SUMMER DRIVING DANGERS: EXPLORING WAYS TO PROTECT DRIVERS AND THEIR FAMILIES

HEARING

BEFORE THE

SUBCOMMITTEE ON CONSUMER PROTECTION AND COMMERCE

OF THE

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C O N T E N T S

[1] Statement has been retained in committee files and also is available at https://docs.house.gov/meetings/IF/IF17/20190523/109548/HHRG-116-IF17-20190523-SD005.pdf.

SUMMER DRIVING DANGERS: EXPLORING WAYS TO PROTECT DRIVERS AND THEIR FAMILIES

THURSDAY, MAY 23, 2019

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON CONSUMER PROTECTION AND COMMERCE,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:03 a.m., in the John D. Dingell Room 2123, Rayburn House Office Building, Hon. Jan Schakowsky (chairwoman of the subcommittee) presiding.

Present: Representatives Schakowsky, O'Halleran, Luján, Cárdenas, Blunt Rochester, Soto, Matsui, McNerney, Pallone (ex officio), Rodgers (subcommittee ranking member), Latta, Guthrie, Bucshon, Hudson, Carter, and Walden (ex officio).

Staff Present: Jeffrey C. Carroll, Staff Director; Evan Gilbert, Deputy Press Secretary; Lisa Goldman, Senior Counsel; Waverly Gordon, Deputy Chief Counsel; Daniel Greene, Professional Staff Member; Alex Hoehn-Saric, Chief Counsel, Communications and Consumer Protection; Zach Kahan, Outreach and Member Service Coordinator; Meghan Mullon, Staff Assistant; Tim Robinson, Chief Counsel; Chloe Rodriguez, Policy Analyst; Andrew Souvall, Director of Communications, Outreach and Member Services; Benjamin Tabor, Staff Assistant; Sydney Terry, Policy Coordinator; Mike Bloomquist, Minority Staff Director; Melissa Froelich, Minority Chief Counsel, Consumer Protection and Commerce; Peter Kielty, Minority General Counsel; Bijan Koohmaraie, Minority Counsel, Consumer Protection and Commerce; and Brannon Rains, Minority Legislative Clerk.

Ms. SCHAKOWSKY. The Subcommittee on Consumer Protection and Commerce will now come to order.

The Chair now recognizes—oh, I am sorry. The Chair now recognizes herself for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. JAN SCHAKOWSKY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Good morning, and thank you so much for being with us today. Today's hearing is about promoting auto safety and raising awareness about the threats families face in our Nation's—on our Nation's roads, and off the roads as well, as we enter summer driving seasons.

One of those threats is child vehicular heatstroke, which occurs when a child is left in an overheating car. I would like to take a moment to recognize two families who have endured such tragedies and turned their pain into action, advocating for legislation to make sure no child ever dies in an overheating car.

Miles and Carol Harrison from Purcellville, Virginia. They are the parents of Chase, who died at only 21 months in a—on July 8, 2008, after being unknowingly left in a hot car.

Erin Holly of Charlotte, South Carolina, her now 2-year-old son, Finn, was 4 weeks old when he was unknowingly left in her family car—in their family car. Fortunately, his parents quickly realized their mistake and rescued their baby boy. But just a few months later, one of Finn's daycare classmates died in a hot car. Shortly after, a 7-month old child in Erin's community also died in an overheated car.

You know, there are far too many ways for parents to lose children that we can't control. We have a duty, however, to do everything we can to ensure that parents don't lose a child when we can prevent that. Fifty-two children died in heatstroke in cars last year, 52. In most cases, the parents accidentally—loving parents accidentally left their child in the car. Eight children died in hot cars so far this year. Just yesterday—just yesterday, a 5-month-old girl tragically died in a van sitting outside of her daycare.

Education alone cannot solve this crisis. Even the most attentive parent can get distracted and inadvertently leave their child in a rapidly warming vehicle. A simple alert notification for parents that they have left their child in the car can save their lives.

Yesterday, we had a press conference where several such technologies were displayed, proving that we have the technological skill that we need to prevent many of these tragedies. We do have to do an evaluation of those different technologies.

You get a warning when you leave keys in the car or when you leave your lights on. Every new car should be equipped with technology to effectively alert parents if they learn that a child is in the car. That is why I am eager to reintroduce hot cars—the HOT CARS Act with Congressman Ryan and also Congressman King of New York, that new cars come equipped with an alert system.

I also look forward to exploring many other safety technologies, such as automatic emergency braking, lane departures, departure warnings, and pedestrian detection that exist today and can dramatically reduce the number of automobile fatalities and injuries. But deployment of these safety features is slow and often reserved for those willing to pay a premium for advanced technologies in their cars. It is time for Congress to take decisive action to keep families safe, and we all have a track record—and we do have a track record of success.

Last year, finally, rear backup cameras became standard in new vehicles; an issue that I championed for a long time before it actually became the law and was enforced. And thanks to the commitment of those parents, children, and advocates who made that happen. I look forward to exploring how we can ensure that all cars can be equipped with the best safety features.

[The prepared statement of Ms. Schakowsky follows:]

PREPARED STATEMENT OF HON. JAN SCHAKOWSKY

Good morning, thank you for being here with us.

Today's hearing is about promoting auto safety and raising awareness about the threats families face on our nation's roads as we enter summer driving season.

One of those threats is child vehicular heatstroke, which occurs when a child is left in an overheating car. I would like to take a moment to recognize two families who have endured such tragedies, and turned their pain into action, advocating for legislation to make sure no child ever dies in an overheating car.

Miles and Carol Harrison from Purcellville, Virginia. They are the parents of Chase, who died at only 21 months old on July 8, 2008, after being unknowingly left in a hot car.

Erin Holley of Charleston, South Carolina. Her now 2-year-old son, Finn, was 4 weeks old when he was unknowingly left in their family car. Fortunately, his parents quickly realized their mistake and rescued their baby boy. But just a few months later, one of Finn's daycare classmates died in a hot car. Shortly after, a 7-month old child in Erin's community also died in an overheated car.

There are far too many ways for parents to lose a child that we can't control. We have a duty to do everything we can to ensure that parents don't lose a child when we can prevent it.

Fifty-two children died of heat stroke in cars last year. FIFTY-TWO. In most cases, the parent accidently leaves the child in the car. Eight children died in hot cars so far this year. Just yesterday, a 5-month-old girl tragically died in a van sitting outside of her daycare.Education alone cannot solve this crisis. Even the most attentive parent can get distracted and inadvertently leave their child in a rapidly warming vehicle.

A simple alert notifying parents that they left their child in their car can save lives. Yesterday, I held a press conference where several such technologies were on display, proving that we have the technology needed to prevent many of these tragedies.

You get a warning when you leave keys in the car or when you leave your lights on. Every new car should be equipped with technologies to alert parents if they leave a child in the car.

That's why I am eager to reintroduce the HOT CARS Act with Congressman Ryan to mandate that new cars with come equipped with an alert system.

I also look forward to exploring many other safety technologies—such as automatic emergency braking, lane departure warnings, and pedestrian detection—that exist today and can dramatically reduce the number of automobile fatalities and injuries every year.

But deployment of these safety features is slow, and often reserved for those willing to pay a premium for advanced safety features.

It's time for Congress to take decisive action to keep families safe.

And we have a track record of success.

Last year, rear back-up cameras became standard in new vehicles, an issue I championed after hearing devastating stories from parents whose children died in back- over accidents. Thanks to the commitment of those parents, children today are more protected.

I look forward to exploring how we can ensure all cars can be equipped with the best safety features.

Ms. SCHAKOWSKY. I now yield to the ranking member, Mrs. McMorris Rodgers.

OPENING STATEMENT OF HON. CATHY MCMORRIS RODGERS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mrs. RODGERS. Thank you, Madam Chairman. I want to just say thank you for your leadership on these important issues for many years, and now as the chair of this subcommittee.

Welcome to everyone. Today, we are going to explore ways that we can protect drivers and their families from dangers on our roadways, as well as off our roadways, as the chairwoman just outlined.

First, thank you, Mr. Harrison, for being here. Your story is powerful, and it is moving, and I want to commend you for your commitment to Chase.

Several automakers have taken the challenge head on, of reducing instances children are left in cars. And there are also several startups focusing on other technologies to address these tragedies. I am committed to finding all paths to getting safety and safe technologies into cars faster. Sometimes that means industry needs certainty, and sometimes that means the market needs space for innovation, or both.

This weekend is Memorial Day weekend, and it brings families and friends together. We honor those who have sacrificed their lives defending our rights and our freedom. It also unofficially marks the start of the summer vacation travel season, and with more travel, comes more risk on the roads.

In recent years, more than 300 people have died over the holiday weekend, and some estimate that the number could increase over this weekend. I encourage everyone here and everyone watching: be safe, put your phone down, focus on driving. Do not drive if you have consumed any alcohol or other drugs. If you feel different, you drive different. Put on your seatbelt. Seatbelts save lives.

Risk on our roadways also present safety concerns year round. Technology offers potential solutions to many of these safety concerns. Right now, advanced driver assistance systems are in more and more cars that we drive every day. Advanced driver assistance systems include automatic emergency braking, lane departure warning, crash avoidance technology, blind spot detection, vehicle-to-vehicle communications, V2X, and so much more.

In fact, 20 automakers have voluntarily pledged to include automatic emergency braking, the AEB, in virtually all new passenger vehicles by September 2022. The Insurance Institute for Highway Safety estimates that by 2025, this agreement will prevent 28,000 crashes and 12,000 injuries. These systems are the foundation and building blocks for self-driving vehicles.

We lose more than 37,000 lives a year on our roads. And according to the National Highway Traffic Safety Administration, 94 percent of all accidents are due to human error. These include distracted driving, driving while under the influence of alcohol or drugs, and even driving drowsy. The more we can safely automate the driving process, the more human error we can remove. As a result, we have greatly improved the safety of our roadways.

In addition to drastically improving safety, self-driving vehicles offer vast mobility benefits. People with disabilities, our elderly community, and those not served by traditional public transportation stand to gain so much from widespread use of self-driving vehicles.

Self-driving vehicles promise to improve freedom and mobility for our communities. Self-driving vehicles would make going to work, to the grocery store, across town to visit friends, or going to the doctor so much easier. Self-driving vehicles will restore independence and break down the transportation barriers for so many Americans.

Self-driving vehicles are also important for our global standing. Right now, the United States is the global leader in innovation. To

compete and remain the leader, we must do everything we can to advance the safe development and deployment of self-driving vehicle technology. Other countries are moving full speed ahead. Some are even developing their technology in our own backyard. Almost a quarter of all companies testing in California are Chinese.

Earlier this year, I joined my colleagues, Republican Leader Walden and Representative Latta, urging this committee to continue the bipartisan work from last Congress to advance the safe development of self-driving cars.

I want to thank the chairwoman, Chair Schakowsky, for holding this important hearing for us to explore ways, so many ways, in which we can improve auto safety and save lives.

Thank you, and I yield back.

[The prepared statement of Mrs. Rodgers follows:]

PREPARED STATEMENT OF HON. CATHY MCMORRIS RODGERS

Good morning and welcome to the Consumer Protection and Commerce Subcommittee hearing. Today we will explore ways we can protect drivers and their families from dangers on our roadways.

First, thank you Mr. Harrison for being here. Your story is powerful, and moving. I want to commend you for your commitment to Chase.

Several automakers have taken the challenge of reducing instances children left in cars head on and there are also several startups focusing on other technologies to address these tragedies.

I remain committed to finding all paths to getting safety technologies into cars faster—sometimes that means industry needs certainty and sometimes that means the market needs space for innovation or both.

This weekend is Memorial Day Weekend. It brings families and friends together to remember and honor those who have sacrificed their lives defending our rights and Freedom.

It also unofficially marks the start of the summer vacation travel season. With more travel comes more risks on our roads.

In recent years, more than 300 people have died over this holiday weekend and some estimate that number could increase over this weekend. I would encourage everyone here and watching, please be safe.

- Please put your phone down and focus on driving;
- Please do not drive if you have consumed any alcohol or other drugs: ″If you feel different, you drive different″; and
- Please put your seat belt on . . . seat belts save lives.

Risks on our roadways also present safety concerns year-round. Technology offers potential solutions to many of these safety concerns.

Right now, advanced driver assistance systems are in more and more of the cars we drive every day. Advanced driver assistance systems include automatic emergency braking, lane departure warning, crash avoidance technology, blind spot detection, vehicle-to vehicle communications, V2X, and so much more.

In fact, 20 automakers have voluntarily pledged to include automatic emergency braking (AEB) in virtually all new passenger vehicles by September 2022.

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These systems are the foundation and building blocks for self-driving vehicles.

We lose more than 37,000 lives a year on our roads, and according to the National Highway Traffic Safety Administration, 94 percent of all accidents are due to human error.

These include distracted driving, driving while under the influence of alcohol or drugs, and even driving drowsy. The more we can safely automate the driving process, the more human error we can remove. As a result, we can greatly improve the safety of our roadways.

In addition to drastically improving safety, self-driving vehicles offer vast mobility benefits. People with disabilities, our elderly community, and those not served by traditional public transportation stand to gain so much from widespread use of self-driving vehicles.

Self-driving vehicles promise to improve freedom and mobility for our communities. Self-driving vehicles could make going to work, to the grocery store, across town to visit friends, or to go to the doctor so much easier.

Self-driving vehicles will restore independence and break down transportation barriers for so many Americans.

Self-driving vehicles also are important for our global standing. Right now, the U.S. is the global leader in innovation. To compete and remain the leader, we must do everything we can to advance the safe development and deployment of self-driving vehicle technology.

Other countries are moving full speed ahead. Some are even developing their technology in our own backyard. Almost a quarter of all companies testing in California are Chinese.

Earlier this year, I joined my colleagues Republican Leader Walden, and Rep. Latta urging this Committee to continue the bipartisan work from last Congress to advance the safe development of self-driving cars.

I want to thank Chair Schakowsky for holding this important hearing for us to explore ways in which we can improve auto safety.

Thank you and I yield back.

Ms. SCHAKOWSKY. The gentlewoman yields back.

And now I recognize Chairman Pallone for 5 minutes for his opening statement.

Mr. PALLONE. Thank you, Madam Chair.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

This hearing is particularly timely as the Memorial Day weekend is one of the busiest travel weekends of the year. Millions of Americans are taking to the Nation's roads to travel to barbecues and beaches; including many heading to the Jersey Shore.

But this can be a dangerous weekend too. Nearly 350 people died in motor vehicle crashes over Memorial Day weekend in 2017. And as temperatures rise, so does the risk of heatstroke for children left in cars. In 2017, more than 40,000 people died as a result of a motor vehicle accident, and 4.6 million were injured.

Unfortunately, automobile fatalities are on the rise. Motor vehicle death rates have steeply increased since 2014, after nearly a decade of falling. It is a troubling trend suggesting that we need to double down on our efforts to improve the safety of our roadways.

Technologies exist that will vastly improve motor vehicle safety, but we must find ways to get them in the hands of all drivers. Take, for example, heatstroke victims in cars. One child's death is an extraordinary tragedy. Fifty-two is a crisis. Last year, 52 children died from heatstroke after being left in hot cars. Over the last 20 years, 802 children have been lost from these types of tragedies, and more than half of those deaths occur when a distracted parent accidentally leaves his or her child in a vehicle.

This is a heartbreak, obviously, that Mr. Harrison knows all too well.

Mr. Harrison, I am sorry for your loss, and I thank you for sharing your son's stories in hopes that we can end these sorts of devastating accidents.

There are ways we can prevent kids from dying from vehicular heatstroke. Technologies alerting drivers to check their backseats for children exist today, but have not been widely deployed.

This crisis requires action. Just yesterday, there was another tragic death in Florida when a baby girl died after being left in a daycare van for several hours; and that is why I applaud Chairwoman Schakowsky and Congressman Ryan for the work on the HOT CARS Act, legislation that would require vehicles to be equipped with safety technologies alerting drivers to check their rear seat after a car is turned off.

These and other existing safety technologies hold the promise of saving lives and reducing both the number and the severity of auto crashes. Crash avoidance technologies like automatic emergency brakes, rear automatic braking, blind spot detection, and lane departure warnings are all proving to reduce crashes.

Similarly, the Insurance Institute for Highway Safety estimates that adaptive headlights, which automatically channel light around curbs without causing glare for oncoming traffic, could help prevent up to 90 percent of nighttime curb crashes. These headlights are available overseas but are not legal in the United States.

Yet NHTSA has not done much to require or even encourage automakers to make lifesaving technology standard. If an automotive feature or technology proves it can save lives, it should not be a luxury reserved only for those who can afford to buy the high-end car. These sorts of safety technologies should become a standard, in our cars, as seatbelts and air bags.

NHTSA is even failing at educating consumers and incentivizing manufacturers to adopt safety features. The New Car Assessment Program managed by NHTSA provides ratings on a scale from one to five stars for vehicle performance in crash and rollover tests. This five-star safety rating is supposed to be a tool that helps consumers make more informed decisions when purchasing their vehicles and encourages manufacturers to exceed minimum safety standards.

But this safety seal has become a more—basically, a mere participation trophy. Ninety-nine percent of 2016 models received four or five stars, the highest ratings. The very integrity and value of the five-star safety rating is undermined if the certification does not draw meaningful distinctions between the safety of different vehicles.

It is also not meaningful if the safety certification fails to include crucial safety technologies already deployed on automobiles. Unfortunately, the five-star safety rating does not account for advanced crash avoidance technologies like four-wheel collision warning, lane departure warning, and blind spot detection.

NHTSA started to update the program in 2015, but has yet to make needed changes. We must modernize the five-star safety rating for the 21st century automobile so consumers can be empowered to identify and purchase the safest car of their choosing.

So I thank our witnesses for testifying this morning.

Madam Chair, I want to say that I really am impressed by all of the—not only the hearings that you have been having, but the initiatives that are coming forward on consumer protection. Which I really think has, you know, kind of been neglected in the past. You are making sure that when we deal with consumer issues, that they are once again in the forefront. So I appreciate that. Thank you.

[The prepared statement of Mr. Pallone follows:]

PREPARED STATEMENT OF HON. FRANK PALLONE, JR.

This hearing is particularly timely, as the Memorial Day weekend is one of the busiest travel weekends of the year. Millions of Americans are taking to the nation's roads to travel to barbeques and beaches—including many heading to the Jersey shore. But this can be a dangerous weekend too. Nearly 350 people died in motor vehicle crashes over Memorial Day weekend in 2017. And as temperatures rise, so does the risk of heatstroke for children left in cars.

In 2017, more than 40,000 people died as a result of a motor vehicle accident, and 4.6 million were injured. And, unfortunately, automobile fatalities are on the rise. Motor vehicle death rates have steeply increased since 2014, after nearly a decade of falling. It's a troubling trend suggesting that we need to double down on our efforts to improve the safety of our roadways.

Technologies exist that will vastly improve motor vehicle safety. We must find ways to get them in the hands of all drivers.

Take for example heatstroke victims in cars. One child's death is an extraordinary tragedy. Fifty-two is a crisis. Last year, 52 children died from heatstroke after being left in hot cars. Over the last 20 years, 802 children have been lost from these types of tragedies, and more than half of these deaths occur when a distracted parent accidently leaves his or her child in a vehicle.

This is heartbreak Mr. Harrison knows all too well. Mr. Harrison, I am so sorry for your loss. I thank you for sharing your son's story in hopes that we can end these sorts of devastating accidents.

There are ways we can prevent kids from dying from vehicular heatstroke. Technologies alerting drivers to check their backseats for children exists today but has not been widely deployed. This crisis requires action. Just yesterday there was another tragic death in Florida when a baby girl died after being left in a day care van for several hours. And that's why I applaud Chairwoman Schakowsky and Congressman Ryan for their work on the HOT CARS Act—legislation that would require vehicles to be equipped with safety technologies alerting drivers to check the rear seat after a car is turned off.

These and other existing safety technologies hold the promise of saving lives and reducing both the number and the severity of automobile crashes. Crash avoidance technologies like automatic emergency brakes, rear automatic braking, blind spot detection, and lane departure warnings are all proving to reduce crashes. Similarly, the Insurance Institute for Highway Safety estimates that adaptive headlights—which automatically channel light around curves without causing glare for oncoming traffic—could help prevent up to 90 percent of nighttime curve crashes. These headlights are available overseas but are not legal in the United States.

Yet, NHTSA has not done much to require or even encourage automakers to make life-saving technologies standard. If an automotive feature or technology proves it can save lives, it should not be a luxury reserved only for those who can afford to buy the highest end cars. These sorts of safety technologies should become as standard in our cars as seatbelts and airbags.

NHTSA is even failing at educating consumers and incentivizing manufacturers to adopt safety features. The New Car Assessment Program managed by NHTSA provides ratings on a scale from one to five stars for vehicle performance in crash and rollover tests. This 5-Star Safety Rating is supposed to be a tool that helps consumers make more informed decisions when purchasing their vehicles and encourages manufacturers to exceed minimum safety standards. But this safety seal has become a mere participation trophy. Ninety-nine percent of 2016 models received 4 or 5 stars, the highest ratings.

The very integrity and value of the 5-Star Safety Rating is undermined if the certification does not draw meaningful distinctions between the safety of different vehicles. It is also not meaningful if this safety certification fails to include crucial safety technologies already deployed on automobiles.

Unfortunately, the 5-Star Safety Rating does not account for advanced crash avoidance technologies, like forward collision warning, lane departure warning, and blind spot detection.

NHTSA started to update the program in 2015 but has yet to make needed changes. We must modernize the 5-Star Safety Rating for the 21st century automobile, so consumers can be empowered to identify and purchase the safest car of their choosing.

I thank our witnesses for testifying this morning, and I look forward to the discussion.

Ms. SCHAKOWSKY. Thank you, Mr. Chairman.

In lieu of the ranking Republican, Mr. Latta is now recognized for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. ROBERT E. LATTA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

Mr. LATTA. Well, thank you, Madam Chair. And thank you very much for holding today's hearing.

And I want to thank all of our witnesses, and especially you, Mr. Harrison, for being with us today.

As has been mentioned, this weekend is Memorial Day weekend and the unofficial start of summer. Summertime means school is out and families across the country are hitting the roads for vacation. It can also mean more inexperienced drivers behind the wheel, added congestion, and increased unpredictability on our roadways.

Today, we have the opportunity to discuss the bipartisan efforts this subcommittee can make to promote the development and deployment of different technologies that have the potential to address some of these concerns and, ultimately, save thousands of lives.

In 2016 alone, more than 37,000 people lost their lives on U.S. highways. Ninety-four percent of the accidents are attributed to human error, including driver distraction and inattention. I believe there are technologies we can utilize to prevent the loss of life during the summertime driving season and any time.

Today, many cars are already equipped with active safety features or semiautonomous driving systems. These systems known as advanced driver assistance systems help drivers stay within their designated lane, accelerate to pass a slow-moving vehicle, safely change lanes, avoid front-end collisions, and even park. These advanced systems demonstrate the important role technology plays to address auto safety concerns, and are the foundation for the eventual deployment of self-driving vehicles.

That is why last Congress I introduced, with Chairman Schakowsky, the bipartisan Self Drive Act, which clarified the Federal and State roles in regulating self-driving vehicles, provided much needed updates to outdated statutory and regulatory barriers, and ensured that the National Highway Traffic Safety Administration gets the data it needs, all while focusing on consumer safety and improving mobility for individuals with disabilities or senior citizens and those underserved by inadequate public transportation.

Included in the legislation was also language to spur innovation around technology to help avoid the tragedy of a child losing his or her life in a hot vehicle. U.S. companies are investing major resources in the research and deployment of these technologies, and the Self Drive Act would have provided much needed certainty and updates to existing rules to unleash this innovation.

Earlier this year, I joined Republican Leaders Walden and Rodgers in requesting the gentleman from New Jersey, the chairman of the full committee, that this committee stay focused on this issue. I believe our work on the SELF DRIVE Act was an example of this committee at its best, working together in an open process on technology that will save lives.

Since the legislation passed unanimously both in committee and on the House floor, it is my hope that we can make this issue a priority again in this Congress. Within this subcommittee, the gentle lady from Illinois, our chair, has worked tirelessly to promote technology to seek to prevent the tragedies we have heard about when a child is left in a hot car. I commend her for her work, and stand committed to working with her in a bipartisan way to implement policies that could reduce these tragedies.

We have an opportunity to work towards ending senseless deaths on our roads by making investments in technology. I want to thank our members and staff on both sides of the aisle for their hard bipartisan work on this issue.

Again, I thank the gentle lady for having this committee hearing today, and I yield back the balance of my time.

[The prepared statement of Mr. Latta follows:]

PREPARED STATEMENT OF HON. ROBERT LATTA

Good morning, I would like to thank our Chair for holding this important hearing, and I thank our witnesses for being here. This weekend is Memorial Day Weekend and the unofficial start to summer. Summertime means school is out and families across the country are hitting the road for vacation. It can also mean more inexperienced drivers behind the wheel, added congestion, and increased unpredictability on our roadways.

Today, we have the opportunity to discuss the bipartisan efforts this Subcommittee can make to promote the development and deployment of different technologies that have the potential to address some of those concerns and ultimately save thousands of lives.

In 2016 alone, more than 37,000 people lost their lives on U.S. highways. Ninety-four percent of accidents are attributable to human error, including driver distraction and inattention. I believe there are technologies we can utilize to prevent the loss of life during the summer driving season. Today, many cars are already equipped with active safety features or semi-autonomous driving systems. These systems, known as advanced driver assistance systems, help drivers stay within their designated lane; accelerate to pass a slow-moving vehicle; safely change lanes; avoid front end collisions; and even park. These advanced systems demonstrate the important role technology plays to address auto safety concerns and are the foundation for the eventual deployment of self-driving vehicles.

That is why last Congress I introduced, with Chair Schakowsky, the bipartisan SELF-DRIVE Act, which clarified the Federal and State roles in regulating self-driving vehicles, provided much needed updates to outdated statutory and regulatory barriers, and ensure the National Highway Traffic Safety Administration gets the data it needs—all while focusing on consumer safety and improving mobility for individuals with disabilities, our senior citizens, and those underserved by inadequate public transportation.

Included in the legislation was also language to spur innovation around technology to help avoid the tragedy of a child losing their in a hot car. U.S. companies are investing major resources in the research and development of these technologies and the SELF-DRIVE Act would have provided much needed certainty and updates to existing rules to unleash this innovation.

