



Post-DUI Crash Risk

Impaired driving continues to be the greatest single factor contributing to fatal traffic crashes in Washington State. Despite the passage of numerous impaired driving laws since 2000, driving under the influence (DUI)-involved fatalities have remained constant. A major source of this toll has been the persistence of repeat DUI offenders. For the last sixty years, Washington legislators have tried to deter repeat DUI offenders through legal sanctions that rise in severity with each additional DUI conviction. Currently, sentencing guidelines for those convicted of DUI include milder penalties for first-time offenders with BACs below 0.15 mg/dl, while those with even one prior DUI conviction (and first-time offenders with BACs of 0.15 or higher) face markedly elevated penalties. All penalties increase yet again for offenders convicted of a third DUI charge, and those charged with a fourth DUI offense now face a Class B felony charge as well (see [RCW 46.61.5055](#)).

Regardless of the prevalence of post-DUI drivers in many studies, few crash risk estimates linking repeat DUI drivers to crash risks exist in the research literature. A 1992 study estimated that repeat DUI offenders (whether impaired at the time or not) were 40 percent more likely to be involved in fatal crashes than drivers with no prior DUI arrests. The study's author also estimated that repeat-DUI drivers with BACs of 0.10 or higher were four times more likely to be involved in a fatal crash than drivers in the same BAC range but without a previous DUI arrest. A follow-up study by the same author using 2010 data confirmed the general nature of these findings but determined that repeat DUI drivers were 62 percent more likely to be involved in fatal crashes than drivers without previous DUIs. Previous-DUI drivers with BACs at or above the *per se* limit (0.08 and above in this study) were about four times more likely to be involved in fatal crashes than drivers in the same BAC range but without a previous DUI. The risk of prior-DUI offender involvement in non-fatal crashes is also not well known. However, an analysis of 1985-1991 California crash data showed that drivers with one DUI conviction were 76 percent more likely to be involved in crashes than drivers with no previous DUI convictions, and drivers with two convictions were over twice as likely to be involved in a crashes as were drivers with no previous DUI convictions.

While few studies have focused on post-DUI crash risk, a large number have examined the problem of DUI recidivism. Because of the widespread adoption in the U.S. of multi-tiered DUI legal structures like Washington's, researchers have used this framework to identify factors predicting DUI recidivism and to design strategies for preventing it. These studies have established a number of specific predictors of recidivism, including obvious ones like driver BAC level at arrest, prior crash involvement, and prior license suspensions. However, variables like criminal history, socioeconomic status, psychometric test scores, and many others have also proved to predict recidivism. Research into offender psychological traits has found that DUI recidivists are more likely to score higher on measures of defensiveness, dishonesty, sensation-seeking, and hostility. Repeat-DUI offenders also tend to fault external factors like bad luck and unfair policing for their arrests and convictions. Unfortunately, blaming external factors such as these enables repeat-DUI offenders to avoid facing their substance use problems. However, certain therapeutic

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approaches, like motivational interviewing, are now used successfully to help offenders overcome their resistance to engaging in treatment programs.

Despite these programs, however, DUI-related deaths and injuries persist. Not surprisingly, many researchers have begun to question the validity of the existing DUI legal framework. For instance, several studies have shown that a “first” offense is unlikely to be the first time an offender has driven impaired, nor is it likely even to be a first DUI arrest. One recent study found, for example, that the view of legislators and courts that first-time offenders are “social drinkers who have only driven alcohol-impaired once” falls apart in the face of “published empirical estimates that a driver can drive alcohol-impaired 200 to 2,000 times before being arrested even once for DWI.” The authors conclude, “It is reasonable to assume that the typical so-called *first offender* will have had an extensive history of alcohol-impaired driving by the time his or her violation is recorded in” driver or vehicle administrative data. On this basis, these and other researchers question the justification for assigning lighter sanctions to those convicted of a first DUI. Faulty record-keeping and legal exemptions, like prosecutorial diversions and plea arrangements, have also contributed to this first-offense legal fiction, so in many cases a driver’s first DUI actually turns out to be a second offense.

