



Breath Test Refusal Rates in the United States – 2011 Update

Esther S. Namuswe,^a Heidi L. Coleman,^b and Amy Berning^b

Overview

Background

Breath alcohol concentration (BAC) test refusals by suspected impaired drivers are a challenge for impaired driving enforcement and prosecution. Periodically, NHTSA gathers data on State BAC refusal rates and develops an estimated national rate. This information can be useful to States and local jurisdictions. It enables them to track changes over time and compare their rates to other States and the Nation as a whole. NHTSA developed previous estimates for 1987, 2001, and 2005.

Objectives

This study was conducted to gather information about State BAC test refusal rates from 2011 and compare them to the most recent 2005 data. This study also sought to identify challenges and practices that may have an impact on BAC test refusal rates.

Methods

NHTSA obtained pre-existing 2011 data from the States regarding: (1) BAC test requests, (2) BAC test refusals, and (3) BAC test refusal rates. NHTSA also obtained information from the States regarding challenges and practices that may have an impact on BAC refusal rates.

Table 1
Breath Test Refusal Rates, 1987, 2001, 2005, 2011

Statistic	Year of Data			
	1987	2001	2005	2011
Mean	19%	25%	22%	24%
Median	14%	18%	17%	18%
Weighted Mean	–	24%	21%	19%
1st Quartile	11%	14%	11%	15%
3rd Quartile	22%	32%	33%	30%
Range	1% – 72%	5% – 85%	2% – 81%	1% – 82%

^a Public Health Fellow, Association of Schools of Public Health

^b Office of Behavioral Safety Research, National Highway Traffic Safety Administration

Key Facts

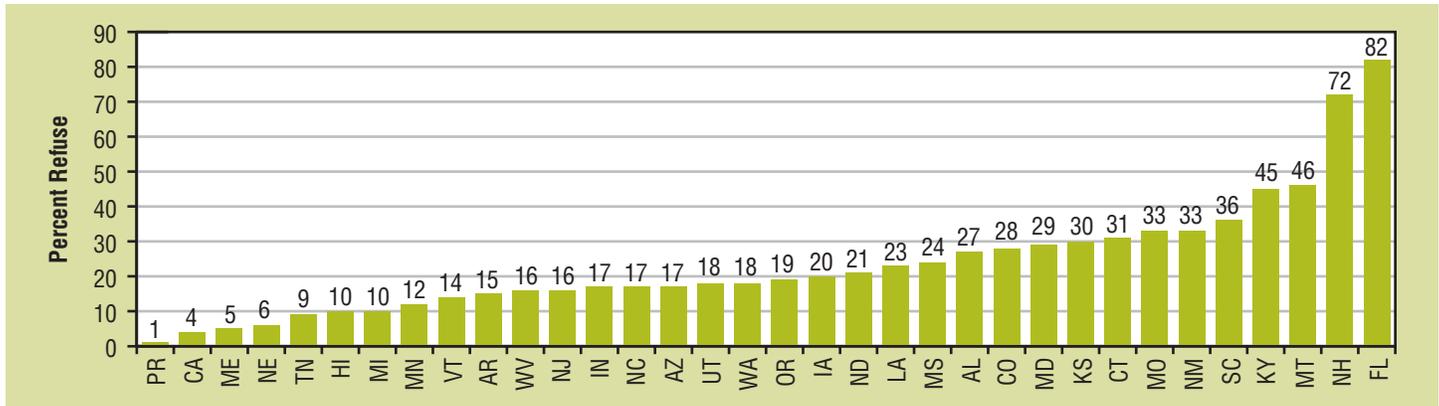
- NHTSA received sufficient data to calculate 2011 BAC refusal rates for 34 States. NHTSA was also able to compare the 2011 rates to the 2005 rates for 28 States.
- The average (mean) BAC test refusal rate in 2011 was 24 percent, compared to 22 percent in 2005, 25 percent in 2001, and 19 percent in 1987. See Table 1.
- The midpoint (median) BAC test refusal rate in 2011 was 18 percent, compared to 17 percent in 2005, 18 percent in 2001, and 14 percent in 1987. See Table 1 and Figure 1.
- The weighted average (weighted mean) BAC test refusal rate in 2011 was 19 percent, compared to 21 percent in 2005 and 24 percent in 2001. The weighted mean was not calculated for 1987. See Table 1.
- The range of State BAC test refusal rates in 2011 was 1 percent to 82 percent, compared to 2 percent to 81 percent in 2005, 5 percent to 85 percent in 2001, and 1 percent to 72 percent in 1987. See Table 1 and Figure 1.

