

# Essential Education on Marijuana and Driving



## Focus Group Technical Memorandum September 2023

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## Introduction

Every year, more states are legalizing cannabis which has translated to an increase in the number of cannabis-related crashes. As of August 2023, 23 states, two territories, and the District of Columbia have enacted legislation to regulate cannabis for non-medicinal use. Additionally, 38 states, three territories, and the District of Columbia have legalized marijuana for medical use.<sup>1</sup> The number of U.S. states without some type of regulated cannabis market is quickly approaching zero. This legalization is despite the fact that marijuana is still federally classified as a Schedule I drug.

According to the most recent *National Health Survey on Drug Use and Health*, marijuana is the number one illicit drug used by Americans, with 52.5 million people reporting use in 2021.<sup>2</sup> The first two states to legalize adult-use cannabis markets were Washington State and Colorado, with referendums passing in 2012. In the last decade, legalized states have grappled with passing sound policy while balancing public safety. One thing is certain and agreed upon by all states: education is a crucial priority in keeping roadways safe.

The Governor's Highway Safety Administration (GHSA) provided states guidance in their 2022 report titled *Cannabis Consumers and Safe Driving: Responsible Use Messaging*.<sup>3</sup> This report describes the need for fact-based and effective public information about cannabis use and driving. Recommendations made to State Highway Safety Offices (SHSO) include working with cannabis industry groups and advocates to craft and disseminate safe driving campaigns. Additionally, messaging should be factual and straightforward, avoiding stereotypes and mockery.

GHSA's report also discusses the messengers of these campaigns. Under most circumstances, cannabis-impaired driving messages should be delivered by community-based groups or industry advocates, as they are trusted sources for cannabis consumers. With the exception of law enforcement officers (who are trained to detect impairment by cannabis), government representatives are generally not a good choice to deliver safety messaging. With this direction in mind, a research team at the Texas A&M Transportation Institute (TTI) conducted four focus groups to understand the various stakeholders' thoughts and opinions on cannabis-impaired driving. The goal was to enhance the cohesive educational campaign in the state of Texas so that it is consistent across all stakeholder groups.

## Methodology

The research team identified four key stakeholder groups with expertise and opinions valuable to the conversation of cannabis-impaired driving in Texas. The following groups were identified: Law Enforcement Officers, Traffic Safety Resource Prosecutors (TSRPs), Texas Compassionate Use Program (TCUP) Physicians, and Cannabis Industry Advocates who support legalization. Recruitment emails were drafted by the investigators and approved by the Institutional Review Board (IRB). A copy of the recruitment materials can be found in Appendix A. Once approval was received from the IRB, researchers began recruiting focus group participants. A copy of the IRB approval letter can be found in Appendix B.

Law enforcement officers were recruited as they have a unique perspective on the current landscape of drug-impaired driving on our roadways. As the stakeholder group that provides the foundation for cannabis-impaired driving cases in the judicial system, researchers sought to understand existing and potential barriers for the officers pre- and, potentially, post-legalization of cannabis in Texas. To facilitate this focus group, investigators contacted officers by email. The selected officers serve on the Texas Impaired Driving Task Force or are officers who have participated in other TTI projects.

TSRPs provide training and education to prosecutors and law enforcement officers for traffic crimes in their respective states. To recruit this group, researchers first cross-referenced a list of states where adult-use cannabis has been legal since at least 2020. TSRPs from those states were identified through the National Traffic Law Center, Traffic Safety Resource Prosecutor List.<sup>4</sup> Emails were distributed to the appropriate TSRPs in states with legalized adult-use cannabis markets. Through those emails, there were additional recommendations to include TSRPs from states with either medical cannabis markets or no regulated market. All suggestions were welcomed, and additional invitations were distributed.

Cannabis industry advocates were identified through conferences held by an organization called [Texans for Responsible Marijuana Policy](#). This organization coordinates the advocacy for cannabis laws in the state of Texas. Researchers have attended both online and in-person conferences that the organization held in 2020 and 2022. Initial emails were not returned, so investigators contacted presenters from the conferences. Additionally, board members from the [Foundation for an Informed Texas](#) were contacted. These stakeholders showed interest and agreed to gather the group of cannabis advocates to participate in the industry focus group.

The medical marijuana program in Texas is called the Compassionate Use Program. The Texas Department of Public Safety (TxDPS) is the agency charged with overseeing this program. TxDPS maintains an online physician registry<sup>5</sup> of medical doctors who are authorized to prescribe cannabis to patients in the state of Texas. TTI researchers downloaded the list of qualified physicians recorded in the registry. The first attempt to contact doctors was made by identifying physicians who included a website address in the registry. This list was comprised of 45 physicians. The clinics were contacted through request forms on their websites and by email. With zero responses received, investigators conducted a second round of contact attempts. Phone calls were made to reach the first 45 clinics that were contacted. Additionally, the remaining 265 clinics were added to the call list. Again, researchers received zero responses to the request for focus group participation. At this point, investigators reached out to contacts made from the industry advocate group and requested their assistance in recruiting participants for the physician focus group. This attempt was successful, and the advocates were able to directly connect the TTI researchers with several physicians listed on the registry.

Once focus group participants were identified, polls were distributed to determine times that worked for all parties interested in participating. Calendar invitations were then sent to join the webinars on the identified dates. All the focus groups utilized the Microsoft Teams

program for the webinars. The study information sheet was attached to the calendar invitation, and participants were asked to read the document and respond with any questions. The study information sheet can be found in Appendix C. The following section lists the dates of the focus groups and includes the notes from each discussion.

## Focus Groups

### Law Enforcement

#### Overview

The law enforcement focus group webinar took place on April 24, 2023. The law enforcement personnel that participated ranged from patrol officers to state coordinators for law enforcement initiatives. The focus group lasted approximately 48 minutes. The general protocol and list of questions can be found in Appendix D. The following sections are the notes gleaned from this focus group and are not the opinions of the research team.

#### Notes

##### **While cannabis is currently not legal in Texas, what existing issues have you noticed when dealing with cannabis?**

Many people do not think of driving under the influence of cannabis as a Driving While Intoxicated (DWI) offense. There is a lack of public education. Officers have received responses such as, "Why are you saying DWI when I haven't had anything to drink?" Law enforcement focus group members (hereafter abbreviated to L.E.) assume there is a lack of knowledge about the DWI laws regarding cannabis-impaired driving. L.E. theorizes the "High Times" culture has made it believable that marijuana is completely harmless and not responsible for crashes.

