

NHTSA Research Is Hard to Come By

Prying research findings out of the National Highway Traffic Safety Administration (NHTSA) can be an arduous task. This isn't a new problem, but it's one insiders suggest is getting worse — again.

The problem appears to be that, because so much NHTSA research has public policy implications, many reports have to be "sanitized" before they're politically acceptable. This is especially true of reports suggesting payoffs from government regulation. Another explanation for long delayed

research is bureaucratic inertia. This cover story chronicles the problems of never-ending and/or languishing NHTSA research and reflects on why this is happening.

Short Background: NHTSA rulemaking ground to a virtual halt for much of the 1980s, with the agency often citing the need for additional research before it could move forward. The major exception was a long-delayed automatic restraint standard issued in 1984 — and then only after NHTSA was ordered to do so by the Supreme Court.

During Administrator Jerry Ralph Curry's three years at NHTSA, the rulemaking backlog was largely eliminated. New standards were issued to upgrade the safety of light trucks, vans, and utility vehicles. Another important advancement is NHTSA's new side impact protection standard — but the early history of this standard provides a classic example of how delayed research holds up rulemaking. After saying in 1979 that improving occupant protection in side impacts was one of the agency's highest

short-term priorities, NHTSA terminated rulemaking in 1982 because "extensive research still remains to be completed." (See *Status Report*, Vol. 22, No. 9, August 15, 1987.)

When Curry arrived in 1989, he said he was disappointed with the agency's pace. "The perfect is the enemy of the good," Curry declared, meaning he didn't intend to wait for the perfect research to support the perfect side impact protection standard. He intended to use existing research as the basis for a good side impact standard. When additional research was completed, the new administrator reasoned, then rulemaking would be reopened to improve the standard.

This is exactly what Curry did, relying on existing research to issue a side impact protection standard in late 1990. Curry's tenure at NHTSA is over, though. He has stated he's leaving the agency.

Pedestrian Protection: A current case of endless research and delayed rulemaking involves pedestrian protection. NHTSA estimates that about 109,000 pedestrians are injured annually in motor vehicle crashes, and one of the most serious problems is head injury. Impacts with hoods, fenders, and windshields cause the most injuries.

A 1990 NHTSA research document describes procedures for evaluating the injury potential when a pedestrian's head strikes the hood of a motor vehicle. Researchers concluded then that, "with little or no additional research and development effort," performance criteria to reduce severe head injuries could be developed.

Were such criteria published? No. The

agency continued its pedestrian research. By November 1991, a document by NHTSA researchers was describing the pedestrian head injury program as "well advanced." The latest research findings were promised then but still haven't been presented.

One former NHTSA staffer says the pedestrian studies the agency already has are "too convincing." The research "was too good. It showed the feasibility of rulemaking." Yet, at a public meeting in December 1991, senior NHTSA officials said that no pedestrian rulemaking was planned and that research would be discontinued.

Tim Hoyt, a former NHTSA employee who worked on pedestrian research and is now director of safety at Nationwide Insurance Company, is one of the few who will speak on the record. He says he knows "it has been and continues to be very difficult to get pedestrian and other research results published My perception of why is that some of the results might put pressure on the agency to move forward on rulemaking at a time when it's not anxious to do that."

A Congressional report on NHTSA's pedestrian research findings has been written and now is being revised, reportedly at the direction of the agency's front office.

Air Bags: After automatic restraints began appearing in more and more new cars, NHTSA started to evaluate both air bag and automatic safety belt effectiveness in crashes. The air bag segment of the evaluation was completed last year, but its release is being held up. The holdup involves automatic belts, NHTSA

says. Findings are conclusive that air bags lower occupant death and injury risk, the agency explains, but findings about the effectiveness of automatic belts are, so far, inconclusive. Meanwhile, the positive air bag findings remain under agency cover.

"The front office said to do finer detail [on belts]," a NHTSA staffer says. Such an exercise may be pointless because automatic belts are practically dinosaurs. They're in fewer and fewer new cars, while more cars are being equipped with air bags.