Earlier this year, I joined Republican Leaders Walden and Rodgers in requesting Chairman Pallone stay focused on this issue. I believe our work on the SELF-DRIVE Act was an example of this committee at its best: working together, in an open process on technology that will save lives. Since this legislation passed unanimously both in Committee and on the House Floor, it is my hope that we can make this issue a priority again this Congress.

Within this Subcommittee, Chairwoman Schakowsky has also worked tirelessly to promote technologies that seek to prevent the tragedies we have heard about when a child is left in a hot car. I commend her for her work and stand committed to working with her in a bipartisan way to implement policies that could reduce these tragedies.

We have an opportunity to work towards ending senseless deaths on our roads by making investments in technology. I want to thank our members and staff on both sides of the aisle for their bipartisan work.

Thank you again, and I yield back my time.

Ms. SCHAKOWSKY. I thank the gentleman.

I want to assure you that we will be working in a bipartisan way with the autonomous vehicles but also the safety protection bills. I hope everyone will come on as a co-sponsor of the HOT CARS Act.

So now it is my privilege to introduce our witnesses today. I did want to point out that there is a slightly different feature available today, and those are boxes of tissue; because we are dealing with a very, very sensitive issue today, among others.

Our witnesses are Miles Harrison, who is the father of Chase Harrison; Janette Fennell, the president and founder of KidsAndCars organization; Gary Shapiro, who is president and CEO of Consumer Technology Association; and Jason—Levine or Levine?

Mr. LEVINE. Levine.

Ms. SCHAKOWSKY. Levine, executive director of the Center for Auto Safety.

We want to thank our witnesses for joining us today. We look forward to your testimony.

I failed to mention that all members can submit for the record opening statements. But at this time, the Chair will now recognize each witness for 5 minutes to provide their opening statement.

I think most people here understand the light system. You have a series of lights. The light will initially be green at the start of your opening statement. The light will then turn yellow when you have 1 minute remaining, and please begin to wrap up testimony at that point. The light will turn red when your time has expired.

So, Mr. Harrison, again, very grateful for you to be here. I know this is difficult. We all do. You are recognized for 5 minutes.

STATEMENTS OF MILES HARRISON, FATHER OF CHASE HARRISON; JANETTE FENNELL, PRESIDENT AND FOUNDER, KIDSANDCARS.ORG; GARY SHAPIRO, PRESIDENT AND CEO, CONSUMER TECHNOLOGY ASSOCIATION; AND JASON LEVINE, EXECUTIVE DIRECTOR, CENTER FOR AUTO SAFETY

STATEMENT OF MILES HARRISON

Mr. HARRISON. Thank you, ma'am, very much. And for everyone here, thank you for your time.

Eleven years ago, it was a typical day at my home; everyone getting up, getting ready to head out the door, as well as myself getting ready to go to work. Like many parents, I was multitasking; thinking of all the things to do during the day. We were rushing around, rushing around, not very organized.

My world changed forever that day. When I went to my office I was focused on all the work problems that people typically focus on, and the day flew by. I even went out to lunch with my boss. We talked about all the problems, all the pressures.

Having no idea what time it was, at the end of the day, a colleague of mine came up to my office around 5 p.m. And said, "hey, do you have a doll in your car?" And I said, "a doll? What are you talking about?"

It was then that I realized, oh my God, oh my God, what have I done! I ran outside of my office and rushed to my car. I saw my son Chase through the window. I threw open the car door and grabbed him and rushed into my office carrying him and screaming, "oh my God, oh my God!" I had not dropped him off at daycare.

I was so distraught and upset I couldn't see straight. I was taken by ambulance to the emergency room. And I remember a nurse asking me if I wanted something for the pain, and I said, "I don't deserve that. I need to feel all this pain."

From the hospital they took me to the police station where the police insinuated that I had murdered my son. The first thing they asked me is if I had life insurance on my son. I didn't even think about that.

From the police station I was taken to a hospital where I stayed under an assumed name for two weeks, because if I had checked in with my real name, I would have been arrested. During my hospital stay, my son had a funeral, which I was not allowed to attend. I made my own funeral by pulling out the trundle part of my bed and had my own funeral because I could not go to my son's.

My story continues with a very public trial, fighting a charge of involuntary manslaughter which, thank God, I was found not guilty. But it didn't matter to me. I was already guilty; so full of shame and embarrassment and anger. I had killed my son.

I cry every day for Chase. I still haven't forgiven myself, don't know if I ever will.

After the trial, Gene Weingarten wrote a Pulitzer Prize article called "Fatal Distraction" about parents who have gone through what my family has gone through.

This didn't have to happen. If there had been a simple alert in my car, this would not have happened. Children are dying unnecessarily. Families are being destroyed.

In my son's honor, we have made it a mission to try to help Congress implement some sort of a car warning system. Please, I implore you to enact this legislation.

I know my time is running up, so I am going to be—I am going to stop. But I want to thank you all for hearing my testimony. And please help us.

[The prepared statement of Mr. Harrison follows:]

Testimony of

Miles Harrison

Hearing before the

House Committee on Energy and Commerce

Consumer Protection and Commerce Subcommittee

On

"Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families"

Thursday, May 23, 2019

Almost 11 years ago, it was a typical day of getting everyone up and ready to head out the door as well as get myself to work on time. Like so many parents, I was multi-tasking, getting my child ready, making sure we had everything packed and rushing around with the typical morning busyness.

My world changed forever that day.

When I went to my office that day, I was focused on fixing all of the problems at work because that was my job. The day flew by. I went to lunch with my boss to update him on the status of my work projects. Then, having no idea what time it was, a colleague came into my office and said, "Hey, do you have a doll in your car?"

Stunned, I had no idea why he would ask such a question and couldn't imagine what he was talking about. I stood up and started to go through what I had done that day; and then realized, "OH MY GOD - NO- OH MY GOD!" I rushed to the car and as I came upon the side window – I saw Chase... I had not dropped him off at daycare as I had intended to.

I ripped open the car door, pulled him from the car seat and ran into the office with him in my arms. SCREAMING and crying and calling out for help. It was too late.

I was so distraught, upset and completely incapacitated that I spent hours in the ER. The nurse offered me painkillers to help me feel better; but I refused and said, "I did not deserve to not feel pain."

The police demanded that I be brought to the station and interviewed. The detective started asking all sorts of questions like, "Did you have life insurance on your son?" It started to hit me, I had killed my son. I did it. My poor sweet little boy. God take me now and return him to his beautiful mother. PLEASE GOD NOT HIM. TAKE ME.

I had to be hospitalized for several weeks and even registered under a fake name because I would have been arrested the moment I left the hospital. Tragically, I was not even allowed to attend my son's funeral.

My story continues with a very public trial, fighting a charge of involuntary manslaughter of which, thank God, I was found not guilty after three days in the courtroom. It really did not matter to me whether I was found guilty or innocent. I considered myself guilty. Guilty and full of shame and anger.

I cry every day for Chase. I still have not forgiven myself and don't know if I have the capacity to do so. I look at my wife in amazement. She never wavered. She stayed with me and we are still together. She is the most beautiful and wonderful wife in the world.

After the trial, Gene Weingarten, from the Washington Post, wrote a Pulitzer Prize winning feature article titled "Fatal Distraction" about parents who have gone through what my family went through. He somehow was able to capture the essence of how otherwise wonderful parents could be involved in a 'parent's worst nightmare.' He was able to explain this modern day phenomena in a way the people could understand and relate to.

This did not have to happen. Knowing that a simple chime could have saved my son's life is heartbreaking. How can this be, that in our great country it is not mandatory that the simplest alarm not be required in all cars? Children are dying and families are being destroyed unnecessarily. This has got to stop.

In our son's honor, we have made it our mission to try to prevent this unspeakable tragedy from happening to ANY parents. Every time we hear of another child dying, we ask WHY? Why does this keep happening when there is technology available to prevent it? Every loving, caring parent must realize that this disaster could happen to them. They need to be made aware of this phenomena. I urge Congress to take immediate action to save lives by requiring proven technology that would alert to an unattended occupant of a vehicle.

Thank you.

Ms. SCHAKOWSKY. Thank you so much.
Ms. Fennell, you are recognized for 5 minutes.

STATEMENT OF JANETTE FENNELL

Ms. FENNELL. Madam Chairwoman, I am Janette Fennell, the founder and president of KidsAndCars.org. We are an organization dedicated to improving safety of children in and around motor vehicles. KidsAndCars.org appreciates the opportunity to express our views on the HOT CARS Act and other available technologies that will save the lives of children.

In 1996, my family was kidnapped at gunpoint in San Francisco and locked in the trunk of our car. Thankfully, we all survived and used this traumatic experience to help guide the Federal regulatory process to ensure that no one else had to end up in the trunk of a vehicle without a means of escape. Now, all vehicles come with an internal trunk release as standard equipment.

Though we are proud of that accomplishment, the most important lesson we continue to learn every day is that the simple changes to vehicles save lives. In fact, not one person has died in a vehicle equipped with an internal trunk release, not one.

We are showing a chart here that talk about hot car deaths. Starting in the mid-1990s, parents were told to transport their children in the backseat of vehicles to protect them from the air bags in the front seat. Laws were passed requiring this behavior, and that forever changed the way American children are transported.

As you can see from this chart, while we have basically eradicated children being killed by overpowered air bags, children continue to die in hot cars.

When most people think about memory, they think about retrospective memory, the ability to recall things from the past. The other type of memory is prospective memory, the ability to plan and execute an action in the future; for example, the intention to drop a baby at daycare.

Prospective memory is more prone to forgetfulness. If ever—if you have ever forgotten something on top of your car or failed to run an errand, you have experienced the fickleness of our prospective memory. Unknowingly leaving a child in a vehicle is a prospective memory failure.

Studies show that, in autopilot, the brain is unable to account for a change in routine. The reason is that when you are in autopilot, you are functioning on your habit memories, not what is exactly happening in the here and now. The catch here is that the habit memory suppresses and completely takes over the prospective memory, regardless of the importance of your plan.

Autopilot is most common during times of stress and fatigue, both of which all parents of young children experience. These cognitive failures have nothing to do with a parent's love for their child or the ability to care for them. No one in this world has an infallible memory.

We need to focus on technology because we have proven, year after year, that knowing this can happen to you when hearing it on the news is not changing anything. A detection system is a must. Right now, somewhere in the United States dozens of fami-

lies are going about their daily lives unaware by the year's end, their child will die in a hot car.

Now, let's talk about frontovers. NHTSA's 2018 report states that frontovers are responsible for 366 deaths and 15,000 injuries. Toddlers are extremely vulnerable because they have established independent mobility at about 1 to 2 years of age, yet they have not developed the cognitive ability to understand danger. Young children are impulsive, unpredictable, and still have very poor judgment. This is a real combination for a disaster.

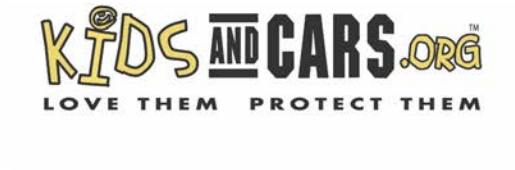
Automatic emergency braking or a bird's eye, or 360-degree view technology, uses a series of cameras and sensors all around the vehicle allowing drivers to see all sides of that vehicle.

And now keyless ignition, this is a vehicle design flaw that can be easily remedied with an automatic ignition shutoff feature. Many drivers are accustomed to using a traditional key to start and stop their vehicle. When a traditional key is removed, that means the vehicle engine is turned off. However, in vehicles with a keyless ignition, the driver can walk away with their key fob in their hand while the vehicle is left running.

And as I wrap up, I can say nothing more eloquent than a statement that was made in Automotive News. "All safety-related devices should become standard equipment on all vehicles. No choice. It is not an economic decision. It is a moral decision. When the choice becomes profit versus lives, the decision should be simple."

Thank you.

[The prepared statement of Ms. Fennell follows:]



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Testimony of

Janette E. Fennell
Founder and President
KidsAndCars.org

Hearing before the

House Committee on Energy and Commerce

Consumer Protection and Commerce Subcommittee

On

"Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families"

Thursday, May 23, 2019

Madam Chairwoman, I am Janette Fennell, the founder and president of KidsAndCars.org. We are an organization dedicated to improving the safety of children in and around motor vehicles. I wish to thank you and the members of the Consumer Protection and Commerce Subcommittee of the House Committee on Energy and Commerce for inviting me to appear before you today to testify on the important issue of child safety. I come before you today because there are a number of legislative measures which will save the lives of thousands of people, especially children, that Congress should take immediate and swift action on. KidsAndCars.org appreciates the opportunity to express our views on the Hot Cars Act and other available technologies that will save the lives of children.

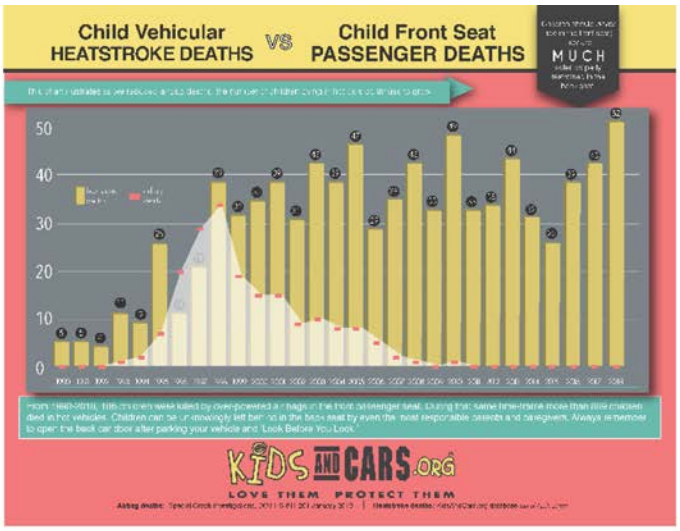
In 1996 my family was kidnapped at gunpoint and locked in the trunk of our vehicle. Thankfully, we all survived, and we used this traumatic experience to help guide the Federal Regulatory process to ensure that no one else had to end up in the trunk of a vehicle without a means of escape. Now, all vehicles 2002 or newer come with a glow-in-the-dark internal trunk release as standard equipment. Though we are proud of that accomplishment, the most important lesson we continue to learn every day is that these simple changes to vehicles save lives. In fact, not one person has died in a vehicle equipped with an internal trunk release mechanism. Not one.

Children, especially young children, are unaware of the dangers that they can encounter each day in and around motor vehicles, even vehicles that are not moving. While it is the responsibility of parents and other adults to protect our children, many parents are themselves unaware of the risks presented by the simple act of moving the family car in the driveway.

Hot Cars

Last year alone fifty-two (52) children died in hot cars. This was the worst year in history and a 37% increase based on an average of 38 deaths per year. Logic would tell us at a time when we have the highest levels of education and public awareness, the number of fatalities should decrease; but in fact, the number of deaths has increased. Once and for all we must reach an agreement that education alone will not and cannot put an end to these needless tragedies.

Starting in the mid-90s, parents were told to transport their children in the back seat of vehicles to protect them from airbags in the front seat. Laws were passed requiring this new behavior, forever changing how Americans transport their children.

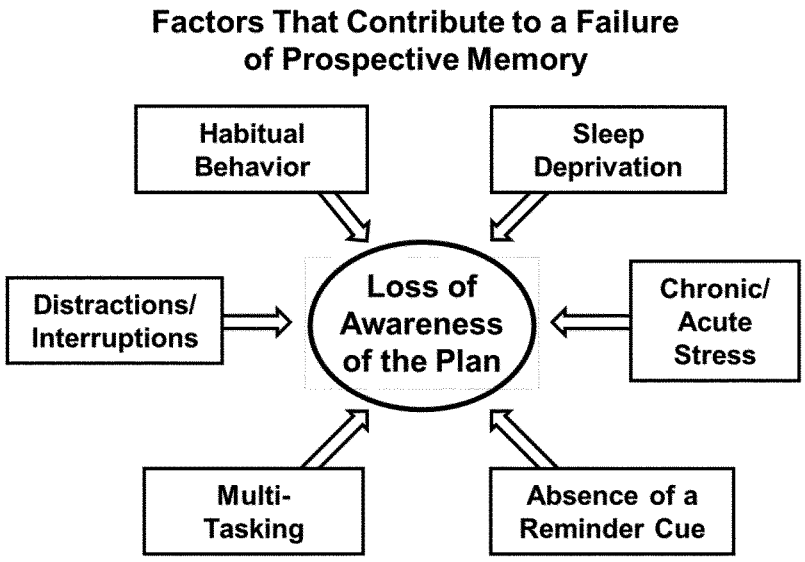


This was precisely when we ***should have*** added technology to our vehicles based on the fact that children were placed out-of-sight causing even the most attentive drivers to lose awareness of a child's presence. Adding to this risk of losing awareness are rear-facing car seats that look the same whether a baby is in them or not and the fact that many babies fall sound asleep during car rides.

Because we failed to recognize the unintended consequence of children traveling in the back seat, we are grieving the deaths of almost 900 children and counting...

A vehicle acts like a greenhouse, with 80% of the increase in temperature happening in the first 10 minutes. When a child becomes trapped in a hot vehicle, it takes only minutes for their core body temperature to rise to 105 degrees. Children have died in hot cars on days where the outside temperature was in the 50s.

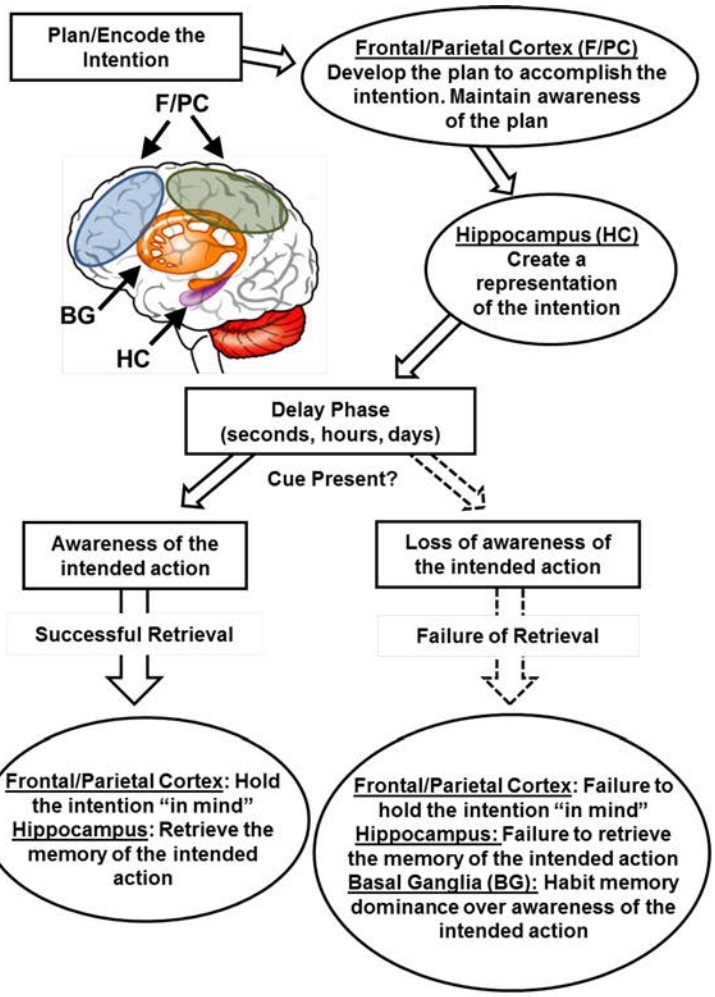
About 27% of hot car deaths involve a child that got into a vehicle on their own, but was unable to get out. Approximately 13% were knowingly left and the overwhelming majority, 56%, was unknowingly left by an otherwise responsible, loving parent or caregiver.



Prospective memory failure – the science behind hot car tragedies

The most difficult aspect of ending these tragedies is overcoming the misconception that this only happens to "bad parents." Nothing could be further from the truth. Memory failures are remarkably powerful and happen to everyone regardless of gender, class, personality, race or other traits.

Dr. David Diamond, professor of psychology and memory expert at the University of South Florida, has studied hot car tragedies for well over a decade. Simply put, his expert conclusion is that you cannot train your brain not to forget.



Consider this, an exhausted parent was up all night with a cranky baby. After months of sleep deprivation, both parents are running on fumes. Mom normally takes the baby to daycare, but is running late. Dad agrees to do daycare drop-off. He straps the baby into the rear-facing car seat and begins his commute to work. He is driving to work on autopilot. The baby is sound asleep. Dad loses awareness of the baby in the back seat. Both parents think the baby is at daycare. Fast forward to 5 pm. The mother arrives at daycare to pick up her child

and is told the baby was never dropped off that day. After frantically placing calls to her husband, he runs to the parking lot to find his baby, dead, in the back seat of his car.

When a parent fails to execute the plan, that memory is not destroyed. It's just suppressed.

When most people think about memory, they think about retrospective memory - the ability to recall things in the past. Our other type of memory is called prospective memory - the ability to plan and execute an action in the future, for example, the intention to drop the baby off at daycare.

Prospective memory is more prone to forgetfulness. If you've ever forgotten something on top of your car or failed to run an errand, you've experienced the fickleness of prospective memory. Unknowingly leaving a child in a vehicle is a prospective memory failure.

Most people spend a lot of time on routine behaviors, doing the same activities over and over create habit memories which allows you to perform those behaviors on "autopilot" without thinking about them. For example, driving to work every day.

Studies show that in autopilot, the brain is unable to account for a change in routine without a disruptive reminder. The reason is that on autopilot, you are functioning off of habit memories, not what is actually happening here and now. The catch here is that habit memory suppresses and completely overtakes the prospective memory — regardless of the importance of your plan. In other words, autopilot can take you to work, but won't allow for a change in routine to drop the baby off at daycare unless there is some type of audio, visual or other disruptive reminder to do so.

Autopilot is more common during times of stress and fatigue - both of which all parents of young children experience.

These cognitive failures have nothing to do with a parent's love for their child or ability to care for them. Nobody in this world has an infallible memory.

People are still being criminally charged for something they didn't even realize they were doing (or not doing). These incidents are not a crime, but a public health issue. Every incident should be thoroughly investigated, but the element of memory failure needs to be considered in the overall assessment of the case.

Prof. Diamond wrote that his theory is that children forgotten in cars results from the driver losing awareness of the presence of the child due to a complex memory dynamic – basically a parent fully intends to perform an action, such as attending to a child. However, something, perhaps an unrelated activity or incident, derails that intention.

But to make matters worse, when people assume something happens, the brain can turn it into a false memory. That's why many of these parents go about their day thinking they had dropped off their child. They discover their critical error when they go to their daycare to pick up their children after work.

We can't predict who is going to experience this type of memory failure because it can literally happen to anyone. But, we know the certain factors that will lead to it. When new information comes into those routines, such as a parent's daycare drop-off day suddenly changing or an emergency phone call from a boss on the way to work, that's when memory failures can occur.

Solutions

KidsAndCars.org and others have been educating parents on this topic for over 20 years. But, education is not enough. We cannot educate every single parent, grandparent, babysitter and caregiver in the country. And even if we could, most caregivers who are educated about hot car deaths still adamantly believe this could never happen to them.

We need to focus on technology because we've proven year after year that knowing this can happen to you and hearing it on the news and knowing it happens to great parents, is not changing anything.

It's essential, then, that we rethink how vehicles can protect us.

For over a decade, advocates have informed the National Highway Traffic Safety Administration about these deaths and the technology that could help prevent such tragic deaths but they are not working toward a solution.

The auto manufacturers realize humans need reminders. Our vehicles remind us to buckle our seat belts, turn off the headlights and take our keys with us. Some even remind you not to forget your cell phone.

Technological solutions are readily available that could detect the presence of a child inside a vehicle and prevent these horrific tragedies. There are a number of various systems that use motion, weight, vital sign, carbon dioxide and other sensor systems to sense the presence of a living being inside a vehicle. We already have similar sensing systems in vehicles to remind us to buckle up and those that turn the front seat air bags on or off.

Not only could these systems be effective in preventing children from being left in vehicles, they would also be able to provide alerts if a child gained access to a vehicle and became trapped. The same systems that could protect children could also protect animals or adults who were unable to get themselves out of a hot car.

Several auto manufacturers are already starting to include technology in some makes and models in an attempt to prevent hot car incidents. Yet, it is important to note that there is a wide variety in the potential effectiveness of the systems, and this will continue to exist without a minimum performance standard.

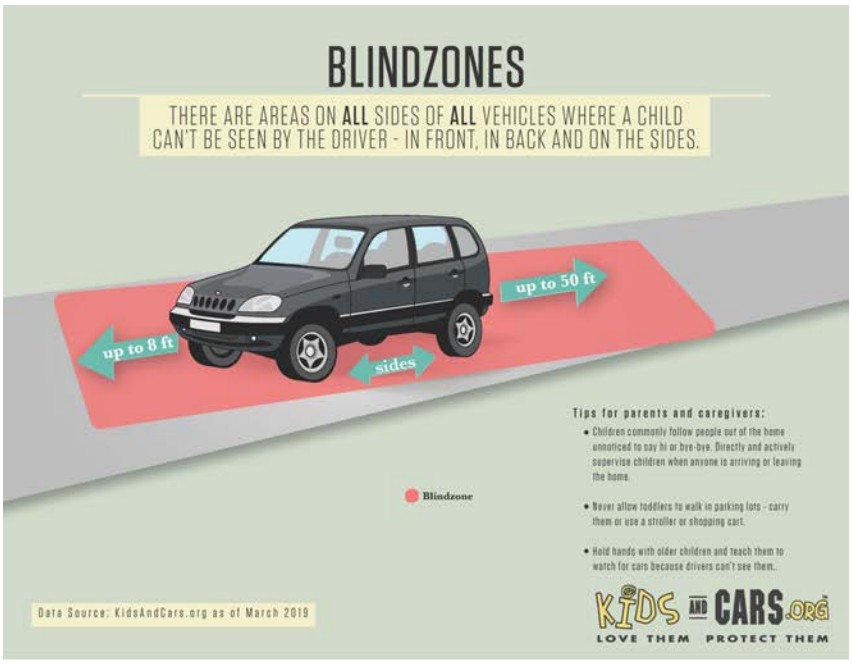
Making these life-saving technologies standard in all motor vehicles is necessary because if given the choice, most parents and caregivers would not purchase aftermarket technology that they do not think they need. Standardization of technologies is important to ensure that systems are effective and reliable.

Right now, somewhere in the United States, dozens of families are going about their daily lives unaware that by year's end their child will die in a hot car. They will suffer the same loss that has already consumed over 900 families in our country and this will continue to happen until Congress directs the agency to regulate in this area. We must act NOW.

