Traffic Safety Facts
Research Note

NHTSA
www.nhtsa.gov

DOT HS 811 095

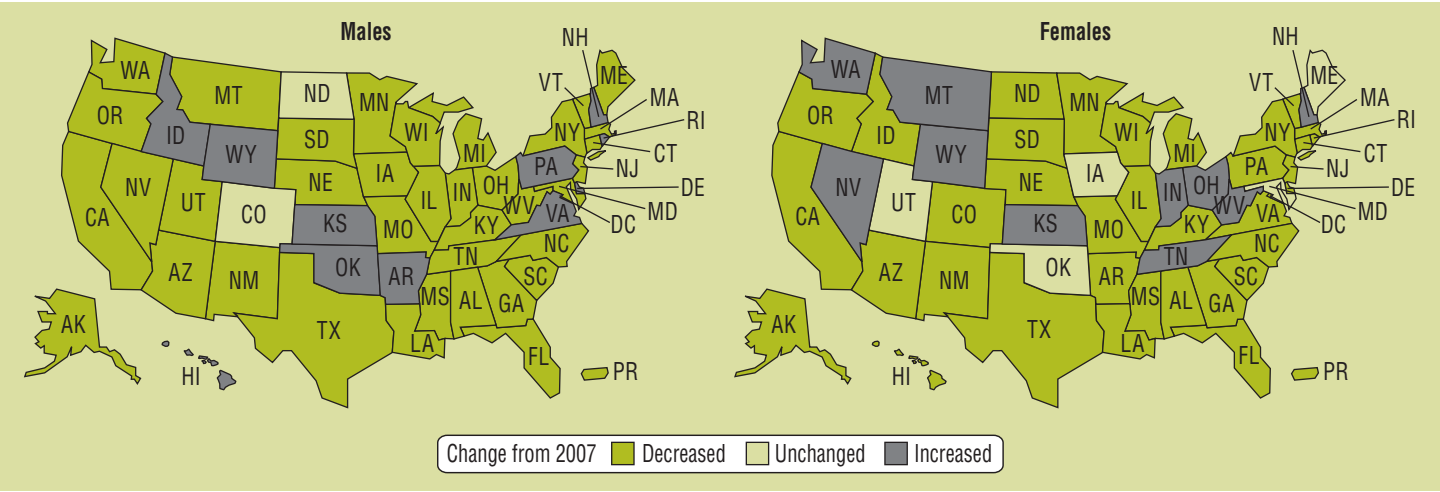
August 2009

Alcohol-Impaired Drivers Involved in Fatal Crashes, by Gender and State, 2007-2008

This Research Note emphasizes recent trends in the number of alcohol-impaired drivers involved in fatal crashes, by the gender of the driver as well as the State where the fatal crash occurred. This analysis was performed in light of recent data[1] from the Federal Bureau of Investigation that depicted a recent increasing trend in the number of female drivers arrested for driving under the influence (DUI) of alcohol. Analysis of NHTSA's Fatality Analysis Reporting System (FARS) shows that the number of alcohol-impaired (blood alcohol concentration, BAC=.08+ grams per deciliter) female drivers increased or remained flat in 15 States in 2008, as compared to 2007. In comparison, the number of alcohol-impaired male drivers increased or remained flat in 13 States. These changes are significant in the light of the overall drop of about 9 percent in the number of alcohol-impaired drivers nationwide from 2007 to 2008. Data from FARS for 2007 and 2008 was used in this research note. Figure 1 depicts the State-by-State changes in 2008 in the number of alcohol-impaired drivers in 2008 as compared to 2007, for males and females. The States are highlighted according to whether there were increases (grey) or decreases (green) in the number of alcohol-impaired drivers, or if they were unchanged (light green). The largest increase in the number of alcohol-impaired female drivers was in Ohio (+8, or a 17% increase) while the largest percentage increase was in New Hampshire (+125%, or an increase of 5 drivers). Other States showing an increase in the number of alcohol-impaired female drivers were Montana, Nevada, Wyoming, West Virginia, Indiana, Washington, Kansas and Tennessee. The five States where the number of alcohol-impaired female drivers was unchanged in 2008 were Iowa, Maine, Maryland, Oklahoma, and Utah.