Additionally, the length of time it takes to get blood laboratory results returned for drug cases is an issue. While alcohol cases can be charged swiftly due to the quick turnaround of toxicology, it can take a very long time to receive drug results back from the laboratory, which may send the wrong message. The lack of immediate action is an issue.

##### **[Follow up to the previous question]**

##### **What barriers do you experience when dealing with those issues?**

While it may not be legal in Texas, the legalization of cannabis in other states has made higher-potency cannabis readily available in Texas. Observations by L.E. include cannabis being purchased legally in states like Colorado and brought back into Texas. Delta-8 and Delta-10 THC products are also a concern since they are impairing substances and are being sold in Texas retail outlets.

Some areas of the state also do not currently have Drug Recognition Experts (DREs), which means those areas have limited resources to detect drug impairment.

##### **If legalization for recreational use becomes a reality in Texas, do you foresee any new problems arising?**

Easier access will mean more cannabis users. Traffic fatalities rose significantly in Colorado after cannabis was legalized. Impaired driving will increase as more people experiment with the drug after legalization.

**What thoughts or concerns do you have about the THC isomer products, such as Delta-8?**

People have a misunderstanding of what these products are and that they are still impairing. Issues with products like Delta-8 are the same as Delta-9; consumers understand they need to use more Delta-8 to achieve the same high. Having these types of products sold over the counter may give the wrong impression that the drug will not have an impairing effect. Additionally, many products are labeled as having Delta-8 THC, yet results are coming back from the toxicology lab as Delta-9 THC. These products are accessible virtually everywhere in Texas, including gas stations.

**What issues do you experience if you believe someone is driving under the influence of cannabis?**

Most officers are overlooking cannabis-impaired driving in general. They are quick to file a possession of marijuana (POM) charge, but do not want to go through the effort to conduct an impaired-driving investigation. There have been video accounts of officers smelling cannabis, the driver saying they smoked it all about an hour ago, but the officer is only worried about the physical presence of the marijuana and does not conduct an impaired driving investigation. Most Texas districts are dismissing POM charges, especially when found in smaller quantities. However, counties are not as quick to dismiss DWI charges.

**[Follow up to the previous question]**

**Do you have suggestions on how to solve those issues?**

There is a need for more Advanced Roadside Impairment Detection Enforcement (ARIDE), DRE, and Standardized Field Sobriety Test (SFST) refresher training. It is essential for law enforcement officers to stop overlooking impairment – it's not just POM.

Having state coordinators meet with police administrators and Chiefs to help them understand the issues of cannabis-impaired driving would be helpful. There are some Chiefs that don't prioritize DWI arrests. This issue requires strong leadership.

**Do you believe DWI-cannabis is underreported?**

Yes (all agreed).

**[Follow up to the previous question]**

**If yes, to what extent? What can be done to help?**

Many officers are not trained adequately and are not looking for cannabis impairment. L.E. wasn't sure how much cannabis-impaired driving is going unreported but speculated that it is significant. It was estimated that 50-75% of the stops conducted in Austin had marijuana in the car. Protocol dictates cite and release if the amount possessed is under 4 ounces. Since several Texas jurisdictions have encountered successful decriminalization efforts, many county prosecutors are not interested in filing POM charges, so enforcement of marijuana possession is not

happening.

It is also important to note that marijuana is the number 1 drug used by teens, surpassing alcohol.

**Currently, it is very time-consuming to pull crash reports where cannabis was a factor. For poly-drug use, the narrative must be searched manually for potential keywords. Do you believe law enforcement would support a change to the CR-3 form to fix that?**

Yes, law enforcement would likely support that change.

**If a change to the CR-3 was required to track cannabis-related crashes easier, what do you believe is the best way to accomplish that?**

The appropriate way to address this issue is to provide a drop-down menu allowing the ability to select multiple drug names. It would not be difficult to accomplish since the form currently requires officers to click on the boxes anyway. Another problem might be the length of time it takes to get drug results back. Officers may not return to the case file and complete the supplemental if it takes 1.5 years to receive toxicology results back from the lab.

**What tools do you believe are necessary if cannabis legalization happens?**

- Officers need to have pressure to conduct DWI enforcement.
- Traffic safety grants specifically for DWI.
- Special enforcement officers are great, but occasionally, it would be ideal to "swap roles" with patrol officers. This would allow patrol officers to gain the experience of identifying impairment.
- Departments are suffering from a limited number of officers. More manpower is needed to conduct DWI arrests due to the length of time it takes for an officer to complete a DWI arrest.
- Green labs for training, including running through several tests to see what cannabis impairment looks like. One L.E. had previously attended a green lab and mentioned it was beneficial to be able to talk to the scientists in attendance.
- More DREs and additional focus on ARIDE training.
- Funding for training programs like DREs.
- TxDPS labs need more personnel and equipment to decrease the wait time for drug toxicology results.
- L.E. suggested that impaired driving will not be solved simply by law enforcement. The problem will not be solved until we take the human element out of the equation by utilizing technologies like self-driving cars.

**Do you have any other comments or questions you would like to share?**

Educating the public is an important aspect. Knowing what has worked and failed in other states to educate our legislature on best practices is beneficial. We also need to be aware

that the legalization of marijuana opens doors for other drugs, such as hallucinogens. Much of the legislative process depends on the people writing the bills, which seem to be influenced or written by the same people who have successfully legalized cannabis in other states. We need to ensure the legislature is adequately educated on the policy recommendations they are bringing forward.

Another idea would be to get federal funding for DWI enforcement, like what is done for Commercial Motor Vehicles. If a project is funded by the federal government, the local government cannot eliminate the funding. One example of local authorities defunding impaired driving measures happened in Austin, where their dedicated DWI unit was reduced from 23 officers to zero.

## **Traffic Safety Resource Prosecutors**

### **Overview**

The TSRP focus group webinar took place on May 5, 2023. The Traffic Safety Resource Prosecutors that attended represented states that ranged from those with adult-use marijuana markets to states with few legalization and decriminalization measures. The focus group lasted approximately 90 minutes. The general protocol and list of questions can be found in Appendix D. The following sections are the notes gleaned from this focus group and are not the opinions of the research team.

### **Notes**

#### **Can you tell us a little bit about the landscape surrounding cannabis-impaired driving, both pre- and post-legalization?**

Since legalization, TSRP focus group participants reported there has generally been an increase in the amount of marijuana present in impaired driving cases. There was a consensus among several participants that multiple drugs and cannabis-positive tests have surpassed alcohol-only positive tests. One of the challenges TSRPs face includes the public's various perceptions of cannabis impairment. In states with per se marijuana laws, jurors tend to struggle with the lack of surety on the duration of impairment and usage when the amount of THC present in the defendant is less than the per se statutory amount. This is found to be true for both medical cannabis consumers (i.e., to mitigate symptoms or for relaxation) and non-users.

