

HIGHWAY TO JUSTICE

SUMMER 2017

From The ABA with support from the National Highway Traffic Safety Administration

PERSPECTIVE FROM THE BENCH: THE IMPACT OF MARIJUANA LEGALIZATION ON TRAFFIC SAFETY

By Hon. Chaney Taylor, Jr.
NHTSA Region 7 Judicial Outreach Liaison

The JOL Program – A Collaborative Partnership of the ABA and NHTSA Connecting Judges to Traffic Safety Information, Resources and Networking

INTRODUCTION

Twenty-six states and the District of Columbia currently have laws broadly legalizing marijuana in some form. Three other states will soon join them after recently passing ballot measures permitting the use of marijuana for medical purposes. A number of states have also decriminalized possession and use of small amounts of marijuana.¹ Volumes have been written about the impact of marijuana use on traffic safety and this brief article will explore some of what is known so far. As a cautionary note, however, some of the available data can be not only misleading, but conflicting.

STATE OF WASHINGTON

In November 2012, Washington State voters approved ballot Initiative 502, which allows adults aged 21 years and older to possess up to 1 ounce of marijuana for personal use. The new law became effective on December 6, 2012. The American Automobile Association (AAA) Foundation for Traffic Safety conducted a study² from 2010-2014 on the impact of marijuana use on traffic safety. Key findings from that study were as follows:

- I. Statewide, 3,031 drivers were involved in fatal crashes in years 2010 – 2014.
- II. An estimated 303 drivers – 10.0% of all drivers involved in fatal crashes in Washington between 2010 and 2014 – had detectable THC in their blood at the time of the crash.
- III. Of all THC-positive drivers involved in fatal crashes, an estimated 34.0% had neither alcohol nor other drugs in their blood, 39.0% had detectable alcohol in addition to THC, 16.5% had other drugs in addition to THC, and 10.5% had

had both alcohol and other drugs in addition to THC in their blood at the time of the crash.

- IV. From 2010 through 2013, the estimated number and proportion of drivers involved in fatal crashes who had a detectable concentration of THC in their blood ranged from a low of 48 (7.9%) to a high of 53 (8.5%). The number and proportion both doubled from 49 (8.3%) in 2013 to 106 (17.0%) in 2014.
- V. Analysis of trends over time before and after Initiative 502 took effect indicate that the proportion of drivers positive for THC was generally flat before Initiative 502, but began increasing significantly approximately 9 months after the effective date of Initiative 502.
- VI. In 2014, the number and proportion of drivers in fatal crashes who were positive for THC were both more than double the averages from the prior four years.

WASHINGTON STATE ROADSIDE STUDY

The National Highway Traffic & Safety Administration (NHTSA) assisted the State of Washington in conducting a study that examined Marijuana, Other Drugs & Alcohol Use by Drivers in Washington State.³ The methodology and findings of that study, which was published in July of 2016, are too voluminous for this article, but in summary, data was collected from drivers in three waves: (1) immediately before legal sales, (2) six months after implementation of legal sales, and (3) one year after implementation.

With regard to alcohol use, the percentage of alcohol positive drivers declined slightly across the three waves with 6.2 percent in Wave 1, 4.1 percent in Wave 2, and 4.3 percent in Wave 3. This was not a statistically significant decrease. Interestingly, there was an increase in THC-positive drivers who were alcohol-free, at Waves 2 and 3 (19.0% and 20.2%) compared to Wave 1 (13.2%). There was a decrease in the percentage of drivers who tested positive for any other drug (with no THC) and were alcohol-free from Wave 1 (17.2%) to Wave 3 (13.0%).

continued, page 2

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We would like to hear from other judges. If you have an article that you would like to share with your colleagues, please feel free to submit it for inclusion in the next edition of *Highway to Justice*.

To submit an article, please send it to the editor, Hon. Earl Penrod penrod26d01@msn.com with a copy to the staff liaison, cheronne.mayes@americanbar.org. Please contact Ms. Mayes for editorial guidelines.

The deadline for submission of articles for the Fall issue is September 15.

PERSPECTIVE FROM THE BENCH: THE IMPACT OF MARIJUANA LEGALIZATION ON TRAFFIC SAFETY continued from page 1

The study also found a statistically significant reduction in the percentage of THC-positive drivers who were over the per se limit. In Wave 1 there were 14.5 percent of drivers over the 5 ng/mL limit while in Wave 2 the percentage decreased to 5.3 percent of THC positive drivers. In Wave 3 the percentage over the limit was 9.2 percent. However, this study only measured prevalence of THC-positive drivers. It did not address whether an increased prevalence of THC-positive drivers is related to greater impairment among drivers or greater crash risk.

