

A Technical Memorandum

2016 Impaired Driving and Gender

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Introduction

The Impaired Driving Challenge

Impaired driving continues to be a significant public safety concern in Texas and across the nation. Despite reductions in alcohol-related traffic fatalities over the past thirty years, alcohol has remained a significant crash factor. According to the National Highway Traffic Safety Administration (NHTSA), there were 43,510 motor vehicle traffic fatalities across the country in 2005, and 31% of those fatalities were people killed in alcohol-impaired-driving crashes (13,582 individuals). Ten years later, there were 32,675 people killed in motor vehicle traffic fatalities in 2014. Despite reducing traffic fatalities by over 10,000 over a 10-year period, the percentage of those killed in alcohol-impaired driving fatalities remained the same, 31%.¹

The impaired driving challenge is even more pronounced in Texas, where the alcohol-impaired-driving fatality percentage was 41% in 2014.² That year, Texas led the nation along with Massachusetts and North Dakota with the highest alcohol-impaired-driving fatality percentage.

While the impaired driving challenge is not unique to Texas, what makes it unique in Texas is that the state has one of the fastest growing populations in the nation. With new drivers on Texas roads every day, the challenge is twofold: ensuring that existing and new infrastructure can meet the needs of a growing population, and educating and motivating motorists to choose not to drive while impaired.

Impaired driving crashes have ramifications beyond just the individuals immediately involved; they impact the economy through lost productivity, medical costs, legal and court costs, emergency service costs, insurance administration costs, congestion costs, and property damage.

Data

Texas state crash data originates from peace officers' completed crash reports. The crash reports are housed in a database referred to as CRIS, or the Crash Records Information System that is maintained by the Texas Department of Transportation (TxDOT). The crash data referenced in this technical memorandum are TxDOT reportable crashes. TxDOT reportable crashes are crashes that have occurred on public roadway and result in injury or death to a person or cause at least \$1,000 in property damage.

Unless otherwise indicated, crash data referenced in this technical memorandum is from CRIS. CRIS data varies from FARS (Fatality Analysis Reporting System) in two ways: CRIS data contains just Texas crash records whereas FARS contains data on all fatal crashes within the 50 states, District of Columbia, and Puerto Rico, and secondly, CRIS data is dynamic and can be continuously updated, whereas FARS data has certain cutoff dates by which states submit their crash data.

Crash data referenced in this tech memo was used to produce a crash data snapshot presentation given at the 2016 Texas Statewide Impaired Driving Forum in April 2016 and two infographics circulated to impaired driving stakeholders. This tech memo serves to complement and expand in detail on the

¹ National Highway Traffic Safety Administration. 2014 State Alcohol Impaired-Driving Estimates. (2016, June). Retrieved July 28, 2016, from <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812264>.

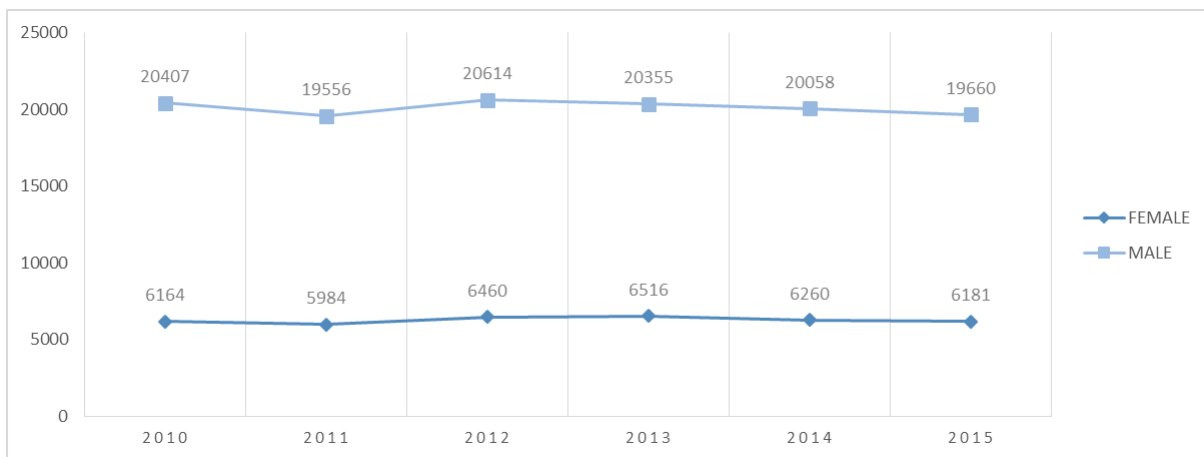
² According to CRIS data that was pulled in April 2016, the alcohol impaired driving fatality percentage was 39% in 2014. However, because a comparison is being drawn between alcohol impaired-driving fatality percentages in other states and in Texas, FARS data was referenced. The year 2014 was the most recent year for which FARS data was available.

