Bare-Bones Budget Crimps NHTSA’s Full-Plate Agenda

The National Highway Traffic Safety Administration (NHTSA) has outlined a new "aggressive research and development program" spanning the next four years. But analysis of the agency's recent spending record indicates the ambitious agenda will probably exceed the agency's resources.

Even though NHTSA's managers are seeking an 8 percent increase over their 1991 budget, this is one-half the research funds they need, says the Transportation Research Board of the National Academy of Sciences. To meet future safety challenges, the board recommends a $30 to $40 million boost in federal vehicle and highway safety research spending, with expansion in the biomechanics programs and human factors research to underpin future safety regulation. (See Status Report, Vol. 26, No. 3, March 16, 1991.)

The agency's resources, never commensurate with the scope of the health problem caused by motor vehicle crashes, were curtailed during the early 1980s when budget cutters slashed the research and analysis budget by 21 percent, from $43,621,000 in 1982 to $34,544,000 in 1983. The number of research staff positions shrunk dramatically, dropping from 183 in 1981 to 161 in 1982. Today there are 146 authorized positions in the research department.

Although the budget has fluctuated since 1983, most notably for injury control grants managed jointly with the Centers for Disease Control, the 1991 budget of $36.5 million is remarkably similar to the 1983 level. Since then "it's [been] pretty much level-funded," says George Parker, the agency's associate administrator for research.

More than one-third of the research budget, $13 million, is consumed by routine data collection for the Fatal Accident Reporting System, the National Accident Sampling System, and other systems. These data bases are extremely important, but their costs limit the dollars available.

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Boon or Boondoggle?
NHTSA Weighs Plan for Driving Simulator

A pivotal decision on the future of the National Highway Traffic Safety Administration's (NHTSA) research programs is fast approaching, as officials contemplate construction of a $32 million national advanced driving simulator (NADS).

For an agency with a $36 million a year research budget, it is a momentous decision. A number of agency researchers contend an advanced, motion-based driving simulator could help evaluate improvements.

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Bare-Bones Budget Crimps NHTSA's Full-Plate Agenda

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able for actual research. Because the chances of receiving a larger proportion of the federal budget seem remote, agency officials are trying to do more with less and some ambitious projects lie dormant for years. The latest research plan, when coupled with the 1992 budget request, indicates this will not change.

What will change is that developing technologies will claim an increasing share of NHTSA's research assets in the next few years. In its 1992 budget submission, the agency asked Congress for a 75 percent increase in funding for crash avoidance projects, slating $11,937,000 for human factors research and other projects associated with development of "intelligent" vehicle and highway systems (IVHS), a project conducted jointly with the Federal Highway Administration. According to the research plan, a myriad of electronic devices that were developed by the military can be applied to vehicles to help drivers detect obstacles, monitor blind spots, warn of a possible rollover, and even check out whether they are getting sleepy. Agency researchers want to evaluate these systems and others.

To keep up with the workload, NHTSA officials have asked Congress for two more engineers to assess system performance and reliability, and a human factors researcher to match the capabilities and limitations of drivers with the new devices. Much of the remainder of the crash avoidance budget will go to further work on antilocks and other heavy truck braking systems, and a study of the handling and stability of the longer combination vehicles.

Like squeezing a balloon, however, when spending goes up in one area, it goes down in others. NHTSA's proposed budget for crashworthiness programs—projects designed to improve the ability of vehicles to protect occupants in crashes—dropped 25 percent in the 1992 budget request, declining from $10,924,000 in the 1991 appropriation, to $8,200,000 in 1992.

Last year the House Appropriations Committee signaled its concern over NHTSA's lack of commitment to long-term biomechanics research, which is key to future improvements in vehicle crash performance. During 1990 only $897,000 was spent on dummy research, most of it having to do with development of a side impact dummy to support a new rule.

"Although adequate research is fundamental to making sound rulemaking decisions in these areas," the committee pointed out in its report on 1991 appropriations, "NHTSA's biomechanics budget request . . . is approximately one-third below comparable funding levels a decade ago." The committee gave the agency $3 million for dummy development and directed the agency to develop "test procedures for improved air bag and safety belt systems, and for reducing head and neck injuries in all crash modes." But in 1992 spending will plunge unless Congress earmarks funds once again.