Frontovers

Every year, thousands of children are hurt or killed because a driver moving forward very slowly didn't see them. These incidents for the most part take place in driveways or parking lots and are referred to as 'frontovers' (the opposite of a backover).

Frontovers can happen in any vehicle because all vehicles have a front blindzone, the area in front of a vehicle where you can't see from the driver's seat. The danger tends to increase with larger vehicles. In general, the blindzone in front of vehicles ranges from 6-8 feet and very few drivers are aware that this blindzone exists.



Statistics

The National Highway Traffic Safety Administration April 2018 report (DOT HS 812515) states that frontovers are responsible for 366 deaths and 15,000 injuries per year. We are now seeing more children injured and killed in frontovers than backovers, likely thanks in part to the rearview camera requirement which took effect in May of 2018.

Over 80% of frontovers involved a larger size vehicle (truck, van, SUV), which have become increasingly popular over the last decade. In fact some auto manufacturers no longer produce sedans.

The predominant age of child victims is 12-23 months. And, tragically, in over 70% of these incidents, a parent or close relative is behind the wheel.

Toddlers are extremely vulnerable because they have established independent mobility at around 1-2 years. Yet, they have not developed the cognitive ability to understand danger. Young children are impulsive, unpredictable and still have very poor judgment. Additionally, they do not recognize boundaries lines such as driveways, sidewalks or streets. This is a real combination for disaster.

Common circumstances

The "bye-bye Syndrome" happens when a child exits the home unnoticed and follows a parent or loved one into the driveway without their knowledge. This is one of the most common scenarios. Another very common scenario is when a child gets in front of a moving vehicle in a parking lot and the driver does not see them or does not have time to stop before hitting the child.

Solutions

It makes no sense that drivers are behind the wheel of a 3,000-pound lethal weapon, and cannot see what is directly in front of their vehicle. Technological solutions exist that could prevent frontover fatalities.

Automatic emergency braking (AEB) is now available in select vehicle makes and models. Also available on select vehicle makes and models is technology that uses a series of cameras and sensors to allow the driver to see all sides of the vehicle as birds-eye or 360° view technology.

Much like rear blindzones, front blindzones which are killing and injuring thousands every year is unacceptable, especially when the technology exists to remedy the problem. The bottom line is that it is impossible to avoid hitting something you literally cannot see.

How many children must pay with their lives before we use what is sitting right in front of us to save them?

KidsAndCars.org urges Congress to take action to pursue solutions to this solvable problem, including but not limited to minimum performance standards for AEB and other technologies.

Keyless Ignition

KidsAndCars.org has documented 31 fatalities and 71 injuries due to carbon monoxide (CO) involving keyless-ignition vehicles being inadvertently left running inside an attached garage since 2006 in the United States. This is a vehicle design flaw that can be easily remedied with an automatic ignition shut-off feature.

Vehicles with keyless ignitions can easily be unknowingly left running without the keys inside the vehicle. Many drivers are accustomed to using a traditional key to start and stop their vehicle. When a traditional key is removed, that means the vehicle engine is turned off. However, in vehicles with a keyless ignition, the driver can walk away with their keys in-hand while the vehicle is left running. When a vehicle is left running in an attached garage, colorless and odorless CO fumes seep into the home silently claiming their victims.

In 2011, the National Highway Traffic Safety Administration proposed a new rule and said costs to solve the problem were 'minimal.' Yet, eight years later nothing has been done.

This year, 91 percent of new cars will have a keyless ignition. People will continue to be severely injured or killed until action is taken. Solutions are cost efficient and readily available. We urge Congress to swiftly enact the PARK IT Act, S. 543.

Final Thoughts

We cannot wait any longer or continue to stand by while families needlessly suffer the death or serious injury of a loved one. Every day, I work with parents who have had to bury a child and who cannot understand why feasible and affordable safety systems are not standard equipment on every car sold in the United States. When we develop vaccines to protect children from deadly diseases, we make them available to everyone. Now is the time to make these motor vehicle safety vaccines available to every family. I can think of no more eloquent statement on the need for basic safety features in all vehicles than the one from Automotive News, the publication that covers the automotive industry, "All safety-related devices should become standard equipment on all vehicles. No choice. It's not an economic decision; it's a moral decision. When the choice becomes profit vs. lives, the decision should be simple."[1]

You have the power to help prevent the tragic injuries and fatalities that families are suffering every day from the death or serious injury of a loved one in a motor vehicle related tragedy. The time for action is now.

Thank you for the opportunity to testify before this Subcommittee today.

[1] Automotive News (Nov. 2004).

Ms. SCHAKOWSKY. Thank you so much.

I do want to announce that a vote has been called. We have time, I think, for Mr. Shapiro's 5 minutes, and I recognize you now, then we will break, and hopefully, all those here can come back. I will be here.

Mr. LEVINE. I will be here too.

Ms. SCHAKOWSKY. OK.

STATEMENT OF GARY SHAPIRO

Mr. SHAPIRO. Chair Schakowsky, Ranking Member McMorris Rodgers, and members of the subcommittee, thank you for giving me this opportunity to testify.

The Consumer Technology Association represents over 2,200 American technology companies, 80 percent of whom are small businesses and startups. We also own and produce CES. It is the largest and most influential tech event in the world. It is the largest business event in the world in Las Vegas every January.

We applaud you and this committee for addressing this important issue, vehicle safety, especially around the busy summer driving season. We know that many lifesaving technologies exist, and others, such as self-driving technology, are quickly advancing.

At CES 2018, Carol Staninger, a passionate advocate for the welfare of children and president of Ancer, exhibited her innovation for the first time. She was 82 years old. After seeing news stories about children and pets accidentally left in hot cars, Carol decided that she could make a difference through technology. She invented a presence detector and alarm device called Save Our Loved Ones to prevent children, seniors, and pets from being left alone in cars.

Many other entrepreneurs have introduced devices to solve this specific problem using connected car seats, apps, and Bluetooth. They all help remind parents to check the backseat.

Automakers have also worked to address this problem. Nissan has the rear-door alert system which monitors when the rear door is open and closed, before and after the vehicle is in motion. Several other tech-enabled safe driving products can increase safety. There are tools to help parents monitor teenage drivers, prevent distraction, and alert first responders in the case of an emergency.

You have heard the statistics today 30,000 to 40,000 people are dying every year on U.S. roads. That is more than 100 deaths per day, and 94 percent of serious crashes are due to human error. And on average, 11 children die in auto accidents every week-and we can prevent those tragedies.

Self-driving vehicles will lead to a huge reduction in roadway fatalities. They cannot become distracted, fatigued, or impaired, and they have a 360-degree viewing angle around the vehicle. Not only will self-driving vehicles save lives, they will empower seniors and people with disabilities. And full adoption of self-driving vehicles could cut insurance premiums by some 40 percent. We will see increased productivity as people waste less time in traffic. We will need fewer parking structures, opening new areas for green space.

And every day, there are advances in self-driving vehicles. Many companies, both here and abroad, are already testing self-driving vehicles, with countries like China vying for the lead.

The road to fully self-driving vehicles is a global competition, and we expect every leading nation to confront tough issues such as self-driving accidents, which will occur, although in minuscule numbers compared to our national annual carnage from human drivers.

Some argue that self-driving vehicles should not be deployed until systems are perfect. This is a dangerous road; as perfection may be a long, unreachable goal. Every year that we delay self-driving, we are costing tens of thousands of American lives. A RAND report found that deploying cars that are just 10 percent safer than the average human driver will save more lives than waiting until those cars are 70 percent or 90 percent better.

We will be able to save millions of lives in the future, but only if we move forward. The perfect must not be the enemy of the great. We don't have to wait for fully self-driving vehicles to start reducing the number of deaths. Driver-assist technology is already saving lives, avoiding accidents, and paving the way for completely self-driving innovations to come.

Advanced driver assistance systems can prevent nearly 30 percent of all crashes, saving 10,000 lives a year. There are technologies that help drowsy or inattentive drivers stay focused and provide specific responses, such as automatic braking and lane drift avoidance. And the aftermarket industry provides a valuable service in allowing consumers to add these great technologies to vehicles they already own. And Congress and the Department of Transportation have already recognized the value of these vehicles.

Last year the SELF DRIVE Act, which Chair Schakowsky and Congressman Latta both introduced, as you said, and which we supported, passed out of this committee and the House unanimously. It would have given a jump start towards adopting our vehicle safety laws to address self-driving and would have made a huge difference in creating more opportunities for testing and development. Sadly, politics got in the way of it crossing the finish line in the Senate, but I am encouraged by the continued efforts of the Department of Transportation and members on both sides of the aisle to move our country forward and advance this lifesaving technology.

I ask you to continue your leadership. There are challenges. Much work remains to be done, but we are heading towards zero fatalities.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Shapiro follows:]

House Committee on Energy and Commerce
Subcommittee on Consumer Protection and Commerce
Hearing on "Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families"
Testimony of Gary Shapiro, president and CEO, Consumer Technology Association
May 23, 2019

Chair Schakowsky, Ranking Member McMorris Rodgers, and members of the subcommittee, thank you for the opportunity to testify today. I am Gary Shapiro, president and CEO of the Consumer Technology Association (CTA)™.

The Consumer Technology Association is the trade association representing the $398 billion U.S. consumer technology industry, which supports more than 18 million U.S. jobs. CTA represents more than 2,200 American companies – 80%of which are small businesses and startups. We also own and produce CES – the largest and most influential tech event in the world, held each January in Las Vegas. I am fortunate to have a front row seat each day as our members develop and introduce innovative and life-changing products and services, create jobs, and grow the economy. At CTA, we work to advance public policy that fosters innovation, advances competitiveness, and promotes job and business creation. Today I will highlight the role advanced vehicle technologies and innovation can play in reducing roadway deaths.

Technology is changing our lives for the better, including innovations that can save thousands of lives every year in the U.S. More than 37,000 people died on U.S. roads in 2017 – that's more than 100 traffic deaths per day – and 94% of serious crashes are due to human error, according to the National Highway Traffic Safety Administration.[1]

This weekend alone, more than 37 million Americans will hit the road for holiday travel over Memorial Day weekend—up 3.5% from last year. This increase in travel – an extra five miles a day per driver, according to AAA – can also lead to a higher risk of accidents.[2]

Fortunately, technology continues to improve vehicle safety and provide options for consumers. Many technologies exist today, and others, like self-driving technology, are advancing rapidly. At CES® 2018, Carol Staninger, a passionate advocate for the welfare of children and president of Ancer, LLC, exhibited for the first time at age 82. After seeing news stories about children and dogs accidentally left in hot cars, Carol decided she could make a difference—through technology. Carol invented a presence detector and alarm device called Save Our Loved Ones (SOLO) to prevent children, pets or seniors being left alone in cars.[3] Many other entrepreneurs have introduced devices to solve this problem using connected car seats, apps, and Bluetooth devices. They all help remind parents to check the back seat.

[1] https://www.nhtsa.gov/press-releases/us-dot-announces-2017-roadway-fatalities-down
[2] https://newsroom.aaa.com/2019/05/memorial-day-travel-forecast-2019/
[3] https://saveourlovedones.com/about-us/

Automakers have also worked to address this problem. Nissan has the Rear Door Alert system, which monitors when the rear door is opened and closed before and after the vehicle is in motion. The system responds with a series of notifications if a rear door was used prior to a trip but was not re-opened after the trip.[4]

Several other tech-enabled safe-driving products on the road today can help increase safety—there are tools to help parents monitor teenage drivers, prevent distraction and alert first responders in the case of an emergency.

Vehicle technology has an enormous presence at CES and grows every year. At CES 2019, more than 170 vehicle technology exhibitors showcased the latest in self-driving technology—from Bosch's all-electric, self-driving pod to Qualcomm's 5G-enabled, self-driving chipset. These innovators underscored how self-driving technology will save lives, boost our economy and open a world of possibilities for passengers.

CTA represents innovators in the diverse vehicle transportation ecosystem who are developing an array of highly automated and self-driving technologies. Self-driving vehicles will lead to an enormous reduction in roadway fatalities. Self-driving vehicles cannot become distracted, fatigued or impaired and have a 360-degree view around the vehicle. By avoiding a myriad of traffic violations that cause so many accidents, self-driving technology has the power to save thousands of lives a year.

Not only will self-driving vehicles save lives, they'll also provide new opportunities for mobility to seniors and people with disabilities. A report from the Ruderman Family Foundation estimates that self-driving cars could open two million employment opportunities for people with disabilities.[5] But the impact it will have on the quality of life of people with disabilities cannot be captured by a number. Self-driving vehicles will enable seniors to maintain their independence for longer—no more waiting for a family member to drive to a doctor's appointment or run important errands.

The potential economic benefits of self-driving vehicles are enormous—up to $796 billion by 2050 according to a study by Securing Americas Future Energy.[6] Full adoption of self-driving vehicles in the U.S. could cut insurance premiums by 40%.[7] As they reduce vehicle injuries they will cut medical costs and productivity losses, now estimated to be $63 billion annually in the U.S. for driving related injuries.[8]

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[4] https://nissannews.com/en-US/nissan/usa/releases/rear-door-alert-technology-to-become-standard-on-all-four-door-nissan-nameplates

[5] https://rudermanfoundation.org/white_papers/self-driving-cars-the-impact-on-people-with-disabilities/

[6] https://avworkforce.secureenergy.org/wp-content/uploads/2018/06/Americas-Workforce-and-the-Self-Driving-Future_Realizing-Productivity-Gains-and-Spurring-Economic-Growth.pdf

[7] https://www.bloomberg.com/news/articles/2016-09-11/self-driving-cars-to-cut-u-s-insurance-premiums-40-aon-says

[8] https://www.cdc.gov/motorvehiclesafety/costs/index.html

We will see increases in productivity as people waste less time in traffic. We will need fewer parking structures, opening new areas for green space and development. Research suggests self-driving cars and related innovations have the potential to create millions of new jobs and generate billions of dollars' worth of economic activity in the years ahead, making it crucial to maintain U.S. leadership in this emerging industry.[9]

Development of self-driving vehicles is happening rapidly. Several companies are already testing self-driving vehicles today. Waymo is operating a ride hailing service with Level 4 minivans outside of Phoenix, Arizona, and the company recently announced a partnership with Lyft to offer the service to more local consumers through the Lyft app.[10] The vehicles currently have trained drivers behind the wheel, but providing this self-driving experience to consumers will go a long way in educating them on the capabilities and benefits of this technology.

Providence, Rhode Island, just launched a public pilot project with self-driving shuttles, one of many cities that have recognized early the value this technology can bring to its citizens.[11] The project highlights the opportunity to fill existing gaps in public transportation by linking commuters in underserved communities to Amtrak, commuter rail and other bus stops.

The road to fully self-driving vehicles is a global competition and we expect every leading nation to confront tough issues, as self-driving accidents will occur—although in minuscule numbers compared to our national annual carnage from human drivers. Some argue self-driving vehicles should not be deployed until systems are perfect. This is a dangerous road, as perfection may be an unreachable goal. Human drivers make many preventable errors while behind the wheel. Delaying self-driving vehicles by insisting upon an impossible-to-achieve standard for perfection will cost tens of thousands of lives each year. A Rand report found that deploying cars that are just 10% safer than the average human driver will save more lives than waiting until they are 75% or 90% better.[12] We will be able to save millions of lives in the future, but only if we are willing to continue moving forward. The perfect must not be the enemy of the great.

We don't have to wait for fully self-driving vehicles to start cutting down on roadway deaths. Driver-assist technology is already saving lives, avoiding accidents and paving the way for completely self-driving innovations still to come. Advanced Driver Assistance Systems (ADAS) can prevent nearly 30% of all crashes, saving 10,000 lives.[13] Lane-departure warning lowers rates of certain crashes by 11% and lowers the rates of injury from crashes by 21%.[14] We should promote technologies that help drowsy or inattentive drivers stay focused or provide specific responses such as automatic braking and lane-drift avoidance—all of which are now

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[9] https://avworkforce.secureenergy.org/wp-content/uploads/2018/06/Americas-Workforce-and-the-Self-Driving-Future_Realizing-Productivity-Gains-and-Spurring-Economic-Growth.pdf
[10] https://www.theverge.com/2019/5/7/18536003/waymo-lyft-self-driving-ride-hail-app-phoenix
[11] https://www.wpri.com/news/local-news/providence/self-driving-shuttles-set-to-hit-the-road-in-providence/2001011552
[12] https://www.rand.org/pubs/research_reports/RR2150.html
[13] https://www.mema.org/sites/default/files/MEMA%20BCG%20ADAS%20Report.pdf
[14] https://www.automotive-fleet.com/141839/lane-departure-warning-drops-crash-rates-study-shows

increasingly available in newer model vehicles. The aftermarket industry provides a valuable service in allowing consumers to add life-saving technologies to vehicles they already own. As the average age of vehicles on the road today tops 11 years, aftermarket solutions will continue to play a critical role in increasing the use of vehicle safety technologies.

Congress and the Department of Transportation have recognized the value of self-driving vehicles. Last year, the SELF DRIVE Act, which CTA supported, passed out of this committee and onto the House floor unanimously. This important legislation would have been a jump start toward adapting our vehicle safety laws to address self-driving technology and would have created more opportunities for testing and deployment. While politics got in the way of getting it across the finish line, I am encouraged by the continued efforts of the Department of Transportation and members on both sides of the aisle to move our country forward and advance this life-saving technology.

I ask the committee to continue this leadership. Challenges remain on the road to self-driving vehicles. Current vehicle safety standards and regulations will need to be updated. Consumers will need to be educated on the capabilities of the technology. Insurance and liability laws will need to adapt. While there is much work to be done, it is essential we keep working together to make the goal of zero road fatalities a reality.

Ms. SCHAKOWSKY. Thank you very much.

Mr. Levine, we will hear from you when we come back. And please, come right back after votes. There are three votes. Thank you.

We are in recess.

Ms. SCHAKOWSKY. The meeting will reconvene, if Mr. Harrison could go back to the table. Oh, there he is. OK. Thank you.

We ready, Mr. Levine?

Mr. LEVINE. Yes.

Ms. SCHAKOWSKY. You may proceed for 5 minutes. Thank you.

STATEMENT OF JASON LEVINE

Mr. LEVINE. Thank you.

Good, morning. Thank you, Chairman Pallone, Chairwoman Schakowsky, Ranking Member Walden, and Ranking Member Rodgers, for holding this important meeting.

My name is Jason Levine, and I am the executive director of the Center for Auto Safety. Since 1970, the Center has been the Nation's premier independent nonprofit advocacy organization focused on auto safety, quality, and fuel economy. On behalf of our members and all drivers, passengers, and pedestrians, we work every day to get unsafe cars and trucks off the road as quickly as possible.

There are far too many defective vehicles and unrepaired, recalled cars and trucks on our Nation's roads. Yet our mission has also always included pressing for vehicles of tomorrow to be as safe as possible. In our five decades, we have successfully advocated for car companies to install advanced safety technology from airbags to electronic stability control, from antilock brakes to backup cameras.

During that same time, we have urged the Department of Transportation to create performance standards to ensure these new technologies work as advertised, provide the appropriate level of safety, and make safety features standard equipment and not luxury add-ons.

Sadly, while Silicon Valley, Detroit, and Wall Street use a lot of happy talk about millions of robot cars coming to save the world in the next few months, back here on planet Earth, auto crash deaths and injuries continue to represent a public health crisis. They are the leading cause of death for 5- to 24-year-olds in the United States and are responsible for more than 38,000 funerals annually. That is the equivalent of almost every man, woman, and child in Park Ridge, Illinois, or Pullman, Washington.

Unfortunately, instead of writing minimum performance standards to require existing safety technology, the current administration seems to prefer deferring to whatever the auto industry finds most profitable at the moment. The crash avoidance technology features often highlighted in TV commercials, including automatic emergency braking, lane departure warnings, or adaptive headlights, all exist in an unregulated State with varying, unpredictable, and poorly measured performance. This lack of standards leads to consumer confusion and diminishes the increased safety protections that this technology promises.

Moreover, even existing congressional mandates through the Department of Transportation are regularly ignored. Rules for rear

seatbelt reminder systems, front and side impact requirements for child seats, rollover integrity for buses, and use of e-mail for recall notifications are each many, many years overdue.

Sadder still, the groundbreaking New Car Assessment Program, NCAP, better known as America's five-star crash rating system, has been allowed to become an afterthought when compared to our foreign competitors, all of whom base their programs on our NCAP. This is the equivalent of the United States no longer being a force in basketball on the world stage.

NHTSA's failure to update the program, combined with steps taken last year to freeze the current ratings in place, means that receiving a five-star crash rating will soon be the equivalent of receiving a Little League participation trophy.

The ability of safe—of the—sorry. The ability to improve the safety of the 17 million new vehicles sold to the United States every year remains in our collective reach. NHTSA must set mandatory performance standards in order to create a level playing field and ensure the safety technology meets minimum levels of functionality. Otherwise, consumer safety is dependent either upon economic status or seeking civil justice after a tragedy; neither of which is a long-term solution.

Yet as part of the deregulatory fever which has gripped NHTSA, instead of writing safety standards, the agency is withdrawing rulemakings with known safety benefits, including updating event data recorders and requiring electronic throttle control to mitigate instances of sudden acceleration.

Auto safety is not now and should never be a partisan issue. The safety of our families and friends, our neighbors on the road, our dogs, pedestrians on our streets, the bicyclists in our bike lanes, can be improved today through technology and congressional leadership. We greatly appreciate this committee shining your spotlight on an issue that impacts every single American. On behalf of our members across the country, the Center for Auto Safety stands ready to help you in these efforts.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Levine follows:]

The Center for Auto Safety
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Testimony of Jason Levine, Executive Director, Center for Auto Safety before the

House Committee on Energy and Commerce
Consumer Protection and Commerce Subcommittee

May 23, 2019

Rayburn House Office Building, John D. Dingell Room (Room 2123)

Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families

Good morning. Thank you Chairman Pallone, Chairwoman Schakowsky, Ranking Member Walden, and Ranking Member McMorris Rodgers for holding this important hearing today. My name is Jason Levine and I am the Executive Director of the Center for Auto Safety. Since 1970, the Center has been the nation's premier independent non-profit advocacy organization focused on auto safety, quality, and fuel economy. On behalf of our members, and all drivers, passengers, and pedestrians, we work every day to get unsafe cars and trucks off the road as quickly as possible. There are far too many defective vehicles and unrepaired recalled cars and trucks on our nation's roads.

Yet, our mission has also always included pressing for the vehicles of tomorrow to be as safe as possible. In our five-decades we have successfully advocated for car companies to install advanced safety technology: from airbags to electronic stability control, from anti-lock brakes to back-up cameras. During that same time, we have urged the Department of Transportation, and the National Highway Traffic Safety Administration, to write performance standards to be sure these new technologies work as advertised, provide the appropriate level of safety, and make safety features standard equipment and not luxury add-ons.

Sadly, while Silicon Valley, Detroit, and Wall Street use a lot of happy talk about millions of robot cars coming to save the world in the next few months, back here on planet Earth auto crash deaths and injuries continue to represent a public health crisis. According to the Centers for Disease Control they are the leading cause of death for 5-24 year olds in the United States and are responsible for more than 38,000 funerals annually. That is the equivalent of almost every man, woman, and child in Marlboro Township, NJ, or Park Ridge, Illinois, or Redmond, Oregon, or Pullman, Washington.

Unfortunately, instead of writing minimum performance standards to require existing safety technology the current administration seems to prefer deferring to whatever the auto industry finds most profitable. The crash avoidance technology features, often highlighted in TV commercials, including automatic emergency braking, lane departure warnings, or adaptive headlights, all exist in an unregulated state with varying,

unpredictable, and poorly measured performance. This lack of standards leads to consumer confusion and diminishes the increased safety protections that this technology promises.

Moreover, even existing Congressional mandates to the Department of Transportation are regularly ignored. Rules for rear seat belt reminder systems, front and side impact-requirements for child seats, rollover integrity for buses, and the use of email for recall notifications, are each many years overdue.

Sadder still, the groundbreaking, paradigm shifting, non-regulatory New Car Assessment Program (NCAP) – better known as America's 5-Star Crash Rating System has been allowed to become an afterthought when compared our foreign competitors. All of these programs were originally based on NCAP. This is the equivalent of the United States not even being a top-3 country at basketball on the world stage.

NHTSA's failure to update the ratings, combined with steps taken last year to freeze the current ratings in place, means that receiving a 5-star crash rating will soon be the equivalent of receiving a little league participation trophy.

The ability to improve the safety of the 17 million new vehicles sold in the U.S. every year remains in our collective reach. NHTSA must set mandatory performance standards in order to create a level playing field and ensure that safety technology meets minimum levels of functionality. Otherwise, consumers are dependent either upon their economic status for safety or relying on seeking civil justice after a tragedy, neither of which is a long-term solution.

For example, the Center recently petitioned NHTSA to investigate Nissan over a defective automatic emergency braking system. The problem is that it will brake even when there is no obstacle - thus creating a hazard for the vehicles behind these Nissans. This creates many issues: Because there is no standard, it takes longer to determine whether this feature is defective. In the meantime, people are turning it off because they don't know if it will work, thus undermining consumer confidence in the technology. Testing to a minimum AEB performance standard potentially would have identified and avoided the problem ahead of time.

Yet, as part of the deregulatory fever which has gripped NHTSA, instead of writing safety standards the agency is withdrawing rulemakings with known safety benefits including updating event data recorders and requiring electronic throttle control to mitigate instances of sudden acceleration.

Auto Safety is not now, and should never be, a partisan issue. The safety of our families and friends, our neighbors on the road, the pedestrians on our streets, the bicyclists in our bike lanes can be improved today, through technology and Congressional leadership. We greatly appreciate this Committee shining your spotlight on an issue that impacts every single American. On behalf of our members, the Center for Auto Safety stands ready to help you in these efforts.

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Addressing Critical Safety Issues and Saving Lives

No single mistake should ever cost someone their life - especially when existing technology, available at reasonable price, can mitigate or eliminate potential tragedy and does not interfere with the utility of the vehicle. Below are areas where technology, in combination with required minimum performance standards, could address critical safety issues and save lives.

No Child Should Die Because Of A Single Mistake by A Parent or Guardian

As so clearly illustrated by the Harrison's experience, movingly described by Miles Harrison in his testimony at today's hearing, tragedies can be one mistake away for any person, particularly our most vulnerable populations. Technology will never address all of our issues, but it can help us to reduce the chance that we make them. Fifty-two children died of heatstroke in the back seat of cars in 2018 - more than in any previously recorded year.[1] That's one every week. Early indications are that 2019 is on pace to surpass that figure.

