Introduction

With the highest rates in the country of recent cannabis use among youth, prevention must be a top priority. Prevention is best when it comes in the form of promotion of healthy lifestyles and norms that reduce the risks associated with the use of alcohol, tobacco and other drugs, and the promotion of protective factors that support the health and well-being of children and families.

National data shows that more Vermonters (ages 12 and up) are using marijuana compared to the country overall. The number of Vermonters who try cannabis for the first time between the ages of 12 and 17 is also higher in our state than in the country overall. The Vermont Department of Health, in partnership with the Agency of Education (AOE), has conducted the Youth Risk Behavior Survey (YRBS) since

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1 Past 30-day marijuana use is 38% among 18-25 year-olds.
1993 for high school students and more recently for middle school students. The survey is conducted every two years and allows Vermont to obtain data over time, or trend data, to analyze substance use (and other risky behavior) patterns among middle and high school students. The 2017 results were recently released and for the first time in ten years, current cannabis use has increased significantly in the previous two years to 24% of high school students. The data also show that cannabis use increases with each grade level. The amount used, and frequency of use among those who reported use of cannabis also showed increases.²

Early and continuous use of cannabis significantly increases the risk of not completing high school, not enrolling in or completing college, low educational achievement, lower income, unemployment and welfare dependence as an adult, premature workforce retirement due to disability, and reduction in IQ in middle adulthood.³

Eighty percent of the brain develops in the first three years of life, therefore, helping to promote healthy children, families and communities during this critical period is central to lifelong health. It is essential that every child and family in Vermont is connected to the kinds of help that can make a real difference in a child’s health, development and ability to learn.

Programs and services that help communities become as healthy and involved as they can be are a key part of drug and alcohol use prevention in Vermont. Bringing communities together is a job for many people from all walks of life, including parents, students, community coalitions, law enforcement, and health care providers.

This revised and adopted report provides the Commission’s recommendation on how to proceed with meaningful measures to reduce potential abuse of cannabis among the general population should the General Assembly enact a law establishing licensed retail sale of cannabis, but we must note that legalizing cannabis could have a significant deleterious effect on Vermont’s youth.

**Health Impact Assessment (HIA): Marijuana Regulation in Vermont**

In January 2016, the Vermont Department of Health released a Health Impact Assessment (HIA): Marijuana Regulation in Vermont.⁴ The HIA began with an extensive review of the existing literature to identify the strength of evidence associated with potential health impacts of cannabis use. Indicators (impacts) were rated as: not well researched, a fair amount of evidence, strong evidence, or very strong evidence. The report identified physical, mental and social health indicators associated with non-medical cannabis use and the research demonstrated the majority of them were worse with cannabis use.

Using this review of all available research findings, and experiences of states that have legalized cannabis, the HIA answered the following questions if Vermont regulated and taxed cannabis:

- What would happen to the prevalence of cannabis use?
- Would traffic safety change?
- What would be the impact on mental health?
- What might change in other substance use disorders and treatment?
- What might change in academic outcomes?
- Would emergency department admissions change?

The report concludes with lessons learned from tobacco and alcohol control and cessation efforts that could apply to cannabis regulation, and recommendations to consider should Vermont decide to regulate

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and tax cannabis for non-medical use. Those lessons are distilled below, and the Research and Data Collection, as well as the Policy Committees of the Subcommittee on Prevention and Education drew upon and reaffirmed the work done during this extensive HIA for their recommendations.

**Lessons from Tobacco and Alcohol that Could Apply to Cannabis Regulation**

The following policies are taken from evidence-based alcohol and tobacco work and should be fully applied to any regulated cannabis market:

1. **Smokefree policies** reduce secondhand smoke, increase the number of people who quit smoking, reduce tobacco initiation rates, and reduce tobacco-related morbidity and mortality. Vermont law currently allows for tobacco substitutes (i.e. vaporizers) in many places where smoking is banned. Vermont smokefree laws do not cover the use of cannabis and should be amended to do so.

