

SAFER VEHICLES AND HIGHWAYS

4.2 million U.S. Lives Spared Since 1966

55TH ANNIVERSARY OF *UNSAFE AT ANY SPEED*

CENTER FOR STUDY OF RESPONSIVE LAW

WASHINGTON, DC


JANUARY 2021

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Dedication

This report is dedicated to Clarence Ditlow, the formidable lawyer and engineer, who led the Center for Auto Safety for over 40 years of advocacy, litigation, advising and publicly informing the American people that safety, efficiency, clean air and their consumer warranty rights are to be respected by those in the seats of private and public power.

CONTENTS

FOREWORD by Ralph Nader	1
1. RECOMMENDATIONS: A Blueprint for Further Reducing Auto Deaths and Injuries	5
2. EARLY HISTORY OF THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	16
3. THE UNFINISHED SAFETY AGENDA: Issue Key Federal Motor Vehicle Safety Standards	20
4. ENFORCE THE LAW REQUIRING RECALL OF SAFETY DEFECTIVE VEHICLES	33
5. UPGRADE STATE HIGHWAY SAFETY DEFECTIVE VEHICLES	38
6. ELIMINATE CHILD MOTOR VEHICLE DEATHS WITH AVAILABLE TECHNOLOGY ...	43
7. EXPAND VEHICLE SAFETY CONSUMER INFORMATION	48
8. THE FUTURE: Make Safety the Winner in the Battle Over New Vehicle Technology	55
APPENDIX	60
A. Auto Safety Leaders as Secretary of Transportation and as Members of Congress	60
B. Contributors to Preparation of this Report	61
C. “Auto Safety Agency Faces Calls for Overhaul as Biden Presidency Begins” <i>New York Times</i> , by Christopher Jensen, January 21, 2021	62

FOREWORD

by Ralph Nader

It started with the relentless tragedies of friends, acquaintances, and classmates being injured or losing their lives in roadway collisions. Memories piled up with no relief for a society that had dealt little beyond exhortations to drive without drinking and just drive carefully. As a youth, I was drawn to hitchhiking, whether for work, for going to and from college and law school, or traveling around the United States. Occasionally, drivers who picked me up were among the first to happen upon a violent “accident.” Too often the crash vehicle occupants either were screaming or gravely silent. I saw the agony of the wounded as rescue vehicles rushed to the scene. I also saw collisions inside vehicles that newspaper stories and photos could not adequately convey. Horrors, such as steering columns impaling drivers, heads crashed through windshields, and bodies pushed through popped-open doors onto hard pavement, were all too common.

These terror scenes were never reported with an engineering context. During my third year at Harvard Law School, I chose automobile design and liability as the topic for an extensive seminar research paper that pulled together the literature of human factors and crashworthy engineering knowledge.

As I assembled this information, I became enraged at the auto company bosses for their stubborn indifference to what their few safety engineers were telling them, but only when asked. The auto executives were infatuated with style, horsepower, and trivial model changeovers. Unfortunately, the U.S. auto industry was technologically stagnant. Intrepid Ford Vice President and engineer, Donald Frey, was one of the few auto executives who sounded the alarm about the safety failures in his industry. For GM, Ford, and Chrysler, the nineteen fifties epitomized *laissez-faire* run amok. The consequences were deadly. Preventable slaughter on roads and highways was blamed on the drivers. No engineering schools, no traffic safety councils, no laws were focusing on the vehicles as *first* (improved tires, brakes, handling) and *last* (crash protections) clear protections to minimize driver deficiencies.

My law school research fed my growing outrage over the vast numbers of preventable human casualties, suffering and family wreckage that flowed from the auto industry’s dominant control of what was really a public health epidemic of mass trauma and mass pollution. Simple technological “vaccines” were blocked by a handful of bosses in Michigan, inebriated with their inhumane, narrow definition of marketplace success.

My student quest led me to a remarkable project in Boston by Liberty Mutual Insurance company and its vice president for engineering, Frank J. Crandell. He believed in loss prevention, which should always be a cardinal principle of the insurance industry. He took a four-door Chevrolet and outfitted it with many of the known safety features we take for granted today such as seat belts, padded dash panels, collapsible steering columns, stronger door latches, rollover bars and the like. The auto insurer then widely distributed his sketch and technical data, which aroused the indignation of the auto industry. At about the same time, the Pentagon, realizing that they were losing more airmen on U.S. highways than in the Korean War, spent about \$5 million to fund studies at the Cornell Medical School, the Harvard School of Public Health, and other institutions, to find ways for vehicles to protect their occupants.

I devoured these and other sources, from medical schools to the U.S. Patent Office. I located retired company engineers, such as Henry Wakeland, for inside understanding of these corporate hierarchies and what they were suppressing. Many cardinal safety travesties were well-known for centuries. Roman Chariots used padding to blunt “G-forces.” World War I airplanes were equipped with seatbelts. Race cars, post-World War II, had all kinds of engineered safeguards that saved drivers in devastating, often fiery crashes. But for tens of millions of drivers on the roads, passenger cars were like a roomful of knives. People rattled around in cars that were like glass and metal cages and collided with a variety of sharp edges and hard surfaces. There were no active or passive restraints.

In the Fifties and early Sixties, the auto industry was America’s darling giant, astride the globe, with only a little emerging competition. In the U.S., General Motors was a Goliath—smug, profitable and ready to squelch any public criticism of its gas-guzzling, over-powered and over-stylized vehicles that left their unbelted occupants as unprotected human crash dummies.

There was no federal regulatory presence whatsoever. What state laws there were integrated select industry-captured Society of Automotive Engineers (SAE) standards, like standards on brake fluid. I recall testifying before a legislative committee in Massachusetts to lawmakers whose bored demeanors were only broken by a legislator handing out cigars after his wife gave birth. Auto industry lobbyists knew how to court state legislators and dampen any interest in auto safety.

Six years out of law school, I had enough material and frames of reference to complete *Unsafe at Any Speed*, literally two months before my superb publisher, Richard Grossman, published it on November 30, 1965. *The New York Times* gave it a page-one story, which so alarmed GM that they telegraphed Grossman Publishers and requested a dozen copies be airmailed to Detroit and asked if they could be billed. Grossman chuckled, saying he could probably trust a GM check not to bounce.

At that time, little did I know that GM had a full-fledged private detective invading my privacy to find “dirt” on me and discredit my accusations. Once exposed, both the president of GM, James Roche, and the chief detective, Vincent Gillen, were hauled before Senator Abraham Ribicoff’s (D-CT) Senate Subcommittee on Government Operations in March 1966. From then on, a dutiful number of reporters followed the auto safety legislation winding through Congress, until President Lyndon B. Johnson signed two bills on September 9, 1966 with me as an invitee receiving a signing pen. The National Highway Traffic Safety Administration (NHTSA) was created under the Department of Transportation and its safety-sensitive Secretary, Alan Boyd. With some ups and many downs, over 54 years, mandatory standards for operational and crash safety, together with the unsung prodding of product liability tort lawsuits, and safer highways combined to save many lives, prevent or diminish many more injuries and save tens of billions of dollars. Together the laws, those regulators who believed in these laws, and the outside monitoring and advocacy made the auto safety effort a long-overdue demonstration of what government safety policies can do for the well-being of the American people. But because of an inadequate NHTSA enforcement budget, the deliberate absence of statutory criminal penalties for corporate criminal violations, and the influence of a plethora of auto company lobbyists on powerful legislators, such as Representative John Dingell (D-MI), there were more stops than starts. Moreover, many achievable practical opportunities

were missed or endlessly postponed. For an engrossing history of the battle for auto safety see Michael Lemov's book, *Car Safety Wars: One Hundred Years of Technology, Politics, and Death* (Fairleigh Dickinson University Press, 2011).

In recent years, the auto safety beat has been neglected by the media because official "inaction" in the arena of mandated duties is not considered "news." Standards not issued or strengthened, recalls not ordered, penalties not applied, data not compiled by make and model, safety research vehicles or devices not funded and chronic secrecy by government and auto companies do not qualify as "newsworthy." This is profoundly unfortunate. The media seems to have an institutional memory problem, having forgotten or never known just how critical a role they played in 1966 and later intervals in getting legislators and regulators to do the safe thing for the American people.

This report, was compiled by leading civic advocates regularly engaged in the never-ending task of working to ensure that vehicular crash deaths, injuries, pollution, fuel waste, and property damage diminish. It presents highlights of the fight for auto safety and important and specific recommendations of what still needs to be done. These recommendations reflect known, practical, money-saving technologies and policies still waiting for adoption. The authors also point to the need for stronger laws by Congress, especially in the areas of adopting criminal penalties, legislatively mandated safety advances, a more comprehensive capacity, and substantially increased funding for NHTSA to meet the serious challenges confronting the federal government's mission, together with state and local enhancement, for motor vehicle and highway safety. As the auto companies and new entrants move this subeconomy into the less-charted territory of autonomous vehicles, electric vehicles, smart highways and vulnerable kinds of automation, this report demands that open and safe testing, options for revisions and proper burdens of proof become standard practices respected by legislators and regulators. There is no place for companies insisting on immunities from liability under state tort laws as they clamor for various kinds of federal and state subsidies and privileges.

The contents of this report reflect years of civic oversight of government and industry by a small number of exceptionally dedicated safety advocates. They have persisted, insisted and resisted in their unsung labors for the public safety interest with little recognition and modest livelihoods. They rarely are profiled in the media no matter how many lives they have saved through recalls and many other actions that would not have been undertaken without their dogged attention.

I wish to thank them for concisely pulling together an immense amount of information and recommendations on the 55th anniversary of my book, *Unsafe at Any Speed*. They are representative of a very small corps of citizen safety champions without whom progress in many directions would not have occurred. The lead author, Joan Claybrook, former head of NHTSA under President Jimmy Carter and a relentless advocate, organized and coordinated the creation of this report.

The following people provided Joan Claybrook much appreciated assistance with this effort: Jackie Gillan (President Emeritus, Advocates for Highway and Auto Safety), Cathy Chase, Peter Kurdock, Tara Gill, and Shaun Kildare (Advocates for Highway and Auto Safety), Jack Gillis (Consumer Federation of America), Jason Levine and Michael Brooks (Center for Auto Safety), Janette Fennell and Amber Rollins (KidsAndCars.org), Ken Diggles (Automotive

Safety Research Institute), Jacqueline McLaughlin, artist and cover designer, Colin Henricks, IT consultant, and Elisabeth Solomon, proofreader.

The past 55 years offer lessons learned and unlearned. A major revelation is how little the intransigent culture of the auto industry—even toward its innovative suppliers—has changed. Whether the issues are consumer information, proposed safety standards, long-overdue fuel efficiency, emissions control and other areas for practical action, the auto industry’s lobbyists can almost always be relied upon to shout “NO, NO.” In retrospect, over the years, their negativism is absurd in the extreme. Imagine, Henry Ford II saying the industry would have to close down unless the first modest federal vehicle safety standards proposed by NHTSA in 1966 were weakened. Some ten years later, he admitted on television that cars were safer and more fuel-efficient because of federal regulations. Other industry executives were not as gracious.

Finally, I hope this report will encourage the mass media and congressional committees, as well as professional engineering societies, to pay more attention to surface transportation vistas, including the necessity for cost-effective public investment in new forms of public transit and upgrading existing mass transit. Getting around on the ground should include many diverse forms of arriving at one’s destination in a timely, safe, and environmentally benign manner.

Ralph Nader
January 2021
Washington, DC

1. RECOMMENDATIONS

A Blueprint For Further Reducing Auto Deaths And Injuries

1. Appoint a New, Independent NHTSA Leader and Drastically Increase Funding

The urgency of enhancing NHTSA's capacity to act is clear from scope of the tragedies suffered in the U.S. in 2019:

- 36,096 deaths and over 2.7 million injuries, an ongoing public health crisis.
- On average, 100 people were killed and over 7,500 injured every day.
- Almost half of passenger vehicle occupants killed were unrestrained, although 90% of vehicle occupants regularly are restrained.
- 5,000 killed were motorcyclists (14% of total fatalities).
- 1,050 of those killed were children age 14 and younger, with 270 children age four through seven and 184 age two and younger.
- 4,356 fatalities involved young drivers age 15-20.
- An astounding 10,142 fatalities (28%) involved a drunk driver.
- 3,142 fatalities involved a distracted driver (an increase of almost 10% from 2018).¹

President Biden must select a tough, independent Administrator not linked to the auto industry with the capacity to revitalize the National Highway Traffic Safety Administration (NHTSA), and restock its inadequate technical personnel and meager coffers. It has years of critical regulatory backlog to address and must focus immediately on regulating the forthcoming electric motor vehicles for safety as well as future autonomous vehicles. For almost four years the agency has not had a Congressionally approved leader. NHTSA is responsible for the safety of over 320 million people who drive or ride in more than 288 million registered motor vehicles, and others in commercial vehicles. The vehicle safety budget of \$194 million in fiscal year (FY) 2020 is a pittance when compared to the budget of military marching bands with over twice NHTSA's budget or to the payoff in lives saved. Ninety-five percent of transportation deaths occur on the highways yet NHTSA gets only 1% of the Department of Transportation budget. The vehicle safety budget should be increased by five times to one billion dollars a year.

¹ 2021 Roadmap of State Highway Safety Laws, Advocates for Highway and Auto Safety, Washington, D.C., January 2021

2. Immediately Require New Electronic Systems to Automatically Help Prevent Crashes

NHTSA should immediately require, as standard equipment, the most promising new vehicle safety protections in decades: advanced driver assistance systems (ADAS) that assist drivers to avoid crashes by 20 to 55%, according to the Insurance Institute for Highway Safety (IIHS). Also, Consumers Union in its report, *Safety First*, June 29, 2020, found that a savings of 11,800 lives could result from fleetwide adoption of automatic emergency braking, lane departure warning, blind spot warning and pedestrian detection. These are astounding savings. They also protect against pedestrian and bicycle fatalities that are at their highest level in almost 30 years, according to NHTSA. These exciting new safety technologies should be mandated immediately for all new vehicles to save lives and should be incorporated in new vehicles (especially new electric vehicles) at the initial design stage, which is highly cost effective. They are already in some expensive vehicles. They are ready now. Implementing these systems costs far less than the billions auto and tech companies are investing now in futuristic Autonomous Vehicles (AVs). The ADAS (Advanced Driver Assistance Systems) can be operational rapidly and provide some of the key benefits claimed by AVs (Autonomous Vehicles). Thus, all families, not just those buying costly vehicles, will be protected. Previously, only the crash protection system worked automatically. Now these new technologies work automatically to help prevent crashes, a wonderful outcome that avoids the pain and suffering as well as financial costs associated with crashes.

3. Install Passive Alcohol Detection Technology to Stop Drunk Driving

For about 12 years NHTSA has been funding an auto industry consortium working to develop passive, nonintrusive alcohol measurement technology (driver monitoring, eye tracking, hands-on-wheel). The technology should be subject to extensive independent testing immediately because the safety payoff is so huge, estimated at 9,000 lives saved per year. NHTSA should initiate efforts with other companies and institutes to get the job done and issue a rule at the earliest feasible date requiring this performance capacity. This would build a market for the new technology and encourage innovative companies to speed up its development.

4. The Unfinished Safety Agenda: Issue Key Motor Vehicle Safety Standards

Beyond the new ADAS standards noted above, NHTSA has a huge backlog of key motor vehicle safety standards it should issue quickly that would save thousands of lives and prevent an untold number of injuries. This need is the result of failed agency leadership, industry opposition and resulting political pressures, as well as lack of funding.

- A. Some standards have been mandated by Congress by a date certain going back to 2014, including motorcoach rollover structural integrity and anti-ejection protections, side and frontal impact rules for child restraint systems, rear seat belt reminders,

manufacturer retention of safety records and heavy vehicle speed limiters). House Energy and Commerce Committee Chair Frank Pallone (D-NJ) recently asked the GAO to investigate the factors contributing to NHTSA's delays.

- B. Four key rulemakings were withdrawn and terminated in the last 4 years (mandatory event data recorder requirements, state inspection of passenger-carrying vehicles, motor carrier safety fitness determinations, and evaluation of truck drivers for obstructive sleep apnea). They should all be reinstated.
- C. Other safety standards have been on NHTSA's docket or within their eyesight for years and yet highway users are still being maimed and killed unnecessarily. These include: stopping child vehicular heat stroke deaths with an occupant detection and reminder alert (the Hot Cars Act, H.R. 3593); improving nighttime driving by upgrading Head Lamp standard No. 108; strengthening seatback standard No. 207 to stop failures causing death and severe injury; protecting pedestrians and bicyclists with vehicle exterior design improvements (as required by the European Union) given the huge increase in such deaths and injuries (an increase of 50% in the last ten years compared to 7% for all other traffic deaths); for keyless vehicles, an automatic shutoff and vehicle lock requirement are essential to prevent carbon monoxide poisoning and rollaway.
- D. Recent model year vehicles have incorporated many significant safety improvements that were absent in their predecessors. All vehicles now have improved structures in front, sides and roof that reduce injuries from intrusion. It is now normal to have eight airbags that provide protection in frontal crashes, side crashes, and rollovers. Emerging crash protection improvements needed include air belts, "between the seat" airbags, and active seat and head restraints that automatically adjust in a crash to reduce injury, all of which should be turned into mandatory federal motor vehicle safety standards, as well as side impact airbags which now are not required but usually installed.

Other key actions needed are to:

- Significantly increase funding for the crash investigation and data programs which should be overhauled to improve statistical quality and completeness of data, and linked with police crash reports and investigations at the crash scene to provide real-time data to NHTSA.
- Use the THOR (Test Device for Human Occupant Restraint) 50% male and 5% female dummies in New Car Assessment Program (NCAP) frontal tests in order to improve chest injury measurements and encourage safety systems to reduce chest injury. It is designed to improve biofidelity and sensing over the older Hybrid III dummy. EuroNCAP (European New Car Assessment

Program) already uses the 50% THOR. It is designed to improve biofidelity and sensing over the older Hybrid III dummy.

- Develop separate Female NCAP ratings that apply female injury criteria to the dummy test results. Increase the weighting and reduce the injury tolerance of chest and leg injuries.
- Develop a separate senior or Silver NCAP that increases the weighting for body regions that are likely to be the most injurious to seniors. More specifically, increase the weighting of chest injury and reduce the allowable chest injury tolerance.
- Measure and regulate the aggressiveness of vehicle front structures. Require an initial crush distance at low force to reduce the battering ram character of some vehicle front structures. In addition, develop a Rear Seat NCAP to protect occupants most adversely affected by stiffness increases.
- Either adopt the EuroNCAP Far-side test or improve upon it so that manufacturers who have added far-side protection will be encouraged to include it in vehicles for the US market.

H.R. 2, the Moving Forward Act, introduced by House Transportation and Infrastructure Chair Peter DeFazio (D-OR.), Highway and Transit Subcommittee Chair Eleanor Holmes Norton (D-DC), House Energy and Commerce Committee Chair Frank Pallone (D-NJ), and Consumer Protection and Commerce Subcommittee Chair Jan Schakowsky (D-IL), passed the U. S. House of Representatives on July 1, 2020. It should be enacted into law. It requires mandatory minimum federal safety standards for ADAS, a federal rule requiring technology that monitors driver behavior and detects the presence of alcohol as standard equipment in all passenger vehicles, a federal rule to prevent child vehicular heatstroke deaths by detecting a child inadvertently left in the vehicle, mandatory standards for vehicle front ends to protect pedestrians and bicyclists as required in Europe, and critical safety requirements for large commercial trucks and school buses. It also requires a vitally needed update for the New Car Assessment Program (NCAP) providing consumer information based on crash testing that gives manufacturers the incentive to produce safe vehicles.