The largest increase in the number of alcohol-impaired male drivers was in Kansas and Oklahoma (+24, or 26% and 15% increases, in Kansas and Oklahoma, respec-

Figure 1
Changes in the Number of Alcohol-Impaired Drivers in 2008, Compared to 2007, by State and Gender



Source: National Center for Statistics and Analysis, 2007 FARS Annual Report File and 2008 Final File

[1] FBI, Crime in the United States, 2007. Table 33: 10-Year Arrest Trend by Sex, 1998-2007. Washington, DC, September 2008. http://www.fbi.gov/ucr/cius2007/data/table_33.html

tively) while the largest percentage increase was in Idaho (+33%, or an increase of 16 drivers). Other States showing an increase in the number of male alcohol-impaired drivers were Hawaii, Rhode Island, Arkansas, Wyoming, Delaware, Virginia, Pennsylvania, and Kansas. The two States where the number of alcohol-impaired male drivers was unchanged in 2008 were North Dakota and Colorado.

Table 1 categorizes the States into three groups, States that showed decreases, increases, or remained flat in the number of alcohol-impaired drivers in 2008, by the gender of the driver. In 2008, the number of alcohol-impaired female drivers remained flat or increased in 15 States, comprising about 20 percent of the number of female alcohol-impaired drivers involved in fatal crashes nationwide. In comparison, the corresponding percentage for males was about 17 percent in the 13 States where the number of alcohol-impaired drivers remained flat or increased.

Table 1
Alcohol-Impaired Drivers Involved in Fatal Crashes, 2008 and Changes from 2007

Change	Number of States	Number of Alcohol-Impaired Drivers	% of Alcohol-Impaired Drivers in the U.S.
Alcohol-Impaired **Male** Drivers			
Increased	11	1,333	15%
Unchanged	2	167	2%
Decreased	37 + D.C.	7,675	84%
U.S.	**-**	**9,175**	**100%**
Alcohol-Impaired **Female** Drivers			
Increased	10	261	16%
Unchanged	5	70	4%
Decreased	36 + D.C.	1,318	80%
U.S.	**-**	**1,650**	**100%**

Components may not add to U.S. totals due to independent rounding.

In States where the number of alcohol-impaired female drivers increased, the percentage increase was greater than the corresponding percentage increase among male alcohol-impaired drivers in States that had increases in the number of male alcohol-impaired drivers (+23% versus +9%), as shown in Table 2. Table 2 depicts the extent of the change in the number of alcohol-impaired drivers by the two categories of changes, the States where the number of alcohol-impaired drivers increased and States where the number of alcohol-impaired drivers decreased in 2008. In the 10 States where the number of alcohol-impaired female drivers increased, the percentage increase from 2007 to 2008 was about 23 percent, from 212 to 261 female drivers. In the 36 States and the District of Columbia where the number of alcohol-impaired female drivers decreased, the percentage decrease was about 17 percent (from 1,580 to 1,318 female drivers). In comparison, in the 37 States and the District of Columbia that showed decreases in their numbers of alcohol-impaired male drivers, there were 975 (-11 percent) fewer alcohol-impaired male drivers in 2008, as compared to 2007. This however, was offset by an increase of 111 (+9 percent) male alcohol-impaired drivers for the 11 States where there were increases in their number of alcohol-impaired male drivers in 2008.

Alcohol-Impaired Drivers by the Number of Passengers Riding With Them, by the Gender of the Driver

Table 3 depicts the number of passengers riding with alcohol-impaired drivers, by gender. Overall, as compared to alcohol-impaired male drivers, a slightly higher percentage of alcohol-impaired female drivers had one or more passengers riding with them at the time of the crashes. About 35 percent (21%+14%) of the alcohol-impaired female drivers had one or more passengers riding with them as compared to 31 percent (21%+10%) of all alcohol-impaired male drivers who had one or more passengers riding with them.

