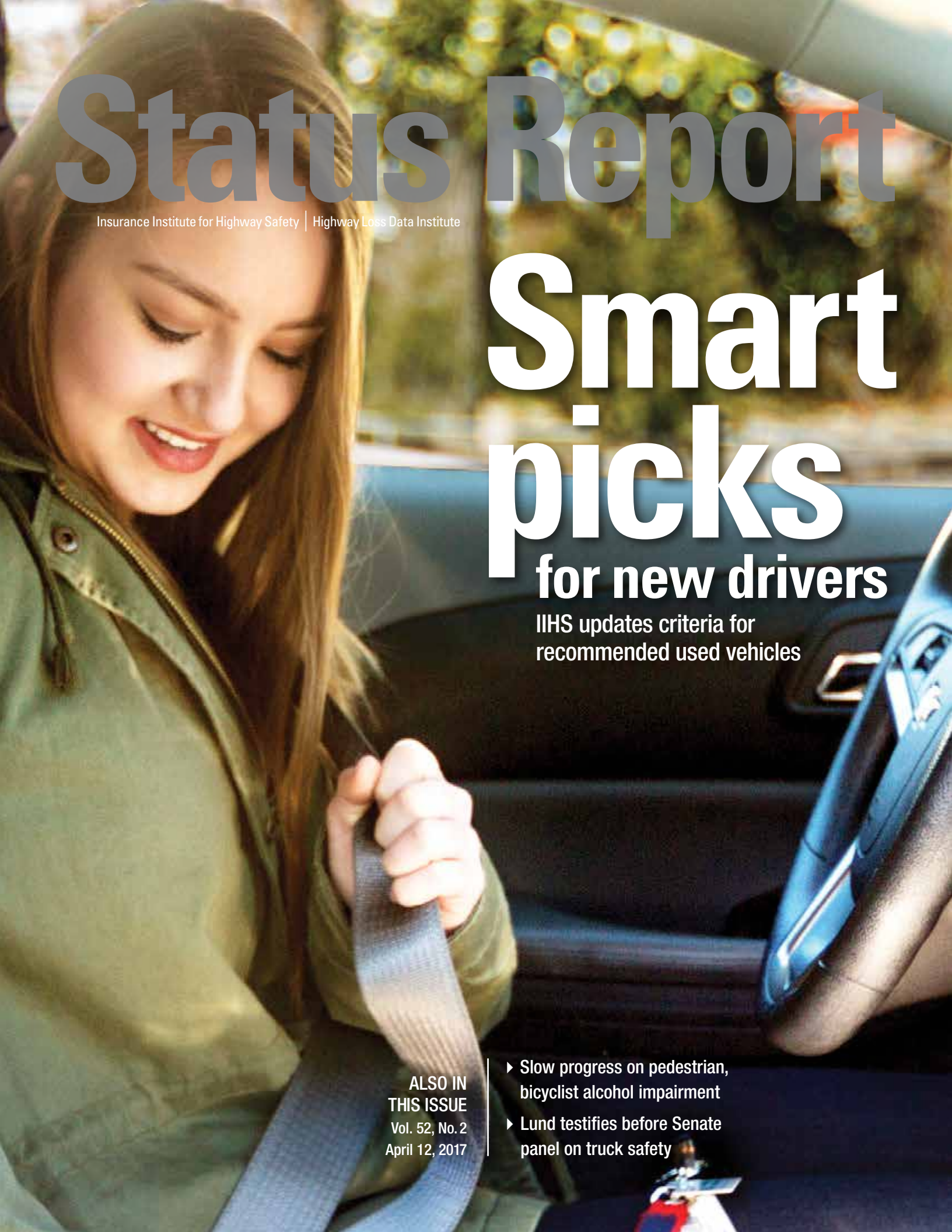
Status Report

Insurance Institute for Highway Safety | Highway Loss Data Institute

Smart picks for new drivers

IIHS updates criteria for recommended used vehicles



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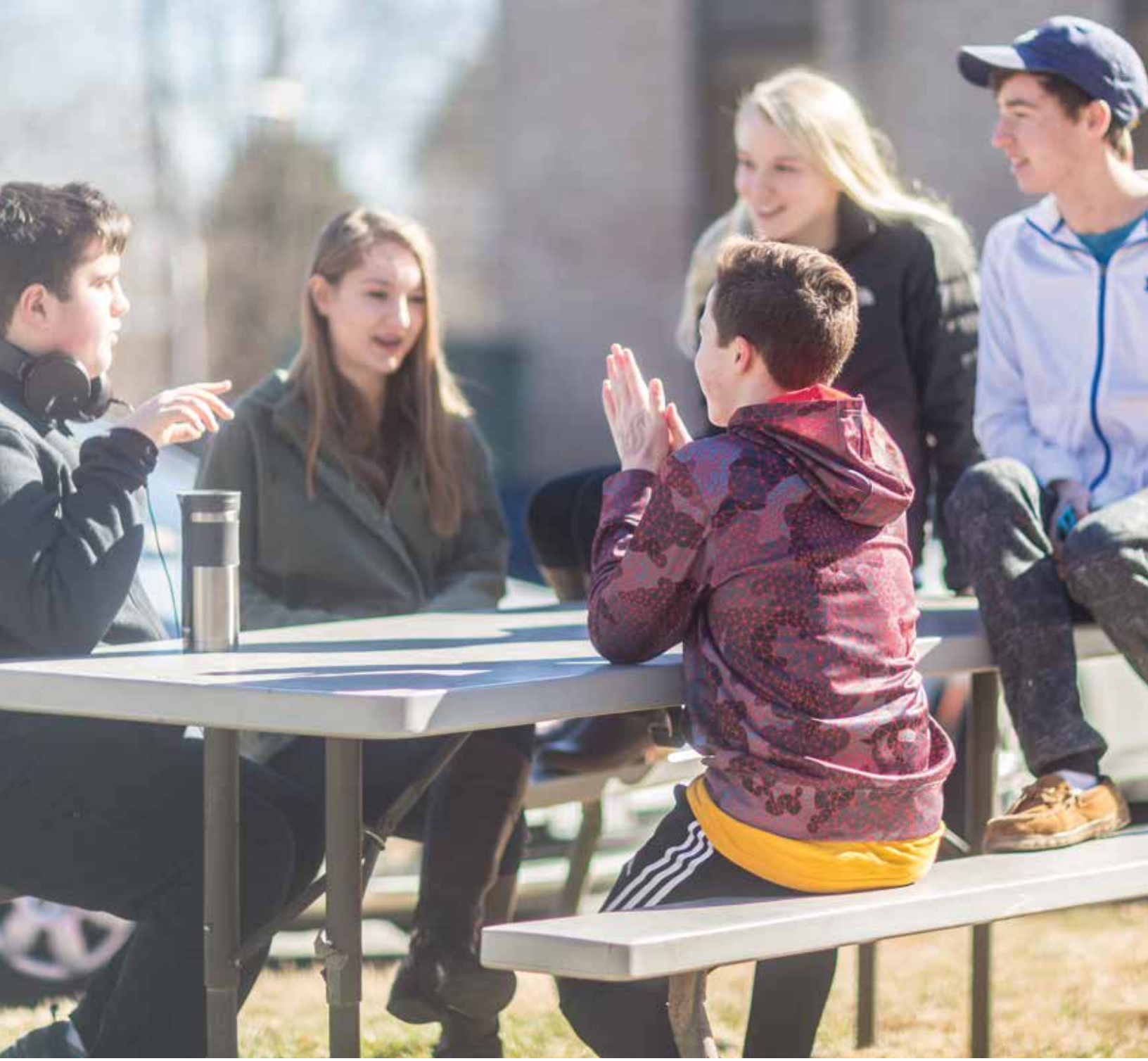


When Cathy Danial was shopping for a vehicle for her son, Joey, she couldn't have foreseen the moment four years later when another driver would hit Joey's SUV, causing it to spin around, leave the road and strike a tree.

What she did know was that anything could happen. That's why she researched safety ratings and chose to spend a little more money for a vehicle that would offer good protection in a crash.

Joey Danial ended up with a 2007 Hyundai Santa Fe, which is what he was driving when the crash occurred on a four-lane Michigan road earlier this year. He wasn't hurt, but the Santa Fe was totaled.

Despite the frightening circumstances of the crash, none of the impacts were severe enough to prompt airbags to deploy. Still, the outcome reinforced the Danials' confidence in the 2007 Santa Fe. They replaced it with the same model.

"I certainly feel like my car did a pretty good job, considering the damage to the car versus the damage to me, which was nothing," Joey Danial said recently.

IIHS wants to help other families have that kind of confidence in their young driver's first vehicle — without having to experience a serious crash. The latest update of the Institute's list of recommended used vehicles for teens includes 49 "best choices," starting under $20,000, and 82 "good choices," starting under $10,000. (The latter category includes the 2007 Santa Fe.)

