

GAO Criticizes FHWA For Safety Program Flaws

In a report sharply critical of state and federal management of the highway safety improvement program, the General Accounting Office has said there is still no way to determine if safety funds are being spent for the most cost-effective projects.

GAO suggested a number of steps for improving the cost-effectiveness of this multi-million dollar program. In an official response to the study, the Federal Highway Administration — which administers the federally-funded program — declined to accept the bulk of these recommendations. It characterized states' programming flaws as merely "a need to obtain additional refinement."

In the report, GAO found that though states have had almost ten years to implement the federal standard requiring a systematic safety project selection method, "none of the eight

Cole Quoted

When asked for his views on the air bag, the former president of General Motors Corp., Edward N. Cole, told *The Washington Post* (Tuesday, Nov. 23, 1976):

I am very much in favor of it for a couple of reasons. It's passive, you don't need to do anything. Particularly for the most severe (injuries) to the head . . . It protects the head and neck, the most vulnerable part of your body. The shoulder belt does not.

When Cole was GM's president, the company supported and pushed air bag technology; with his retirement, GM's attitude toward air bags changed drastically, as *The Wall Street Journal* article on this page documents.

Saga of the Air Bag, Or the Slow Deflation Of a Car-Safety Idea

* * *
GM Failed to Push Device;
Dealers Discouraged Use;
Case of a 'Biased' Buyer

By ALBERT R. KARR

Staff Reporter of THE WALL STREET JOURNAL
WASHINGTON—It seemed bizarre, as buying a car goes.

There I was, eye to eye with a salesman in the showroom of Congressional Oldsmobile, a dealer in suburban Washington, eager to make a purchase. But I insisted on a car equipped with an air bag, the automatically inflating device that protects front-seat occupants in a crash. It was a \$315 optional item.

Did the salesman jump at the prospect of the lucrative sale? Not at all. Instead, after conferring with an associate, he told me how much it would cost to repair the car "if the air bag goes off" and said he didn't even know if I'd be able to buy one.

When I persisted, the salesman agreed to inquire at the dealer's zone office. It then took a week to find out if I could even order an Olds with an air bag—and all the time the dealer was risking the loss of a sale.

Eventually, I managed to buy the car—with an air bag. But my experience wasn't unusual. Indeed, a number of other people had considerably more difficulty trying to buy an air bag-equipped car while this option was offered on most full-size 1974-76 model Cadillacs, Buicks and Oldsmobiles. (The option is no longer offered.) Some customers, in fact, failed after months of trying.

A "Biased" Buyer

One of these is Dr. Arnold Arms, a Kansas City physician, who survived an October 1975 crash into a bus without injury because his Olds air bag functioned as intended, cushioning him and shielding him from shattered windshield glass. When he tried to buy a new Olds with an air bag, the dealer repeatedly put off delivery; half-a-dozen tries through July of this year were of no avail,

(Cont'd on page 7)

states included in our review had a fully implemented system or definite plans for achieving one.” According to the study, FHWA:

- did not know the status of states’ project selection procedures;
- had not developed adequate procedures for assessing state progress;
- had not established a target date for completion and implementation of such selection systems.

1972, 1976 GAO Findings: Little Change

A comparison of the 1972 and 1976 GAO studies of the highway safety improvement program suggests that little has been done to correct what GAO found to be important management flaws four years ago. For example:

1972

“Eight years after inception, the highway safety improvement program has yet to become a fully implemented major national program.”

“[Neither] the Highway Administration nor the states have reasonable assurance that the safety improvement projects [carried out] . . . represent the most worthwhile use of safety improvement funds.”

None of the six surveyed states “had a comprehensive inventory” of high hazard locations as a basis for planning a cost-effective improvement program.

GAO noted the “incompleteness of accident data” in the six states and their resulting inability to develop comprehensive inventories of cost-effective projects.

GAO urged FHWA to “provide stronger program leadership” to the states.

1976

“... none of the eight states GAO reviewed had a fully implemented system [for programming cost-effective safety projects], or definitive plans for achieving one.”