Parker says the agency's commitment to crashworthiness research is undiminished. The shift in priorities is not as dramatic as it appears in the '92 budget request, Parker says. By the time the agency was told to shift priorities, officials were already well into the 1993 budget planning cycle, having submitted the proposed

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* National research institutes of the National Institutes of Health.

budget to the Office of Management and Budget. "We already had our request in," says Parker, "so we didn’t have an opportunity to adjust it to a higher level." Although the agency has studied fatal injuries in considerable detail, it knows less about the long-term implications of nonfatal injury. Much of the crashworthiness resources are spent on developing specialized trauma data bases. For example the agency collaborated with Jackson Memorial Hospital in Dade County, Florida, on a $4 million project to develop a better data base on nonfatal trauma in crashes.

The need for continued improvements in vehicle crashworthiness is clear, NHTSA’s plan says. Even after full implementation of new safety standards, frontal crashes are expected to claim 10,000 lives and account for 120,000 serious injuries annually. And researchers expect 7,500 people to die in side crashes. NHTSA plans to investigate ways to limit intrusion in frontal crashes, improve steering wheels, and develop a broader range of tests to limit lower limb injuries. They also plan to upgrade the side impact rule, Federal Motor Vehicle Safety Standard (FMVSS) 204, to prevent head trauma, the chief cause of injury and death in side crashes, and strengthen the door latch and hinge standard, FMVSS 206.

Other crashworthiness research projects include work on glazing and door designs to reduce the risk of ejection in rollover crashes and improvements in the roof crush standard. Adding more padding to vehicle interiors would also reduce the risk of head injury for occupants.

For the 6,500 pedestrians struck and killed every year, NHTSA has worked out a test procedure for measuring hood deformation in impacts and could issue a rule to require automakers to design more forgiving hoods, fenders, and cowl surfaces into cars in order to reduce the risk of serious head injuries when pedestrians are struck. NHTSA says it intends to develop test procedures and demonstrate vehicle designs that will lower the risk of thoracic injury to pedestrians, and examine the benefits of lowering bumpers and vehicle profiles to reduce the risks for children and lower the severity of leg injuries for adults. NHTSA also hopes to develop less aggressive heavy truck front ends and test procedures to limit lower limb injuries.

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Boon or Boondoggle? NHTSA Weighs Plan For Driving Simulator

(Cont’d from Page 1)

ments in vehicles and roadway designs that could help prevent crashes, says George Parker, associate administrator for research. To build and maintain such a facility, however, would be very expensive and could profoundly affect the rest of the agency’s research programs, unless the agency can persuade the auto industry and others in the private sector to spend sizable portions of their research budgets to rent time on the simulator. (See “Driving Simulators,” Page 5.)

Brian O’Neill, president of the Insurance Institute for Highway Safety, says: “In my view the benefits would not justify the huge costs involved in building and operating such equipment when our field is already short of research funds. Simulators have a very limited research potential because, by definition, the subjects know they are being studied and this violates a basic requirement of good research design.” Because people know they are being studied while in a simulator, O’Neill points out, their attitudes and judgments, which are important components of real-world driving, may differ markedly in a simulator. This means that researchers cannot be sure that their simulation findings are valid. And although it is possible to successfully evaluate driver skills in a variety of contexts using a simulator, he emphasizes that researchers do not need an expensive motion-based simulator to do so.

“Even aircraft simulators, which are very sophisticated,” says O’Neill, “are mainly used for training and not research.”

The University of Iowa, which prepared a feasibility and design study for NHTSA, estimates the simulator would cost $32 million to build with an annual operating cost of about $7.1 million. That does not (Cont’d on Page 4)
Boon or Boondoggle?  
NHTSA Weighs Plan For Driving Simulator

(Cont'd from Page 3)
include service costs associated with model development for customers, construction of experimental cabs, or consulting fees. If the facility were fully utilized, using a two-shift operation, five days a week for a total of 3,500 hours a year, it would cost users $2,031 per hour for the facility to break even. This does not count the cost of other equipment and fees.

"Those kinds of costs are very sobering," says Robert LeFevre, manager of crash avoidance for General Motors. GM has not decided whether the company will provide financial support for the simulator.

NHTSA has commissioned two "needs assessments" to determine whether the project should go forward. Parker expects the studies will outline research initiatives appropriate for an advanced simulator and his final recommendation to Jerry R. Curry, NHTSA administrator, will hinge in large part on the contractors' evaluations.

