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Driving Under the Influence of Marijuana: Education of Vergennes Union High School Students

Margaret S. Johnston
University of Vermont

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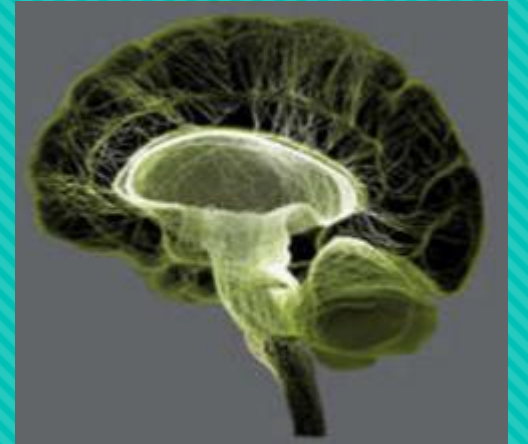
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Driving Under the Influence of Marijuana: Education of Vergennes Union High School Students



<https://www.drugabuse.gov/publications/drugfacts/marijuana>

Margaret Johnston, MS3

Little City Family Practice- Vergennes, VT

Family medicine Clerkship, March-April 2017

Mentor: Dr. Tim Bicknell

Problem Identification: Driving Under the Influence of Marijuana

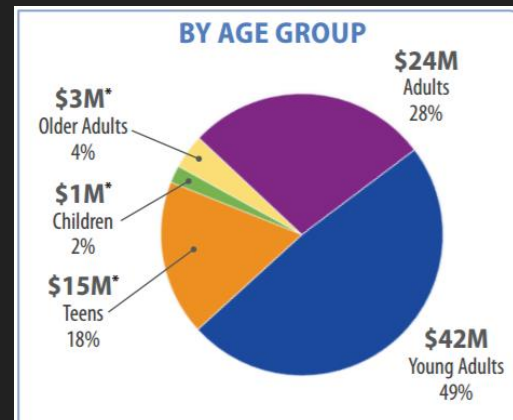
- The **leading cause of death** for 15-24 year olds is **motor vehicle accidents**
- The risk of involvement in a motor vehicle accident **increases 10-fold** after marijuana smoking
- The 2015 Vermont Youth Risk Behavior Survey (YRBS) results from Addison County:
 - **18%** of students rode in a car or other vehicle in the past 30 days with someone who was using marijuana
 - **13%** of students who drove a car in the past 30 days reported driving after using marijuana
- In Vermont, more teens enter treatment with a primary diagnosis for marijuana dependence than all other illicit drugs combined
- Many physicians do not routinely screen for marijuana use or driving under the influence of marijuana

Public Health Costs

In 2015, 317 adolescents received treatment for abuse of marijuana at state-funded treatment facilities

The cost of treating Vermonters for marijuana use disorders costs more than 2 million dollars

The total cost of crash-related deaths in Vermont in one year is estimated to be \$86 million dollars



Community Perspective

- Officer Jason Ouellette, Vergennes Police Department
 - “Driving under the influence of marijuana is a common problem that we see in Vergennes, there are some weeks and some months that are worse than others”
 - “We don’t just see high school students driving under the influence of marijuana, we also see their parents”
 - “As police officers we are trained to perform standard field sobriety tests on individuals that we think are under the influence. If they fail the standard field sobriety test we take them back to the station and have a Drug Recognition Expert evaluate them”
- Tim Bicknell, MD
 - “We counsel adolescent patients to avoid driving in a car with someone who has been drinking alcohol, but it isn’t common practice to counsel patients on driving under the influence of marijuana”
 - “In Addison County, and other areas of Vermont, I think a lot of adolescents see parents or other community members operating machinery under the influence of marijuana, including cars, boats, ATV’s, and tractors, so they don’t think it is dangerous”

Intervention and Methodology

- Presentation was made to a total of 42 Vergennes Union High School Students
- Ages ranged between 15-18
- The presentation included:
 - The leading cause of death for high school students
 - Effects of smoking marijuana on the ability of an individual to drive
 - The consequences of driving under the influence of marijuana
 - Searching the internet for reliable, peer-reviewed articles
 - How to talk to peers about driving under the influence of marijuana
- After the 15min presentation, students were asked, on a scale of 1-10 how much did the presentation changed their understanding of driving under the influence of marijuana
 - 0: not at all
 - 10: it completely changed their understanding of the issue and they learned a lot

Results and Responses

- 100% response rate
- The average response was 6.43 (on a scale from 1-10)
- Comments I received from teachers, school administrators, and students after the presentation:
 - “It was really effective for the students to hear from a young medical student who graduated from Vergennes Union High School, they were really interested in your presentation” -teacher
 - “In most of our health classes we talk about drinking and driving, not smoking and driving. A lot of people I know think it is okay to smoke and drive.” – student

Evaluation of Effectiveness and Limitations

- According to the survey results, the majority of students learned new information which changed their perspective on driving under the influence of marijuana
- Working in a small group setting allowed students to ask questions and interact with the presentation
- Based on qualitative feedback from students and teachers, the presentation was helpful and filled a knowledge gap in the health curriculum
- Limitations:
 - Did not assess what students knew about the effects of smoking marijuana and driving before the presentation
 - Short time frame and school vacations made it difficult to meet with all of the health classes at Vergennes Union High School

Recommendations for Future Interventions

- Survey students before presentation to investigate knowledge gaps and common misconceptions on the effects of smoking marijuana on driving
- Ask students during the presentation to write down one question they have about smoking and driving, answer questions at the end of the presentation or email them with answers
- Work with the health teachers at Vergennes Union High School to incorporate a similar presentation into their curriculum
- Survey medical providers in Addison County about how often they are screening adolescent patients for marijuana use and driving under the influence of marijuana
- Encourage health care providers to educate their adolescent patients on the dangers of driving under the influence of marijuana

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