Teenagers are among the riskiest drivers, but they often end up with inexpensive vehicles that don't offer adequate protection in a crash. To help families find safer

Best choices

Recommended used vehicles for teens starting under $20,000

Large cars	Price
Volvo S80 2007 and newer	$4,000
Toyota Avalon 2015 and newer	$18,800
Infiniti M37/M56/Q70 2013 and newer	$19,800

Midsize cars	
Dodge Avenger 2011-14	$5,300
Chrysler 200 sedan 2011 and newer	$5,900
Kia Optima 2011 and newer	$7,600
Volkswagen Passat 2013 and newer; built after October 2012	$8,700
Volkswagen Jetta 2015 and newer	$9,200
Nissan Altima sedan 2013 and newer; built after November 2012	$9,500
Ford Fusion 2013 and newer; built after December 2012	$9,600
Volvo S60 2011 and newer; price is for 2012, which had lower trim level available	$9,800
Subaru Legacy 2013 and newer; built after August 2012	$10,700
Chevrolet Malibu 2014 and newer	$10,900
Honda Accord sedan and coupe 2013 and newer	$11,100
Toyota Camry 2014 and newer; built after December 2013	$11,200
Mazda 6 2014 and newer	$11,400
Hyundai Sonata 2015 and newer	$11,900
Acura TL 2012-14; built after April 2012	$12,400
Lincoln MKZ 2013 and newer	$13,300
Subaru Outback 2013 and newer; built after August 2012	$13,600

Midsize cars (continued)	
Chevrolet Malibu Limited 2016	$13,700
Toyota Prius v 2015 and newer	$16,300
Volvo V60 2015 and newer	$18,400
Audi A3 2015 and newer	$18,500
Infiniti Q50 2014-15	$19,100

Small SUVs	
Mitsubishi Outlander Sport 2011 and newer	$6,900
Mitsubishi Outlander 2014 and newer	$10,700
Chevrolet Trax 2015 and newer	$11,800
Fiat 500X 2016 and newer; built after July 2015	$12,600
Nissan Rogue 2014 and newer	$12,900
Buick Encore 2015 and newer	$13,800
Subaru Forester 2014 and newer	$14,900
Honda CR-V 2015 and newer	$15,600
Hyundai Tucson 2016 and newer	$16,000
Toyota RAV4 2015 and newer	$16,000
Mazda CX-3 2016 and newer	$16,600

Midsize SUVs	
Volvo XC90 2005 and newer	$2,500
Ford Flex 2010 and newer; built after January 2010	$7,200
Chevrolet Equinox 2014 and newer	$12,100
GMC Terrain 2014 and newer	$13,300
Nissan Pathfinder 2015 and newer	$15,800

Midsize SUVs (continued)	
Kia Sorento 2016 and newer	$16,500
Volvo XC60 2013 and newer	$16,500
Ford Edge 2015 and newer; built after May 2015	$17,400
Nissan Murano 2015 and newer	$19,100

Minivans	
Kia Sedona 2015 and newer	$14,700
Honda Odyssey 2014 and newer	$16,100
Toyota Sienna 2015 and newer	$18,100

Pickup	
Toyota Tundra extended cab (Double Cab) 2014 and newer	$15,600

Vehicles on this list earn good ratings in the IIHS moderate overlap front, side, roof strength and head restraint tests and good or acceptable ratings in the small overlap front test. If rated by NHTSA, they earn 4 or 5 stars overall or 4 or 5 stars in the front and side tests under the old rating scheme. All come with standard ESC.

All listed vehicles start under $20,000. Prices, provided by Kelley Blue Book and rounded to the nearest $100, are from March 1, 2017, for the lowest trim level and earliest applicable model year. The estimates are based on the following criteria: vehicle in good condition, typical mileage and private party purchase in Arlington, Va.

Note: Some listed models include a "built after" date. This applies when a manufacturer makes changes to improve safety in the middle of a model year. Information about when a specific vehicle was manufactured can be found on the certification label typically affixed to the driver door or near it.

vehicles that fit within their budgets, IIHS began publishing a list of recommended used vehicles for teens in 2014 (see *Status Report*, July 16, 2014, at iihs.org).

This year, IIHS is applying more stringent criteria to both lists, as recent safety improvements to new vehicles have percolated down to lower-cost used vehicles.