Parker, an engineer who hails from the aerospace industry, says: "When you build spacecraft, you always work with the user group of scientists that want to run experiments... we're kind of forcing this simulator down the throats of the industry in a way, without really having much input from them." As a result, says Parker, he intends to assemble a task force composed of scientists from the University of Michigan, University of Iowa, experienced industry advisers, and human-factors experts "to work with us and review the needs studies in order to come to a collegial decision on what we want to do."

NHTSA officials don't expect Congress to provide the funding for the simulator in one year, so Parker says the agency has begun building a portion of the cost into its annual budget. Although officials have not concluded it should be built, so far Congress has earmarked $5 million for NHTSA to spend on the simulator.

Support for the simulator on Capitol Hill is, of course, greatest among the congressmen and senators who hope their state will bag the prize. "There's a lot of congressional support for NADS," says Curry. "Every time I turn around, I've got a letter." The support is based on the size of the pork barrel, Curry notes, but "I've got to make the call. And if it's a white elephant, the American people deserve to be told why it's a white elephant."

Peter Rogoff, a staff member serving the Senate Appropriations Transportation Subcommittee, says support for the simulator is thin. "We're concerned about the economics of it, whether the annual operating costs would be covered." That is why the subcommittee directed NHTSA to conduct the needs studies and ordered the agency to seek prospective users outside the federal government who are "willing to make definitive financial or other commitments for the design, construction, and operating costs of the simulator..."

"We have to do a report to Congress that's due in July," notes Parker, "They wanted to know what our plan was, and how much we've gotten from private industry—which is nothing so far." Although Congress has given the agency the authority to seek outside funding, "we're not willing to go out and do that until a decision has been made." Robert Munson, director of automotive safety at Ford Motor Co., agrees that it's too soon to judge the simulator. "Our company position is we would like to have them go through the study and then tell us exactly what the simulator would be used for," says Munson. "We have not shut the door and said the company will not use the simulator."

SCHOLARSHIP AWARD

Mark A. Veazie, a Johns Hopkins University doctoral candidate, will receive the William Haddon, Jr., fellowship award for the study of injury prevention at the school's Injury Prevention Center.

Veazie is a former sanitation program manager at the Washington State Department of Health. He was also a guest lecturer at the University of Washington, where he received a bachelor's degree in environmental health and a master's in epidemiology.

The award was established primarily by property and casualty insurers in memory of the late Dr. Haddon, former president of the Insurance Institute for Highway Safety.
Driving Simulators: Exposing the Illusion

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The success of sophisticated moving-base aircraft simulators has encouraged the application of similar technology to the driving case. There is little in common between the two situations. The aircraft simulator is a $30 million dollar device representing a $150 million dollar aircraft. For the automobile case, it seems harder to justify a $30 million dollar simulator, when the real article can be purchased for about $10 thousand dollars. High realism simulators appear to offer little for driver training, although rudimentary low-cost simulators can be useful in initial instruction of location and function of controls. An accompanied learner driver can practice starting and stopping a real car five times per minute; a simulator offers little difference in training rate or safety. In contrast, it would be difficult to fit in more than a few real aircraft takeoffs and landings in an hour, not to mention the fuel cost, equipment cost, and danger. The simulator allows takeoffs, followed by takeoffs without intervening landings, to be repeated under varying conditions. While the performance skills learned in simulators can be critical in emergencies in the air, car driving emergency situations usually arise because of expectancy violations.

The notion of driving simulators is far from new. A survey published 20 years ago [Kuratorium für Verkehrssicherheit 1970, as cited by Hulbert and Wojcik 1972] lists 28 devices then in use, 17 of them in the U.S. For well over 20 years, driver simulators have incorporated moving bases and multiple movie projectors to provide visual information, including information to the rear view mirror. Hulbert and Wojcik [1972] list 30 driver performance topics they consider could be successfully researched using simulators. Included on their list are such items as alcohol and drug effects, fatigue effects, rear lighting systems, reduced visibility in fog, and passing zone markings and signs. While some progress has been achieved on a few items on their list using simulators, but insufficient progress can be a problem. Can the lack of progress be traced specifically to insufficient realism in the simulator, thus justifying a more sophisticated simulator? Any decisions regarding major investments in additional driver simulators should identify what specific problems they can be used to solve, and why they can solve them when only slightly less sophisticated simulators could not.