Background and Objectives

In 2011, 32,367 people died in the United States in traffic crashes. Thirty-one percent (9878) of those fatalities involved an impaired driver, which NHTSA defines as a driver with a BAC of .08 grams per deciliter or above.¹ Every State in the U.S. has enacted an implied consent law, under which drivers suspected of impaired driving may be asked by law enforcement to submit to BAC testing and, if the drivers refuse, they may be subject to sanctions, such as the suspension of their driver's license.

BAC test refusals are a challenge in the enforcement of impaired driving laws. BAC test results are important pieces of evidence in cases of driving while impaired (DWI). BAC evidence is even more critical in cases based on a *per se* statute, under which drivers are convicted when their BAC

Figure 1
Breath Test Refusal Rates by State, 2011



Note that New Hampshire had 2011 data only from January to September. Therefore, the data are extrapolated based on the average for the 9-month period.

exceeds a specified level. The impact of BAC test refusals on prosecution was studied in a 2012 NHTSA report.²

Periodically, NHTSA gathers data on State BAC test refusal rates and documents the challenges of BAC testing. In previous studies, NHTSA found that the average (mean) refusal rates for the country as a whole, based on data that was provided by States, ranged from 19 to 25 percent. Specifically, the rates were:

- 19 percent in 1987,³
- 25 percent in 2001,⁴ and
- 22 percent in 2005.⁵

19–25 percent

The range of average (mean) BAC refusal rates estimated in previous NHTSA studies

Several years have passed since the last BAC test refusal rate update. The current study gathered information about State BAC test refusal rates from 2011 and compared the 2011 rates to the previous update, which was conducted in 2005. The current study also identified

challenges and practices that may have an impact on BAC test refusal rates.

Methods

In 2012, NHTSA obtained pre-existing 2011 data from the States regarding (1) BAC test requests, (2) BAC test refusals, and (3) BAC test refusal rates. NHTSA also obtained from the States information regarding some of the challenges and practices that may have had an impact on BAC refusal rates.

NHTSA calculated descriptive statistics, including averages (means), ranges, frequencies, and midpoints (medians). Similar to the 2001 and 2005 studies,^{4,5} NHTSA also calculated weighted averages (weighted means) of the State BAC test refusal rates, using State populations.

Results

NHTSA obtained at least some data from 45 States. Most States do not track all BAC test requests. More often, States track only BAC test failures (at or above the illegal *per se* level, which is .08 g/dL in every State) and BAC test refusals. Some States provided data regarding both the number of refusals and test requests. In addition, some States have developed their own BAC test refusal rate calculations, and compiled clarification notes regarding how they derived their calculations. Based on all the information NHTSA could access, we were able to calculate the BAC refusal rates for 34 States for 2011.

In 2011, the range of State BAC test refusal rates was 1 percent to 82 percent.

- Two States had BAC test refusal rates above 70 percent,
- Two additional States had rates above 40 percent,
- 22 of 34 States had BAC test refusal rates below 25 percent, and
- Seven States had rates of 10 percent or less.

See Table 1 and Figure 1.

Similar ranges were cited in earlier studies:

- 2 percent – 81 percent in 2005,
- 5 percent – 85 percent in 2001, and
- 1 percent – 72 percent in 1987.