In many cases, a simple reminder would have prevented such a death. A reminder akin to seat belt alerts in the front seat, a technology that no one questions in terms of utility. In fact, if it so chose, NHTSA could initiate rulemaking tomorrow that would require all new motor vehicles have a child safety alert system to ensure via flashing symbols and warning sounds that the driver is aware of a backseat passenger. A very few manufacturers have started to install this sort of technology. No child's life should be dependent upon the luck of being in the back of one of those chosen vehicles.

No One Should Die Because Their Car Has A Keyless Ignition

Once thought impossible, the majority of new vehicles entering the U.S. market can be powered on and off without a key. Yet, this new technology does not come without drawbacks, as it represents such a dramatic change from the way people have traditionally interacted with their vehicles and has led to several dozen deaths. As recently as last week there were two more reported fatalities which appear to have resulted from a vehicle equipped with keyless ignition left running unintentionally. Retired MIT professor James Livingston and his wife, Sherry Penney, the first woman to lead the Massachusetts University system, were overcome in their Sarasota, Florida home by carbon monoxide exhaust that followed them into their house.

What is most troubling is there a relatively simple solution that would prevent these deaths: require the vehicles to shut off after a given period of time if the vehicle is not in use. Tragically, NHTSA began rulemaking on just such a solution 8 years ago, (76 FR 77183, Dec. 12, 2011) but has yet to finalize the standard. This delay has cost lives.

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[1] *See* www.Kidaandcars.org

It is true that some auto manufacturers, including General Motors and Ford, have taken proactive steps to respond to these hazards, implementing additional safety features such as auto shut-off systems to prevent CO poisoning. Yet, absent a requirement, most automakers have not addressed the various risks posed by keyless ignition technology, from carbon monoxide poisoning to vehicle rollaway. The next death is only a mistake away.

No One Should Die Because Their Headlights Aren't Good Enough

In September 2018, the National Transportation Safety Board (NTSB) recommended that NHTSA revise FMVSS 108 to "include performance-based standards for vehicle headlight systems correctly aimed on the road and tested on-vehicle to account for headlight height and lighting performance."[2] The headlights in question are sometimes referred to as adaptive or smart. Unlike the current high/lo beam, the new headlights can adjust intensity to alert drivers to pedestrians and other vehicles sooner, allowing greater time to react during low-light hours.

When working as designed, adaptive headlights can improve pedestrian safety and reduce glare for oncoming traffic. Once again, Europe, Japan, and elsewhere have moved ahead of the U.S. in the use of this safety technology, but in the instance of adaptive headlights it is because a regulatory change is needed.

In a promising move, NHTSA recently responded to a 2013 Toyota petition to amend the regulation to allow for use of such technology. In theory, a proposed rulemaking on this issue will be put forth in the near future. It is unfortunate it took NTSB having to make this its number one recommendation to NHTSA on pedestrian safety to move this issue along. Six years after Toyota's original request, one can hope that a minimum performance standard will emerge that validates the utility of the headlights and requires their use instead of simply allowing adaptive headlights as a luxury add-on.

The Life Saving Value of Staying in your Lane

Lane-departure warning (LDW) is a system that gives a driver feedback—either visual, auditory, or tactile (such as vibrations from the steering wheel or driver's seat)—when their car crosses lane markings. Lane-keeping assist (LKA) goes further and provides either braking or steering input to direct the vehicle back into its lane. The Insurance Institute for Highway Safety (IIHS) estimates that up to 8,000 lives a year could be saved from preventing lane-departure crashes. Yet, as of model year 2017, LDW was standard on only 6 percent of new U.S passenger vehicles.

These features (LDW and LKA) are designed to reduce the occurrence of crashes where vehicles drift off the road or hit a car in an adjacent lane. When used appropriately, the technology can help drivers avoid sideswiping another vehicle moving

[2] https://www.ntsb.gov/news/events/Documents/2018-DCA15SS005-BMG-abstract.pdf

in the same direction, hitting a vehicle in oncoming traffic, and protects bicyclists and other vulnerable road users. It is important to note that the systems have limitations—lane monitoring may not work as well at all speeds, weather conditions, or road conditions.

But those limitations highlight the value of standards. A minimum performance standard could provide a baseline for developers to implement, improve, and install this technology. However, NHTSA has been studying mandating lane-departure warning for a decade now, with no definitive conclusions.

It's 2019 and Your New Car's Black Box Thinks it's 2006

In 2006, NHTSA published a final rule regarding Event Data Recorders (EDRs or "black boxes").[1] The rule set out data element requirements for vehicles where the manufacturer chose to install an EDR but did not mandate EDRs in vehicles. Six years later, in 2012, NHTSA published a Notice of Proposed Rulemaking, proposing that EDRs be required in all vehicles, yet did not update any of the data elements collected by the EDRs.[2] Seven years later, in February 2019, NHTSA's proposal to mandate EDR installation was withdrawn based on wide voluntary adoption of EDRs. However, the data elements required to be collected have not been updated since 2006, long before the implementation of many of today's advanced vehicle technology.

This would include AEB, lane departure, and adaptive cruise control, amongst others. Moreover, the EDRs do not capture whether the vehicle is using any of the commercially available 'semi-autonomous modes' more accurately known as Advanced Driver Assist Systems. Therefore, investigators do not have the necessary tools to accurately reconstruct crashes based on currently available EDR data and must rely on the least objective party after a crash – the manufacturer.

In order to assist crash investigators, such as the government's own experts at NTSB, the Center for Auto Safety believes an immediate expansion of EDR data elements to capture events where driver assistance technologies played a role in the crash is necessary. Further, NHTSA would serve the motoring public, and the automotive and technology industries, well by expanding the role of EDRs to capture a broad range of autonomous vehicle operation information in order to inform future research and rulemaking. It is often said that new vehicles are computers on wheels. Yet, these computers still crash, and determining what happened, and how to avoid it happening again, will require not only additions to traditional data elements, but may well necessitate the incorporation of video, LIDAR, RADAR and other sensors as well. Long-term consumer acceptance is dependent upon confidence in why crashes are happening in driverless vehicles. The best way to know is to have useful data from EDRs when vehicles are in person-driving mode, autonomous-driving mode, and everything in between.

[1] 49 CFR 563, at 71 Fed. Reg. 50998 (Aug. 28, 2006).
[2] 77 Fed. Reg. 74144

The U.S. Version of the New Car Assessment Program (NCAP) Currently Rates Zero Stars

The New Car Assessment Program (NCAP) is celebrating its 40th anniversary this year. Originated in 1979 by NHTSA, under then Administrator Joan Claybrook, the program was designed to make government crash test results widely available to the public in the interest of better understanding the safety of the make and model of each new vehicle. The program was amongst the most successful consumer information programs in the history of the U.S. government and helped demonstrate to the auto industry that safety does indeed sell. Years later, the 5-star system that is widely synonymous with NCAP was introduced, providing a simple metric for consumers to understand the relative safety of new vehicles. Copycat versions of NCAP sprang up all over the world, saving countless thousands of lives. Sadly, the current custodians of this ground-breaking program have let it become nothing more than window dressing for advertising purposes.

The last update to the U.S. NCAP standards was in 2010. In 2015, NHTSA announced it would provide a major update of the ratings. In 2018, NHTSA sought further comments. The 2010 version of the ratings remain in place, which means with every new model year, NHTSA misses an opportunity to incentivize vehicle manufacturers to improve occupant protection without even requiring new regulations. The fact is that recent years' NCAP star ratings suggest that the program is failing to sufficiently distinguish between models, resulting in overall frontal and side impact ratings of 4- or 5-stars for over 98% of all vehicles tested.[3] This stagnation in ratings provide incredibly little comparative information for consumers in purchasing vehicles, and no incentive for manufacturers to improve crashworthiness and safety technology.

Yet, the recent request for comments suggests that the agency is considering allowing automakers to self-certify certain tests. This idea threatens one of the pillars of the NCAP program - that it is an independent assessor of safety and occupant protection technology. NCAP tests have long been conducted by the federal government independent of automaker influence. This independence is why the program still relies on blind car purchases to prevent manufacturers from gaming the system. NCAP test results are fully available to the public for review, while self-certifications are not. Further, such self-certifications would undoubtedly be deemed protected by the agency's confidential business information regulations. NCAP must continue to function independently of the whims of manufacturers whose main concerns are maintaining perfect ratings, and share prices, rather than investing in safety.

It should be a mark of shame on the Department of Transportation, not only that the ratings have not been updated for almost ten years, but that their counterparts around the world are lapping the United States when it comes to safety ratings. Euro NCAP uses far more tests to evaluate rear seat occupant protection in frontal crashes, far side impact protection, rear impact whiplash protections, child seat installation and occupant

[3] See NCAP Combined Crashworthiness Rating Calculator, September 19, 2018, at: https://www.regulations.gov/document?D=NHTSA-2017-0037-0037.

protection, and pedestrian impact protection. Further, Euro NCAP evaluates driver assistance systems such as forward collision warning, automatic emergency braking, seatbelt reminders, speed assistance systems, and lane support systems such as lane departure warning, lane keeping assist, and emergency lane keeping systems, none of which are covered by U.S. NCAP. The Japan NCAP and Australian NCAP are also providing more helpful information to their consumers than the U.S.

The time for NHTSA to update NCAP is now. The Center for Auto Safety has previously submitted to NHTSA a variety of areas that should be part of that update. They include:

Pedestrian Safety NCAP

According to the CDC, "in 2015, 5,376 pedestrians were killed in traffic crashes in the United States. This averages to one crash-related pedestrian death every 1.6 hours. Additionally, almost 129,000 pedestrians were treated in emergency departments for non-fatal crash-related injuries in 2015. Pedestrians are 1.5 times more likely than passenger vehicle occupants to be killed in a car crash on each trip."[4]

In other words, in 2015 pedestrian deaths accounted for more than 16% of people killed[5] in police-reported motor vehicle traffic crashes. The figures only increased, as almost 6,000 pedestrians were killed in 2016 and an estimated 6,200 were killed last year.[6] The death/injury rate for a pedestrian involved in accident is 5.7 times the rate for a motor vehicle occupant. Clearly, no assessment of vehicular safety should be considered complete without an assessment of vehicular design impact on pedestrian safety, yet NCAP has none. There is an urgent need to reduce the incidence of pedestrian involved crashes and reduce the appalling death rate and NCAP can be part of the solution. Euro NCAP has recognized this need and now includes in its vehicle ratings both collision avoidance features and automobile design features that protect pedestrians and minimize death and injury in an accident,[7] incentivizing car designers to incorporate pedestrian safety design features into their offerings.

Updates to NCAP's ratings should also include assessment of design features and component capabilities that detect and protect pedestrians. This need is particularly urgent with the emergence of automated driver assistance and automated driving systems, which have unfortunately already caused the death of a pedestrian.[8] The potential use of advanced sensors such as RADAR, LIDAR, infrared detectors, and advanced lighting systems to enhance pedestrian safety has tremendous potential for improving pedestrian collision avoidance.

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[4] Pedestrian Safety, CDC, https://www.cdc.gov/motorvehiclesafety/pedestrian_safety/index.html.
[5] Traffic Safety Facts, NHTSA, 2015, https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812375.pdf.
[6] Governor's Highway Safety Association: New Projection: 2018 Pedestrian Fatalities Highest Since 1990, https://www.ghsa.org/resources/news-releases/pedestrians19
[7] Vulnerable Road User (VRU) Protection, https://www.euroncap.com/en/vehicle-safety/the-ratings-explained/vulnerable-road-user-vru-protection/.
[8] How a Self-Driving Uber Killed a Pedestrian in Arizona, https://www.nytimes.com/interactive/2018/03/20/us/self-driving-uber-pedestrian-killed.html.

In 2018, the NTSB issued eight safety recommendations to NHTSA addressing the need include performance-based standards for vehicle headlight systems, development of performance test criteria for vehicle designs that reduce pedestrian injuries, and incorporation of pedestrian safety systems including pedestrian collision avoidance systems and other more passive safety systems into NCAP.[9] The Center supports the NTSB recommendations, and urges NHTSA to incorporate a focus on pedestrian safety into the NCAP rating system, incentivizing companies offering cars for sale in the US market to address the horrendous pedestrian death rate from crashes and protect the American public.

Older Americans (Silver NCAP)

Numerous studies have shown that older drivers and passengers are more susceptible to chest injuries in crashes than younger adult populations,[10] yet NCAP frontal impact tests treat all passengers as one of two body types, a 50th percentile male or a 5th percentile female.[11] Americans over 65, functioning as both drivers and passengers, are a significant and growing proportion of the population. Technologies that improve the survivability of this population also improve the survival of women and juveniles. Manufacturers are contemplating and including technologies in vehicles that enhance elderly survival such as, e.g., adaptive air bags,[12] limited force restraint systems that anticipate crash severity and automatically adjust belt restraint tension to minimize injury,[13] and inflatable seat belts.[14]

Yet, without NCAP recognition of these lifesaving technologies, manufacturers have less incentive to accelerate their adoption. NCAP should include evaluation and rating of safety technologies adapted for the survival of the elderly and other vulnerable populations so that manufacturers receive credit for their investments in their life saving innovations and every demographic enjoys the benefits of safer cars. We suggest using a silver star to indicate a given vehicle possess such technology.

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[9] NTSB Public Meeting of September 25, 2018, Highway Special Investigation Report Pedestrian Safety NTSB/SIR-18/03, https://www.ntsb.gov/news/events/Documents/2018-DCA15SS005-BMG-abstract.pdf.
[10] Op cit., *Age Appropriate Restraints For The Right Front Passenger*, Augenstein, Perdeck , Digges, Bahouth; *Investigation Of The Performance Of Safety Systems For Protection Of The Elderly*, J. Augenstein1, K Digges, G. Bahouth, D. Dalmotas, E. Perdeck, J. Stratton, Annu. Proc. Assoc. Adv. Automot. Med. 2005;49:361-9
[11] 49 CFR Part 572, Subpart B.
[12] http://online.wsj.com/public/resources/documents/Eyesontheroad02132005.pdf.
[13] Advanced Restraint Systems (ARS) Final Report, DOT HS 811 794A, https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/811794a.pdf.
[14] *The Ford inflatable seat belt: How it affects car seats and children*, Consumer Reports News: March 01, 2011. https://www.consumerreports.org/cro/news/2011/03/the-ford-inflatable-seat-belt-how-it-affects-car-seats-and-children/index.htm.

Crash Avoidance Technology

When NCAP was initiated there were no crash avoidance technologies, as they are currently understood, available to manufacturers or consumers. Now there are many crash avoidance features including computer-controlled disc brakes, antilock braking systems, lane change warning, blind spot detection and warning, rear cross-traffic alert, pre-collision braking, rear vision cameras, reverse automatic braking, V2X, and electronic stability control. To accelerate incorporation of these life-saving technologies into cars, to stimulate competition and incentivize continuous safety improvement, NCAP could, and should, evaluate the efficacy of these important systems and provide buyers with assessments of crash avoidance features, both in absolute terms and relative to other vehicles.

Anthropometric Test Device upgrades

NHTSA should standardize test procedures and the biomedical design of advanced Anthropometric Test Devices (ATDs) and approve their use in NCAP, in order to enhance the ability of researchers and analysts to interpret test results from one test condition into equivalent results at other conditions. Extensive research has shown much greater susceptibility to chest injuries in lower speed front crashes by older Americans and 5% young female passengers than the standard 50% male.[15] Data collected from appropriately standardized ATDs collected at higher speeds as per current standards would provide a means of interpreting those higher speed crash results for the more susceptible elderly and female cohorts without the need for additional tests.

Analysis of test data has also shown sensitivity to placement of restraints, especially shoulder belts. ATD upgrades should also include standardization of seat belt placement to complement ATD sensor location(s), to assure collection of the most meaningful data for both acceleration and chest compression.

Rear Seat Passengers

Without changes to NCAP ratings, manufacturers have no incentive to improve rear seat safety. It would be tragic if overall passenger safety is degraded by design changes reflected in high NCAP ratings based solely on front seat test results. As front seat safety has improved in response to NCAP tests and resultant car design evolution, the once accurate appraisal of rear seat passengers as being safer is no longer necessarily accurate. It is imperative that NCAP acknowledge the significant and increasing susceptibility of rear seat passengers to crash injury risk, particularly since this risk appears to be related to design changes that have enhanced front seat safety.

[15] *Age Appropriate Restraints For The Right Front Passenger*, Augenstein, Perdeck, Digges, Bahouth. 51st Annual Proceedings Association For The Advancement Of Automotive Medicine, October 15 – October 17, 2007.

NCAP crash tests should include rear seat occupant ATDs of 5% female and 50% male, as well as infants and other ATDs as they become available, to validate vehicle safety, with the purpose of making the rear seat as safe as the front.

Far-Side Impact

Far-side impact is a significant source of injury and death to American motorists.[16] Related injuries and deaths are usually associated with the occupant sliding out from under the shoulder belt, causing a wide range of injuries, with head injuries being predominant. Countermeasures that would minimize or eliminate such injuries have been identified.[17] Accelerating adoption of these countermeasures, especially inflatable curtains, would save many lives in far-side impacts and also reduce injuries in rollovers. One of the purposes of NCAP is to motivate investment in life saving technologies, such as inflatable curtains.

Extending NCAP assessments to include far-side impacts would likely motivate additional investment in these technologies. Some manufacturers are already including inflatable curtains in their automobiles, and they should receive NCAP credit for their investment and the added safety this addition provides to consumers. The public should also be made aware, through NCAP ratings, of the differential in safety between vehicles that include this life-saving technology, and those that have chosen not to provide this safety feature.

Post-Crash NCAP

NCAP should be expanded to include important post-crash characteristics of automobiles which effect occupant survivability, including ease of vehicle egress, flammable material concerns, and the performance of automatic crash notification (ACN) systems. NCAP ratings can be a powerful motivator for manufacturers to promote post-crash safety.

The ability of occupants to open doors and safely egress from the post-crash vehicle should be evaluated and included in NCAP ratings. The ability to safely egress a damaged vehicle is fundamental to post-crash survival, and consumers should know if the vehicle they are considering is a death trap.

Second, NCAP should assess the propensity of vehicles to burn after a crash. There are many flammable components in modern cars, including fuel, engine compartment fluids (e.g., power steering fluid and transmission fluids) that can be released in a crash, and numerous ignition sources including environmental items, dynamic metal objects, catalytic convertors, and electrical sparks that can easily ignite these fluids, starting a

[16] *Characteristics Of The Injury Environment In Far-Side Crashes*, K. Digges1, H Gabler2, P. Mohan1, B. Alonso, Annu Proc Assoc Adv Automot Med. 2005; 49: 185–197.
[17] *Injury Reduction Opportunities of Far side Impact Countermeasures,* Ola Bostrom1, Hampton C. Gabler2 Kennerly Digges3, Brian Fildes4, Cecilia Sunnevang, Ann Adv Automot Med. 2008; 52: 289–300.

conflagration that can end in the death of injured or trapped vehicle occupants. Electric car batteries are also known to spontaneously ignite after collisions, sometimes quickly and sometimes hours or days after the crash.

All of these potential fires are dangerous to the vehicle's occupants, surrounded as they are by flammable fluids, plastics, and unexpended gas generator propellants, and to first responders. NCAP should provide test data to potential consumers ranking the post-crash fire hazard assessments of new cars as part of the crash test results.

Finally, NCAP should evaluate the performance of ACN systems. NHTSA has yet to set performance specifications for ACN technology, nor is it required in vehicles. As a result, installation and performance of ACN varies widely across manufacturers. The ability to provide first responders and trauma centers with crash data immediately after an event occurs can be critical to proper response and treatment of crash victims.

How is Selling a Recalled Toy Car is Illegal but Selling a Recalled Used Car is Acceptable?

Finally, the main focus of the Center's testimony, and today's hearing, is on how to make the cars that will be rolling off assembly lines and into America's driveways in the next few years safer. Minimum performance standards requiring the use of existing advanced technology can help drivers avoid crashes and improve the likelihood of vehicle occupants surviving crashes. Yet, one step that could be taken which does not require regulation, but would require Congressional action, is to ban the sale of used cars with unrepaired recalls.

Currently there are explicit federal prohibitions on the sale of new cars with unrepaired recalls, the sale of previously rented cars with unrepaired recalls, and the rental of cars with unrepaired recalls, but no such federal prohibition exists for the sale of used cars. Amazingly, it is legal to resell a used vehicle with an unrepaired ignition switch, but it is illegal to sell a recalled French fry cutter, a recalled coffee press, or even a recalled toy car. The same is true for food, medicine, and cosmetics. But this summer, as temperature and humidity rise across the country, used cars with unrepaired Takata airbag inflators - which are most likely to degrade and ultimately explode in such conditions - will be sold, along with thousands of other unrepaired and unsafe vehicles. This is one danger that can be addressed sooner rather than later.

Ms. SCHAKOWSKY. And we will now begin the portion where members can ask questions. Each of us has 5 minutes, and I will—I will begin.

Ms. Fennell, how quickly can a car reach dangerous temperatures on a warm day?

Ms. FENNELL. I think it happens much more quickly than people understand. In fact, 80 percent of the heat that is going to accumulate in your car happen in the first 10 minutes. So by the time the child or anyone is in a car for as much as an hour, the temperature has spiked as much as 40 to 50 degrees. And you can imagine, on an 80-degree day, how warm that vehicle gets.

Ms. SCHAKOWSKY. I wanted to ask you about the technology. As you know, right now, the HOT CARS Act does not specify any particular technology. Are some better than others, and what are the things that, in your view, ought to be basic essentials in any technology?

Ms. FENNELL. Well, some of the technology out there is a very good start, but what really needs—what we really need is something that detects the presence of a child, an animal, or any occupants that cannot get out of the car on their own. So what is needed is something that detects the presence of a living being, and that is available. We demonstrated it yesterday. So that really is what is needed to end this issue.

Ms. SCHAKOWSKY. Thank you.

Mr. Levine, I was told—maybe I—I wasn't able to see the technologies. So I was told that something, one of them connected to the fob. I don't have a key to my car, but I have got a fob, which I never touch. It is in my purse. It opens the door. I can start the car. I don't ever touch it.

Have you heard of that? I mean, I want to say that that would not be sufficient in any way if it only dealt with that kind of a notification. I am not so sure either about text messages or whatever. I am not looking at my phone all the time. And so when you think about the technologies, I am thinking about hot cars again, do you have any suggestions that we ought to take in mind?

Mr. LEVINE. Well, thank you for the question. I think that the first issue we have identified is we need to use technology to remind people that they make mistakes. We all make mistakes. No mistake should cause a tragedy.

Manufacturers are experimenting with different technologies, and I believe your fob vibrating is one of them. Text messaging is another one. The more important question is what is going to work, not just what is feasible. And so that is going to require some consumer testing. That is going to require some research study. But, obviously, the more audible the warning, the more visible, the more—the more urgent that warning is, the more likely we are going to save lives.

So, you know, it is good to see experiments. Maybe it is all of those things combined. Maybe you are opting into some and some are mandatory. But you are right; if it is something that is not going to actually help you, then there is no point in having it, other than putting out an advertisement.

Ms. SCHAKOWSKY. OK. I just want to go on record as saying the two things that you said, a text message or just going to the fob, I think is absolutely not sufficient. Wouldn't be for me.

I wanted to—well, I think you have said, Ms. Fennell, how this legislation would help protect children in vehicle accidents, but what is your—what is your priority in this legislation? What do you want to see happen? And are the technologies there now that are sufficient to make children safe?

Ms. FENNELL. Well, thank you for that question. And I want to piggyback a little bit on Mr. Levine's comment, because the systems that we are seeing today have redundancy. So if a child is locked in the car, it is really up to the OEM. Do they want them to be a loud horn? Do they want it to be a text message? They can choose how that person is alerted. And there are, you know, many different layers, if The OEM picks I want those two or those three. So, obviously, the more the better.

But there is software available now. It is called door sequencing. So if you open your back door within 10 minutes of leaving for your trip, when you arrive, you will get a little flash on your dashboard that says check the rear seat, and that—we welcome that, but it doesn't say if there is a child in the car or not. And, for instance, if on your way to work, you know, you have opened that back door, you go and you stop for gas and you don't open that back door, when you arrive at work, you will not get that notification.

So what we really want to make sure is a system that can detect the presence of a living being and that there is redundancy built into the system.

Ms. SCHAKOWSKY. OK. I have run out of time.

Mr. Shapiro, I thank you. And we can talk more. We had a little conversation, but I would like more.

But I just want to say—my ranking member will—that I just can't thank you enough, Miles and Carol, who have made their life's mission to prevent this tragedy that you have suffered so much. In the name of Chase, you are going to make a difference, and I look forward to working together to prevent others from suffering that way. So thank you once again.

I yield back.

And now I yield 5 minutes to the ranking member, Mrs. McMorris Rodgers.

Mrs. RODGERS. Thank you, Madam Chairman. And I share those thoughts.

I am curious, as a mom with three young kids, dealing with car seats every day, is there any technology related to an alarm system on the car seat itself?

Ms. FENNELL. I can take that question. Yes, there are two car seats made by Evenflo that have technology built into them. They are a little bit higher priced than a regular car seat, but the problem we have with that is that nobody thinks this is going to happen to them. They may not want to pay that extra $5. So car seats, of course, is a welcome addition to some of the technology that is needed, but we really feel it should be vehicle-based. Because when you think about so many years ago, no one ever wanted an airbag and they wouldn't pay extra for that airbag. Now we, you know—

fast-forward to today. Who would ever buy a vehicle without an airbag?

So it does, you know, take time for those things to go through the turnover of the vehicle system; but we are really promoting vehicle-based and car seat as a backup.

Mrs. RODGERS. OK. Thank you.

Mr. Shapiro, in your testimony, you highlighted an entrepreneur, over 80 years old, who had a booth at CES, focused on preventing children, seniors, and even pets from being inadvertently left in cars. It also highlighted the benefits of self-driving cars for all facets of society. I have a son with special needs, Down syndrome, and I am really excited about what self-driving cars are going to mean for him and his future.

How do you see innovations helping us move toward safer roadways and saving lives? In other words, how can we address these auto safety issues through innovation and technology-based solutions?

Mr. SHAPIRO. Thank you. We as an association have one fundamental mission, and it is focused on innovation and improving people's lives. So we are pretty passionate about it. And I think there is a role for industry, there is a role for consumer groups, and there is a role for government.