2. **Limiting access** to alcohol and tobacco has been proven to reduce use and these strategies should be applied to cannabis. This includes:
   - Limiting outlet density – controlling the number of stores that can sell the substance within a certain area.
   - Limiting the type of outlet that can sell cannabis can decrease initiation and youth use. If youth have access to cannabis or exposure to cannabis advertising in the retail outlets they frequent, they are more likely to begin use.
   - Limiting the times of day that cannabis can be sold.
   - Limiting the age at which a person can purchase cannabis

3. **Increasing taxes** and establishing minimum price laws reduce the amount of alcohol or tobacco people use and the same can be expected with respect to cannabis. In addition, prohibiting price discounting is an effective strategy to reduce use.

4. **Allowing local control** over outlet density and advertising contributes to a culture of health in the community, despite the fact that people can easily travel from one town to another.

5. **Limiting the age** of legal alcohol purchase to 21 years old or older decreases the number of motor vehicle accidents, reduces initiation of use, and use of alcohol. The strategy of restricting access by age should be applied to cannabis.

6. **Childresistant packaging** helps prevent access by young children, accidental ingestion and contributes to saving lives.

7. **Limiting tobacco and alcohol advertising** can reduce youth initiation and use and will do the same with respect to cannabis. Prohibiting self-service displays, internet sales, free samples, mass media advertising and flavored products are all established means of limiting youth tobacco use and should be a part of any commercial cannabis regulation.

8. **Enforcing laws** that restrict sale to those of legal age is an effective way to keep alcohol and tobacco out of the hands of youth and should also be applied in the realm of cannabis. This requires a strong enforcement effort.
The following set of recommendations originated in subcommittees of the Commission's Prevention and Education Subcommittee focused on: community prevention, school prevention, research and evaluation, and policy and are adopted by the Commission:

Recommendations requiring prevention funding
Fund Substance Misuse Prevention – $7 million
Establish a Substance Misuse Prevention Fund. A statutory scheme to tax and regulate cannabis should direct the Agency of Human services to establish and oversee the use of dedicated funds to be generated by taxes levied on cannabis activities to implement comprehensive substance misuse prevention strategies throughout the state. A Substance Misuse Advisory Committee (SMAC) should be established underneath the Commissioner of Health to provide the State with specific advice on the use of the funds.

Dedicated funding is critical because Vermont funds most substance misuse prevention programs and strategies through federal grant funding, with little to no state funding. Because federal grants vary in both amount and priority area, the inconsistency of the current funding structure makes it difficult to maintain population level substance use outcomes. Too often federal grants allow for the roll-out of strategies, and then the evaluation of the strategies, but fail to continue to fund them once proven effective.

The evidence is very clear that substance misuse prevention works best when it is comprehensive and sustained. Comprehensive prevention means that strategies are implemented at each level of the prevention framework: policies and systems, community, organizations, relationships and individual. Sustained means that these strategies are consistently funded so that they can be implemented, evaluated and adjusted over time to meet the needs of the community. Substance misuse prevention is not substance-specific and these efforts work to avoid and delay any substance use among youth, and reduce the quantity and risk of use among adults.
Each community is different
Vermont is made up of distinct communities. Each one has its own risk factors and different abilities to adopt and implement strategies. Implementing a one-size-fits-all approach does not work well in such an environment.

The model in action
One intervention will not keep any given individual from misusing substances. An individual needs support on all levels of the prevention framework to have the best opportunity for success. This is even more true at a population level – what one individual needs, is not necessarily what another would benefit from.

For example, Sarah is an 8th grade student. She lives in rural Vermont with a single father in an apartment above a general store. Her father is very supportive, but he works late shifts to make enough to feed them both and pay rent. He smokes cigarettes, but otherwise uses few substances. What could a prevention fund do to help keep Sarah from using substances in her life?