“[The] Highway Administration did not have assurance that the states’ plans for developing and implementing a systematic approach would enable them to achieve the most safety benefits for each dollar spent.”

“[F]ive of the eight states we reviewed had not established inventories of cost-effective safety projects.”

“Although the eight states we reviewed have accident reporting systems, they did not obtain all the information required for identifying the most hazardous locations and when available it was not always used.”

FHWA “has not aggressively managed the program;” the agency should “intensify its efforts to insure that states develop and use systematic procedures in the near future.”

The federal standard requiring state-level project selection systems – HSPS 9 – is one of 18 federal standards for state and local highway safety programs. (See *Status Report*, Vol. 10, No. 21, Dec. 23, 1975.) The GAO study did not deal with the federal motor vehicle safety standards, or with those national highway safety standards for state and local programs administered by the National Highway Traffic Safety Administration.

The report noted that GAO, which monitors federal programs for the Congress, made similar criticisms in a 1972 study (*Problems in Implementing the Highway Safety Improvement Program*, B-164497[3]; see *Status Report*, Vol. 7, No. 12, July 3, 1972) and that few systems improvements have been made since then. (See box.)

Based on an analysis of highway safety programs in eight selected states – California, Idaho, Louisiana, Maryland, Nevada, Pennsylvania, Texas, and Washington – the report found one or more flaws in most project selection systems.

- The states' accident reporting systems “did not obtain all the information required for identifying the most hazardous locations and when available it was not always used.”
- “Safety improvement projects were not always selected on the basis of cost-effectiveness analysis.”
- “Priorities were not being established through the use of inventories of cost-effective projects.”
- Safety projects financed with regular federal-aid construction funds were often not selected through a systematic approach.
- “Federal-aid highways under some local jurisdictions were not considered and did not receive safety funds,” though they represent about 37 percent of the federal-aid system.

Some of the report's sharpest criticisms were reserved for FHWA's failure to “aggressively” manage the highway safety improvement program. The agency does not have adequate procedures for assessing states' progress in planning cost-effective safety improvement programs, according to the study, and has been ineffective in its efforts to obtain state implementation of safety program standards.

In reply to the GAO charges, FHWA claimed that it is “substantially meeting the intent of Congress” in its management of the program. It is “still too early . . . to expect all states to have fully implemented” systems for programming safety work, the agency argued, and most states have made “significant progress” in implementing the safety standards.

FHWA declined to accept GAO recommendations that it establish and enforce a “definite and reasonable” timetable for state completion of a safety project planning system. Instead, FHWA said that it would “continue to work with the states in developing” and implementing a systematic planning process. The agency rejected the GAO recommendation that states be required to use cost-effectiveness analyses in deciding both their improvement method and the locations to be improved. FHWA said that “other factors, such as categorical funding, state and local constraints . . . changes in accident patterns, traffic, [and] differences in annual costs” make reliance on such analyses “impossible.”

The 1972 GAO study of state and federal highway safety program management found that only about 2 percent of federal-aid highway construction funds were used for safety work even though such projects could provide much more cost-effective safety benefits than regular construction. Even those limited expenditures were not being applied in a systematically planned safety program, GAO said in 1972. The latest study pointed out that states have greatly increased their safety spending (from about \$100

million in 1971 to about \$1.1 billion in 1975), but still have not developed procedures for applying the funds in the most cost-effective way.

Copies of the latest GAO report, *Management Actions Needed to Improve Federal Highway Safety Programs* (CED-76-156, Oct. 21, 1976), can be obtained from the U.S. General Accounting Office, Distribution Section, Room 4522, 441 G St., N.W., Washington, D.C. 20548.

FHWA Official Warns Of Safety ‘Shrug Off’

A senior Federal Highway Administration official recently told a group of highway engineers that they are in danger of making “the false assumption that we engineers can shrug off our safety responsibility.”

Howard L. Anderson, FHWA’s associate administrator for highway safety, speaking to members of the Institute of Transportation Engineers at a recent meeting in Cedar Rapids, Iowa, urged them to see themselves as “professionals with a moral responsibility to protect the safety of the road user.”

