



Marijuana legalization- Review of Regulating driving under the influence

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MLSP 6905 Capstone Project Presentation

Project Research Question

- What have other states with legalized marijuana done to determine if a driver is under the influence?
- What should Minnesota consider as they push to legalize recreational marijuana?

Literature Review / Background

- Increased drug-impaired drivers involved with crashes since legalization
- Drivers under the influence of marijuana demonstrate some impaired functions needed for driving

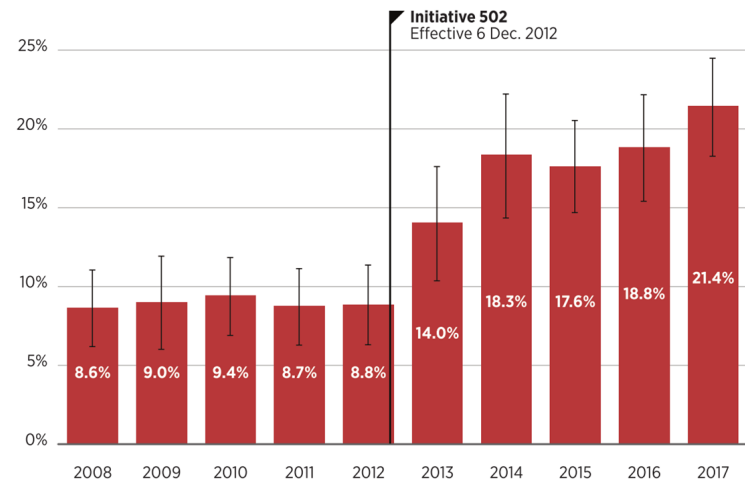
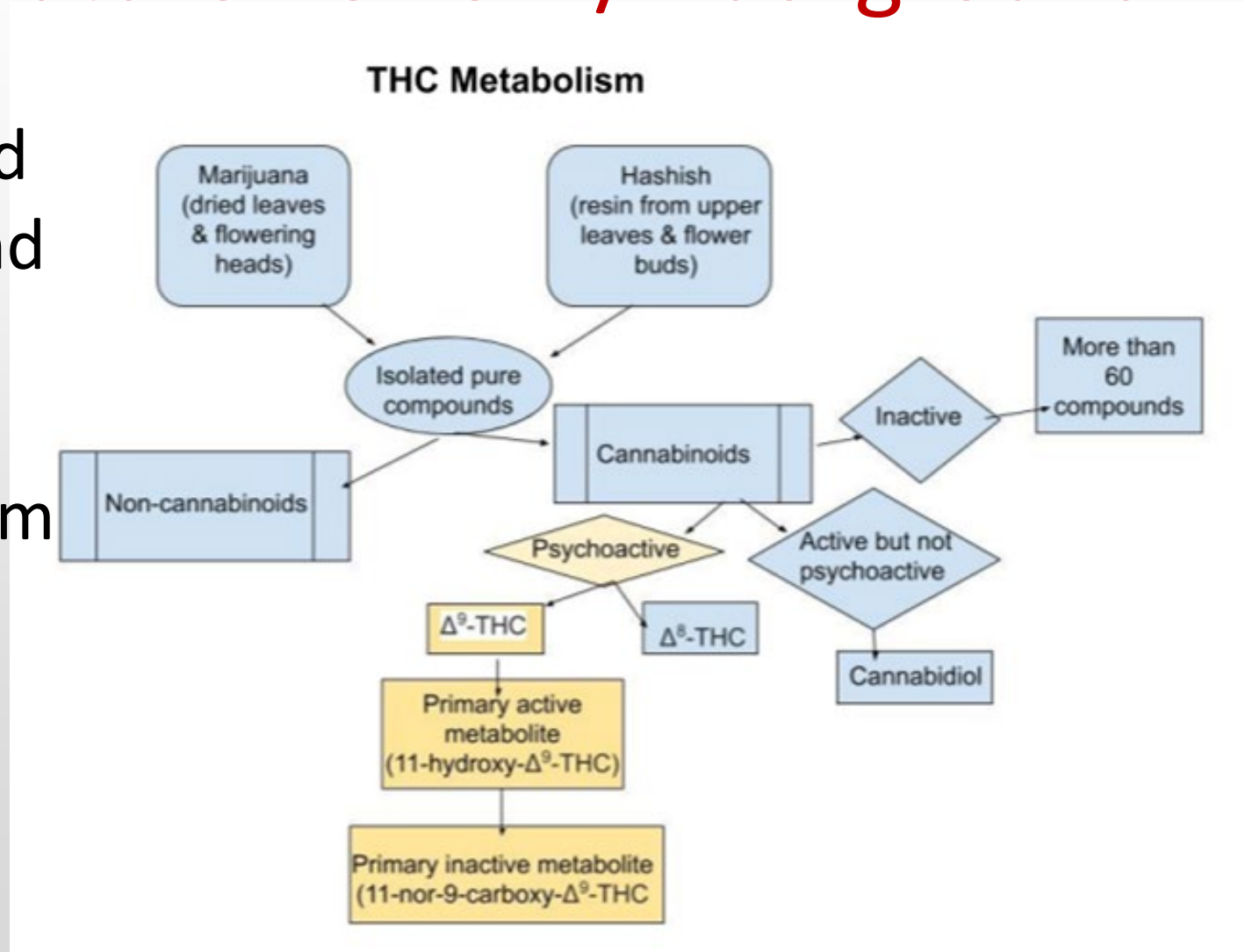