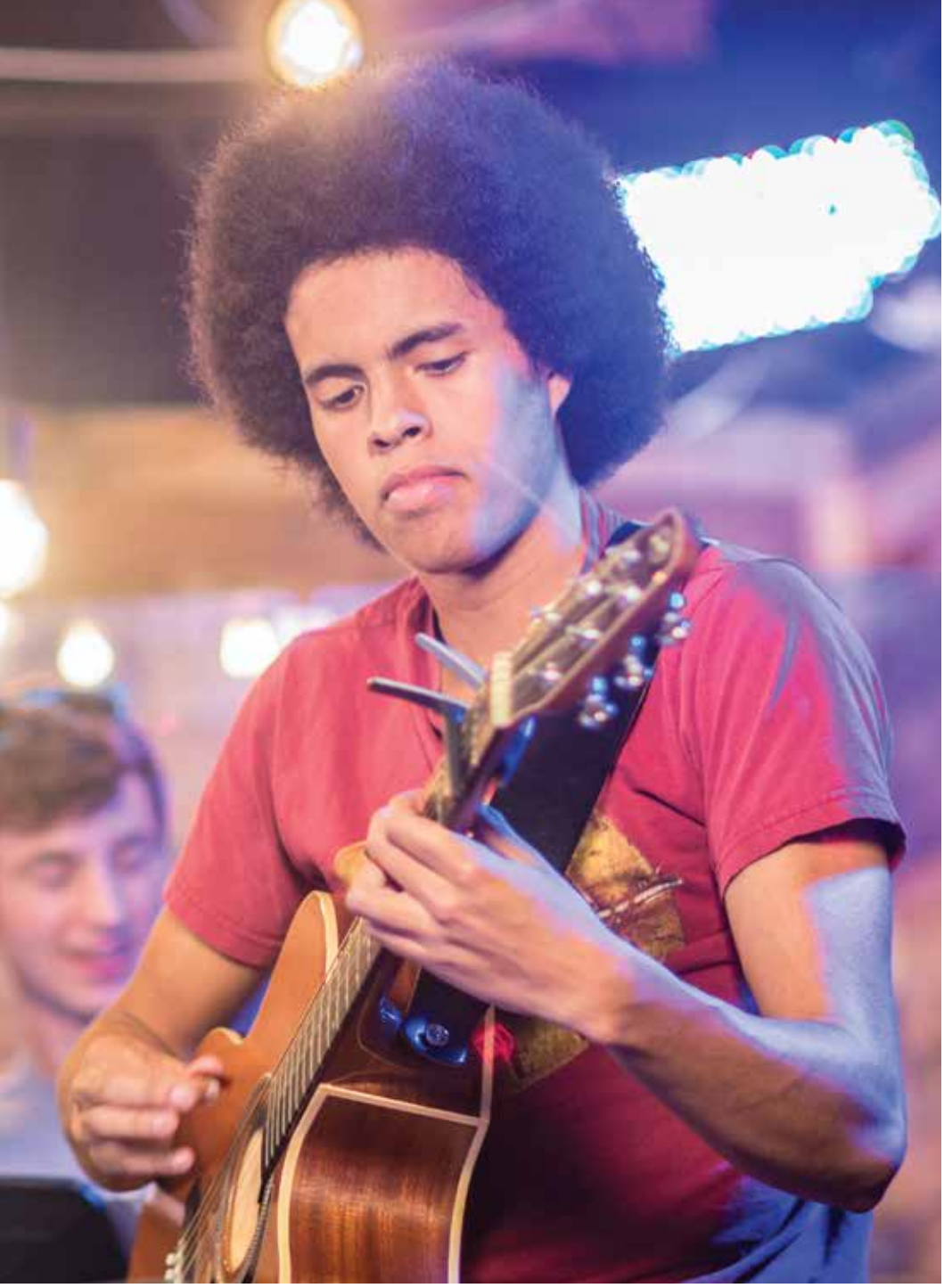
For the first time, small overlap front crash protection has been factored in for the best choices section of the list. And the bar has been raised for the less expensive good choices as well, with better side and head restraint ratings required.

"Just as we are always updating the criteria for our awards for new vehicles, *TOP SAFETY PICK* and *TOP SAFETY PICK+*, we can now point used vehicle buyers toward even safer models than before," says David Zuby, IIHS executive vice president and chief research officer. "Good crash protection is more affordable than ever, so there's no need to skimp on safety when it comes to a vehicle for a young driver."

Prices for listed vehicles are provided by Kelley Blue Book, based on estimates for a private-party purchase near the Institute's Arlington, Va., headquarters.

"Choosing a safe vehicle for your teen is of paramount importance, and settling on a vehicle your family can afford is also very important," says Jack Nerad, executive editorial director and executive market analyst for Kelley Blue Book.

"Kelley Blue Book provides you with updated vehicle prices and values that are unique to your area, so KBB.com is a great site to visit as you finalize your buying decision."



Rules of thumb

Both lists follow a few basic principles, which should always be taken into account when shopping for a vehicle for a teenager:

- **High horsepower and young drivers don't mix**. Teens may be tempted to test the limits of a powerful engine. Vehicles that come only with powerful engines have been left off the lists, but some recommended models have high-horsepower versions. Stick with the base engine.
- **Bigger, heavier vehicles are safer**. There are no minicars or small cars on the lists. Small SUVs are OK; they weigh about the same as a midsize car.
- **Electronic stability control is an essential feature**. This technology, which cuts single-vehicle fatal crash risk nearly in half, has been required on new vehicles since the 2012 model year. It helps a driver maintain control on curves and slippery roads. All listed vehicles have the feature standard.