In comparison, in 2005:

- One State had a BAC test refusal rate above 70 percent,
- Two additional States had rates above 40 percent,
- 27 of 39 States had BAC test refusal rates below 25 percent, and
- Seven States had rates of 10 percent or less.

See Table 1 and Figure 2.

Table 2
BAC Test Refusal Rates, 2005 versus 2011

State	2005	2011	Change
Alabama	31	27	-4
Alaska	16	–	*
Arizona	11	17	6
Arkansas	16	15	-1
California	6	4	-2
Colorado	–	28	*
Connecticut	29	31	2
Delaware	2	–	*
District of Columbia	14	–	*
Florida	40	82	42
Georgia	22	–	*
Hawaii	11	11	0
Idaho	20	–	*
Indiana	–	17	*
Iowa	–	20	*
Kansas	27	30	3
Kentucky	36	45	9
Louisiana	39	23	-16
Maine	7	5	-2
Maryland	29	29	0
Massachusetts	41	–	*
Michigan	–	11	*
Minnesota	13	13	0
Mississippi	24	24	0
Missouri	–	33	*
Montana	16	46	30
Nebraska	6	6	0
New Hampshire	81	72	-9
New Jersey	17	16	-1
New Mexico	18	33	15
New York	12	–	*
North Carolina	20	17	-3
North Dakota	14	21	7
Ohio	39	–	*
Oklahoma	34	–	*
Oregon	16	19	3
Puerto Rico	1	1	0
South Carolina	36	36	0
Tennessee	–	–	*
Utah	15	18	3
Vermont	17	15	-2
Virginia	3	–	*
Washington	16	18	2
West Virginia	11	16	5
Wisconsin	10	–	*

■ Light red: Small increase (<10%)

■ Dark red: Sizeable increase (10% or more)

■ Light green: Small decrease (<10%)

■ Dark green: Sizeable decrease (10% or more)

0: No change

*: Could not be compared (data in only one year)

Table 2 includes data from all States that provided data in 2005 and/or 2011.

Feedback From the States

BAC Test Recordkeeping

A number of States offered comments regarding the types of data they could provide and their record keeping procedures.

States offered comments regarding BAC test recordkeeping, challenges, and recommendations

- Most States did not have a centralized system for BAC test records.
- As a result, data from some sources were not captured.
- It is difficult for entities that use paper form recordkeeping to transfer all data accurately and in a timely manner.
- In many States, BAC test requests that did not result in a refusal or failure were not recorded.

Breath Testing Challenges Faced by States

The following are challenges that were noted by some States.

- Inadequate or outdated test instruments.
- States are not able to track all BAC test requests consistently, due to a shortage of personnel and other administrative resources.

Recommendations From the States

Many States were supportive of research to develop and test strategies to address the challenges they cited. Some States offered recommendations that were specific to their laws and testing procedures.

- States noted that refusal rates will remain high if the sanctions for failing a BAC test (i.e., by exceeding State *per se* thresholds) are more severe than those for refusing to submit to a test. States recommended that the license suspension periods for first and repeat refusals should be at least as severe as those for exceeding the State *per se* levels (.08 or higher BAC).
- Some States practice forced blood testing for offenders who refuse to submit to a breath test (e.g., by obtaining a warrant following a breath test refusal). States recommended that law enforcement agencies in these States should ensure that forced blood test results are recorded as a refusal (carrying longer suspension terms), and not confused for and recorded as a test-compliant offender who could receive a shorter suspension term.
- One State recommended tracking tests that the offender was “unable” to complete (e.g., due to instrument, suspect, or enforcement personnel issues) and efforts made to resolve those issues.