The decision not to release information on air bag effectiveness is costing NHTSA dearly. The media are asking for information and, because NHTSA hasn't released its comprehensive report, reporters fishing for material are getting incomplete information through the Freedom of Information Act. Some such fragments of undigested and sometimes incorrect information have been featured twice on television news in Washington, D.C. They've raised alarm — misplaced alarm — about the potential for harm from inflating air bags.

The most recent news report, broadcast earlier this month, focused on five fatal air bag deployment crashes (see related story on page 6). It was only after releasing incorrect and potentially damaging information about these five crashes to the media that NHTSA finally released its own investigators' reports, which corrected the record.

But the damage was done. A reporter was able to force out of the agency internal

memos containing the incorrect

**Research Still
Under Review**



information that was used in misleading news reports. Plus, NHTSA has been accused of conspiring to cover up negative information about air bags.

"The problem isn't conspiracy. It's bureaucratic bungling," says Institute President Brian O'Neill, who adds that "somewhere in the agency there's an extensive report saying air bags are working and have saved more than 100 lives to date. But, instead of making this available to reporters, NHTSA employees are scurrying around answering charges based on misinformation about five crashes. What's needed is to quit waiting for evaluations of automatic belts and get the air bag effectiveness report out."

More Examples: Virtually all NHTSA research can influence public policy — unless it comes out too late to help policymakers with their decisions. There's a report to Congress on the effects of 65 mph speed limits, for example, that's being held up while NHTSA looks for ways to indicate that the higher speed limits have caused deaths — but, for political reasons, to indicate this finding without stating it outright. There's a study on aftermarket brake linings that was initiated at the request of automakers but withheld from the Experimental Safety Vehicle conference in November 1991.

Another NHTSA study — this one on the effects of a California law lowering the legal threshold for alcohol-impaired drivers — was completed in August 1991 but not released until last month (see related story on page 7). The study was delayed, even though it could have been helpful to the U.S. Congress during consideration of legislation to encourage such state laws.

Then there's NHTSA's comprehensive risk-benefit analysis, conducted last spring at the request of the Office of Management and Budget. NHTSA officials told *Status Report* it couldn't release this study without OMB's approval. When *Status Report* queried, OMB said it was willing to let the study go. But by then NHTSA had developed a new twist — it might release the risk-benefit findings at a Congressional hearing just as this *Status Report* goes to press. If so,

NHTSA will be releasing the findings months after the research was completed.

"When's the last time you heard of a favorable report, one that touts an organization's achievements, that was buried for so long?" O'Neill asks. "Usually these kinds of reports are trumpeted loudly. Is this because NHTSA's afraid to go public with anything that proves regulation is successful?"

NHTSA recently decided to discontinue its long-running survey of safety belt use in 19 cities nationwide, even though this survey has been conducted without interruption since the mid 1970s and provides the only data that can be used to measure long-term belt use trends. NHTSA officials seem to prefer state surveys that have less rigorous methods and are producing higher safety belt use estimates.

Electric Vehicles: Is NHTSA sliding back into its 1980s style of inaction? It's beginning to appear that, even when automakers ask for immediate rulemaking, NHTSA cannot respond promptly. For example, General Motors requested urgent rulemaking in the spring of 1991 to modify — not weaken — federal motor vehicle safety standards to accommodate electric vehicles as well as gasoline- and diesel-powered vehicles, which were the only kinds envisaged when the standards were written.

Such rulemaking is needed quickly because several automakers have electric vehicles in advanced development. Yet the only NHTSA action so far is a December 1991 advance notice of proposed rulemaking requesting comments on a range of issues. A final rule could be more than a year away.

Why Is This Happening?