5. Enforce the Law Requiring Recall of Safety Defective Vehicles

In the 55 years since the publication of *Unsafe at Any Speed*, manufacturers have recalled over 500 million defective vehicles, but they continue efforts to minimize expensive recall costs by delaying recalls, narrowing the scope of a recall, or denying the defect. For years, the civil penalties for failure to comply with federal motor vehicle safety laws were a joke. But starting in 2010 with the highly publicized Toyota case involving sudden acceleration and a number of deaths, Congress drastically increased NHTSA's civil penalty authority. Today civil penalties

amount to \$21,000 for each violation and a maximum penalty of \$105,000,000 for a related series of violations. A separate violation occurs for each motor vehicle or item of motor vehicle equipment and for each failure or refusal to allow or perform a required act. (49 USC 30165a.) However, in the last four years civil penalties imposed by NHTSA dropped precipitously to \$25 million from \$320 million in the prior four years. And, NHTSA still has no authority to seek criminal penalties for refusal or failure to recall a defective or noncompliant vehicle. Without doubt, criminal penalties, especially jail time, would get the attention of industry CEO's and other managers and encourage them to strictly obey the law. Fear of criminal penalties is the reason companies have fought NHTSA's authority to impose them and stopped their enactment by Congress over the past 55 years. Unfortunately, even when NHTSA has authority to enforce the law it often does not. For example, the Center for Auto Safety estimates that as many as 50 million recalled vehicles remain unrepaired in 2020.

Another key issue is the lack of a federal prohibition on the sale of used cars subject to a recall. Transparency at NHTSA and by manufacturers continues to be a problem despite endless FOIA requests filed by the Center for Auto Safety. And manufacturers still attempt to conduct "service campaigns" to fix the vehicle as a substitute for a legal recall with its specific time and public reporting requirements. With continuous pressure from the Center for Auto Safety and other safety groups, NHTSA has been forced to recall many vehicles even though it did not initially take action. Examples are Firestone tires on Ford explorers, Toyota sudden acceleration, GM ignition switch/airbag case, and the 63 million defective Takata Airbags with a rupture of the inflator. Legislation in 2015, the Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94) requires recalled component parts to be identified by the name of the manufacturer and prohibits rental car companies from renting or selling a vehicle subject to a recall without it being fixed. Also, recall notices can be sent electronically to consumers in addition to the required notice by first-class mail. Congress mandated NHTSA to issue a rule by August 29, 2016 requiring manufacturers to notify consumers via email about vehicle safety recalls. NHTSA initiated a rule on September 1, 2016 but no further action has been taken. NHTSA has delayed issuance of a final rule that meets the Congressional deadline by more than 4 years. Despite all the deficiencies, recalls are more effective than in earlier years, and consumers now have access to better information on vehicle safety. But monitoring of NHTSA by consumer groups is essential to make sure the law is enforced and obeyed.

6. Upgrade State Highway Safety Laws

Just as enforceable federal motor vehicle safety standards are the key to protecting vehicle occupants, pedestrians, and bicyclists in a crash, enforceable state laws governing driving and occupant behavior are essential to limiting deaths and injuries at the state level.

Advocates for Highway and Auto Safety annually updates and publicly releases its *Roadmap of State Highway Safety Laws*, evaluating each state's laws, putting public pressure on states to upgrade them.² Despite over \$700 million annually in financial support from NHTSA to the states, far too many state safety laws are still lacking. Although NHTSA cannot force the states

² Advocates for Highway and Auto Safety, Annual Roadmap of State Highway Safety Laws, available at: <https://saferoads.org/roadmap-reports/>

to act as provided in the original Highway Safety Act, it can twist arms and use its bully pulpit, but it rarely does. That is why Advocates, a nonprofit alliance of consumer, medical, public health, law enforcement, and safety groups and insurance companies and agents is pressing and lobbying the states and revealing their deficiencies to the public. These laws cover five overarching issue areas: occupant protection, child passenger safety, teen driver safety, impaired driving and distracted driving.

No state has yet rated 100% with enactment of all the key laws, but a few are superior to most others. Overall, the best states are: New York, Louisiana, Rhode Island, Washington, the District of Columbia, Delaware, Maine, Oregon and California.

The importance of these laws cannot be understated. Until 1985, no states required lap/shoulder safety belt use. Today, all but New Hampshire require belt use, resulting in an increase from about 12% to 15% in 1980 to over 90% in 2020 of vehicle users buckling up. From 1975 to 2017, safety belts in passenger vehicles saved an estimated 374,000 lives and over \$1 trillion in economic costs. Other safety laws, such as child restraint use, .08 BAC (blood alcohol content) limit for driving, zero BAC laws for underage drinking and driving, graduated driver licensing for teens, and motorcycle helmet-use laws, also have big payoffs. State elected officials should use Advocate's report to identify deficiencies in their laws and take action to close the gaps to save lives, prevent injuries and reduce health care costs and other costs associated with traffic crashes. Advocates, insurers, and consumer groups continue working every year to upgrade lifesaving state laws.

7. Eliminate Child Motor Vehicle Deaths with Available Technology

Since the mid-1990s when KidsAndCars.org was founded by Janette Fennell, many improvements in child protection in and around cars have been adopted because of her relentless advocacy. She first collected and then got legislation adopted to force NHTSA to collect "nontraffic" data revealing many dangers to children.

There is an unfinished agenda for federal safety standards to protect children despite important federal rules secured by Fennell with the substantial help of other auto safety groups, especially Advocates for Highway and Auto Safety and Public Citizen, including power windows that don't strangle children, brake transmission interlocks, and back-up cameras. In every case these were opposed by the auto manufacturers, although they have minimal cost, and now have saved many lives of precious children.

A major improvement would be fold-away child restraints built into the rear seat. This would eliminate the problems with child seats not being properly installed, and the cost and inconvenience of purchasing child seats. Even with a special LATCH (Lower Anchors and Tethers for Children System Regulation), 70% to 90% of child seats are misused because of improper installation. Chrysler experimented with this concept, and Volvo in the 1990s produced some vehicles with such systems for toddlers. These systems reduce the risk of death of children under one-year of age by 71% and toddlers ages 1-4 by 54%. Every state requires child-restraint use systems.

The challenges for the next few years are:

- A. Rear seat belt reminders (as in the front seat). Public Citizen and Advocates petitioned NHTSA for a safety standard requiring this technology, but NHTSA refused to act. In the 2012 surface transportation authorization bill, the Moving Ahead for Progress in the 21st Century (MAP-21) Act (Pub. L. 112-141), advocacy groups got a requirement for issuance of such a federal rule by October 2015. The agency did not act, so the groups sued in 2017, and in 2018, the U.S. Court of Appeals demurred based on NHTSA's promise to issue a rule. In September 2019, the agency issued an advance notice of proposed rulemaking. Eight years after the law was passed, NHTSA still has done nothing more.
- B. The most recent efforts for child safety technology have been to require occupant detection and alert technology installed in all vehicles so that children are not inadvertently left in cars where they die from excessive heat exposure. At least 39 children die trapped in hot cars every year, but this tragedy is totally preventable with readily available and cost-efficient technology. A requirement for issuance of such a standard by NHTSA passed the House of Representatives in H.R. 2 in July 2020, but failed to move in the Senate.
- C. Vehicle seat backs are notoriously weak in some cars because of a useless federal seat back safety standard (FMVSS 207). When the seat back fails, mostly in rear impact crashes, children (and adults) in the back seat are killed or badly injured, and front-seat occupants can experience head injury, quadriplegia and death. NHTSA has been aware of this deficiency for many decades but failed to act. The only solution is to mandate such a requirement in forthcoming safety legislation.
- D. Child pedestrian safety is a key issue. Along with protecting pedestrians of other age groups and bicyclists, NHTSA should issue safety standards for vehicle front ends mimicking the European Union standards in place for many years. H.R. 2, the Moving Forward Act passed by the House of Representatives in July 2020, contains a requirement for NHTSA to issue such safety standards as well as rules for automatic front and rear braking that are important protections for child pedestrians.

8. Expand Vehicle Safety Consumer Information

Consumer information is powerful if it is current, relevant, presented so consumers can understand and use it, and is readily accessible.

The National Traffic and Motor Vehicle Safety Act of 1966 (Pub. L. No. 89-563) required NHTSA to issue Uniform Tire Quality Grading Standards (UTQGS) that measured treadwear, traction and heat resistance, posting the grades on each tire and at each retail establishment. Without this performance information, consumers would have no idea how to select a tire, one

of the most complex items on a car. Without performance information, price and branding are the surrogates for quality and safety. The rule implementing UTQGS was finally issued in 1978.³

NHTSA's most important consumer information program is the New Car Assessment Program (NCAP), which consists of compiling all of NHTSA crash tests by make, model, and year, and making the results available to help the public with purchasing decisions. Initiated in 1978, by then NHTSA Administrator Joan Claybrook, it shook the automotive companies that tried to get it quashed by the Secretary of Transportation when the crash test results were released in the *The Car Book* on the *Phil Donahue Show* in 1980. It was a smashing success, causing the auto companies to compete for safety for the first time and to acknowledge that "safety sells." *The Car Book* set a record for the most requested government publication but was discontinued in 1981 by the new Reagan Administration, undoubtedly at the request of auto manufacturers. Jack Gillis, the NHTSA staffer who put it together then quit, subsequently published it for 40 years with the Center for Auto Safety. It is now available on the Internet. Beginning in the 1990s, the NCAP program has been copied around the world, including by regulatory bodies in the EU, South East Asia, South America, and countries such as Australia, China, India, Japan, and others thanks to the work of David Ward, Secretary General of Global NCAP and Director General of FIA Foundation in London, Great Britain.

Unfortunately, NHTSA has failed to keep the U.S. NCAP program up to date. It is no longer a vibrant program challenging manufacturers to compete. It needs a drastic overhaul with many more tests to reinvigorate competition among manufacturers. It needs to adopt a relative rating system so consumers can truly differentiate the test results, with tests indicating the highest speed at which each vehicle will meet the performance criteria. Doing so will take advantage of the market and the life-saving power of consumer information. An attempt by NHTSA to achieve this in 2015 was stopped by the White House Office of Management and Budget (OMB)'s Office of Information and Regulatory Affairs (OIRA) which controls issuance of all major U.S. government regulations. Unlike other countries, the NCAP information is readily available at dealers on the new car price stickers on every new car sold in America. But the popularity of the information has spawned private entities like IIHS (Insurance Institute for Highway Safety) to conduct vehicle performance testing, and these programs in the U.S. and abroad have caused automakers to improve the safety of their vehicles.

Other critical sources of consumer information are at NHTSA's website Safercar.gov, which is generally helpful for consumers. But unfortunately, NHTSA has bureaucratized its administration of the Freedom of Information Act, making it hard and time consuming to get current information and forcing consumer organizations to sue the agency. To get access to manufacturers' essential technical service bulletins, consumer groups had to secure a requirement in federal legislation. Also valuable are the hundreds of thousands of letters NHTSA receives each year, listing problems, safety defects, and more but they are not readily available. NHTSA needs to make a major overhaul to increase distribution of consumer information.

Another critical source of information for consumers about their vehicle is the Event Data Recorder (EDR), which collects information electronically about vehicle performance and crashes. But NHTSA has no requirement that vehicles be equipped with an EDR, as

³ 43 FR 30549 (Jul. 17, 1978).

exists in Europe and as recommended by the National Transportation Safety Board for more than three decades. NHTSA only requires that minimal information must be captured in voluntarily installed EDRs. This is insufficient to properly ascertain key facts about vehicle performance and crashes, especially as vehicles become more highly automated. EDRs must be mandated by NHTSA for all new vehicles and require sufficient, standardized crash and performance information for effective analysis, and be accessible to aid investigators, regulators, and researchers in identifying safety problems.

For the future, the following is recommended to empower consumers to achieve major improvements in the automotive marketplace:

- A. Update the NCAP crash ratings to include information on new crash avoidance features such as forward collision warning, crash imminent braking, dynamic braking and blind spot detection, establish ratings for pedestrian and bicyclist crash avoidance technology, and provide comparative information by make and model for risk of injury to the head, pelvis and upper/lower legs;
- B. Create a vehicle rating covering all tests and safety features with specific ratings for adults, elderly occupants and children;
- C. Conduct specific research on packaging and delivering consumer information to car buyers;
- D. Simplify distribution of information and give timely responses to inquiries;
- E. Issue a rule requiring EDR's on all vehicles with a broad array of information; and
- F. Ensure NHTSA's technical library is robustly complete and easily accessible online and improve the auto safety hotline to help consumers register vehicle problems with NHTSA.

9. The Future: Make Safety the Winner in the Battle Over New Vehicle Technology

For the past three years the automotive and tech industries and highly paid lobbyists have been working the Halls of Congress urgently trying to pass corporate interest legislation to help rush autonomous vehicles (AVs) to the marketplace with little or no accountability, including undercutting tort liability. Their mission is to recoup the billions they have invested in speculative self-driving technologies. Senator John Thune (R-SD), as then Chair of the Senate Commerce Committee, and some of his colleagues, promoted flawed legislation that failed to offer any basic safety protections, but instead proposed expanded exemptions from safety rules, required bureaucratic advisory committees to distract regulators, yet contained no authorization for increased funding for NHTSA to do the work. Congressional and industry

enthusiasts have made countless bogus and unsubstantiated claims about achieving major reductions in vehicle-related deaths and injuries without any supporting research or evidence whatsoever, despite several serious crashes of cars with AV technology critically investigated by the National Transportation Safety Board.

Numerous business leaders in the automotive and related industries have expressed concerns about the rush to produce AVs because the technology is many years away from safe operation. Also, the cost of AVs with advanced self-driving technologies will be exceedingly high. Only the wealthy can afford to pay large amounts for such a personal vehicle. Yet the public generally will have to pay for huge highway infrastructure improvements needed to accommodate AVs. Such work will divert essential funding from overdue and mounting roadway and bridge repairs and rehabilitation in states and communities across America.

Before any legislation is debated, the industry must document and fully justify its claims and reveal the costs. Also, they need to respond to the numerous safety proposals by consumer and health groups.

Minimal mandatory safety requirements for all AVs must cover: the human-machine interface, cybersecurity protection, electronic safety, a “vision test” for AVs, the security and accuracy of over-the-air updates, provision for a manual override, a functional safety standard, with no expansion of exemptions from safety standards, collection of AV information and data modeled after Safercar.gov, agreement on complete transparency of the basis for all decisions concerning AVs, including those involving people with disabilities and access to ridesharing, retaining the local, state and federal regulatory roles with the states overseeing the operation of these vehicles and no limitations on producer liability.

Far more practical and with immediate cost-effective payoff for the public would be a focus by NHTSA on the exciting near-term driver assist technologies that would automatically help to avoid or reduce the impact of crashes. NHTSA's energies should be centered on technologies to immediately prevent crashes and fatal injuries as previously stated in these recommendations.

10. Upgrade Key Safety Standards and Rules for Large Commercial Trucks

This report does not cover large commercial trucks in detail, but some of the advocacy organizations that work on auto safety also focus on truck safety. Also, truck safety standards for new vehicles are issued by NHTSA, the focus of this report. And, crashes involving these vehicles kill 5,000 people annually and seriously injure 150,000 more, with 97% of the fatalities in truck/car crashes being occupants of the passenger vehicle, according to IIHS research.⁴ The trucking industry is primarily concerned with profits. Thus, it resists safety standards, constantly pushes to allow larger, more dangerous vehicles on highways, and seeks the availability of more truck drivers (such as teens) with longer driving hours allowed and few restrictions on their qualifications. Thus, this report makes the following recommendations:

Automatic Emergency Braking (AEB) is the most important truck safety standard NHTSA should issue immediately because truck crashes are devastating; truck drivers are often weary or fall asleep, and AEB would help significantly to prevent such crashes. In 2015, consumer safety

⁴ IIHS, Large Trucks, December 2019, available at <https://www.iihs.org/topics/fatality-statistics/detail/large-trucks>

groups petitioned NHTSA to issue an AEB truck safety standard; the petition was granted, yet nothing has happened since despite continuous efforts by safety advocates. A study by IIHS in September 2020 shows AEB would reduce rear-end crashes in trucks by an amazing 40 percent. The EU already requires AEB on trucks.

H.R. 2, The Moving Forward Act, the infrastructure and safety legislation passed by the House in July, 2020 requires NHTSA to issue a safety standard mandating commercial vehicles be equipped with AEB by a date certain with minimum performance standards. NHTSA can do this without legislation but has refused to do so.

Passenger vehicle crashes that underwrite the rear and side of large trucks are horrific, killing and maiming over 150 people per year (92 in the rear and 66 in the side), mostly the car occupants. Technology now exists to update the old, weak NHTSA standard for rear guards, and to add side guards. This should be done with dispatch. H.R. 2 also requires issuance of an upgraded standard.

In addition to concerns about truck vehicle safety standards, there are opportunities under the Federal Motor Carrier Safety Administration to improve truck safety with a requirement for entry-level driver training for all, including behind-the-wheel training. The current rule does not require ANY minimum behind-the-wheel hours of driving. Also, overweight trucks must be not be granted continuing weight limit exemptions. Overweight trucks disproportionately damage our roads and bridges. Every year safety advocates have to fight off various and often multiple trucking industry attempts to increase the weight limits of large trucks on our highways.

Tired truckers are overinvolved in crashes, but some companies and the independent truckers constantly push for inhumane longer hours of driving, which they claim is a key economic issue for them. Consumer organizations and the Teamsters are now suing DOT to invalidate a recent, outrageous rule taking away the current 30-minute rest break after 8 hours of being on duty. Another industry effort to lower driver costs and create a larger pool of drivers is dubbed "Teen Truckers." DOT is currently creating so-called "pilot programs" to allow teenagers to drive large trucks in interstate commerce, even though studies show truck drivers under age 19 are 4 times more likely to be involved in a fatal crash compared to drivers age 21 and over. This harms safety but gives companies a larger group of cheap labor from which to hire. The trucking industry must be watched like a hawk as it is always on the prowl for increased profits, often with safety being sacrificed.

2. EARLY HISTORY OF THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

On September 9, 1966, President Lyndon Johnson signed into law two new safety statutes: The National Traffic and Motor Vehicle Safety Act, and the Highway Safety Act—two landmark laws creating new federal authority to issue federal vehicle safety standards for all new vehicles sold in the U.S., require the notification of vehicle owners about vehicle safety defects, and provide grants-in-aid to states for highway safety programs such as drinking and driving, and safety belt and motorcycle helmet use.

In the audience that day was Mr. Ralph Nader, the 33-year-old author of *Unsafe at Any Speed*, his new book that excoriated the massive auto industry and the government for ignoring safety. In 1966, 50,894 Americans died in highway crashes.⁵ The book highlighted the deficiencies of the GM Corvair, a unique rear engine vehicle with a propensity to be unstable and rollover, killing or severely injuring the occupants. It led to the enactment of the 1966 law after a public uproar caused by General Motors' lawyers who hired private investigators to dig up dirt on Mr. Nader. Senator Abraham Ribicoff (D-CT) forced the president of GM, James Roche, to personally apologize to Mr. Nader in testimony before his subcommittee with coverage by every newspaper, television and radio outlet in the nation. Almost overnight Ralph Nader became a national hero.