State Practices

States identified a number of potentially promising BAC testing procedures or practices, including:

- Quick access to evidential breath testing equipment in rural or frontier areas.
- Frequent data downloads from breath testing equipment.
- BAC test results of test-compliant suspects are separated from forced tests (tests taken pursuant to a warrant).
- Longer suspension terms for suspects who are forced to provide a BAC sample and shorter ones for compliant suspects.
- Refusal of a BAC test can be used as evidence of guilt.
- A centralized system for BAC test records.
- State record systems that permit selection of “Unable,” e.g., due to equipment failures, inadequate BAC test samples or other reasons.
- State record systems that identify certain data elements, such as minors, commercial drivers, DWI, high BAC results, and repeat offenders.

Promising practices have been identified also in previously published NHTSA reports.

In 2008, NHTSA produced a Report to Congress,⁶ which identified some promising strategies to reduce BAC test refusals, including the use of search warrants for blood draws when offenders are noncompliant, the use of forced blood testing when an offender refuses to be tested and “No Refusal Weekends” (when judges are available at all times throughout a weekend to issue warrants to overcome breath test refusals).

In 2012, NHTSA published a report, documenting State BAC testing and results for fatally injured and surviving drivers involved in fatal crashes from 1997 to 2009. This document identifies reporting practices and strategies that may improve BAC testing and reporting.⁷

Study Limitations

This study relied on pre-existing data obtained by NHTSA from participating States. Some States tracked only BAC test requests or only BAC test refusals. Accordingly, NHTSA did not have sufficient data to calculate a BAC test refusal rate for all States. Some States estimated the number of BAC test requests based on the number of DWI convictions, so BAC tests that did not result in a conviction may not have been included in the calculation.

Some States calculated BAC refusal rates, but did not provide notes explaining how they computed their rates. Table 3 in the Appendix lists the BAC test requests, refusals and BAC refusal rates for the States that provided data for 2011.

Most State databases were not set up to capture the data elements that were requested for this study. There is a wide variety of record systems, testing procedures, and availability of data elements among the States. These differences limit the types of analyses and comparisons that can be conducted between and across States. These problems were present also in past studies. The full scope of the test refusal problem is difficult to determine with precision, particularly for States that do not specifically code BAC test requests, as well as refusals and test failures.

The absence of a central repository for BAC test data leads to wide variations in the types of data tracked within each State.

Some States had not finished compiling their 2011 data at the time of this study and were either able to provide only estimates or not able to provide data at all. Therefore, their refusal rates may be under reported.

It is especially difficult to compare the national estimates for 2011 to those for 2005. Some States reported data in 2005 and not in 2011; and some States reported data in 2011 and not in 2005. These differences in State participation can impact overall national estimates. Comparisons both across and between States also should be viewed with caution, since States may have changed their data collection or analysis practices during the 6-year period from 2005 to 2011.

Conclusions and Lessons Learned

This study was conducted to gather information about State BAC test refusal rates from 2011 and compare them to previous study findings, from 1987, 2001, and 2005.

Based on the data received, the lowest national average (mean) BAC test refusal rate was in 1987 (19%). The mean for 2011 was 24 percent, which is slightly higher than the mean for 2005 (22%). The lowest midpoint (median) BAC test refusal rate was also in 1987 (14%). The median for 2011 was 18 percent, which is the same as 2005. The weighted mean BAC test refusal rate based on State populations was not calculated in 1987. It was 19 percent in 2011 and 21 percent in 2005.

States identified some challenges and potentially promising strategies that relate to the collection and use of BAC testing information.

From 2005 to 2011, the BAC refusal rate decreased in 11 States and increased in 12 States. There was no change in 5 States.

It was outside the scope of this study to determine the factors that may have led to pronounced decreases or increases in BAC test refusal rates in individual States or across the Nation. Future studies could explore these factors in high or low BAC refusal rate States.