COLORADO

Also in 2012, Colorado voters passed a measure legalizing recreational use of marijuana. Subsequently, in 2013, Colorado passed legislation setting a per se impairment level of 5 nanograms per milliliter of blood (5ng/ml), but it included a "permissive inference" provision, which allows defendants to present evidence that they were not impaired at that level.

In August 2014, The Washington Post published an article⁴ using data from the Colorado Department of Transportation (DOT) showing that since legalization of recreational use of marijuana, highway fatalities were at near-historic lows. This appears to conflict with the 2010-2014 AAA study conducted in Washington, but it should be noted that the data/numbers used by the Washington Post article author Radley Balko were raw and not broken down into percentage(s) of how many fatalities were marijuana-related, and simply showed that the overall numbers had declined. Moreover, Balko's article was not based on a study or analysis, but simply an extraction and reporting of the Colorado DOT raw data.

TRAFFIC SAFETY AND EMPLOYMENT

Not surprisingly, legalization of marijuana is also having an impact on traffic safety in the workplace. It's pretty much undisputed that the number of employees who test positive for marijuana rises dramatically in legalizing or decriminalizing states. Employees who are legal marijuana users and drive either to and from work or as a part of their job(s) create a bit of a conundrum for employers. Employers may not terminate an employee solely for being a legal marijuana user, but in employment at will states, an employee may be terminated for any or no reason not otherwise illegal (basis of race, religion, creed, ethnicity, gender, age, etc.) However, employers are not required to continue to employ an employee who is under the influence.

It should be noted that commercial vehicles are federally regulated and currently, there is no authorization for a medical marijuana exemption for a positive marijuana drug test. If the holder of a commercial driver's license tests positive for marijuana, his or her commercial driving privileges are ended. However, with regard to non-driving employees such as clerks, dispatchers and/or mechanics, Butch Rice, the PCEO of Stallion Transportation Group, a national trucking company based in Arkansas, says that issue is more complicated and we will have to "wait and see."⁵

PER SE LIMITS, IMPAIRMENT AND EVIDENTIARY ISSUES

Several states have established per se blood concentration limits of marijuana for determining impairment: CO, MT and WA, 5ng; NV, OH, 2ng; and PA, 1ng. The problem of determining impairment is compounded by the fact that there are 483 chemicals that have been isolated and identified from marijuana plants, and of those, 60-109 are cannabinoid, some psychoactive and some not. The main psychoactive agent of marijuana is tetrahydrocannabinol, or THC. All of this raises questions of evidentiary standards that may be used in court: 1. Type of testing (blood, urine, saliva, hair follicle), 2. Warrant requirements (see *Birchfield v. North Dakota*⁶), 3. The use of drug-recognition experts (DREs), 4. Rebuttable presumptions of impairment, and finally, 5. The individuality of THC pharmacokinetics. The current National Center for State Courts recommendation is blood testing in combination with behavioral and/or physiological evidence.⁷

PERSPECTIVE FROM THE BENCH: THE IMPACT OF MARIJUANA LEGALIZATION ON TRAFFIC SAFETY continued from page 2

Technology for testing THC and other drug blood levels is constantly improving, and includes laser technology, fingerprint utilization, oral fluids, electronic sensors and drug breathalyzers. Undoubtedly, smartphones will also play a role in the use of technology for determining blood levels of THC, alcohol and other drugs, particularly post-conviction.

CONCLUSION

Legalization of marijuana is still relatively new to some states, particularly recreational use and more research is needed to determine the full impact on traffic safety, but one thing is clear: motor vehicle crash fatalities are on the rise. According to data released by the National Safety Council,⁸ motor vehicle crash fatalities were up 6% in 2016 from 2015 and for the first time since 2007, exceeded 40,000. Researchers should continue monitoring of THC presence and quantitative levels in drivers involved in motor vehicle crashes. Policymakers should become and remain informed on impaired driving trends and make changes accordingly, along with providing public education programs designed to enhance road and highway safety.

