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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

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Forwarded to:

Honorable Diane K. Steed
Administrator
National Highway Traffic Safety
Administration
400 7th Street, N.W.
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

H-85-47 and -48

The tragic contribution of alcohol to violence on our highways long has been recognized. In fact, within 5 years of the first fatal motor vehicle crash in the United States, the relationship of alcohol to highway death and injury was described in a 1904 scientific journal as a developing public safety and health problem. 1/

In the years that followed, State and local officials found that State laws did not deal adequately with the problem of drunk driving and that the critical information needed to measure the nature and extent of the problem did not exist. One report indicates that in 1924 it appeared ". . . to be the belief of traffic commissioners and other informed individuals that probably one fourth to a third of our automobile accidents (were) . . . at least partly chargeable to alcohol use by drivers." 2/ But, as the landmark 1968 Alcohol and Highway Safety Report to Congress states, "Due to the lack of sufficiently precise data, exact estimates of the nature of the problem in the U.S. in the first third of the century . . . are not possible." 3/

The need for accurate and reliable information on the involvement of alcohol in highway crashes is, in fact, even more pressing today than ever before. Since 1980 there has been a virtual explosion of interest and activity nationwide concerning the drunk driving problem. Substantial commitments of financial and human resources are being made annually in every State to implement or expand drunk driving countermeasure programs. 4/ New laws to toughen drunk driving statutes have been enacted in most States, and Congress has passed several laws to encourage State action. National, State, and local officials are under considerable public pressure to reduce the estimated 23,500 alcohol-involved highway deaths and 650,000 alcohol-involved injuries suffered each year.

1/ Editorial, The Quarterly Journal of Inebriety 26: 308-309, 1904.
2/ Miles, W. R., Alcohol and Motor Vehicle Drivers, Proceedings, 13th Annual Meeting of Highway Research Board, Washington, D.C., Dec. 7-8, 1933.
3/ Secretary of Transportation, 1968 Alcohol and Highway Safety Report (hereinafter referred to as "1968 Report").
4/ Federal highway safety grant funding (at a FY 1985 level of $126.5 million) is allocated each year to the States to supplement State highway safety funding resources. (The National Highway Traffic Safety Administration estimates that Federal highway safety grant funds represent about 2-3 percent of total State highway safety (continued)

However, obtaining support particularly at the local level for initiating and sustaining action necessary to reduce this problem is dependent upon demonstrating that drunk driving is a serious local problem. Complete and accurate information on the involvement of drinking drivers in fatal highway crashes is essential for acquiring such support. To allocate resources for, and to evaluate the effectiveness of, drunk driving laws and programs at the State and national level, each State must know both the level of, and the annual changes in, the level of alcohol involvement in highway crashes. Such knowledge also is a critical prerequisite to the planning and implementation of effective countermeasure programs. However, a recent Safety Board review of State and national accident reporting systems indicates that this critical information may not, in fact, be available in many States.

During the 1960s and 1970s, several landmark steps were taken to improve the availability of accident data. As a result of the Highway Safety Act of 1966, the Department of Transportation became the principal Federal agency in the fight against drunk driving. On June 26, 1967, the Secretary of Transportation issued the first 13 National Uniform Standards for State Highway Safety Programs. These standards established prerequisites that States must meet to receive Federal highway safety funds provided by the 1966 act. The eighth standard, "Alcohol in Relation to Highway Safety," required each State to obtain quantitative tests for alcohol "on the bodies of all drivers and adult pedestrians who die within four hours of a traffic accident (and) on all surviving drivers in accidents fatal to others." 5/ (See appendix.) The accompanying "Highway Safety Program Manual" to Standard No. 8 emphasized that the purpose of the Standard was, in part, "to ensure that States and their communities have accurate information on the extent to which the immoderate use of alcohol is a factor in the highway crashes in their jurisdictions, to serve as a basis for resource allocations and for determining the effects of countermeasures." 6/

The National Committee on Uniform Traffic Laws and Ordinances (NCUTLO), which develops the Uniform Vehicle Code (the model traffic law for the United States), also expressed the need for accurate records on the involvement of alcohol in highway crashes by adopting in 1975 a new section (10-116) of the code which requires the determination of alcohol involvement in all drivers or pedestrians involved in fatal highway accidents.

However, the most significant 7/ national effort to improve the collection, analysis, and use of traffic accident data began in 1975 when the National Highway Traffic Safety

expenditures each year.) Accordingly, States develop annual "Highway Safety Plans" (HSP) to allocate this funding which are supposed to reflect the relative need for programs in the various highway safety program areas (i.e., alcohol, seatbelts, emergency medical service, police traffic services, pedestrian safety, etc.). Determinations of program "need" are supposed to be based upon an empirical "Problem Identification" process that, for example, indicates the level of alcohol involvement in the States' highway crashes and the impact of the alcohol countermeasure programs in reducing these crash levels. Because, historically, countermeasure programs have achieved only small reductions in alcohol-involved crash levels, there is a concomitant need for highly accurate and precise data which can allow measurement of small changes in crash levels.