abovementioned materials, specifically focusing on gender and impaired driving crashes in 2015. For the purpose of this report, driving under the influence (DUI) refers to crashes where a person has a blood alcohol concentration (BAC) greater than 0.00, or a person had a positive alcohol test (BAC \geq 0.08), or a positive drug test, or had alcohol or drug as a contributing factor. Drugs can include legal (prescription medication) and/or illegal drugs.

Impaired Driving in Texas

In 2015, there were a total of 25,841 DUI crashes in Texas. Figure 1 below illustrates the number of DUI crashes from 2010 – 2015 broken down by gender. Of 2015 DUI crashes, 76.1% involved male drivers, and 24.0% of crashes involved female drivers. These gender percentages have been consistent over the past six years.

Figure 1 DUI Crashes, 2010 - 2015



Crash Severity

In 2015, in DUI crashes where the driver was female, 3.41% were fatal. During the same time period, in DUI crashes where the driver was male, 4.86% were fatal. Male and female driver involvement in fatal DUI crashes both decreased from 2014 to 2015.

In DUI crashes with a male driver, a larger percentage were fatal and incapacitating crashes than crashes with a female driver. Conversely, in DUI crashes with a female driver, a larger percentage were non-incapacitating, not injured, and possible injury crashes than crashes with a male driver. This trend was consistent from 2010 – 2015 and is illustrated in Table 1 below.

Table 1 DUI Crash Severity and Gender, 2010 - 2015

2010									
Fatal		Incapacitating		Non-Incapacitating		Not Injured		Possible Injury	
M	F	M	F	M	F	M	F	M	F
1,007	218	1,594	436	3,927	1,230	9,987	3,61	3,461	1,148
4.9%	3.5%	7.8%	7.1%	19.2%	20.0%	49.0%	49.7%	17.0%	18.6%
2011									
Fatal		Incapacitating		Non-Incapacitating		Not Injured		Possible Injury	
M	F	M	F	M	F	M	F	M	F
970	199	1,591	418	3,737	1,167	9,531	2,962	3,347	1,173
5.0%	3.3%	8.1%	7.0%	19.1%	19.5%	48.8%	49.5%	17.1%	19.6%
2012									
Fatal		Incapacitating		Non-Incapacitating		Not Injured		Possible Injury	
M	F	M	F	M	F	M	F	M	F
991	199	1,700	464	3,716	1,206	10,165	3,230	3,662	1,274
4.8%	3.1%	8.3%	7.2%	18.0%	18.7%	49.3%	50.0%	17.8%	19.7%
2013									
Fatal		Incapacitating		Non-Incapacitating		Not Injured		Possible Injury	
M	F	M	F	M	F	M	F	M	F
1,038	242	1,605	425	3,548	1,129	10,501	3,413	3,61	1,202
5.1%	3.7%	8.9%	6.5%	17.4%	17.3%	51.6%	52.4%	16.0%	18.5%
2014									
Fatal		Incapacitating		Non-Incapacitating		Not Injured		Possible Injury	
M	F	M	F	M	F	M	F	M	F
1,065	228	1,552	369	3,483	1,129	10,445	3,283	3,135	1,163
5.3%	3.6%	7.7%	5.9%	17.4%	18.0%	52.1%	52.4%	15.6%	18.6%
2015									
Fatal		Incapacitating		Non-Incapacitating		Not Injured		Possible Injury	
M	F	M	F	M	F	M	F	M	F
956	211	1,468	353	3,258	1,045	10,547	3,431	3,050	1,047
4.9%	3.4%	7.5%	5.7%	16.6%	16.9%	53.7%	55.6%	15.5%	17.0%