States that prohibit marijuana have felt a heavy impact from bordering states that have legalized adult-use. Oftentimes, it can be challenging to persuade juries in these states that cannabis can cause impairment since many states have recently pushed for and succeeded with legalization reform. It is difficult for jurors to comprehend why other states would make these reforms if cannabis impairment was truly a concern and a danger to the public.

Since the wave of legalization in the U.S. gained momentum around the same time as the COVID pandemic, significantly altering day-to-day life across the country, it is difficult to measure whether the increase in cannabis-impaired driving could be correlated to

legalization measures, or instead has spiked because of what the country was experiencing from the pandemic. For states that have experienced a decline in cannabis-impaired crash fatalities since legalization, it is believed that public education, an allotment of resources about marijuana consumption and impairment, and warnings on packaging to not drive for a certain amount of time after consuming may contribute to that decline.

### **Where do you believe your state is excelling?**

Several TSRPs shared that they have a strong DRE program, which significantly aids in helping the judge and/or jury understand their claim that a driver was impaired. Those states with ARIDE-trained officers, or officers with some type of training that enables them to recognize cannabis impairment in driving, also see greater success in prosecuting cannabis-impaired driving cases. It was noted that having a DRE available to testify can make or break cannabis-impaired driving cases.

### **Where do you believe your state needs improvement?**

Counterintuitively, juries and judges can be more hesitant to convict on cannabis-impaired driving charges if a DRE is not included in an impaired driving case. Therefore, if there is not a sufficient amount of DREs in the state, it is extremely difficult to have one of these experts involved in every applicable case.

Some states do not have robust DRE or ARIDE programs in place. This is largely because there is no support from policing agencies, and there is a lack of buy-in that DREs provide more than what a test result can say. One participant explained that their policing agencies simply instruct officers to obtain urine if they believe someone is impaired; however, a urine test is insufficient when prosecuting cannabis-impaired driving cases.

Other TSRPs shared that they either do not have enough DREs in their state or that the concentration of DREs across the state is not dispersed enough to cover rural areas. Focus group participants also explained that DRE retention is challenging. Additionally, getting officers to understand that having a DRE involved in impaired driving cases significantly increases the likelihood of a conviction – even in what would be considered "easy" cases.

### **If you were to give advice to a state that still does not have a legal adult-use market, what advice would you say should be started now to help counter cannabis-impaired driving?**

As there will be tax revenue, there needs to be a heavy focus on diverting some of the revenue to public safety. There will likely be pushback from the cannabis industry, but through advocacy work and public service announcements, the voting population can be informed that this is necessary. Additionally, public information campaigns prior to legalization should be authorized to alert the public about not only the dangers of driving under the influence of cannabis, but they should also be warned that mixing it with alcohol increases the impairment levels of both the cannabis and alcohol (or cannabis mixed with other drugs). If the stance is taken that this is a public health matter rather than using scare tactics to warn the public of the dangers, it will be more effective.

Training and retaining law enforcement who are specially trained to recognize cannabis-impaired driving will be crucial. This includes promoting more DREs and ARIDE-trained

officers. Having a reputable L.E. phlebotomy program, with a good track record, will enable submitting blood samples to hold up as strong evidence.

Crime labs will need additional funding, as the number of tests ordered can be expected to increase post-legalization. These laboratories will need increased funding to accommodate the influx of testing.

The following concerns are essential in preparing for a legal cannabis market: 1. Address cannabis impairment on roadways, 2. Define terms clearly, 3. Collect and process evidence, including bodily fluids, 4. A thorough understanding of any legislative gaps, 5. Ensure statutes are clear and allow for success in terms of enforcement and investigation.

Overall, the TRSP focus group participants did not feel their state effectively prepared for legalization. They feel they are still playing catch up, waiting for opportunities to address legislative items that need further clarification, and inadvertently are faced with being "reactive" rather than having a thorough "proactive" plan in place. Thinking about what kind of evidence a prosecutor will need to prosecute a DUI case and developing a plan from that perspective will help identify the steps that need to be taken before legalization.

**What cannabis-related trainings are you aware of that are offered to judges, prosecutors, and law enforcement?**

Aside from ARIDE and DRE trainings for law enforcement officers, the group was aware of other educational opportunities, including working with the Governor's Council on Impaired Driving, where prosecutors can present on various topics – including cannabis. Additionally, one participant shared a program their agency provides to help bridge the gap between DREs and ARIDE-trained officers.

A recommendation was to have a Judicial Outreach Liaison that could help bridge the gap between judges and prosecutors.

**What are the tools that your state has that are used roadside?**

DREs and ARIDE-trained officers are routinely called to help with roadside investigations when available.

In some states, oral fluid is permissible on the roadside but has not been widely implemented. This could be partly due to no expressed statutory requirements to utilize oral fluids, or it could be because of a lack of funding. Other states are exploring using oral fluid roadside, but do not currently conduct roadside testing for drugs. As a "blood, breath, or urine" state, statutory reforms would be needed to conduct oral fluid testing roadside.

**What tools are used at the police station?**

Statutes in some states expressly prohibit roadside collection of blood or oral fluids (even for DREs). Additionally, these tools may only be administered after a consultation with an attorney according to legislation.

**Since the presence of THC in the bloodstream does not indicate impairment as alcohol does, how does your state prosecute DUI for cannabis if the suspect cannot be evaluated**

### **due to injury?**

States with per se laws can win cases if the THC levels are above the statutory per se level; however, if blood samples are requested to aid as evidence from hospitals, those tests may not always detect THC in the blood. Therefore, by providing a 'Preservation Request' to the hospital to retain the sample, returning with a warrant to obtain it, and then re-testing the sample in a crime lab, prosecutors may discover that there actually was THC in the blood. This can "make a world of difference" when prosecuting a cannabis-impaired driving case.

For states without a per se law, TSRP focus group participants shared that a review can be done by filing a motion to obtain medical records, which would obtain similar information to what a DRE would gather during an evaluation.

### **How do you track cannabis-related crashes within your crash reports?**

The group shared that they track cannabis-related crashes within the crash reports similarly to how Texas currently does – selecting multiple drugs (for detecting poly-drug use) and putting the details into the narrative. The toxicology labs submit test results to their Department of Transportation, which can track, read, and record crash reports and lab results into their database to manage statistical data.