Anderson criticized two “myths” that he said “permeate . . . our professional thinking” and lead to “marginal activity in highway related safety programs”: the so called “nut behind the wheel” myth – that safety efforts should be directed primarily at drivers, rather than vehicle or highway design improvements – and the “construction and maintenance zone myth” – that “safety of the driver through work sites is not of major importance.”

Anderson told the engineers that though “driver error contributes to many accidents,” improvements in highway and roadside design “have shown more substantial results than the results of both vehicle and driver programs combined.” Anderson suggested several highway engineering improvements which he thinks might increase safety on urban freeways, among them the use of performance standards for the design of traffic barrier systems.

(Both the National Transportation Safety Board and the Center for Auto Safety have criticized the lack of performance standards for barrier systems, including guardrails and bridge railings. As part of its reports on several fatal crashes on bridges, NTSB has called for the establishment of mandatory national performance requirements for traffic barriers. See *Status Report*, Vol. 9, No. 23, Dec. 26, 1974; Vol. 9, No. 18, Oct. 11, 1974; Vol. 10, No. 8, April 11, 1975.)

As for special safety problems of highway work zones, Anderson said “the attitude of the engineers responsible for construction and maintenance safety is the major portion of the safety problem.” He cited a number of hazards found recently by FHWA officials in a survey of highway work zones in 18 states: narrow lanes, sharp curves, unsafe barricades, poorly located and illegible warning signs and confusing pavement markings. He said that “construction sites in all states need improvements in the interest of safety.”

(FHWA recently began revising its regulations governing safety measures in federal-aid highway work zones. The revisions are required under the settlement terms of a suit filed last year by members of the Center for Auto Safety, the Building and Construction Trades Department of the AFL-CIO and local motorists over conditions in a 22-mile construction zone on I-495, the beltway around Washington, D.C. See *Status Report*, Vol. 11, No. 15, Sept. 23, 1976.)

“Highway safety improvements have a double payoff,” said Anderson. Better engineered roads “mean less driver error and a more forgiving environment when an error is made. That is a difficult combination to beat.”

Anderson, formerly an FHWA regional administrator, was appointed head of FHWA’s headquarters safety office in May 1975.

Advisory Panel Urges Moped Study

The National Highway Safety Advisory Committee has urged that the National Highway Traffic Safety Administration “expedite a comprehensive study of motorized bicycles (mopeds) in this country and in Europe.”

The committee is concerned about “a lack of in-depth statistical information on this type vehicle,” Committee Chairman Judith T. Connor said in a letter to Transportation Secretary William T. Coleman, Jr. The presidentially-appointed committee is charged with advising the Secretary of Transportation on highway safety matters.

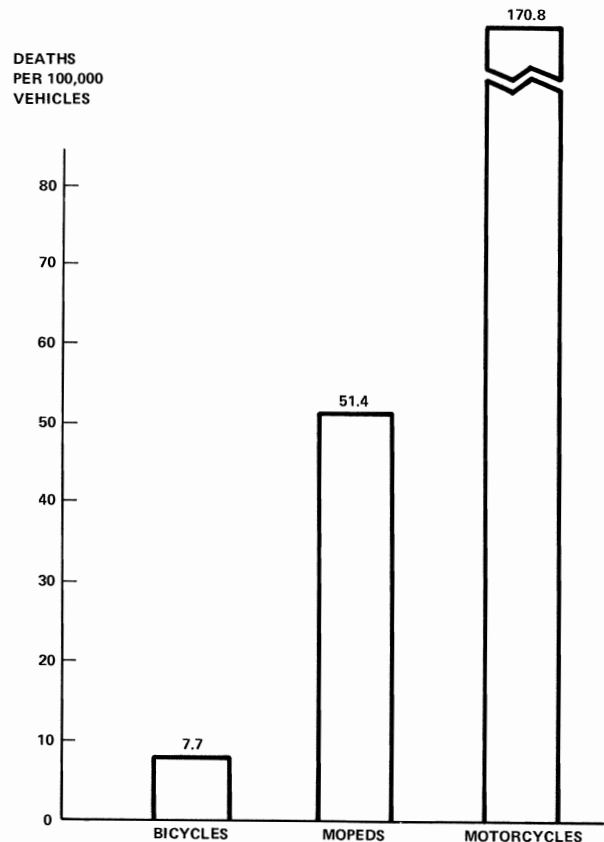
A resolution passed by the committee said the study should “cover the causes of motorized bicycle accidents, injuries and deaths, as well as administrative and operational problems.” The study should also consider the “effects of existing highway and motor vehicle safety regulations both here and abroad on patterns and amounts of usage on the incidence of accidents, injuries and deaths,” the committee said.