Another reason for doubting the current DUI legal framework is that many recidivism studies have failed to account for important confounding factors like undetected drug use or the presence of psychiatric disorders among repeat-DUI drivers. As a result, research into the effectiveness of certain sanctions and treatment regimes, such as court-mandated participation in Alcoholics Anonymous programs, has found that they offer weak or inconsistent therapeutic benefits except in conjunction with other proven treatment approaches. In fact, paradoxically, several studies have shown that forced participation in AA programs can produce worse outcomes than no treatment at all.

Finally, many recidivism studies have included inconsistent comparison parameters, as well as data gaps in the records crucial for comparisons, leading to flawed results. For instance, while one study has estimated that the average time to recidivism among repeat DUI offenders is about six years, many studies have relied on much shorter follow-up periods, thus excluding offenders who later recidivated and thereby systematically underestimating the prevalence of DUI recidivism and generating erroneous estimates of re-offense risk.

A widespread inattention to all of these important factors has cast serious doubt on studies that have claimed to find meaningful differences between first offenders and repeat offenders. In fact, as one recent study found, “The recidivism rate among first offenders more closely resembles that of second offenders than of nonoffenders”. These and many other authors have also called for treatment programs that provide more effective and realistic approaches to managing both first-time and repeat-DUI offenders. One such study concludes, succinctly, that the “punitive approaches to DWI employed by the judiciary have failed to significantly reduce recidivism”.

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Reference Summaries:

Ahlin EM, Zador PL, Rauch WJ, Howard JM, and Duncan GD (2011). **First-time DWI offenders are at risk of recidivating regardless of sanctions imposed.** *Journal of Criminal Justice.* 39:137-142.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3095888/pdf/nihms265653.pdf>

This study investigated outcomes of various administrative sanctions and more severe punishments for the driving records of licensed Maryland drivers with at least one recorded DWI offense between 1973 and December 31, 1998. Using data from the Maryland Motor Vehicle Administration, the authors classified all licensed drivers by one of eight separate “disposition sequences” and then applied proportional hazard models to estimate the probability that drivers in the study sample would remain DWI-free through December 31, 2004. Covariates in the model included age, gender, the number DWI offenses on each driver’s record, and the number of days since the driver’s “index” (i.e., first) DWI offense. Results of this longitudinal study showed that first-time DWI offenders, regardless of the legal consequences they received, were just as likely to recidivate as repeat offenders, and those who received administrative sanctions only “had a risk of recidivating similar to that of drivers who were convicted” (1). These findings challenge the commonplace notion among judges and state legislators that first-offenders are “social drinkers who have only driven alcohol-impaired once” when numerous empirical estimates have shown that DWI offenders “can drive alcohol-impaired between 200 and 2,000 times before being arrested even once” for DWI (3). Based on this and other studies, the authors conclude that “punitive approaches to DWI employed by the judiciary have failed to significantly reduce recidivism” (1).

Bishop NJ (2011). **Predicting rapid DUI recidivism using the Driver Risk Inventory on a state-wide sample of Floridian DUI offenders.** *Drug and Alcohol Dependence.* 46: 423-429.
<https://www.sciencedirect.com/science/article/pii/S037687161100216X>

This study investigated the predictive power and sensitivity of the scales and subscales in the Driver Risk Inventory (DRI) for identifying significant predictors of DUI recidivism among a sample of 26,646 drivers arrested in Florida between January 1, 2008 and December 31, 2009. These scales measured *alcohol use risk*, *driving risk* (independent of substance use), *drug use risk*, *stress risk*, and *dishonesty*. Florida, like several other states, requires all DWI offenders to complete this self-report-based online screening tool, which is a source of data on demographic details, substance use and driving history, criminal history, and other measures. From the original sample, the author identified 90 repeat offenders and analyzed their responses on the DRI. He found that offenders scoring higher in alcohol use risk, driving risk, and criminal history were significantly more likely to reoffend within a short period of time (average time to recidivism was less than 5 months) than those scoring lower on those measures.

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Cavaiola AA and Strohmetz DB (2010). **Perception of risk for subsequent drinking and driving related offenses and locus of control among first-time DUI offenders.** *Alcoholism Treatment Quarterly.* 28: 52-62.