5/ Program Standard 4.4.8, "Alcohol in Relation to Highway Safety," authorized under 23 U.S.C. 402(a).

6/ Highway Safety Program Manual No. 8, National Highway Safety Bureau, Federal Highway Administration, January 17, 1969. (emphasis added)

7/ The National Highway Safety Bureau (later, the National Highway Traffic Safety Administration) began collecting available fatal crash data from the States in the 1960s. A National Accident Summary first was published in 1970, and from 1972-1974 the Fatality Analysis File was the repository for State accident data. Both were partial files, however, which did not include data from every State.

Administration (NHTSA) established the Fatal Accident Reporting System (FARS). FARS is a computerized file containing data on all fatal motor vehicle accidents in the 50 States, Puerto Rico, and the District of Columbia (D.C.). It is the first census of fatal crashes in the United States and is regarded as the most complete data base available on fatal accidents. Operating on an annual budget of approximately $3 million, FARS uses more than 100 full- and part-time Federal and State employees in its operations. The reporting system enables making a State-by-State determination of whether each State has "accurate information on the extent to which immoderate use of alcohol is a factor in the (fatal) highway crashes in their jurisdictions. . . ." 8/ Using FARS data, the Safety Board has completed such an assessment and examined the current status of State alcohol-involved crash data. The Board's results indicate that considerably more than half of the States do not collect sufficient data on drivers who are fatally injured in highway accidents to allow an accurate, ongoing assessment of the extent to which alcohol is present in such accidents.

Testing of Fatally Injured Drivers

For the latest complete reporting year, 1983, only 13 States and the District of Columbia determined and reported blood alcohol concentration (BAC) test results on 80 percent 9/ or more of the drivers fatally injured in motor vehicle accidents in their jurisdictions. (See tables I and II.) Twenty-seven States determined and reported BACs for 50 to 79 percent of their fatally injured drivers, while 10 States reported on fewer than 50 percent. Nationally, alcohol test results are known for only 56.7 percent of all fatally injured drivers, 10/ 17.8 percentage points more than the 1975 reporting level of 38.9 percent when the FARS was established. (See table III.) The poor testing and reporting levels of many States reflected in the FARS point to one of several deficiencies in our current national and State accident data bases which limit the usefulness of these systems for measuring the level and changes in the level of alcohol-involved highway crashes.

