

Status Report

Insurance Institute for Highway Safety | Highway Loss Data Institute

How to make **young driver** laws even better

Fatal crash rates have plunged,
but there's still room for progress

**ALSO IN
THIS ISSUE**
Vol. 47, No. 4
May 31, 2012

- ▶ Motorcycle antilocks slash claims for newly insured riders
- ▶ Michigan allows most motorcyclists to skip helmets
- ▶ Hail-related insurance claims jumped in 2011

If every state adopted all five components of the toughest young driver licensing laws in the nation, more than 500 lives could be saved and more than 9,500 collisions could be prevented each year, the Insurance Institute for Highway Safety and Highway Loss Data Institute (HLDI) estimate. Some states could halve or more than halve their rate of fatal crashes among 15-17 year-olds if they adopted the strongest graduated driver licensing (GDL) provisions.

Institute researchers collaborated with HLDI analysts to develop an online calculator (go to ihs.org/gdl) to show individual states the safety gains they could achieve by adopting some or all of the most beneficial GDL provisions in effect today. The five key GDL components are permit age, practice driving hours, license age, and night driving and passenger restrictions.

The current best practices are a minimum intermediate license age of 17 (New Jersey), a minimum permit age of 16 (Connecticut, Delaware, District of Columbia, Kentucky, New Jersey, New York, Pennsylvania, Massachusetts and Rhode Island), at least 65 supervised practice hours (Pennsylvania) and, during the intermediate stage, a night driving restriction starting at 8 p.m. (Idaho

immediate reductions in fatal crashes and collision claims as soon as the beefed-up provisions are in force.”

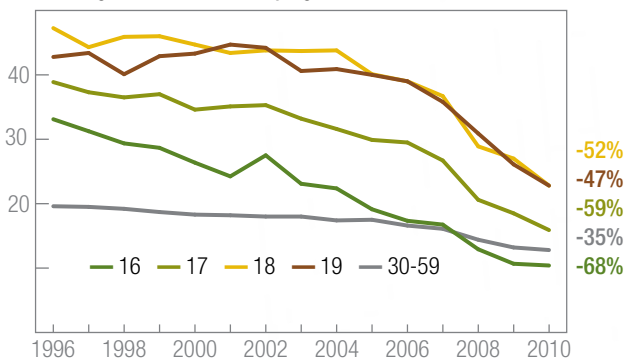
Graduated licensing enables new teen drivers to gradually build up driving experience as they mature and develop on-the-road skills. The system has three stages: a supervised learner’s period, an intermediate license (after passing a road test) that limits driving in high-risk situations except under supervision, and a license with full privileges. Teens with learner permits should get lots of supervised driving practice, and once they have intermediate licenses they should be subject to limits on night driving and teen passengers. The longer the restrictions last the better.

In the mid-1990s, states began adopting elements of graduated licensing (see *Status Report*, Aug. 10, 1996). By December 2000, all but nine states had GDL laws. Since there is no nationwide GDL system, the laws vary.

To recognize states with the best laws, the Institute began rating them in 2000 from good to poor. Initially, only six states and the District of Columbia earned good ratings, and nine were poor (see *Status Report*, Dec. 20, 2000). By May of 2011, 36 states and D.C. rated good, seven rated fair and seven were marginal.