Also in the audience was Joan Claybrook, a fellow with the American Political Science Association, who worked for Rep. James A. Mackay (D-GA) and Senator Walter Mondale (D-MN) in 1966. Mackay was instrumental in securing a statutory mandate to create a new federal agency to administer the law. Mondale secured a requirement that manufacturers notify consumers of safety defects. At Mr. Nader's recommendation, Claybrook subsequently was hired as special assistant to the first Administrator of this agency, Dr. William Haddon, Jr., M.D., Then she worked for Mr. Nader as a public advocate overseeing the agency in the 1970s, and in 1977 was appointed by President Jimmy Carter as the agency's fifth Administrator. In 1982 she replaced Mr. Nader as President of Public Citizen.

The new government agency, named the National Highway Traffic Safety Administration (NHTSA) in 1970, was charged with issuing initial federal safety standards by the end of January 1967. A key innovation required by the new law, at the urging of Nader and Haddon, was federal vehicle crashworthiness standards designed to protect occupants in a crash. The auto industry had long blamed drivers with slogans like "the nut behind the wheel" and "the life you save may be your own." The enactment of the federal law pinpointed the responsibility of manufacturers to make vehicles designed to protect occupants involved in crashes. This only slightly increased manufactures' costs and it more properly defined their liability. The payoff has been remarkable.

None of the first government crash safety standards were unique. They were very basic and well-known to the auto manufacturers. By law, they were based on existing voluntary and recently developed Government Services Administration (GSA) standards for the purchase of government vehicles, a provision Ralph Nader insisted be added, because the GSA standards were the most

⁵ Motor Vehicle Traffic Fatalities & Fatality Rate 1899–2016 NHTSA

advanced standards then available. The new federal standards had to be scientifically based, objective and practicable. They included requirements for laminated windshields, collapsible steering assemblies with non-rearward column displacement, interior padding, seat anchorages, and most controversial, lap and shoulder harnesses to restrain occupants and diffuse crash energies during impact. The industry referred to these belts with disdain as spaghetti because they disliked their ugly appearance, ignoring their huge life-saving value. The original safety standards also addressed traditional systems to prevent crashes, such as brakes and lights.

From the beginning, the federal vehicle safety standards started saving lives and reducing the horrific injuries and trauma that were readily preventable. By building safety into the vehicle at the start of the design process, the cost to manufacturers was minimal, a few dollars in most cases. Many of the vehicle safety technology pioneers in 1966 and today are automotive suppliers who take the risks of designing new concepts for the automotive industry. The public always strongly supported new safety innovations and the federal auto safety standards built into new vehicles. An extensive 2004 Lou Harris Poll found that, “Statistically, the weight of public opinion is overwhelmingly on the side of having federal responsibility for safety in matters of safety and public health. The intensity of support is also high. Over the years, roughly six in 10 Americans have viewed federal regulatory responsibility over highway and auto safety and other matters affecting the health and safety of the people as not just important, but ‘very important,’ essentially indicating that they view it as an indispensable necessity.”⁶

In response to the 19 proposed vehicle safety standards released by Haddon in December 1966, Henry Ford II held a press conference with a vehicle mocked up to show the new vehicle standards were impossible to meet.⁷ He growled, “Many of the temporary standards are unreasonable, arbitrary and technically unfeasible...if we can’t meet them when they are published, we’ll have to close down.”⁸

The first federal vehicle safety standards were issued, as required by the new law, on January 31, 1967. Some changes from the proposed standards were made as requested by the manufacturers. Knowing how instrumental these first standards would be, Nader harshly criticized the agency for caving to industry pressure. But it was noteworthy that the agency had prepared and issued 19 federal standards in 4.5 months, with minimal staffing and limited funds. Almost all of those first standards have since been upgraded, and as the agency gained expertise and funding, it issued more sophisticated standards that significantly challenged the manufacturers.

But in 1967, General Motors (GM) was still angry and tried to avoid compliance with the lap/shoulder standard (FMVSS 208) by claiming it could be harmful in a crash with large males using shoulder belts in the front seat and with unbelted large males in the rear seat (no rear belts were required). GM claimed the rear occupants would shoot forward in a crash and hit heads with the front seat shoulder belted occupants. Haddon temporarily delayed the standard, putting out a worldwide all-points bulletin asking for any data on this issue. Volvo, which had put front seat shoulder harnesses in their vehicles starting in 1959, responded saying it had collected data on all shoulder belt crashes involving its vehicles and found no example

6 “Survey of the Attitudes of the American People on Highway and Auto Safety” by Louis Harris and Peter Harris Research Group, June 2004, Conducted for Advocates for Highway and Auto Safety.

7 Claybrook, J, Bollier, D, The Hidden Benefits of Regulation: Disclosing the Auto Safety Payoff, *Yale Journal on Regulation* (1985).

8 Id.

of the harm claimed by GM. Volvo also found lap and shoulder belts were huge lifesavers in crashes from 12 to 60 mph. Haddon reinstated FMVSS 208, but GM, ever the protagonist, announced it was charging consumers an additional \$75 for the mandatory installation of the shoulder belts. The Chair of the President's Council of Economic Advisors, Charles Schultze, called that: "GM's Christmas present."

In November 1968 Richard Nixon was elected President. In February 1969 he fired Haddon, whose deputy, engineer Robert Brenner, became Acting Administrator. Before he left, Haddon initiated vehicle crash testing with two vehicles smashing into each other at about 30 mph at a proving ground. The dramatic pictures of a Plymouth decimating a Volkswagen caused a stir.

Nixon's team immediately quashed any more public crash testing by the agency. But crash testing was an integral part of developing government safety standards and not only supported agency research, but a decade later became the foundation for a public consumer information program for comparing various vehicle models.

During his two and a half years as Administrator, Dr. Haddon made two particularly important contributions to the future of auto safety. Most importantly, he created what is now known as the Haddon Matrix, a small chart (such as is used in tic-tac-toe) with the key elements for making policy decisions to enhance vehicle and highway safety. Across the top of the chart, he divided the instantaneous crash event into three segments to distinguish the role of each: the "Pre-Crash, Crash and Post-Crash" elements of a crash. The numbering for the motor vehicle safety standards was also organized by Pre-Crash (100 series), Crash (200 series) and Post-Crash (300 series). Down the left side of the chart Haddon listed "the vehicle, the driver, and the environment." By evaluating each of these factors in the chart, it became evident who was responsible for needed remedies. Secondly, he organized the new agency into three sections around the scientific information needed to issue vehicle safety rules and highway safety standards for the states. Thus, there was the Motor Vehicle Standards and Enforcement office, the Highway Safety office, and the Research office, which was responsible for researching and providing essential research and statistical information to both major program sections to help develop and justify agency decisions.

The new Secretary of Transportation was John Volpe, a building contractor. One of the most important research programs at the agency at that time concerned airbags, a newfangled idea that auto supplier Eaton, Yale and Town was developing (calling it the "People Saver") in hopes of selling it to the manufacturers. It involved an electric charge into an inflation device to fill a pillow-like nylon bag with air when a frontal crash occurred at over 12 mph, to cushion front-seat occupants and prevent them from being injured. The agency staff knew this innovative space-age-like device was controversial. So, they decided they had to inform the new Secretary of its possibilities before the manufacturers complained. They wanted to move forward with research and the issuance of a vehicle safety standard.

But they had no access to Secretary Volpe. So, they helped to schedule a meeting of the secretary's Federal Motor Vehicle Safety Advisory Council and extend an invitation to the secretary to attend, at which time the staff made a presentation on the life-saving potential of airbags. Volpe was immediately hooked. He saw his role as Secretary in a new light, as one in which he could help to save thousands of lives on the highway. He directed the agency to pursue rulemaking to federally mandate installation of airbags.

The other important supporter of airbags in the early 1970s was Edward Cole, an engineer who was then President of GM. He saw airbags as totally feasible and an asset to the industry. For him personally, supporting airbags assuaged his conscience over the faulty design of the Corvair. He took the lead in getting airbags installed in GM cars beginning with 1974 models before he retired, with promises of more. Without the power and efforts of these two men, the technology could have been long delayed, and might not have ever been produced, given the opposition of most of the automotive industry to introduction of this very new lifesaving concept.

The new administrator of the agency appointed by President Nixon was Douglas Toms, a congenial motor vehicle administrator from the State of Washington, who, following Volpe's lead, supported airbags. When he first arrived to look over the agency, he asked Haddon's special assistant, who would now be his special assistant, Joan Claybrook, what he should request from Secretary Volpe in taking the job. Claybrook immediately replied, "Request that the auto safety agency report directly to the Secretary, separating it from the massive Federal Highway Administration (FHWA) where it was buried when the DOT was created in 1966." She argued that the multi-billion-dollar FHWA, with its focus on building roads, submerged the critical importance of the auto safety program inside the DOT. And she pointed out that 95 percent of transportation deaths and injuries occur on the highway, enhancing the importance to the secretary of this fiscally smaller but potent program to reduce transportation deaths. She was already secretly working with Senator Abraham Ribicoff's office to secure legislation to achieve this goal. When Volpe readily agreed, Ribicoff passed the Highway Safety Act of 1970 (Pub. L. 91-605-Dec 31, 1970) creating NHTSA in Sec. 201, and thus was born the National Highway Traffic Safety Administration (NHTSA) as we know it today.

The newly constituted safety agency proceeded to initiate rulemaking to require airbags in all new cars but ran into a buzzsaw when Lee Iacocca, then President of Ford, and Henry Ford II visited President Nixon in April 1971. As revealed in the Nixon Watergate tapes, the two moguls loudly complained about NHTSA's rulemaking on airbags and its development of a new rear-impact safety standard to force improvements in fuel tanks (Ford was developing the Pinto!). Ford suggested that NHTSA require installation of automatic front seat safety belts instead of airbags. Nixon agreed, resulting in the airbag safety standard being delayed for more than a decade. His dream crushed, Volpe resigned to become the U.S. Representative to the Vatican, and Administrator Toms also left. In 1974, Congress passed legislation revoking the automatic safety belt standard in response to loud public complaints, requiring a congressional veto vote before any future airbag standard could take effect, and giving NHTSA authority to require auto companies to recall defective vehicles. A few weeks later Nixon resigned the presidency in disgrace over the Watergate scandal.

No one in 1966 or 1974 predicted the huge number of lives that would be saved with motor vehicle safety standards, vastly upgraded and new state highway safety laws, and new highways built under the federal aid highway program. In 1966 the number of highway deaths were 50,894 (they increased to a high of 54,589 by 1972). In 2019, the number of fatalities was 36,096, despite the huge increase in the number of drivers, vehicles and miles traveled. Based on an analysis by the Center for Auto Safety of deaths per million vehicle miles traveled, an estimated 4.2 million lives were spared because of these safety improvements in the U.S. from 1966 to 2019.

3. THE UNFINISHED SAFETY AGENDA

Issue Key Federal Motor Vehicle Safety Standards

The Payoff and Challenges of NHTSA's Vehicle Standards

In 1977, following the election of Jimmy Carter, Henry Ford II had a change of mind about the federal motor vehicle programs. As he said on *Meet the Press* in October 1977, “We wouldn’t have safety without the law, we wouldn’t have emission controls without the federal law, and we wouldn’t have as much fuel economy without the federal law.”⁹

The federal motor vehicle safety standards issued by the National Highway Traffic Safety Administration are the heart of the 1966 law. They apply to all new vehicles sold in the United States as of the effective date of each standard (usually 3-5 years after issuance), and they stay in effect until changed. Thus, manufacturers must install them year after year in new cars.

To date, 48 federal safety standards applying to passenger motor vehicles (cars, vans, light trucks, SUVs) have been issued. Additional life-saving motor vehicle safety standards not specifically covered by this report apply to large trucks and buses. NHTSA’s safety standards are by law minimum standards, but too frequently are watered down through industry opposition or challenge. A major obstacle to issuance of vehicle safety standards by NHTSA, beginning with the Reagan Administration, has been review in the White House Office of Information and Regulatory Analysis (OIRA), which has held up approvals based on alleged insufficient benefits compared to questionable costs. But NHTSA’s robust analyses of the benefits of its proposed safety standards always exceed the costs, even though costs are regularly exaggerated by manufacturers.

An extensive NHTSA study in 2014, covering the years 1960 (when a few vehicles were equipped even with safety belts) through 2012, found that an astounding 613,501 lives had been saved by specific federal motor vehicle safety standards in the U.S. In some cases, the standards studied were not fully in effect in 2012. The number of lives saved just in 2012 were 27,621. If the estimate of lives saved is extended to the year 2020, it is safe to say the number would reach about 850,000 in the U.S. The study was updated in 2015 for the years 1968–2015. Not to be ignored is the fact that U.S. vehicle safety standards have a reach beyond the U.S., as often manufacturers apply these U.S. standards in vehicles they sell elsewhere in the world.

Some standards have been in effect much longer than others (belts, steering assemblies, door locks and interior impact took effect with 1968 models, while airbags were phased in from 1988-1998 and electronic stability control is quite recent), and thus the total numbers for the older standards are usually larger. Also, all of the vehicle safety standards except belts are automatic, requiring no action by occupants.

A decade after FMVSS 208, which required lap and shoulder belts, was issued in 1967, belt use was stuck at about 12% to 15%.¹⁰ Following the passage of state seat belt-use laws in the 1980s and

⁹ Interview with Henry Ford II, chairman of the board, Ford Motor Company, on “Meet the Press,” National Broadcasting Company, October 30, 1977.

¹⁰ In 1968-71 lap belt was observed in surveys to be 9-16 % while shoulder belts use ranged from 1 to 6 percent for the same MY (Robertson et al. 1972. <https://www.nap.edu/read/10832/chapter/3#20>. At thi time lap and shoulder belts were separate systems. Use increased slightly with better designs.

1990s (now in every state except New Hampshire) safety belt usage grew dramatically and now is about 90%. Moreover, it is about 5% higher in states with primary enforcement than in states with secondary enforcement. With these caveats, the primary life savers among NHTSA's safety standards by total number of lives saved for the period 1968-2015 according to NHTSA, are:

Lap and shoulder belts	394,673
Energy absorbing steering assemblies	90,731
Frontal airbags	56,905
Door locks, latches & hinges	48,759
Occupant protection in interior impact	41,005
Side impact protection (inc. airbags)	39,420
Dual master cylinders/front disc brakes	20,360
Electronic stability control	16,350
Child safety seats	11,839
Windshield bonding	11,447
Roof crush resistance	5,060
Lamps, signals, reflectors	3,229
Heavy truck brakes ABS (anti-locking brake systems)	716
Rollover Curtains	552
Tire upgrade	407
Fuel system integrity	103
Tire Pressure monitoring systems	71
Rear viability cameras	40
Heavy tractor Electronic stability control	8
TOTAL	741,675¹¹

Despite the huge life and injury savings achieved by motor vehicle safety standards, NHTSA operates under very difficult circumstances. Historically, and still today, it has a minimal budget. NHTSA's fiscal year 2020 budget for the vehicle safety program is \$194 million, a tiny amount for the regulatory agency responsible for preventing death and injury to this nation's hundreds of millions of drivers and occupants on our roadways. It is less than half of the dollars allocated to the U.S. military marching bands, which cost about \$437 million annually.¹²

Five years ago, in F.Y. 2015, NHTSA's motor vehicle budget was only \$130 million. This agency has literally been starved. It also has been outgunned by the manufacturers in terms of engineering capacity. Much of the agency's technical work is accomplished with contractors, and the agency does not have a test facility (in contrast, for example, to the Federal Highway Administration and even the insurance industry-funded Insurance Institute for Highway Safety (IIHS), but must rent space for its test work from the Honda-owned facility in Ohio that used to be owned by Ohio State University when NHTSA first used it.

¹¹ Kahane, C.J. (214, September). Lives saved by vehicle technologies and associated Federal Motor Vehicle Safety Standards, 1960-2012—Passenger cars and LTVs—With reviews of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes. (Report No. DOT HS 812 069). Washington, D.C.: National Highway Traffic Safety Administration. Updated through 2015.

¹² In 2017 *Military Times* reported that the defense department estimates "military bands spend about \$437 million on instruments, uniforms and travel expenses each year."

The number of agency standards engineers is pitifully small, and many do not have the electronic engineering skills needed to oversee today's vehicles. With electric vehicles about to swamp new vehicle sales, NHTSA needs upgraded expertise and many more high-level engineers and safety researchers.

Another issue is that during administrations closely allied with the auto companies, agency decisions are not made strictly on engineering and payoff information, but to accommodate the pressures from industry. During the Trump years, NHTSA administrators were acting, but never confirmed as the agency administrator. NHTSA issued no new federal vehicle safety standards, and the Trump administration attempted to severely cut back on NHTSA's budget, which was mostly overridden with small increases enacted by Congress.

The bright side of this picture is that strong and dedicated outside advocacy groups regularly oversee and participate in NHTSA rulemaking proceedings, file lawsuits if necessary, testify on Capitol Hill and lobby for safety legislation with an effectiveness that belies their small numbers. These groups include Advocates for Highway and Auto Safety, the Center for Auto Safety, the Insurance Institute for Highway Safety, Consumers Union, Public Citizen, Consumer Federation of America, KidsAndCars.org, the Truck Safety Coalition (which includes Parents Against Tired Truckers and Citizens for Reliable and Safe Highways) and Consumers for Auto Reliability and Safety.

Despite all of the difficulties and challenges, the benefits of NHTSA's standards are remarkable. But they could be much better, and that goal will only be achieved with outside pressure and Presidential support, just as happened when *Unsafe at Any Speed* sparked the original 1966 legislation.

Crash Protection Improvements Since 1966 And New Safety Standards Needed

After several starts and stops in the 1970s and 1980s, airbags in the steering wheel and passenger side dashboard became standard equipment in the 1990s in cars, vans and light trucks under a legislative mandate. These airbags were highly effective in reducing adult head injuries in frontal collisions (but required placing young children in the rear seat to protect them from the force of the airbag). Along with the airbags came improved technology in the seatbelts. This technology limited the force that the belt applied to the human body by allowing the belt to play out at a controlled force during a crash. It also tightened the seat belt against the body so as to further reduce its force. To continue the reduction of injuries in frontal crashes, knee airbags have been introduced on most vehicles for both the driver and front passenger. These knee bags are designed to reduce injuries to the knees, upper legs and pelvic regions. They are not required by any federal safety standard, but should be. For side protection, airbags have been introduced to protect both the head and the chest. The airbag that provides head protection also covers the side windows to prevent partial and complete ejection. This protection is invaluable in rollovers as well as side crashes. They also are not required by a federal safety standard but should be.

In recent years, a safety feature not readily visible has been the improvement of vehicle structures. To comply with the airbag and other crash protection standards, today's vehicles have much stronger occupant compartments that reduce injuries caused by intrusion. This can

be observed in frontal and side structures and especially in the roof structure. Earlier generations of vehicles were required to have roof structures that would support 1.5 times the vehicle weight. Today's vehicles are required to support three times the vehicle weight, but most will support four or five times their weight. This increase in roof structure, in combination with airbags that cover the windows to prevent ejection, has greatly improved rollover safety.