Testing of Surviving Drivers in Fatal Crashes

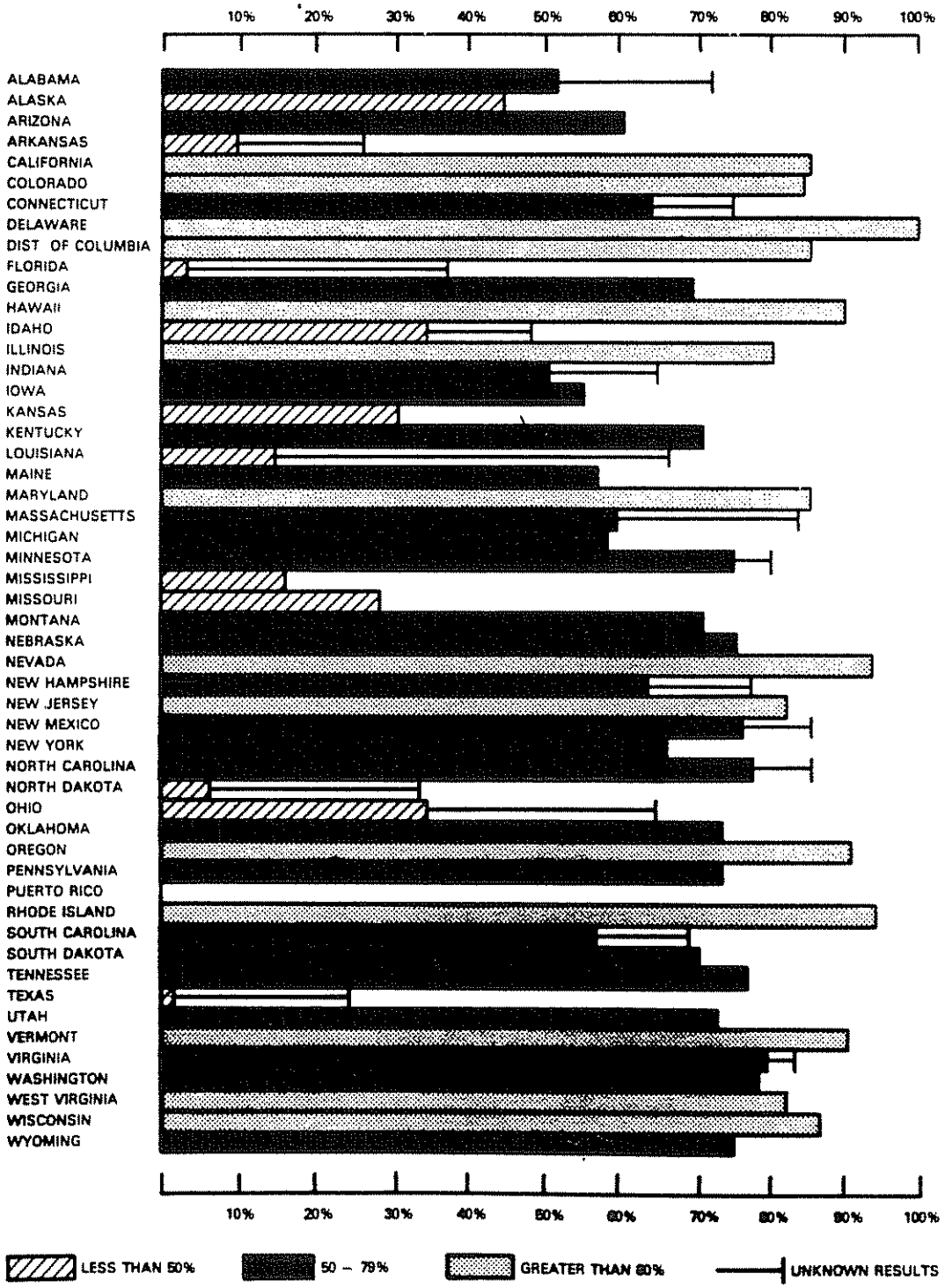
To assess accurately the role of alcohol in highway crashes and to evaluate the impact of State and Federal countermeasures, studies of alcohol-involved fatally injured drivers alone are insufficient and potentially misleading. When a multivehicle fatal crash occurs, the driver (or drivers) responsible for causing the crash may not be fatally injured. Moreover, in single-vehicle fatal crashes, the drivers' injuries may not be fatal. The Safety Board believes that BAC data on the drivers who survive fatal crashes are needed to complement information on fatally injured drivers.

8/ Program Standard 4.4.8, op. cit.

9/ The 80 percent reporting level is considered by NHTSA's National Center for Statistics and Analysis (which operates FARS) and other experts familiar with the problems inherent in testing and reporting blood alcohol involvement in highway crashes to be a "good" reporting level and reasonably close to complete reporting. Drivers who die more than 4 hours after a crash are not tested routinely because test results would not be representative of the BAC at time of crash. California, for example, found that 3 out of 4 drivers who had not been tested died more than 4 hours after their crash. In addition, medical treatment, such as transfusions, can preclude accurate testing.

10/ In the FARS, a "known" BAC result is one that is available to the FARS analysts. As discussed later, BAC testing may be performed in a given State, but the results are not made available by a hospital or some other State agency to the State office that maintains accident records.

Table I.--Percentage fatally injured drivers tested with known BAC.*



* Data from NHTSA 1983 Fatal Accident Reporting System.

Table II.--Number of States where 80 percent (or more) of driver fatalities are tested and the BAC is available from FARS.

Year	No. States*	States
1975	6	CA, CO, DC, NH, NJ, RI
1976	5	CA, CO NJ, OR, RI
1977	9	CA, CO, HA, NV, NH, NJ, OR, RI, WI
1978	8	CA, CO, DC, HA, NH, NJ, OR, RI
1979	9	CA, CO, DE, DC, NH, NJ, OR, RI, WI
1980	13	CA, CO, DE, DC, HA, NH, NJ, NM, OR, RI, SD, VT, WI
1981	14	CA, CO, DE, DC, HA, MD, NV, NH, NJ, OR, RI, VT, WA, WI
1982	15	CA, CO, DE, DC, HA, MD, NV, NJ, NM, OR, RI, UT, VT, WA, WI
1983	14	CA, CO, DE, DC, HA, IL, MD, NV, NJ, OR, RI, VT, WV, WI

*including the District of Columbia

Table III.--Testing of fatally injured drivers 1975-1983 (FARS).