1. *Governing Magazine*, <http://www.governing.com/gov-data/state-marijuana-laws-map-medical-recreational.html>
2. *AAA Foundation for Traffic Study*, <https://www.aaafoundation.org/sites/default/files/PrevalenceOfMarijuanaInvolvement.pdf>
3. *Ramirez, A., Berning, A., Carr, K., Scherer, M., Lacey, J. H., Kelley-Baker, T., & Fisher, D. A. (2016, July). Marijuana, other drugs, and alcohol use by drivers in Washington State (Report No. DOT HS 812 299). Washington, DC: National Highway Traffic Safety Administration.*
4. *Washington Post*, Aug 2014 https://www.washingtonpost.com/news/the-watch/wp/2014/08/05/since-marijuana-legalization-highway-fatalities-in-colorado-are-at-near-historic-lows/?utm_term=.3325f8422b6b
5. *Arkansas Democrat Gazette*, Feb 18, 2017
6. *Birchfield v. North Dakota*, 579 U.S. ____ (2016)
7. NCSC, Blake Kavanaugh, JD KIS Analyst
8. NSC Motor Vehicle Fatality Estimates, National Safety Council, Itasca, Illinois

DATES TO REMEMBER

July 31

National Heatstroke Prevention Day
Heatstroke Awareness



Back to School Safety Month

Walk, Bike, and Ride to School Safely

August 16 – September 4

Drive Sober or Get Pulled Over
National Enforcement



September 17 – 23

Child Passenger Safety Week
OCCUPANT PROTECTION
Child Passenger Safety



September 23

National Seat Check Saturday
Heatstroke Awareness

October 4

Walk to School Day

DON'T FORGET

Valuable resources can be found at:

- **National Highway Traffic Safety Administration**
<http://www.nhtsa.gov/Impaired>
- **American Bar Association/Judicial Division/NCSCJ**
http://www.americanbar.org/groups/judicial/conferences/specialized_court_judges/NHTSA.html
- **Highway to Justice - Archives**
http://www.americanbar.org/publications/judicial_division_record_home/judicial_division_record_archive.html
- **National Judicial College**
www.judges.org
- **Governor's Highway Safety Association: Impaired Driving Issues**
<http://www.ghsa.org/html/issues/impaireddriving/index.html>
- **AAA Foundation for Traffic Safety**
<https://www.aaafoundation.org/>
- **National Center for State Courts**
<http://www.ncsc.org/>

CONTACT INFO

To learn more about programs offered by NHTSA, please contact one of the following:

Judicial Fellow:

Hon. Earl Penrod: Penrod26d01@msn.com

Tribal Courts Fellow:

Hon. J. Matthew Martin:
abajudicialfellow@gmail.com

Judicial Outreach Liaisons:

Hon. Brian L. Burgess, Judicial Outreach Liaison, Region 1 (Maine, Massachusetts, New Hampshire, Vermont, and Rhode Island): Brian.Burgess@vermont.gov

Hon. John S. Kennedy, Judicial Outreach Liaison, Region 2 (Connecticut, New Jersey, New York, Pennsylvania, Puerto Rico and Virgin Islands): JSKennedy17402@gmail.com

Hon. Phyllis McMillen, Judicial Outreach Liaison, Region 5 (Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio):
mcmillen008@gmail.com

Hon. Chaney W. Taylor, Jr., Judicial Outreach Liaison, Region 7 (Iowa, Missouri, Arkansas, Kansas, Nebraska): ctaylorjol@gmail.com

Hon. Mary Jane Knisely, Judicial Outreach Liaison, Region 10 (Montana, Idaho, Oregon, Washington, Alaska):
maryjaneknisely@gmail.com

NHTSA HELPS DEVELOP NEW YORK PEDESTRIAN SAFETY FOR LAW ENFORCEMENT WORKSHOP

By Shannon Purdy
Regional Program Manager, NHTSA Region 2

On March 7, the New York Governor's Traffic Safety Committee (GTSC), in collaboration with the State Department of Transportation, State Department of Health, NHTSA and the FHWA New York Division, hosted a one-day workshop, *Pedestrian Safety for Law Enforcement*, in Albany.

Pedestrians and bicyclists continue to comprise nearly 1/3 of New York State's crash fatalities each year, earning designation as a FHWA Pedestrian Safety Focus State. In 2016, the State Department of Transportation, Department of Health, and GTSC released the first Statewide Pedestrian Safety Action Plan, identifying the top 20 Focus Cities for pedestrian/bicycle crashes outside of New York City. And in June 2016, New York launched its first annual two-week pedestrian safety high visibility enforcement campaign, "See! Be Seen!"



