syndrome, glaucoma, and nausea (2). It is estimated there are now more than 1.2 million legal medical marijuana patients, and patient surveys consistently find that over half report using marijuana to reduce reliance on prescription drugs, primarily opioids (3-5). While the research is still early, there are varying amounts of support for the use of cannabis in all of the disorders mentioned in the Kansas Medical Cannabis bill. There are over 1000 clinical trials with cannabis listed in Pubmed (National Library of Medicine) accompanied by over 25,000 other scientific papers on cannabis. Presently, the FDA has approved Marinol for chemotherapy-induced nausea, Epidiolex is approved for intractable seizures, and Sativex is approved for the relief of spasticity and sleep disturbances related to multiple sclerosis (as well as the treatment of severe neuropathic-related cancer pain). Thus, it is clear that cannabis can be

useful for a number of disorders and symptoms in addition to pain. There are many books and courses available that thoughtfully discuss the research support for the therapeutic use of cannabis (6-8). I have also co-edited a comprehensive Special Issue in the American Journal of Drug and Alcohol Abuse on the *Benefits and Consequences of Cannabis Legalization* that covers many of these topics in detail (9).

From a pharmaceutical perspective, botanical cannabis is a very safe drug. In the U.S., tobacco kills almost 500,000 people last year, alcohol almost 90,000 (9,10). The opioid epidemic was responsible for over 75,000 overdose deaths in 2020-2021 and 700,000 since the onset of the epidemic (11). In contrast, to my knowledge, even though medical cannabis was first legalized 23 years ago and the full plant is now legal in 36 states and the District of Columbia, nobody has ever died from a cannabis overdose. Medical cannabis was first legalized (per state law) over 25 years ago and 75% of the U.S. population (230,000,000+ people) now live a state in which medical cannabis can be legally recommended. In no case has a state decided to change course and ban medical cannabis. Medical cannabis has also been legalized in Canada, Mexico, Columbia, Brazil, Uruguay, Peru, Chile, Argentina, South Africa, Portugal, Great Britain, Norway, Sweden, Finland, Italy, Israel, Germany, Australia, Thailand, Czech Republic, Greece, Poland, Lithuania, Netherlands, Ireland, Switzerland, and Croatia. Medical legalization has continued to have overwhelmingly bipartisan support in the U.S., with 91% of the population supporting its legalization (10).

Minors are protected by a regulated market. A wealth of studies have shown that cannabis use in minors has *not* increased in states with legalized cannabis (even when legalized for adult use) (11-13). In fact, NIDA Director Nora Volkow recently stated that "I was expecting that the use of marijuana among adolescents would go up and overall it hasn't" (14). A recent study in JAMA Psychiatry (15) found that any use and frequent use of cannabis did *not* increase in 12-17 years old individuals and cannabis use disorder was *lower* in 2013-2016 (even after adult use legalization) compared to before legalization (see Figure 3, left panel). I am attaching a recent review on this topic authored by me and Dr. Mark Elliott (16).

One of the primary concerns of physicians opposing medical cannabis in Kansas is that recommending cannabis may constitute malpractice. This is a legal question, not a medical one. As such, it has been considered by the legal profession in some detail. Yet I can find no evidence that a physician has been found guilty of malpractice due to recommending cannabis. The ability to "recommend" cannabis has been upheld by the US Court of Appeals for the Ninth Circuit in Conant v. Walters, which decided that a physician's discussion of the potential benefits of medicinal cannabis and making such recommendations constitute protected speech under the First Amendment. The court reasoned that doctors should not be held liable for conduct that patients might engage in after leaving the office and that open and unrestricted communication is vital in preserving the patient-doctor relationship and ensuring proper treatment (17-19). In addition, as physicians are only *recommending* (not prescribing) cannabis, the legal community considers that this is itself is a weak allegation to file a personal injury lawsuit. For those physicians who are concerned about legal liability about recommending cannabis, insurance (specifically for prescribing cannabis) is available. Just as in other areas of clinical practice, physicians are well aware of the risks that they are taking in their practice of medicine and adjust their practice accordingly. Guidelines are available for physicians who choose to include

cannabis in their practice (20). Thus, as in all of medicine, there are risks inherent in its practice and it is up to the physician to assure that they are aware of these risks. To date, there is no evidence to suggest that recommending cannabis constitutes malpractice.