Year	Percentage tested w/known results	Percentage tested w/unknown results	Percentage not tested	Unknown if tested
1975	38.9	9.8	37.7	13.7
1976	40.8	10.2	39.6	9.3
1977	43.2	11.5	33.5	11.8
1978	42.0	12.8	33.8	11.4
1979	44.9	12.6	33.6	9.0
1980	46.6	11.0	34.7	7.7
1981	48.6	10.8	35.1	5.5
1982	54.3	10.8	29.4	5.6
1983	56.7	10.5	28.0	4.7

Despite the fact that approximately 55 percent of all drivers involved in fatal crashes survive the crash, in 1983, only two States—Delaware and Vermont--routinely tested for and reported the BAC levels of a significant portion of surviving drivers in fatal crashes. Vermont has a law requiring tests of surviving drivers, while in Delaware it is the official policy of the state medical examiner to test surviving drivers. Only three additional States--Colorado, Nebraska, and Utah--test and report BAC levels on more than half of the surviving drivers involved in fatal crashes. 11/ (See table IV.) Nationwide, BAC levels were determined and reported on only 16.5 percent of the surviving drivers involved in fatal crashes. (See table V.)

Table IV.--Numbers of States where 50 percent (or more) of surviving drivers (in fatal crashes) are tested and the BAC is available from FARS.

Year	No. States	States
1975	2	CO, DE
1976	4	CO, DE, NE, UT
1977	3	CO, DE, NE
1978	2	CO, DE
1979	3	DE, NE, VT
1980	4	DE, NE, UT, VT
1981	4	CO, DE, NE, VT
1982	5	DE, NE, SD, UT, VT
1983	5	CO, DE, NE, UT, VT

Table V.--Testing of surviving drivers involved in fatal crashes (FARS).

Year	Percentage tested w/known results	Percentage tested w/unknown results	Percentage not tested	Unknown if tested
1975	9.9	3.6	73.0	13.5
1976	10.4	4.6	73.2	11.8
1977	10.8	4.8	68.6	15.8
1978	10.9	5.3	69.7	14.2
1979	12.0	5.6	70.6	11.8
1980	13.8	5.4	71.1	9.8
1981	14.6	4.5	73.9	7.0
1982	16.3	5.4	71.5	6.9
1983	16.5	5.7	71.8	6.0

Note: Surviving drivers account for about 55 percent of all drivers in fatal accidents.

11/ For 1983, FARS indicates Delaware tested (with known results) 90 percent of surviving drivers; Vermont--71 percent; Nebraska--60 percent; Utah--53 percent; and Colorado--51 percent.

Testing in Injury-Producing Crashes

Epidemiological studies of injury-only accidents estimate that between 18 and 26 percent involve alcohol. 12/ In 1982 alone, NHTSA estimated that approximately 708,000 persons were injured in alcohol-involved highway crashes. Clearly, reductions in alcohol-involved injury-producing crashes also are an important goal of States and local alcohol countermeasure programs. 13/ Unfortunately, no State routinely measures alcohol involvement in injury-only crashes because existing State laws do not permit BAC testing of drivers involved in nonfatal injury-producing crashes unless they have been arrested for driving while under the influence (DWI).

National statistics on injury-producing crashes are available from NHTSA's National Accident Sampling System (NASS). Since 1979, NHTSA has investigated and placed into the NASS computer files approximately 10,000 accidents randomly selected from police-reported accidents across the United States. The reporting of alcohol data in the NASS accident files is, however, even less complete than in the FARS system, because States test so few drivers involved in injury-only crashes.

Estimating Alcohol Involvement in Crashes

Because accurate and complete data on the presence of alcohol in all drivers involved in fatal and serious injury crashes have been largely unavailable, researchers as well as Federal, State, and local policy-making officials in many jurisdictions have been forced to estimate the extent of alcohol involvement in all fatal crashes (and, in some cases, in all types of highway crashes) from the information available on fatally injured drivers. But, as noted above, most States do not even routinely collect BAC data on all drivers killed and must estimate the overall level of alcohol involvement in all drivers who die in highway crashes. Consequently, even the national statistics published by NHTSA and others are, in fact, estimates derived from a sample of 15 so-called "good" States that test and report alcohol involvement in 80 percent or more of their driver fatalities. 14/

Extrapolating alcohol involvement from driver fatalities to other crash populations (i.e., all drivers in fatal crashes or injury crashes) can, however, introduce biases which can distort the true level of alcohol involvement. 15/ In a recent analysis of the FARS system, Voas found that "there is no subset of FARS data which can truly be considered to be . . . randomly and completely collected. . . Drivers [in the 15 good States sample] are not a random sample of the fatally injured drivers from their States." 16/ Because more drivers who are involved in the types of fatal accidents known to have high alcohol involvement (i.e., nighttime, single-vehicle, rural, and those involving drivers 15-35 years

12/ Fell J.C., Alcohol Involvement in Traffic Accidents. Recent Estimates from the National Center for Statistics and Analysis; Farris, R., et al., A Comparison of Alcohol Involvement in Exposed and Injured Drivers. NHTSA Report No. DOT-HS-4-00854, 1977; and Terhune, K.W., and Fell, J.C., "The Role of Alcohol, Marijuana and Other Drugs in the Accidents of Injured Drivers", Proceedings of the 25th Annual Conference of the American Association for Automotive Medicine, California, 1981.