The following thought experiment helps address such questions. Consider a make-believe simulator consisting of an actual car, but with the remarkable property that after it crashes a reset button instantly cancels all damage to people and equipment. What experiment could be performed on such make-believe equipment which would increase our basic knowledge about driving? The answers provide an upper limit on what might be done using improved simulators. Defining subject areas, such as alcohol and driving, should not be confused with defining specific questions; in Chapter 7 we note that there are already over 500 technical papers on how alcohol affects performance. Increased knowledge about driving is most likely to be discovered using the normal processes of science. In these, problems are first defined, and if they can be solved using existing equipment, they are. If they cannot be solved using existing equipment, new equipment is developed only if it is considered likely to contribute to the solution, and not for its own sake.

Dr. Leonard Evans is a principal research scientist for General Motors Research Labs in Michigan. He has a Doctorate in Physics from Oxford University.

CHRYSLER RECALL

Chrysler is recalling 640,000 passenger cars and vans for defective seat belts. The inboard front-seat belt buckle assembly straps on the vehicles could fail, increasing the occupant's risk of injury. The affected vehicles are the 1990 Chrysler Town and Country, and the 1989 and 1990 Plymouth Voyager and Dodge Caravan.

The buckle assembly straps are made of metal and are enclosed in plastic housing located near the anchor position beside the seat. These straps could break if bent repeatedly.
When Better Bumper Takes a Back Seat To Design, It’s Expensive

Building a better automobile bumper isn’t all that complicated, results of a recent crash test show. Insurance institute for Highway Safety engineers mounted a Chevrolet Cavalier bumper on a Pontiac Grand Am and cut the amount of damage in a 5 mph crash test by half.

In initial rear-into-pole crash tests at 5 mph, a 1991 Cavalier performed best among 22 cars, sustaining only $125 damage. The more expensive 1991 Grand Am sustained $1,146 damage in the same test, possibly because styling considerations overrode performance. “Presumably for styling reasons, the Grand Am’s bumper was designed closer to the sheet metal it was designed to protect. Plus, the license plate was built into the bumper,” points out Brian O’Neill, president of the Insurance Institute for Highway Safety.

When engineers mounted the Cavalier rear bumper on a Grand Am and put the car through the same 5 mph rear-into-pole test, damage was cut to only $546. “This demonstrates once again that cars can be designed to prevent damage in crashes at low speeds, if manufacturers choose to do so. General Motors and other automakers know how to design damage-resistant bumpers, but for styling and other reasons they aren’t putting their best bumpers on all car lines,” says O’Neill.

These results illustrate a point the Institute has been making for years—the substantial difference in the amounts of damage occurring in low-speed crashes, even among similar cars from the same manufacturer. “There’s no excuse for the poor performance of the Pontiac bumper. In fact,” O’Neill says, “all cars ought to have better bumpers than they do today.”

Side Door Standard Will Make Vans And Light Trucks Safer

Beginning with the 1994 model year, side doors on pickups, vans, utility vehicles, and small buses under 10,000 pounds must meet a standard for side door strength.

With this action the National Highway Traffic Safety Administration (NHTSA) kept its pledge to improve the safety of this segment of the passenger vehicle market, which now accounts for about one-third of automotive sales. The only significant exception is the bumper regulation, which applies to automobiles only. Recently the agency turned down a petition to require the bumper heights of light trucks, vans, and utility vehicles to conform to the same standard as automobiles.

The extension of the static strength tests of Federal Motor Vehicle Safety Standard (FMVSS) 214 to light trucks and vans leaves unanswered, however, whether the agency will ultimately require light trucks and vans to meet the more stringent dynamic crash test provisions of the regulation. On the same date that trucks must meet the less stringent requirements, Sept. 1, 1993, manufacturers also will be required to certify that 10 percent of their automobile fleet is capable of withstanding new crash test provisions designed to limit thoracic and pelvic injuries. (See Status Report, Vol. 25, No. 10, Nov. 17, 1990.)

The side door strength provisions applicable to light trucks and vans will probably require side door beams to be installed, the agency says. “Extending side impact protection to these vehicles makes sense because their numbers, especially minivans, have increased dramatically during the last decade and most are used to carry people rather than cargo,” says Jerry Ralph Curry, NHTSA administrator.

The regulation will not apply to walk-in vans. Sliding doors on vans that are not adjacent to vehicle seating need not meet the rule, and NHTSA says that utility vehicle doors designed to be easily detached are also exempted. And manufacturers, the agency says, may continue to produce utility vehicles equipped with fabric or plastic doors.