Beyond those basics, parents should seek out a vehicle with the highest crash test ratings they can afford.

Models on this year's good choices list earn good ratings in the Institute's moderate overlap front, side and head restraint tests. Vehicles on the best choices list must also have a good rating for roof strength to protect in rollover crashes and a good or acceptable rating in the small overlap test, which replicates what happens when the front, driver-side corner of a vehicle strikes another vehicle or an object such as a tree or utility pole.

If rated by the National Highway Traffic Safety Administration (NHTSA), vehicles on either list must earn 4 or 5 stars overall or 4 or 5 stars in the front and side tests under NHTSA's old rating scheme, which was used through the 2010 model year.

Check for recalls

Before purchasing a used vehicle, it's critical to check for outstanding recalls. You can enter the vehicle identification number at nhtsa.gov/recalls. It's also a good idea to notify the manufacturer once you purchase the vehicle, so the company can make sure you receive future recall notices.

Consumers should keep in mind that the ongoing recall of Takata airbags affects a large number of vehicles. Since the risk of airbag malfunction increases over time and also depends on the climate where the vehicle is kept for most of the year, not all affected vehicles have been recalled yet. NHTSA recommends checking its recall page every six months or so.

Plan ahead for a hand-me-down vehicle

In recent years, front crash prevention has been part of the criteria for IIHS safety awards for new vehicles. Although such systems are likely to be valuable for inexperienced drivers, they are usually available only as optional equipment, making it difficult to locate a used vehicle that has the feature. The same goes for good- or acceptable-rated headlights. IIHS began headlight ratings last year, but many vehicles have multiple headlight systems with varying ratings.

Parents of children who are still years away from driving should plan ahead if they want their future driver to benefit from front crash prevention and good-rated headlights. If possible, when buying the next family vehicle, choose an IIHS *TOP SAFETY PICK* or *TOP SAFETY PICK+* with at least 4 or 5 stars from NHTSA, and consider handing it down to your teenager when the time comes. ■

Good choices

Recommended used vehicles for teens starting under $10,000

Large cars	Price
Ford Taurus 2009 and newer	$4,300
Mercury Sable 2009	$4,600
Audi A6 2007 and newer	$5,600
Toyota Avalon 2009-14	$6,500
Buick LaCrosse 2010 and newer	$7,500
Lincoln MKS 2009 and newer	$7,800
Buick Regal 2011 and newer	$8,000
Saab 9-5 2010-11	$9,700
Acura RL 2009 and newer	$9,900

Midsize cars	
Saab 9-3 2005-11	$2,000
Suzuki Kizashi 2010-13	$3,600
Volkswagen Jetta sedan and wagon 2009-14	$3,900
Audi A4 sedan and wagon 2007 and newer; built after July 2006	$4,100
Volkswagen Passat sedan and wagon 2009-12	$4,500
Mercury Milan 2010-11	$5,200
Volkswagen CC 2009 and newer	$5,200
Ford Fusion 2010-12	$5,300
Subaru Legacy 2009-12	$5,400
Volvo C30 2008-13	$5,400
Audi A3 2008-13	$5,700
Chevrolet Malibu 2010-13	$5,800
Honda Accord sedan 2008-12	$5,900
BMW 3-series sedan 2009 and newer	$6,700
Lincoln MKZ 2010-12	$6,900
Hyundai Sonata 2011-14	$7,200
Subaru Outback 2010-12	$7,700
Acura TSX 2009-14	$8,300
Acura TL 2009-11	$8,400
Buick Verano 2012-15	$8,600
Mercedes-Benz C-Class 2009 and newer	$8,600
Toyota Camry 2012-13	$9,100

Small SUVs	
Mitsubishi Outlander 2007-13	$3,900
Nissan Rogue 2008-13	$4,400
Subaru Forester 2007-13	$4,400
Ford Escape 2009 and newer	$4,900

Small SUVs (continued)	
Mazda Tribute 2009-11	$4,900
Mercury Mariner 2009-11	$5,100
Honda Element 2007-11	$5,300
Honda CR-V 2007-14	$5,400
Volkswagen Tiguan 2009 and newer	$5,800
Toyota RAV4 2009-14	$7,000
Hyundai Tucson 2010-15	$7,500
Kia Sportage 2011 and newer	$7,700