NHTSA research is largely high in quality, but review outside Research and Development often causes delays and sometimes involves "political" editing. There's a phantom editor in the agency's front office, insiders explain, who keeps reports in limbo. "He sits in his office and goes through reports," says one source, "loading them up with little post-it notes" asking whether the agency really wants to say this or that. And when he finally decides to let go of the research, "he can pull off all the little post-its, without leaving a trace" of the delay or changes he caused.

A former top NHTSA official says, "There's certainly nothing wrong with research documents getting an agency review for technical merit. But what happens is that research documents get agency review for policy adherence." The net result is, important research takes far too long to see the light of day.

Former NHTSA engineer Scott Schmidt adds, "It seems like documents would circle in the review process indefinitely because all the reviewers would have comments, and the comments would contradict each other. One person would say, 'We need more of this,' and another would say, 'We should drop this.' Nobody from the administrator's office would ever say, 'This is what's going to happen,' so nothing would happen at all. Even our simple documents would go seemingly forever through the review cycle. They would just circle around."

Whatever the reasons, research languishes unfinished or churns through NHTSA's clearance process for months — even years. The result is not only long delays in getting valuable information to the public and policymakers but also a holdup in the process of issuing standards to protect American motorists.

NHTSA's Response: When contacted for comment on the general information in this report, agency officials asked *Status Report* to note that the number of research reports being released has gone up, not down, and that the review process focuses on technical content, not political implications.

NEBRASKA Motorcycle Deaths And Injuries Decrease

Motorcycle crashes and the deaths and injuries they cause declined in Nebraska after the state's mandatory helmet use law for all riders took effect in 1989, says a new study supported by the Institute.

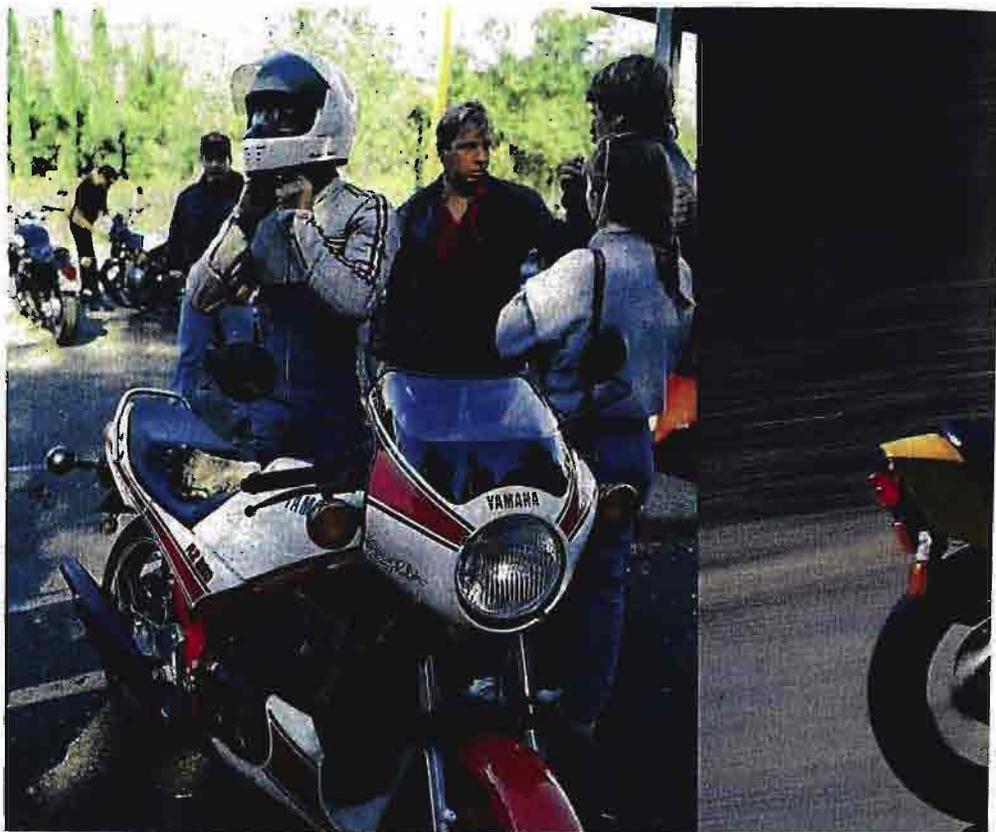
Reported helmet use in Nebraska went from 16 to 89 percent after the law took effect, consistent with prior research on the effectiveness of comprehensive helmet laws in increasing use rates. A previous helmet use law in Nebraska was repealed in 1977.

