Honorable Senators of the Health and Welfare Committee

Thank you for the opportunity to address the Health Impact Assessment document regarding Cannabis Regulation inVermont. The short version is: Middle paragraph page 36 regarding ACE is good, pages 49-60 are good, the rest could be more complete.

You have heard from professionals and constituents, earnest and impassioned pleas for this or that regarding Cannabis Legalization. For everyone cannabis legalization is a no-brainer. The only difference is yes/no/maybe/now/later. How do reasonable people hold such diverse and passionate positions? The limbic system is a filter we all have that sorts good from evil. A result is we read and accept what we are programmed to like and discard the rest as inadequate or wrong. We use our cortex to explain why, but after the filter has informed our thinking. So my opinions reflect me and the contents of the HIA reflect the several authors.

The HIA fails first in the initial phase of scope, part of the CDC description of an HIA. The DoH chose to focus on the potential for harm from legalization which loads the scales way down. They declined to weigh the harms of the prohibition that will be alleviated by legalization and the benefits of legalization for public health.

For example, what about the kids? The kids are way ahead of the adults here. Most have access, most do not use cannabis. I don't have access. Where do they get it? From a dealer who carries a gun, heroin, oxycontin, Ecstasy, crack and a knap sack full of pot for the kids. Legalization – the kids will get it anyhow, but from someone over 21 who buys a standardized product in a venue that does not sell the more dangerous drugs.

This is very important. This is how we protect the next generation of potential addicts from exposure to opiates! No dealer with a pocket full of pills, no availability.

On Driving the HIA does not know the research. I have provided you with a February, 2015 NHTSA study which should be substituted for that section of the HIA. It explains the diversity of results and provides a complete, up to date study. Like prior European studies, drug combinations are more dangerous than single drugs and sedatives. I call your attention to Table 5: The presence of THC does not increase the risk of an accident, after controlling for age, sex, ethnicity/race, time of day, direction of travel and day of the week. Table 8 illustrates the role of alcohol in crashes. Alcohol at BRA well below 0.08 contributes to crashes. The enforcement community may believe 0.08 is the minimum level for driving under the influence, and fear cannabis at any level, as that is the law and that is their training. But they are wrong.

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If with legalization there are permitted patterns of use that aggravate drugged driving, this data may change and should be considered in formulating regulations

(go slow allowing bars, especially if they sell alcohol). Changing patterns of use need to be monitored.

Education should be undertaken, but not by the DoH. DoH under current leadership has demonstrated that they do not understand the audience when offering "educational material" on the web page, and "**§ 4474m. Department of Public Safety; provision of educational and safety information**

The Department of Public Safety shall provide educational and safety information developed by Vermont Department of Health to each registered patient upon registration pursuant to section 4473 of this title, and to each registered caregiver upon registration pursuant to section 4474 of this title."

And in this HIA. All cannabis use is abuse. The public requires good science or they will dismiss the content as with the failed DARE program. DoH depends on studies that are found lacking on subsequent evaluation. They score highly studies that say what they want to read and appear unaware of the requirement that science is repeatable. If a study is found to lack repeatability, there is an error. For instance the study that shows an 8-9 IQ loss over 10 years differs from other similar cohort studies that do not find cannabis use by adolescents causes IQ loss. And the brain shape studies funded by NIDA that claim changes caused by cannabis use in young adults are not repeatable, if control for alcohol use is included. Although the authors note that Adverse Childhood Events predisposes kids to early drug use, mental illness and addiction, they continue to ignore that the association of early intense cannabis use with addiction, other drug use and mental illness is not causation but a symptom from ACE.
Any other Department of Vermont Government would be preferable. Under different leadership DoH might be a good resource.

What should education about use include?
For Adults experimenting:
First, 25% of people exposed to THC, the psychoactive component of cannabis vapor have dysphoric experiences . Like migraine sufferers who get bad headaches with drinking alcohol, some people will not find cannabis inhalation a relaxing pastime. Smoking provides polycyclic hydrocarbons and carbon monoxide from burning plant material which is not good for anyone. Vaporization provides the same cannabinoids without the smoke and is healthier. Inhaling vapor results in the high in 10 minutes and lasts 2-3 hours. Eating, oral consumption, is very tricky and may incapacitate you for many hours. And so forth.
For Kids:

An excellent intervention with 14 year olds is available, two 45 minute interventions out of the school year result in reduced and delayed risk taking by the individuals and their herd for initiation of alcohol use and binge drinking, as well as other drugs. Cannabis specific education should be in biology class and the relative harms and risks of alcohol, tobacco, opiates, cocaine, Ecstasy and cannabis should be clarified. Kids are smart and need real facts.

Effects on substance abuse and prevention:
Cutting off the pipeline created by the illegal status of enormously popular cannabis will reduce the availability of opiates and others to kids. Reduced access will reduce recruitment of new addicts. Also, easier access to cannabis cultivars will allow some taking opiates for long term pain to explore the benefits of avoiding the nausea, vomiting and constipation associated with opiates and in many cases avoid opiates all together, with reduced accidental over dosing, sleep disturbance and development of addiction. Finally, some addicts who are sensation seekers will be glad to use cannabis for their high, if it is easy to purchase – and not from the guy with a gun and opiates.
In the future, when good cannabis regulation is the norm, the sensible changes to the regulation of alcohol and tobacco (pages 49-60) may be possible. This will attenuate the intensity of use of these serious problems.

Thank you again for the opportunity to address this issue.
Joseph McSherry, MD, PhD
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