New rollover protection standards were issued following enactment of legislation initiated by Senator John McCain (R-AZ), then chair of the Senate Commerce Committee, and brought to fruition by Senator Trent Lott (R-MS) as the subcommittee chair, following hundreds of deaths resulting from crashes of Ford Explorers with Firestone Tires. (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) Pub. L. 109-59, Aug. 2005). The companies tried to cover up the problem, but it was exposed by enterprising television investigative reporter Anna Werner from station KHOU-TV in Houston, Texas. The new rollover standards resulted in redesigns by manufacturers and dramatic reductions in rollover deaths, exceeding an astounding 4,300 per year.¹³

However, a number of additional key safety improvements are essential and feasible right now and should be incorporated into new or amended vehicle safety standards. A recent study by J. Forman and others at the University of Virginia found that belted occupants of vehicles MY 2009 and later who were involved in frontal crashes had no significant reduction in serious (AIS 3+) chest injuries when compared with those in vehicles that were MY 2008 and older.

There are several explanations for this lack of safety improvement in newer model vehicles.

- Papers by Samaha¹⁴ and by Sahraei¹⁵ examining studies at George Washington University showed that front structures of vehicles have become shorter and stiffer in recent model years, resulting in an increase in the severity of crashes. This trend has been especially unfavorable to rear seat occupants who have not benefited from air bags and advanced technology in the seatbelts. It is also unfavorable to vulnerable front seat occupants including females of all ages and seniors.
- Papers by Digges¹⁶ at the Automotive Safety Research Institute have found that beginning in 2011, chest injury measurements made in the New Car Assessment Program (NCAP) tests were meaningless due to lax testing standards that permitted the belt to be routed far away from the device on the dummy that measures chest injury. Consequently, incentives for automotive manufacturers in lowering chest injury have been reduced.

¹³ <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812981>

¹⁴ Samaha R, Digges K, Fesich T, Authaler M, "Frontal Crash Testing and Vehicle Safety Designs: A Historical Perspective Based on Crash Test Studies," SAE Paper 2010-01-1024, 2010.

¹⁵ Saharei, E, Digges, K., Marzougui, D., and Roddis, K., "High Strength Steels, Stiffness of Vehicle Front-end Structure, and Risk of Injury to Rear Seat Occupants, Accident Analysis and Prevention, 66 (2014) 43-54, 2014.

¹⁶ Digges K, Dalmotas D, Prasad P and Mueller B; "The Need to Control Belt Routing for Silver NCAP Ratings", Proceedings of the 25th ESV Conference, Paper Number 17-0403, June 2017.

Digges K, Dalmotas D, and Prasad P; "Application of Multiple Rib Gages to Improve Chest Injury Measurements", Proceedings of the 26th ESV Conference, Paper Number 19-0266, June 2019.

- The current Hybrid III (50% male and 5% female) frontal dummies are not capable of measuring chest injury accurately when the shoulder belt is purposely routed far away from the measurement gage. The THOR family of dummies (updated versions of prior test dummies) has multiple chest measurements and could be used to mitigate this deficiency.

The paper by J. Forman and others at the University of Virginia also found that a seat belt wearing female has 73% greater odds of being seriously injured in a frontal crash than her male counterpart. The female body regions of greater added risk included the legs and the ribs, with odds ratios of 2.29 and 2.14, respectively.

Several important safety technologies to address some of these issues are now available in limited quantities. One is the air belt which, by inflating along the shoulder segment of the belt, softens the loading the chest. When available, this technology has been applied to rear seat occupants who have not benefited from all the technology protections available for front seat occupants. A second new technology is a “between the seats” airbag. This airbag provides protection in a crash that occurs on the far-side of the vehicle. This crash type frequently occurs when making a left turn across oncoming traffic. The “between the seats” air bag reduces injuries caused by the driver impacting the far-side of the vehicle and/or the other occupant. Euro NCAP currently gives credit for this safety technology and some vehicles available in the US have it in 2021 models. A third valuable technology is the active seat and head restraint that moves forward to cushion the head and provide improved support in a rear crash. Unfortunately, the current federal safety vehicle standard preventing the failure of the front seat back is totally insufficient, allowing the seat back to fail in rear crashes, causing severe harm to rear seat occupants (especially children) and to front seat occupants as well. This standard, FMVSS 207, needs to be strengthened immediately.

Recent model year vehicles have incorporated many significant safety improvements that were absent in their predecessors. All new vehicles now have improved structures in front, sides and roof that reduce injuries from intrusion. It is now normal to have eight airbags that provide protection in frontal crashes, side crashes, and rollovers. Emerging crash protection improvements needed include air belts, “between the seat” airbags, and active seat and head restraints, all of which should be turned into mandatory federal motor vehicle safety standards, as should side impact airbags which now are not required but usually installed. In addition, NHTSA should adopt the following recommendations:

- Use the THOR 50% male and 5% female dummies in NCAP frontal tests in order to improve chest injury measurements and encourage safety systems to reduce chest injury. EuroNCAP already uses the 50% THOR.
- Develop separate Female NCAP rating that applies female injury criteria to the dummy test results. Increase the weighting and reduce the injury tolerance of chest and leg injuries.
- Develop a separate senior or Silver NCAP that increases the weighting for

body regions that are most injurious to seniors. More specifically, increase the weighting of chest injury and reduce the allowable chest injury tolerance.¹⁷

- Measure and regulate the aggressiveness of vehicle front structures. Require an initial crush distance at low force to reduce the battering ram character of some vehicle front structures. In addition, develop a Rear Seat NCAP to protect occupants most adversely affected by stiffness increases.¹⁸
- Either adopt the EuroNCAP Far-side test or improve upon it so that manufacturers who have added far-side protection will be encouraged to include it in vehicles for the US market.¹⁹

The next generation of vehicles will see significant increases in vehicle weight due to the heavy batteries in the electric vehicles. This added weight will increase the energy that the vehicle frontal structure needs to absorb in a crash. As a result, vehicle frontal structures are likely to become even more aggressive when involved in both frontal and side impacts and could further harm pedestrians and bicyclists. This change makes automatic emergency brakes a critical safety standard for installation in all new vehicles to avoid crashes, especially electric vehicles, which will become widespread in the next few years.

Legislative Mandates Compel Agency Action on Safety Standards

Since the late 1980s nearly every major advance in auto safety standards has been mandated by Congress through enactment of bipartisan legislation. In 1977, under the Carter Administration and the leadership of Administrator Joan Claybrook, NHTSA issued an occupant protection safety standard, FMVSS 208, to initiate installation of airbags in front seating positions. However, in 1981 the incoming Reagan Administration revoked that safety standard, setting off a protracted legal battle led by State Farm Insurance Company that ended up in the U.S. Supreme Court. Following a decisive 9 to 0 legal victory for airbag proponents, the new Secretary of Transportation, Elizabeth Dole, in 1984 reissued the standard to take effect with 1989 models, but allowed that if by 1989, two-thirds of the population were covered by state seat belt-use laws, the airbag rule would automatically be revoked (the auto companies fought for this subterfuge but lost). Finally, in 1991, with Democratic and Republican support, a federal surface transportation funding bill was passed that directed NHTSA to issue a final rule on airbags with a specific deadline for action, covering front seat occupants in both cars and light trucks/SUVs.

The goal of this legislative strategy by citizen advocates was to force NHTSA to act on

¹⁷ Digges K, Dalmotas D, and Prasad P, "An NCAP Star Rating System For Older Occupants," Paper Number 13-0064, Proceedings of the 23rd ESV Conference, May 2013.

¹⁸ Digges, K., Eigen, A., and Harrison, J., "Application of Load Cell Barrier Data to Assess Vehicle Crash Performance and Compatibility", SAE, 1999-01-0720, March, 1999.

Digges, K., and Eigen, A., "Examination of Car to Light Truck Compatibility in Frontal Crashes", SAE 2001-01-1165, March, 2001.

Sahraei, E, Soudbakhsh K, Digges K, "NCAP Star Rating and Safety of Rear Seat Occupants," Proceedings of the ASME 2009 Bioengineering Conference (SBC2009-206582), June, 2009.

¹⁹ Digges, K., Echemendia, C., Fildes, B., and Pintar, F., "A Safety Rating for Far-Side Crashes", Paper Number 09-0217, Proceedings of the 21st ESV Conference, June 2009.

overdue regulations. This strategy has been used for the past 30 years to achieve significant, lifesaving improvements in motor vehicle safety. NHTSA's glacial pace in moving any safety standard to the finish line in recent Republican or Democratic administrations has necessitated that safety and consumer groups seek relief in Congress to force the agency to act by a particular date, and sometimes to sue the agency. And the likelihood that litigation would be successful is vastly enhanced with a legislative mandate for NHTSA to act by a date certain. NHTSA, which early on had been a pacesetter in automotive technological innovations, fell behind—way behind—under pressure from manufacturers and regulation-averse administrations, leaving the legislative strategy as the only alternative to achieve progress.

With the constant activity of outside advocacy groups (that organize and activate many dozens of other organizations), there is strong and continuing support in Congress for the safety program. Concern by key members of Congress was made evident recently by a September 16, 2020 letter from Frank Pallone (D-NJ), Chair of the House Committee on Energy and Commerce, to the Comptroller General, asking for a study of the factors contributing to delays in NHTSA's completion of rulemaking, reports and research initiatives by their statutory deadlines.

By July 2020, following yeoman work by safety groups, several bills were pending in Congress mandating agency rulemaking on safety standards for both motor vehicles and motor carriers. Of these, only H.R. 2, the most comprehensive of these bills, passed the House of Representatives, in July 2020.

Underlying the industry delaying tactics lies resentment of mandatory safety standards. The manufacturers have argued since the 1966 legislative debates for so-called voluntary “standards” or voluntary agreements in place of mandatory federal motor vehicle safety standards. But even the Congress in 1966 recognized voluntary “rules” are detrimental to safety in many ways. These agreements are made in secret by the industry with no public input; there is no means of enforcement; the agreement typically does not result in the use of state-of-the-art technology; not all manufacturers participate; and there are no remedies for consumers if the voluntary standard is not met or is ineffective. Also, arguments over voluntary standards are a delaying tactic to avoid regulation.

Congress rejected voluntary “standards” over 50 years ago when it passed the National Traffic and Motor Vehicle Safety Act in 1966. As the Senate committee report stated:

“The promotion of motor vehicle safety through voluntary standards has largely failed. The unconditional imposition of mandatory standards at the earliest practicable date is the only course commensurate with the highway death and injury toll.”²⁰

This statement was true in 1966 and it is true 55 years later.

Below is a list of some of the federal laws mandating rulemaking by NHTSA to secure lifesaving improvements in motor vehicles. They all have high payoff. NHTSA has authority to issue these rules without a statutory mandate, but legislation has been necessary to get the agency to act.

²⁰ Committee Report on S. 3005, The Traffic Safety Act of 1966, June 23, 1966, at 271, 273, 274.

Tire Pressure Monitoring Systems (TPMS).

Section of 13 the Transportation Recall Enhancement, Accountability and Documentation (TREAD) Act (Pub. L. 106-414, Nov. 2000). *Lives Saved:* NHTSA estimates that TPMS will reduce the number of annual motor vehicle crash fatalities by about 120 and the annual number of injuries due to motor vehicle crashes by about 8,500, when all passenger vehicles are equipped with the technology.²¹

Electronic Stability Control (ESC).

Section 10301 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (Pub. L. 109-59, Aug. 2005). *Lives Saved:* According to NHTSA, an estimated 1,949 lives were saved by ESC (Electronic Stability Control) among passenger vehicle occupants in 2015. From 2011-2015, NHTSA estimates that ESC saved more than 7,000 lives by preventing vehicle rollovers, while other safety standards mandated by the 2005 law are preventing roof crush injuries and deadly ejection in rollover crashes.²²

Electronic Stability Control on Large Trucks and Motorcoaches.

Section 32703 of the Moving Ahead for Progress in the 21st Century (MAP-21) Act (Pub. L. 112-141, July 2012). *Lives Saved:* NHTSA estimates that up to 49 lives will be saved and 649 injuries prevented per year by this safety system being equipped on these vehicles with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds.²³

Rear View Cameras.

Section 2 of the Cameron Gulbransen Kids Transportation Safety Act of 2007 (Pub. L. 110-189, Feb. 2008). *Benefits Realized:* The Insurance Institute for Highway Safety (IIHS) estimates that rearview cameras can be expected to prevent nearly 1 in 6 police-reported backing crashes according to a November 2016 report. These crashes often kill or seriously injure small children.²⁴

Frontal Airbags.

Section 2508 of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 (Pub. L. 102-240, Dec. 1991). *Lives Saved:* According to the National Highway Traffic Safety Administration (NHTSA), by 2017, frontal airbags have saved over 50,000 lives, with more every day. In 2017 alone, airbags saved over 2,800 lives.²⁵

Seat Belts for Rear Center Seating Position.

Section 5 of Anton's Law (Pub. L. 107-318, Dec. 2002). *Lives Saved:* While figures for rear center seating positions are not separately reported, nationwide seat belts saved an estimated 14,668 lives age five and older in 2016, according to NHTSA. An additional 2,456 lives could have been saved if all passenger vehicle occupants had worn seat belts.²⁶

²¹ Safercar.gov, Vehicle Shoppers, Resources, TPMS FAQs.

²² Webb, C. N. (2017, March). Estimating lives saved by electronic stability control, 2011-2015. (Traffic Safety Facts Research Note. Report No. DOT HS 812 391). Washington, DC: National Highway Traffic Safety Administration.

²³ Federal Motor Vehicle Safety Standards; Electronic Stability Control Systems for Heavy Vehicles, 80 F.R. 36050 (Jun. 23, 2015).

²⁴ IIHS Status Report, Rearview cameras reduce police-reported backing crashes, Vol. 51, No. 9 (Nov. 17, 2016).

²⁵ Traffic Safety Facts 2017: A compilation of Motor Vehicle Crash Data, NHTSA, Sept. 2019, DOT HS 812 806.

²⁶ 2016 Lives Saved.

Upgraded Roof Crush Standard.

Section 10301 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (Pub. L. 109-59, Aug. 2005). *Lives Saved:* “NHTSA estimates that as many as 135 fatalities and 1,065 injuries will be prevented in rollover crashes annually as a result of this safety improvement.”²⁷

Improved Protection for Vehicle Occupants in Side Impact Crashes.

Section 10302 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (Pub. L. 109-59, Aug. 2005). *Lives Saved:* NHTSA estimates that approximately 300 lives will be saved and 360 injuries will be prevented annually by this upgrade.²⁸

Seatbelts on Motorcoaches.

Section 32703 of the Moving Ahead for Progress in the 21st Century (MAP-21) Act (Pub. L. 112-141, July 2012). *Lives Saved:* According to the American Bus Association Motorcoach Census, in 2015 there were 596.4 million passenger trips on motorcoaches, amounting to over 1.63 million trips per day.²⁹ Since MAP-21 was enacted there have been 126 fatal crashes involving motorcoaches which have killed 175 people.³⁰

Stars on Cars–New Car Assessment Program (NCAP) Ratings on Vehicle Price Stickers (Monroney label).

Section 10307 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (Pub. L. 109-59, Aug. 2005). *Benefits Realized:* In 2019, there 17.1 million new vehicles were sold in the United States that had to list the NHTSA NCAP ratings on the window sticker. This listing will continue each year automatically.³¹

Weak Political Leadership + Strong Industry Opposition = The Unfinished Safety Agenda

While auto safety improvements during the past 55 years have been substantial and consequential, there is still a large unfinished safety agenda. This agenda is neither unrealistic nor unachievable, and when implemented it will secure significant reductions in motor vehicle crashes, deaths, injuries, and economic costs. The current annual death, injury and financial toll of approximately 36,096 fatalities, 2.7 million people injured and more than \$800 billion in total costs to society is equivalent to a “crash tax” of at least \$784 on every American (Note: The dollars saved are 10-year-old estimates and NHTSA needs to update them). There are safety solutions and countermeasures to most, if not all, of the significant causes of motor vehicle crashes, deaths, and injuries. What is lacking is political leadership at NHTSA and DOT

²⁷ NHTSA, Final Regulatory Analysis, FMVSS 216 Upgrade Roof Crush Resistance, National Center for Statistics and Analysis (Apr. 2009).

²⁸ Federal Motor Vehicle Safety Standards; Occupant Protection in Interior Impact; Side Impact Protection; Fuel System Integrity; Electric-Powered Vehicles: Electrolyte Spillage and Electrical Shock Protection; Side Impact Phase-In Reporting Requirements, 72 F.R. 51908 (Sep. 11, 2007).

²⁹ American Bus Association Foundation (2017, October) Motorcoach Census: A Study of the Size and Activity of the Motorcoach Industry in the United States and Canada in 2015.

³⁰ FMCSA, Large Truck and Bus Crash Facts 2016, FMCSA-RRA-17-016 (May 2018).

³¹ Hannah Lutz, 2020 vision: Lower but stable sales in the U.S., Automotive News (Jan. 6, 2020).

to advance proven safety technologies as standard equipment given the persistent opposition from industry.

Exciting New Essential Crash Avoidance Technologies Should be Mandated as Standard Equipment on All New Cars Immediately

Crash avoidance technologies that are demonstrated lifesavers have been developed, but are typically available only on expensive models, usually as costly add-ons, making them unaffordable for most consumers. These safety systems work automatically to alert and guide drivers to avoid crashes. Previously only crashworthiness standards worked automatically to protect occupants. NHTSA should issue safety standards covering these incredible new crash prevention technologies immediately and can do so because the technology is in use on the highway today, making it possible to rapidly write mandatory safety standards. With the market provided by mandatory government standards, the innovative automotive supplier industry will produce even more creative technologies that assist drivers in avoiding crashes—the best outcome of all. Consumer Reports found that 11,800 lives could be saved annually with installation of four of these features: emergency braking, pedestrian detection systems, blind spot warning and lane departure warning.³²

Proven collision avoidance systems include automatic emergency braking (AEB), lane departure warning (LDW), blind spot detection (BSD), rear AEB and rear cross-traffic alert. The Insurance Institute for Highway Safety (IIHS) has found that:

- AEB can decrease front-to-rear crashes with injuries by 56 percent;
- LDW can reduce single-vehicle, sideswipe and head-on injury crashes by over 20 percent;
- BSD can diminish injury crashes from lane change by nearly 25 percent;
- Rear AEB can reduce backing crashes by 78 percent when combined with rearview camera and parking sensors; and
- Rear cross-traffic alert can reduce backing crashes by 22 percent.³³

Other Motor Vehicle Safety Standards Needed

Stop Child Vehicular Heat Stroke Deaths with Occupant Reminder Alert.

Since 1990, approximately 900 children have died from vehicular heatstroke after unintentionally being left by an adult usually in the rear seat. An occupant detection and alert requirement would prevent young children from dying when left behind in the rear seat of a car, or if they inadvertently

³² CR, *Consumer Reports*, “Safety First, Car Crashes, Innovation, and Why Federal Policy Should Prioritize Adoption of Existing Technologies to Save Lives,” June 29, 2020.

³³ IIHS, Real world benefits of crash avoidance technologies, available at: <https://www.iihs.org/media/259e5bbd-f859-42a7-bd54-3888f7a2d3ef/e9boUQ/Topics/ADVANCED%20DRIVER%20ASSISTANCE/IIHS-real-world-CA-benefits.pdf>

climb into an unattended vehicle. This technology is available from automotive suppliers. It is incomprehensible that auto manufacturers refuse to install this readily available detection and alert technology and have continued to successfully oppose a legislative or regulatory mandate.

Improve Nighttime Driving by Upgrading Headlamp Standard, FMVSS 108.