The present law is estimated to have decreased the number of reported motorcycle crashes per 10,000 registrations by 26 percent in Nebraska, compared with five other states — Iowa, Kansas, Oklahoma, South Dakota, and North Dakota. These comparison states were chosen because they're in the same region and did not change their helmet laws during the period 1984 through '89. None has a comprehensive helmet use law, although all except Iowa have less comprehensive laws that cover some young riders.

Crashes and registrations declined during the years studied, but Nebraska's decrease was the largest and coincided with passage of the law, the study says.

Factors other than increased head protection may have contributed to the reduction in reported crashes, the researchers note. These include a decrease in miles driven per registered motorcycle or a change in rider risk characteristics. The report points out that the proportion of injured motorcycle operators without appropriate licenses decreased after the law, indicating there may be less "experimental" driving of borrowed motorcycles, possibly an additional benefit of helmet laws.

The study also examines fatalities and specific injuries from motorcycle crashes in two urban Nebraska counties for one year before and one year after the effective



date of the new law, January 1, 1989. Findings include substantial declines in the number of reported injuries, hospital admissions, severe nonhead injuries, and deaths, with the largest decline found in severe head injuries.

Comparing head injuries among helmeted and unhelmeted cyclists for the two years combined provides even stronger statistical evidence of the effectiveness of helmet use laws in preventing head injuries, according to the research. The percentage of injured motorcyclists with serious brain or cranium injuries was much lower among helmeted motorcyclists (5 percent) than among unhelmeted cyclists (14 percent). This statistically significant effect from motorcycle helmet use indicates a two-thirds reduction in serious injury to the head.

"Motorcycle Crash Injuries and Costs: Effect of a Reenacted Comprehensive Helmet Use Law" by R.L. Muelleman, E. Mlinek, and P.E. Collicott appeared in *Annals of Emergency Medicine*, Vol. 21, pages 266-72.

CALIFORNIA Helmet Use Is Way Up

The motorcycle helmet use rate in California is 98 percent, up from an overall 48 percent before the state's mandatory helmet law went into effect. This is the main finding of observational surveys conducted for the Institute by UCLA School of Public Health researchers in seven California counties before and after the helmet law took effect on January 1, 1992.

"There had been concern about compliance with the helmet requirement in California because of demonstrations by opponents and threats to defy the law," says Institute President Brian O'Neill. "But the fact is, riders are complying. The helmet use law in California is working as well as similar laws have worked in other states," O'Neill adds.

In Texas, like California, helmet use rose from less than 50 percent just before a comprehensive helmet law took effect in 1989 to 90 percent immediately after tak-