Figure 1. Estimated Percentage of Drivers Involved in Fatal Crashes Who Were THC-Positive, Washington State, 2008-2017. Vertical bars represent 95% Confidence Intervals.

AAA Foundation of Safety, 2020

Literature Review / Background

- THC is lipid soluble and has a complex metabolism



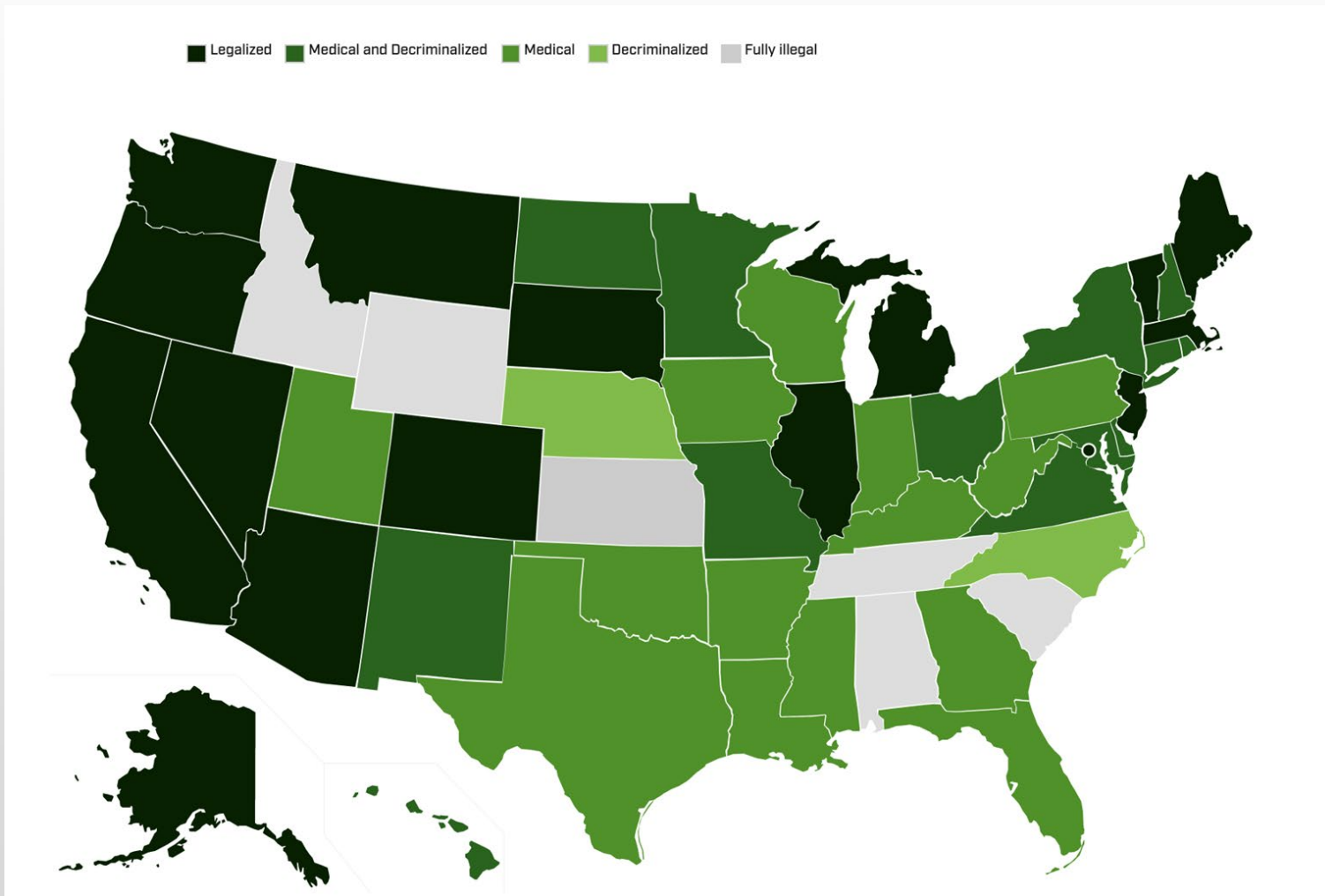
Literature Review/ Background

- Issues assessing intoxication
 - Chronic user vs. non-regular users
 - Method of use
 - Proving intoxication at time of testing
 - No defined relationship between intoxication and impairment

Materials & Methods

- Literature review
- Search terms:
 - marijuana impairment
 - marijuana and driving laws
 - marijuana impaired driving

Discussion / Conclusion



Discussion

- Zero tolerance DUI
 - illegal for any amount of *any drug*
- Per se DUI
 - illegal to have a *specified level* of drug metabolite
- Zero tolerance per se DUI
 - illegal for any amount of *specific drug metabolite*

How to determine marijuana impaired driving

Step 1

Step 2

Step 3

Step 4

Outcome

Erratic
driving
noted

Unusual
behavior
noted

Field
Sobriety
Test

Laboratory
Testing

Charged
with DUI

Acceptable Specimens

	Advantages	Disadvantages
Blood Testing	-gold standard	-limited ability to relate the amount of drug or metabolite in blood to level of impairment -invasive procedure -requires search warrant and nurse/licensed phlebotomist
Oral Fluid Testing	-minimally invasive -rapid -point-of-arrest devices in the works	-requires search warrant -issues associated with distinguishing use vs. environmental exposure
Sweat Testing	-no advantages over oral fluid testing	-cannot be regarded as evidence of impairment at time of arrest/crash -susceptible to contamination
Hair Testing	-not invasive	-cannot be regarded as evidence of impairment at time of arrest/crash
Urine Testing	-methodology well established	-cannot be regarded as evidence of impairment at time of arrest/crash

Regulations/Changes in Other States

What have states with legalization implemented?