References

- ¹ National Highway Traffic Safety Administration. (2012). Alcohol-Impaired Driving. Traffic Safety Facts: 2010 Data. (DOT HS 811 606). Washington, DC: National Center for Statistics and Analysis.
- ² Jones, R. K. & Nichols, J. L. (2012). Breath Test Refusals and Their Effect on DWI Prosecutions. (DOT HS 811 551). Washington, DC: National Highway Traffic Safety Administration.
- ³ Jones, R. K., Joksch, H., & Wiliszowki, C. (1991). Implied Consent Refusal Impact. (DOT HS 807 765). Washington, DC: National Highway Traffic Safety Administration. (1987 study)
- ⁴ Zwicker, T., Hedlund, J., & Northrup, V. (2005). Breath Test Refusals in DWI Enforcement: An Interim Report. (DOT HS 809 876). Washington, DC: National Highway Traffic Safety Administration. (2001 study).
- ⁵ Berning, A., Beirness, D., Hedlund, J., & Jones, R. (2007). Traffic Safety Facts Research Note: Breath Test Refusals. (DOT HS 810 871). Washington, DC: National Highway Traffic Safety Administration. (2005 study).
- ⁶ Berning, A., Compton, R., Vegega, M., Beirness, D., Hedlund, J., Jones, R., & Nichols, J. (2008). Refusal of Intoxication Testing: A Report to Congress. (DOT HS 811 098). Washington, DC: National Highway Traffic Safety Administration.
- ⁷ Casanova, T., Hedlund, J., & Tison, J. (2012, August). State blood alcohol concentration (BAC) testing and reporting for drivers involved in fatal crashes: Current practices, results, and strategies, 1997–2009. (DOT HS 811 661). Washington, DC: National Highway Traffic Safety Administration.

Appendix

Table 3
BAC Test Requests, Refusals and Refusal Rates, 2011

STATE	BAC Test Requests 2011	BAC Test Refusals 2011	BAC Test Refusal Rate 2011
Alabama	23,382	6,218	26.6%
Alaska	4,138	–	–
Arizona	17,212	2,953	17.2%
Arkansas	24,100	3,620	15.0%
California	196,665	8,022	4.1%
Colorado	26,267	7,293	27.8%
Connecticut	9,970	3,053	30.6%
Delaware	–	168	–
Dist. of Columbia	–	–	–
Florida	26,777	21,966	82.0%
Georgia	15,089	–	–
Hawaii	6,535	688	10.5%
Idaho	–	783	–
Illinois	–	–	–
Indiana	27,013	4,468	16.5%
Iowa	17,756	3,569	20.1%
Kansas	16,320	4,837	29.6%
Kentucky	9,739	4,340	44.6%
Louisiana	5,189	1,195	23.0%
Maine	7,566	373	4.9%
Maryland	22,343	6,493	29.1%
Massachusetts	–	–	–
Michigan	37,542	4,032	10.7%
Minnesota	28,084	3,530	12.6%
Mississippi	29,552	6,945	23.5%
Missouri	32,394	10,574	32.6%
Montana	5,917	2,691	45.5%
Nebraska	12,200	749	6.1%
Nevada	–	–	–
New Hampshire	4,214	3,047	72.3%
New Jersey	35,250	5,794	16.4%
New Mexico	9,491	3,172	33.4%
New York	–	–	–
North Carolina	47,149	8,029	17.0%
North Dakota	5,680	1,181	20.8%
Ohio	–	–	–
Oklahoma	–	–	–
Oregon	17,588	3,256	18.5%
Pennsylvania	–	–	–
Puerto Rico	8,736	110	1.3%
Rhode Island	–	–	–
South Carolina	27,542	9,818	35.6%
South Dakota	–	–	–
Tennessee	6,584	609	9.2%
Texas	–	–	–
Utah	7,697	1,345	17.5%
Vermont	2,191	323	14.7%
Virgin Islands	–	–	–
Virginia	–	–	–
Washington	39,580	7,059	17.8%
West Virginia	8,900	1,418	15.9%
Wisconsin	–	–	–
Wyoming	–	–	–



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