ILLINOIS CALIFORNIA Fewer Cyclist Injuries

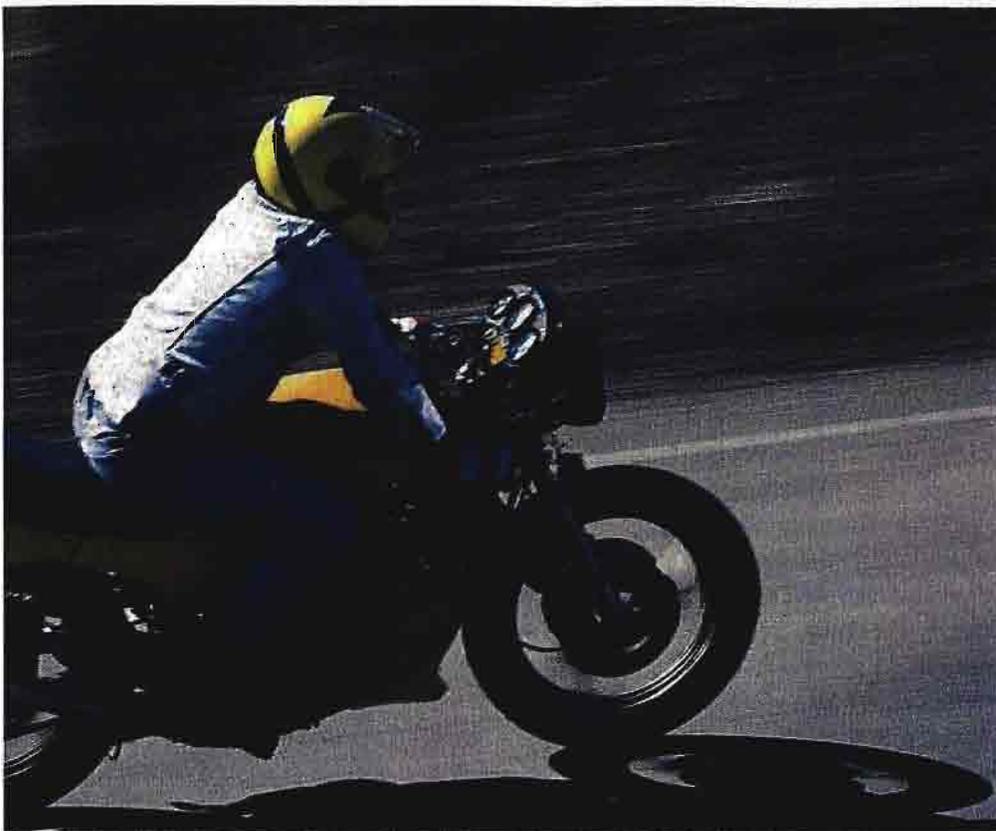
Two studies of motorcyclists involved in crashes add to evidence that wearing helmets lessens serious injury risk.

Medical researchers in California and in Illinois report that helmeted riders hospitalized after crashes sustained fewer and less serious injuries, including fewer severe head injuries, than did motorcycle riders who weren't wearing helmets. The researchers also found that helmeted riders faced no greater risk of neck injury than unhelmeted riders. The incidence of overall neck injuries was scrutinized in both studies, because opponents of mandatory helmet use laws claim such injuries occur more frequently among helmeted riders.

The Illinois study reported on 398 motorcyclists admitted to hospitals less than 24 hours after being injured in crashes. Eight medical centers from across the state were included in the study, which was conducted from April through October of 1988, "the motorcycle riding season in Illinois."

The rate of head injury was three times higher for the unhelmeted group than it was for helmeted riders, say the authors. They also note that, "among those crash variables that predict the most severely injured patients, the lack of helmet use is a key contributor to increasing injury severity."

Researchers in California studied 474 crash-involved motorcyclists admitted to the University of California at Irvine Medical Center over a 45-month period. The incidence of serious head or neck injury was 19 percent among unhelmeted riders, compared with four percent among those in the helmeted group. "Those who were wearing a helmet had fewer and less severe head and facial injuries, required fewer days on a ventilator, and sustained no serious neck injuries. Fewer patients who



ing effect and more than 95 percent two months later. "This is the way it is in state after state," O'Neill points out. Fewer than half of all cyclists typically wear helmets unless use is mandated. Then use rates jump to nearly 100 percent.

The California survey involved observations of helmet use by nearly 17,000 motorcycle drivers and passengers in Fresno, Los Angeles, Riverside, Sacramento, San Bernadino, San Diego, and Santa Clara counties. Researchers found use rates consistent across all counties and for all types of motorcycles.