13/ Injury crashes are, in fact, a statistically better measure for evaluating countermeasure program impact because their larger numbers allow small changes to be detected in States or localities that have few fatal crashes.

14/ Fell, op. cit.

15/ Voas, op. cit.; Zylman R., "A Critical Evaluation of the Literature on 'Alcohol-Involvement' in Highway Deaths." Accident Analysis and Prevention 1984; 6(2): 163-204.

16/ Voas, op. cit.

of age) tend to be tested for alcohol than those in other types of accidents (e.g., daytime, multivehicle, or urban), extrapolations not corrected for these differences tend to overestimate the number (and proportion) of alcohol-involved drivers. 17/

Voas also states that "perhaps the greatest potential for overestimating the number of alcohol-related fatalities is the extrapolation from results for fatalities to the results for survivors (of fatal crashes)." The principal reason for this bias, again, appears to be an oversampling of nighttime, rural, and single-vehicle crashes. In his study of FARS data from the 15 "good" States, Voas found that 45 percent of the fatalities are from nighttime crashes, compared to 40 percent for survivors; 50 percent of fatalities are from single-vehicle accidents, compared to only 36 percent for survivors; and 60 percent of fatalities are from rural accidents, compared to 50 percent for survivors.

Estimates of the extent of alcohol involvement in injury-only crashes are even less precise than those for fatal crashes. This is because States test so few drivers involved in injury-only crashes and almost never test passengers, pedestrians, or other road users. Moreover, because police only test drivers they suspect were drinking, the BACs of those measured are less likely to be representative of the entire population of injured drivers. The net effect of these biases would tend, therefore, to underestimate the proportion of alcohol-involvement and overestimate the average BAC in injury-only crashes.

Importance of Accurate Records

The importance of accurate and complete records on the involvement of alcohol in highway crashes is not simply to satisfy the need to accurately define the magnitude of the drunk driving problem in a particular State or locality, or nationwide. In fact, properly drawn samples of such crash records can and have served to estimate the extent of alcohol-involvement in fatal crashes. The importance of complete and accurate records and conversely the danger posed by biased and incomplete information relate most directly to the policy decisions State and local governments must make in addressing the drunk driving problem at their level.

Drunk driving is, by its nature, a local problem requiring localized solutions. The principal resources and responsibility for controlling drunk driving resides in our States, counties, and towns. Accurate and complete alcohol testing of all drivers involved in fatal highway crashes in that locality is necessary if a county or city is to be able to document the extent of its drunk driving problem, to design countermeasure programs, and to evaluate their effectiveness.

Similarly, State officials need to break down statewide data on fatal crashes to identify localities or driver groups with special problems, to target these areas or groups for special emphasis programs and, finally, to evaluate their impact. Because of the overrepresentation, for example, of drivers under age 21 in alcohol-involved fatal highway crashes, States have adopted a minimum legal drinking age of 21. In order to establish the need for and to evaluate the effect of such legislation, knowledge of the level of alcohol-involvement in fatally injured 18-, 19-, 20-, and 21-year-old drivers in the years prior and subsequent to the change in law is necessary. If fewer 18- to 20-year-old drivers killed in highway crashes are tested for alcohol than older drivers, or if testing

17/ Voas does indicate, however, that the sample of fatally injured drivers from the FARS 15 "good" States can provide a reasonable basis for a national estimate of the alcohol involvement in all fatally injured drivers if corrected for oversampling from nighttime and single-vehicle crashes.

drivers killed in highway crashes are tested for alcohol than older drivers, or if testing rates vary greatly from year to year, it might not be possible to evaluate the effect of the age-21 legislation. Crash records with biases simply may not reflect accurately a group's level of alcohol involvement.

The Safety Board believes that the information presented above clearly indicates that there is sufficient reason for concern about the limited effort of many States and localities to accurately measure the extent to which alcohol is involved in fatal highway crashes within their jurisdiction. Without BAC testing of all drivers involved in fatal crashes, or a better understanding of the biases and deficiencies in current State crash records systems, local, State, and Federal officials will not be able to evaluate accurately their efforts to control the drunk driving problem and to allocate resources therefore on an objective, scientific basis.