In 2015, there were 1,167 fatal DUI crashes in Texas. Of those, males were behind the wheel for 956 crashes (82%) while females were behind the wheel in 211 crashes (18%). From 2014 to 2015, women were involved in 17 fewer DUI crashes while men were involved in 109 fewer DUI crashes. Despite these reductions, fatal crashes involving both genders have increased and decreased over the past six years, making it difficult to determine whether fatal DUI crashes are trending upward or downward.

Ethnicity

White, non-Hispanic drivers involved in DUI crashes from 2010 – 2015 comprised almost 50% of all driver ethnicities involved in a DUI crash. During the same time period, Hispanic drivers comprised almost 40% of driver ethnicities involved in a DUI crash. The ethnicities of drivers involved in a DUI crash from 2010 – 2015 is illustrated in the Table 2 below.

Table 2 DUI Crashes and Ethnicity, 2010 - 2015

Ethnicity	American Indian		Asian		Black		Hispanic		White		Other		Total
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	
2010	54	>1%	274	1.0%	2,417	9.2%	10,236	38.9%	13,223	50.3%	96	>1%	26,300
2011	38	>1%	284	1.1%	2,237	8.9%	9,960	39.5%	12,608	50.0%	69	>1%	25,196
2012	40	>1%	257	1.1%	2,394	8.9%	10,383	38.7%	13,684	51.0%	64	>1%	26,822
2013	32	>1%	325	1.2%	2,622	9.9%	10,300	38.7%	13,254	49.8%	75	>1%	26,608
2014	44	>1%	330	1.2%	2,726	10.5%	10,183	39.0%	12,653	48.5%	141	>1%	26,077
2015	33	>1%	332	1.3%	2,679	10.5%	9,919	38.7%	12,487	48.7%	185	>1%	25,635
Total	241	>1%	1,802	1.2%	15,075	9.6%	60,981	38.9%	77,909	49.7%	630	>1%	156,638

* Unknown ethnicity was not included in total or percent calculation

Where ethnicity of the driver was known in 2015 fatal DUI crashes, White, non-Hispanic drivers were behind the wheel more than any other ethnicity. In 2015 fatal DUI crashes, White, non-Hispanic female drivers were behind the wheel 66% (137 crashes) of crashes with a female driver, while White, non-Hispanic male drivers were behind the wheel 52% (491 crashes) of crashes involving a male driver. These percentages were consistent with trends between the years of 2010 – 2015. It should be noted that over the past six years, white, non-Hispanic females have been involved in a greater percentage of fatal DUI crashes than white, non-Hispanic males, comprising about 10% more. Similarly, Hispanic men involved in fatal DUI crashes have on average been involved in 10% more fatal DUI crashes than Hispanic women over the same time period. The percentage of fatal DUI crashes that have involved American Indian, Asian, and Black female and male drivers has remained stable over the past six years, at >1%, >1%, and 11% respectively.

Table 3 Female Fatal DUI Crashes and Ethnicity, 2010 - 2015

Ethnicity	Female												Total
	American Indian		Asian		Black		Hispanic		White		Other		
Year	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	
2010	0	0%	3	1.3%	25	11.5%	50	22.9%	140	64.2%	-	-	218
2011	2	1%	2	1%	21	10.7%	39	19.8%	132	67.0%	1	>1%	197
2012	0	-	1	>1%	21	10.6%	50	25.3%	125	63.1%	1	>1%	198
2013	0	-	2	>1%	28	11.7%	62	25.8%	148	61.7%	-	-	240
2014	1	>1%	2	>1%	25	11.1%	51	22.6%	145	64.2%	2	>1%	226
2015	0	-	1	>1%	21	10.0%	49	23.2%	137	65.0%	3	1%	211
Total	3		11		141		301		827		7		1290