Increasing motorcycle helmet use rates is important because, "when they're worn, helmets decrease the likelihood of a cyclist being killed in a crash by approximately 30 percent," says Jess F. Kraus, lead researcher on the California survey and a professor at the UCLA School of Public Health.

"Research also shows that, when helmet use laws are repealed, motorcycle head injuries and deaths increase significantly. When the laws are reinstated, incidences of head injury and death from motorcycle crashes decrease," Kraus adds.

Motorcycle Helmet Use in California

	BEFORE LAW				AFTER LAW	
	Sept. 1991		Dec. 1991		Jan. 1992	
	No.	% Use	No.	% Use	No.	% Use
Drivers	6,819	43	4,356	51	3,666	98
Passengers	1,030	24	560	22	332	94
All Riders	7,849	41	4,916	48	3,998	98

wore helmets were discharged with disability, and hospital charges were lower," authors of the California study conclude.

"A Prospective Study of the Impact of Helmet Usage on Motorcycle Trauma" by P. Kelly, T. Sanson, G. Strange, and E. Orsay appeared in *Annals of Emergency Medicine* Vol. 20, No. 8 (1991). "Helmet Use Improves Outcomes After Motorcycle Accidents" by M.A. Murdock and K. Waxman appeared in *The Western Journal of Medicine*, Vol. 155, No. 4 (1991).

MARYLAND Is 25th State With Universal Helmet Law

Starting October 1 all motorcyclists in Maryland must don helmets under new legislation signed into law by Governor William Donald Schaefer. Since 1979, when cycling groups won repeal of a 1968 statute, cyclists 18 and older have been allowed to ride without helmets.

"Insurance companies and the state share the millions it costs each year to provide medical care and rehabilitation expenses for injured riders not wearing helmets," Schaefer told legislators. Safety advocates credit a study of such costs and Schaefer's support for persuading reluctant House and Senate committee members, who for years opposed the helmet measure, to clear it for consideration by the full state legislature.

These 25 states, plus the District of Columbia, have universal helmet laws: Alabama, Arkansas, California, Florida, Georgia, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Nebraska, Nevada, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Tennessee, Texas, Vermont, Virginia, Washington, and West Virginia.

Responding to Five Driver Fatalities in Cars With Air Bags

An internal memorandum from the National Highway Traffic Safety Administration (NHTSA) recently made its way into the hands of a Washington, D.C. television reporter. The memo erroneously stated, "NHTSA is aware of 1/2 dozen or so cases in which it is believed that the air bag caused the death of the occupant . . ."

The fact is, NHTSA hadn't reached this conclusion. The memo's basis turned out to be five air bag crashes being investigated because they were of low or moderate severity with deaths. Details became clear when NHTSA released its investigators' reports. Two deaths were unrelated to air bags. Two involved drivers slumped over steering wheels, before crashes, because of medical problems. The fifth driver, an elderly woman, was seated close to the wheel before her crash. Investigators attributed the latter three deaths to steering wheel and air bag loading of drivers' chests.