<p>Driving Regulations</p>	<p><u>Medical Only States</u></p> <ul style="list-style-type: none"> • 30% have regulations specific to driving under the influence of THC • 70% have zero tolerance, but do not differentiate THC from other drugs for DUI purposes • 5 are zero tolerance <i>per se</i> • Ohio has a <i>per se</i> limit of 2 ng/mL 	<p><u>Recreational States</u></p> <ul style="list-style-type: none"> • 43% have regulations specific to driving under the influence of THC • 57% have zero tolerance, but do not differentiate THC from other drugs for DUI purposes • Arizona has zero tolerance <i>per se</i> • Nevada has <i>per se</i> limit of 2 ng/mL • Colorado, Illinois, Montana, Washington have <i>per se</i> limits of 5 ng/mL • Colorado has reasonable inference
<p>Education</p>	<p><u>Public education campaigns</u></p> <ul style="list-style-type: none"> • Goal of educating public on impairment while driving • Ex: <i>Drive High Get a DUI</i> 	<p><u>Officer enforcement training</u></p> <ul style="list-style-type: none"> • Classes which focus on the signs of impairment (<i>Standardized Field Sobriety Test, Advanced Roadside Impaired Driving Enforcement, Drug Evaluation and Classification, Prosecuting the Drugged Driver</i>) • Training on report writing and how to testify in court
<p>Legal System</p>	<ul style="list-style-type: none"> • Law enforcement grants • Separate DWI courts, prosecutors, and crime labs • State task force • Electronic warrant system 	

Recommendations for MN

- Form committees, task forces, or leadership teams to focus on data, funding, training, further studies
- Use revenue from taxes towards education, research, and testing
- Education classes for officers to recognize impairment
- Develop a way to get warrants fast
- Behavioral signs of impairment should be considered hand in hand with levels of THC to determine impairment
- Rely on blood testing as specimen of choice

Study Limitations / Next Steps

- Literature review- many confounding studies
- Development of a modified field sobriety test
 - include tracking & finger tapping assays, pupil dilation, and vitals
- Increase number of Drug Recognition Experts (DREs)
- Continue research on oral fluid testing & marijuana-impaired driving studies

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