While there is much good in Bill 560, there are some issues that could be problematic.
New Sec 38: re pharmacists.
Pharmacists are required for each dispensary. Their tasks are quite time-consuming and the pharmacists need to be available during all operating hours. Questions that immediately come to mind are:

- Are there enough pharmacists in Kansas to fill these roles? I would assume these positions would be most difficult to fill in rural areas. If this turns out to be the case, will pharmacists be recruited away from drugstores in the already medically underserved rural areas? If pharmacists cannot be recruited for these positions and/or drugstores are left without sufficient staff, this will not serve the needs of Kansas' patients.
- Have nurses been considered to fill the position of medical oversight? Most, if not all, of the tasks assigned to the pharmacists in Bill 560 could be handled by nurses. Nurses, in particular, are quite skilled at providing patient education.
- Per Bill 360, pharmacists cannot be paid more than 1% of the dispensary's gross receipts. This is a puzzling requirement. The rationale for limiting the amount that the medical staff of a medical dispensary could be compensated is not apparent to me. Have the economics of this been considered? This approach would seem to assure that only large scale, deep pocketed, and multi-state cannabis companies could work in this environment. This would increase the likelihood that it would not be possible for smaller dispensaries (those likely in rural areas) to operate in this environment.

New Sec 30: re "the smoking, combustion or vaporization of medical marijuana is prohibited."
Smoking flower (and less so combustion and vaporization) have their own potential medical consequences. Doctors for Cannabis Regulation has, in fact, cautioned against their use during early COVID (21). Nevertheless, the inhalation route has some important advantages:

- Inhaling medication allows it to take effect more quickly. This can be important for many medical disorders.
- Because of the quick onset of action that occurs with inhalation, patients can feel the effects quickly and carefully titrate their dose to assure that too much medication is not taken. We have all heard stories of individuals who have ingested edibles and experienced significant untoward effects. This can be avoided by using inhalation methods of administration.

The legislative process is an admittedly unusual pathway for providing legal access to a medication. This approach is often cautioned against while we await the findings from additional research. The exploration of cannabis therapeutics is, indeed, a very exciting area of investigation and many pharmaceuticals that utilize the human body's cannabinoid receptors are in development. However, the pathway to FDA approval is a long and arduous process; it will likely be at least a decade before many of these compounds are available for use. And despite the clarion call for "more research," relatively little research in the U.S. is being funded for clinical trials of cannabis; furthermore, this research is notoriously difficult to conduct due to government restrictions. Meanwhile, there is an *urgent need* to increase the availability of botanical cannabis for those presently suffering. Although I myself was initially skeptical of

many of the claims of medical cannabis advocates, I can no longer ignore the hundreds of personal and heart-felt testimonies of changed lives, not possible with present pharmaceuticals, that I have heard over the past several years. I hope that you are similarly touched.

It is important that the ability of patients to obtain a potentially life-saving drug is not further delayed. I urge your support of the use of medical cannabis in Kansas.