Earlier this year IIHS tested headlight systems on model year 2020 vehicles, and only about one fifth received a good rating. The majority tested were rated poor or marginal because of inadequate visibility, excessive glare for oncoming drivers, or both. This is especially dangerous for nighttime driving. With effective headlamps available now in the marketplace, this standard should be upgraded immediately.

Repair Known Failures of Seatback Strength Standard, FMVSS 207.

NHTSA has known about the problem of front seatbacks collapsing rearward in rear-end crashes and killing rear seat occupants, particularly children, since the 1970s, but continues to ignore its deadly consequences in some vehicles. The current NHTSA seatback strength minimum performance standard for all seating positions has not been changed since 1967. From 1990 to 2014, according to the Center for Auto Safety, nearly 900 children seated behind a front-seat occupant, or in a center rear seat, died in rear impacts of 1990 and later model-year cars due to front-seatback failure. Seat back failure also results in the front-seat occupant being propelled rearward, killing or seriously injuring the front seat occupant when the person's head hits the rear roof. This is an easy upgrade to make and a revised standard should be issued immediately.

Protect Pedestrians and Bicyclists with Design Improvements.

In 2018, more pedestrians and bicyclists were killed, according to NHTSA, than in any year since 1990. Killed were 6,283 pedestrians and 857 bicyclists. Between 2009 and 2019, total fatalities in the U.S. increased by 7% while pedestrian fatalities increased a shocking 52%.³⁴ New safety standards for pedestrian safety with tests forcing vehicle design changes in the hood and bumper areas (similar to those required by the European NCAP and regulations), mandatory installation of automatic emergency braking, enhancing the U.S NCAP information program by adding pedestrian tests, and changes to roadway infrastructure, are long overdue. Pedestrian deaths are soaring and will continue unabated without reasonable vehicle and roadway design improvements.

Slash Drunk Driving Deaths with In-Vehicle Technology.

On average one alcohol-impaired driving fatality occurs every 50 minutes. In 2018, the last year data are available, over 10,500 people died in drunk driving crashes and 162,000 more were injured. A July 2020 study by IIHS on the benefits of alcohol-detection systems that prevent people from drinking and driving shows these systems could prevent more than a quarter of all highway fatalities, saving upwards of 9,000 lives annually. NHTSA should require that all new vehicles be equipped with passive, unobtrusive sensor technology (driver

³⁴ Traffic Safety Facts 2009, National Highway Traffic Safety Administration, Report No: DOT HS 811 402; Preview of Motor Vehicle Traffic Fatalities In 2019, National Highway Traffic Safety Administration, Report No.: DOT HS 813 021 (Oct. 2020).

monitoring, eye tracking, hands-on-wheel) that prevents a vehicle from moving if the blood alcohol content (BAC) of the driver exceeds state legal limits. DOT and the auto industry have been researching technological remedies for over a decade and have spent tens of millions of federal dollars, but admit that their system(s) are not ready. Thus, NHTSA must shift gears and initiate efforts with other companies and institutes to get the job done. It is past time for immediate independent expert review and development of a NHTSA standard applying to all new vehicles. Initiating rulemaking for passive alcohol detection systems, with a firm statutory deadline for final issuance, would build a market for the new technology (or technologies) and encourage innovative companies to compete and speed up resolution of this incredible system.

Distracted Driving Must be Urgently Addressed with Federal and State Rules

Distracted driving caused by extensive use of electronic devices such as cell phones calls, texting and entertainment can be contained with driver monitoring technology. The number of deaths in 2018 in crashes involving a distracted driver reached 2,841 with many more injured, and reached an annual economic cost of \$40 billion. Public support for tough state laws to prohibit distracting activities while driving is overwhelming (90%). Congress should direct NHTSA to conduct the necessary research to issue a final rule by a date certain to require manufacturers to install monitoring technology to reduce distraction while driving, and to direct the NHTSA Section 405 grant program to address state adoption of stronger laws and enforcement on distracted driving.

Safety Standards are Essential to Address Unnecessary Risks from Keyless Ignition

Keyless ignition vehicles present obvious safety risks including carbon monoxide poisoning and vehicle rollaway. As more vehicles equipped with keyless ignitions are sold, the prevalence of the dangers from problems associated with them are increasing and must be addressed. NHTSA needs to issue a safety standard for keyless ignition vehicles including automatic shutoff and a braking system that prevents vehicles from rolling away from parking places.

Provide NHTSA Essential Authorities to Effectively Regulate the Industry and Curb Dishonest and Deceptive Practices.

Enhanced legal authorities are needed for NHTSA to effectively regulate and enforce safety standards. Congress should:

- Enact criminal penalties for knowing violation of NHTSA safety requirements, a priority for holding corporate executives accountable;
- Create imminent hazard authority for fast action by NHTSA to stop or avoid harm;

- Require safety equipment be sold separately by manufacturers and dealers instead of being bundled with expensive non-safety-related packages that discourage consumer purchase of safety equipment;
- Remove the cap on civil penalties NHTSA can impose; and
- Allow judicial review of agency decisions about safety defects, which a court of appeals has ruled must be left to the agency's prosecutorial discretion. But there have been too many cases where the agency had little rationale for not acting, leaving injured consumers with no recourse.

4. ENFORCE THE LAW REQUIRING RECALL OF SAFETY DEFECTIVE VEHICLES

In the 55 years since the release of *Unsafe at Any Speed*, there have been over 500 million vehicles recalled due to a dangerous defect or a violation of a federal safety standard. Considering that at the time of its publication, there was neither a mandate nor a means to recall a single vehicle, let alone half a billion, this is progress indeed. Prior to the passage of the National Traffic and Motor Vehicle Safety Act in 1966, it was completely at the discretion of auto manufacturers whether to pull a dangerous vehicle off the road. When recalls happened it was infrequent and ad hoc. Even when owners did receive a notification about the recall, the notifications lacked specificity, or a clear explanation of the risks to the consumer, and the repairs were often slow and inefficient. Needless to say, there was rarely any public notification regarding these recalls.

Following the public attention *Unsafe at Any Speed* brought to the dangers facing everyone on the road, Congress began its work on the Vehicle Safety Act. A few Senators in particular played key roles in shaping the main tenants of the Act, which stands today as a testament to the power of consumer activism.

To begin with, in 1966 it was not uncommon for automakers to secretly recall thousands of vehicles by telling consumers to bring their vehicle to a dealership for a “free review,” without revealing anything was wrong. At that point, the vehicle would be fixed without letting the consumer know that there had been a defect. Ralph Nader brought this practice to the attention of his Senator, Abraham Ribicoff (D-CT), then chair of the Government Operations Subcommittee. Senator Ribicoff demanded the auto companies give him a list of all vehicle recalls since 1960, and proceeded to make the list public, thus laying the groundwork for what would become customary—the full and complete public disclosure of recalls. Yet, a few more steps were necessary to make sure that the practice of removing dangerous vehicles from public roads was done transparently.

During the course of the writing of the Vehicle Safety Act, Senator Walter Mondale (D-MN) successfully pressed to get mandatory consumer notification of vehicle recalls into the new law. But days after the new auto safety legislation was enacted, the auto industry took the legal position that all information sent to the agency about recalls was required to be kept secret. In response, Senator Warren Magnuson (D-WA), who was Chair of the Senate Commerce Committee that wrote the law, asked the agency for its first recall reports and then released these 13 reports to the public. That single action functionally ended the debate about public availability of recall information, thus cementing one of the most valuable impacts of the Vehicle Safety Act.

With the law enacted in 1966, the ability of manufacturers to be the sole deciders of whether a vehicle or component was defective, or whether to inform the owner of a safety defect, was erased. The Vehicle Safety Act requires manufacturers to notify the purchaser of a vehicle or vehicle equipment by certified mail within a reasonable time after the discovery of a safety defect. The new law also required manufacturers to submit all such notifications to the Secretary of Transportation. If there was resistance by manufacturers to initiating a recall, the new law authorized the Secretary to make an initial and final safety defect determination and ultimately (after the law changed in 1974) to order a manufacturer to conduct a recall.

While the Vehicle Safety Act introduced a new process for vehicle safety defects, many challenges remained, particularly when it came to prodding the Department of Transportation to take action on possible defects.

On September 1, 1971, Ralph Nader and the Public Interest Research Group (PIRG) sent an extensive letter to the relatively new National Highway Traffic Safety Administration (NHTSA) about deficiencies in NHTSA's investigative procedures, including the handling of a motor mount defect in almost seven million Chevrolets. Within three months, NHTSA had met with GM engineers and determined that a recall was necessary. It was exactly this sort of oversight and advocacy on behalf of consumers that had led Mr. Nader and Consumers Union to found the Center in 1970, to ensure there was a permanent, independent, representative in Washington speaking on behalf of consumers when it came to auto safety. The Center for Auto Safety remains a leading consumer auto safety advocate in the nation, vigorously fulfilling this role ever since.

In 1977, Nader joined forces with the Center in its second defect petition to NHTSA regarding Ford Pinto and Mercury Bobcat fires following an article in *Mother Jones* about a gas tank safety defect in these vehicles. In what remains the fastest NHTSA response on record, the agency opened an investigation the next day. Finally, after NHTSA released rear end crash tests of the Pinto showing it caught fire at under 30 mph, Ford finally agreed to recall the vehicles due to mounting public and government scrutiny.

Other important changes, which improved the process, took place in the 1970s. In 1974, Congress amended the Vehicle Safety Act to require manufacturers to provide free recall repairs to vehicle owners, and required notice beyond the first purchaser, closing critical loopholes that had previously suppressed recall completion rates. In addition, the Secretary was granted the discretion to change the form of communication for recall notifications. In 1976, NHTSA did just that and allowed the notification by first-class mail instead of certified mail. This turned out to be an important change with many more recalls resulting.

Under Joan Claybrook, the Administrator of NHTSA for President Carter, NHTSA initiated a system for consumers to call a new 800 hotline at the agency with their complaints about vehicles, as well as allowing consumers to learn if their vehicle had been recalled. This simple mechanism for collecting information about defects and for disseminating critical safety information remains today, though it has been supplemented by the use of online complaint collection and a recall database available 24 hours a day for consumers with Internet access.

Yet, progress for consumers has always faced opposition and setbacks—and auto recalls are no different. In the 1980s, during a new administrative philosophy at NHTSA under President Ronald Reagan, the agency chose not to publicize a series of recalls, putting consumers in danger. NHTSA began concealing defect investigation activities, choosing to pursue “informal inquiries” that were not made part of the public record. Until the Center for Auto Safety released a list of this new class of investigations into possible auto defects, the public was completely unaware of the potentially dangerous condition of their vehicles.

This was the beginning of another hard-fought victory by the Center for Auto Safety in making sure consumers had access to what were often called “secret warranties” or “technical service bulletins.” Manufacturers would notify their dealers, and eventually NHTSA, of potential performance issues with their vehicles, but failed to inform consumers. More insidious was the

practice of only letting owners know that a free fix was available if they asked. It took several decades of effort, enactment of legislation, and ultimately litigation by the Center, but today all technical service bulletins are available on NHTSA's website, in a win for transparency and consumer safety.

Recalls have come in many different sizes and shapes over the decades. Some of the largest have involved tires. Between 1976 and 1977, the Center for Auto Safety began collecting complaints about Firestone 500 tires, leading to a demand for a recall in November 1977. Due to faulty design and production, the tread on these tires would separate, causing crashes. As a result of a Freedom of Information Act (FOIA) request, the Center learned about a NHTSA public survey that was favorable to the tire company, but Firestone did not know what the agency found and the Center would not reveal the results. Firestone then sought a court order to suppress the survey. The subsequent publicity led to congressional hearings and, eventually, the finding by NHTSA of a serious safety defect and a massive recall of over 19 million tires, impacting many car owners.

Twenty years later, it was a specific vehicle that was most impacted by a defective tire. In 2000, a downward trend in NHTSA investigations and recalls was sharply reversed by a public uproar over sidewall failures of Firestone tires installed on Ford Explorers. Explorer drivers began to experience significant numbers of rollover incidents, eventually leading to more than 270 deaths and many horrific injuries in the U.S. alone. Extensive Congressional hearings and publicity resulted in the passage in 2000 of the Transportation Recall, Enhancement, Accountability and Documentation (TREAD) Act, which increased the base penalty for failing to identify defects and conduct recalls from a meager \$800,000 to \$15,000,000. But attempts by Senator John McCain to secure robust criminal penalties if a manufacturer knowingly concealed a safety defect that caused death or injury, were defeated.

As the result of a congressional mandate in the TREAD Act, NHTSA required manufacturers to submit "early warning" information about claims and notices received relating to deaths and injuries allegedly due to defects in their products. Known as Early Warning Reporting (EWR), the system also collected statistical data about consumer complaints, warranty claims, property damage claims, and field reports from vehicle, child seat, and tire manufacturers.

Unfortunately, the TREAD Act enhancements to penalties and data were soon proven to be insufficient to prevent automaker malfeasance. Sudden acceleration crashes reported by Toyota owners proved to be the first large crack in the system. While it came to a head in 2009, the Toyota unintended acceleration crisis, which claimed at least 89 lives, did not develop overnight. Draconian cuts in NHTSA's enforcement budget and staffing, failure to follow up on early research into electronic controls and adopt safety standards based on the research, lax enforcement, flawed research on electronic controls, inadequate crash-data collection programs, and failures to effectively implement the EWR System mandated in the TREAD Act, all played significant roles.

Only a few years later, many of these failures were repeated by NHTSA enforcement in response to the General Motors ignition switch defect that unexpectedly shut off the engine and power steering, as well as deactivated the airbags. While 29 million vehicles were ultimately recalled starting in 2014, this was seven years after NHTSA discovered the defect, but neglected to order a timely recall. Failures across NHTSA, from the Special Crash Investigations team,

through EWR and the Office of Defects Investigation, were contributors to a defect that claimed the lives of at least 174 victims and injured many more.

Just months after this GM recall, NHTSA ordered a national recall on all vehicles containing driver-side Takata airbags with defective inflators. This defect, also affecting millions of passenger-side airbag inflators, is known to have been the cause of at least 27 deaths and an untold number of injuries in vehicles made by 19 different vehicle manufacturers. Many of these injuries and deaths were caused by shrapnel created due to the explosive rupture of the Takata airbag inflator and associated housing, often even in low-speed impacts. NHTSA's action came eleven years after the first reported fatality due to Takata airbags, after six years of ever-expanding Honda recalls related to the defective Takata airbags, and after a failed attempt by the agency to correct the problem using geographic recalls, a flawed creation by manufacturers to limit the number of vehicles recalled based on weather and heat patterns they claimed were relevant to the existence of a safety defect. As of 2020, over 63 million Takata inflators were under recall.

In the aftermath of the mammoth Takata recall, Congress acted again to improve the recall completion system. In 2015, Congress passed the Fixing America's Surface Transportation (FAST) Act.³⁵ Included in this larger highway bill were a number of important changes to the law concerning recalls. One, which was directly related to the airbag recall, was a change to require recalled component parts (like airbag inflators) be identified by manufacturers when they submitted their recall reports to NHTSA, ideally by part number. This change was not only crucial for current vehicle owners, but for salvage yards and other second and third users of component parts who could now avoid unintentionally installing a defective airbag in their vehicle.

Another important section of the law was a result of a horrific crash caused by a defect in a recalled rental car. In 2004, Cally Houck, whose two adult daughters were killed by a recalled power steering hose in their rental vehicle, waged a multi-year campaign to ensure that the tragedy, which befell her family, would never happen again. The result, included in the FAST Act, was the Rachel and Jacqueline Houck Safe Rental Car Act, which made it a violation of federal law for the first time for a rental car company to rent or sell a vehicle under recall. This victory for safety was yet another example of the power of committed consumer advocacy.

One other major change dealing with recalls was included in the FAST Act, one which recognized that in 2015, Americans were just as likely to receive correspondence via e-mail as a first-class letter. Accordingly, Congress added the authority for electronic communication in addition to the mail recall notification process. Unfortunately, as of this writing, NHTSA has failed to implement this new requirement, leaving millions of owners of recalled vehicles likely unaware they are driving a potentially deadly vehicle.

Finally, the Fast Act significantly increased the maximum civil penalties NHTSA could impose to not more than \$21,000 for each violation (a separate violation occurs for each motor vehicle or item of motor vehicle equipment and for each failure or refusal to allow or perform an act required by any of those sections) with a maximum penalty for a related series of violations of \$105,000,000. But the amounts imposed in any case are discretionary with the agency. For

³⁵ Pub. L. 114-94 (2015).

example, from FY 2013 to FY 2016 under President Obama NHTSA imposed \$319 million in civil penalties, but from FY 2017 to FY 2020 under President Trump it imposed only \$25 million.

More challenges remain to close the recall completion gap. NHTSA estimates suggest that as many as 50 million recalled vehicles remain unrepaired in 2020. While some have suggested that innovations such as Over-The-Air software updates and fixes will be able to address this gap, software updates via the Internet cannot fix a defective airbag inflator or power steering hose.

The manufacturers and car dealers must take steps to entice vehicle owners to act and NHTSA must push them to do so.

Another key unresolved issue is a lack of a federal prohibition on the sale of used cars with open recalls. In MAP-21 (Pub.L. 112-141) Congress banned the rental of vehicles that were subject to recall but had not been fixed. Congress must now act to prohibit the sale of all vehicles under recall until they are repaired.

While the recall system still has many challenges to overcome in 2020, times have changed dramatically in favor of consumer safety when it comes to recalls over the last 55 years. Recall information is now broadly available to the American public in ways that could not have been imagined in the 1960s, providing consumers with far better information on vehicle safety. Also, the tort liability system has matured and helps to secure defect information from manufacturers and to secure information about safety problems from NHTSA. Both NHTSA and trial lawyers need to be more transparent so that consumers are informed about safety problems.

However, automakers have continued to fight to create exit ramps leading to profits rather than making safety Job One. The industry and its regulator have trended again towards less transparency; expensive recalls are avoided at all costs. And “service campaigns” are too often used as a replacement for recall remedies under the law. While our highways are much safer now than they were in 1965, there remains a long road ahead to ensure that the safety vision of *Unsafe at Any Speed* becomes a reality.

5. UPGRADE STATE HIGHWAY SAFETY LAWS

Passage of the *Highway Safety Act of 1966* ushered in the first federal highway safety program and created the *State and Community Highway Safety Grant Program*, codified at 23 U.S.C. Section 402. Its goal is to amplify state highway safety activities through a partnership among federal, state, and local governments. To accomplish this objective, every state, U.S. territory, and Indian Nation as well as the District of Columbia and Puerto Rico, established an agency responsible for coordinating its highway safety programs.

Just as enforceable federal motor vehicle safety standards are the key to protecting vehicle occupants, pedestrians and bicyclists in a crash, enforceable state laws governing driving and occupant behavior are the major force to limiting deaths and injuries on the road at the state level. Federal safety standards and state laws both are clear and mandatory. The passage of enforceable state laws has proven to be the key to effective state safety programs, as documented by NHTSA.

Lobbying for such enactment of new laws is led by Advocates for Highway and Auto Safety (AHAS), a nonprofit organization supported by insurers and consumer and public health organizations. Each year Advocates updates and publicly releases its *Roadmap of State Highway Safety Laws*, evaluating each state's laws, before putting pressure on states to upgrade them.³⁶ Given the proven payoff in lives saved, far too many state laws covering occupant protection, child passenger safety, teen driver safety, impaired driving and distracted driving are still lacking.