Individual:
At school, Sarah decided to join a club called Above the Influence, or ATI. The youth in the ATI club was learning how to understand data, leadership skills, public speaking, understand advertising and media, and how living above the influence of substances, including cannabis.

Relationships:
Sarah also got involved in a new mentoring program at her school, and met with her mentor every week and one week they talked about the new VT cannabis legalization law. Sarah and her mentor talked about the health effects of cannabis and Sarah enjoyed having a trusted adult she could ask questions of on this topic.
Organizations:
Sarah used the skills she learned in ATI and volunteered to be part of a youth work group to rewrite her schools substance use policies that had included detention or expulsion if caught with or using cannabis on school grounds. Sarah and her classmates changed the policy to include the youth be screened for substance use, attend a 3-session educational group on the health effects of cannabis and completion of community service hours.

Community:
By the time a few months went by, Sarah had taken a leading role at ATI and is working with the Recreation Department to put up Smoke Free signage in the local park to include both tobacco and cannabis. Sarah and her Dad attended a Select Board meeting to advocate for an increase in substance free events to focus on children, youth and families.

Policy:
Sarah participated in the states yearly “Prevention Works!” rally at the Vermont statehouse and met with her legislators to learn more about the goals of the cannabis legislation and shared with legislators how the law is impacting children and youth.

Funding breakout for Substance Misuse Prevention

$6 million – the State should Establish Six Regional Prevention Networks (RPN)
These networks will be responsible for developing capacity, support and oversight of existing infrastructure, and ensuring utilization of proven population health models. Specifically, communities will apply the Strategic Prevention Framework to identify risk and protective factors. Once identified, communities could use approaches like the 7 Strategies f or Change from Community Anti-Drug Coalitions of America (CADCA) which provides guidance on how to impact individual behaviors through community conditions.

Specifically, the regional network would (for concrete examples, please see what is being done by the Deerfield Valley Community Partnership⁵, the Iceland Model⁶, or Vermont Afterschool⁷):

- fund prevention programs, such as afterschool programming, youth leadership and community coalitions,
- maintain and coordinate educational and counter marketing campaigns (through all methods including social media);
- serve as a policy institute, educating local decision-makers and leaders about the best practices and model polices for health;
- produce data and reports for needs assessments and program evaluation;
- develop a strategic plan for their region; and
- engage youth and young adults in prevention activities.

$10,000 – the State should establish and manage the Substance Misuse Advisory Committee (SMAC)
Establish a committee to manage an investment funding model for sustainable substance use primary and secondary prevention. The $10,000 will cover the cost to run the committee and reimburse members for time and expenses.

$500,000 – Evaluation

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The State should run sustained evaluation and quality improvement on all Substance Misuse Prevention Fund (SMPF) activities to ensure SMPF funds are used appropriately.

While long-term surveillance is critical, short-term studies to evaluate the effectiveness of programs and policies must be more nimble and timely. A team of University of Vermont researchers and Health Department analysts are designing a flexible tool that could be used for this type of work, but do not yet have sustainable funding.

$300,000 – the State should research, develop, implement, and evaluate statewide media and communication strategies
Topics include: increasing awareness and understanding of cannabis legislation; perceived harm of cannabis use; health effects on youth and young adults; and cannabis use during pregnancy. Development of each communication strategy includes formative research with the intended audience, message and creative concept development and testing, strategic implementation, and evaluation of audience reach and engagement based on identified metrics. To be run by the Health Department with existing staff and with input from the SMAC.

$100,000 – The State should fund one full-time position at the Health Department to oversee the Substance Misuse Prevention Fund (SMPF), staff the Substance Misuse Advisory Committee, run technical assistance to the Regional Prevention Networks and manage evaluation to ensure the SMPF dollars are well spent.

Fund School-based Prevention - $15 million

The State should initiate a program of school-based prevention by funding at least one full-time substance use prevention professional for each 250 student cases. Funding and staffing these positions should be done outside of the per-pupil spending construct. These will provide prevention and education services to all students and organize and implement peer leadership groups. They will provide intervention, screening and referral services for those students who are identified as having substance abuse problems. Additionally, they will educate and train the school and community in the areas of substance misuse, interpersonal skills, and group and stress management.