*Unknown ethnicity was not included in total or percent calculation

Table 4 Male Fatal DUI Crashes and Ethnicity, 2010 - 2015

Ethnicity	Male												Total
	American Indian		Asian		Black		Hispanic		White		Other		
Year	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	
2010	2	>1%	8	>1%	118	11.8%	364	36.4%	502	50.2%	6	>1%	1,000
2011	1	>1%	7	>1%	86	8.9%	367	38.0%	502	52.0%	2	>1%	965
2012	1	>1%	6	>1%	109	11.1%	323	32.8%	546	55.4%	1	>1%	986
2013	0	-	7	>1%	105	10.2%	346	33.5%	573	55.4%	3	>1%	1,034
2014	4	>1%	6	>1%	124	11.7%	368	34.7%	550	52.0%	7	>1%	1,059
2015	0	>1%	9	>1%	124	13.1%	315	33.2%	491	51.7%	10	1%	949
Total	8		43		666		2,083		3,164		29		5,993

*Unknown ethnicity was not included in total or percent calculation

License Status

From 2010 to 2015, approximately 16% of all drivers involved in a DUI crash were unlicensed. During this time period, unlicensed female drivers accounted for 9.4% of female drivers involved in a DUI crash. Conversely, from 2010 – 2015, unlicensed male drivers accounted for 17.6% of male drivers involved in a DUI crash.

Table 5 below compares the percentage of unlicensed female drivers against the percentage of unlicensed male drivers involved in a DUI crash. In general, both the percentage of unlicensed female and male drivers involved in DUI crashes appeared to be increasing. In 2010, unlicensed female drivers accounted for 7.9% of female drivers involved in a DUI crash; by 2015, that percentage had jumped to 12.5%. Similarly, in 2010, unlicensed male drivers accounted for 17.0% of male drivers involved in DUI crashes; by 2015, that percentage had jumped to 21%.

Table 5 DUI Crashes and Gender of Unlicensed Drivers, 2010 – 2015

	Gender	Female		Male	
		Count	Percent	Count	Percent
Year	2010	486	7.9%	3,475	17.0%
	2011	429	7.2%	3,058	15.6%
	2012	482	7.5%	3,101	15.0%
	2013	641	9.8%	3,508	17.2%
	2014	728	11.6%	3,919	19.5%
	2015	775	12.5%	4,120	21%

From 2010 – 2015, White, non-Hispanic drivers comprised 50% of drivers involved in a DUI crash while Hispanic drivers comprised 40%. However, White, non-Hispanic drivers only comprised 14% of unlicensed drivers involved in a DUI crash from while Hispanic drivers comprised 75% of unlicensed drivers involved in a DUI crash. Hispanic drivers were not only overrepresented in terms of the percentage of unlicensed drivers involved in a DUI crash, but they were almost twice as overrepresented. This overrepresentation is illustrated in below in Table 6.

Table 6 DUI Crashes, Unlicensed Drivers, and Ethnicity, 2010 – 2015

	Ethnicity	American Indian		Asian		Black		Hispanic		White		Other		
		M	F	M	F	M	F	M	F	M	F	M	F	
Year	2010	3	-	9	-	225	72	2,824	287	398	126	5	-	
	2011	7	-	8	2	203	53	2,507	263	319	104	4	-	
	2012	-	1	7	2	198	50	2,569	300	311	123	1	8	
	2013	2	3	8	-	321	82	2,690	411	467	144	9	1	
	2014	4	1	5	9	461	130	2,875	405	540	177	14	4	
	2015	4	4	7	2	436	121	2,968	422	671	218	25	5	
	Total	29 (>1%)		59 (>1%)		2,352 (9.5%)		18,521 (75.2%)		3,598 (14.6%)		76 (>1%)		24,635

*Unknown ethnicity was not included in total or percent calculation

Seatbelt Use

From 2010 to 2015, 7% of drivers involved in DUI crashes were not wearing a seatbelt at the time of the crash. When examining gender, an average of 5% of females involved in DUI crashes were not wearing a seatbelt, and an average of 8% of males involved in a DUI crash were not wearing a seatbelt.