Data on two-wheeled vehicles compiled by the European Conference of Ministers of Transport in 1974 show the death rate per 100,000 vehicles was approximately 8 for bicycles, 51 for mopeds and 171 for motorcycles. Early next year the Organization for Economic Cooperation and Development (OECD, an organization including Western European countries, Canada, Japan and the United States among its members) expects to release results of an 18-month study of two-wheeled vehicles in Europe.

NHTSA plans to use that study, and other data it hopes to gather in this country, to get some idea of what problems to expect with mopeds in the U.S. According to an NHTSA official who serves on OECD’s Road Research Group, some European officials have expressed regrets that “they did not take

Status Report

BICYCLE, MOPED AND MOTORCYCLE DEATHS PER 100,000 VEHICLES, 1971
GERMANY, BELGIUM, DENMARK, FRANCE, NETHERLANDS, SWITZERLAND*



*EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT, REPORT BY THE COMMITTEE OF DEPUTIES ON ROAD SAFETY PROBLEMS CONCERNING TWO-WHEELED VEHICLES, PARIS, 1974

IIHS, 1975

November 30, 1976

mopeds seriously” when they were first introduced there. “It’s much more difficult to impose rules and regulations once they have been in use for several years,” he said.

NHTSA’s Office of Traffic Safety Programs has already asked that the agency’s multidisciplinary accident investigation team in southern California study moped crashes. The agency has also asked the Bureau of the Census to include mopeds in a National Personal Transportation Survey it plans to conduct in 1977-78.

Canadian efforts to gather crash data on mopeds have been hampered due to the lack of registration requirements and confusion about whether moped crashes should be reported with bicycles or motorcycles. Many states in the U.S. which have adopted special moped statutes do not require registration. Some states treat mopeds as bicycles while some continue to consider them motorcycles. (See *Status Report*, Vol. 10, No. 19, Nov. 24, 1975.)

Standardized Symbols Proposed For Controls

In an effort to simplify identification of essential vehicle controls, the National Highway Traffic Safety Administration has proposed replacing word identifications with international symbols. The symbols “can convey information more quickly and with less chance of human error than can words,” the agency said.

Under the existing standard on vehicle control identification (FMVSS 101), manufacturers may use words or symbols to identify vehicle controls for headlights, windshield washers and the like. Under the proposed amendment, manufacturers would have to use specified symbols to identify *vehicle controls* for: headlamps and taillamps, windshield washers and wipers, hazard warning signals, heating and air conditioning fans, and defrosting and defogging systems for windshields and rear windows.

The proposal would also require symbols for the following *vehicle displays*: turn signals, fuel level, engine coolant temperature, oil pressure, seat belts, headlight highbeams, hazard warning and electrical charge.

The symbols proposed are those adopted by the International Standards Organization, an international advisory group based in Switzerland.

The proposal would go into effect Sept. 1, 1979, with manufacturers allowed the option of complying with either the current or proposed standard until then.

Comments on the proposal, which appeared in the *Federal Register*, October 21, should be submitted by Dec. 6, 1976, to Docket 1-18, Notice 12, Docket Section, National Highway Traffic Safety Administration, 400 Seventh St., S.W., Washington, D.C. 20590.