Sgt. Brian Massengill of Durham City (N.C.) PD leads a group discussion on best placement of pedestrian decoy operations

To make future campaigns and sustained enforcement/education activities most effective, the NY team recognized pedestrian safety enforcement training as a critical need for participating law enforcement (LE) agencies – particularly those in the 20 Focus Cities – and asked NHTSA to help. The *Pedestrian Safety for Law Enforcement Workshop* was developed by the New York GTSC team, Shannon Purdy, Region 2, and Paula Bawer from the Safety Countermeasures Division.

Additional curriculum development was provided by the two primary law enforcement instructors, Sergeant Brian Massengill from the Durham, North Carolina Police Department and Officer Jeremy Smalley from the Montgomery County, Maryland Police Department. The instructors delivered a brief context of the Action Plan and fundamental understanding of the education and engineering strategies that must be considered and integrated.

The bulk of the Workshop is conversational, in-depth, hands-on training in strategies and tactics specific to pedestrian law enforcement. The workshop concluded with a field exercise – e.g., having instructors guide participants on conducting an enforcement operation at a pre-defined location outside the classroom.

Delivered primarily by law enforcement officers well-versed in New York Vehicle and Traffic Law, GTSC and other State representatives assisted in delivering modules with broad, State-level program content. The New York team will have hosted three more workshops prior to the June 2017 *See! Be Seen!* high visibility enforcement campaign. In addition, Shannon is helping neighboring Connecticut and New Jersey develop the one-day workshop for their respective law enforcement communities.



Region 2's Shannon Purdy (center of front row) along with participants and instructors at workshop

“JUNK SCIENCE” IN MV CASES – A CHALLENGE FOR THE JUDGE

By Professor John B. Kwasnoski
Professor Emeritus of Forensic Physics

It is common for a crash reconstruction expert to be offered to the Court to assist the trier of fact in motor vehicle cases. The scientific basis for collision reconstruction rests in the study of physics, which often presents in hard-to-decipher expert reports filled with mathematical equations and calculations. The scientific foundation for expert opinions presents several issues for judges:

As the gatekeepers, judges must have a rudimentary understanding of the science

Under Federal Rule 702, the task of “gatekeeping”, or assuring that scientific expert testimony truly proceeds from “scientific knowledge”, rests with the trial judge. A judge may also be asked to rule on a pre-trial motion to exclude or limit a reconstruction expert’s testimony at trial. The judge may rule on the qualifications of an expert and the admissibility of the expert’s testimony based on a Frye¹ or Daubert² standard. To do so the judge may conduct a hearing in which experts for both sides of the case testify. So here’s the reality – the judge must understand the scientific vocabulary used by the crash reconstruction experts – vocabulary that may be just as perplexing as the medical testimony offered by doctors.

As an example, an expert testifies that, “The vehicle maintained a constant speed of 35 mph as it accelerated through the turn.” A lay person might react to that testimony by saying, “you can’t maintain a constant speed and accelerate at the same time”. But, in fact, the statement is true, and the mistaken response occurred because of the misunderstanding of the term “accelerate”. According to Newtonian physics, acceleration occurs whenever the motion of the vehicle changes (in any way), so that the vehicle accelerates 1) when the vehicle speeds up (the common interpretation of the word), but it also accelerates 2) when the vehicle brakes and slows down (this is called negative acceleration), and 3) when the vehicle changes direction. This third meaning of the term acceleration validates the expert’s testimony. All three of these changes in motion require a net force to create the change in motion – a relationship stated in Newton’s 2nd Law of Motion. So judges may need some knowledge of physics to understand the experts’ testimony before they make a pre-trial ruling or render a decision in a jury-waived trial. *Simple negligence*, *gross negligence*, and *proximate cause* are part of the legal lexicon that the judges understand, but they may not have a working knowledge of the scientific vocabulary the crash reconstruction expert uses.