Table 2
Number of Alcohol-Impaired Drivers, by Gender and Categories of Increasing and Decreasing Numbers in 2008 As Compared to 2007

Change in number of alcohol-impaired drivers in 2008 as compared to 2007	Males		Females	
	Change in Drivers	% Change in Drivers	Change in Drivers	% Change in Drivers
In States w/increase	+111	+9%	+49	+23%
In States w/decrease	-975	-11%	-262	-17%
U.S.	**-864**	**-9%**	**-212**	**-11%**

Components may not add to U.S. totals due to independent rounding.

Table 3
Alcohol-Impaired Drivers Involved in Fatal Crashes, by the Number of Passengers Riding With Them, 2008

Number of Passengers	Male Drivers		Female Drivers	
	Number	%	Number	%
None	6,403	70%	1,075	65%
1	1,889	21%	347	21%
2 or more	883	10%	17	14%
Total	**9,175**	**100%**	**1,650**	**100%**

Components may not add up to totals due to independent rounding

Alcohol-Impaired Drivers by the Number of Child Passengers (14 and Under) Riding With Them, by the Gender of the Driver

Table 4 depicts the number of child passengers (14 and under) riding with alcohol-impaired drivers, by gender. Overall, as compared to alcohol-impaired male drivers, a marginally higher percentage of alcohol-impaired female drivers had child passengers riding with them at the time of the crashes. About 3 percent of the alcohol-impaired female drivers had child passengers riding with them as compared to 1 percent of all alcohol-impaired male drivers who had child passengers riding with them.

Table 4
Alcohol-Impaired Drivers Involved in Fatal Crashes, by the Number of Children 14 and Under Riding With Them, 2008

Number of Passengers	Male Drivers		Female Drivers	
	Number	%	Number	%
None	9,118	99%	1,608	97%
With child passenger	57	1%	42	3%
Total	**9,175**	**100%**	**1,650**	**100%**

Components may not add up to totals due to independent rounding

Fatalities in Crashes Involving Alcohol-Impaired Female Drivers

Table 5 depicts the distribution of fatalities that occurred in crashes involving an alcohol-impaired female driver. In 2008, there were 1,837 fatalities in crashes involving an alcohol-impaired female driver. In 2008, about 80 percent (62%+18%) of the fatalities that occurred in crashes involving alcohol-impaired female drivers were either the alcohol-impaired female drivers themselves or passengers riding with them.

Table 5
Alcohol-Impaired Drivers Involved in Fatal Crashes, by the Number of Passengers Riding With Them, 2008

Role of Fatally Injured Person	Number	%
Alcohol-impaired female drivers	1,140	62%
Passengers riding with alcohol-impaired female drivers	327	18%
Occupants of other vehicles	239	13%
Nonoccupants	130	7%
Total	**1,837**	**100%**

Alcohol-Impaired Drivers Involved in Fatal Crashes, by State and Gender

Table 6 depicts the number, overall and alcohol-impaired, of drivers involved in fatal crashes by age and gender for 2007 and 2008. The numbers for States are highlighted if the number of male or female alcohol-impaired drivers involved in fatal crashes increased, decreased, or remained unchanged from 2007, as previously summarized in Table 1. In three States (Kansas, New Hampshire, and Wyoming), the number of alcohol-impaired drivers increased in 2008 among both males and females.

Estimates of alcohol involvement are generated using a combination of BAC values that are reported to FARS and imputed BAC values when they are not reported to FARS. In all 50 States, the District of Columbia, and Puerto Rico, it is illegal *per se* to drive or operate a motorcycle with a BAC of .08 g/dL or above (alcohol-impairment).

Recent DUI Arrest Data From FBI

The FBI's recent report, *Crime in the United States*, revealed a 28.8-percent increase in the number of women arrested for driving under the influence over a 10-year period from 1998-2007. These arrests are a measure of the drinking and driving public health and safety problem in the United States.