No state has yet rated 100% with enactment of all the key laws, but a few are superior to others. Overall, the best states are: New York, Louisiana, Rhode Island, Washington, The District of Columbia, Delaware, Maine, Oregon and California. NHTSA cannot force the states to act as it could under the original Highway Safety Act, nor is it able to lobby for enactment of some state laws such as motorcycle helmet use laws, but it can twist arms and use its bully pulpit. Unfortunately, it rarely does.

The original NHTSA 402 grants are awarded to every state under a formula enabling them to target major traffic crash and fatality contributors by enactment and enforcement of belt and motorcycle helmet use laws and improvements in bicyclist and pedestrian safety, as well as statutory measures to curb deaths and injuries due to drug and alcohol impaired driving, excess speed, and other unsafe driving behaviors.

Since its inception, the national highway safety grant programs have been revised many times by Congress, creating new incentive grants, penalties and sanctions in the process. The most recent substantial changes resulted from the Moving Ahead for Progress in the 21st Century (MAP-21) Act, Pub. L. 112-141, enacted in 2012, which created a new incentive grant program to address behavioral issues, the National Priority Safety Programs codified at 23 U.S.C. Section 405. These discretionary grants award states with funds for taking specific actions to address impaired driving, occupant protection, motorcyclist safety, distracted driving, graduated driver licensing (GDL), nonmotorized safety, and traffic records. NHTSA is responsible for making funding determinations for Section 405 awards.

³⁶ Advocates for Highway and Auto Safety, Annual Roadmap of State Highway Safety Laws, available at: <https://saferoads.org/roadmap-reports/>

NHTSA's grant programs have helped bring about numerous changes to highway safety laws, programs and practices and saved innumerable lives and costs each year. But by far the most effective incentive to get states to reduce deaths and injuries is a statutory sanction forcing all states to pass a law within three years or lose millions of dollars in federal-aid highway construction funding. This is what occurred so successfully with the age 21 for drinking law, the .08 blood alcohol content (BAC) limit for drinking and driving, and zero tolerance for underage drinking and driving. Adoption of specific countermeasures has yielded tremendous results according to the most recent data and information. These include:

- From 1975 to 2017, seat belts have saved over 374,000 lives³⁷ and over \$1 trillion in economic costs.³⁸
- Use of seat belts in passenger motor vehicles saved an estimated 14,955 lives of occupants age five and older in 2017 alone.³⁹
- Use of child restraints saved an estimated 325 child occupants (age four and younger) in 2017.⁴⁰
- Enactment of graduated driver licensing (GDL) programs for novice teen drivers have been “associated with statistically reliable reductions in traffic crash outcomes of 16 percent for 16-year-olds and 11 percent for 17-year-olds.”⁴¹
- Use of motorcycle helmets saved an estimated 1,872 lives and nearly \$3.5 billion in economic costs and \$21 billion in comprehensive costs in 2017 alone.⁴²
- An estimated 538 lives were saved due to minimum drinking-age laws in 2017.⁴³
- Use of ignition interlock devices (IIDs) prevented more than three million attempts to drive drunk in the twelve years from 2006 through 2018, according to a 2019 report from Mothers Against Drunk Driving (MADD).⁴⁴
- Lowering the blood alcohol content (BAC) limit while driving from .10 to .08 percent, in the U.S. reduced the annual drunk driving crash rates by more than

37 Traffic Safety Facts 2017: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System, NHTSA, Sep. 2019, DOT HS 812 806.

38 The Economic and Societal Impact of Motor Vehicle Crashes, 2010 (Revised), NHTSA, May 2015 (Revised), DOT HS 812 013.

39 Traffic Safety Facts 2017: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System, NHTSA, Sep. 2019, DOT HS 812 806.

40 Traffic Safety Facts 2017: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System, NHTSA, Sep. 2019, DOT HS 812 806.

41 Masten, S. V., Thomas, F. D., Korbelak, K. T., Peck, R. C., & Blomberg, R. D., *Meta-analysis of graduated driver licensing laws*, November 2015, DOT HS 812 211, NHTSA.

42 Lives and Costs Saved by Motorcycle Helmets, 2017, NHTSA, DOT HS 812 867, December 2019.

43 Traffic Safety Facts 2017: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System, NHTSA, Sep. 2019, DOT HS 812 806.

44 Drunk Driving Starts Stopped (.08 BAC or higher) by an Ignition Interlock, MADD. Available here: <https://www.madd.org/wp-content/uploads/2019/05/2019IIDReportData.pdf>

10 percent overall and is estimated to have saved on average 1,736 lives each year between 1983 and 2014—24,868 lives in total during that time period.⁴⁵

In fiscal year (FY) 2020, the \$724 million grants program is the best funded program in NHTSA's budget.⁴⁶ Since 2007, funding for state grants has grown nearly 24 percent.⁴⁷ The awards for Section 405 vary greatly as they are dependent on states having adopted specific traffic safety laws. Each grant program specifies how the award can be spent; however, there is some discretion in how a state actually does so. Section 402 includes broad categories for spending, allowing the potential for programs that have not necessarily correlated to effective improvements in traffic safety.⁴⁸ States may apply for Section 403 funding, which is dedicated to research and development activities related to highway and traffic safety. Under this program, the Secretary may evaluate the efficacy of a countermeasure to increase safety. In FY 2020, funds appropriated for Section 403 for research totaled \$42 million.⁴⁹ Additionally, Section 404 efforts are focused on high-visibility enforcement. The states work in cooperation with NHTSA to carry out campaigns to reduce alcohol-impaired or drug-impaired driving or to increase seat belt use. In FY2020, Section 404 received \$30 million in funding.⁵⁰

While the highway safety grant programs have helped to curb the number of traffic fatalities in the U.S., additional progress is urgently needed to reduce the 36,096 U.S. traffic fatalities in 2019.⁵¹ Research on proven countermeasures and enactment of primary enforcement traffic safety law should be accelerated to address the leading contributors on the road to death and injury in crashes. These include: the failure of belts and motorcycle helmets, speeding, drunk driving, and distraction behind the wheel. Providing incentive grants for specific high payoff programs and the use of sanctions has been successful in the past and should be employed again. Coupling this strategy with changes to the existing grant program has the potential to yield significant traffic safety benefits. Changes to the Section 405 program that should be considered include:

- Alcohol-impaired-driving fatalities accounted for 29 percent of the total motor vehicle traffic fatalities (10,511 people) in the U. S. in 2018 (the most recent year for which this data are available).⁵² Grants directed at reducing alcohol-impaired driving should include a new category to encourage states to reduce the BAC limit while driving to .05 percent. In 2018, Utah became the first state in the nation to enforce a .05 percent BAC limit. While .05 percent or lower BAC limits while driving have been set in countries around the world with favorable

45 Fell, James C, Scherer, Michael, *Effectiveness of Lowering the Blood Alcohol Concentration (BAC) Limit for Driving from 0.10 to 0.08 Grams per Deciliter in the United States*, Traffic Inj Prev. 2019; 20(1): 1–8.

46 U.S. DOT, Budget Estimates. Fiscal Year 2021, National Highway Traffic Safety Administration, Exhibit II-1 (Mar. 2, 2020).

47 Id.

48 23 USC 402(2).

49 U.S. DOT, Budget Estimates. Fiscal Year 2021, National Highway Traffic Safety Administration, Exhibit II-2 (Mar. 2, 2020); U.S. DOT, Budget Estimates. Fiscal Year 2020, National Highway Traffic Safety Administration, Exhibit II-2 (Mar. 21, 2019); U.S. DOT, Budget Estimates. Fiscal Year 2019, National Highway Traffic Safety Administration, Exhibit II-1 (Feb. 13, 2018);

50 U.S. DOT, Budget Estimates. Fiscal Year 2021, National Highway Traffic Safety Administration, Exhibit II-1 (Mar. 2, 2020).

51 Preview of Motor Vehicle Crash Fatalities 2019, NHTSA, October 2020, DOT HS 813 021.

52 Traffic Safety Facts 2018 Data: Alcohol-Impaired Driving; NHTSA, December 2019, DOT HS 812 864, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812864>

outcomes, the U.S. is lagging by just beginning to take action. Additionally, 34 states and the District of Columbia (D.C.) have enacted laws requiring ignition interlock device (IIDs) use for all offenders convicted of driving while alcohol impaired. For the sixteen states that do not have this law, Congress should enact a sanction withholding federal highway construction money from states that do not adopt an IID law by a date certain. This successful approach has resulted in rapid and uniform adoption of other state drinking and driving laws. It is important to note that when faced with losing federal funding, states instead came into compliance with the federal law.

- In 2019, 43 percent of all passenger vehicle occupants killed in traffic crashes (9,466 people) did not use a seat belt, according to NHTSA.⁵³ Congress should require state enactment of primary enforcement seat belt use laws covering front and rear seat occupants or face loss of highway construction funds. These laws should also eliminate loopholes in state belt laws such as exceptions for use in taxis, transportation network company (TNC) vehicles and limousines.
- In 2018, 2,841 people were killed in crashes involving a distracted driver; 506 of those killed were nonoccupants such as pedestrians and pedalcyclists, according to NHTSA.⁵⁴ Moreover, these types of crashes are known to be underreported for a variety of reasons including gaps in police crash report coding and database limitations. A supplemental grant should be added to get states, by law, to prohibit distracting viewing of devices while driving such as video conferencing, watching videos, updating social media, taking videos or photos, reading text-based content, and playing games. An exception for navigational systems would be acceptable.
- In 2019, 5,014 motorcyclists were killed.⁵⁵ The number of motorcyclist fatalities has more than doubled since a low of 2,116 in 1997. Adoption of an all-rider motorcycle helmet law should be added to the list of qualifying provisions for grant awards, and the restriction that prevents use of agency funds for activities related to securing helmet use laws should be removed.
- In 2018, 4,492 people were killed in crashes involving young drivers (age 15–20).⁵⁶ A supplemental grant should be added for states that extend graduated driver licensing (GDL) restrictions to age 21.
- Additional considerations to improve grant programs include: eliminating prohibitions on the use of federal awards for automated enforcement programs

⁵³ Preview of Motor Vehicle Crash Fatalities 2019, NHTSA, October 2020, DOT HS 813 021.

⁵⁴ Traffic Safety Facts: Distracted Driving 2018, April 2020, NHTSA, DOT HS 812 926, available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812926>

⁵⁵ Preview of Motor Vehicle Crash Fatalities 2019, NHTSA, October 2020, DOT HS 813 021.

⁵⁶ 2018 data provided by NHTSA to Advocates for Highway and Auto Safety (Advocates) per request.

to curb speed and red light running; the addition of a set of “speed criteria” to qualify for new awards; and, awards for states that don’t use the 85th percentile for speed limit setting.⁵⁷ Moreover, to assist states, law makers and advocates in making changes to state law to qualify for awards, NHTSA should be required to publicly enumerate all missing or deficient provisions in a state’s traffic safety laws.

⁵⁷ Using the 85th percentile speed to set speed limits on road segments may have unintended consequences. Raising the speed limit to match the 85th percentile speed may lead to higher operating speeds, and hence a higher 85th percentile speed. This generates an undesirable cycle of speed escalation and reduced safety (Donnell and others 2009).

6. ELIMINATE CHILD MOTOR VEHICLE DEATHS WITH AVAILABLE TECHNOLOGY

The interaction of children and vehicles is the #1 killer of children in the United States. Children have always been treated as an “afterthought” by automakers when designing and manufacturing vehicles. In the late 1990s, a new organization was founded by Janette Fennell called KidsAndCars.org to press for safety protections for children in motor vehicles, particularly in non-traffic events. But because NHTSA did not collect nontraffic/noncrash data, it professed it could not issue any safety standards dealing with this problem.

Nontraffic Data Collection and Survivor Advocacy

To succeed in getting NHTSA to act, citizen advocates need data and people power in their advocacy. To be included in NHTSA’s Fatal Accident Reporting System (FARS), a crash must take place on a public road or highway with the person(s) involved dying within 30 days of the incident. FARS data does not include any incidents that do not meet these criteria, thus the topic of ‘nontraffic’ incidents was ignored for decades. Nontraffic means any event involving a motor vehicle that happens off public roads or highways, usually in parking lots or driveways. For example, hot car deaths, backovers, frontovers, carbon monoxide poisoning, vehicle submersion, trunk entrapment, and power window strangulation are all considered nontraffic incidents and have never appeared in the FARS system.

The collection of nontraffic fatality and injury data was an early priority of KidsAndCars.org. This data was painstakingly compiled from sources including media reports, individual accounts from families, medical examiner reports, police reports, child death review teams, coroner reports, medical professionals, lawyers and published studies. Numerous sources are required due to the lack of a national data reporting system. Between 50-75 data points are sought to capture information for each case in this unique database.

After years of grassroots efforts documenting nontraffic data, and *unsuccessfully* requesting NHTSA to do the same, in 2008, KidsAndCars.org and consumer groups got Congress to require NHTSA to begin collecting nontraffic data. NHTSA created the “Nontraffic Surveillance” (NTS) database to satisfy these requirements. The NTS is a virtual data collection system designed to provide counts of fatalities and injuries that occur in nontraffic crashes and noncrash events. NHTSA’s first report in January 2009 stated that at least 1,740 deaths and over 840,000 visits to hospital emergency rooms are taking place every year. This was a huge first step so NHTSA could act to curtail the nontraffic carnage.

One significant limitation of the NTS data is that there are still only five states that report nontraffic data to NHTSA. This must be improved with a specific NHTSA grant program. KidsAndCars.org continues to document nontraffic incidents and identify emerging trends that NHTSA is failing to address.

In addition, successful advocacy requires people power. KidsAndCars.org created a survivor advocacy program empowering hundreds of family members and friends who have been affected by the injury or death of a child in a vehicle-related incident to channel their grief into

action. Giving a voice to those who have suffered a traumatic experience is the backbone of the organization's work and instrumental in influencing change. Without the survivors' courage and strength, many of the successes in making vehicles safer would not have been realized. They are an integral part of the injury prevention process.

Grieving families should not have to share their painful stories year after year, or in some cases over a decade, to get NHTSA to take action. Every time their stories are told, they relive the horror. Becoming a grieving advocate is one of the most selfless acts imaginable. Nothing will bring their children back, yet they continue fighting to spare others the pain they live with every day. They are heroes and an integral part of the child safety team.

Trunk Releases.

While living in San Francisco in 1995, the Fennell family survived being kidnapped, locked in their car trunk, and left to die. Throughout the kidnapping, the Fennells were unaware if their 9-month-old son, who had been in the back seat, had been taken or harmed. The Fennell family survived the ordeal but quickly decided it had to do whatever it took to ensure others would not have to be confined in a car trunk with no means of escape. Thus, the Trunk Releases Urgently Needed Coalition (TRUNC) organization was formed. The goal was to stop trunk entrapments.

TRUNC found no data existed on the number of trunk entrapments. To rebut the mantra "no data, no problem," the advocates began the arduous work of documenting trunk entrapment, case after case, one-at-a-time.

TRUNC was successful with the help of safety advocacy groups, despite the full-bore opposition of the auto industry, in getting NHTSA to issue a safety standard requiring glow-in-the-dark plastic trunk releases (that cost pennies in mass production) in the trunks of all vehicles beginning with model year 2002. To date, there has not been a single death in the trunk of a car that has an internal release. Countless lives and horrifying events have been prevented thanks to a small piece of plastic.

Shortly thereafter, KidsAndCars.org, a national nonprofit organization, was founded to address motor vehicle hazards harming children where no hard data existed. As a result, three important NHTSA rules were issued to address long-standing sources of death and injury, particularly to children.

Power Windows.

Thousands of children (and others) have been seriously injured or strangled to death by vehicle power windows. Ralph Nader highlighted this threat in *Unsafe at Any Speed* in 1965.

Forty-five years later, safer "pull up to close" and "push down to open" power window switches are standard equipment in all vehicles as of October 2010 thanks to a safety standard championed by passionate safety advocates and victims' families. The dangerous rocker and toggle power window switches that were hurting and killing passengers are no longer allowed in new vehicles.

According to the KidsAndCars.org database, from 2000-2009, an average of four child power window strangulation deaths took place annually in addition to thousands of serious injuries. From 2010-2019, the average harmed decreased by 75%. But the new rule did not completely eliminate the problem. KidsAndCars.org found cases where one person inadvertently rolled the window up on another unsuspecting passenger.

Brake Transmission Shift Interlocks.

Hundreds of children are hurt or killed every year after a vehicle is inadvertently knocked into gear, something small children could achieve. Data from KidsAndCars.org helped uncover the frequency of these preventable nontraffic incidents. As often occurs, the automobile manufacturers tried to circumvent a mandatory rule, seeking a “voluntary agreement” instead of a proper Federal Motor Vehicle Safety Standard (FMVSS). Safety groups fought back, and the rule was issued in 2010. All vehicles with automatic transmissions are required to be equipped with a system that requires the brake pedal to be depressed before the car can be shifted out of park.

According to KidsAndCars.org data, from 2005-2010 an average of 14 children were dying after knocking vehicles into gear. From 2015-2019, the average decreased by 64% per year. There has been a significant decrease in the number of children injured and killed from setting vehicles into motion since this feature became standard in all vehicles.

Rearview Cameras.

For over 100 years, vehicles were manufactured without any standard requiring what a driver should be able to see behind a vehicle when backing up. Each year an average of 226 individuals are killed and over 12,000 injured in backover crashes according to NHTSA NTS data. Given industry opposition to a rear camera rule, KidsAndCars.org and Advocates for Highway and Auto Safety in 2008 got Congress to enact the Cameron Gulbransen Kids Transportation Safety Act.⁵⁸ It directed NHTSA to issue a safety standard within three years requiring improved rear visibility in new vehicles. On four separate occasions from 2011 to 2013, the Obama administration delayed issuing the final rule. In November 2011, DOT sent a final draft rule to the White House Office of Management and Budget (OMB), Office of Information and Regulatory Analysis, where it languished for another nineteen months before being withdrawn in June 2013.

In a tactic to delay the rule from being issued, NHTSA said it would add rearview video systems to its list of recommended features in the New Car Assessment Program, (NCAP). While this information is important, implementing the rear visibility rule still needed to be completed.

After DOT announced that it “intended” to complete the rule by January 2015, taking twice as long as Congress had directed, safety advocates and two New York parents who backed over their children sued DOT. The lawsuit, brought by Public Citizen, asked the U.S. Court of Appeals for the Second Circuit to order the agency to issue the rule promptly. The court was set to hear arguments in the case on April 1, 2014. But, the day before the court date, NHTSA issued the long overdue final rule on March 31, 2014, fully aware it would otherwise lose in court.

After more than 15 years of extraordinary efforts, the safety standard went into full effect on May 1, 2018, requiring all new vehicles to have a rearview camera as standard equipment. The number of reported backover incidents, that harm more than children, are now beginning to decrease. Research from the Insurance Institute for Highway Safety (IIHS) indicates that a rear automatic braking system bundled with rear parking sensors and a rearview camera can reduce backing crash-involvement rates by more than 75 percent.

But challenges to protect children still exist.

⁵⁸ Pub. L. 110-189 (2008).

Rear seat belt reminders.

There is no denying the fact that seat belts save lives. Rear seat reminder systems can both remind the driver and rear seat occupants to buckle up and alert the driver when a passenger unbuckles while the vehicle is moving.

Rear seat belt reminders were originally requested by Public Citizen and Advocates for Highway and Auto Safety in a 2007 petition. NHTSA took no action. Five years later, the advocacy groups got a requirement in the Moving Ahead for Progress in the 21st Century Act (MAP-21), for issuance of a final safety standard no later than October 2015. NHTSA still did not act.