To me, the role of government is to, in a sense, encourage innovation and also create the regulatory guardrails so that we can proceed and also have competition, because competition—there are so many solutions to this problem. We are seeing it in the competitive marketplace. You can see it in the patent filings. You can see it—and it is not just about this issue.

To me, the bigger answer, in a sense, is, since it takes so long to get a rule, a rulemaking, a process to go forward, to get it implemented, the aging cars we have, the average is 12 years, young parents with kids aren't likely to buy a new car, the big—the quicker answer to me is to get us to self-driving and the levels there as quickly as possible. Because if you think about self-driving, the advantage of that is, first of all, we obviously have fewer accidents and we are going—I expect that we are going to start having it as soon as we have these steps to self-driving.

The second is—and Ms. Fennell really hit home this point well for me—is that part of the challenge is, is that we are away from our children by sitting in the front. It makes sense, from a safety point of view, while you are mobile; but with self-driving, that won't be necessary anymore. You will be—most likely, you will be in the back with your kids, and that type of incidence will be helped, but we will also obviously have collision avoidance.

And the other thing with self-driving, we will have—by definition, self-driving cars, I believe, will have to be able to detect thepresence of beings, because there is not going to be a steering wheel in a future. You know, it will take a while to get there, and there is not going to be all the other things you have in a car, and you will have living environments, but they have to respond to the people that are in there. The people could have—for example, what if the person in the car has a heart attack or something like that? The vehicle has to know that. So when you are in a self-driving vehicle, as a being of any age or size, the vehicle will know about that

and presumably have some communication mechanism and ability to alert emergency or to go to a hospital, things like that.

So 25, 30 years from now, if we don't mess it up, if we—if we proceed as fast as we can to stop those 30,000-plus deaths a year and hundreds of thousands of incidents, this issue also will be an issue of the past, and this will—the horror that Mr. Harrison went through will never have to happen again. And that is why I think, in a sense, there is a dual path.

There is the legislation here that is now before you. Stand alone and you have to decide whether that is important enough to make it a priority in a way under any scenario will take several years, but also I would urge you to push the legislation this committee already passed unanimously so we can proceed as a country, instead of starting to get behind, where we have a national approach, we make it a national goal, and we get there, and then we eliminate well over 90 percent of deaths and injuries. And there are so many benefits from that.

Also, as a—just trying to get kids around as a parent, I am looking forward to that.

Mrs. RODGERS. Thank you.

Now, I am very excited about self-driving cars on a number of fronts, although yesterday, I was told that they are also going to notify—the potential of notifying you of when your weight goes up, which I am not sure I am excited about that.

Mr. SHAPIRO. We talked about that.

Ms. SCHAKOWSKY. We agree there.

Mrs. RODGERS. Thank you. I was—yes, I am out of time too.

I was interested, Mr. Harrison, just in hearing what technology you are most excited about, but maybe you can address that later. Thank you.

Mr. HARRISON. Thank you, ma'am.

Mrs. RODGERS. I will yield back.

Ms. SCHAKOWSKY. If I could, at the end, I want to ask a question about self-driving cars and algorithms that may inadvertently be discriminatory. So I will do that.

Mr. Cárdena is next for 5 minutes.

Mr. CÁRDENA. Thank you very much, Madam Chair and Ranking Member, for holding this very critical and important and emotional issue.

The loss of life, each life is very tragic, and the fact that we are such an amazing country with so much technology and so much ability to right these situations quicker than probably anywhere on the planet, I think this hearing is important that we hear about technology and we hear also about how dire that pain is when these tragedies occur.

For example, according to KidsAndCars, we lost 62 children from backover/frontover collisions. And, again, that is 62 too many. That is one too many, et cetera. And as a parent and a grandparent, it is this lens that I have now of being a grandparent, it is even more critical to me, all of these issues.

The first question I would like to ask is to Ms. Fennell. What sorts of safety tips can parents and children follow to avoid a backover or frontover tragedy?

Ms. FENNELL. Thank you very much for that question. What we tell parents is to make sure that you walk all the way around your vehicle before you ever move it, because there could be children behind or in front of the vehicle. And they tend—when you are leaving, they want to come and give you a kiss goodbye. They just want to wave, and they don't understand that you may not be able to see them. So, you know, make sure that you walk all the way around.

And we also suggest, because this is very available, if you don't already have built-in cameras and things, you can get these aftermarket. Because so many people say to me all the time, oh, when I get a new car, I want to get one of those, you know, rear-view cameras. I am, like, you don't have to wait. You can get that. It is pretty darn economical, and you just don't want to be backing blindly.

Mr. CÁRDENA. I think one thing the Government can actually do is help subsidize retrofitting older vehicles with these devices so that it can become more prevalent more quickly. That could be something the Government could encourage and invest in saving lives. That is one aspect. So thank you for sharing that with us. And you are not just talking to us; you are talking to the American people right now. So thank you for sharing that knowledge.

I would also like to thank you, Miles Harrison, for sharing what it is like to go through what you have gone through. Chase, we all wish he we were here with us, but you and Carol are here with us and you are dedicating your lives to unborn children, to families who have yet to have children, and all of us who have precious little ones in our lives.

I think that your courage and your willingness to allow yourself to be so confronted with this pain every day in front of all of us and the public proves that you are innocent. It proves that what you went through in that trial was an overburden by our society that, in my opinion, was not necessary. And as a Christian myself, I notice that you mentioned that you have yet to forgive yourself. Well, I am of the feeling and the opinion that forgiveness was not something that you needed, because from where I come from, forgiveness is something that you get later after something. I do not think that you were required forgiveness because you didn't do anything in malice. You loved Chase, that is obvious. And I admire you for your strength.

I just hope and pray that we as representatives of the people, of the people's House, will do our job and to show the amount of strength and the responsibility and the energy and the time that we and our staffs should put forth to make these solutions more real as quickly as possible. Because every day that goes by, this could and does happen in America. So, again, thank you for your courage and thank you for being here.

And, Carol, thank you for sharing your words with me and giving me advice. And there are many, many things that we can do, and hopefully, we will do them as quickly as possible.

I yield back.

Ms. SCHAKOWSKY. Thank you.

I now yield to Mr. Latta for 5 minutes.

Mr. LATTA. I thank you, Madam Chair. Again, thanks for having today's hearing.

And, Mr. Shapiro, if I could ask you my first question, and, again, going back to self-drive technology. And, you know, when we worked on the legislation last year, we wanted to make sure that safety was always first, last, and always. We wanted to make sure that we had cyber security being built in the vehicles, that we also had privacy, making sure that those concerns were addressed. And also, with the issues with our senior citizens who are no longer mobile, that they would have the ability to get out again; our friends that had disabilities, that they had the opportunity, that they were able to be mobile and to go to a job. Just like Mr. Harper, who was our vice chairman at the time; his son has a disability, and he said that if he or his wife weren't home, that they wouldn't be able to get him to work each day, and why it is so important.

And in 2016, the Department of Transportation had the competition for a Smart City Challenge out there for innovative and smart solutions that could occur out there, and the city of Columbus won, in Ohio, because they were wanting to address the alarmingly high rate of infant mortality that they had in the city.

And I would like to ask you, do you see more communities integrating self-driving vehicles and their services to address more community concerns out there, and what those concerns could be addressed by?

Mr. SHAPIRO. Yes, thank you for that question. Smart cities is a very vital part of our future for so many different reasons. It goes to resiliency. It goes to energy efficiency, being green. It goes to having near you everything you need in serving populations, especially as we are moving to cities. It is not just the United States, around the world, whereas 40 or 50 years ago, two-thirds of us lived outside cities, soon two-thirds of us will live in cities.

So smart cities themselves, what they do is they—the structure changes, even how you build the city, how many parking spaces you have, how people get around, and micro transportation and options and everything else. But what we see with self-driving cars, that is a vital part. And Ford, recently at CES, the CEO presented a vision of a smart city and showed how you redesign the city and you use self-driving cars to get around, and it just changes everything.

And, obviously, what goes away are so many things that we are spending money on today, both as a Government and as people, in terms of if you don't have—if you have self-driving cars, if you get rid of 90 percent or more of collisions, it is not only the 30,000, 40,000 people that die, it is the hundreds of thousands, if not millions, that are injured. It is the cost. It is the auto insurance cost, the collision repair cost. There are so many things that change fundamentally.

And you actually need fewer cars in a city, which in theory, should cut down on congestion. You need less parking in a city, and all of a sudden green spaces open up. So this is—the way we actually have CES in Las Vegas is we actually have smart cities and we have a lot of self-driving right nearby because it is just part of what it is. And a lot of the demonstration projects we are seeing in the beginning are self-driving vehicles on a—on a course—on an area—a community, a business entity area, a residential community for older people, where you have smart-driving vehicles—self-

driving vehicles actually going around. So, yes, it changes everything, and that is where we are heading as a world.

You know, some of us would just like to have timed traffic lights, but we have to go much, much further and much quicker. And that is where the Government has a major role to end this tragedy on our highways. There are so many things we will do with self-driving cars, and we are getting closer every year.

I honestly don't think this is happy talk. This is real. There are demonstrations. I have been in several self-driving cars myself, and they are safer and they are better and they will solve this problem totally.

Mr. LEVINE. Well, thank you.

Mr. LATTA.Let me go on. You know, with the SELF DRIVE Act that I introduced with our chair in the last Congress, and it passed the House unanimously, could you also explain some, how—when we are talking about how it can improve the highway safety—I know you touched on it a little bit, but really get into a little more detail on how we can make these roads safer out there, because of 37,000 lives we lost last year alone.

Mr. SHAPIRO. Well, what we are seeing in consumers, one, is—and the Act will help—is make it a national approach. Right now, if you want to go to California in a self-driving car to Nevada, you literally have to change your license plate at the border. That is not how we operate as a country. That is not what—I mean, one of our competitive advantages over Europe, frankly, is the fact that we have one language, one land, and the rules which—affecting vehicles are really more on licensing and things like that.

So the self-driving act does so many different things to allow testing, to encourage testing to move us forward, but what we are seeing—and I want to get this point out, if I may, Madam Chair—is that consumers have chosen—the biggest surprise that I had at the end of 1998 is when—because we—I am sorry—2018, is that when we issue our annual statistics and forecasts, we had to raise by a billion dollars what Americans are spending on car electronics.

And I dug deep and I said, why is this? What did we get wrong a year ago? And what we got wrong was Americans' desire to load up their cars with safety options, that are going to dealerships, and all these things which lead us to self-driving, going to Level 2 and Level 3, they want that in their cars. So they are choosing, actually, with their pocketbooks to get these features. And that bodes really well for investment by the car companies. It bodes well for what consumers wants.

Mr. LATTA. Thank you very much.

Madam Chair, my time has expired, and I yield back. And I appreciate your indulgence.

Ms. SCHAKOWSKY. Thank you.

Congresswoman Blunt Rochester, you have 5 minutes.

Ms. BLUNT ROCHESTER. Thank you, Madam Chairwoman, for calling this important hearing on summer driving dangers.

I first want to say to Ms. Fennell, thank you so much for sharing your story and for the work that you are doing.

I thank all of the panelists for your testimony.

I especially want to say something to Mr. and Mrs. Harrison. As a parent, I sit before you and think about all the parents across

the country, all the families. And I think about the fact that how I got to this position was unexpectedly being widowed at the age of 52. And I am from the State of Delaware, and I remember being in the hospital that day and our Vice President called and said, may the day come when your loved one's name brings a smile to your face before a tear to your eye.

And as I see you cry those tears, I want you both to know that Chase is here, you are creating a legacy for him, and there will be a day when we pass these bills and you will be able to smile, smile broadly, and know that your work is not in vein and that you turned your pain into purpose. So thank you so much for sharing. Thank you for staying on the battlefield.

And thank you all for the work that you are doing. Just wanted you to know that.

Now I am going to take a breath and turn to my questions. For my State in Delaware, automobile safety is very important. And I would like to echo Chairman Pallone's opening that it is fitting that we are having this hearing Memorial Day weekend. Delaware saw approximately 9 million visitors in 2017, and some of those visitors, vehicle safety was crucial to saving their lives, their children, pedestrians, and families.

We also have the major I95 corridor that goes up and down the East Coast, So this is really important. And Delaware saw 119 automobile-related fatalities in 2017, which was greater than the previous 2 years. So this is important, this discussion, not just to Delaware, but to our country.

And I want to ask my first question to Mr. Levine. Thank you, again, for your testimony. We all agree that these technologies have the potential to radically change the automobile travel in our country and safety, but I am concerned that access to these lifesaving technologies is sometimes determined, in large part, by income. If you could talk to us about the fact that, you know, you have these things like land departure warnings, backup cameras, and things like that that are all also sold as like luxury item packages. They are put in as upgrades. And I understand that JD Power, in 2015, the study said that consumers are willing to pay for safety features but up to a certain limit.

And so if you could just talk about how widespread this is, this issue of bundling these things. And do you believe that safety enhancing features as part of an expensive add-on or bundle discourages consumers from buying these safety features?

Mr. LEVINE. Thank you for the question. And I think the short answer is, yes, it does. We have a history of the auto industry very successfully taking longer than probably is necessary once safety technology has met a certain level of performance requirements in terms of seeing it as a standard, and has used that interim time to sell it as a luxury feature.

We need to look no further than the backup cameras, which took 10 years from the moment at which they were readily available in terms of the technology and reasonably priced in terms of integrating it into the system, until they became mandatory. And during that period of time, all of a sudden it became part of a leather seat package, a moon roof package that really undercuts the ability for everyone to prevent that awful mistake.

Ms. BLUNT ROCHESTER. And should NHTSA be doing more to require safety features on all new vehicles? I have 43 seconds, and anybody can jump in also, if there are ideas to help consumers to be able to access these features.

Mr. LEVINE. Real quick, there is a number of existing mandates over at NHTSA in terms of safety rules that they could move forward very quickly and some other things that they could start the process of to move things forward to get everyone the safety devices.

Ms. BLUNT ROCHESTER. I have 27 seconds.

Ms. FENNELL. I would like to just say there is a pending rule for rear seatbelt reminders that would save thousands and thousands of lives. We know a reminder for putting on your seatbelt will help. We tell everyone to put their children in the backseat, but there is not a reminder back there. It should have been finished in October of 2015. It has not even been started yet.

Ms. BLUNT ROCHESTER. I yield back the balance of my time. And thank you so much.

Ms. SCHAKOWSKY. Thank you.

Mr. Buchson, you are recognized for 5 minutes.

Mr. BUCHSON. Thank you very much.

And thank you for all your testimony.

You know, one of the most common things we are having trouble with now is distracted driving from cell phone usage, right? I have four kids. They are 26, 24, 21, and 15. Three of them drive, one is going to. Is there any technology right now that could prevent people from being on their phone when they are driving?

Ms. Fennell, I will start with you, and then Mr. Shapiro, I guess, whoever feels like they can answer that question the best.

I mean, we have to go—you know, they asked—I can't remember—Willie Horton, why do you rob banks? He said, "that is where the money is."

And so this is one of the biggest problems that we have in our country are distracted driving by everyone really. Is there something we can do about it?

Mr. LEVINE. So I will start. I mean, there are a number of technologies that are being tested that either can disable phone use inside the vehicle. Obviously, there is some consumer acceptance concerns of that, because if you are not the driver, there is a level of I want to be able to still use my phone. So there is a weighing of the safety——

Mr. BUCHSON. Can I make a quick comment? My dad, he died at age 84, and he never put his seatbelt on. So he was resistant to that.

So we still mandated seatbelts in automobiles, right?

Mr. LEVINE. So we are—you know, we would be okay with that. I am just, you know——

Ms. BLUNT ROCHESTER. I understand.

Mr. LEVINE [continuing]. Explaining part of the reason. And there is other—there is aftermarket technology. The phones themselves have the technology. I think we also need an ability to have a larger conversation, which this committee has started and continues, on the idea of how terribly dangerous distracted driving is.

I think people still think it is not the same thing as drinking or being on drugs or other distractions. It is equally as deadly.

Mr. BUCHSON. Anybody else have any comments?

Mr. SHAPIRO. Sure. The increase in driving deaths is troubling, and part of it can be attributed to lower gas prices and the fact that people are driving more, the economy is doing better, but not all of it. And definitely, there is a distracted driving issue.

I think we did a really good job several years ago of alerting people to it. We had a lot of public education campaigns. We worked very hard on it. I think companies like Apple and other cell phone companies have said, you know, you have to punch in "I am not driving," especially—even if you are a passenger, and that is a good solution. But the—it seems that the nature of the technology is such that it becomes more urgent and it is almost like you get a little hormone thing too. It is difficult not to answer.

And then there are solutions coming a little bit quicker. The smart speaker is migrating to the car, and that allows you to use your voice, if you will, as a medium, rather than looking down and using your hands. You can have your e-mails and other things read to you. There is a lot of different things there.

And also there is, frankly, these passive and active reminders that are increasingly in cars that tell you if you have gone over the line. It vibrates your seat or makes a noise, and these are solutions. And the advantage of these being introduced the way they are by the car companies is consumers are becoming, not only comfortable with them, but they want them. Yes, they do have to pay more for them in the beginning, but there is a competitive marketplace in the beginning as to which ideas win, how they can perfect it. And there is an economy of scale which as you make more of these, and the right ones survive, they go down dramatically in cost.

So the Government, I think, and your job as Congress, is to figure out that fine line between mandating something that could be cost effective for everyone and not impose a huge cost that would cost a lot more to buy a car, and going the other way and saying, "Wait a second. We will just leave this to the free marketplace forever. These safety devices may have value but not enough to mandate."

So you have to figure out that balance line. I would urge that competition, especially for new products being introduced, publicize, get them out there, see which ones are the best, and see how consumers react to them. But we have a lot of solutions coming as we get to the holy grail, which is the self-driving car.

Mr. BUCHSON. All right. I will follow up with you on another question, Mr. Shapiro.

Most rural parts of this country—I represent a lot of rural areas—people have to travel great distances to receive medical care. So this is a potential area of self-driving that could really be beneficial, right? The closest hospital may be the next town over, and specialists may be hundreds of miles away.

Can you talk about maybe how self-driving vehicles, not only just for convenience, but actually for things like going to see a doctor or—especially for rural parts of America, how it might benefit people more broadly as it relates to that?

Mr. SHAPIRO. That is a hugely important point, Congressman. I appreciate you raising it. Rural America is not well-served by a lot of our whole U.S. infrastructure today, and it is a challenge. Self-driving cars clearly will make a difference because that will provide for—especially for a lot of—a large portion of elderly people cannot drive even, and it will allow them to be served and serviced.

And also, since we have such an active group that is proceeding so quickly in technology, telemedicine is increasingly big, and we need to break down barriers for that as well. You shouldn't always have to get into a car to see your doctor. We have found in our own operation, for example, that if you just let people talk to a doctor, they may not have to go to the emergency room. But yet you will serve, not only all the elderly people, rural people, people with disabilities and others, and they need to be empowered. We shouldn't have such a large percentage of our population eliminated from the services we can provide to get them healthy, to see things, and do things.

Mr. BUCHSON. Thank you very much. I yield back.

Ms. SCHAKOWSKY. Mr. Carter, you are recognized for 5 minutes.

Mr. CARTER. Thank you, Madam Chair.

I thank all of you for being here this very important subject.

Mr. Harrison, thank you especially. I can only imagine the pain, but I want you to know that your courage is an inspiration to all of us. And thank you. Thank you for being here.

Mr. Shapiro, let me ask you, and kind of to follow up on Dr. Bucshon's questions about distracted driving. You know, we concentrate a lot of times on DWI and impaired driving, but distracted driving is a big problem. I mean, we have all experienced it. And, listen, I am as bad as anybody, I admit, and I need to do better with that.

But distracted driving, as we get—as we have more of this, and we do have more of it, because we are—we are a society now that is—you got to have it right now. I mean, the phone rings, you have got to answer it right now. You know, you get an e-mail, you have got to answer it right now. And that is just the kind of society we are right now.

Are there any—any ways to educate and incentivize drivers like me that are distracted to change our behavior?

Mr. SHAPIRO. I don't know about incentivizing you, because I don't want to violate any ethics rules, but in terms of—there is a huge number of innovative technological solutions that people are selling. For example, let's say your teenager, you want to track what they are doing and how they are driving, you can. Insurance companies will increasingly say you can get a lower rate if we could put—you know, track your driving for a while or always, to see whether——

Mr. CARTER. There is a financial——

Mr. SHAPIRO. There are some marketplace things out there and there is a lot of self—there is a lot of technology. Increasingly, for example, there is technology which monitors your eyes. And if your eyes are away from the road for more than a couple of seconds, it sends off an alert. There is that, as I said, if you go over the line, increasingly in a large number of cars you get a passive indication,

your wheel vibrates, or your seat vibrates. So there is a noise which lets you know you have done that.

So there is a lot of solutions out there, just as—but, you know, the fact that there are technological solutions doesn't mean they are activated. For example, with drunk driving, we have known how to cure drunk driving for 30 years. We know you could test someone before they start their car, and we have chosen—not we. We collectively as government and people have chosen not to implement that.

But I think we need to do more in public awareness. I think we need to do more in terms of publicizing these things that are out there, and I think the insurance companies have their role to play. But, yes, it is definitely a problem. And there is different State laws. Like if you are at one of these lights here in Virginia where our organization is, you could wait there for two minutes, and how could you resist looking at your device. But in some States, that is illegal.

Mr. CARTER. Right, right. And in the State of Georgia we have made it illegal, or the legislature has passed legislation to make it illegal, and I welcome that. I think it is necessary, and certainly, we have got to change that. I understand.

You have talked a lot about self-driving cars, Mr. Shapiro, and that is obviously the wave of the future. What do you see as the most impactful technologies that are coming out there? I mean, if I had to—if you had to list, you know, this is really going to be a game changer, is there something like that out there?

Mr. SHAPIRO. Well, self-driving cars is the answer, but there are many steps to get to the answer. It is not digital where you are either there or you are not. I mean, it is easier to do in climates where there aren't snow and hail and rain and things like that, and there are so many things and steps and different companies along the way that have to do things really, really well to make this work. I mean, we have the camera technologies got down dramatically. Some of the new cars today have several cameras on them, but someone has to process that.

And, for example, there is something called LIDAR, which is very expensive. It is a couple thousand dollars now, but that really allows—like cameras aren't the only answer, although Tesla takes the approach that cameras are the only the answer. The problem is that cameras do not really work that well at night, and they see two dimensionally. LIDAR actually picks up where cameras wear off.

So I am not going to say there is one answer. I am going to say the answer is redundancy and making sure that cars are safe.

Mr. CARTER. Let me ask you this. Not to interrupt you, but let me ask you. I have got my truck. You know, it is a 2004. It has got 408,000 miles on it. I mean, obviously, it doesn't have any of this technology. Is there any kind of aftermarket technology that can be applied? Because the average—the average person keeps a car for, what, 10–1/2, 11 years?

Mr. SHAPIRO. It is about almost approaching 12 years now. And you are absolutely right; this is going to be an evolution over years, and there will be aftermarket solutions, but I do not know if there will be total solutions. So the question is—but if we have—it is like

think of the measles vaccine, if you will. The higher percentage of self-driving cars we get out there, the safer everyone is.

Mr. CARTER. Right.

Mr. SHAPIRO. And how we address the last 10 or 15, 20 percent, I think there should be some good, healthy discussion. It could be those car—your car might have, even though it is old, might have higher insurance premiums on it because you are less safe than everyone else.

So we will get to those problems. Those are not the big problems. I think the issue is how do we get this legislation passed, which came out of this committee the last Congress, bipartisan unanimously. How do we get it so we are working as a country towards a goal? And that goal, in my view, could be clearly stated by X date, we have X number of fewer percentage deaths. And that is what we should be doing in the country.

Mr. CARTER. Well, thank you again.

Thank you all for being here.

And I yield back.

Ms. SCHAKOWSKY. I would like to thank all of our witnesses for their participation in today's hearing.

We have some documents to submit for the record. I request unanimous consent to enter them into the record. I will read them. A letter from Securing America's Future Energy; a letter from the United States Chamber of Commerce's Technology Engagement Center; a statement from Jennifer Huddleston and Ryan Skorup, research fellows from the Mercatus Center at George Mason University; a letter from Marc Scribner from Competitive Enterprise Institute; a statement of Catherine Chase, president of the advocate—Advocates for Highway Safety Auto—and Auto Safety; a letter from the National Security Council.

Without objection, I would like to insert them into the record.

Hearing none, so ordered.

[Material submitted for inclusion in the record follows:]

Ms. SCHAKOWSKY. I remind Members that pursuant to committee rules, they have 10 business days to submit additional questions for the record to be answered by the witnesses who have appeared. I ask each witness to respond promptly to any such questions that you may receive.

And at this time, the subcommittee is adjourned.

[Whereupon, at 12:28 p.m., the subcommittee was adjourned.]

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Securing America's Future Energy

May 23, 2019

The Honorable Frank Pallone
Chairman, Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Greg Walden
Ranking Member, Energy and Commerce
2322 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Jan Schakowsky
Chairwoman, CPAC Subcommittee
2367 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Cathy McMorris Rodgers
Ranking Member, CPAC Subcommittee
1035 Longworth House Office Building
Washington, D.C. 20515

Chairman Pallone, Ranking Member Walden, Chairwoman Schakowsky and Ranking Member McMorris Rodgers:

Thank you for holding today's hearing on the critical need to improve safety on the nation's roadways in order to protect American drivers and their families.

Securing America's Future Energy (SAFE) appreciates the opportunity to submit this letter of record. SAFE is a nonpartisan nonprofit organization committed to reducing U.S. oil dependence to improve U.S. economic and national security. Recent innovations in transportation technology hold enormous potential for increasing roadway safety while expediting the United States' ability to reduce oil dependence by improving efficiency and diversifying fuel choice in our transportation sector.

All across the nation, Americans are currently planning their summer vacations – many of which will involve the time-honored tradition of a road trip with family or friends. For many Americans, these vacations become cherished memories of setting out on roads across the country to enjoy time with their loved ones.