In order to scale this up, the system should begin in year one with 15 schools, prioritizing schools based on level of need and demonstrated commitment to comprehensive school-based prevention. This would be run out of the Health Department and coordinated by current staff.

Cost: $65,000 – $75,000/annual salary and benefits for a full-time trained professional in substance use prevention.
Year 1: $1,125,000 (assuming 15 positions at $75,000)
Year 5: $18,750,000 (assuming 250 positions at $75,000)

Fund Research on Health Effects - $1 million

The State should immediately fund at least one longitudinal study at an academic institution to determine the impact of cannabis use on the health of Vermonters. The Commission recommends $1 million annually for a minimum of 15 years. This estimate is based on National Institutes of Health funding levels. Funding this type of research will also provide opportunities for scientists in Vermont to apply for federal and private funding to supplement this effort.

8 The Vermont Board of Education standard is that no school counselor should exceed 250 students on a caseload.
Little is known about the health effects of the cannabis consumed today. The potency and mode of use is very different from the longitudinal studies relied on to determine the effect of cannabis use on human health.

The heightened interest in cannabis use and the related health effects due to state legalization of cannabis use has revealed shortcomings in research and state-wide data collection. States face a lack of funding for research and data collection activities surrounding cannabis use and a lack of research on cannabis-related health outcomes. The Council of State and Territorial Epidemiologists (CSTE) has a set of recommendations for strengthening research and data collection across the nation.9 Using the work of CSTE and the Health Impact Assessment, the Subcommittee on Research and Data Collection spoke with stakeholders from data collection and research organizations in Vermont and developed the following recommendations now adopted by the Commission.

**Priority policy-level recommendations that do not require prevention funding**

Put infrastructure in place before sales begin
The State should ensure that all critical staff are hired, all regulations and rules are in place, and all testing infrastructure is built and functioning before allowing for the licensing of production, distribution or retail of cannabis products. Authorize a governing body or administrative unit responsible for overseeing the implementation of the regulation and taxation of cannabis.

Carefully Examine the sale of infused products on the regulated market
The Subcommittee on Prevention and Education strongly recommended that a commercial market in Vermont should prohibit retail sales of products infused with cannabis for non-medical purposes. The Commission was divided on whether to accept this recommendation and the competing policy considerations are discussed in the Commission’s main report.

The Subcommittee further recommended the following guidelines, adopted by the Commission, in the event that infused products are permitted in the commercial market in Vermont:

**Never allow infused products that could appeal to children.** Mandate that should future legislation ever allow for infused/edible products, they are never allowed in a format that could be attractive to youth (e.g. gummy bears, cookies, brownies, etc.). Before any future regulation regarding edibles is implemented, ensure that full testing and regulatory bodies are in place. This includes development, implementation and full funding for comprehensive food inspection.

**Standardize and test packaging and potency.** Ensure that all THC concentration regulations, particularly those relating to packaging, labeling and testing, are in place before implementation. Cannabis and cannabis products should be batch-tested and labeled for potency. Procedures must be in place to regulate and test final products for contaminants.

**Restrict Advertising**
Advertising restrictions should be implemented to ensure that youth and young adults are not

targeted by, or exposed to, cannabis advertising. Advertising should be restricted from any area where youth could potentially be exposed.

**Additional Critical Recommendations to Ensure Youth and the Public are Protected in a Fully Regulated Marketplace**

The two sets of recommendations above should be prioritized. In addition, the Commission recommends the implementation of the following in a fully regulated cannabis marketplace.

1. **Expand Existing Tobacco Laws.** Expand and enhance all current tobacco smoking laws and regulations to include the use of tobacco or cannabis and include any potential type of delivery system or tobacco substitute (electronic cigarettes, vape pens, etc.).