<https://www.tandfonline.com/doi/abs/10.1080/07347320903436169>

This study analyzed data for a sample of 139 first-DUI offenders from Monmouth County, New Jersey. Study authors administered two standardized measures of *perceived control* to each subject, Rotter's Internal-External Locus of Control Scale (RIELOC) and Donovan and O'Leary's Drinking Related Internal-External Locus of Control Scale (DRIELOC). The first scale measures a subject's sense of control over life's events. An *internal* orientation indicates that the subject believes in personal control over his or her life events, so is more likely to assume responsibility for life's events. An *external* orientation, on the other hand, signifies that the subject is more likely to blame bad luck or overly zealous police officers for what happens in life, including a DUI arrest. The DRIELOC, by comparison, measures perceived control over drinking. Scoring lower on this scale indicates that the subjects

Those scoring higher in internality on the more global RIELOC scale are more likely to seek out information and help from others while maintaining a belief that events in their lives depend more on their own actions than on luck or the actions of others. Those scoring lower in internality on the RIELOC scale were less apt to seek out information or help in an effort to reduce their risk of incurring another DUI arrest, regardless of whether or not they believed they had control of their own drinking behavior. The DRIELOC, on the other hand, was a useful indicator of an offender's willingness to seek out help in order to reduce the chances of getting another DUI arrest. Those scoring higher in internality on both scales appeared to be more willing to take whatever actions are necessary in order to reduce their reoffense risk.

Cavaiola AA, Strohmetz DB, and Abreo SD (2007). **Characteristics of DUI recidivists: a 12-year follow-up study of first time DUI offenders.** *Addictive Behaviors.* 32:855-861.

https://s3.amazonaws.com/academia.edu.documents/46107993/Characteristics_of_DUI_recidivists_a_12-20160531-7440-1kxsahj.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1557185487&Signature=jA%2FHBMvDwywsugTxfnJl4m%2FVBw8%3D&response-content-disposition=inline%3B%20filename%3DCharacteristics_of_DUI_recidivists_A_12-.pdf

This study investigated 77 randomly selected first-time DUI offenders from a "socioeconomically diverse" area of New Jersey. The researchers then screened all offender participants and administered MAST and MMPI surveys to them in order to investigate outcomes after their initial convictions. In their 12-year follow-up, study authors found that 29 of the 77 (38%) had recorded a subsequent re-arrest for DUI. The study found that repeat offenders (who averaged six years from first to second DUI offense) were slightly but significantly more likely to present themselves (to screening interviewers) "in a favorable manner: (i.e., "fake good") than first-time offenders, although both groups scored high in this area. Repeat offenders were also more likely to have had

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their driver licenses revoked *before* their first DUI convictions and then again *after* those convictions. Finally, repeat offenders were significantly more likely to receive convictions for reckless / careless driving and to be involved in a crash. The authors conclude that such “reckless driving behaviors may be more a reflection of a poor decision-making lifestyle rather than merely of alcohol use per se” (860). They recommend that screeners should pay closer attention to an offender’s prior driving record” than to “pencil and paper” survey responses that may falsely represent the respondent as benign or innocent.

Dickson MF, Wasarhaley NE, and Webster JM (2013). **A comparison of first time and repeat rural DUI offenders.** *Journal of Offender Rehabilitation.* 52:421-437.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4516123/pdf/nihms708118.pdf>

The NIH-funded study identifies noteworthy characteristics among a sample of 118 drivers convicted of DUI in one of three rural counties in Kentucky and recruited between February 2009 and April 2011. The study authors conducted structured interviews with all participants to gather demographic data, mental health histories, substance abuse histories, and criminal histories. They then compared first-time (n=56) and repeat (n=61) offenders along those parameters and found slight and non-significant differences between the two groups in terms of demographic variables and mental health issues. However, first-DUIs and repeat-DUIs differed significantly in terms along two important dimensions – drug use and history criminal history. Repeat offenders were significantly more likely to have ever used illicit drugs and to have used them during the past year. They were also more likely to have committed a non-DUI (and non-violent) crime and to have spent more time in prison after an adult criminal conviction. The authors also noted that this study was somewhat rare in finding that a majority of offenders (60%) were arrested for a drug-involved DUI (versus alcohol-involved). Nevertheless, both first-time and repeat DUI offenders in this study showed much higher rates of alcohol and drug use, as well as higher rates of mental health issues, than studies of urban DUI offenders have historically shown. Finally, less than half (45%) of all study participants reported having ever received any type of treatment for either substance use or mental health problems.