Unfortunately, some of these trips will end in tragedy. Driving is the least safe way to travel, compared to all other major modes of transportation; car travel has the highest fatality rate when measured by the number of fatalities per passenger mile. In 2018, for the third straight year, nearly 40,000 American lives were lost on our roadways – of those, 10,000 were connected to drunk driving collisions.[1,2]

Fatalities increase during the summer months as Americans drive more miles, which is only compounded by increased rates of driving under the influence of alcohol around holidays. During the approaching Memorial Day Weekend, the National Safety Council estimates that 380 Americans may die on U.S. roads.[3]

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[1] National Safety Council, "Vehicle Deaths Estimated at 40,000 for Third Straight Year." NSC.org, February 13, 2019
[2] National Safety Council, "Impairment Begins With the First Drink." NSC.org.
[3] National Safety Council, "Holiday Traffic Fatality Estimate - Memorial Day." NSC.org

While there is no silver bullet for traffic safety, many deaths can be prevented through a range of technologies and policies that can be adopted or implemented today. Advanced driver assistance systems (ADAS), which includes features like automatic emergency braking (AEB), forward collision warning, and lane departure warnings, can augment the safety of vehicles on the road. Additionally, these technologies hold the potential for significant system-wide fuel economy savings.[4]

Since 94 percent of fatal collisions can be attributed to human error or choice, the advent of autonomous vehicle (AV) technology has the potential to further enhance roadway safety. Unlike humans, AVs are not capable of driving under the influence, can be programmed to obey traffic laws and speed limits, and cannot be distracted. SAFE's research has found that AVs will also unlock $800 billion dollars in annual social and economic benefits by 2050.[5]

Quantified Benefits of Autonomous Vehicles

Public Benefits by 2050 (annual)	**$633 Billion**
Congestion Mitigation	$71 Billion
Accident Reduction – Economic Impact	$118 Billion
Accident Reduction – Quality of Life Improvements	$385 Billion
Reduced Oil Consumption	$58 Billion
Consumer Benefits by 2050 (annual)	**$163 Billion**
Value of Time	$153 Billion
Reduction in Cost of Current Taxi Service	$10 Billion
Total Annual Benefits (by 2050)	**$796 Billion**

Source: David Montgomery, *Public and Private Benefits of Autonomous Vehicles*, June 2018.

While the private sector continues to make significant progress in the technological development of AVs, Congress and the U.S. Department of Transportation must also work to develop the appropriate policy framework to accommodate their safe and expeditious deployment.

We would like to thank the subcommittee for its leadership on the bipartisan SELF DRIVE Act (H.R. 3388) in the previous Congress. While it was not enacted, the SELF DRIVE Act would have established a modern and flexible regulatory framework to spur innovation in the private sector while implementing guardrails for the safe testing and deployment of AVs on public roads. Additionally, SELF DRIVE would have ensured that the full range of benefits would be realized by all Americans – including the millions of seniors, people with disabilities, and wounded veterans who experience significant mobility challenges.

We strongly urge you to expediently consider and pass similar legislation this year to ensure that Americans are able to realize the full safety benefits of AVs as soon as possible. In drafting this legislation, we respectfully request that the committee consider including the following provisions:

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[4] Amitai Bin-Nun, "Using Fuel Efficiency Regulations to Conserve Fuel and Save Lives by Accelerating Industry Investment in Autonomous and Connected Vehicles." Securing America's Future Energy, April 2018.

[5] Amitai Bin-Nun, Jeff Gerlach and Alex Adams, "America's Workforce and the Self-Driving Future." Securing America's Future Energy, June 2018.

1. **Reinforcing the authority of the National Highway Traffic Safety Administration (NHTSA)** as the nation's sole regulator of motor vehicle design, construction, and performance through measured preemption language. This should enable states and localities to continue fulfilling their traditional roles, including setting and enforcing traffic laws.
2. **Modernizing Federal Motor Vehicle Safety Standards (FMVSS)** by setting timelines for NHTSA to update outdated regulations that were written with only human-driven vehicles in mind. Setting timelines will create urgency for the agency without setting standards prematurely and hampering innovation.
3. **Reforming the FMVSS exemption process** in order to accelerate the safe introduction of innovative vehicles designs that improve transportation access, fuel efficiency, and fuel diversity.
4. **Leveling the playing field** between established automakers and new entrants such as technology and transportation network companies. Policy neutrality for technologies and business models is essential to unleashing the full potential of American innovation.
5. **Ensuring that the full benefits of AVs will be realized by people with disabilities,** especially through language that would preempt states from imposing discriminatory laws that would not allow people with disabilities to operate AVs without a driver license.

Thank you again for your attention to the critical issue of traffic safety. The status quo – 40,000 American lives lost every year and millions more injured – is unacceptable and the costs are far too great to delay action. We look forward to working with you, your colleagues, and fellow stakeholders to accelerate the adoption of lifesaving vehicle technologies.

Thank you,

Robbie Diamond
President and CEO
Securing America's Future Energy

Tim Day
Senior Vice President
U.S. Chamber of Commerce

1615 H Street, NW
Washington, DC 20062
202-463-5471

May 22, 2019

The Honorable Jan Schakowsky
Chairwoman
Subcommittee on Consumer Protection
and Commerce
U.S. House of Representatives
Washington, DC 20515

The Honorable Cathy McMorris Rodgers
Ranking Member
Subcommittee on Consumer Protection
and Commerce
U.S. House of Representatives
Washington, DC 20515

Dear Chairwoman Schakowsky and Ranking Member McMorris Rodgers:

The U.S. Chamber of Commerce's Technology Engagement Center (C_TEC) respectfully submits the following statement for the record for the Consumer Protection and Commerce Subcommittee's hearing titled "Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families."

C_TEC strongly supports the Committee's efforts to understand how to most effectively reduce the number of roadway fatalities and ensure the safety of America's transportation system. According to the National Highway Traffic Safety Administration (NHTSA), 37,133 Americans lost their lives in 2017 due to motor vehicle crashes, 94% of which were caused by human error.

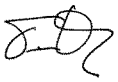
To address this problem, C_TEC believes that the safe deployment of autonomous vehicles will dramatically reduce the number of motor vehicle fatalities and make our roads safer. In my testimony to this Subcommittee last Congress, I advocated for a safety-first approach to regulating autonomous vehicles to ensure public acceptance of the technology and to fulfill the safety promise of autonomous vehicles.

Last Congress, the House passed H.R. 3388, the SELF DRIVE Act, which would establish a safe and effective regulatory framework for autonomous vehicles. C_TEC applauds the Committee's leadership on this bipartisan legislation, and we look forward to working with the Committee and its members on renewed efforts to further this critical technology.

C_TEC believes that Congress can play an important role in facilitating the safe development, testing, and deployment of this life-saving technology through preserving the traditional federal, state, and local regulatory roles for autonomous vehicles, ensuring a technology and stakeholder-neutral approach, advancing the safe testing of autonomous vehicles, and modernizing motor vehicle safety regulations.

Autonomous vehicles have the potential to save thousands of lives every year and have a critical role to play in reducing roadway deaths. Thank you for including this statement into the record, and C_TEC is ready to work with the Committee and its members to safely advance the adoption of autonomous vehicles.

Sincerely,



Tim Day
Senior Vice President
C_TEC U.S. Chamber of Commerce

Letter for the Record
Marc Scribner
Senior Fellow
Competitive Enterprise Institute

Before the Consumer Protection and Commerce Subcommittee
Committee on Energy and Commerce
U.S. House of Representatives

Hearing: Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families

May 23, 2019

Dear Chairman Pallone, Ranking Member McMorris Rodgers, and members of the Subcommittee,

Thank you for the opportunity to supplement the record of your hearing with our views on automotive safety policy. Broadly, we encourage members of the Subcommittee to focus on technologies, practices, and policies that show the most promise in reducing substantial numbers of motor vehicle injuries and fatalities.

The dozens of children who perish from heatstroke in motor vehicles every year in the United States are each tragedies. Congress, regulators, automakers, and other stakeholders should work to eliminate these fatalities. Indeed, automakers have been rapidly deploying rear seat occupant reminder technologies in the absence of a legislative or regulatory mandate in recent years.

According to the National Highway Traffic Safety Administration's latest publication on children and traffic safety, 1,233 children 14 years old and younger were killed in motor vehicle crashes in 2016. In contrast, for the same cohort during the same year, KidsInCars.org estimates 39 heatstroke fatalities. The rear seat occupant reminder rulemaking mandate contained in the HOT CARS Act, while well-intended, fails to address the vast majority of motor vehicle child fatalities.

Such a regulatory mandate without additional agency funding would necessarily shift National Highway Traffic Safety Administration resources from other areas. Specifically, we are concerned that mandating a rear seat occupant reminder rulemaking proceeding would negatively impact future rulemaking proceedings related to highly automated vehicles.

Removing human error and misbehavior—the primary risk factors in crash fatalities—from motor vehicle operations has the potential to save thousands, if not tens of thousands of lives every year in the U.S. To that end, we encourage members of the Subcommittee to revive bipartisan legislative efforts from the previous Congress to speed regulatory modernization at the National Highway Traffic Safety Administration to more rapidly bring highly automated vehicles to market.

Sincerely,

Marc Scribner
Competitive Enterprise Institute

STATEMENT OF CATHERINE CHASE
PRESIDENT
ADVOCATES FOR HIGHWAY AND AUTO SAFETY

ON

"SUMMER DRIVING DANGERS: EXPLORING WAYS TO PROTECT DRIVERS AND THEIR FAMILIES"

SUBMITTED TO THE

UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE
SUBCOMMITTEE ON CONSUMER PROTECTION AND COMMERCE

MAY 23, 2019

Introduction

Advocates for Highway and Auto Safety (Advocates) is a coalition of public health, safety, and consumer organizations, insurers and insurance agents that promotes highway and auto safety through the adoption of federal and state laws, policies and regulations. Advocates is unique both in its board composition and its mission of advancing safer vehicles, safer motorists and road users, and safer roads. We respectfully request that this statement be included in the hearing record.

Deaths and Injuries on Our Nation's Roads Remain Unacceptably High

In 2017, more than 37,000 people were killed and 2.7 million were injured in motor vehicle crashes.[1] Crashes impose a financial toll of over $800 billion in total costs to society and $242 billion in direct economic costs, equivalent to a "crash tax" of $784 on every American. The summer travel season can be an especially hazardous time on our Nation's roads as families depart for their annual vacation or travel over the long Memorial Day weekend. In fact, according to the Nation Safety Council as many as 380 people may be killed in crashes over the upcoming Memorial Day holiday period this year. This incredibly high level of carnage and expense would not be tolerated in any other mode of transportation.

Available Commonsense and Cost-Effective Solutions

While far too many lives are lost and people are injured on our Nation's roads each year, proven solutions are currently available that can help to prevent or mitigate these senseless tragedies. The National Highway Traffic Safety Administration (NHTSA) currently values each life lost in a crash at $9.6 million. Each one of these preventable losses not only irreparably harms families and communities, but they also impose significant costs on society that can be avoided. While we are optimistic that in the future autonomous vehicles (AVs) may bring about meaningful and lasting reductions in motor vehicle crashes, that potential remains far from a near-term reality. Over the next decades, while the technology is being developed and deployed, lawmakers should require verified vehicle safety technologies in all cars. We urge your consideration of our recommendations for safety advances outlined below.

Preventing the Tragedy of a Child Being Left Unattended in a Vehicle

In 2018, at least 52 children were killed as a result of being left unattended in a vehicle or as a result of gaining access independently into an unoccupied vehicle – a record number for annual vehicular heatstroke fatalities. Since 1990, at least 889 children have been killed in these tragic and preventable circumstances.[2]

While leaving a child, especially an infant or toddler, in a car may seem unthinkable, scientific research and the findings of neuroscience experts show that many factors including work demands, lack of sleep or a change in routine, can lead to children being forgotten by parents, grandparents or other child care providers and catastrophic outcomes. People are not infallible; that's why reminder systems for headlights, keys, doors and regular maintenance are built into

[1] Statistics are from the U.S. Department of Transportation unless otherwise noted.
[2] Statistics provided by KidsAndCars.org.

vehicles. Systems are currently available that can detect the presence of a child and alert the driver that an occupant is in a rear seating position unattended. This problem will continue until such technology is placed as standard equipment in all new cars because no one believes that they would ever forget their precious child or that this situation could happen to them.

Recommendation: Congress should enact legislation that would require the U.S. Department of Transportation (U.S. DOT) to issue a final rule for all new cars to be equipped with a visual, auditory and haptic alert to detect occupants unknowingly left in vehicles.

Proven, Advanced Vehicle Technologies Should be Standard in All Vehicles

Every day on average, over 100 people are killed and 7,500 people are injured in motor vehicle crashes. Advanced vehicle technologies, also known as advanced driver-assistance systems (ADAS), can prevent and lessen the severity of crashes and should be required as standard equipment on all vehicles. These include automatic emergency braking (AEB), lane departure warning (LDW), lane keeping assist, adaptive cruise control (ACC), 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, and BSD can diminish injury crashes from lane change by nearly 25 percent. However, these safety systems are often sold as part of an additional, expensive trim package along with other non-safety features, or included only in high end models or vehicles. Moreover, there are currently no minimum performance standards to ensure they perform as expected. Additionally, the IIHS has found that while nighttime visibility is essential for safety, few vehicles are equipped with headlights that perform well.

On the path to AVs, requiring minimum performance standards for these building block technologies will ensure the safety of motorists in vehicles and all roads users sharing the driving environment with them, and build consumer confidence in the capabilities of the technologies.

Recommendation: Advanced vehicle technologies that have proven to be effective at preventing and mitigating crashes should be standard equipment with minimum performance standards and Federal Motor Vehicle Safety Standard (FMVSS) 108 should be upgraded to improve headlight performance.

Crash Data Must be Collected and Available

At a minimum, data reflecting the performance of the vehicle including how the safety systems perform in a crash should be collected, recorded, accessible, and shared with appropriate federal agencies and researchers so that safety-critical problems can be identified. Currently, vehicles are not required to be equipped with an event data recorder (EDR). While there is a requirement for what data voluntarily-installed EDRs must capture, this information is insufficient to properly ascertain facts about crashes, especially as vehicles become more highly automated.

Recommendation: Essential data documenting a vehicle's performance in a crash should be collected, recorded, accessible, and shared with appropriate federal agencies and researchers in order to identify safety-critical problems. EDRs must be mandated for all

vehicles and required to collect sufficient, standardized information to aid investigators and regulators in assessing performance, including for AVs.

Vulnerable Road Users Must be Protected

Deaths and injuries of pedestrians and bicyclists remain unacceptably high. In fact, in 2016, pedestrian and bicyclist fatalities hit their highest levels in nearly 30 years. Vehicles can be designed, specifically in the front end, to reduce the severity of impacts with pedestrians and/or bicyclists. Additionally, collision avoidance systems for pedestrians, like advanced AEB, have promise to further reduce deaths and injuries. Advocates continues to monitor research on the effectiveness of these systems and will support data-driven solutions to crashes involving vulnerable road users. Moreover, the New Car Assessment Program (NCAP) must be updated to include pedestrian crashworthiness and pedestrian crash avoidance, among other improvements. Upgrades to infrastructure could also offer pedestrians and bicyclists better protection to reduce the occurrence and severity of crashes.

Recommendation: NHTSA should be directed to issue a standard for improved vehicle designs to reduce the severity of impacts with vulnerable road users. In addition, NCAP must be updated to include pedestrian crashworthiness and pedestrian crash avoidance, among other issues.

Improving Safety for Older Americans

In 2017, over 6,500 people age 65 and older were killed in traffic crashes – representing 18 percent of all traffic fatalities. Advocates has developed federal legislative proposals addressing both human factors and vehicle design issues to improve the safety of older adults. These recommendations include development of a crash test dummy representative of older occupants, revising NCAP to include a "Silver Car Rating", and modifying the injury criteria used in crash tests to address the specific injury patterns suffered by older occupants. Additionally, Advocates supported the mandate that hybrid and electric vehicles be manufactured to make sounds when operating at speeds below 18 miles per hour in order to enable child and adult pedestrians and bicyclists, especially those with visual-impairments and older adults, to identify the presence and movement of these very quiet vehicles. This final rule was issued in December 2016 and compliance is required by September 2020.

Recommendation: NHTSA should be required to develop a crash test dummy representative of older occupants, revise NCAP to include a "Silver Car Rating", and modify injury criteria used in crash tests to address the specific injury patterns suffered by older occupants.

The Epidemic of Distracted Driving Must be Addressed

In 2017, crashes involving a distracted driver claimed 3,166 lives. Crashes in which at least one driver was identified as being distracted impose an annual economic cost of $40 billion dollars, based on 2010 data. Issues with underreporting crashes involving cell phones remain because of differences in police crash reporting, database limitations, and other challenges. It is clear from an increasing body of safety research, studies and data that the use of wireless electronic devices

for communications (such as mobile phones and text messaging), telematics and entertainment can readily distract drivers from the driving task.

Numerous devices and applications, which pose a substantial risk for distracted driving, are being built into motor vehicles. Yet, NHTSA has merely issued non-binding guidelines which recommend, but do not require, that clearly unsafe electronic devices should not be installed in vehicles. This does not prohibit manufacturers from installing electronic communications devices that have highly distracting features and will not prevent manufacturers from disregarding the agency guidelines.

Recommendation: NHTSA should issue regulations to strictly limit the use of electronic communication and information features that can be operated while driving, and to prohibit the use of those features that cannot be conducted safely while driving. Additionally, improvements to the incentive grant program are needed to encourage states to pass strong safety laws and qualify for money to undertake efforts to combat distracted driving. Congress should pass the SAFE TO DRIVE Act, HR 2416, which would add opportunities for states to improve distracted driving laws and qualify for distracted driving incentive grant awards.

Impaired Drivers Must be Kept Off the Roads

On average, an alcohol-impaired driving fatality occurs every 48 minutes on America's streets. In 2017, 10,874 people were killed in crashes involving a drunk driver, accounting for nearly a third of all traffic fatalities. The National Transportation Safety Board (NTSB) has consistently listed ending impaired driving on their Most Wanted List of Transportation Safety Improvements, including the 2019-2020 list released earlier this year. Moreover, when drug and alcohol use are combined, known as "polyuse", the effects of impairment for a driver can be amplified.

Recommendation: Congress should direct the U.S. DOT to take a number of actions that would curb impaired driving. Specifically, they should issue a minimum standard requiring all new vehicles to be equipped with passive sensor technology that prevents a vehicle from moving if the blood alcohol content (BAC) of the driver is above a certain level. Additionally, states should be incentivized to lower the BAC while driving limit to 0.05 percent or lower. Moreover, 17 states still do not have a lifesaving law requiring ignition interlock devices (IIDs) for all offenders. States that do not yet have this vital law should be required to enact it by a date certain or face a sanction.

Connected Vehicle Technology has the Potential to Offer Added Safety Benefits

Connected vehicle technologies allow a vehicle to send and receive communications with other vehicles (vehicle-to-vehicle (V2V)) and the infrastructure (vehicle-to-infrastructure (V2I)). These messages can relay information ranging from the relative location and direction of motion of other vehicles to warning messages that traffic lights are about to change or weather conditions are soon to be encountered. These systems will likely help fill in gaps in the performance of AVs. For instance, V2V communication can provide safety applications for ADAS such as Left Turn Assist (LTA) and Forward Collision Warning (FCW). LTA warns

drivers to the presence of oncoming, opposite-direction traffic when attempting a left turn. FCW warns drivers of stopped, slowing or slower vehicles ahead.

Recommendation: In 2017, NHTSA issued a Notice of Proposed Rulemaking to require V2V technology. However, despite the identified safety benefits of V2V technology, this rule is languishing at the U.S. DOT. NHTSA should be directed to complete this rulemaking by a date certain.

Safety Standards are Necessary for Keyless Ignition Systems

Keyless ignition vehicles present certain safety risks including carbon monoxide poisoning and vehicle rollaway. As more vehicles that are equipped with keyless ignitions are sold, prevalence of the dangers from problems associated with them is increasing.

Recommendation: Congress should pass the PARK IT Act (S. 543), which would require NHTSA to issue standards for keyless ignition vehicles including an automatic shutoff and preventing a vehicle from rolling away.

NHTSA Must be Sufficiently Funded and Given Additional Authorities

Ensuring NHTSA has adequate resources, funds and staff is a crucial priority. In recent years, millions of motor vehicles have been recalled for serious and sometimes fatal safety defects including faulty GM ignition switches and exploding Takata airbags. Nonetheless, used cars can still be sold and leased with open recalls – a significant loophole that should be closed. NHTSA must also have the ability to take immediate action when the agency determines that a defect involves a condition that substantially increases the likelihood of serious injury or death if not remedied immediately. Further, NHTSA must also be given the authority to pursue criminal penalties in appropriate cases where corporate officers who acquire actual knowledge of a serious product danger that could lead to serious injury or death and knowingly and willfully fail to inform NHTSA and warn the public.

Recommendation: Considering the unacceptably high number of fatalities and injuries on our Nation's roads, the prevalence of recalls, and the new responsibilities incumbent upon the U.S. DOT as AVs are developed and deployed, NHTSA must have additional resources and authorities to effectively oversee vehicle safety.

Commonsense Regulation of Experimental Driverless Car Technology is Essential

Autonomous vehicles (AVs), also known as driverless cars, are being developed and tested on public roads without sufficient safeguards to protect both those within the AVs and everyone sharing the roadways with them without consent. Numerous public opinion polls show a high skepticism and fear about the technology, and for good reason. At least six crashes resulting in four fatalities have occurred in the U.S. involving cars equipped with autonomous technology that are being investigated by the NTSB.

While AVs have tremendous promise to meaningfully reduce traffic crashes, fatalities and injuries once they are proven to be safe, they must be subject to minimum performance standards set by the U.S. DOT. These standards should include, but not be limited to, cybersecurity,

vehicle electronics, driver engagement for AVs that require a human driver to take over at any point, and a "vision test" for driverless cars to ensure they can properly detect and respond to their surroundings. Additionally, minimum performance requirements and protections will be especially critical as autonomous systems are deployed in commercial motor vehicles. Additionally, although AVs may increase access to mobility in the future, the varying needs of diverse disability communities, such as wheelchair users, must be addressed and safety must be ensured.

The recent crashes involving the Boeing 737 MAX airplane tragically highlight the catastrophic results that can occur when automated technology potentially malfunctions and is not subject to thorough oversight. Reports have indicated that many aspects of the plane's certification were delegated to Boeing. In addition, safety systems that could have assisted the pilots were not required as standard equipment. Lastly, both planes were being operated by experienced pilots that had extensive training. Yet, there are no federal training requirements for individuals testing or operating automated vehicle technology or for the consumers who purchase these vehicles and are using them on public roads.

Along with sensible regulations for AVs, consumers must be given essential information about the limitations and capabilities of the technology in the owner's manual and at the point of sale, as well as via a public website searchable by the vehicle identification number (VIN) that includes, at a minimum, vehicle information such as any exemptions from federal safety standards and the AV's operational design domain (ODD).

Recommendation: AVs must be subject to minimum performance standards set by the U.S. DOT including for cybersecurity, vehicle electronics, driver engagement for AVs that require a human driver to take over at any point, and a "vision test" for driverless cars to ensure they can properly detect and respond to their surroundings. In addition, consumers must be given essential information about the specific limitations and capabilities of AVs in the owner's manual and at the point of sale, as well as via a public website searchable by VIN.

Conclusion

America's roads are needlessly dangerous. Far too many lives are lost and serious injuries sustained in crashes each year especially considering commonsense solutions are available. Advocates' recommendations enumerated above can help to drastically improve the safety of all road users. With leadership and action from this Committee, these measures can be implemented and lives can be saved.

Statement of the National Safety Council
House of Representatives
Committee on Energy & Commerce
Subcommittee on Consumer Protection & Commerce
Hearing on
"Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families"
Thursday, May 23, 2019

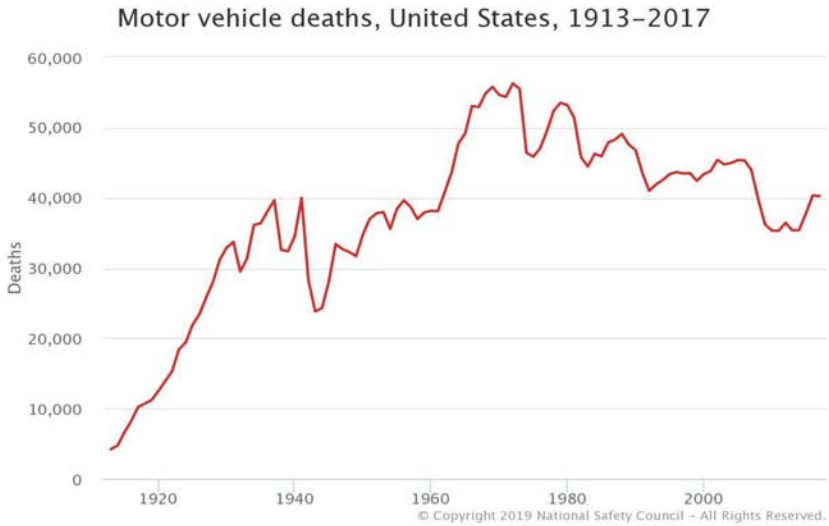
Thank you for allowing the National Safety Council (NSC) to submit this statement for the record. NSC is a 100-year-old nonprofit based in Itasca, IL, with a mission to end preventable deaths in our lifetime at work, in homes and communities and on the road through leadership, research, education and advocacy. Our more than 15,000 member companies represent employees at more than 50,000 U.S. worksites. These members are across the United States and are likely in each district represented on this Subcommittee.

The National Safety Council estimates that at least 40,000 people were killed in motor vehicle crashes in 2018.[1] We also estimate a tragic beginning to summer with 380 people dying in motor vehicle crashes during the Memorial Day holiday weekend. Your timing for this hearing is critical.

Included here are the number of people killed in motor vehicle crashes in 2018 from the Chairs' and Ranking Members' states.

New Jersey	565
Illinois	1,048
Washington	541
Oregon	468

[1] https://www.nsc.org/in-the-newsroom/2018-marks-third-straight-year-that-motor-vehicle-deaths-are-estimated-to-have-reached-40-000



These are the lives of your constituents. These mothers, fathers, sisters, brothers, aunts and uncles contributed to the communities in which they lived. Yet, our national outrage at these losses is conspicuously absent, particularly when you compare to deaths in other forms of transportation, such as aviation. These crashes and deaths on our roadways not only have a human toll, but there is an annual cost to the American economy of over $433 billion.[2] The United States has consistently avoided the hard choices needed to save lives on the roadways, and NSC calls on Congress to act in a bipartisan manner to implement policies that will save lives. We know the solutions; we need the will to enact them.

Road to Zero

NSC is so committed to the goal of zero deaths on the roadways that we lead, in partnership with the U.S. Department of Transportation, the Road to Zero Coalition, a diverse group of over 900 members committed to eliminating roadway fatalities by 2050. Over the past two and a half years, the coalition has grown to include members from across the country representing transportation organizations, businesses, academia, safety advocates and others, the first time so many organizations have collaborated to put forth a plan to address fatalities on our roads.