### **Based on your experience, what policy-related advice for impaired driving would you give to a state that is legalizing marijuana?**

- Funding for labs – clear consensus among the group.
- Do your best to educate legislators – a large crowd of those in favor of legalization will be there to pressure legislators and tell them it is not dangerous.
- Take proactive measures to be prepared – i.e., make sure the labs will be able to handle the influx in testing and have the needed testing equipment and tools. Using private labs gets very expensive (testing + travel costs for scientists to testify).
- When discussing the pros and cons related to per se laws, TSRP focus group participants agreed that they were against per se laws.
  - Defense attorneys can argue that per se laws are not based on science.
  - Studies show that half of the fatalities are actually under the five nanogram mark (common per se law limit). This is a misleading limit.
  - Marijuana affects everyone so differently.
  - Cannabis leaves the body quickly – if testing is not done quickly, the results are unreliable and inaccurate for demonstrating impairment at the time impairment is in question.

### **Do you have any other comments or suggestions that you would like to share?**

Encourage legislators to educate themselves on the psychological aspects of cannabis consumption on adolescent brains. Once legalization is open to adults, minors are more susceptible to normalized marijuana use.

Set a minimum DRE "callout policy" to adopt uniformly across the state as best as possible – i.e., every crash, have a DRE available. Their job is gathering evidence. They are not directing traffic or having other distractions that general LE faces post-crash.

## Cannabis Industry Advocates

### Overview

The Cannabis Industry Advocates focus group webinar occurred on September 1, 2023. The focus group lasted approximately 1 hour and 40 minutes. The general protocol and list of questions can be found in Appendix D. The following sections are the notes gleaned from this focus group and are not the opinions of the research team.

### Notes

#### **What do you believe cannabis legalization should look like in Texas?**

Cannabis should be federally legal. Dispensaries should be located near residential areas. Cannabis must be regulated and tested to ensure the products are clean and safe. It should be allowed for the purchase and consumption by citizens above 21 years of age.

Medical access should not be restricted by age. Insurance providers should cover the cost of cannabis as medicine for patients. A suggestion was made that cannabis should be rescheduled as Schedule IV for "independent regulation." This would give patients complete information about the product and its components. Some form of tracking should be included so patients can be educated/informed on the potential harms and benefits of what has worked for specific medical conditions. This tracking should be anonymous.

Corporations, regulated dispensaries, or home growers would sell cannabis. (This model could also be scalable to other drugs.) There should not be license caps to avoid near monopolies, which could inflate prices. Plant limits are variable according to the climate and other limitations.

One should have the ability to grow personal plants. Regulations should be on the business side, not on the personal level. Cottage manufacturing laws already exist in Texas. These laws could be applied to cannabis production for those who do not want to mass produce but would like to have some sales. A certificate of analysis that explains the cannabinoids and terpene profile of the cannabis product is critical for the consumer.

There is concern about the safety of the legal market to prevent health scares. Full spectrum testing of cannabis should exist. Products could be tested by anybody in the public interest when the market is legal, and labs can fully test. There is no need for micromanaging the market. It is important to prevent the illicit market from growing.

Regarding legal concerns, being a cannabis consumer should not take away a citizen's Second Amendment right to carry a firearm. We should expunge people's criminal records if they were convicted for low-level crimes that no longer exist. There should also be safeguards on parental rights and professional licensing.

**It has been stated that tax revenue from a regulated cannabis market would benefit the state of Texas. If these revenues were generated, where would you suggest they be allocated?**

Tax money should be invested in health and education – more precisely, public health issues. Some tax dollars should be allocated to medical research and sociological research.

The money could also be invested in an innovation fund - earmarked for private companies and universities to study cannabis – seed funding for entrepreneurs to study cannabis. These efforts could benefit patients and consumers.

Cannabis revenues should be spent to educate the young generation and educate the public on the pros and cons of using cannabis. One topic that the public could be educated on is Cannabinoid Hyperemesis Syndrome, which can be detected in advance by completing a DNA test. If the individual has this genetic condition, they could be educated on the harmful effects and use other products that won't trigger their susceptibility.

The revenue could also be used to regulate the program itself. In addition to regulation, education about cannabis could be used to combat fear and misinformation. The money could also help victims harmed by previous cannabis policies by establishing a percentage of tax revenue for expungements, for example. This fund would be temporary because all past crimes would eventually be expunged.

**Please provide your general thoughts on cannabis-impaired driving.**

One advocate described personally not driving under high amounts of THC. The advocate feels comfortable driving after taking the doctor-recommended cannabis product prescribed for daytime use. This product does not have high THC or a narcotic component. Conversely, they indicated they would not drive after taking the product prescribed for night-time use, as it provides a sedative effect that is unsafe for operating a motor vehicle.

Driver education is a critical component of educating people on the dangers of impaired driving. The public health sector should teach drivers how to evaluate themselves for signs and symptoms of impairment they must be aware of before engaging in the driving task. Anything impairing should be concerning, including a person's mood, drowsiness, cold medicine, and cannabis, to name a few. Ridesharing and driver-assistance systems can reduce risk on roadways.

Advocates agreed that the presence of a substance in the system does not equal impairment. The science must be up to date in measuring impairment. Hence, educating law enforcement and policymakers about signs of impairment is essential. We should invest in tools that law enforcement can use to determine impairment, not rely on a level in the body to make that determination. It is important to have evidence to prove in a court case.

Stipulating a limit on how much cannabis can be in a person's system can lead to undo hardship for patients who need the medicine to function. Additionally, cannabis affects everyone differently. The method of ingestion also creates different results and differs from person to person. One should judge their own signs of impairment and opt out of driving should they notice those symptoms.

Some participants agreed that they feel like they may be better drivers when under the influence of cannabis because they are not as aggressive. It is important to consume

regulated cannabis products because they are consistent, and a person can better understand the expected results to gauge impairment.

All participants agreed that mixing alcohol and cannabis is a dangerous combination.

**How do you feel Cannabis differs from alcohol as it relates to the driving task?**

Driving under the influence of alcohol is never acceptable. Participants agreed that, for themselves, they would never mix alcohol and cannabis.

Advocates described that since they started using cannabis, they reduced their alcohol intake. They also agree that mixing alcohol and cannabis is not something they recommend or think one should do. Advocates also agree that experienced cannabis users tend to be less affected by the substance as it relates to the driving task.

Alcohol leads to poor decision-making capabilities, increases speed, and drivers are more aggressive. One potential downside of driving under the influence of cannabis is potential increased confusion in unfamiliar surroundings.

The prohibition of not being allowed to consume cannabis in public spaces could lead to people consuming it inside their cars, increasing the likelihood of driving impaired.

