Facing the Impacts of Legalized Marijuana
11/19/2020
Sean K. Oswald, Senior Associate, RLS & Associates, Inc.
I am NOT with the United States Department of Transportation (USDOT) or the Federal Transit Administration (FTA).

I DO NOT represent or claim to represent USDOT or FTA in any manner.

Nothing included in this slideshow (or discussed during conversation) should be interpreted to be authoritative from USDOT or FTA.

I am not representing that anything addressed in these slides or during the panel conversation is the viewpoint/position/opinion, etc. of USDOT/FTA.
Basic Information
Basic Information

Recreational vs. Medical vs. Decriminalized

♦ What does “Recreational” Marijuana mean?
  ○ How many states have passed “Recreational”?
    ▪ 15, plus D.C.

♦ What does “Medical” Marijuana mean?
  ○ How many states have passed “Medical”?
    ▪ 36, plus D.C., Guam, Puerto Rico, and U.S. Virgin Islands

♦ What does “Decriminalized” Marijuana mean?
Basic Information

Common Names: What are they?

♦ Cannabis, Marijuana, Weed, Pot, and on and on and on and on......
  ○ Business industry leaning toward “Cannabis”

♦ Differ based on demographics, geography, type of product, etc.

♦ Curious observation:
  ○ Increase in legalization = Decrease in “Whacky” names
Some new* popular vocabulary:

- **Shatter**
  - THC extract product
  - Amber “glass-like” appearance

- **Vaping**
  - Inhaling marijuana through vape pen

- **Dab, Dabbing (not the dance)**
  - Inhaling concentrated cannabis oil
Basic Information

Illicit THC Potency Over Time

Percentage of THC and CBD in Cannabis Samples Seized by the DEA from 1995-2018

- THC %
- CBD %

Graph showing the percentage of THC and CBD in cannabis samples seized by the DEA from 1995 to 2018.
Basic Information

Illicit THC Potency Over Time

- Recreational and Medical THC products are regularly found to be 20% - 30% THC
- THC concentrates can be 80%+ THC
What is CBD vs. THC?

- Cannabidiol (CBD):
  - Many forms, oil is most popular
  - Touted as “non-intoxicating/non-psychoactive”

  **Medical Uses**
  - Heavily studied for its use in wide variety of health issues
  - Most significant and reliable evidence showing effectiveness for epilepsy
  - 2018 - FDA approved CBD medication for 2 limited health conditions
Lost of Claims from Marketers, but Lack of Consistent Oversight/Quality Control

- i.e., Does the product label ACCURATELY reflect nature/content of product? Were the levels accurately and reliably tested?

- Who verifies the veracity?
“Will a USDOT drug test find CBD?”

- Technical Answer is NO
  - USDOT tests for THC, not CBD

- However, many CBD products have varying levels of remnant THC ... so maybe a better question to ask is....
So, “If I use CBD, will I test positive for THC?”

- Possible (likelihood varies). Some CBD products under state laws have up to 5% THC, other CBD products have 0-0.3% THC.

- How much CBD product do you use? How LONG have you consistently used that product?

- Bottom Line: If THC is found above cut-off levels, USDOT test will always be POSITIVE (source of THC is 100% irrelevant).
Basic Information

How Do People Use Marijuana?

♦ Smoke
  ○ Joint, pipe, bong, blunt, etc.

♦ Vaporize
  ○ Collect THC in vapor, which is then inhaled instead of smoke
  ○ Typically THC oil but can be leaf form as well

♦ Edibles
  ○ Not just your **grandma’s** pot-brownie any more
Basic Information

How Do People Use Marijuana?
Public Opinion on Legalizing Marijuana

**Do you think the use of marijuana should be made legal, or not? (%)**

- **1969**: 84
- **1980**: 66
- **1990**: 30
- **2000**: 31
- **2010**: 32
- **2018**: 34

**Legal**

- **1969**: 12
- **1980**: 16
- **1990**: 63
- **2000**: 60
- **2010**: 62

**% who say marijuana should be made legal**

**Millennial (1981-97)**
- **1969**: 15
- **1980**: 43
- **1990**: 74

**Gen X (1965-80)**
- **1969**: 15
- **1980**: 43
- **1990**: 63

**Boomer (1948-64)**
- **1969**: 15
- **1980**: 43
- **1990**: 54

**Silent (1928-45)**
- **1969**: 15
- **1980**: 43
- **1990**: 34

Note: Don’t know responses not shown.