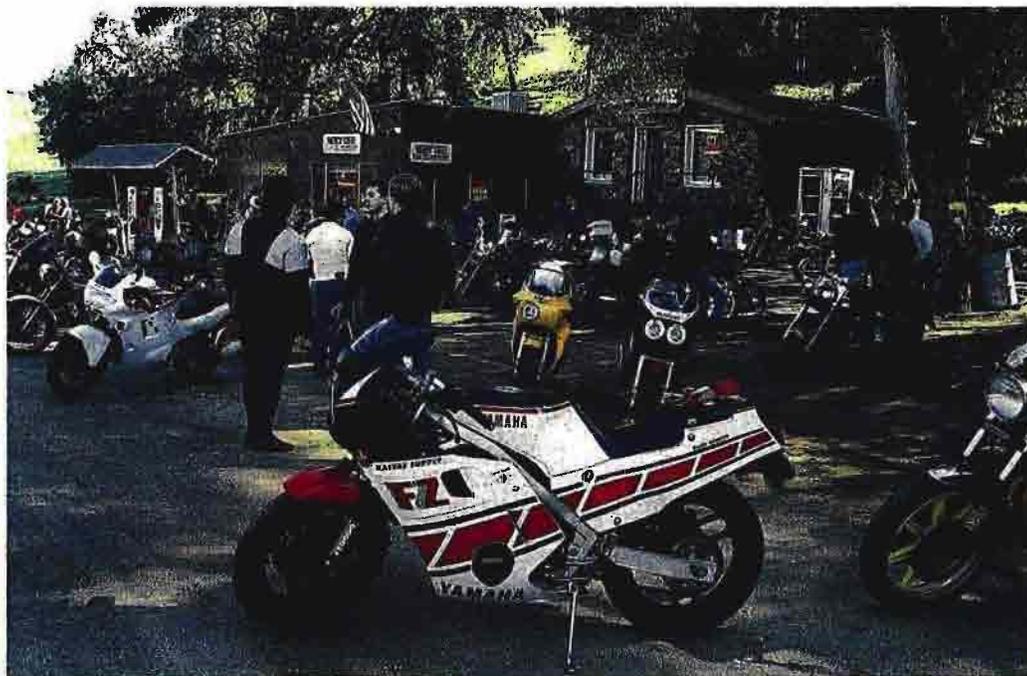
To put these cases in perspective, the Institute identified several crashes in which elderly female drivers of cars in low- to

moderate-severity crashes without air bags sustained virtually the same patterns of fatal injuries as drivers in the air bag crashes.

The Motor Vehicle Manufacturers Association (MVMA) responded to the five deaths by petitioning NHTSA for car labels warning about the possibility that a deploying air bag "could impart serious or even fatal injury to an occupant who is in close proximity to the steering wheel."

Institute President Brian O'Neill calls MVMA's petition "irresponsible" because it implies being close to the steering wheel is a problem only in cars with air bags. "This isn't true," O'Neill points out. "The steering wheel is the number one hazard for drivers in crashes. Being very close to or slumped over the wheel exacerbates this hazard for belted and unbelted drivers in cars with and without air bags."

"Are we going to label every potential hazard, no matter how remote?" O'Neill asks. "Are we going to warn about possibly being ejected from cars with door-mounted automatic belts when the door opens in a crash, as sometimes happens? Or about the risk of being decapitated by a motorized belt in a crash if the lap belt isn't buckled? This happened once. First thing you know, we'll have cars full of warning labels."



NHTSA Reports Effects of Impaired Driving Laws in California

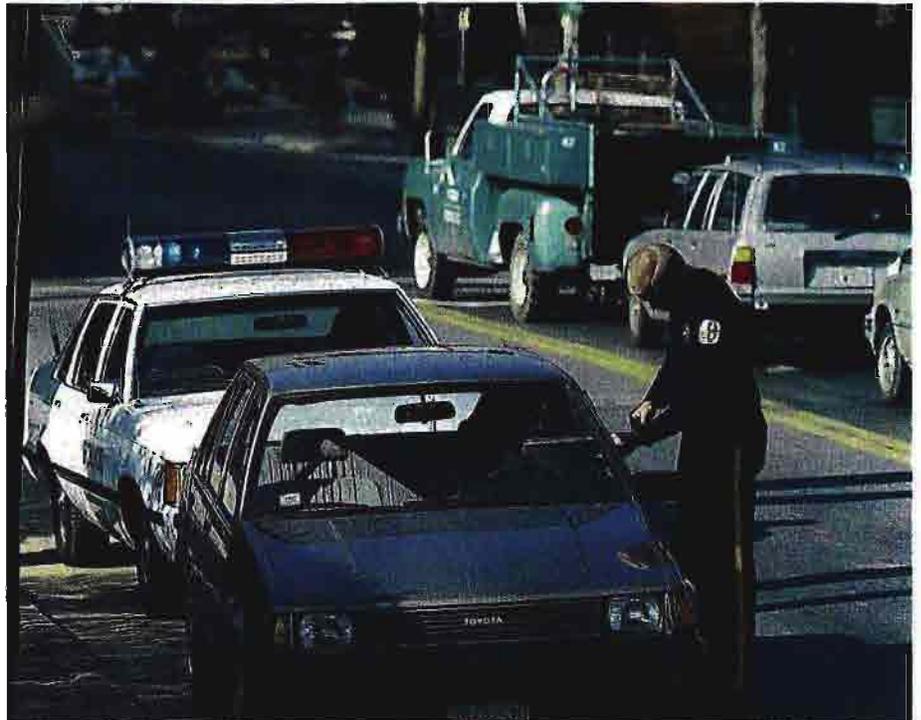
Since January 1990, it has been illegal to drive in California with a blood alcohol concentration (BAC) at or above 0.08 percent. An August 1991 study from the National Highway Traffic Safety Administration (NHTSA), released just last month, examines the effects of this law, marking one of the first systematic analyses of any of the nation's five state laws specifying 0.08 percent as the threshold at which it is illegal *per se* to drive.