In addition light trucks and vans must meet a number of significant new safety requirements that have applied to automobiles beginning in September, the start of the 1992 model year. They include extending the limits on rearward displacement of steering columns under FMVSS 204 to more vehicles, dynamic testing of manual lap and shoulder belts and mandatory installation of rear lap and shoulder belts under FMVSS 208, and installation of head restraints under FMVSS 202. Other improvements scheduled to take place in the 1994 model year along with the side impact rule include installation of center high-mounted stop lights and roof strength requirements. And between 1995 and 1998, manufacturers must begin meeting the automatic restraint provisions of FMVSS 208 by providing either air bags or automatic seat belts in pickups, vans, and utility vehicles.
Universal Helmet Laws Reduce Fatalities

After a detailed review of 49 studies on helmet use that varied in scope, time frame, and approach, the General Accounting Office (GAO) finds that all the studies agree on one pertinent point: Universal laws that require motorcyclists to wear helmets save lives and money.

At the request of the U.S. Senate, GAO analyzed research on the fatality rates of helmeted and nonhelmeted riders, usage rates under universal and partial helmet laws, and the societal cost of accidents involving nonhelmeted riders. The agency concluded that “the studies were remarkably consistent in finding that lower fatality rates occurred when universal helmet laws were in effect.”

In reviewing the studies, GAO found helmeted riders experienced fatality rates 28 to 73 percent lower than that of nonhelmeted riders, and “the incidence of head injuries rated ‘severe’ or worse was 46 to 85 percent lower than that of nonhelmeted riders.”

Although the magnitude of costs for caring for injured motorcyclists was unclear, the GAO report stated, “There is evidence from other studies, however, that these costs are very large for serious and critical head injuries.”

The report cited a study of trauma victims (not only motorcyclists) at two Maryland hospitals that showed “average first-year costs of about $92,000 for serious head injuries and $171,000 for critical head injuries.” And many of those patients “were still convalescing one year after their accidents.”

GAO’s review of helmet law studies found that universal laws result in use rates in the range of 92 to 100 percent, while states without laws or with partial laws achieve use rates of 42 to 59 percent.

The agency’s findings are contained in an interim report, and a final report on motorcycle helmets and seat belts is due later this year.

New Hampshire Belt Use Rates: Education Alone Is Not Enough

The safety belt use rate in New Hampshire is 36 percent for drivers, 33 percent for passengers—about the same as in other states that, like New Hampshire, don’t have safety belt laws. New Hampshire’s rates are of interest nation-wide because officials there reported higher use rates than in other states without laws—52 percent in 1990, according to the State Of New Hampshire Safety Agency. Officials further said the high rate is due to public education programs.

“Our recent observations of belt use by more than 30,000 motorists in New Hampshire suggest otherwise. Belt use isn’t as high in New Hampshire as officials would have us believe,” points out Brian O’Neill, president of the Insurance Institute for Highway Safety. “Besides, 52 percent in a state without a law contradicts all the research evidence from here and abroad that education alone fails to produce high rates of belt use.”

Even in states with safety belt laws, use rates often don’t top 50 percent. The reason is that, even where belt use is mandatory, there often is only limited publicity and enforcement,” O’Neill explains. “Demonstration programs have repeatedly shown that well-publicized enforcement of safety belt laws is the best way to increase use. Educating people to buckle up doesn’t, by itself, produce high use rates. What we need are laws plus education and enforcement. This is the way high use rates have been achieved in Canadian provinces and elsewhere. It’s also why the U.S. Department of Transportation’s new program to increase belt use in this country through stepped-up publicity and enforcement is so important.”

Forty states and the District of Columbia have belt use laws. A law in Delaware will take effect in 1992. Kentucky, Maine, Massachusetts, Nebraska, New Hampshire, North Dakota, South Dakota, Vermont, and West Virginia don’t have belt laws.
Citing the need for more research and other priorities, the National Highway Traffic Safety Administration (NHTSA) has canceled its rulemaking plans for additional injury criteria to limit facial, neck, and lower leg injuries in frontal crashes.

In 1986 the safety agency, responding to a 1983 petition by General Motors, proposed using the Hybrid III test dummy to set injury criteria for facial, neck, and lower leg injuries. NHTSA now says that its research “has not yielded adequate information to initiate further rulemaking. The findings indicate that existing technology to assess injury in the areas of facial laceration, neck injuries, and knee-tibia injuries . . . is still short of being useful for compliance application.”