Table 7 DUI Crashes and Seatbelt Use, 2010 - 2015

	Gender	Female		Male	
		Count	Percent	Count	Percent
Year	2010	344	5.6%	1,679	8.2%
	2011	342	5.7%	1,672	8.6%
	2012	362	5.6%	1,665	8.1%
	2013	362	5.6%	1,589	7.8%
	2014	327	5.2%	1,644	8.2%
	2015	321	5.2%	1,496	7.6%

However, in general, it appeared as though the percentage of drivers who were impaired and not wearing a seatbelt has been decreasing slightly. In 2010, 5.6% of female drivers impaired were not wearing a seatbelt at time of crash; by 2015, that percentage had marginally decreased to 5.2%. The same trend was seen for male drivers: in 2010, 8.2% of male impaired drivers were not wearing a seatbelt, and by 2015, that percentage had decreased to 7.6%.

Drugs

Where drugs (other than alcohol) were found to be in a driver’s system, there were 5,921 notations on crash reports from 2010 – 2015. During this period, 71% of drivers who had a drug other than alcohol in their system were male, while 19% of drivers were female.

From 2010 – 2015, 18% of drivers in DUI crashes had cannabis in their system. Of these drivers, 83% were male and 17% were female. From 2010 – 2015, 18% of drivers in DUI crashes had CNS Depressants in their system. Of these drivers, 60% were male and 40% were female.

In DUI crashes where a drug was present, more female drivers had multiple drugs in their system followed by CNS Depressants. In DUI crashes where a drug was present, more male drivers had multiple drugs in their system followed by Cannabis.

Table 8 DUI Crashes and Alcohol/Drug Result, 2010 - 2015

Drug Result	Female	Male	Total
Cannabis	176	861	1037
CNS Depressants	412	628	1040
CNS Stimulants	178	698	876
Dissociative Anesthetics	22	62	84
Hallucinogens	10	38	48
Inhalants	7	18	25
Multiple Drugs (Explain in Narrative)	691	1427	2118
Narcotic Analgesics	122	220	342
Other Drugs (Explain in Narrative)	101	250	351
Total	1719	4202	5,921

Key Crash Data Findings

- In 2015, there were a total of 25,841 DUI crashes in Texas. Of these, 76% (19,660) were male drivers while 24% (6,181) were female drivers.
- In DUI crashes with a male driver, a larger percentage were fatal and incapacitating crashes than DUI crashes with a female driver. Conversely, in DUI crashes with a female driver, a larger percentage were non-incapacitating, not injured, and possible injury crashes than DUI crashes with a male driver.
- From 2010 – 2015, approximately 16% of all drivers involved in a DUI crash were unlicensed. During this time period, unlicensed female drivers accounted for 9.4% of female drivers involved in a DUI crash. Conversely, during the same time period, unlicensed male drivers accounted for 17.6% of male drivers involved in a DUI crash. In general, both the percentage of unlicensed female and male drivers involved in DUI crashes appear to be increasing.
- In 2015 DUI crashes where the driver was a female, 5.2% were not wearing a seatbelt. In 2015 DUI crashes where the driver was a male, 7.6% were not wearing a seatbelt. These percentages represented six-year lows for each gender.
- From 2010 – 2015, 18% of drivers in DUI crashes had cannabis in their system. Of these drivers, 83% were male and 17% were female. From 2010 – 2015, 18% of drivers in DUI crashes had CNS Depressants in their system. Of these drivers, 60% were male and 40% were female.

Conclusion

While great strides have been made in reducing impaired driving fatalities and crashes over the decades, there is still a great deal of work that must be done. One way to perhaps better understand and thus approach impaired driving crashes is to examine gender as a crash factor and determine if gender trends exist. An analysis of 2015 impaired driving crashes continues to demonstrate that DUI crashes were predominately associated with White, non-Hispanic males, and that a growing percentage of male drivers were unlicensed at the time of the DUI crash. Understanding driver characteristics associated with DUI crashes better equips the state the ability to target and reduce impaired driving crashes.