Correction

In the Vol. 11, No. 17 story on the availability of public briefings on what the *Federal Register* is and how to use it, incorrect phone numbers were listed for where to obtain additional information on the briefings. Persons wishing to schedule or obtain information on briefings outside of Washington, D.C., should contact Robert Lewis at 202/523-5240. For information on briefings in Washington, contact William Short at 202/523-5282.

and Dr. Arms never did get a new air-bag car.

General Motors, the only manufacturer to offer the air bag to the public, has its answers to complaints about such difficulties. A GM spokesman says the company has found that most buyers simply don't want an air bag, and it contends that Dr. Arms is unusual because he is "biased" in liking the device. "Anybody whose life has been saved by the air bag would be biased in favor of it," the GM man explains.

The company's relationship with this safety device has actually been an on-and-off affair, an odd episode in the annals of auto marketing. Former GM President Edward Cole played a large role in the air bag's development. When it first offered the air bag, the company showed some enthusiasm about selling it. And William Buxton, sales vice president, contends that "we gave it one hell of a try." In three years, GM says, it was able to sell only 10,294, and so it has dropped this option on its 1977 models.

But a Wall Street Journal survey of car buyers, GM dealers and some close watchers of the auto scene shows that the air bag received no wholehearted promotion; instead, the company and its dealers actively discouraged sales. The survey turns up evidence that many dealers, like many people in general, know little about the air bag, did little to make buyers aware of it or whet their interest in it, and often sought to pour cold water on any interest that customers showed.

Picking Up "Vibrations"

Much of the resistance apparently sprang from salesmen's doubts about the reliability and effectiveness of the air bag, but they may well have taken a cue from coolness at GM. My salesman says he and his colleagues picked up "vibrations" from critical factory pronouncements about the device. In recent public statements, GM has questioned whether the air bag really gives added protection to car occupants.

The question of public reaction to the air bag has special significance now. Transportation Secretary William Coleman is preparing to decide whether to order that all new cars be equipped with air bags or with similar "passive-restraint" protective devices that require no "active" step such as buckling seat belts.

One point being considered by Mr. Coleman is whether people want the air bag installed in their cars or will at least accept it. Crucial evidence could come from answers to the questions: How did people react to the air bag when GM was selling it, and what sort of marketing promotion did it get? The Transportation Department plans to do some field work aimed at answering those very questions.

Mr. Coleman will also be influenced, of course, by reports of the air bag's effective-

ness. The cars so equipped have travelled over 320 million miles. Government and GM logs show that the air cushion has deployed about 100 times and that the occupants almost always escaped death or severe injury. But in some instances, the car was so crushed that nothing would have saved the driver or passengers.

Allstate Insurance Co., a big backer of the air cushion, calculates that the fatalities in air-bag cars work out to one for every 80 million miles of travel, against one fatality for each 37 million in other cars.

Still, there is widespread skepticism about the effectiveness, reliability and cost of this safety device. Public comments received by the Transportation Department run about four to three against requiring the air bag in new cars. But its advocates note that the government already requires auto buyers to pay for many other safety features, such as seat belts. They say public worry over such hazards as inadvertent deployment of the air bag reflects misinformation; there have been few such occurrences, and they haven't affected the driver's control or caused injury, air-bag advocates note. They say public concern has been fed by auto makers' disparagement of the device. People wouldn't buy any new option, the proponents add, if auto manufacturers and dealers didn't give it a good "sell."

Mr. Cole, the former GM president, says an auto maker must "create a desire on the part of the user" to buy an option like the air bag. Did the company do that? Mr. Cole's reply: "No."

To begin with, air-bag availability was limited. GM offered this option on less than a fifth of its production. The air cushion couldn't be bought till December 1973, two months into the 1974-model season. This was after most customers who traditionally go for new options, at the start of a model run, had done their buying. So in the first year, the 1974 Cadillac, Buick and Olds sales brochures didn't mention the air bag.