Midsize SUVs	
Ford Taurus X 2008-09	$3,700
Saturn Vue 2008-09; built after December 2007	$4,000
Honda Pilot 2006 and newer	$4,000
Hyundai Santa Fe 2007 and newer	$4,300
Subaru Tribeca/B9 Tribeca 2006-14	$4,700
Ford Edge 2007-14	$5,200
Dodge Journey 2010 and newer	$5,400
Hyundai Veracruz 2008-12	$5,700
Nissan Murano 2009-14	$5,900
Ford Flex 2009	$6,100
Acura RDX 2007 and newer	$6,900
Chevrolet Equinox 2010-13	$6,900
GMC Terrain 2010-13	$7,100
Lincoln MKX 2007 and newer	$7,100
BMW X3 2008 and newer	$7,300
Mercedes-Benz M-Class 2007-15	$7,700
Toyota Highlander 2008 and newer	$8,100
Honda Crosstour 2010-15	$8,200
Infiniti EX 2008-13	$8,200
Volvo XC60 2010-12	$8,200
Acura MDX 2007 and newer	$8,300
Kia Sorento 2011-15	$8,400
Toyota Venza 2009-15	$8,400
BMW X5 2008-13	$8,600

Large SUVs	
Saturn Outlook 2008-09; built after March 2008	$5,000
Chevrolet Traverse 2009 and newer	$6,300
GMC Acadia 2008 and newer; built after March 2008	$6,900

Large SUVs (continued)	
Buick Enclave 2008 and newer; built after March 2008	$7,300
Audi Q7 2008 and newer; built after December 2007	$9,100
Mercedes-Benz R-Class 2009-12; built after September 2008	$9,100

Minivans	
Kia Sedona 2006-14	$2,500
Hyundai Entourage 2007-08	$3,300
Honda Odyssey 2008-13	$4,800
Volkswagen Routan 2010-12	$5,600
Chrysler Town & Country 2010 and newer; built after March 2010	$6,100
Dodge Grand Caravan 2010 and newer; built after March 2010	$6,100
Nissan Quest 2011 and newer	$8,500

Pickups	
Toyota Tundra extended cab (Double Cab) 2007-13	$8,400
Ford F-150 crew cab (SuperCrew) 2009 and newer	$9,800

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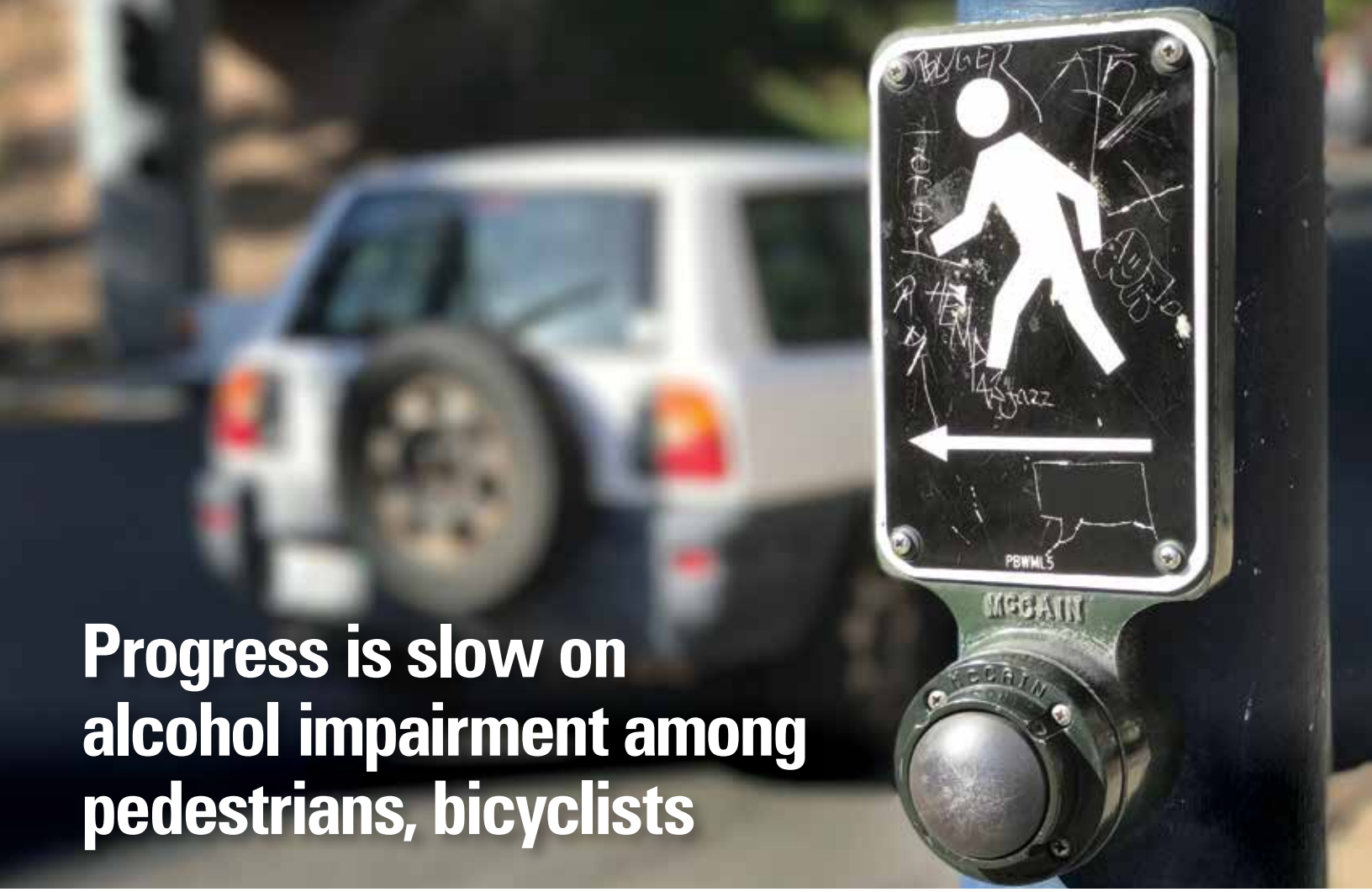