2. **Do not allow use of cannabis in public places.** Ensure children and youth are not exposed to cannabis use or second-hand smoke.

3. **Fully fund enforcement and oversight.** Follow best practice in protecting youth and young adults, as well as adult users, by ensuring licensing fees are set at a level, and will continue to grow with inflation and industry growth, that fully funds the necessary enforcement and oversight efforts now and in the future. Note: Current tobacco and alcohol licensing fees are not sufficient to support best practice enforcement efforts.

4. **Restrict Age of Access.** Implement prevention, regulation and enforcement strategies that greatly reduce access to and use of cannabis for those age 25 and younger. This is to protect children, youth and young adults during the time in life of rapid brain development and academic involvement. The Commission acknowledges that political reality likely precludes consideration of an age limit above 21 years of age for cannabis use, but emphasizes the need for efforts to provide education and prevention strategies particularly aimed at people under the age of 25 whose brains are still developing.

5. **Build driver testing infrastructure.** Build the infrastructure and procedures necessary to conduct appropriate and consistent testing for THC before cannabis is regulated.

6. **Implement a public education strategy about the dangers of driving under the influence of THC.** Do this before cannabis is regulated and ensure that the education includes information on what the legal limits mean in terms of use.

7. **Expand screening in primary care practices.** Expand screening for substance use disorders and mental health problems and trauma in primary care.

8. **Get providers the information they need.** Ensure medical providers receive the most recent information and training related to screening for risk factors for substance misuse disorders (e.g. non-adaptive stress response) as well as Screening, Brief Intervention and Navigation to Services (SBINS). Work with local teaching institutions to ensure that medical students, nursing students (and other allied health professionals) receive the most recent information and training on the health impacts of cannabis.
Appendix A: Subcommittee Members

Members of the Community-based Committee
- Jill S. Rinehart, MD FAAP Hagan, Rinehart & Connolly Pediatricians, PLLC, President, American Academy of Pediatrics Vermont Chapter, Clinical Associate Professor of Pediatrics, Robert Larner College of Medicine at the University of Vermont
- Mariah Sanderson, Director of the Burlington Partnership for a Healthy Community
- Cindy Hayford, Director of the Deerfield Valley Community Partnership and Windham County Regional Prevention Program Coordinator
- Melanie Sheehan, MCHES, Regional Prevention Program Manager, Mt. Ascutney Hospital and Health Center
- Sarah Kleinman, Director, 4-H/Youth Programs, University of Vermont Extension
- Mark Redmond, Director Spectrum Youth Services
- Jolinda LaClair, Director, Drug Prevention Policy, Governor’s Opioid Coordination Council
- Rose Gowday, Community Engagement Liaison, Governor’s Opioid Coordination Council
- Robin Rieske, CPS, Prevention Consultant, Division of Alcohol and Drug Abuse Programs, Vermont Department of Health
- Lori Tatsapaugh Uerz, NPN, Director of Prevention Services, Division of Alcohol and Drug Abuse Programs, Vermont Department of Health
- Megan Trutor, Health Department

Members of School-based Committee
- Beth Keister, Tobacco and Substance Use Prevention Coordinator, AOE
- Amy Minor, Superintendent, Colchester School District
- Debby Haskins, Private Substance Abuse Counselor & Consultant
- Dawn Poitras, Association of Student Assistance Professionals & Student Assistance Professional at Barre Supervisory Union
- Other sources who provided information:
- Margo Austin, VSAC Outreach and former SAP at Burlington High School
- John Pandolfo, Barre Supervisory Union superintendent

Research and Data Collection Committee
- John Searles, Substance Abuse Research and Policy Analyst, Department of Health
- Shayla Livingston, Public Health Policy Analyst, Department of Health
- Representative Anne Pugh, Chair of the House Human Services Committee

Policy Committee
- Commissioner Mark Levine, Department of Health
- Shayla Livingston, Public Health Policy Analyst, Department of Health
- David Englander, Senior Policy Advisor and General Counsel, Department of Health