U.S. Department of Transportation
National Highway Traffic Safety Administration

This research note and other general information on highway traffic safety may be accessed by Internet users at: www-nrd.nhtsa.dot.gov/CATS

Table 6
Total, Alcohol-Impaired Drivers Involved in Fatal Crashes, by State, 2007-2008

State	Male Drivers in Fatal Crashes				Female Drivers in Fatal Crashes			
	2007		2008		2007		2008	
	Total	Drivers w/ BAC=.08+	Total	Drivers w/ BAC=.08+	Total	Drivers w/ BAC=.08+	Total	Drivers w/ BAC=.08+
Alabama	1,067	291	963	257	390	55	312	36
Alaska	81	19	56	16	34	3	34	1
Arizona	990	238	866	192	401	58	328	41
Arkansas	**611**	**129**	**572**	**135**	240	36	198	22
California	4,055	863	3,414	779	1,324	151	1,170	139
Colorado	580	132	520	132	203	26	184	25
Connecticut	303	81	264	66	97	21	86	15
Delaware	**121**	**31**	**112**	**38**	35	9	38	5
District of Columbia	34	10	36	8	12	1	6	0
Florida	3,247	692	2,992	674	1,190	144	1,118	134
Georgia	1,634	337	1,479	307	645	68	552	64
Hawaii	**129**	**32**	**108**	**35**	40	10	30	5
Idaho	**215**	**49**	**227**	**65**	72	13	74	12
Illinois	1,267	339	1,066	278	405	61	336	45
Indiana	941	183	804	161	**290**	**23**	**304**	**29**
Iowa	460	89	446	69	117	10	122	10
Kansas	**450**	**94**	**381**	**118**	**172**	**9**	**111**	**16**
Kentucky	860	176	805	165	324	25	285	20
Louisiana	986	291	887	268	297	45	270	38
Maine	170	48	136	26	62	11	67	11
Maryland	638	141	604	122	192	16	200	16
Massachusetts	400	117	333	95	163	31	103	21
Michigan	1,104	237	976	226	407	39	405	38
Minnesota	593	135	474	106	196	26	163	23
Mississippi	822	235	711	197	288	58	271	50
Missouri	962	255	942	238	343	52	297	47
Montana	239	75	211	59	**82**	**22**	**72**	**23**
Nebraska	239	58	213	46	116	13	68	7
Nevada	379	89	326	80	**124**	**17**	**110**	**19**
New Hampshire	**130**	**27**	**138**	**34**	**51**	**4**	**57**	**9**
New Jersey	728	152	598	126	259	35	190	25
New Mexico	376	98	336	82	113	15	104	11
New York	1,359	286	1,259	274	449	56	404	50
North Carolina	1,590	389	1,357	341	606	62	506	58
North Dakota	88	36	98	36	32	10	39	9
Ohio	1,264	314	1,210	275	**460**	**47**	**425**	**55**
Oklahoma	**729**	**164**	**763**	**188**	264	26	233	26
Oregon	434	108	372	94	144	25	141	22
Pennsylvania	**1,618**	**404**	**1,528**	**412**	516	67	479	54
Rhode Island	**57**	**16**	**53**	**19**	20	4	25	3
South Carolina	1,041	371	850	321	353	67	297	53
South Dakota	129	33	110	31	43	9	34	3
Tennessee	1,187	300	1,010	247	**439**	**49**	**366**	**56**
Texas	3,484	1,030	3,430	1,015	1,144	189	1,061	166
Utah	285	39	257	37	84	8	90	8
Vermont	61	15	76	8	24	6	26	3
Virginia	**999**	**235**	**831**	**242**	340	50	241	34
Washington	620	157	537	135	**163**	**24**	**165**	**30**
West Virginia	404	112	375	96	**140**	**12**	**102**	**16**
Wisconsin	752	247	627	161	243	43	224	41
Wyoming	**141**	**42**	**142**	**48**	**36**	**5**	**45**	**8**
U.S.	41,053	10,039	36,881	9,175	14,184	1,862	12,568	1,650
Puerto Rico	477	115	428	111	110	12	81	9

Note: Numbers are formatted based on **Increase**, Decrease, or No Change.
Source: Fatality Analysis Reporting System (FARS) 2007 Final and 2008 ARF Files