The centerpiece of the coalition's work has been the creation of the Road to Zero report, a comprehensive roadmap of the strategies necessary to achieve our goal by 2050. In April 2018, the coalition issued our report with three primary recommendations.

1. Double down on what works through proven, evidence-based strategies
2. Accelerate advanced life-saving technology in vehicles and infrastructure

[2] https://injuryfacts.nsc.org/motor-vehicle/overview/introduction/

3. Prioritize safety by adopting a safe systems approach and creating a positive safety culture

The Lifesaving Potential of Advanced Technology

NSC believes advanced vehicle technology, up to and including fully automated vehicles, can provide many benefits to society. The most important contribution will be the potential to greatly reduce the number of fatal crashes on our roadways, which are increasing. Federal leadership on motor vehicle safety is necessary because there should only be one level of safety. Consumers need confidence in vehicles regardless of where they reside; manufacturers need certainty in order to invest in design and production, and states do not possess the expertise and the resources to replicate design, testing and reporting programs. Further, a patchwork of requirements will result in confusion for consumers and increased cost for manufacturers and operators attempting to comply with a myriad of requirements. Finally, the absence of a safe, workable standard will drive development, testing and deployment overseas, resulting in the flight of innovation and the jobs that accompany it to locations outside of the US.

To reach our goal of zero deaths, we need to encourage the development of innovations that address human errors and road design failures and, once proven, establish mandates for adoption of technologies that work. The potential safety benefits of automated vehicles could be incredible, however to be clear, it will be decades before we have meaningful fleet penetration on U.S. roadways of AVs.

In the meantime, there are significant technologies available in vehicles today. Advanced Driver Assistance Systems (ADAS) can prevent or mitigate crashes. Consumer education about these new technologies is of utmost importance, and NSC is working to expand consumer education around these new technologies. NSC and the University of Iowa created the first and largest ADAS national campaign at, MyCarDoesWhat.org, to help. When a person visits MyCarDoesWhat.org, he or she learns about dozens of existing safety features such as lane departure warning, blind spot monitoring, backup cameras, automatic emergency braking and more. The purpose of MyCarDoesWhat is to educate the public about these assistive safety features in order to maximize their potential lifesaving benefits.

Another way to help consumer understanding is to standardize the nomenclature or taxonomy for advanced technologies. NSC recommends that, at the very least, systems that are not fully automated or Level 5 should not be described as such. ADAS, with emphasis on driver assist, represents the vehicles being sold today and requires drivers to remain fully engaged in the driving task. That fact is often lost in marketing, media reports and consumer expectations. Labeling a motor vehicle as "automated" or "autonomous" today, or even using terms such as "autopilot," only confuse consumers and can contribute to losses of situational awareness around the driving task. By establishing standard nomenclature and establishing clear performance outcomes, consumers will better understand what they should expect from these technologies.

Additionally, the National Safety Council was a founding member of PAVE (Partners for Automated Vehicle Education), which launched in January of 2019. PAVE is a broad-based coalition that includes automotive and technology companies, safety and mobility advocates and community partners. PAVE members believe that in order to fully realize the benefits of self-driving technology, policymakers and the public need factual information about the present and future state of such technology. PAVE enhances public understanding through a variety of strategies including an educational website at PaveCampaign.org; "hands-on" demonstrations

allowing the public to see and experience driverless technology and workshops to help understand the technology. In the future, PAVE will produce educational toolkits for car dealers to help them communicate more effectively with customers about their vehicles' capabilities and limitations. PAVE is focusing on levels 4 and 5 vehicles.

Finally, the New Car Assessment Program (NCAP) program has operated for nearly 40 years with a goal of testing vehicle safety systems and educating consumers about them. Practically, it has created a mechanism to allow consumers to evaluate vehicles on safety systems. NSC supports NCAP, and expanding its role into ADAS safety, believing it is an important program to improve the safety of the motor vehicle fleet.

Prioritizing Safety

By prioritizing safety, we commit to changing our nation's safety culture. This means we have to accept that any life lost is one too many. Once we accept that one death is too many, we will begin thinking about how to take a "safe systems" approach to our roadways. Fully adopted by the aviation industry, this means building fail-safe features that anticipate human error and developing infrastructure with safety margins. When it comes to technology, the U.S. prioritized safety years ago by dedicating spectrum for safety purposes to prevent crashes. Today, other groups would like to take the spectrum for streaming services. I urge this committee to direct the U.S. DOT, the Federal Communications Commission, the Department of Commerce and others to maintain the spectrum for roadway safety purposes allowing vehicles to communicate with each other, infrastructure, pedestrians and others to prevent crashes. This spectrum provides a safety margin that we should not give away.

Some of these changes may include engineering greater safety into a design. For example, in the pictures below, a multi-lane intersection with a red light in Scottsdale, Arizona was replaced with a roundabout. With the intersection, there are 32 potential points of failure, but with a roundabout, those points of failure are engineered down to only eight. Speeds are decreased, and if crashes do occur, they occur at angles that are not as violent.

Infrastructure changes do not have to be expensive. Through the Road to Zero Coalition, NSC has awarded grants to groups across the country working in communities of all sizes. The biggest and hardest change is the shift to truly prioritize safety by changing safety culture on the roads. We cannot be complacent when it comes to losing so many people each and every day on our roads. We need leaders in this area, and I can think of none better than the members of this Committee and Subcommittee. We have changed safety culture in workplaces, around child passenger safety and in other areas. We can do it here too with your help.

Conclusion

Today, we have millions of drivers behind the wheel, spend millions of dollars on education and enforcement campaigns, and still recognize billions in economic loses as a result of crashes. In spite of safer vehicle designs and record-setting seat belt use rates across the nation, operating a motor vehicle remains one of the deadliest things we do on a daily basis. The integration of some of these technologies will likely be messy as we deal with a complex and ever-changing human-machine interface. There will be an evolution of the existing technologies and perhaps a revolution when it comes to new and different technologies. We need to be prepared for unanticipated consequences and new failure modes.

We cannot afford to ignore the carnage on our highways that is a national epidemic today. The U.S. trails other industrialized countries in addressing highway deaths. NSC appreciates this Committee's leadership on vehicle technology and safe roadway transportation. If safety for the traveling public is the ultimate goal, advanced technology provides the most promising opportunity to achieve that outcome, and will go a long way toward reaching the goal of eliminating preventable deaths in our lifetime.

Follow-up questions to May 23 2019 Congressional Testimony

Additional Questions for the Record

Subcommittee on Consumer Protection and Commerce
Hearing on
"Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families"
May 23, 2019

Ms. Janette E. Fennell, Founder & President
KidsAndCars.org

The Honorable Tony Cardenas (D-CA)

1. According to Kids and Cars, as many as 62 children were killed in backover or frontover collisions, where a vehicle—typically driven by a parent in a driveway or parking lot—strikes and kills a child. In many of these incidents, the child doesn't want to be left behind and follows the unsuspecting parent to the car or kids are playing in a driveway or parking lot. The parent can't see the child in a 'blind zone,' or the area right in front or behind a vehicle that may be obscured from the driver's vision.

    a. Ms. Fennell, during the Obama Administration, NHTSA issued a rule requiring rear visibility technologies in all new vehicles by 2018, a rulemaking Chairwoman Schakowsky tirelessly championed. Are you confident that this rule will help protect children from backover collisions? Do you believe that the rule is being properly adopted and enforced?

As of May 2018 all newly-manufactured vehicles must be equipped with a rearview back-up camera as required by the Cameron Gulbransen Kids Transportation Safety Act in 2008 (Pub. Law 110-189). This was a critical victory for safety as research performed by the Insurance Institute for Highway Safety (IIHS) has found that cameras cut backing crashes 40 percent for drivers 70 and older and can be expected to prevent nearly 1 in 6 police-reported backing crashes.

However, additional advanced technologies which can provide safety benefits have evolved since the law was enacted. They include:

- Rear automatic emergency braking (Rear AEB) applies brakes automatically to prevent backing into something behind the vehicle.

- Pedestrian Detection systems can detect pedestrians, then issue warning and trigger automatic emergency braking, if necessary. Some can detect cyclists.

- Rear cross-traffic warning: when a car is in Reverse, this system notifies the driver when sensors detect that a vehicle or an object is approaching out of rear-camera range and could be moving into the car's path. This can be a visual, audible or haptic notification.

- 360-degree surround-view camera systems use cameras located around the car (in the grille, often below the side mirrors, and the rearview camera). The systems give drivers a "bird's-eye" view of the vehicle as if from above; help them check for children and objects around the car, particularly when backing up; and, make parking easier.

These newer technologies would be extremely helpful to further prevent predictable and needless tragedies. In fact, IIHS has concluded that vehicles equipped with rearview cameras, rear parking sensors, and rear automatic emergency braking were 78 percent less likely to be involved in a backing collision reported to police.

Also, the most recent and advanced camera systems provide a 360-degree view all around the vehicle which is particularly helpful because children and others can approach the vehicle from any direction. This system would also be very helpful to prevent frontover deaths and injuries.

Most drivers with whom we have spoken welcome this new technology, appreciate the additional safety protections cameras provide and use them on a daily basis. Many consumers vow that they will never drive a vehicle without a rearview camera again and quite frankly don't know how they were able to drive safely without this essential safety equipment.

b. Ms. Fennell, how can we help reduce the prevalence of frontover crashes? Are forward collision avoidance technologies the answer, or do these safety systems have limitations?

Frontover crashes have become a significant cause of injury and death for children and others. According to the attached NHTSA study (DOT HS 812 515, April 2018, Non-Traffic Surveillance: Fatality and Injury Statistics in Non-Traffic Crashes in 2015) the number of frontover deaths has already surpassed backover fatalities. These data state that 284 *backover* deaths and 12,000 injuries were reported while 366 deaths and 15,000 injuries took place do to ***frontovers.***

Frontover incidents often take place when a vehicle is moving forward very slowly into a garage or parking spot. Technology currently available such as cameras and pedestrian automatic emergency braking systems could help to prevent or mitigate frontover incidents. Further research on the ability of sensing systems used in conjunction with automatic braking technology designed specifically to address these horrible frontover tragedies should be undertaken immediately by the U.S. Department of Transportation. With so many different forward collision avoidance technologies on the market with varying capabilities, it is important for drivers to know and understand exactly what the system in their vehicle is capable of and what it's limitations are. Standardizing forward collision avoidance systems could eliminate the confusion of what they can and cannot do.

Finally, education and awareness about the blindzone in front of all vehicles is extremely important, but the fact remains you cannot avoid hitting something you literally cannot see. People simply do not believe or understand that there is an area in front of a vehicle where you cannot see a child. But, just like backovers, technology is the key to ending these predictable and preventable injuries and deaths.

c. Ms. Fennell, what sorts of safety tips can parents and children follow to avoid a backover or frontover tragedy?

Please see attached backover and frontover safety tips from KidsAndCars.org.

U.S. Department of Transportation
National Highway Traffic Safety Administration

TRAFFIC SAFETY FACTS
Crash • Stats

NHTSA

DOT HS 812 515 | A Brief Statistical Summary | April 2018

Non-Traffic Surveillance: Fatality and Injury Statistics in Non-Traffic Crashes in 2015

Summary

Based on the Non-Traffic Surveillance (NTS) system, an estimated 2,125 people were killed in non-traffic motor vehicle crashes in 2015. Over one third (39%) of these people were nonoccupants such as pedestrians and bicyclists. Additionally, an estimated 95,000 people were injured in these crashes during 2015, of which about one-third (31%) were nonoccupants.

Introduction

Non-traffic motor vehicle crashes are a class of crashes that occur off the public trafficways. These crashes, subsequently referred to as "non-traffic crashes," are mostly single-vehicle crashes on private roads, two-vehicle crashes in parking facilities, or collisions with pedestrians in driveways. In addition, there are non-traffic incidents such as a vehicle falling on a person underneath or an unintentional carbon monoxide poisoning inside the vehicle. Both non-traffic crashes and non-traffic incidents have the potential to cause fatalities and injuries to people. Nevertheless, the information on either of these was not available until 2007, when Congress required the National Highway Traffic Safety Administration to start collecting and maintaining information pertinent to these events. Complying with the directive, NHTSA designed and implemented a virtual data collection system, Non-Traffic Surveillance, previously called Not-in-Traffic Surveillance, to provide counts and details of fatalities and injuries to people involved in non-traffic crashes and non-traffic incidents. This issue of Crash•Stats focuses only on non-traffic crashes and presents some salient statistics about occupants and nonoccupants killed and injured in such crashes in 2015.

The statistics reported in this summary are based on the NTS data for 2015. Since a complete record of all non-traffic crash fatalities and injuries from States and police jurisdictions is not available, adjusted weights have been used to obtain national estimates. The background and details about collection of NTS data and the adjustment of weights adopted from the General Estimates System (GES) are provided in the Appendix.

People Killed in Non-Traffic Crashes in 2015

The NTS data show that during 2015, an estimated 2,125 people were killed in non-traffic crashes (Table 1.) Of these, 39 percent were nonoccupants such as pedestrians and bicyclists and 61 percent were occupants. Among nonoccupants, 44 percent were struck by vehicles moving forward and 34 percent by vehicles backing up. Rollaway vehicles (unattended with no driver in control) killed another 142 nonoccupants that account for 17 percent of all the nonoccupants killed in non-traffic crashes. The majority (97%) of the 1,298 occupants killed non-traffic crashes during 2015 were victims of single-vehicle non-traffic crashes. Additionally, 3 percent of the occupants were killed in multiple-vehicle non-traffic crashes.

Table 1. Nonoccupants and Occupants Killed in Non-Traffic Crashes From 2012 to 2014

Occupant Status of People	Killed By	2015	
		Number†	Percent
Nonoccupants	Forward Moving Vehicles	366	44%
	Backing Vehicles	284	34%
	Rollaway Vehicles (unattended with no driver in control)	142	17%
	Other (stopped, disabled, or parked vehicles)	35	4%
	Subtotal (39%)	**827**	**100%**
Occupants	Single-Vehicle Crashes	1,265	97%
	Multiple-Vehicle Crashes	32	3%
	Subtotal (61%)	**1,298**	**100%**
Total (100%)		**2,125**	**100%**

†Estimated number
Data source: NTS 2015

People Injured in Non-Traffic Crashes in 2015

The statistics in Table 2 show that during 2015, an estimated 95,000 people were injured in non-traffic crashes. Of these, 31 percent were nonoccupants – 51 percent of whom were injured by vehicles moving forward and 40 percent by vehicles backing up. Rollaway vehicles injured about 2,000 nonoccupants who made up about 7 percent of the injured nonoccupants. Most occupants (60%) injured in non-traffic crashes were victims of single-vehicle crashes and the remaining 40 percent were injured in multiple-vehicle crashes.

Table 2. Nonoccupants and Occupants Injured in Non-Traffic Crashes in 2015

Occupant Status of People	Injured By	2015	
		Number†	Percent*
Nonoccupants	Forward Moving Vehicles	15,000	51%
	Backing Vehicles	12,000	40%
	Rollaway Vehicles (unattended with no driver in control)	2,000	17%
	Other (stopped, disabled, or parked vehicles)	1,000	2%
	Subtotal (31%)	**29,000**	**100%**
Occupants	Single-Vehicle Crashes	40,000	60%
	Multiple-Vehicle Crashes	26,000	40%
	Subtotal (69%)	**66,000**	**100%**
Total (100%)		**95,000**	**100%**

†Estimates rounded to the nearest thousand; the column entries may not sum to the totals shown.

*Percentages calculated prior to rounding.

Data source: NTS 2015

Appendix: NTS Background, Data Collection, and Adjustment Factors

In 2007, Congress required NHTSA to begin collecting and maintaining information about fatalities and injuries to people in non-traffic crashes (i.e., the crashes that occur off the public trafficways), as well as in non-traffic incidents such as a vehicle falling on a person underneath or unintentional carbon monoxide poisoning. This was made mandatory under Public Law Number 109-59, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFE-TEA-LU), and under Public Law Number 110-189, the Cameron Gulbransen Kids Transportation Safety Act of 2007 (K.T. Safety Act). To comply with this directive, NHTSA designed and implemented the Not-in-Traffic Surveillance system, now called Non-Traffic Sureveillance system. This is a virtual data collection system designed to provide counts and details regarding fatalities and injuries that occur to people in non-traffic crashes and non-traffic incidents.

NHTSA uses several sources to collect information relevant to non-traffic crashes and non-traffic incidents. These sources include the police accident reports (PARs), trauma registries and hospital records, insurance companies' data, and newspaper stories. An assessment of the sources indicates that the most appropriate source of the data depended upon whether the event was a non-traffic crash or non-traffic incident and whether the crash outcome was a fatality or nonfatal injury. Accordingly, NTS was developed as a virtual system comprised of four major components. The first component of this system consists of the database of fatalities and injuries in non-traffic crashes. This component is primarily based on the PARs. The second component is a database of non-crash fatalities obtained from the death certificates. The third component is a database of non-crash injuries, which is based on a nationally representative sample of emergency department records. The fourth component is a collection of detailed investigations of particular types of incidents conducted by NHTSA under its Special Crash Investigations (SCI) program. More information about the SCI is available at www.nhtsa.gov/research-data/special-crash-investigations-sci. The statistics reported in this Crash•Stats are based on the first component, i.e., the information about non-traffic crash fatalities and injuries acquired from the PARs. NHTSA receives these reports every year through its existing crash data collection infrastructure. Nevertheless, NTS does not contain a complete record of all non-traffic crash fatalities from all States or from a sample of police jurisdictions. To account for this inherent incompleteness in the NTS data, NHTSA derives adjustment factors to arrive at national estimates related to non-traffic crashes. These factors are derived from the difference between the expected number of fatalities (based upon death certificates) and the number of fatalities registered in the NTS system. For non-traffic injury data, NHTSA relies on the States' data programs and uses information from all those States that collect information on both traffic and non-traffic crashes causing injuries. The adjustment factors for the non-traffic injury data are derived from the difference between the observed and expected number of injuries in non-traffic crashes.

The adjustment factors derived for fatalities and injuries are used to adjust weights adopted from GES. The

resulting adjusted weights applied to NTS data provide national estimates for non-traffic crashes. The information about the individual non-traffic crashes occurring in a year together with the corresponding NTS-adjusted weights is compiled into the NTS database. This database is available in the SAS format. Additional information about the definitions and attributes of the NTS variables is available in the NTS Analytical User's Manual 2008-2015 (to be made available at https://crashstats.nhtsa.dot.gov/#/DocumentTypeList/).

Note: In 2007, the coding for non-traffic crashes under NTS was done based upon a small set of variables. Starting in 2008, the coding began using data elements similar to those used in the National Automotive Sampling System–General Estimates System (NASS-GES). For this reason, the estimates presented in this Crash•Stats may not be compared with the similar estimates reported in 2007. Regarding backovers (backing-vehicle crashes), although the same definition was used in NTS 2015 as in 2007, different attributes were used in 2015 to determine a backing maneuver.

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U.S. Department of Transportation

National Highway Traffic Safety Administration

For questions regarding the information presented in this document, please contact NCSAWEB@dot.gov. This Crash•Stats and general information on highway traffic safety can be found at www.nhtsa.gov/NCSA. To report a safety-related problem or to inquire about motor vehicle safety information, contact the Vehicle Safety Hotline at 888-327-4236.

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KIDS AND CARS.ORG
LOVE THEM PROTECT THEM

KidsAndCars.org Backover Safety Tips

Drivers should heighten their awareness before engaging a vehicle into reverse; especially when children are present. Young children are impulsive and unpredictable; still have very poor judgment and little understanding of danger.

KidsAndCars.org urges everyone to install a rearview camera and sensors on their vehicle. Many drivers believe they have to wait to purchase a new vehicle to have this safety feature but a rearview camera, 360-degree camera system and/or sensors can be installed on ANY vehicle.

- Install locks at the top of doors in your home so children cannot get outside on their own. Keep doors locked at all times.
- Create habits to ensure children are directly supervised every time someone is arriving or leaving the home. This is when most tragedies at the home occur.
    - Example of a routine you can implement at your home – Before leaving the home, verbally and visually confirm that all children are in direct contact with the adult who is actively watching them. The supervising adult should stay in direct contact with all children until the person leaving is safely out of sight.
- Walk completely around your vehicle scanning the area for children and pets prior to moving a vehicle. If you see or hear children, be sure they are directly supervised by an adult.
- If you need to move a vehicle without another adult present, make children move away from your vehicle to a place where you can clearly see them or put them in the car with you before moving the car.
- Never allow young children to walk through parking lots. Young children should always be carried or placed in a stroller or shopping cart in parking lots. Even holding hands cannot prevent a child from darting away.
- Do not allow children to play in driveways, cul-de-sacs or parking lots unsupervised.
- Trim landscaping around the driveway to ensure drivers can see the sidewalk, street and pedestrians clearly when backing out of their driveway. Pedestrians also need to be able to see a vehicle pulling out of the driveway.
- Roll down the driver's side window when backing so you can hear if someone is warning you to stop.
- Be especially careful about keeping children safe in and around cars during busy times, schedule changes and periods of crisis or holidays.

Tips to teach children

Talk to your children about the dangers of vehicles, but never rely on them to protect themselves. Even children who know about vehicle dangers can place themselves in dangerous situations. It only takes one brief moment of distraction or a ball rolling out into the path of vehicle. Children of all ages have been run over and injured or killed by vehicles.

- Parked vehicles might move. Warning signs that a vehicle might move include a running engine, reverse lights (white lights) and brake lights (red lights) or smoke coming from the exhaust pipe on a vehicle.
- The driver may not be able to see you.
- Never walk behind or in front of a running vehicle.
- Never play in parking lots, driveways, streets or cul-de-sacs unsupervised.
- When walking on the sidewalk, watch for cars pulling into or leaving driveways.

Please share these important safety tips with your childcare providers, teachers, relatives, friends, family and neighbors...

These precautions can save lives.

For more information visit www.KidsAndCars.org or contact us at email@KidsAndCars.org.

Additional Questions for the Record

Subcommittee on Consumer Protection and Commerce
Hearing on
"Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families"
May 23, 2019

Mr. Gary Shapiro, President and CEO
Consumer Technology Association

The Honorable Michael C. Burgess, M.D. (R-TX)

1. Mr. Shapiro, counterfeit automotive parts have been a threat to vehicle operators for many years. In 2012, the National Highway Traffic Safety Administration (NHTSA) issued a consumer safety advisory on the dangers of counterfeit airbags. In 2014, Immigration and Customs Enforcement (]CE) uncovered an operation by two Canadians to import counterfeit Chinese-made airbags and mail them to U.S. customers.

   Recently, a woman in the 26t11 District of Texas was killed when her vehicle struck a tree and the counterfeit airbag did not deploy. In fact, there was no airbag. The airbag had been repaired following a previous accident by inserting a rag and covering it with silicon putty. I have also learned that airbag theft has become a serious problem due to the lack of replacement parts for recalled Takata airbags.

   a. Are there technology-based solutions that can help secure the automotive supply chain?

   b. Could technology improve the ability to populate the supply chain in order to reduce the demand for stolen parts?

   c. Are there solutions that can help alert a vehicle owner or operator of a potentially counterfeit part?

   While this is beyond CTA's area of expertise, technology-based solutions can help secure the automotive supply chain. "Smart Supply Chain" chip technologies, rooted in cybersecurity, are specifically intended to deter device or chip counterfeiting. The Automotive Anti-Counterfeiting Council works to identify and eliminate counterfeit auto parts and cooperates with law enforcement.

2. Mr. Shapiro, self-driving vehicles are supposed to reduce vehicle accidents

because of their ability to detect and react to other vehicles. Yet, full deployment is many years down the road.

a. Do you foresee a future in which airbags are no longer needed due to the proliferation and precision of self-driving vehicles?
Fully self-driving vehicles are still in the early stages of development. They will be great, but not perfect for several years. They will reduce the number of collisions we suffer from today. Companies are experimenting with different configurations and still determining what equipment will be needed. It is too early to say whether airbags or other equipment that is standard today will be required in the future. Airbags and other equipment are mandated by Federal Motor Vehicle Safety Standards (FMVSS). Some of these will become outdated and not be necessary for fully self-driving vehicles. Congress and the Department of Transportation should address this issue and consider ways to update or replace the FMVSS that could limit or prevent the deployment of SDVs.

3. Mr. Shapiro, I understand that technology to identify a human or pet in the backseat of a vehicle is available and being implemented by some manufacturers.
   a. When do you anticipate widespread adoption of this technology in new vehicles?

   As I discussed in my opening statement, different technologies exist for identifying rear-seat occupants and alerting the driver. Some are incorporated in the vehicle itself as original equipment, and many other technologies (car seats with occupant alerts, clip-ons, phone alerts, apps) can be incorporated into vehicles that do not have that feature already added. As our vehicle technology continues to advance, our roads will become much safer for all passengers, and one day, self-driving vehicles will prevent nearly all roadway deaths. We must continue to focus on removing roadblocks from incorporating this technology and getting SDVs on the roads.

4. Mr. Shapiro, I believe consumer education is essential to maximizing the safety benefits of not only advanced driver assistance systems, but also self-driving vehicles.

   a. How should the industry work to educate consumers on the capabilities of systems in vehicles today?

   Consumer education is a crucial piece of the puzzle in fully implementing ADAS and SDVs. Many of these technologies are costly so companies are incentivized to educate consumers on the capabilities of their vehicles today, but as an industry, we can do better. That is why CTA was a founding member of the Partners for Automated Vehicle Education (PAVE) Coalition. PAVE's goal is to do exactly what you suggest- educate consumers on the capabilities and benefits of SDVs.

b. Is there anything you think we can be doing to improve consumer understanding and trust in these systems?

We must emphasize the life-saving benefits of self-driving vehicles, and clearly communicate with consumers about their strengths and weaknesses. Industry must be clear about exactly what their technology can and cannot do. It may take more time to teach consumers how to use the technology, but for the sake of public safety we must do so. Bad actors eliminate consumer trust and could hurt consumers and inhibit government acceptance of this technology. That is why I believe new companies who over-promise their customers self-driving capabilities and under deliver are not only potentially hurting their own customers but damaging the rapid and safe deployment of self-driving vehicles.