KidsAndCars.org and the Center for Auto Safety filed suit in federal court on August 16, 2017 to compel the U.S. Department of Transportation (DOT) to implement the law and issue a standard requiring a rear seat safety belt warning system. The case was tried in front of the D.C. Court of Appeals, but in 2018 the Court agreed to a settlement when NHTSA “promised” to issue a rule. In September 2019 NHTSA issued only an advanced notice of proposed rulemaking, the first step in a long rulemaking process. Eight years after the law was passed, NHTSA has done little toward issuance of a modest rule that can save children’s lives. It is clear that more needs to be done to hold NHTSA accountable to timelines set by law.

Occupant Detection and Alert Technology.

In the mid-late 1990s, children in the U.S. began dying in hot cars at alarming rates, an unintended consequence of moving child passengers to the back seat to avoid the risk of overpowered airbags in front seats. Today, at least 39 children die trapped in hot cars every year, but this doesn’t have to happen.

Technology to detect the presence of a child inside a vehicle is readily available and cost effective. This technology can alert the driver, bystanders, emergency contacts and even authorities if a child is in danger, trapped inside a vehicle.

The auto industry blames parents in order to avoid installing simple technology in their vehicles and to distract the public’s attention from the role of vehicle design in saving lives. It has voluntarily agreed to install less-effective, non-detection systems to remind drivers to check the back seat. These types of systems would provide many false alerts causing drivers to tune out the warning. They would not protect children who get into vehicles on their own and become trapped (approx. 25% of fatalities), nor would they work in a number of other common scenarios. A detect and alert safety standard is necessary to ensure the technology being used is effective and comprehensive and can be tested for compliance. In addition, voluntary agreements are useless in achieving effective solutions because they are not enforceable, usually are weak, and any company can withdraw at any time with no consequences.

KidsAndCars.org along with Advocates for Highway and Auto Safety and other safety organizations have been a driving force to secure legislation in the Hot Cars Act, knowing that NHTSA will not act. This Federal bill has bipartisan support and would require technology in all new vehicles to detect occupants and alert the driver and bystanders to prevent hot car deaths. The Hot Cars Act passed the U.S. House of Representatives in July 2020 as a part of the Moving Forward Act (H.R. 2). It now must pass the Senate and become law.

Protection of Children in Cars with Child Safety Seats.

Fifty years ago, few drivers put their child in a safety seat. But since 1985, every state has required use of car seats for infants and young children. In many states, parents are not allowed to check out of the hospital with a newborn without proof that they have a federally approved infant car seat and know how to use it properly.

Car seat use has reduced the risk of death in a car crash for children less than one-year-old by 71% and the risk of death for toddlers (aged 1–4 years) by 54% in passenger vehicles.

Requiring use of child seats began in 1978 when Dr. Robert Sanders, a pediatrician and legislator from Tennessee, also known as “Doctor Seat Belt,” secured passage of the first child passenger safety law requiring parents to put infants and young children in child safety seats. It initiated the wave of similar state legislative efforts that spread across the country with the help of Joan Claybrook, then Administrator of NHTSA, who gave grants to states and citizen organizations to help push the laws. By 1982, with the help of local and national grassroots advocacy organizations, 20 states had passed laws requiring the use of car seats for children. By 1985, every state had child passenger safety laws with various requirements.

Despite this momentum, children continue to suffer and die unnecessarily due to three factors: lack of car seat use, ineffective car seat designs and incorrect car seat installation.

Ongoing advocacy and investments have led to improved technology and regulation. For instance, NHTSA mandated the LATCH system beginning in 2002—a reliable, standardized connector built into all cars, which is compatible with all new child safety seats. Today, 97% of infants and 94% of children aged one to three are regularly restrained in car seats, although installation remains a major concern because 70–90% of seats are misused. This is a serious problem. It should not take 40 hours of instruction to learn how to properly install a child’s car seat. This is the current requirement to become a Child Passenger Technician.

A major improvement would be fold-away child car seats built into the rear seat, eliminating the installation problems, and the cost and inconvenience of purchasing child seats. Some years ago, Chrysler experimented with this concept and Volvo in the 1990s produced vehicles with such systems for toddlers. Given the number of child seats produced each year, there is a market for higher grade systems built into all motor vehicles, not only for parents but for other family members such as grandparents who transport little children.

Power Accessory Auto Reverse.

The auto-reverse feature currently found on most driver’s windows would reduce the number of injuries and fatalities from automatic systems if on all vehicle windows. Auto-reverse uses sensors to determine if an obstruction is in the path of a power window and allows the window to bounce back open if it detects an object. This feature should be included on all vehicle power accessories including windows, sunroofs, moon roofs, sliding van doors, etc. In Europe over 70% of vehicles come with the auto-reverse feature on all power accessories. The fight to add this important safety feature in the U.S. continues. This becomes even more critical with the emergence of autonomous vehicles as children may be alone in the passenger cabin.

7. EXPAND VEHICLE SAFETY CONSUMER INFORMATION

NHTSA's Vehicle Safety Consumer Information Programs

Few federal agencies have a greater impact on the public and personal health of Americans than NHTSA. The public availability of information on vehicle testing, standards development, regulatory compliance, and the monitoring of America's vehicles is an absolute imperative. To be effective and to change the behavior of both manufacturers and consumers, the consumer information on these tasks must be salient, easy-to-understand, relevant and readily available.

The 1966 motor vehicle safety law specifically required NHTSA to issue Uniform Tire Quality Grading Standards (UTQGS) that measured treadwear, traction and heat resistance, posting the grades on each tire and at each retail establishment. At the time there were less than 15 major tire manufacturers producing nearly 2000 lines of tires. Price and branding were misleading and ineffective indicators of tire quality and safety. As one of the most complex items on a car, having to simultaneously perform more functions than any other part, consumers had no idea how to select the best tires or make informed price/quality/safety purchase decisions.

The only real difference between hundreds of brands had been price. With issuance of this requirement, consumers could, for the first time, select the safest and most cost-efficient tires. The result: manufacturers began to compete on critical performance characteristics and tires have improved dramatically ever since.⁵⁹

NHTSA has embarked on several consumer information programs over the years, beginning with the Motor Vehicle Information and Cost Savings Act of 1972, as amended in 1976. The act recognized the power and ability to improve safety thorough information programs. This effort strengthened odometer disclosure requirements, required auto dealers to distribute certain consumer information to buyers, improved motor vehicle diagnostic equipment so consumers would know more about their vehicle's performance, and provided funding to implement these efforts.

But the most important consumer information program at NHTSA was initiated inside the agency. It involves publishing the agency's crash test results under an innovative project called the New Car Assessment Program (NCAP). Few information programs have done more to improve vehicle safety. The simple publishing of these test results, which the Agency began over 40 years ago, and making them publicly accessible, caused automakers to compete on safety for the first time.

The crash test consumer information program began in 1978, under the direction of NHTSA Administrator, Joan Claybrook. NHTSA published this data in a landmark publication called *The Car Book*. Under President Jimmy Carter, *The Car Book* became one of the most requested consumer publications of the government's Consumer Information Center in Pueblo, Colorado. In fact, it still holds the record for the most requested publication in one day, with over 270,000 consumer requests. It was also a smashing success in that it caused the auto companies to compete for safety for the first time and to acknowledge that "safety sells." It shook the auto companies that tried but failed to get it quashed by Secretary of Transportation

⁵⁹ 43 FR 30549 (Jul. 17, 1978).

Neil Goldschmidt when Claybrook released *The Car Book* on the *Phil Donahue Show* on TV in 1980.

When the Reagan team took over the agency in 1981, they canceled the publication of *The Car Book* in response to corporate America's distaste for providing consumers with useful, fact-based purchasing information. They also canceled 900 other government consumer information publications.

Thanks to the Center for Auto Safety and Jack Gillis (who at NHTSA put together the first edition), *The Car Book*⁶⁰ then began being privately published and sold to the public for the next 40 years, ensuring that this critical consumer information remained available to the public. It is now online. As consumer demand continued for this information, it became impossible for NHTSA to cancel the crash test program, much to the frustration of the car companies that clearly didn't want consumers to know which cars were safe and which were not. The publishing of NCAP results kept the crash test program alive.

During its early days, NCAP survived a long history of attacks by the car companies, claiming that it was inaccurate, ineffective and misleading. Thankfully, due to its strong support by safety advocates and its popularity with the America public through *The Car Book*, the program survived. In fact, publishing consumer information on crash tests has been so popular, that similar programs have spread throughout the world (the EU, South East Asia, South America, and in Australia China and India, Japan) with the landmark work of David Ward, Secretary General of Global NCAP and Director General of the FIA Foundation in London, Great Britain. In addition, it has spawned other consumer information programs on vehicle safety performance testing, including the extensive work by the Insurance Institute for Highway Safety. Across the board, this type of consumer information has caused automakers to substantially improve vehicle safety performance. Publishing comparative consumer information works.

One of the historical ironies of this consumer information program is that while domestic auto manufacturers were the most outspoken critics of the program initially, NCAP had the potential to benefit them the most. During the early years of the program, when the U.S. carmakers were feeling intense competition from the Japanese, the very crash test program they were trying to obliterate actually provided them with the major competitive edge they had over the Japanese automakers. But the Japanese manufacturers accurately sensed that American car buyers wanted comparative crash test ratings information, and went back to the drawing board and made their vehicles some of the best performers. It is likely that the Japanese manufacturers spent less money doing so than Detroit spent trying to destroy the program.

However, because of consumer demand, and the market success of good performers, those carmakers that fought the program came around. Today few car ads fail to mention the now too common NHTSA five-star ratings. As Chrysler's Lee Iacocca famously said in full-page ads, "You can teach an old dog new tricks."⁶¹

This is the power of consumer information. By giving consumers access to comparative

60 Gillis, J., *The Car Book*, 2020 Edition, available at: <https://www.thecarbook.com/>.

61 Statement of Jack Gillis Director of Public Affairs, Consumer Federation of America Author, *The Car Book* in Coordination with the Center for Auto Safety, Before the U.S. Department of Transportation, National Highway Traffic Safety Administration, Public Hearing on the New Car Assessment Program (NCAP), March 7, 2007.

information on crash test performance, carmakers were forced to improve the performance of their vehicles. With simple disclosure, the crash test results have enabled the American consumer to vote with their dollars for better performing, safer vehicles. Prior to NCAP, consumers had no idea which vehicles would best protect them in a crash. When consumers had no ability to make purchase decisions based on crash test performance, manufacturers had no incentive to improve their vehicles.

Sadly, this initially powerful program has lost the ability to bring about safety improvements because its tests now are out of date. After successfully and dramatically improving auto safety, this consumer information program is now in need of a major overhaul. The program has stalled in neutral for years. The current star rating system has resulted in “starflation” with most vehicles getting virtually the same star rating. This has taken away a consumer’s ability to separate the best from the worst—the whole purpose of the program.

A revised NCAP is needed to reinvigorate competition on occupant protection and significantly improve vehicle safety. To move the market, consumers need to be able to make informed choices among vehicles with different performance levels. Today’s NCAP star rating systems prevents them from doing so because nearly every vehicle now gets the same rating.

NHTSA needs to adopt a relative rating system, enabling consumers to truly differentiate among the test results. In addition, it is now way past the time when the agency should increase test speeds. A program that challenges the manufacturers to post the highest speed at which their vehicle will pass the test and updated test protocols would accelerate competition for safety and take advantage of the market power of consumer information. In 2015, an attempt by NHTSA to significantly upgrade NCAP was stopped by the White House Office of Management and Budget regulatory review office OIRA⁶² with little justification. No attempt to upgrade NCAP has been attempted since.

NCAP has proven that “regulation by information” works, but it needs to keep up with the rest of the world, not only to ensure that Americans have access to the safest cars, but also to keep them globally competitive. Doing so, and publishing differentiated comparative test results, will result in a giant leap forward in the safety of American cars and a significant reduction of deaths and injuries caused by products most of us depend on every day.

Obtaining Consumer Information is Critical.

A critical component of insuring that consumers have information about vehicles collected at their expense is the Freedom of Information Act (FOIA), which took effect in 1966. Unfortunately, NHTSA has not always been an “open book” on the information it has collected at taxpayer expense. Organizations such as Public Citizen, Advocates for Highway and Auto Safety and the Center for Auto Safety (CAS) have had to sue under FOIA in order to obtain critically important consumer information because the agency would not reveal it. Data obtained from these lawsuits have covered a wide range of important consumer information including: safety requirements of Mexican motor carriers on U.S. roads, defects in highway guard rails, information on airbag design, reports on the dangers of using cell phones while driving, and numerous instances of coverups of safety defects.

⁶² Office of Information and Regulatory Affairs (OIRA) is a statutory part of the Office of Management and Budget within the Executive Office of the President.

Two of the most important sources of consumer information available at NHTSA, sometimes available only after filing a Freedom of Information request, are (1) “Technical Service Bulletins” (TSBs) written from manufacturers primarily to their dealers that are required by statute to be sent to NHTSA as well, and (2) hundreds of thousands of consumer complaints about safety defects and other vehicle performance issues.

The 1966 law required manufacturers to provide NHTSA with “such performance data and other technical data related to performance and safety” as needed.⁶³ For years these TSBs covering safety and quality were submitted to the agency, but not filed so they could not be readily retrieved at NHTSA. With the advent of computers, the CAS requested manufactures submit TSBs in an easily retrievable format. In some cases, the manufacturers were using TSBs the public never saw to let dealers know of potential problems that should be repaired under manufacturer warranties, but dealers charged unknowing consumers for the repairs. They were dubbed “secret warranties” by consumer advocates. Also, some addressed safety defects. One in 2005, that was never made public, revealed information about the defective GM ignition switch that could cut off while the vehicle was being driven; the recall did not occur until 2014, after a lawyer and expert for a deceased victim raised a public outcry. During the intervening years a number of people were killed because of the unknown ignition switch defect.

This case, at the demand of the CAS, sparked enactment in 2012, of specific requirements in a large transportation bill for the TSBs concerning a defect or noncompliance with federal standards to be made publicly accessible on NHTSA’s website, identifying the specific vehicles with a concise summary of the communication and accompanied by a public searchable index.⁶⁴

NHTSA, however, despite announcing it would start posting TSBs right away, did little, forcing CAS to successfully sue NHTSA in 2016. By 2020, NHTSA got 50,000 backlogged communications online and now updates the system monthly.

Consumer complaints received by NHTSA, according to the DOT Inspector General, are the “primary means for determining whether an investigation is warranted.”⁶⁵ From 1966 until 1992, these complaints were publicly available at NHTSA. To make the complaints easier to evaluate, NHTSA started asking consumers to fill out a standardized Vehicle Owner Questionnaire (VOQ). In 1992, NHTSA required personal identifying information deleted from VOQs for privacy, and later consumers started writing VOQs online. To enhance the database, NHTSA from 1966 to 2006 included many thousands of complaints sent to Ralph Nader, CAS and other entities that were forwarded to NHTSA. But inexplicably in 2006 NHTSA said it no longer would include outside complaints, even though in the past they had helped to identify key safety defects. Importantly, CAS pushed NHTSA to make available the actual consumer complaints/VOQs so that a unique consumer complaint rating of the 20 best and 20 worst vehicles could be published in *The Car Book*. For the first time, consumers could use this critically important consumer complaint information in their car purchases.

63 Public Law 89-563, September 9, 1966, Section 112(d).

64 The Moving Ahead for Progress in the 21st Century (MAP-21) Act, Sec. 31303 (Pub.L.112-141, 2012).

65 DOT Office of Inspector General, “Process Improvements are Needed for Identifying and Addressing Vehicle Safety Defects,” October 6, 2011.

NHTSA Must Update Its Data Collection and Evaluation Systems

NHTSA currently collects and analyses data from a variety of sources. But it takes almost two years for the annual information to become public, and key data are lacking. These problems are rooted in: NHTSA's lack of resources and personnel, old methodologies, inadequate data gathering at the state level that could be enhanced with NHTSA grants (if the funds were available), and the lack of real-time data gathering at the crash site. One of the finest initiatives by Dr. William Haddon and Dr. Robert Brenner during their short terms at NHTSA was an emphasis on scientific decision-making and development of data on which to base agency decisions. But NHTSA data gathering needs a 21st Century overhaul, with greater use of electronic systems now readily available. In some states, when a crash occurs, police fill out the crash report on an iPad that could also send the information gathered in electronic form, to NHTSA, giving the agency real-time data to use in research, rulemaking, and evaluation of possible safety defects. As the section on children reveals, KidsAndCars.org complained because NHTSA did not and would not collect information about non-highway vehicle deaths. So, KidsAndCars.org started gathering data from public sources such as news articles, and then got a legislative mandate forcing NHTSA to collect non-traffic data. This data has served as the basis for NHTSA rules on protecting children such as rear cameras and more. With all the technology advances of the last 25 years, all traffic death and injury data, including from the Event Data Recorder (EDR) after a crash, should be collected electronically in real time to enhance NHTSA's decision making.

NHTSA Must Require Electronic Data Recorders on Every Vehicle.

Another critical source of information for consumers about their vehicle is the Event Data Recorder (EDR), which collects information electronically about vehicle performance in crashes. But NHTSA has no requirement that vehicles must be equipped with EDRs as exists in Europe and as recommended by the National Transportation Safety Board for more than three decades. NHTSA only requires that minimal information must be captured in voluntarily installed EDRs, but this is insufficient to properly ascertain key facts about vehicle performance in crashes, especially as vehicles become more automated. EDRs must be mandated by NHTSA for installation on all new vehicles, require sufficient, standardized crash and performance information for effective analysis, and be accessible to aid investigators, regulators and researchers in identifying safety problems.

Why Consumer Information is Important.

There are two extraordinary marketplace benefits of easy-to-use and understand consumer information provided by NHTSA. First, it enables consumers to vote for better performing and safer cars with their hard-earned dollars, which puts enormous pressure on manufacturers to improve quality and safety. Secondly, it takes advantage of the "bottom of the list" syndrome in free markets. For example, when NHTSA published its safety belt comfort and convenience ratings, it was understood that relatively few consumers would make a purchase decision based on this information. However, the publication of the list encouraged those manufacturers on the bottom of the list to improve their belt performance (which was

a barrier to regular use), and to beg NHTSA to retest and republish the results after they improved their vehicles.

Buying a good vehicle means evaluating one of the most complex products we will ever buy. Another important NHTSA consumer information program is a website called Safercar.gov. This system assists consumers in searching for critical vehicle safety information in one place.

Although putting consumer information about the crashworthiness of cars on NHTSA's website was an important development, it still was not enough. Ideally, consumers need safety information in the dealer showrooms when they are contrasting and comparing different makes and models before making a purchase decision. To address this need for ready accessibility, then Senator Mike DeWine (R-OH) added a provision to the 2005 SAFETEA-LU law requiring manufacturers to put NCAP Star ratings on vehicle price stickers (Monroney Label) that by law must be adhered to the window of every new car. The brilliance of this effort was that it was cost effective, consumer-friendly, and did not require any new distribution system by manufacturers or dealers.