**Do you believe that there should be consequences if someone is found to be driving under the influence of Cannabis?**

Driving impaired under the influence of cannabis should be punished. It is difficult to determine the cause of the crash. It could be factors such as mood (i.e., anger outbursts), drowsiness, and distractions. If those components are involved, and the individual also has cannabis in their system, how does one ascertain the actual cause of a crash? Or how would a law enforcement officer issue a traffic violation? These concerns need to be taken into consideration.

**[Follow up to the previous question]**

**If yes, what do you believe the punishment should be?**

Technology should be deployed to help measure a person's impairment. Any impairment should be punished, but it needs to be objectively measured. Some ideas that were discussed were app-based performance or eye-tracking technologies.

**Do you believe that someone should be held accountable if they were driving under the influence of cannabis and they caused a crash involving serious injury or death?**

Assuming there is an agreement on how to measure cannabis impairment, and a driver has harmed someone due to the impairment, yes, it should be charged and punished. In this case, it should be treated no differently than how we punish alcohol-involved crashes. Really, it is the same thing, just a different intoxicant.

**[Follow up to the previous question]**

**What do you believe is an appropriate consequence?**

Assuming that the impairment was detected, punishment is expected. It should be the same punishment, no matter the substance.

Consumers, nonprofits, and the industry all have a role in educating the public about consumption risks and safety. For example, consumers can demand that the industry provide appropriate education/messaging.

Hindering people's ability to perform certain occupations (i.e., bus driving) because of having cannabis in their system is not non-sensical.

**From your perspective, what is an appropriate method of delivering traffic safety messages to cannabis consumers? (Where do we disseminate/how do we reach them?)**

Partnering with businesses to distribute the information at the point of sale. Target people online with ads or even in public spaces.

Education can be conducted through the Department of Public Safety when a driver gets a license.

Schools, bars, restaurants (specifically education on combining cannabis and alcohol), and billboards are all avenues to provide information. Websites such as erowid.org may be another avenue.

Information about the stigma and misinformation about cannabis that has been distributed to young minds must be given.

**Do you have any suggestions on how to effectively craft traffic safety messaging about cannabis-impaired driving? (What is the message?)**

One advocate mentioned being careful with demonizing the medicine. How one can be responsible with the consumption for adult-use.

One motto that stuck with an advocate is "Start low and go slow."

**In your opinion, do you feel cannabis industry stakeholders would be willing to work with public safety stakeholders to deliver traffic safety messaging in Texas?**

Most advocates said yes. One said that some don't want to acknowledge harm. That might be due to the lack of good messaging by the science community policymakers. They might see it as an attack only.

Teaching young minds about the potential for abuse and how it can hinder one person's life. The advocate believes that cannabis should be an enhancer in life.

Smoking or consuming cannabis should receive an open container charge, just like alcohol.

**Any further comments?**

One advocate said they learned much from each other by participating in the focus group.

## Texas Compassionate Use Program Physicians

### Overview

The physician focus group webinar took place on August 25, 2023. The focus group lasted approximately 55 minutes. The general protocol and list of questions can be found in Appendix D. The following sections are the notes gleaned from this focus group and are not the opinions of the research team.

### Notes

#### **What is the process for a patient to enroll in the Texas Compassionate Use Program (TCUP)?**

Persons interested in enrolling in the TCUP program must find a Department of Public Safety (DPS) certified physician authorized to prescribe cannabis. The clinician certifies that the patient has a qualifying condition. Then, the physician develops a treatment plan for the patient. The patient is added to the Compassionate Use Registry of Texas (CURT) registry and can contact state-licensed dispensaries. There are only three state-licensed dispensaries in the State as of August 2023. The patient gives the dispensary their name and date of birth. The dispensary has access to the DPS registry, which contains the treatment plan created by the physician to release the cannabinoids through that treatment plan.

Texas has a unique situation regarding medical cannabis because physicians provide prescriptions to patients. They build individualized plans and control the patient's care, which is vastly different from other states' practices. The State is trying to move into the term recommendation instead of prescription. The prescriptions, on average, have been safe enough that the patients used to be seen every three months; now, they have the potential to extend the follow-up to twelve months. TCUP participants are not necessarily recreational users, as they prefer certified prescriptions to use as medicine because of the consistency in results.

#### **Are you able to provide a general demographic profile of your patients? (age group, gender)**

- Oldest patients: 90s
- Youngest: 30 days old
- Cost of cannabis: \$100- \$150/ average a month. The dispensaries do not sell smokable products.
- Patients use a mixture of both smokable and other products because of the absorption rates. Individuals who need quick relief will opt for using smokable products. In contrast, others who want a longer-lasting effect will opt for edibles, tinctures, etc.

#### **What factors influence your dosage recommendations? Are they based on milligrams (mg)?**

Prescriptions are made in milligram dosages. The physician helps the patient identify how many milligrams the patient is using in edible equivalents. For example, most patients start at 2.5 mg. High-dosage users can go as high as 40 mg twice a day. Physicians don't care

about the percentages in the product. It can negatively affect the patients' intake levels as they don't correspond to the dosages (mg) they must intake. Physicians have control over the pace at which a patient takes the prescription.

The Department of Public Safety started a Compassionate Use Program working group in January 2023. The committee will provide expertise to the legislature after laws regarding the Compassionate Use Program go into effect.

**Do you believe that the medications that you are prescribing have the potential to impair the driving task?**

Yes. With any new medicine, physicians worry about their ability to drive. It can impair perception when one gets behind the wheel of a car. The physician knows to prescribe appropriate dosages that are the least likely to lead to impairment. Once the patient's tolerance is established, the physician can titrate the dosage to fit the patient's clinical needs. Physicians are able to estimate if the dosage amount prescribed will be enough to impair a specific patient's ability to drive. Some of them are certified to provide this attestation.

**What is the conversation between physician and patient regarding the potential impairing effects that cannabis and other prescription drugs can have in the driving task?**

Physicians usually warn patients of the potential impairment risks in the driving task. Physicians have a contract that patients agree not to use alcohol and other sedating substances while simultaneously using the cannabis prescription.

**Do you tell patients that their medication may cause them to test positive on a drug test?**

Physicians warn patients that the patient will test positive for cannabis. The physicians state in a written contract that patients are not to operate a motor vehicle or heavy machinery for several hours after using the cannabis prescription or while feeling the effects of cannabis in their system.

**What do you believe are obstacles for medical cannabis patients regarding transportation?**

Prescriptions contain a disclaimer that should one have any questions, they can contact DPS. So, in the case of a traffic stop, the law enforcement officer should be able to call the number listed in the prescription to confirm that the patient is a member of the TCUP program.