Progress is slow on alcohol impairment among pedestrians, bicyclists

More than one-third of pedestrians and one-fifth of bicyclists killed in crashes in 2014 were impaired by alcohol, but scant attention has been paid to the problem. This omission contrasts starkly with the many successful policies that have reduced impaired driving, a new Institute study notes.

The study looked at fatalities of passenger vehicle drivers, pedestrians and bicyclists 16 and older from 1982 to 2014. Using a federal database, IIHS researchers looked at the characteristics of those crashes and trends over time. They found that the percentage of fatally injured pedestrians and bicyclists 16 and older who were impaired has fallen over the decades, but not as dramatically as the percentage of impaired drivers.

Most of the decline among fatally injured pedestrians was in the 1980s and early 1990s, while among bicyclists the proportion has fluctuated. An earlier IIHS study that looked at pedestrian and bicyclist fatalities from 1992 to 2011 found that the proportion impaired by alcohol barely changed in those years (see *Status Report*, Dec. 30, 2013).

Previous research has shown that crashes involving pedestrians or bicyclists are more likely to result in death or serious injury when the pedestrians or bicyclists have been drinking. Alcohol impairment contributes to poor decision-making, which can lead to dangerous pedestrian behavior — for example, crossing a street at a dangerous time or location. Alcohol also degrades psychomotor skills, which are important for riding a bike.

The percentage of fatally injured pedestrians with blood alcohol concentrations of 0.08 percent or higher fell from 45 percent in 1982 to 35 percent in 2014. The percentage for bicyclists fell from 28 percent to 21 percent. In contrast, the percentage for passenger vehicle drivers declined from 51 percent to 32 percent.

The largest decrease in alcohol impairment among walkers and cyclists was for people ages 16-20. Alcohol impairment among fatally injured pedestrians in that group fell from 41 percent in 1982-86 to 25 percent in 2010-14. Among fatally injured bicyclists of that age, it fell from 18 percent to 9 percent.

Much of the decline for younger people is likely due to changes in state laws that raised the legal drinking age to 21. In the past, many states had lower drinking ages, but since 1988 the drinking age has been 21 in all states and the District of Columbia.

In contrast, most other policies that have reduced impaired driving are unlikely to reduce alcohol use by pedestrians and bicyclists. In fact, they could have the opposite effect.

"Education and enforcement campaigns aimed at reducing impaired driving may give people the erroneous impression that walking or riding a bike is a safe alternative," says IIHS Senior Research Scientist Angela Eichelberger, the study's lead author. "The public needs to be better informed about the dangers of alcohol impairment for anybody on the road."

Enforcing bans against serving alcohol to obviously impaired customers in restaurants and bars could also help, as could the recent proliferation of ride-sharing services, Eichelberger and her co-authors note.

For a copy of "Fatally injured pedestrians and bicyclists in the United States with high blood alcohol concentrations" by A.H. Eichelberger et al., email publications@iihs.org. ■

Limiting speeds, adopting crash avoidance systems can reduce large truck crashes Lund tells Senate panel

IIHS President Adrian Lund shared research on factors that can lead to large truck crashes and stressed the importance of capping truck speeds and the need for improved underride guards in testimony before a Senate subcommittee.

Lund was among five highway safety experts invited to testify March 14 before the U.S. Senate Committee on Commerce, Science and Transportation's Surface Transportation and Merchant Marine Infrastructure, Safety and Security Subcommittee. Also testifying were Christopher A. Hart, chairman of the National Transportation Safety Board (NTSB); Kansas Highway Patrol Capt. Chris Turner, who is vice president of the Commercial Vehicle Safety Alliance; Paul P. Jovanis, chair of the Transportation Research Board's Motor Vehicle Carrier Safety Research Analysis Committee; and Jerry Moyes, chairman emeritus of Swift Transportation.