When it came to buying an air-bag car, many people found the task difficult. Ivan Gordon, general manager of Gloray Knitting Mills, in Robeson, Pa., says it took him three months to get a 1975 Cadillac, and he succeeded only after overcoming stiff dealer objections. (The normal wait is around four weeks.) Alex Cohen, a New York City publisher, tussled with two dealers before getting a 1976 Cadillac delivered in May of this year, seven months after he first tried to buy one.

Other customers, like Dr. Arms, gave up on buying an air-bag car after various frustrations. Among the disappointed: Mike McCrarry, chairman of a Dallas truck-insurance firm; Stephen Goldspiel, a staff lawyer for the American Bar Association in Chicago; and Calvin Trout, operations director for the Colorado Safety Association in Denver.

Allstate Insurance recently questioned some car buyers on the air bag, and of 65

who said they had inquired about the device at their dealers, 38 reported a "discouraging" response, while 16 said the reaction was "encouraging."

Customers recite a number of arguments they have been given for not buying an air-bag car. Dr. Ludwig Klein, a New York physician, says seven Buick and Olds dealers he talked to told him variously that the air bag was too expensive; that it might suddenly pop out in his face, causing him to lose control of the car (a view not justified by the device's tests and field performance); and that it wasn't sold on a Buick LeSabre, the model he was interested in (his call to GM's Tarrytown, N.Y., office proved that to be false).

"Usually, if I mention an option, they're delighted to sell it to me," Dr. Klein says. But in this case, he adds, "it was obvious that the company didn't want to sell the air bag." He finally got one anyway.

Many dealers concede they have been unenthusiastic about selling the air bag. Silvan Colove, former owner of Colove Cadillac in Robeson, Pa., says he was "leery" about the device. "We actually never tried to sell it." An Ohio Buick dealer says: "I stayed away from it, and so did my dealer colleagues. We wouldn't touch it with a 10-foot pole." My own Olds salesman says a "majority" of car dealers didn't mention the device to the customer when they were ticking off options as they made up the sales agreement unless he brought up the subject himself. (A market survey for GM showed that 56% of 1975-Olds buyers were little aware or totally unaware that the air bag was available.)

"If salesmen presented (the air bag) properly, it would sell," says Ed Brown, sales manager for Ladensdorf Oldsmobile in Des Plaines, Ill. "The increase over what was actually sold would be astounding," he says.

Dealers find that the air bag's \$315 price on 1976 models has deterred sales. "If the air bag were priced within reason, I think there'd be more interest," says Tom Scolan, fleet sales manager for Wiel Oldsmobile in Libertyville, Ill.

GM insists it has sold the device at a big loss. But John De Lorean, a former GM executive now doing consulting work, contends that on the same cost-figuring basis used by the company, the air bag should sell at around \$100, assuming mass production. And at that price, according to a survey made for GM by Market Research Group Inc. of Farmington Hills, Mich., one-third of the 1975-Olds buyers interviewed expressed a great deal of interest in purchasing a car with an air bag; the proportion was far lower when the price was higher.

UPDATE . . .

FUEL ECONOMY OFFICE ESTABLISHED: The National Highway Traffic Safety Administration has established a new office to direct the agency's programs on fuel economy.

In June of this year, Transportation Secretary William T. Coleman, Jr. delegated to NHTSA the authority, under the Motor Vehicle Information and Cost Savings Act of 1972, to set mandatory fuel economy standards for passenger cars. (See *Status Report*, Vol. 11, No. 11, July 8, 1976.)

The new office of fuel economy will report directly to NHTSA Administrator Snow.

In This Issue

- | | |
|--|---|
| ● GAO Criticizes FHWA For Safety Program Flaws . . . Page 1 | ● Advisory Panel Urges Moped Study . . . Page 5 |
| ● Saga Of The Air Bag, Or The Slow Deflation Of A Car-Safety Idea . . . Page 1 | ● Standardized Symbols Proposed For Controls . . . Page 6 |
| ● 1972, 1976 GAO Findings: Little Change . . . Page 2 | ● A Correction . . . Page 6 |
| ● FHWA Official Warns Of Safety 'Shrug Off' . . . Page 4 | ● Update: Fuel Economy Office Established . . . Page 8 |

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loss reduction

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