**Findings**

The four focus groups were evenly split between government, or public safety stakeholders, and cannabis industry advocates and physicians. All groups seemed to share a genuine interest in the wellness and safety of the public. There were many commonalities between the groups and a couple of diverging opinions. One point that emerged from all discussions was that it will require both sides of this topic to work together to find a suitable solution to determine what cannabis impairment means. All parties agree that this solution should be based on science and maintain safety on our roadways.

Regarding per se laws for cannabis and driving, the L.E. group seemed to rely heavily on toxicology testing. The TSRP group also depends on toxicology results to prosecute impaired driving cases; however, they did discourage the creation of per se cannabis laws because a THC level in the blood does not directly correlate to impairment. Both the cannabis industry advocates group and the physicians opposed prosecution of impaired driving cases based on a THC nanogram level found in the blood. They believed that additional tools for law enforcement should be developed to assist in determining cannabis impairment.

This discussion is highly relevant since the impairing effects of cannabis are different based on both the person and the method of ingestion. Detection of THC in the bloodstream does not equate to impairment. Habitual consumers, including those who use cannabis as medicine, will always maintain some level of THC in their blood. Across the country, this conversation continues as stakeholders attempt to find a definition of impairment that scientists, public safety professionals, and cannabis industry supporters can agree to. None of the stakeholders are interested in charging and prosecuting drivers unjustly, but they also agree on accountability, especially if a motor vehicle crash is involved.

The most valuable law enforcement tools currently available are the officers themselves. Participants from the L.E. and TSRP groups discussed the need for more training, resulting in additional DREs and ARIDE-trained officers. Basic training of patrol officers is also needed to shift the focus from possession charges to an impaired driving investigation if cannabis is suspected during a traffic stop. Officers' observations were identified as the best evidence for prosecution of impaired driving cases. Cannabis stakeholders also agree that officers need additional training. While they did not mention current officer training methods, they did add that technology-based methods could play a role in helping officers determine impairment at the roadside.

Public education was a high priority for all stakeholder groups. There was a slight divergence between the two public safety groups and the two cannabis stakeholder groups. All groups agreed that there should be consequences if impairment was the cause of a motor vehicle crash. Law enforcement and TSRPs emphasized training for officers to detect impairment, while the industry advocates focused more on educating consumers about the various benefits and pitfalls of cannabis consumption. All participants agreed that cannabis consumers should be educated on the laws regarding driving under the influence. One important point made by the industry advocate group was that consuming cannabis and alcohol in combination is very detrimental to the driving task. The cannabis and alcohol combination were confirmed by the physicians, who noted that they inform their patients that this combination is of high risk and advise them not to consume both substances. But should they choose to, they should not operate a motor vehicle or heavy equipment.

One topic discussed by both cannabis advocacy groups, but not the public safety groups, was the idea that naïve users of cannabis are more at risk for impairment to the driving task. There was a consensus that habitual cannabis consumers are less impacted by impairment and, therefore, may experience improved driving performance after consuming than those new to the products. Interestingly, this concept was also discussed in the GHSA

report mentioned in the introduction. The report states, "Many users do not believe that cannabis negatively affects their driving. In fact, some believe cannabis consumption improves it. The more often people consume cannabis, the less dangerous they consider driving under the influence of cannabis to be."<sup>3</sup>

## Discussion

SHSOs can contribute to reducing harm on roadways by continuing to fund programs that provide education for and support the efforts of law enforcement officers. International programs such as the Drug Evaluation and Classification Program that trains DREs, and ARIDE, which provides more robust knowledge for determining impairment, should be supported. Law Enforcement Liaisons should also be employed to persuade police chiefs to prioritize DWI enforcement in their jurisdictions.

It is equally important to continue to fund programs that draw attention to the issue of cannabis-impaired driving through campaigns and educational programs. Campaigns should include the use of social media and digital marketing to reach the largest audience. Developing a consistent message to spread through traffic safety networks is essential. It is imperative that the public gain a better understanding of DWI laws and learn to recognize the signs and symptoms of cannabis impairment. Drivers should be encouraged to wait to get behind the wheel if they are experiencing these signs and symptoms. As the National Highway Traffic Safety Administration's campaign says, "If you feel different, you drive different."<sup>6</sup>

Public safety professionals would benefit from creating partnerships and opening dialog with cannabis industry professionals. Since these groups are considered trusted sources for cannabis consumers, there is an opportunity to gain further ground by allowing them to carry forward public safety messaging. Physicians who prescribe cannabis to patients can reach these consumers directly by warning them of the dangers associated with their medications. Those who support adult-use consumption suggest retailers can deliver safety messaging at the point of sale.

To better equip the driving public and maintain safety on our roads, all stakeholders must work together to continue researching and understanding the best tools and practices as they relate to cannabis-impaired driving. It is clear from these focus group discussions that we need improved training, education, and a better understanding of how cannabis impairs the driving task. This will require large, robust clinical trials to explore cannabis-impaired driving through the lens of science and data.

Regarding cannabis-impaired driving, these focus groups have shown that Texas still has a difficult path ahead. Across the U.S., states with years of cannabis legalization under their belts are still battling issues with impaired driving. One of the most prominent issues is understanding what cannabis impairment looks like. And while this subject has many stakeholders, there is one common denominator: the need for education. Law enforcement needs more education on identifying cannabis impairment and understanding the importance of their testimony in court, policymakers and regulators need more education to

create sound policies and regulations, and the public needs more education on how consumption can translate to impairment.

## Appendix A: Recruitment Materials

### Initial Recruitment Email

Subject line: Cannabis Focus Group Invitation

Dear [insert name],

The Texas A&M Transportation Institute (TTI) is seeking to understand the effects of cannabis-impaired driving and what changes to expect if recreational use is legalized in Texas.

The project team wants to invite you for your expertise in this field to a focus group. The focus group will be conducted virtually and last for 60 to 90 minutes. We would like to hold the focus group during the week of [insert dates]. Your participation in this focus group is completely voluntary.

The information obtained will guide the development of educational materials to help inform the public and Texas officials of traffic safety concerns as they relate to cannabis use and driving. The discussion will last between 60 and 90 minutes and is completely voluntary. You are not required to participate in the focus group.

If you are interested in participating, please let us know by [insert date]. If you have additional questions, please let me know!

Kind regards,

[insert name and contact information of TTI research staff]

Funding for this project is provided by the Texas Department of Transportation.

IRB Number: IRB2022-1534M

IRB Approval Date: February 15, 2023

### Follow-up Email (Elects to participate)

Subject line: RE: Cannabis Focus Group Invitation

Dear [insert name],

Thank you for letting us know of your decision to participate in this focus group. We appreciate your time.