Researchers found a 12 percent reduction in alcohol-related traffic deaths in California during 1990, compared with before the 0.08 percent law took effect. (For this study, a death was defined as alcohol-related if any involved driver or fatally injured pedestrian was believed to have a positive BAC.) Arrests for driving while intoxicated increased. "The police and courts required only minimal changes to accommodate the 0.08 percent law," researchers note.

A complicating factor in the study was that an administrative license suspension law was enacted in California within a month of the 0.08 percent law. The two laws took effect within six months of each other. So, researchers say, they "could not quantify the separate effects of each law." Administrative license suspension laws allow authorities to suspend, without judicial involvement, the licenses of drivers who fail or refuse to take alcohol tests.

NHTSA's study of the California laws includes surveys of drivers in five counties. More than 80 percent said they're aware the BAC threshold has been reduced to 0.08. Three-fourths said they believe the risk has increased of being stopped for driving while impaired. Eight out of ten said the risk of license suspension if arrested for impaired driving has increased.

Other states with 0.08 percent BAC *per se* thresholds include Maine, Oregon, Utah, and Vermont.



Police Ranks Fail to Keep Up With Growing Demands of Traffic

Most police agencies in U.S. cities and states aren't keeping pace with the growing need for traffic enforcement services. An Institute survey finds that demand, measured by the number of vehicle miles driven and number of licensed drivers, has generally outstripped the supply of available traffic officers.

The survey covers the period from 1978 through '89. The Institute asked state highway police departments for the number of traffic officers employed in selected years throughout the period. Only Hawaii, which has no highway patrol, was excluded from the survey. Thirty-three states responded with enough information to be included in the results.

In the 33 states as a whole, the number of licensed drivers increased by about 19 percent, but the number of officers whose duties routinely included traffic enforcement rose only by about 6 percent. Annual travel in the 33 states, measured in hun-

dred million vehicle miles traveled, increased by approximately 38 percent, while the number of traffic officers per million drivers fell by about 11 percent.

The Institute separately surveyed 10 cities, five of which provided sufficient data on staffing levels to be included. During the 1981 through '89 period, the ratio of traffic officers in each city to daily vehicle miles traveled in its urbanized area increased somewhat in Detroit, decreased slightly in Dallas, fell by about 25 percent in Chicago and Washington D.C., and fell by about 40 percent in Philadelphia.

"The fact that police staffing levels aren't keeping up with the growth in traffic is a serious concern and means enforcement activities must become more efficient by using modern techniques — for example cameras that can detect red light running or excessive speeding," says Institute President Brian O'Neill.

For a copy of "Police Enforcement Resources in Relation to Need: Changes During 1978-89" by Mark Freedman and Nancy N. Paek, write: Publications, Insurance Institute for Highway Safety, 1005 N. Glebe Road, Arlington, VA 22201.

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