PEW RESEARCH CENTER
Public Opinion on Legalizing Marijuana

- 2016 and 2020 Election ... We voted for more than a president

- New recreational states in 2020
  - New Jersey
  - Arizona
  - Montana
  - South Dakota*
Drug Impaired Driving
Background

Psychoactive Substances

- A large group of drugs that have potential to impair driving
  - Alcohol
  - Some OTC drugs
  - Some Rx drugs
  - Most illegal drugs

- The mechanism, extent, and time of impairment differ greatly
Driver Impairment: Alcohol vs. Marijuana

- It is not “Apples to Apples”
  - Alcohol Impairment
    - Well understood - Intense interest and research for over 60 years
    - Absorption and elimination by our bodies at regular rate across most demographics
      - True regardless of concentration of alcohol in blood
      - This is different from many other drugs

- **Observed impairment correlates directly with alcohol concentration in body**
♦ It is not “Apples to Apples” (continued)
  ○ Marijuana Impairment
    ▪ Interest and ability to conduct quality research is relatively new (“Schedule I” = More barriers to research)

    ▪ Absorption and elimination by our bodies is much different than alcohol
      • Ethyl Alcohol = water soluble || THC = Fat soluble chemical
      • THC can be detected long after ingestion
        » DETECTION does not equal IMPAIRMENT

    ▪ Observed impairment DOES NOT correlate closely with THC concentration in body
Time Course of Standardized THC Concentration in Plasma,
Performance Deficit and Subjective High after Smoking Marijuana
(Adapted from Berghaus et al. 1998, Sticht and Käferstein 1998 and
Robbe 1994)

- Subjective High (% VAS)
- THC Concentration (ng/ml)
- Performance (% baseline)

Peak Impairment
Driver Impairment: Alcohol vs. Marijuana

♦ It is not “Apples to Apples” (continued)
  ○ Marijuana Impairment
    ▪ THC Level in blood (or oral fluid) does not appear to be accurate/reliable predictor of impairment from THC
    ▪ Low levels of THC in blood, not reliable indicator of recent use
THC: Effects on Driving

Examples of Driving Impairment Caused by THC Include:

- Slow reaction time
- Decrease in road tracking/lane position
- Divided attention
- Diminished estimates of time/distance
Let’s take a moment to discuss:

1. Critical Thinking
2. Confirmation Bias
NHTSA Study Headlines:

- Drug most frequently found was THC
  - CORRELATION IS NOT CAUSATION
  - Example: Shoes
- Drivers positive for THC 25% more likely to be in crash*

- 1.25* = Unadjusted odds ratio
- Doesn’t account for other factors
  - Age, gender, race, etc.
- When adjusted for variables = 1.05
  - Not a statistically significant increase
Workplace Impact
Workplace Impact

Federal vs. State

- THC is still Federally illegal... USDOT is a Federal test
- “Safety-Sensitive”
  - Defined by USDOT only
“Prescription” / medical recommendation for Marijuana (THC)

- Will NOT save anyone from a USDOT positive test result
- For USDOT testing, prescriptions must be consistent with the Federally mandated “Controlled Substances Act” (CSA)
- Marijuana (THC) is Schedule 1 under CSA = CAN’T LEGALLY BE PRESCRIBED IN ACCORDANCE WITH DEA
Workplace Impact

Federal vs. State

♦ USDOT tests for presence of drugs, NOT IMPAIRMENT
  ○ Make this VERY clear in your policies and in your employee training
  ○ Most employers and supervisors understand, BUT
  ○ We are seeing MANY employees/applicants who don’t get it

♦ Employees have responsibility to avoid inadvertent ingestion (especially from edibles)
Workplace Impact

Federal vs. State

- USDOT doesn’t test for CBD
  - Still cause for concern/caution for employers and employees
FAQs & Myth-busting
FAQs & Myth-busting

Passive Exposure

♦ “Can someone test positive for THC from secondhand smoke (aka Passive Exposure)?”

  ○ **Yes, but unlikely**, even with today’s increased THC levels

  ○ USDOT tests have “cutoff” levels that are established (in part) for this reason
FAQs & Myth-busting

Impairment vs Presence

♦ “I used marijuana on my vacation, I wasn’t “stoned” at work... what's the big deal?
FAQs & Myth-busting

CBD

♦ “As a transit employee, can I use CBD products?”
  ○ Can vs Should?
  ○ OTC vs Rx?
  ○ Safety Concerns (no oversight)?
Employee Education
Over 50% of marijuana users surveyed say it is safe to drive high on marijuana

- Research published in 2018
- Anonymous survey of marijuana users across all 50 states
- Older age and less education predicted beliefs that driving high was safe
  - More frequent users also more likely to say driving high is safe (the “expert” phenomena)
If you haven’t already, please formally communicate with your employees the key facts/topics, such as:

- State Marijuana laws’ impact on USDOT testing programs
- THC vs CBD
  - Federal, State, Employer, Personal Health
- Drug testing: Impairment vs. Presence
- Passive Exposure
- Passenger Trips/Possession on Transit Vehicles
Employer Policies and Employee Education

- Enhance your Reasonable Suspicion Training
  - Don’t just do it for the “check in the box”
  - Seek new training for refresher classes
  - Focus on “problem” or “community” specific issues
    - I.e. New Marijuana Laws
    - CBD
    - Newly popular methods of ingestion
Workplace Impact

Industry Anecdotal Insight

♦ #1 Comment = Increased difficulty in finding new hires

♦ Recognize need to further clarify certain issues in the D&A Policy

♦ Enhanced training with employees is a must following change in laws

♦ What about you?