The focus group will be held on [insert date and time]. Below is the link and information needed for the virtual meeting.

If you have any questions regarding the survey, please do not hesitate to contact me.

Kind regards,

[insert name and contact information of TTI research staff]

[Virtual meeting information]

IRB Number: IRB2022-1534M

IRB Approval Date: February 15, 2023

### **Follow-up Email (Elects not to participate)**

Subject line: RE: Cannabis Focus Group Invitation

Dear [insert name],

Thank you for letting us know you're not participating in this study. We appreciate your time and consideration.

We will not contact you again regarding this study.

Kind regards,

[insert name and contact information of TTI research staff]

IRB Number: IRB2022-1534M

IRB Approval Date: February 15, 2023

## Appendix B: Institution Review Board Approval

DIVISION OF RESEARCH



### Exemption Determination (Common Rule – Effective January 2018)

February 15, 2023

Title: Essential Education: Marijuana and Driving  
Focus Groups  
Investigator: Cody Stewart  
IRB: IRB2022-1534M  
Submission Type: Submission Response for Initial Review Submission Form  
Funding: Texas Department of Transportation (TXDOT), Texas Department  
of Transportation (TXDOT)  
Reference Number: 152033

Dear Cody Stewart:

The HRPP determined on February 15, 2023 that this research meets the criteria for Exemption in accordance with 45 CFR 46.104.

**This determination only serves as approval for the focus group portion of the work as described in Section 8.1 of the application.**

This determination applies only to the activities described in this IRB submission and does not apply should any changes be made. Please use the reviewed, stamped study documents (available in IRIS and outlined below in the Appendix) for applicable study procedures (e.g. recruitment, consent, data collection, etc...). If changes are needed to stamped study documents or study procedures, you must immediately contact the IRB. You may be required to submit a new request to the IRB.

Your exemption is good for three (3) years from the Approval Start Date (02/15/2023). Thirty days prior to that time, you will be sent an Administrative Check-In Notice to provide an update on the status of your study.

If you have any questions, please contact the IRB Administrative Office at 1-979-458-4067, toll free at 1-855-795-8636.

Sincerely,

IRB Administration

Appendix: Reviewed Study Documents. **Of note, all "forward-facing documents" that will be viewed or completed by participants should be "stamped" in iRIS. The stamped version should be downloaded from iRIS and used during the study.** If a document was not stamped correctly, please communicate with your HRPP Liaison to resolve the issue.

Type	Document Name	Version	Date Submitted into Workflow
Submission Response by Board:			
TAMU IRB	Review Response Form - IRB	Version 2.0	02/07/2023 02:33:02 PM CST
TAMU IRB	Review Response Form - IRB	Version 1.0	01/23/2023 04:00:11 PM CST
Submission Form:			
Submission Form	Initial Review Submission Form	Version 1.0	12/31/2022 11:28:01 PM CST
Submission Attachments:			
Application	IRB Application (Human Research)	Version 1.2	02/07/2023 02:33:02 PM CST
Application	IRB Application (Human Research)	Version 1.1	01/23/2023 04:00:11 PM CST
Application	IRB Application (Human Research)	Version 1.0	12/31/2022 11:28:01 PM CST
Document - Other	Information Sheet	Version 1.3	02/07/2023 02:33:02 PM CST
Document - Other	Information Sheet	Version 1.1	01/23/2023 04:00:11 PM CST
Document - Other	Study Info Sheet - EEMJ FG	Version 1.0	12/31/2022 11:28:01 PM CST
Document - Other Recruiting Materials	Recruitment Emails - EEMJ FG	Version 1.4	02/07/2023 02:33:02 PM CST
Document - Other Recruiting Materials	Recruitment Emails - EEMJ FG	Version 1.2	01/23/2023 04:00:11 PM CST
Document - Other Recruiting Materials	Recruitment Emails - EEMJ FG	Version 1.0	12/31/2022 11:28:01 PM CST
Document -	EEMJ Objectives	Version 1.0	12/31/2022 11:28:01 PM CST
Submission Response by Board:			
Grant		Version 1.0	12/31/2022 11:28:01 PM CST
Document - Questionnaire	DELIV EEMJ Focus Group Planning	Version 1.0	12/31/2022 11:28:01 PM CST

## Appendix C: Study Information Sheet

### STUDY INFORMATION SHEET

**Title of Research Study:** Essential Education: Marijuana and Driving

**Investigator:** Cody Stewart, Texas A&M Transportation Institute

**Why are you invited to take part in this study?**

You were selected for your knowledge of, or experience with cannabis.

**What is the purpose of this study?**

The information obtained will guide the development of educational materials to help inform the public. It will also inform Texas officials of traffic safety concerns related to cannabis use and driving.

**What will I be asked to do?**

You are being asked to participate in a virtual focus group. You will be asked a set of pre-selected questions. The focus groups will be audio recorded. The audio recording is solely for accurate reporting. Recordings will be deleted in September 2023 after the grant. Recordings are mandatory for participation to ensure accuracy.

**What are the risks involved in this study?**

Minimal risks are associated with this study. However, confidentiality among participants cannot be guaranteed due to the nature of focus groups.

**Do I have to participate?**

Your decision to be in this study is voluntary. You do not have to participate, and you can stop participating anytime. You do not have to answer any questions.

**Right to withdraw from the study:**

If you decide to be in this study and then change your mind, you can leave the study at any time without penalty.

**Who will know about my participation in this research study?**

Your name and other personal information will be kept private. Your answers will not be connected to you. Only the project staff and the other focus group participants will know of your participation in the study.

**Will this information gathered during this research be used for future research studies?**

Information from this study could be used for future research studies or shared for future research studies. However, no identifier information will be shared.

**Whom do I contact with questions about the research?**

You may contact Cody Stewart at 979-318-5099 or email [c-stewart@tti.tamu.edu](mailto:c-stewart@tti.tamu.edu).

**Whom do I contact about my rights as a research participant?**

You may call the Texas A&M University Human Research Protection Program office by phone at 1-979-458-4067, toll-free at 1-855-795-8636, or by email at [irb@tamu.edu](mailto:irb@tamu.edu).

*The Texas Department of Transportation has provided funding for this study.*

## Appendix D: Focus Group Questions

### General Protocol

Good morning/afternoon, we are *[Team Member 1 and Team Member 2]* from the Texas A&M Transportation Institute's Center for Alcohol and Drug Education Studies. We are working on a project funded by the Texas Department of Transportation focused on cannabis education. In today's discussion, we seek to understand how cannabis affects impaired driving currently and how that might change if recreational use is legalized.