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Additional Questions for the Record

Subcommittee on Consumer Protection and Commerce
Hearing on
"Summer Driving Dangers: Exploring Ways to Protect Drivers and Their Families"
May 23, 2019

Mr. Jason Levine, Executive Director
Center for Auto Safety

The Honorable Jan Schakowsky (D-IL)

1. **According to Consumer Reports, 65 percent of consumers state that safety is the most important consideration when determining which car to purchase. But from a car buyers' perspective, it can be extremely difficult to determine if one make of vehicle is safer than another. That's why the 5-Star Safety Rating, which provides ratings for vehicle performance in crash and rollover tests, was created. But with nearly every car receiving top ratings, this crucial consumer education tool is failing to provide meaningful information to the driving public, dulling the competitive forces encouraging auto manufacturers to voluntarily improve the safety of their vehicles.**

a. **Do you agree that the current 5-Star Safety Rating system is failing to draw meaningful distinctions between the safety of different vehicles? How would you recommend modernizing the 5-Star Safety Rating so it can provide greater distinctions between vehicle models?**

The U.S. New Car Assessment Program (NCAP or 5-Star Safety Rating System) fails to make meaningful distinctions between the safety of different vehicles. Recent NCAP ratings give frontal and side impact crash ratings of 4- or 5-stars to 98% of all vehicles tested. It is self-evident that if 98% of cars achieve superior ratings, it is impossible to distinguish between them in any significant way. The NCAP testing program must be updated with more and better testing so that real distinctions can be drawn between cars and consumers can make informed buying choices based on this information.

Though NCAP can be modernized in many ways, there are four areas that should be improved immediately: pedestrian safety, safety of older people, crash avoidance technology, and rear seat passenger safety.

First, NCAP must include testing to improve pedestrian safety in auto crashes. According to the Centers for Disease Control and Prevention, "in 2015, 5,376 pedestrians were killed in traffic crashes in the United States. This averages to one crash-related pedestrian death every 1.6 hours. Additionally, almost 129,000 pedestrians were treated in emergency departments for non-fatal crash-related injuries in 2015. Pedestrians are 1.5 times more likely than passenger vehicle occupants to be killed in a car crash on each trip."[1] These figures have only increased, as almost 6,000 pedestrians were killed in 2016 and an estimated 6,200 were killed in 2018.[2] The death/injury rate for a pedestrian involved in accident is 5.7 times the rate for a motor vehicle occupant.[3]

Any evaluation of vehicle safety should be considered incomplete without an assessment of vehicular design impact on pedestrian safety, but NCAP has none. There is an urgent need to stem the appalling increase in pedestrian-involved crashes, and NCAP should be part of the solution. The European New Car Assessment Programme ("Euro NCAP") has recognized this need and includes in its vehicle ratings both collision avoidance technologies and automobile design features that protect pedestrians and minimize injury and death in an accident.[4] This incentivizes automakers to include these features in their cars and should be adopted in the U.S. NCAP.

Updates to NCAP's ratings should include assessment of design features and component capabilities that detect and protect pedestrians. This need is particularly urgent with the emergence of automated driver assistance and automated driving systems, which have unfortunately already caused the death of a pedestrian.[5] The potential use of advanced sensors such as RADAR, LIDAR, infrared detectors, and advanced lighting systems to enhance pedestrian safety has tremendous potential for improving pedestrian collision avoidance.

In 2018, the National Transportation Safety Board (NTSB) issued eight safety recommendations to the National Highway Traffic Safety Administration (NHTSA) addressing the need to include performance-based standards for vehicle headlight systems, development of performance test criteria for vehicle designs that reduce pedestrian injuries, and incorporation of pedestrian safety systems including pedestrian collision avoidance systems and other more passive safety systems into NCAP.[6] The Center supports the NTSB recommendations and urges NHTSA to incorporate

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[1] *Pedestrian Safety*, CTRS. FOR DISEASE CONTROL AND PREVENTION, https://www.cdc.gov/motorvehiclesafety/pedestrian_safety/index.html.
[2] *New Projection: 2018 Pedestrian Fatalities Highest Since 1990*, GOVERNORS HIGHWAY SAFETY ASS'N (Feb. 28, 2019), https://www.ghsa.org/resources/news-releases/pedestrians19.
[3] *Center for Auto Safety Calls on NHTSA to Keep NCAP Independent of Manufacturers*, CTR. FOR AUTO SAFETY (Oct. 1, 2018), https://www.autosafety.org/1005021-2/.
[4] *Vulnerable Road User (VRU) Protection*, EURO NCAP, https://www.euroncap.com/en/vehicle-safety/the-ratings-explained/vulnerable-road-user-vru-protection/ (last visited June 21, 2019).
[5] Troy Griggs & Daisuke Wakabayashi, *How a Self-Driving Uber Killed a Pedestrian in Arizona*, N.Y. TIMES (March 21, 2018), https://www.nytimes.com/interactive/2018/03/20/us/self-driving-uber-pedestrian-killed.html.
[6] *Public Meeting of September 25, 2018, Highway Special Investigation Report Pedestrian Safety*, NTSB/SIR-18/03, NAT'L TRANSP. SAFETY BD. https://www.ntsb.gov/news/events/Documents/2018-DCA15SS005-BMG-abstract.pdf.

a focus on pedestrian safety into the NCAP rating system, incentivizing companies offering cars for sale in the U.S. market to address the horrendous pedestrian death rate from crashes and protect the American public.

Next, NHTSA should update NCAP to reflect the aging of the American population. According to the U.S. Census Bureau, by 2030, one of out every five Americans will be 65 years of age or older.[7] Many studies have shown that older drivers and passengers are more vulnerable to chest injuries in crashes than younger adults.[8] NCAP frontal impact tests, however, treat all passengers as one of two body types, a 50th percentile male or a 5th percentile female.[9] Technologies that improve safety for seniors also improve the survival of women and children. Manufacturers are increasingly including technologies in vehicles that enhance the survival of older people in crashes, including adaptive air bags,[10] limited force restraint systems that anticipate crash severity and automatically adjust belt restraint tension to minimize injury,[11] and inflatable seat belts.[12]

Without NCAP acknowledgement of these lifesaving technologies, however, automakers have far less incentive to speed up their adoption. NCAP should include evaluation and rating of safety technologies adapted for the survival of the elderly and other vulnerable populations so that manufacturers receive credit for their investments in lifesaving innovations and every demographic enjoys the benefits of safer cars. We suggest using a silver star to indicate a given vehicle possesses such technology.

NCAP must also be updated to reflect the dramatic increase in driver assistance and crash avoidance technologies. When NCAP was last updated in 2010, crash avoidance technologies as currently understood were in their infancy. Now, there are a wide variety of such technologies, including computer-controlled disc brakes, antilock braking systems, lane change warning, blind spot detection and warning, rear cross-traffic alert, pre-collision braking, rear vision cameras, reverse automatic braking, V2X, and electronic stability control. NCAP should be updated to assess the effectiveness of these technologies in vehicle safety. This would increase the adoption of these lifesaving features in cars, stimulate competition, and incentivize continual safety improvement. Euro NCAP assesses forward collision warning, automatic emergency braking,

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[7] *Older People Projected to Outnumber Children for First Time in U.S. History*, UNITED STATES CENSUS BUREAU (Sept. 6, 2018), https://www.census.gov/newsroom/press-releases/2018/cb18-41-population-projections.html.
[8] J. Augenstein et al., *Age Appropriate Restraints For The Right Front Passenger*, ANNU. PROC. ASSOC. ADV. AUTOMOT. MED. 51: 381–394 (2007); J. Augenstein et al., *Investigation Of The Performance Of Safety Systems For Protection Of The Elderly*, ANNU. PROC. ASSOC. ADV. AUTOMOT. MED. 49:361-9 (2007).
[9] 49 C.F.R. § 572.5.
[10] *Adaptive Safety* System, FORD MOTOR CO. http://online.wsj.com/public/resources/documents/Eyesontheroad02132005.pdf (last visited June 21, 2019).
[11] *Advanced Restraint Systems (ARS) Final Report*, DOT HS 811 794A, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN. https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/811794a.pdf.
[12] *The Ford inflatable seat belt: How it affects car seats and children*, CONSUMER REPORTS (March 1, 2011, 6:08 AM), https://www.consumerreports.org/cro/news/2011/03/the-ford-inflatable-seat-belt-how-it-affects-carseats-and-children/index.htm.

seatbelt reminders, and lane keeping support systems. It is past time that U.S. NCAP be updated to assess these and other safety systems to protect vehicle occupants, pedestrians, and others.

NCAP should also be modified to include rear seat passenger crash testing. Front seat safety has improved because of NCAP testing. NCAP must recognize the increasing risk of rear seat passengers to crash injuries, especially as this risk may be related to enhancements in front seat safety. As the number of rear seat passengers continues to increase with the rise of ridesharing services, such as Uber and Lyft, it is crucial that NCAP crash testing include rear seat anthropometric test devices (ATDs) of adults, infants, and others, with the goal of making the rear seat as safe as the front. This may become even more relevant with the further development of more successful autonomous vehicle technology.

b. **America's 5-Star Safety Rating system seems to be falling behind similar programs in Europe and other countries. What can we can learn from these international programs?**

Despite being the first program of its kind, NCAP has fallen grievously behind its international counterparts. Euro NCAP uses many more tests to evaluate passenger safety, including rear seat occupant protection in frontal crashes, far side impact protection, rear impact whiplash protections, child seat installation and occupant protection, and pedestrian impact protection. Euro NCAP also assesses driver assistance systems such as forward collision warning, automatic emergency braking, seatbelt reminders, speed assistance systems, and lane support systems (including lane departure warning, lane keeping assist, and emergency lane keeping systems). U.S. NCAP covers none of these systems. Japan NCAP and Australia NCAP also provide more useful information to their consumers than U.S. NCAP. NHTSA should study and adopt many of the vehicle assessments that international NCAP programs feature, and U.S. NCAP lacks.

c. **In 2018, NHTSA sought comments on updating the 5-Star Safety Rating. Are you confident that NHTSA will use its existing authority to make the appropriate updates to the 5-Star Safety Rating?**

It is hard to believe that NHTSA will appropriately use its authority to improve the 5-Star Safety Rating system. The agency continues to drag its feet in all aspects of its mandate, including rulemaking and recall investigations. The agency is inadequately funded to perform its function and protect the American public. Moreover, NHTSA's recent request for comments regarding NCAP indicated that the agency is considering allowing automakers to self-certify their cars for certain tests. A pillar of the NCAP program has been its role as an independent assessor of safety and occupant protection technology. NCAP tests are conducted by the government independent of automaker influence using blind car buying to prevent automakers from gaming the system. NCAP test results are fully available to the public for review, while self-certifications are not. Self-certifications would also undoubtedly be deemed protected by the agency's confidential business information regulations. The risk of self-certification by manufacturers was recently brought to the forefront of public attention by the tragic and deadly crashes of two Boeing 737

MAX airplanes due to software issues that Boeing downplayed in the self-certification process.[13] It is critical that NCAP continue to exist as an independent vehicle assessment program that is not subject to the pressures of manufacturers focused on maintaining 'perfect ratings' and their profits, instead of investing in safety.

2. **Modern cars are far more complex than they used to be. Today's cars are equipped with sophisticated sensors, camera, and technologies that can automatically detect and avoid hazards. And while vehicles have evolved and grown more sophisticated, I am concerned that NHTSA does not have the resources or expertise needed to set appropriate safety standards for these advanced systems.**

a. **How can Congress help NHTSA evolve to appropriately oversee these advanced automobile safety technologies?**

The most important thing Congress can do to help NHTSA oversee advanced auto safety technologies is to provide NHTSA with adequate funding. NHTSA's budget request for FY 2020 follows the larger Department of Transportation (DOT) philosophy of promising safety but cutting areas that actually deliver on those promises. The budget request aims to significantly decrease funding to the areas of the agency that are the likeliest to deliver safety results to the American people. In FY 2019, thanks to Congress ignoring the levels requested by DOT, NHTSA's enacted appropriation for "Vehicle Safety Programs,"—which are the heart of the agency—were $190,000,000. For FY 2020, DOT has requested $151,000,000 for this vital program – a 21% decrease in funding.

DOT is choosing to underfund the Rulemaking, Enforcement, and Research and Analysis departments at NHTSA, which have been directly responsible for vehicle crashworthiness and other safety standards that have saved hundreds of thousands of lives since NHTSA's founding five decades ago.[14] Smart, targeted regulations make a real difference when it comes to safety in our cars and on our roads. Congress has chosen before to enact a higher level of funding for a safety agency than the level requested by the Executive branch. Ignoring the DOT funding levels request again would be a step forward for safety.

This is particularly true when examining the FY 2020 budget request wherein NHTSA asks for a reduction related to "Vehicle Safety Research and Analysis activities" of over $16 million, a 33% decrease from enacted FY 2019 levels (down to $32.8 million). These activities are designed to "enhance the safety and security of automotive electronic control

[13] Dominic Gates, *Flawed Analysis, failed oversight: How Boeing, FAA certified the suspect 737 MAX flight control system*, SEATTLE TIMES (March 21, 2019), https://www.seattletimes.com/business/boeing-aerospace/failed-certification-faa-missed-safety-issues-in-the-737-max-system-implicated-in-the-lion-air-crash/.
[14] *Annual Vehicle Recalls Since 1996*, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN. https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/annualvehiclerecallssince1996.pdf.

systems while supporting the safe adoption of vehicle automation technologies."[15] At a time when private industry is spending tens of billions of dollars in this area, the federal government must be able to, at the least, maintain its current funding levels to provide the necessary oversight of this potentially society-changing technology. A reduction in research funding works in opposition to this goal.

When it comes to advanced automotive safety technologies, it is also essential the DOT plays an integral role in ensuring the safe operation of future self-driving vehicles. Research has always been a key function of the Department and must continue to be a priority as the cars of the future are being conceived, tested on the open road, and eventually deployed in our neighborhoods. Accordingly, we were pleased to see the recent House appropriations bill provide $10 million devoted to creating a Department-wide Center of Excellence dedicated to ensuring the federal government has a workforce capable of reviewing, validating, and certifying the safety of automated technologies. We believe this is a good start in providing DOT and NHTSA career staff the opportunity to perform necessary research across the Department in this area.

Money alone will not make any safety agency function perfectly. NHTSA's ability to realize its full potential to save lives, prevent injuries, and reduce the economic burdens due to crashes on our nation's roads lies with political leadership committed to fulfilling the agency's statutory mission, a dedicated career staff, and the multitude of stakeholders with which those civil servants work on a daily basis. However, the agency tasked with overseeing so much of our nation's traffic and vehicle safety cannot reach this potential with one arm tied behind its back. Underfunding NHTSA is counterproductive to the safety goals shared by all.

b. **Are safety standards needed for some of these advanced safety systems, such as automatic emergency braking or lane keeping support? If so, for which safety technologies or safety systems are safety standards needed?**

Safety standards are needed for automatic emergency braking (AEB) and adaptive headlights. NHTSA should also work toward establishing standards for lane keeping support systems (LKS).

NHTSA should establish safety performance standards for AEB systems. AEB systems use sensors including cameras, RADAR, and LIDAR to determine when a vehicle is coming too close to another one in front of it. The AEB system will then give the driver a warning, alert the driver to brake, and automatically brake if the driver does not respond.

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[15] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., BUDGET ESTIMATES, FISCAL YEAR 2020 (2019), https://www.transportation.gov/sites/dot.gov/files/docs/mission/budget/334271/fy-2020-nhtsacbj-submission-final-31219-tag.pdf.

In 2015 and 2016, NHTSA reached a voluntary agreement with 20 automobile manufacturers to equip "virtually all light-duty cars and trucks with a gross vehicle weight of 8,500 pounds or less" with AEB systems by 2022.[16] This agreement is deeply inadequate. The voluntary agreement is unenforceable, lacks oversight, and has no minimum performance standard for AEB technology. NHTSA should immediately work to establish safety standards for AEB systems as well as mandating their installation on all new vehicles in the United States.

NHTSA should also establish standards for adaptive headlights (also called "smart headlights"). In September 2018, the National Transportation Safety Board (NTSB) recommended that NHTSA revise Federal Motor Vehicle Safety Standard (FMVSS) 108 to "include performance-based standards for vehicle headlight systems correctly aimed on the road and tested on-vehicle to account for headlight height and lighting performance."[17] Unlike the current high/low beam, the new headlights can adjust intensity to alert drivers to pedestrians and other vehicles sooner, allowing greater time to react during low-light hours.

When working as designed, adaptive headlights can improve pedestrian safety and reduce glare for oncoming traffic. Once again, Europe, Japan, and elsewhere have moved ahead of the U.S. in the use of this safety technology, but in the instance of adaptive headlights it is because a regulatory change is needed.

In a promising move, NHTSA recently responded to a 2013 Toyota petition to amend the regulation to allow for use of such technology.[18] In theory, a proposed rulemaking on this issue will be put forth soon. It is unfortunate it took NTSB having to make this its number one recommendation to NHTSA on pedestrian safety to move this issue along. Six years after Toyota's original request, one can hope that a minimum performance standard will emerge that validates the utility of the headlights and requires their use instead of simply allowing adaptive headlights as a luxury add-on.

NHTSA should also continue to research standards for Lane Keeping Support (LKS) systems. LKS systems include lane-departure warning (LDW), which gives a driver feedback—either visual, auditory, or tactile (such as vibrations from the steering wheel or driver's seat)—when their car crosses lane markings. Lane-keeping assist (LKA) goes further and provides either braking or steering input to direct the vehicle back into its lane.

LKS systems can help drivers by reducing the occurrence of crashes in which their vehicle drifts off the road or hitting a car in an adjacent lane, whether sideswiping another vehicle moving in the same direction or hitting a vehicle in oncoming traffic. LKS systems are far

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[16] *NHTSA-IIHS Announcement on AEB: Manufacturers make progress on voluntary commitment to include automatic emergency braking on all new vehicles*, NAT'L TRANSP. SAFETY BD. (Dec. 21, 2017), https://www.nhtsa.gov/press-releases/nhtsa-iihs-announcement-aeb.

[17] NAT'L TRANSP. SAFETY BD., *supra* note 5.

[18] Federal Motor Vehicle Safety Standards: Lamps, Reflective Devices, and Associated Equipment, 83 Fed. Reg. 51766 (proposed Oct. 12, 2018) (to be codified at 49 C.F.R. pt. 571).

from perfect at this point and it important to note that the systems have limitations—lane monitoring may not work as well at lower speeds, in inclement weather, on hilly and winding roads, and with worn or faded lane markings. Additionally, many vehicles equipped with LKS systems allow the driver to turn off the features, leading to lower benefits gained from the systems.

The limitations of LKS systems highlight the value of standards. A minimum performance standard could provide a baseline for developers to implement, improve, and install this technology. However, NHTSA has been studying mandating lane-departure warning for a decade now, with no definitive conclusions.

c. **Should NHTSA or Congress require any of these safety features to be on all new vehicles? If so, which safety features should be made standard?**

NHTSA or Congress should mandate that both automatic emergency braking and adaptive headlights be included on all new vehicles in the United States. These systems have great potential to save lives, prevent injuries, and reduce property damage. It is long overdue that these safety features be made standard on all new cars. AEB and adaptive headlights cannot be allowed to remain as luxury items instead of standard features. Further delay in mandating these safety features will only lead to more lives unnecessarily lost to agency inaction.

3. **Any recalled automotive part endangering the lives of the vehicle occupants and other motorists on our nation's roads must be swiftly remediated and repaired, regardless of whether that defective part is on a new car, rental car, or used car. While current law prohibits the sale of new cars or previously rented cars with unrepaired recalls and the rental of cars with unrepaired recalls, there are no federal protections requiring recalled parts on used cars to be repaired prior to the vehicle's sale.**

   a. **Does the sale of used cars with open recalls endanger the driving public? Please explain.**

   b. **Should Congress explicitly prohibit the sale of used cars with unrepaired recalls?**

Vehicles with unrepaired recalls are unsafe for drivers, passengers, pedestrians, bicyclists, and everyone on the road. Whether the vehicle was purchased new or used the danger from non-deploying or exploding airbags, ignition switch failures causing a loss of motive power, or preventable vehicle fires is the same. This is the reason NHTSA continues to proclaim that "every recall is serious."[19] The loved ones of victims of used vehicle defect related fatalities sold

[19] *See* e.g., @NHTSAgov, TWITTER (May 30, 2018, 6:12 AM), https://twitter.com/i/web/status/1001813477063671808 ("Every recall is serious. If you know your vehicle has open recalls, contact your dealer to make an appointment to get it fixed for free.").

with open recalls do not mourn them any less than those that occur in a new vehicle with the same defect. Put another way: "All safety recalls resulting from defects present an unreasonable risk to safety and we believe it is inappropriate to suggest that some defects are not risky enough to require repair. For the safety of the motoring public, all recalled vehicles should be fixed promptly."[20] NHTSA does not limit this advice to new or rental vehicles, nor should the federal law.

Currently there are explicit federal prohibitions on the sale of new cars with unrepaired recalls, the sale of previously rented cars with unrepaired recalls, and the rental of cars with unrepaired recalls, but no such federal prohibition exists for the sale of used cars. Amazingly, it is legal to resell a used vehicle with an unrepaired ignition switch, but it is illegal to sell a recalled French fry cutter, a recalled coffee press, or even a recalled toy car. The same is true for food, medicine, and cosmetics. As summer comes to the United States in 2019 and as temperature and humidity rise across the country, used cars with unrepaired Takata airbag inflators - which are most likely to degrade and ultimately explode in such conditions - will be sold, along with thousands of other unrepaired and unsafe vehicles. This is one danger that can be addressed sooner rather than later by explicit Congressional action.

4. **According to a Consumer Reports investigation, nearly one and six ride-share vehicles in two major U.S. markets are subject to open safety recalls. The analysis found vehicles with glaring safety defects that pose serious risks, such as deadly airbags that could hurt or kill the driver or front-seat passengers. How can we best address this safety issue?**

The danger that is clearly posed by rideshare companies, including Uber, Lyft, Via, and Juno failing to protect consumers by allowing recalled vehicles on their platforms is real and significant. From defective Takata airbag inflators endangering passengers in the front seat of vehicles to faulty GM ignition switches endangering everyone on the road, to seat-belt detachment issues, to engine fires – defective vehicles should be off the road, not used as profit centers for giant public companies.

Generally, these types of services are regulated at a state or local level, and the Center for Auto Safety continues to support local authorities prohibiting the use of any vehicle for commercial purposes which is known to be under recall. Yet, such a process requires consumers to simply be lucky based on where they live. Another approach would be to address the issue through interstate commerce. For example, Congress could prohibit entities like Uber and Lyft from facilitating the commercial use of any vehicle which has an open recall as a violation of the Motor Vehicle Safety Act. Thus, even if rideshare companies claim no ownership over the

[20] Christopher Jensen, *Faced With Recalls, Rental Companies Sometimes Decide to Wait*, N.Y. Times (Apr. 19, 2011), https://wheels.blogs.nytimes.com/2011/04/19/faced-with-recalls-rental-companies-sometimes-decide-to-wait/(NHTSA spokesperson, as quoted on the urgency of auto recalls).

vehicles in question, they would be required to use their technology platforms to prohibit this dangerous commercial activity which impacts not only passengers but the drivers as well.

5. **Keyless ignition systems, in which a driver merely pushes a button to start or turn off a car, now comes standard in over half of all new vehicles sold in the United States. While these features may add an additional layer of convenience for the driver, they may also pose additional risks. Nearly three dozen people have died of carbon monoxide poisoning since 2006 after a keyless-ignition vehicle was inadvertently left running in a garage. Further, while vehicles with traditional keys prevent a driver from removing the key if the vehicle is not in park, consumers are reporting that drivers can turn off and exit a keyless ignition vehicle without the car in park, increasing the risk of a vehicle rollaway. While NHTSA proposed a rule to address these safety issues in 2011, the rulemaking has yet to be completed. How does NHTSA's failure to complete the rulemaking to establish safety standards for keyless ignition systems present a safety issue?**

Keyless ignitions continue to become more common in new vehicles - the majority of new cars on the U.S. market can be powered on and off without a key. This new technology, however, presents a strikingly different way for people to turn their car on and off. Confusion as to whether a vehicle was on or off has led to at least 28 deaths and over 45 injuries since 2006 due to carbon monoxide poisoning from a vehicle that was left running in a driver's garage.[21]

The solution to this problem is simple: require cars with keyless ignitions to shut off after a certain period of time if the car is not in use. NHTSA began rulemaking in 2011 (76 FR 77183, Dec. 12, 2011)--eight years ago--but still has not finalized a standard for these vehicles. By failing to complete this rulemaking regarding automatic shut-off of keyless ignitions, NHTSA is unnecessarily risking more lives. While some automakers, such as Ford and General Motors, have implemented technologies to mitigate this risk, including automatic shut-off mechanisms, most manufacturers have not acted because of the lack of a clear federal rule. Toyota has recently announced plans to follow suit, but only after 17 deaths.[22]

Keyless ignitions also present the problem of vehicle rollaway. Many keyless ignition systems allow drivers to turn off their car and exit the vehicle without putting the vehicle in the 'Park' position. This can lead to the vehicle unintentionally rolling away and potentially causing property damage, injury, and death. The problem has been widely acknowledged--NHTSA has opened 18 investigations on rollaway vehicles, and there have been at least 93 recalls by

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[21] David Jeans & Majlie De Puy Kamp, *Deadly Convenience: Keyless Cars and Their Carbon Monoxide Toll*, N.Y. Times (May 13, 2018), https://www.nytimes.com/2018/05/13/business/deadly-convenience-keyless-cars-and-their-carbon-monoxide-toll.html?nl=top-stories&nlid=16324671ries&ref=cta.

[22] Jeff Plungis, *Toyota Announces Fixes Designed to Prevent Rollaway and Carbon Monoxide Deaths*, Consumer Reports (June 13, 2019), https://www.consumerreports.org/car-safety/toyota-announces-fixes-designed-to-prevent-rollaway-and-carbon-monoxide-deaths/.

automakers related to rollaways.[23] The solution here is also plain: require cars with keyless ignitions be placed in 'Park' before the driver can turn the car off, or institute another solution that would provide equivalent protection against rollaways.

It is imperative that NHTSA end this inexplicable delay and institute a rule requiring all vehicles with keyless ignitions to have automatic shut-off technology and roll-away protection. Continued delays will only lead to more unnecessary injury and death.

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[23] *Blumenthal Announces Legislation to Protect Against CO and Rollaway Risk Raised by Keyless Cars*, KIDS AND CARS.ORG (Feb, 25, 2019, 9:29 PM), https://www.kidsandcars.org/2019/02/25/blumenthal-announces-legislation-to-protect-against-co-and-rollaway-risk-raised-by-keyless-cars/.

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