Deficiencies in State Alcohol Reporting Systems

The principal flaws in State systems designed to measure and report alcohol involvement in fatal crashes are the failure to test all drivers and the failure to report results of all tests that are obtained. Considering the latter category first, FARS statistics for "drivers tested with unknown results" indicate that, in a number of States, BAC tests have been performed on a substantial number of fatally injured drivers. However, the results have not been reported to the State agency responsible for collecting accident records. (See table VI.) In 13 States, tests are performed on an additional 10 percent or more of fatally injured drivers, but the results are not reported and hence "not known" by these State agencies. For three States, 30 to 50 percent of the test results are "unknown" to the agency responsible for collecting and storing accident reports.

The primary reason for the large numbers of unknown test results appears to be the lack of a formal system and/or sufficient personnel to link BAC test reports (typically sent to State health departments) with fatal accident reports collected by State police, public safety, or transportation agencies. For example, when a staff person was designated in the North Carolina Department of Public Health to coordinate the recording of toxicology results with Department of Public Safety accident analysis personnel, the percentage of fatally injured drivers tested and reported to the FARS increased from 45.04 percent (1982) to 78.74 percent (1983). Similarly, in 1982, when Alabama added a full-time FARS analyst to coordinate exchange of records between agencies, the percentage of fatally injured drivers reported tested increased from 17.5 percent to 52.0 percent. In other States, improvement in recordkeeping within agencies, better data processing equipment or procedures, as well as more staff time are needed to improve reporting levels. If administrative and manpower solutions such as these could be undertaken, currently "unknown" test results could become known, and reporting levels in five more States would immediately rise to 80 percent. (See table VI.)

However, failure to test fatally injured drivers rather than failure to report results remains by far the biggest problem in most States. Failure to test is frequently the result of a combination of factors. The most common reasons identified by the Safety Board for failures to test are:

- o no legal authority
- o lack of expertise
- o personal reluctance of those in the "testing system," i.e., police, physicians, coroners, etc.)
- o lack of resources (financial, personnel)

Table VI.--BAC testing of fatally injured drivers -1983 FARS.

State	No. of Drivers	Percent Drivers Tested With Known Results	Percent Drivers Tested With Unknown Results	Percent Drivers Not Tested	Percent Unknown if Driver Tested
		DRIVER FATALITIES			
Total	24,135	56.74	10.52	28.07	4.67
Alabama	555	52.07	20.90	26.49	.54
Alaska	92	45.65	9.78	4.35	40.22
Arizona	371	61.46	5.93	21.29	11.32
Arkansas	347	10.09	17.87	54.47	17.58
California	2,487	86.45	.24	13.31	-
Colorado	365	84.66	-	15.34	-
Connecticut	266	65.41	10.15	24.44	-
Delaware	60	100.00			
District of Columbia	21	85.71	4.76	9.52	-
Florida	1,374	3.64	34.21	58.97	3.20
Georgia	756	69.58	1.46	28.97	-
Hawaii	82	89.02	-	10.98	-
Idaho	160	36.25	11.88	46.25	5.63
Illinois	884	81.22	2.71	15.50	.57
Indiana	639	51.33	13.46	31.77	3.44
Iowa	320	56.25	6.25	35.00	2.50
Kansas	264	31.82	4.92	38.26	25.00
Kentucky	455	71.21	4.18	24.40	.22
Louisiana	547	15.17	51.92	32.91	
Maine	134	58.96	2.99	35.07	2.99
Maryland	380	86.84	-	12.63	.53
Massachusetts	347	59.08	23.34	5.48	12.10
Michigan	727	58.05	1.93	39.06	.96
Minnesota	344	76.16	3.78	9.88	10.17
Mississippi	432	17.59	.46	49.77	32.18
Missouri	533	28.71	2.44	24.20	44.65
Montana	178	71.91	7.30	19.10	1.69
Nebraska	151	76.16	1.99	15.89	5.96
Nevada	133	93.23	.75	6.02	-
New Hampshire	110	63.64	14.55	21.82	-
New Jersey	464	82.33	.86	16.81	-
New Mexico	272	76.47	8.46	11.03	4.04
New York	1,002	63.37	.70	11.48	24.45
North Carolina	668	78.74	6.59	14.22	.45
North Dakota	72	6.94	26.39	66.67	-
Ohio	910	34.40	29.34	27.91	8.35
Oklahoma	511	73.19	-	26.61	.20
Oregon	329	91.49	-	8.21	.30
Pennsylvania	1,001	74.43	4.80	20.78	
Rhode Island	54	94.44	-	1.85	3.70
South Carolina	459	57.73	11.33	30.94	-
South Dakota	94	70.21	-	29.79	-
Tennessee	648	77.01	.15	22.84	-
Texas	2,175	1.93	31.77	66.30	-
Utah	141	72.34	1.42	26.24	-
Vermont	55	90.91	-	7.27	1.82
Virginia	534	79.40	3.00	17.60	-
Washington	412	78.64	1.21	18.20	1.94
West Virginia	272	82.35	1.10	16.54	-
Wisconsin	437	87.19	.92	11.44	.46
Wyoming	11	75.68	2.70	20.72	.90