Crash reconstruction experts may distort the science in reaching their opinion

In a case in which the length of skid marks (evidence of braking distance) is used to estimate a vehicle’s pre-skid speed an expert attacks the calculation because the vehicle weight is not included in the equation used to calculate speed, called the speed-from-skid marks equation. This equation, one of the most basic in collision reconstruction appears in every reconstruction text, and has been validated numerous times in testing. The vehicle weight is not a factor in the speed calculation but a layperson’s intuition that a heavier car would take a greater distance to stop than a lighter car, which is scientifically incorrect, might make the faux attack seem credible. Influenced by the outcomes desired by those who are paying their fees, experts may unwittingly distort or misinterpret the evidence.

Judicial training on the “science of collisions”

On March 15, 2017 at the Tennessee Judicial Conference, a presentation titled, “Scientific Concepts of Crash Reconstruction: Admissible Evidence vs. Junk Science,” was made by Prof. John Kwasnoski, a collision reconstruction expert of more than thirty years. Before the presentation several of the judges mentioned Rule 706, and said that they used the rule in medical cases because they had difficulty with the medical lexicon that the witnesses used, but they had not used a 706 expert in a motor vehicle case. The presentation included a number of examples of junk science taken from actual cases in which Prof. Kwasnoski had been involved, and in each example the judges were challenged to recognize whether or not the scientific foundation for the expert’s opinion was valid. The expert offering the “junk science” opinion may have sounded believable to a person with only a lay understanding of science, and yet a totally false opinion was offered.

Judge Leon Burns (Ret.) commented, “Prof. Kwasnoski’s presentation was certainly eye opening and presented in such a dynamic manner that everyone gave undivided attention for the entire session and wanted more.” The lesson from the presentation were clear – in order to make rulings or decisions involving crash reconstruction experts, judges must have a rudimentary understanding of the scientific foundation for the experts’ opinion(s) and their vocabulary.

John Kwasnoski is Professor Emeritus of Forensic Physics at Western New England University in Springfield, MA after 31 years on the faculty. He has consulted on more than 1300 collision reconstructions, and has offered sworn testimony on more than 200 occasions. He is one of the authors of the NDAA “Lethal Weapon” training program for prosecutors.

1 Frye v. United States, 293 F. 1013 (D.C. Cir. 1923)

2 Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 584-587

We are busy making plans for the
2018 TRAFFIC COURT SEMINAR
and hope you will make plans now to attend.

March 5–7, 2018
San Diego, California

The complete agenda and registration details
will be finalized in late fall. Check our website
www.ambar.org/jdncscj where details
will be posted when available.

If you want to make sure you
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UPCOMING NATIONAL JUDICIAL COLLEGE COURSES



Behind the Wheel: Today's Traffic Offender

October 23 - 26, 2017

Location **Reno, NV**

Tuition **\$1,079**

Conference Fee **\$289**

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Speaker Proposals Open Now – 2018

The Lifesavers Conference Planning Committee is now accepting speaker proposals for the 2018 Conference which will be held April 22-24 in San Antonio, Texas. Proposals must be submitted via Lifesavers' online portal and will be accepted until August 31, 2017. All speaker proposals are carefully reviewed for their applicability to the Lifesavers Conference audience with a particular focus on "research to practice" and "vigorously evaluated programs."

Researchers, academicians, students, and practitioners are also welcome to submit a poster via a separate application process in lieu of or in addition to a speaker proposal; however, the same review process applies. The poster submission portal will open this September.

Also please note that a limited number of scholarships are available to help speakers from non-profits, government agencies and advocacy groups offset a portion of their travel/conference expenses. So please don't let the cost of attending the Lifesavers Conference deter you from submitting a proposal for you and/or a colleague to speak in San Antonio.

CLICK HERE to submit your speaker proposal.

CONTACT INFO continued

State Judicial Outreach Liaisons:

Indiana: Hon. Tim Oakes:
in.jol.tim@gmail.com

Michigan: Hon. Patrick Bowler:
pcbowler@gmail.com

Oklahoma: Hon. Carol Hubbard:
hubbardranch@msn.com

Pennsylvania: Hon. Michael Barrasse:
mbarrasse@gmail.com

South Carolina: Hon. J. Mark Hayes, II:
mhayesj@sccourts.org

Tennessee: Hon. Leon Burns:
leonburns@gmail.com

Texas: Hon. Laura Weiser:
lweiser@yourhonor.com

Vermont: Hon. Ben W. Joseph:
bwjdisputes@hotmail.com

Virginia: Hon. Gordon Wilkins:
gordonwilkins@yahoo.com

Washington: Hon. Scott Bergstedt:
scott@bergstedtlaw.com