In the five years since the agency began the rulemaking, NHTSA says it diverted “most of its technical talent and resources from this program toward the development of the side impact regulation” and resolution of problems associated with the Hybrid III’s chest deflection measures.

There were other problems, too, says Rolf Eppinger, chief of NHTSA’s biomechanics team. The biomechanical programs were weakened because research facilities, citing funding constraints, abandoned the field. As for the 1986 proposal, says Eppinger, other auto industry officials objected that the injury criteria suggested by GM and then embraced by NHTSA “had insufficient biomechanical basis to become part of a regulation.”

George Parker, associate administrator for research at NHTSA, says the agency is “working on a lot of upgrades to the dummy. I think what GM would tell you is that work needs to be done on the dummy also,” says Parker. “They’re always doing work. Now they have an abdominal insert that measures belt load. We’re looking at that for our program also. I think there’s pretty much agreement that you need to upgrade what’s out there.”

Kit Green, head of GM’s biomedical research programs, agrees that a new rule setting injury limits for facial and neck injuries would be premature. But, Green points out, incremental improvements need to be integrated into rules. NHTSA researchers seek to determine more accurately injury thresholds in crashes, but in the meantime a 20-year-old dummy—the Hybrid II—continues to be an officially accepted test dummy for meeting safety standards in new passenger vehicles.

“What the public needs,” says Green, “and what we want to try and do is persuade NHTSA to very rapidly adopt the Hybrid III as the standard dummy, and then move forward with their research program . . . to incrementally improve the Hybrid III. I think it would not be a wise idea to try and wait for all of the subsystems of the Hybrid III to be perfected.” In November 1990 GM filed a petition asking NHTSA to require all compliance testing of restraints to be conducted using only the Hybrid III dummy. The Insurance Institute for Highway Safety supported the request. (See Status Report, Vol. 26, No. 1, Jan. 26, 1991.)

The Hybrid III is capable of more humanlike responses in crash tests than the Hybrid II, and it is equipped to measure 31 responses to crash test forces over the entire body instead of the Hybrid II’s eight. If the Hybrid III were adopted as the required test dummy under safety standard 208, automakers and the public would benefit. “There are a number of state-of-the-art injury assessments,” says Green, “that are routinely being used by GM and other companies that are natural considerations for across-the-board application in car safety assessment.”
Youth and Alcohol: Blur of Labels Makes A Bad Mix Worse

As wine coolers, fruit-flavored fortified wines, and flavored mineral waters have grown in popularity, the differences between alcoholic and nonalcoholic beverages have become blurred. This is especially true for the nation's teenagers. Two out of three students recently surveyed were so confused by unclear labels and similar packaging that they were unable to distinguish between an alcoholic drink and mineral water.

The Department of Health and Human Services (HHS), which conducted the survey "Do They Know What They Are Drinking?," also found that less than one in six students could identify the drink with the highest alcohol content when shown a group of beverages. Students were most likely to select beer and malt liquor as having more alcohol than fortified wine, which has two to five times more alcohol than either. Even after reading the labels, less than one-half of the students correctly identified the beverage containing the most alcohol.

In addition 80 percent of the teenagers didn't know that a can of beer has about the same amount of alcohol as a shot of whiskey, and 55 percent didn't know a can of beer was the alcohol equivalent of a glass of wine. This confusion is particularly serious when coupled with teenagers' general lack of knowledge about alcohol and its harmful effects, says U.S. Surgeon General Antonia Novello.

There are nearly 21 million 7th through 12th grade students in the United States, and the studies found that over 10.5 million of them drink alcohol, eight million on a weekly basis. Teenagers drink 35 percent of the wine coolers sold, "their drink of choice," but they drink more beer "because [it's] cheap and easy to get." HHS estimates that seven million students, some as young as 12 and 13 years old, are able to purchase their own alcohol.

The Insurance Institute for Highway Safety recently conducted a study on minimum purchase age laws in which young men under the age of 21 attempted to buy beer at grocery stores and other retail outlets. Beer was sold to the underage purchasers at 97 percent of the stores in Washington, D.C., 80 percent of the stores in Westchester County, New York, and 44 percent of the stores in Albany and Schenectady counties in New York, where an enforcement campaign had just taken place.

The study also found that although 92 percent of teenagers said they understood the danger of drinking and driving, almost one-third of those who drink admitted to riding with a friend who was alcohol-impaired.