Deaths on U.S. highways have been on a steady rise as the economy has improved, but truck-related deaths are increasing faster than overall motor vehicle deaths.

"The number of people who died in large truck crashes was 22 percent higher in 2015 than in 2009, while crash deaths overall rose less than 4 percent," Lund told the committee. "Preliminary data for 2016 indicate that the highway death toll is still on the rise, and we expect that trucks are contributing to this disturbing trend."

Reducing the problem requires a range of countermeasures.

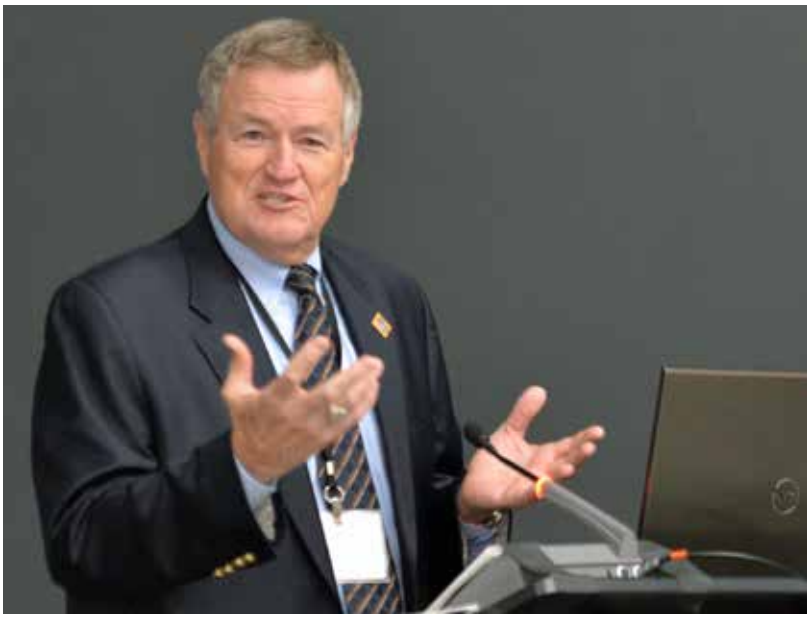
"Making sure that equipment is in good working order, drivers are properly rested and truck speeds are reduced are important steps that would improve the safety of all road users," Lund said. "Strong rear underride guards are another lifesaving measure that should not be overlooked."

Crash avoidance technologies can help, too. These include vehicle stability control systems, forward collision warning/mitigation, blind spot detection and lane departure warning/prevention. Based on an analysis of crashes during 2004-08, IIHS estimates that a combination of all four technologies could prevent or mitigate as many as 107,000 police-reported crashes each year, representing 28 percent of all crashes involving large trucks.

Hart noted that increased implementation of crash avoidance technologies is on the NTSB's Most Wanted List of transportation improvements for 2017-18. The agency calls for the expanded use of event data recorders, including those that can record video, and stepped-up efforts to reduce fatigue-related crashes, alcohol and drug impairment and driver distractions.

"We believe that forward collision avoidance systems and speed-limiting devices should be standard on all commercial trucks," Hart said. Electronic logging devices to record work hours are needed, too.

Jovanis told the committee that regulators should create an enhanced database of large truck and bus crashes that accounts for environment, traffic, road design and vehicle technology factors.



Adrian Lund, IIHS president, was one of five safety experts invited by a Senate panel to testify on ways to improve the safety of large trucks on U.S. roads. In this file photo, Lund addresses a meeting of safety advocates at the Vehicle Research Center.

Making sure that equipment is in good working order, drivers are properly rested and truck speeds are reduced are important steps that would improve the safety of all road users.

Swift Transportation's Moyes shared with the committee how the carrier, which operates about 18,000 trucks, integrates safety into its business model. Swift adopted speed limiters in the 1990s, added vehicle stability control to all of its new trucks beginning in 2007, deployed electronic logging devices in 2010 and started ordering new trucks with crash avoidance and lane-departure systems in 2013. The carrier also uses video event data recorders.

"We made these changes to improve safety for our drivers and the public because it made business sense and it was the right thing to do, not because we were required by the government." Moyes said.

Moyes also gave a nod to the Institute's new **TOUGH**GUARD award, noting that some of Swift's trailers have rear underride guards meeting IIHS criteria. So far, five North American semitrailer manufacturers have qualified for the award. ■

Insurance Institute for Highway Safety
Highway Loss Data Institute

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HLDI shares and supports this mission through scientific studies of insurance data representing the human and economic losses resulting from the ownership and operation of different types of vehicles and by publishing insurance loss results by vehicle make and model.

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