Sincerely,

Bryon Adinoff, M.D.
President, Doctors for Cannabis Regulation

References

1. The National Academies of Sciences Engineering and Medicine. *The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research*; Washington, D.C., 2017. https://www.nap.edu/catalog/24625/the-health-effects-of-cannabis-and-cannabinoids-the-current-state (accessed Dec 3, 2020).
2. Volkow ND, Compton WM, Weiss SR. Adverse health effects of marijuana use. N Engl J Med 2014; 371 (9), 879.
3. Reiman A. Cannabis as a substitute for alcohol and other drugs. Harm Reduct J 2009; 6, 35.
4. Abrams DI, Couey P, Shade SB, Kelly ME, Benowitz NL. Cannabinoid-opioid interaction in chronic pain. Clin Pharmacol Ther 2011; 90 (6), 844-851.
5. Lucas P. Cannabis as an adjunct to or substitute for opiates in the treatment of chronic pain. J Psychoactive Drugs 2012; 44 (2), 125-133.
6. University of Colorado Anschutz Medical Campus. *Medical cannabis education for health care providers.* https://pharmacy.cuanschutz.edu/academics/continuing-education/certificate-programs#cannabis.
7. Society of Cannabis Clinicians. *Medical cannabis clinical training curriculum*. https://www.cannabisclinicians.org/medical-cannabis-courses/.
8. Kogan M, Liebmann-Smith. Medical Marijuana: Avery Publisher, 2021.
9. Cooper ZD, Adinoff B. Special Issue: Benefits and consequences of cannabis legalization. American Journal of Drug and Alcohol Abuse 2019; 45 (6), 547-712.
10. Green TV. Americans overwhelmingly say marijuana should be legal for recreational or medical use. Per Research. April 16, 2021. https://www.pewresearch.org/fact-tank/2021/04/16/americans-overwhelmingly-say-marijuana-should-be-legal-for-recreational-or-medical-use/ (accessed March 14, 2022).
11. Choo EK, Benz M, Zaller N, Warren O, Rising KL, McConnell KJ. The impact of state medical marijuana legislation on adolescent marijuana use. J Adolesc Health 2014; 55 (2), 160-166.

12. Smart R, Pacula RL. Early evidence of the impact of cannabis legalization on cannabis use, cannabis use disorder, and the use of other substances: Findings from state policy evaluations. Am J Drug Alcohol Abuse 2019; 45 (6), 644-663.
13. Ammerman S, Ryan S, Adelman WP, Committee on Substance Abuse & Committee on Adolescence. The impact of marijuana policies on youth: clinical, research, and legal update. Pediatrics 2015; 135 (3), e769-785.
14. Nadelmann E. NIDA Director Nora Volkow on Running a Drug Research Agency in a Political World. In Psychoactive, 2021.
15. Cerda M, Mauro C, Hamilton A, Levy NS, Santaella-Tenorio J, Hasin D, Wall MM, Keyes KM, Martins SS. Association Between Recreational Marijuana Legalization in the United States and Changes in Marijuana Use and Cannabis Use Disorder From 2008 to 2016. JAMA Psychiatry 2020; 77 (2), 165-171.
16. Elliott MD, Adinoff B. Implications of adult use cannabis legalization for adolescent use, perceptions, health, and consequences. Adolescent Psychiatry 2021; 11, 129-146.
17. Gregorio J. Physicians, medical marijuana, and the law. Virtual Mentor 2014; 16 (9), 732-738.
18. Garvey T, Doyle C, Carpenter DH. *Marijuana: Medical and retail— Selected legal issues*: Congressional Research Service, 2015. https://sgp.fas.org/crs/misc/R43435.pdf.
19. Conant v Walter, 309 F3d 629, 636 (9th Cir 2002).
20. Federation of State Medical Boards. *Model Guidelines for the Recommendation of Marijuana in Patient Care. Report of the FSMB Workgroup on Marijuana and Medical Regulation.* , 2016. https://www.fsmb.org/siteassets/advocacy/policies/public-policy-compendium.pdf (accessed March 14, 2022).
21. Doctors for Cannabis Regulation. DFCR cautions against smoking and vaping during the COVID-19 pandemic. 2020. https://www.dfcr.org/post/dfcr-cautions-against-smoking-and-vaping-during-the-covid-19-pandemic (accessed March 15, 2022).