Forty-one States or jurisdictions (including the District of Columbia and Puerto Rico) have laws specifically authorizing blood alcohol tests on fatally injured drivers. (See table VII.) In some of the remaining States in which there is no specific legal authority to perform a BAC test, the result is incomplete testing and reporting. Arkansas, for example, did not have a law authorizing such tests until 1983. Before that, the lack of a law was considered to be a major barrier to complete reporting. State officials in Arkansas now expect that their reporting level will improve dramatically. The lack of a State law, however, does not appear to have been a barrier to complete reporting in all jurisdictions. The District of Columbia and Maryland, for example, do not have specific statutes requiring chemical tests in fatal crashes (as in Uniform Vehicle Code Section 10-116), but nevertheless attain high reporting levels because of the broad authority and consistent efforts of their medical examiners to investigate violent deaths of any kind.

In some States where a system of local lay coroners persists, the medical/forensic expertise may not be available at the local level to organize and manage a permanent system to obtain and analyze blood samples. Moreover, since coroners frequently serve only part-time in this capacity, they have other obligations and are not always concerned with systematically gathering accident data. In Ohio, for example, there are 88 independent, elected coroners, one in each county. Obtaining the ongoing cooperation of so many local officials has proved difficult, to the detriment of the alcohol testing program.

During the course of this inquiry, the Safety Board found that some police and medical personnel are reluctant to test and report blood alcohol information. Some police, for example, said they are reluctant to request a test for fear of causing embarrassment to families. More commonly, however, police are so occupied with other duties, such as securing the crash scene and helping the injured, that they do not make the effort to see that a blood sample is obtained. As described in a Safety Board study on repeat offender drunk drivers, 18/ physicians and hospital personnel often are reluctant to perform blood alcohol analyses or to release results for fear of involvement in lengthy litigation. Finally, some States and localities simply have assigned higher priorities to other needs than to establishing a complete alcohol involvement reporting system.

National Highway Traffic Safety Administration

The Safety Board believes that efforts by the NHTSA to improve alcohol reporting by the States have been insufficient and should be increased greatly to assist States in attaining full compliance with Highway Safety Program Standard No. 8. The principal resources available to the States from the Federal government are the highway safety funds allocated to the States to collect fatal accident data (funds commonly used to hire State FARS analyst personnel) and technical assistance provided by NHTSA headquarters and regional staff.

The primary responsibility for providing technical assistance to and supervision of State data collection is assigned to 10 NHTSA staff members (one in each region) who are designated as regional FARS contract technical managers (regional CTMs). Because of the limited staffing of NHTSA regional offices, the regional CTMs (as well as the other regional staff) are responsible for other highway safety programs in addition to the individual State FARS systems in their regions. Consequently, the regional staff has been

18/ Safety Study: "Deficiencies in Enforcement, Judicial and Treatment Programs Related to Repeat Offender Drunk Drivers," September 18, 1984 (NTSB/SS-84/04).

Table VII.--State law requiring BAC tests on fatally injured drivers.

State	States With Law	States Without Law	States With Law for Testing Surviving Drivers
Alabama		x	
Alaska		x	
Arizona	x		
Arkansas	x		
California	x		
Colorado	x		
Connecticut	x		
Delaware	x		*
District of Columbia	x		
Florida		x	
Georgia	x		
Hawaii	x		
Idaho	x		
Illinois	x		
Indiana	x		
Iowa		x	
Kansas		x	
Kentucky	x		
Louisiana	x		
Maine		x	
Maryland		x	
Massachusetts	x		
Michigan	x		
Minnesota	x		
Mississippi	x		
Missouri	x		
Montana		x	
Nebraska	x		
Nevada	x		
New Hampshire	x		
New Jersey	x		
New Mexico		x	
New York	x		
North Carolina	x		
North Dakota	x		
Ohio	x		
Oklahoma	x		
Oregon	x		
Pennsylvania	x		
Puerto Rico	x		
Rhode Island	x		
South Carolina	x		
South Dakota	x		
Tennessee		x	
Texas	x		
Utah	x		
Vermont	x		x
Virginia		x	
Washington	x		
West Virginia	x		
Wisconsin	x		
Wyoming	x		
Total	41	11	1

* State has established policy for testing surviving drivers involved in a fatal crash.

limited in the time it has had available to work for improved alcohol reporting in each of their States, and such efforts to date have not received a high priority.