Faller S, Webster JM, Leukefeld CG, Bumaguin DB, Duarte PCAV, De Boni R, & Pechansky F (2012).

Psychiatric disorders among individuals who drive after the recent use of alcohol and drugs.

Revista Brasileira Psiquiatria [Brazilian Journal of Psychiatry]. 34:314-320.

<http://www.scielo.br/pdf/rbp/v34n3/v34n3a11.pdf>

This carefully designed cross-sectional study analyzed data gathered during a Brazilian national roadside survey conducted in 25 state capitals of that country. Follow-up interviews by trained examiners using the Mini International Neuropsychiatric Interview (MINI) resulted in 1,134 respondents who completed the entire survey. Results of a Poisson regression analysis showed that 40.5 percent of drivers testing positive for alcohol or drugs also had a co-occurring psychiatric disorder, compared to 12.9 percent of drivers who tested negative for alcohol and drugs. Adjusted rates revealed that substance-positive drivers were 2.5 times more likely to be diagnosed with any

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psychiatric disorder, 4.5 times more likely to be diagnosed with post-traumatic stress disorder (PTSD), 3.1 times more likely to be diagnosed with antisocial personality disorder (ASPD), and 2.5 times more likely to be diagnosed with a mood disorder (depression, mania, or hypomania). Of the 40.5 percent of drivers who tested positive for drugs or alcohol, nearly half (48.1 percent) were diagnosed with substance abuse or dependence. The authors conclude, "If drivers could be properly assessed and receive treatment for potential psychiatric problems, the prevalence of driving under the influence of alcohol and drugs could eventually decrease" (318).

Fell JC (1992). **Repeat DWI offenders: their involvement in fatal crashes.** *Proceedings of the 12th International Council on Alcohol, Drugs & Traffic Safety (ICADTS)*. Cologne, Germany. Sep 28-Oct 2, 1992.

http://www.icadtsinternational.com/files/documents/1992_137.pdf

In this article the author uses 1990 from the Fatality Analysis Reporting System (FARS), the Federal Highway Administration (FHWA,) and the (Federal Bureau of Investigation) FBI to construct relative risk estimates of fatal crash involvement for repeat DWI offenders. From an FHWA estimate of 167,015,250 licensed drivers in the U.S in 1990 and an FBI estimate that 5,339,500 of them had a DWI arrest during the previous three years, he calculated that 3.2% of U.S. licensed drivers had past three-year DWI arrests. Using the FARS field recording prior DWI convictions (in the past three years), he calculated that 4.5% of all drivers involved in 1990 fatal crashes in the U.S. were repeat DWI offenders. After stratifying by BAC level, he calculated the proportion of drivers in each level who had previous DWIs and found that repeat-DWI drivers with a BAC of 0.10 in a fatal crash in 1990 were 4.1 times more likely to be in a fatal crash than were drivers in the same BAC range but with no previous DWI. He also calculated that repeat DUI offenders (whether impaired or not) were 40% more likely to be involved in fatal crashes than drivers without a previous DUI arrest.

Fell JC (2014). **Update: repeat DWI offenders involvement in fatal crashes in 2010.** *Traffic Injury Prevention*. 15:431-433.

<https://www.tandfonline.com/doi/abs/10.1080/15389588.2013.838230>

In this article the author repeats and updates his earlier (1992) study, this time using 2010 FARS data. This subsequent study confirmed the general nature of the original findings but determined that repeat DUI drivers were now 62% more likely to be involved in fatal crashes than drivers without previous DUI arrests. Repeat-DUI drivers with high BACs (now defined as those with BACs \geq 0.08) were still nearly four times more likely (relative risk=3.81) to be involved in a fatal crash than non- DUI drivers in the same BAC range.