Going forward: Needed Improvements in NHTSA's Consumer Information Programs

Time and again, NHTSA's consumer information efforts have substantially improved auto safety. However, time and again NHTSA has simply failed to do all that it can. It is particularly important to note that consumer information programs are likely the least expensive and most effective agents for change in NHTSA's arsenal of safety improvement tools. NHTSA must upgrade its consumer information programs to effectively serve the public, including by:

- Updating NCAP crash ratings to include information on crash avoidance features such as forward collision warning, crash imminent braking, and dynamic braking;
- Establishing ratings for pedestrian and bicyclist warnings and for pedestrian crash avoidance technology (AEBs);
- Providing comparative information on the vehicle differences in the risk of injuries to the head, pelvis, and upper/lower legs;
- Creating a vehicle rating that combines all of the tests and safety features, as well as specific ratings for crashworthiness for adults, for elderly occupants and for children;
- Conducting sophisticated consumer research on the best way to package and deliver consumer information to car buyers;
- Issuing a rule requiring Electronic Data Recorders on all vehicles that gathers extensive crash and other essential information;

- Bringing NHTSA's essential data gathering and analysis systems into the 21st Century, including gathering real-time highway crash information on tow-away crashes from police iPads at crash sites;
- Ensuring that NHTSA's technical library is robustly complete and easily accessible; and
- Improving the auto safety hotline as a resource for consumers to register problems with NHTSA about the vehicles they own and make that information readily available to the public.

Informing the public is one of the most important roles of the National Highway Traffic Safety Administration. Empowered consumers can, and will, bring about significant improvements in the automotive marketplace. But for these improvements to come about, NHTSA must provide relevant, easy-to-use, comparative information on the safety and performance of the cars we buy. If this imperative is ignored, then NHTSA will fail in its congressionally mandated responsibilities to improve the safety and public health of our nation.

8. THE FUTURE OF VEHICLE SAFETY: THE BATTLE OVER NEW TECHNOLOGY

Auto & Tech Industries Pursue Roll Backs of Current Safety Standards to Bail Out Billions Invested in Unproven, Unsafe and Unaffordable Driverless Cars.

For the past three years, auto and tech industries and their high paid lobbyists have been working the Halls of Congress to pass corporate interest legislation that puts industry profits before public safety. Billions of dollars have been invested in speculative self-driving technologies that have not been adequately reviewed by government regulators or meet any minimum performance requirements. Frantic efforts by industry to rush autonomous vehicles or AVs to the marketplace, with little and no industry accountability, and failed federal government oversight also are the hallmarks of another recent and preventable transportation catastrophe—the Boeing 737 MAX fiasco, which resulted in two horrific crashes and the needless deaths of 346 innocent victims.

Some Members of Congress, on behalf of their industry friends, have been promoting passage of flawed legislation that fails to offer any basic safety protections to the public. These congressional and industry enthusiasts have made countless bogus and unsubstantiated claims about achieving major reductions in motor vehicle deaths and injuries without any supporting research or evidence whatsoever.

Already, several serious crashes involving cars equipped with autonomous technology have occurred, which have been subject to National Transportation Safety Board (NTSB) investigations. These investigations have identified dangerous safety deficiencies, determined contributing causes, as well as criticized government and industry actions that contributed to these incidents. In short, the auto and tech industries cannot be trusted to ensure our safety when recouping their speculative investments is the driving force to bring these experimental vehicles to the marketplace.

A Realistic, Sensible and Safe Alternative that will Deliver Available and Affordable Technologies to Reduce Crashes, Deaths, Injuries and Costs.

Advanced safety technologies, which may be foundational technologies for driverless cars, already have proven to be effective at preventing and mitigating crashes in some cars now on the highway. Further serious and sustained reductions in highway deaths and injuries can be achieved by requiring currently available and affordable crash avoidance technologies as standard equipment on all new cars. These include automatic emergency braking (AEB), lane departure warning (LDW), blind spot detection (BSD), rear AEB and rear cross-traffic alert. The Insurance Institute for Highway Safety (IIHS) has found that:

- AEB can decrease front-to-rear crashes with injuries by 56 percent;
- LDW can reduce single-vehicle, sideswipe and head-on injury crashes by over 20 percent;

- BSD can diminish injury crashes from lane change by nearly 25 percent;
- Rear AEB can reduce backing crashes by 78 percent when combined with rearview camera and parking sensors; and
- Rear cross-traffic alert can reduce backing crashes by 22 percent.⁶⁶

Typically, these systems are only available on high-end luxury models or by purchasing an expensive package of add-ons. Several House and Senate bills are currently pending in the Congress to mandate these systems as standard equipment on all cars. Passing these bills is a high priority since NHTSA is unlikely to initiate any regulatory actions without congressional directives.

Our country's focus on switching from gasoline powered to electric vehicles presents an opportunity to advance urgent energy and environmental goals as well as significant safety advances. But electric vehicles have safety challenges with the battery propulsion system which is generally much heavier than gasoline powered vehicles and can thus harm other vehicles and pedestrians and cyclists. This issue must be addressed by NHTSA as these new vehicles are designed. It would be a win-win-win outcome for consumers to drive vehicles that can help save the environment, save fuel costs, and be leaders with new crash avoidance and other safety technology to save lives.

The Challenges and Costs of Autonomous Vehicles

The cost of AVs equipped with advanced self-driving technologies will be exceedingly high. Driverless cars will exacerbate current transportation inequities. AVs will be unaffordable except for the rich but, everyone will bear the cost of infrastructure improvements to accommodate these vehicles.

Huge federal and state funding resources invested in our infrastructure will also be required to accommodate these vehicles. America's crumbling infrastructure poses significant safety and economic concerns. However, funds to upgrade existing urban and rural roads and highways to serve AVs will mean diverting funds from overdue and mounting roadway repairs and rehabilitation in states and communities across the country. For example, according to the American Society of Civil Engineers (ASCE), one in eleven of the nation's nearly 615,000 bridges in the National Bridge Inventory are structurally deficient.⁶⁷ America's roads continue to receive a grade of "D" from ASCE which noted that 20 percent of our nation's highways alone had poor pavement conditions in 2014.⁶⁸ The Federal Highway Administration (FHWA) estimates that \$142 billion in capital investment would be needed on an annual basis over the next 20 years to significantly improve conditions and performance.⁶⁹

66 IIHS, Real world benefits of crash avoidance technologies, available at: <https://www.iihs.org/media/259e5bbd-f859-42a7-bd54-3888f7a2d3ef/e9boUQ/Topics/ADVANCED%20DRIVER%20ASSISTANCE/IIHS-real-world-CA-benefits.pdf>

67 2017 Infrastructure Report Card—Bridges, ASCE, available at <http://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Bridges-Final.pdf>.

68 2017 Infrastructure Report Card—Roads, American Society of Civil Engineers (ASCE).

69 2015 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance, Chapter 8, FHWA 2016, available at <https://www.fhwa.dot.gov/policy/2015cpr/>.

AVs already are being tested on public roads in cities across the country. Because these vehicles share the road with conventional cars, it is critical that our nation's infrastructure accommodate the safe and successful deployment of AVs. The AV industry incorrectly asserts that the introduction of driverless cars will reduce congestion, improve environmental quality, and advance transportation efficiency.⁷⁰ Instead, AVs may contribute to increased congestion, urban sprawl and increased miles traveled. Individuals may choose to live farther from their offices and/or the city center and use AVs for commuting and working. Likewise, there is the real possibility of empty AVs adding substantial miles on the roads as they re-position autonomously after dropping off riders. Both of these realistic scenarios will completely undermine the societal and environmental benefits claimed.⁷¹

Serious consideration must be given to how AV driving could impact the wear and tear and public safety on roadways. For example, large trucks already inflict disproportionate damage on road pavement. Large convoys of automated trucks, commonly known as platooning, could put further strain on roads and bridges, also undermining railroads, the most efficient cargo transportation.

These infrastructure investments are not optional but mandatory in order to safely accommodate driverless cars and/or trucks on our streets and roads. More research is needed to examine the differing upgrades that will be necessary for urban, suburban, and rural regions and the cost to taxpayers.

Consumer groups recommend practical and cost-effective proposals to ensure the safety of AVs.

Minimum Performance Requirements NHTSA Should Require Before AVs are Sold to the Public:

Human-Machine-Interface (HMI) for Driver Engagement.

Research demonstrates that even for a driver who is alert and performing the dynamic driving task, a delay in reaction time occurs between observing a safety problem, reacting and taking needed action. A minimum standard is needed.

Cybersecurity Standard.

AVs must be subject to cybersecurity requirements to prevent against hacking, including hacking stemming from personal or professional animosities, vendettas and retributions.

Electronics Safety Standard.

AVs must be subject to minimum performance requirements for the vehicle electronics that power and operate safety and autonomous driving systems individually and as interdependent systems.

“Vision Test” for Avs.

Driverless cars must be subject to a “vision test” to guarantee AVs will properly detect and

⁷⁰ Self-Driving Coalition For Safe Streets, FAQs.

⁷¹ Bliss, L., Even Shared Autonomous Vehicles Could Spell Traffic Disaster, Citylab, May 10, 2017.

respond to other vehicles, pedestrians, bicyclists, children, pets, wheelchair users, roadway infrastructure, interactions with law enforcement and first responders, and other objects in the operating environment in all conditions. The failure to properly detect and react to a pedestrian led to a tragic and avoidable death in a March 2018 crash in Tempe, Arizona that killed a woman walking a bicycle.

Standard for Over-the-Air Updates.

It is anticipated that updates will be made to AV systems over the air that may change the functionality, capabilities and operational design domain (ODD) of vehicles. A standard must be issued and provide that consumers be given timely and appropriate information on the details of any updates and ensure that any needed training or tutorials are provided. Safety upgrades should not be optional or force the consumer to incur additional expenses. Also, during the update process cybersecurity must be maintained.

Manual Override.

Occupants of a driverless car need the ability to assume control or shut the system down and get to a safe location in the event of a failure. A standard should be established to ensure the capability for a human to assume control of an AV when it malfunctions or travels outside the ODD. The manual override must be accessible to all occupants, including people with cross-disabilities and other vulnerable populations as well as law enforcement and other first responders.

Functional Safety Standard.

Functional safety is a process by which a product is designed, developed, manufactured and deployed to ensure that the product as a whole will function safely and as intended. Basically, a functional safety standard assures consumers that a vehicle will do what a manufacturer states it does, will do so safely, and will not operate outside of conditions under which it can operate safely. Additionally, NHTSA should confirm the manufacturer's certifications are accurate by conducting its own testing as needed.

Revising Current Safety Standards Must be Transparent.

Any actions by NHTSA to revise or repeal existing FMVSS in order to facilitate the introduction of AVs must be conducted in a public rulemaking process and meet the safety need and equivalency provided by current standards.

Information and Data Should be Collected and Available to the Public.

At a minimum, vehicle crash data should be collected, recorded by event data recorders, and be accessible, and shared with appropriate state and federal agencies and researchers so that safety-critical problems can be identified. Currently, there is no requirement that vehicles be equipped with an event data recorder (EDR). There are only requirements for what types of data are collected by those voluntarily installed EDRs.

Accessibility and Consumer Information are Essential.

NHTSA needs to ensure that people with cross-disabilities have access to ride-sharing AV

fleets. Furthermore, the agency should establish a consumer AV database modeled after the current one, Safercar.gov. The database should include information searchable by vehicle make and model, and by vehicle identification number (VIN), at a minimum, about the level of automation, any exemptions from current federal safety standards and other relevant information about the limitations and capabilities of AVs. This consumer information also should be included in the owner's manual and at the point of sale.

The safety regulation of AVs is crucial to avoid catastrophes on the highway. To date NHTSA and DOT have ignored the dangers and challenges and allowed the technology and auto manufacturers to proceed with developing AVs with no consideration of public needs and protections. This is reckless and will be costly not only for the public but for the manufacturers.

Conclusion

NHTSA in the new Biden Administration faces daunting tasks because its basic responsibilities, funding, compliance with congressional directives and focus on the future of motor vehicles have been ignored for far too many years. The first recommendation of this paper is the most important: A strong and talented new leader who can make up for lost time to prevent unnecessary loss of life on our public highways. This report shows again and again how the auto and highway safety programs enacted into law beginning in 1966, following the publication of *Unsafe at Any Speed*, have saved lives and prevented unnecessary deaths, injuries, and needless suffering and pain for millions of families living in America. This report delineates how we can do more—much more—to protect the public from such tragedy. It is a blueprint for action that is humane, cost effective, and productive for the automotive industry.

APPENDIX

Major auto safety advances achieved by the enactment of federal legislation or Executive Branch actions occurred because of the leadership and conviction of these individuals:

Secretaries of Transportation

The Honorable Brock Adams
The Honorable Alan Boyd

The Honorable Elizabeth Dole
The Honorable Ray LaHood

The Honorable John Volpe

Members of the Senate: 1966 to 2020

Sen. Kay Bailey Hutchison (R-TX)
Sen. Richard Blumenthal (D-CT)
Sen. Cory Booker (D-NJ)
Sen. Barbara Boxer (D-CA)
Sen. Sherrod Brown (D-OH)
Sen. Richard Bryan (D-NV)
Sen. Robert Byrd (D-WV)
Sen. Tom Carper (D-DE)
Sen. Maria Cantwell (D-WA)
Sen. John Chafee (R-RI)
Sen. Hillary Clinton (D-NY)
Sen. Christopher Coons (D-DE)
Sen. John Danforth (R-MO)
Sen. Mike DeWine (R-OH)
Sen. Dick Durbin (D-IL)
Sen. Dianne Feinstein (D-CA)

Sen. Kirsten Gillibrand (D-NY)
Sen. Slade Gorton (R-WA)
Sen. Fred Harris (D-OK)
Sen. Philip Hart (D-MI)
Sen. Vance Hartke (D-IN)
Sen. Ernest Hollings (D-SC)
Sen. Daniel Inouye (D-HI)
Sen. Robert Kennedy (D-NY)
Sen. Frank Lautenberg (D-NJ)
Sen. Patrick Leahy (D-VT)
Sen. Trent Lott (R-MS)
Sen. Warren Magnuson (D-WA)
Sen. Edward Markey (D-MA)
Sen. John McCain (R-AZ)
Sen. Howard Metzenbaum (D-OH)
Sen. Walter Mondale (D-MN)

Sen. Daniel Patrick Moynihan (D-NY)
Sen. Patty Murray (D-WA)
Sen. Bill Nelson (D-FL)
Sen. Gaylord Nelson (D-WI)
Sen. Mark Pryor (D-AR)
Sen. Harry Reid (D-NV)
Sen. Abraham Ribicoff (D-CT)
Sen. Jay Rockefeller (D-WV)
Sen. Chuck Schumer (D-NY)
Sen. Ted Stevens (R-AL)
Sen. John Sununu (R-NH)
Sen. Tom Udall (D-NM)
Sen. Chris Van Hollen (D-MD)
Sen. John Warner (R-VA)
Sen. Tim Wirth (D-CO)

Members of the House of Representatives: 1966 to 2020

Speaker Nancy Pelosi (D-CA)
Rep. Cheri Bustos (D-IL)
Rep. Steve Cohen (D-TN)
Rep. Peter DeFazio (D-OR)
Rep. Diana DeGette (D-CO)
Rep. Rosa DeLauro (D-CT)
Rep. John Dingell (D-MI)
Rep. Debbie Dingell (D-MI)
Rep. Chuy Garcia (D-IL)
Rep. Eleanor Holmes Norton (D-DC)
Rep. Steny Hoyer (D-MD)
Rep. Hank Johnson (D-GA)
Rep. Peter King (R-NY)
Rep. Raja Krishnamoorthi (D-IL)

Rep. William Lehman (D-FL)
Rep. John Lewis (D-GA)
Rep. Nita Lowey (D-NY)
Rep. James A. Mackay (D-GA)
Rep. Andrew Maguire (D-NJ)
Rep. James McGovern (D-MA)
Rep. Norm Mineta (D-CA)
Rep. John Moss (D-CA)
Rep. Seth Moulton (D-MA)
Rep. Jerrold Nadler (D-NY)
Rep. Grace Napolitano (D-CA)
Rep. Thomas (“Tip”) O’Neill (D-MA)
Rep. James Oberstar (D-MN)
Rep. Frank Pallone (D-NJ)

Rep. Ted Poe (R-TX)
Rep. David Price (D-NC)
Rep. Kenneth Roberts (D-AL)
Rep. Robert Roe (D-NJ)
Rep. Ben Rosenthal (D-NY)
Rep. Bobby Rush (D-IL)
Rep. Tim Ryan (D-OH)
Rep. Jan Schakowsky (D-IL)
Rep. Gerry Sikorski (D-MN)
Rep. Harley Staggers (D-WV)
Rep. Paul Tonko (D-NY)
Rep. Henry Waxman (D-CA)
Rep. Frank Wolf (R-VA)

The following people contributed to the writing of this report.

JOAN CLAYBROOK, President Emeritus, Public Citizen

Editor-in-Chief: *Safer Vehicles and Highways: 4.2 million U.S. Lives Spared Since 1966*

Joan Claybrook played a key role in mandating air bags and other auto and truck safety standards, as well as issuing the first federal fuel economy standards. Prior to becoming president of Public Citizen, in 1982, Ms. Claybrook was Administrator of the National Highway Traffic Safety Administration in the Carter administration from 1977 to 1981.

CATHY CHASE, President, Advocates for Highway and Auto Safety

Advocates for Highway and Auto Safety is an alliance of consumer, medical, public health, law enforcement, and safety groups and insurance companies and agents working together to make America's roads safer. Advocates' mission is the adoption of federal and state laws, policies and programs that prevent motor vehicle crashes, save lives, reduce injuries, and contain costs. www.saferoads.org/

KENNERLY H. DIGGES, President, Automotive Safety Research Institute

The Automotive Safety Research Institute is an independent, nonprofit, applied engineering and physical sciences organization specializing in automobile crash safety research. www.autosafetyresearch.org/

JANETTE FENNELL, President and Founder, KidsAndCars.org

KidsAndCars.org is a national nonprofit organization dedicated to saving the lives of young children and pets in and around motor vehicles. www.kidsandcars.org/

JACKIE GILLAN, President Emeritus, Advocates for Highway and Auto Safety, and Board Member, Citizens for Reliable and Safe Highways

Citizens for Reliable and Safe Highways (CRASH) is a truck safety organization dedicated to preventing truck crashes, deaths and injuries.

www.trucksafety.org

JACK GILLIS, Executive Director, Consumer Federation of America

The Consumer Federation of America is an association of more than 250 nonprofit consumer organizations that was established in 1968 to advance the consumer interest through research, advocacy, and education.

www.consumerfed.org/

JASON LEVINE, Executive Director, Center for Auto Safety

Since 1970, the Center for Auto Safety has been the nation's premier independent, member driven, non-profit consumer advocacy organization exclusively dedicated to improving vehicle safety, quality, and fuel economy on behalf of all drivers, passengers, and pedestrians.

www.autosafety.org

Auto Safety Agency Faces Calls for Overhaul as Biden Presidency Begins

New York Times, By Christopher Jensen, January 21, 2021

For decades, across administrations of Republicans and Democrats, the National Highway Traffic Safety Administration has faced criticism from safety advocates who accuse it of routinely falling short of its mission.

Among their complaints: That the agency fails to promptly detect and act on deadly safety problems, such as a faulty ignition switch in General Motors cars that could turn off an airbag in a crash. That it fails to promptly carry out congressional safety mandates, keep track of the adequacy of recalls, strongly regulate autonomous vehicles and update safety standards. And that on occasion it's too deferential to the automakers.

See: <https://www.nytimes.com/2021/01/21/business/biden-auto-safety-nhtsa.html>

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