The information obtained will guide the development of educational materials to help inform the public of traffic safety concerns as they relate to cannabis use and driving. Today's discussion will last between 60 and 90 minutes. You are not required to participate in the focus group. You can leave the focus group at any time if you do not wish to continue. Your participation is voluntary. *[Team Member 1]* will lead the discussion today, while *[Team Member 2]* will assist with the discussion and take anonymous notes. In addition, the discussion will be recorded to produce complete notes. The recording will be deleted as soon as our written anonymous notes are completed. If identifiable information is mentioned during the focus group, we will not include it in our notes or report.

For our conversation today, please keep in mind:

- There are no right or wrong answers. We are here to listen to your thoughts and experiences related to cannabis use and driving.
- Everyone's input is valuable. We hope everyone can participate throughout our discussion.

Are there any questions before we get started today?

Great, let's learn a little more about who is here today by going around and introducing ourselves, including your first name, organization, and position.

## Law Enforcement

### *Summary*

When it comes to cannabis-impaired driving, impairment is often solely determined by an officer trained in detection. This places a heavy burden on the officer as the detection of THC in the bloodstream doesn't equate to impairment, unlike the detection of alcohol. As the stakeholders that provide the foundation for any cannabis-impaired driving case, researchers look to understand existing and potential barriers for pre- and post-legalization, beliefs and attitudes towards cannabis-impaired driving, and what is needed to help combat this issue.

### *Questions*

1. While cannabis is currently not legal in Texas, what existing issues have you noticed when dealing with cannabis?
  - a. What barriers do you experience when dealing with those issues?
2. If legalization for recreational use becomes a reality in Texas, do you foresee any new problems arising?
3. What thoughts or concerns do you have about the THC Isomer products, such as Delta-8?
4. What issues do you experience if you believe someone is driving under the influence of cannabis?
  - a. Do you have suggestions on how to solve those issues?
5. Do you believe DWI-cannabis is underreported?
  - a. If yes, to what extent? What can be done to help?
  - b. If no, why not?
6. Currently, it is very time-consuming to pull crash reports where cannabis was a factor. For poly-drug use, the narrative has to be searched manually for potential keywords. Do you believe law enforcement would support a change to the CR-3 form to fix that?
7. If a change to the CR-3 was required to track cannabis-related crashes easier, what do you believe is the best way to accomplish that?
8. What tools do you believe are necessary if legalization happens?
  - a. Do you believe those tools would be beneficial now?
9. Do you have any other comments or questions you would like to share?

## Traffic Safety Resource Prosecutors

### *Summary*

Traffic Safety Resource Prosecutors, commonly known as TSRPs, provide training and education to prosecutors and law enforcement for traffic crimes in their respective states. TSRPs will be recruited from states that already have legalized adult-use cannabis markets. This focus group aims to glean information on how legalization affected their state, what Texas can do to be a step ahead before legalization, and what kind of training and education they recommend based on the experiences in their states.

### *Questions*

1. Can you tell us about the landscape surrounding cannabis-impaired driving both pre- and post-legalization?
2. Where do you believe your state is excelling?
3. Where do you believe your state needs improvement?
4. If you were to give advice to a state that still does not have a legal adult-use market, what advice would you say should be started now to help counter cannabis-impaired driving?
5. What cannabis-related training are you aware of that is offered to judges, prosecutors, and law enforcement?
6. What are the tools that your state has that are used roadside?
  - a. What tools are used at the police station?
7. Since the presence of THC in the bloodstream does not indicate impairment as alcohol does, how does your state prosecute DUI for cannabis if the suspect cannot be evaluated due to injury?
8. How do you track cannabis-related crashes within your crash reports?
9. Based on your experience, what policy-related advice for impaired driving would you give to a state that is legalizing marijuana?
  - a. If interviewing Montana or Nevada, ask how they handle biennial legislative sessions.
10. Do you have any other comments or suggestions that you would like to share?

## Industry

### *Summary*

Best practices listed by the GHSA indicate that state HSOs should partner with cannabis industry advocates in crafting traffic safety messages that resonate with their consumers. These stakeholders are considered trusted sources of information for cannabis consumers. In this focus group session, we will seek to understand beliefs and attitudes about cannabis-impaired driving from advocates of the marijuana industry.

### *Questions*

1. What do you believe cannabis legalization should look like in Texas?
2. It has been stated that tax revenue from a regulated cannabis market would benefit the state of Texas. If these revenues were generated, where would you suggest they be allocated?
3. Please provide your general thoughts on cannabis-impaired driving.
4. What driving skills, if any, do you think are impacted by cannabis consumption?
5. How do you feel cannabis differs from alcohol as it relates to the driving task?
6. Do you believe that there should be consequences if someone is found to be driving under the influence of cannabis?
  - a. If yes, what do you believe the punishment should be?
7. Do you believe that someone should be held accountable if they were driving under the influence of cannabis and they caused a crash involving serious injury or death?
  - a. What do you believe is an appropriate consequence?
8. From your perspective, what is an appropriate method of delivering traffic safety messages to cannabis consumers? (Where do we disseminate/how do we reach them?)
9. Do you have any suggestions on how to effectively craft traffic safety messaging about cannabis-impaired driving? (What is the message?)
10. In your opinion, do you feel cannabis industry stakeholders would be willing to work with public safety stakeholders to deliver traffic safety messaging in Texas?

## Physicians

### *Summary*

The Texas Department of Public Safety maintains a list of physicians who are licensed to prescribe medical cannabis to patients. This list is accessible to the public and will be used to recruit participants for this focus group. With their participation, researchers will seek to understand what messages, if any, they are sharing with their patients to determine if there is an opportunity to reinforce these messages through campaigns and education.

### *Questions*

1. What is the process for a patient to enroll in the Texas Compassionate Use Program (TCUP)?
2. Are you able to provide a general demographic profile of your patients? (age group, gender)
3. Are you an attending physician?
  - a. How often do you see your patients after the initial recommendation?
4. Do you believe that products with a 1% THC content would cause impairment while driving?
  - a. If not, how much do you believe your patients would need to consume to impair the driving task?
5. Do you tell patients that their medication may cause them to test positive on a drug test?
6. Do your patients understand that THC remains in the blood for long periods of time?
7. Have you had discussions with your patients about if they were to be involved in a motor vehicle crash that causes serious bodily injury or death, they may be drug tested?
  - a. Do you review the consequences of DWI with your patients?
8. Do you feel that your patients respect warnings not to drive under the influence of cannabis?
9. What do you believe are obstacles for medical cannabis patients regarding transportation?
10. Do you have any suggestions for how best to address cannabis impaired driving with patients?

## References:

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