Nelson SE, Belkin K, LaPlante DA, Bosworth L, and Shaffer HJ (2015). **A prospective study of psychiatric comorbidity and recidivism among repeat DUI offenders.** *Archives of Scientific Psychology*. 3: 8-17.

<https://psycnet.apa.org/fulltext/2015-13938-001.pdf>

This study investigated whether repeat DUI offenders with higher rates of certain psychiatric disorders are more likely to recidivate than repeat DUI offenders who do not suffer from those

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disorders. The authors assessed the presence of psychiatric disorders in a group of 743 repeat DUI offenders recruited from a two-week inpatient treatment program where they received a standardized mental health assessment. After finishing treatment, the authors monitored these offenders for five years to evaluate DUI offenses, motor vehicle-related offenses, and criminal offenses. The authors concluded that co-occurrence of psychiatric and substance-use disorders did not predict DUI recidivism but criminal reoffense in general. They also found a significant link between attention-deficit disorder and motor vehicle-related offenses. They concluded that DUI is “one outlet in a constellation of criminal behavior” and “psychiatric comorbidity increases vulnerability for criminal reoffense” (9).

Rauch WJ, Zador PL, Ahlin EM, Howard JM, Frissell KC, and Duncan GD (2010). **Risk of alcohol-impaired driving recidivism among first offenders and multiple offenders.** *American Journal of Public Health.* 100: 919-924.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2853607/pdf/919.pdf>

For this study the co-authors obtained more than 100 million driver records from 1973 through 2004 and used them to determine whether and how the DWIA recidivism rates differed among Maryland drivers with 0, 1, 2, or 3+ previous offenses. The results indicated that recidivism rates (per 1000 licensed drivers) for drivers with one previous DWI closely matched those for the drivers with two previous DWIs. Rates for the three-plus group were significantly higher than rates among other driver groups. The authors also noted that dispositions for first-time offenders were significantly more lenient than for repeat offenders, offering many more opportunities to enter diversion programs. They concluded, “Any alcohol-impaired driving violation, not just convictions, is a marker for future recidivism” (919).

Schell TL, Chan KS, and Morral AR (2006). **Predicting DUI recidivism: personality, attitudinal, and behavioral risk factors.** *Drug and Alcohol Dependence.* 82: 33-40.

<https://www.sciencedirect.com/science/article/pii/S0376871605002541>

Using a sample of 284 repeat DUI offenders in Los Angeles County, CA, this study examined a range of previously identified factors in order to determine which of them would actually predict driving after drinking (DAD) in this population, particularly after controlling for known covariates. Previous studies, for instance, had found that the personality traits of *impulsivity* and *hostility* were significant predictors of re-offense. However, the authors of this study found that neither trait remained a meaningful predictor after controlling for sensation-seeking, social desirability bias, and other variables. The most powerful predictor of re-offending was a positive attitude toward alcohol: “Individuals who believe they are affected positively by alcohol intoxication are not responding to the standard penalties for DUI and persist in driving after drinking” (33).

Trimboli L and Smith N (2009). **Drink-driving and recidivism in NSW.** *Crime and Justice Bulletin.* 135: 1-16. New South Wales Bureau of Crime Statistics and Research: Sydney, AU.

<https://www.bocsar.nsw.gov.au/Documents/CJB/cjb135.pdf>

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This article examines the socio-economic, demographic traits, and other characteristics among a population of 23,351 offenders convicted in 2002 of driving while exceeding the PCA (Prescribed Concentration of Alcohol, i.e., the *per se* limit, which was then 0.05) in New South Wales. The authors identified each 2002 offense as the “index” offense for each driver, and they then used 2007 data to identify drivers with subsequent PCA offenses. They also analyzed treatment and penalty variables for each driver convicted in 2002 in order to determine how these variables impacted five-year outcomes. The results showed that 35.5% of offenders who were male, indigenous (aborigine), less than 25 years old, with prior license suspension or revocations, or with two or more previous convictions in the past five years will be convicted again within five years. The authors also challenge earlier estimates of recidivism rates by pointing out that they do not account for “those drivers who drink and drive but who are not detected by the police” (1).