FACT SHEETS AVAILABLE

The 1991 Insurance Institute for Highway Safety fact sheets are now available. The annual publication provides the Institute's analysis of factors, from alcohol to vehicle size, that contribute to motor vehicle fatalities. The fact sheets also summarize state laws that address highway safety issues. New this year is one on "Young Driver Laws."

Examples of some of this year's facts are:
- "Vehicle Size"—The death rate in the smallest passenger cars (wheelbase shorter than 95 inches) was 2.9 per 10,000 registered vehicles 1-3 years old in 1990. This is more than four times the rate per 10,000 (0.7) in the largest cars (wheelbase longer than 114 inches).
- "DUI/DWI Laws"—There are now 29 states plus the District of Columbia that have administrative license suspension laws, permitting licenses to be taken before conviction when a driver fails or refuses to take a chemical test for alcohol.
- "Young Driver Laws"—Eleven states have blood alcohol concentration thresholds that apply to young drivers only.

For a complete set of 18 fact sheets, write: Fact Sheets, Insurance Institute for Highway Safety, 1005 N. Glebe Road, Arlington, Va. 22201.
Roadside surveys in South Australia indicate that random breath testing (RBT) programs should be coupled with community education campaigns to effectively reduce alcohol-impaired driving. RBT enforcement and publicity were stepped up at Easter time in 1987. Afterwards police continued the heightened enforcement, but except for another campaign at Easter time in 1989, publicity efforts declined. Surveys reveal that the level of alcohol-impaired driving declined over each holiday period, but the 1987 decrease was not sustained between 1987 and 1989. And although there was a significant increase over the two-year period in drivers perception that they were likely to be caught if driving with a blood alcohol concentration (BAC) over the 0.08 limit, there was no significant change in the number of drivers who reported that they "were likely to drive if they thought that their SAC could be over the 0.08 limit."

Researchers at the University of Adelaide conclude that persons most likely to drive with high BACs were "predominantly male, aged less than 30 years, had started driving and drinking before the age of 18, and were likely to drink alcohol daily and to have been charged with drink-driving offenses." The researchers recommended that the RBT program be coupled with "a community education program aimed at reinforcing the perception of being caught if over the legal BAC limit, and emphasizing the consequences."

A proposal to mandate the use of speed limiters on heavy vehicles in European Community (EC) countries is now being considered by member states, and could be decided by early 1992, says John Barry, an official of the EC. The measure calls for trucks over 12 metric tons to be limited to 80 km/h (approx. 50 mph) and for buses over five metric tons to be limited to 100 km/h (62 mph). If the proposed directive passes, all EC members would have to be in compliance by 1993.

Speed limitation devices would "improve road safety and reduce the severity of injuries in cases of accidents with heavy goods vehicles and buses" and result in a "reduction of air pollution and fuel consumption" according to the EC proposal.

In April of 1991 the United Kingdom completed a three-step program to install speed limiters on all long-distance buses manufactured since 1974. Their top speeds are limited to 70 mph. In August of 1992, trucks with a gross weight over 7.5 metric tons must be fitted with speed limiters set at a maximum of 60 mph (See Status Report, Vol. 26, No. 6, June 15, 1991). A regulation requiring retrofitting of trucks up to four years old and weighing 20 metric tons and above will be issued in September, says W. Roger Hamilton, managing director of Econocruise Ltd., a British manufacturer of speed limiters. Hamilton was an adviser to a United Nations commission that set an international product standard now under consideration by the EC.

If the EC fails to pass the directive on speed limiters, The Netherlands will implement its own regulation, says Matthijs J. Koornstra, director of the SWOV Institute for Road Safety Research, which works closely with the Dutch government. Koornstra says that a Dutch national regulation would probably be stricter, limiting all heavy vehicles to 80 km/h (50 mph).

Speed limiter regulations are not confined to Europe. Since Jan. 1, 1991, the devices have been compulsory on heavy vehicles and buses in Australia, Hamilton says. Speed limiters are required for trucks with gross vehicle weights ranging from 12 to 20 metric tons, and for buses from 5 to 14.5 metric tons, depending on their date of manufacture, according to Wayne Hillier, project scientist at the Road Safety Bureau of the Roads and Traffic Authority, New South Wales. Vehicles equipped with limiters can travel at 100 km/h (62 mph) on designated, high quality roads where posted speed limits range from 100 km/h (62 mph) to 110 km/h (68 mph). Heavy vehicles without limiters are restricted to 90 km/h (56 mph) on these roads. On roads with 100 km/h (62 mph) posted speed limits, speed limiter equipped vehicles are restricted to 90 km/h (56 mph) along with other heavy vehicles.