NHTSA should take action to ensure that the States improve the testing and reporting of all drivers involved in fatal highway crashes, and upgrade State crash records and information reporting systems. NHTSA should conduct an active program to assist States with low testing and reporting rates in conducting a thorough review of their testing and reporting systems. The Federal highway safety grant process as well as State funding should be utilized to institute the necessary remedial actions that are identified. Such an effort is consistent with NHTSA's mandate to determine the extent to which alcohol is involved in highway accidents, and is essential to meeting its responsibility to assist the States in their efforts to counter the impact of alcohol abuse on highways.

Conclusion

The Safety Board, in pursuit of its mission to "investigate . . . the facts, conditions and circumstances and determine the cause or probable cause" of transportation accidents, long has recognized the critical importance of obtaining complete information on the level of alcohol present in all persons involved in the transportation accidents it investigates. With the current high level of public and official interest in the problem of drunk driving and the considerable amount of local, State, and Federal funds being expended to counter it, there is a critical need to determine whether programs are, in fact, reducing alcohol-involved deaths. Legislators, elected officials, and program administrators at all levels of government do not wish and cannot afford to make policy and program decisions based on incomplete or misleading information. Based on the evidence presented here, however, it appears that in many States the information required to make these decisions is both incomplete and potentially misleading.

To address the lack of accurate and complete information on the role of alcohol in highway crashes, the Safety Board urges those States without laws authorizing testing for the presence of alcohol in fatally injured drivers to enact such laws. Moreover, the Board is convinced that such authority should extend to the testing of all drivers involved in fatal crashes. Section 10-116 of the Uniform Vehicle Code (as amended) is an appropriate model for States to follow. States also should strive to determine the level of alcohol involvement in crashes involving serious injury to allow a more complete understanding of the role of alcohol in highway crashes.

Those States that now require the testing of fatally injured drivers should improve their regulations, procedures, and programs to ensure that testing for alcohol involvement is actually performed and properly reported. To this end, each State should review its support for the Fatal Accident Reporting System. The Safety Board believes that the completeness and accuracy of the Fatal Accident Reporting System is vital to understanding the nature and extent of alcohol involvement in highway crashes.

Therefore, the National Transportation Safety Board recommends that the National Highway Traffic Safety Administration:

> Undertake a more extensive and aggressive program to provide direct technical support to States to improve alcohol testing and reporting of all drivers involved in fatal highway crashes. (Class II, Priority Action) (H-85-47)

Urges States with deficient programs to increase the allocation of highway safety grant program funds and State matching funds to improve the measurement and reporting of alcohol involvement in fatal highway crashes. (Class II, Priority Action) (H-85-48)

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY, Member, concurred in these recommendations.

By: Jim Burnett
Chairman

APPENDIX

HIGHWAY SAFETY PROGRAM STANDARD 8
ALCOHOL IN RELATION TO HIGHWAY SAFETY

PURPOSE

To broaden the scope and number of activities directed toward reducing traffic accident loss experience arising in whole or in part from persons driving under the influence of alcohol.

STANDARD

Each state, in cooperation with its political subdivisions, shall develop and implement a program to achieve a reduction in those traffic accidents arising in whole or in part from persons driving under the influence of alcohol. The program shall provide at least that:

I. There is a specification by the State of the following with respect to alcohol related offenses:

   A. Chemical test procedures for determining blood-alcohol concentrations.

   B. (1) The blood-alcohol concentrations, not higher than 0.10 percent by weight, which define the terms "intoxicated" or "under the influence of alcohol"; and

      (2) A provision making it either unlawful, or presumptive evidence of illegality, if the blood-alcohol concentration of a driver equals or exceeds the limit so established.

II. Any person placed under arrest for operating a motor vehicle while intoxicated or under the influence of alcohol is deemed to have given his consent to a chemical test of his blood, breath, or urine for the purpose of determining the alcohol content of his blood.

III. To the extent practicable, there are quantitative tests for alcohol:

   A. On the bodies of all drivers and adult pedestrians who die within four hours of a traffic accident.

   B. On all surviving drivers in accidents fatal to others.

IV. There are appropriate procedures established by the State for specifying:

   A. The qualifications of personnel who administer chemical tests used to determine blood, breath, and other body alcohol concentrations;

   B. The methods and related details of specimen selection, collection, handling and analysis;

   C. The reporting and tabulations of the results.

V. The program shall be periodically evaluated by the State, and the National Highway Safety Traffic Administration shall be provided with an evaluation summary.