Kenya also has issued a speed limiter requirement for all vehicles over 10 tons. Hamilton says that school buses have been fitted with the devices, but that trucks have been exempted for now because of Kenya's economic problems.
Air Bags Available For Passenger Side On '90 and '91 Lincolns

Ford Motor Company is beginning a program to retrofit certain 1990 and all 1991 Lincoln Continentals and Town Cars with passenger-side air bags. The vehicles were manufactured without passenger-side air bags because of a supplier shortage.

Driver- and passenger-side air bags were offered originally as standard equipment on the 1990 Lincoln Continental and Town Car, but, because of a fire at a plant supplying propellant for passenger-side air bags, only the driver-side air bags were available for both models. Customers who were unable to purchase these cars with passenger-side air bags were offered originally as standard equipment in all Lincoln Continentals and Town Cars, but, because of a fire at a plant supplying propellant for passenger-side air bags, the only passenger-side air bags available for both models. Customers who were unable to purchase these cars with passenger-side air bags were offered originally as standard equipment in all Lincoln automobiles, and owners of these cars are also eligible for the retrofit program.

Ford estimates that about 187,000 vehicles are affected. Owners will be notified by mail when the air bag module is available at their Lincoln-Mercury dealer.

Installation of driver-side air bags, standard equipment in all Lincolns, was never affected by the supply shortage. Ford says that when an adequate supply of passenger-side air bags becomes available, it will resume factory installation on the Lincoln Continental and Town Car. Ford plans to equip all its passenger cars with driver and passenger-side air bags by the "mid-1990s."

Commercial Drivers: April 1 Deadline Is Nothing to Fool With

Commercial vehicle drivers must obtain their new national commercial drivers license by April 1, 1992, but many drivers have not yet obtained them, the Federal Highway Administration (FHWA) says.

"There are three basic problems," says Stan Hamilton, an FHWA official. "There are rumors that we're going to delay the deadline that are going around among the CB operators. Then there are others who are relying on their current licenses' expiration date, which is a mistake. And the third reason is the good old American tendency to wait until the last minute."

By federal statute drivers must possess the new license by the deadline or they cannot drive, says Richard P. Landis, associate administrator for motor carriers. "Also it makes no difference what expiration date may be indicated by the drivers' current operating licenses."

Out of an estimated four million commercial drivers who must obtain the new license, figures provided by the American Association of Motor Vehicle Administrators (AAMVA) indicate only about 1.3 million have done so, say motor carrier office officials. They estimate it takes drivers, on average, about an hour and 20 minutes to complete the written test and another hour and a half to complete the driving test.

The number of drivers who must repeat one test or the other at least once varies greatly, the Office of Motor Carriers says. In California about 93 percent of the commercial drivers who have taken the tests passed, but in Louisiana, only 71 percent were able to pass. The AAMVA and Office of Motor Carriers officials also worry that if enough drivers don't get their licenses early, they'll be caught in a logjam because the states will be unable to process them quickly enough, and the drivers will not be able to work until they obtain their new license. "Remember," says Hamilton, "a lot of state offices are short-staffed because of budgetary problems."

Both interstate and intrastate commercial drivers must obtain the license if they operate a truck with a gross vehicle weight rating of 26,000 pounds or more and tow a unit with a weight rating of more than 10,000 pounds. Bus drivers who operate buses with a seating capacity of 16 or more persons must receive the license, as well as any person who operates a vehicle that transports hazardous materials requiring placarding.

"This covers not just the over-the-road segment of the truck industry," says Landis, "but part time or occasional drivers—everybody, in fact, who ever drives such a vehicle."

CHILD RERAINTS

Fisher-Price is recalling 26,700 model number 9149 child safety seats that fail to meet the applicable safety standard of the National Highway Traffic Safety Administration (NHTSA).

Tests performed by the manufacturer revealed, according to NHTSA, that some of the safety seats have breast shields that could separate during a crash because of faulty buckle frames. The seat is designed for use in the rear-facing position by infants. The company will provide owners of the seat, manufactured between Jan. 1 and Feb. 27, 1991, with a new shield and modification kit.

Owners of the model number 9149 safety seat can contact Fisher-Price by calling 1-800-233-4004 between 8 a.m. and 5 p.m. to see if their seats are affected by the recall.
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