Fatal crashes per 100,000 people

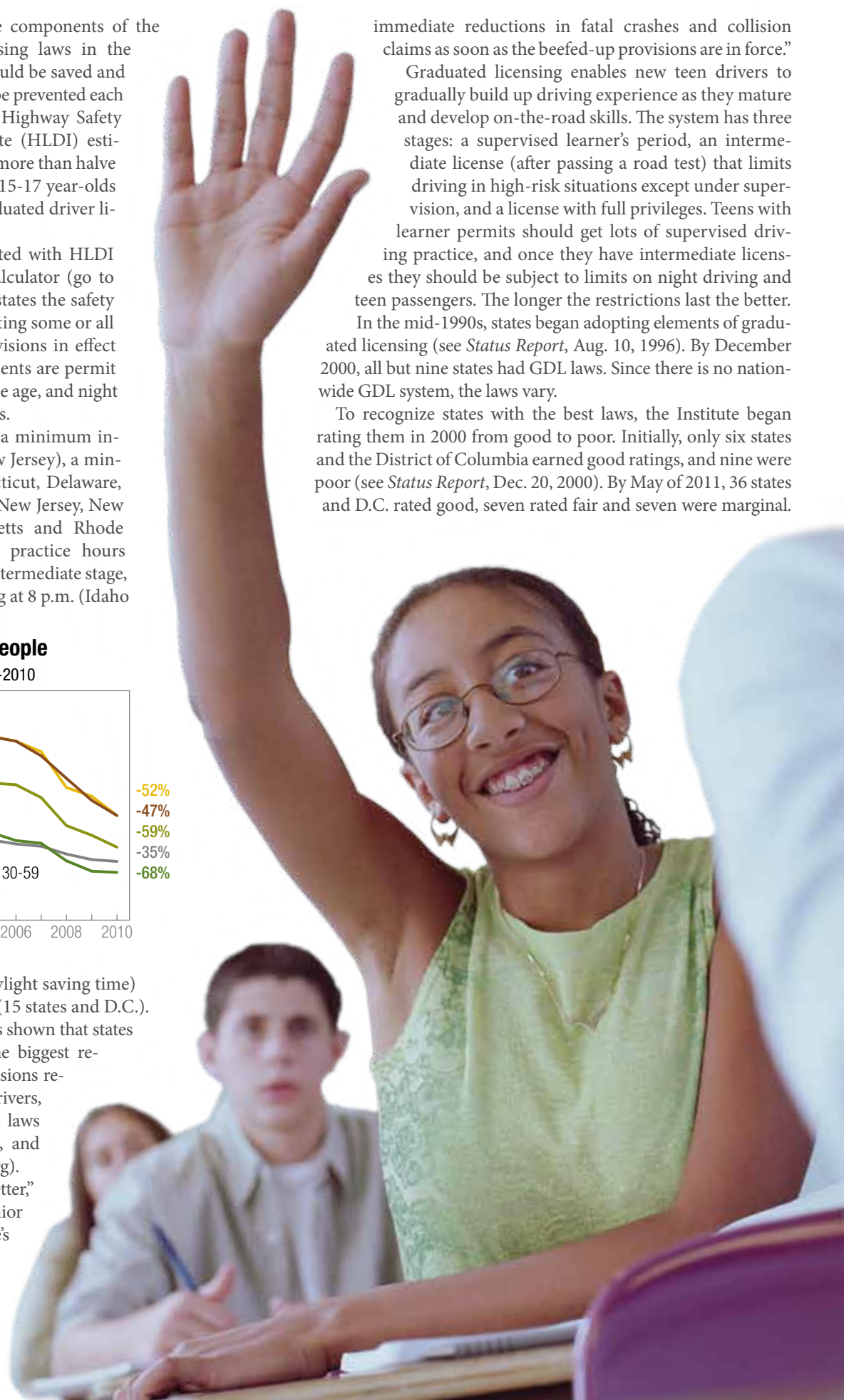
Passenger vehicle drivers by age, 1996-2010



and in South Carolina during daylight saving time) and a ban on all teen passengers (15 states and D.C.).

Institute and HLDI research has shown that states with the strongest laws enjoy the biggest reductions in fatal crashes and collisions reported to insurers among teen drivers, compared with states with weak laws (see *Status Report*, May 7, 2009, and Sept. 9, 2008; on the web at ihs.org).

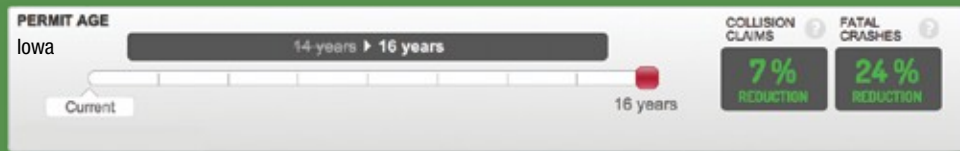
“Even the best states can do better,” says Anne McCartt, Institute senior vice president for research. “There’s room for improvement across the board, and states could see



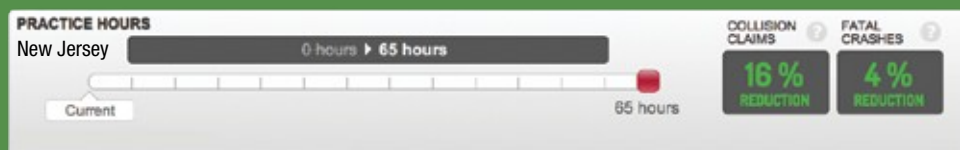
Match the best

An online calculator shows states how to reduce rates of fatal crashes and collision claims among teenage drivers by adopting some or all of the best GDL provisions in force today.

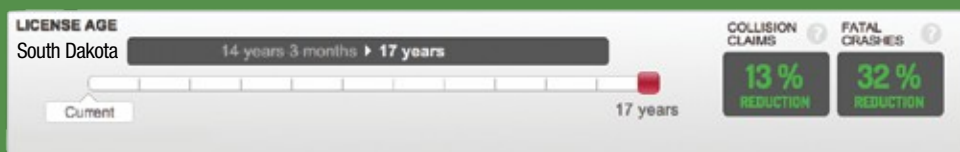
iihs.org/gdl



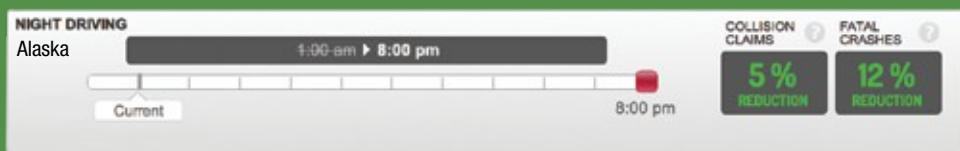
Permit age: One way states can reduce teen crashes and deaths is to raise the minimum permit age. The older teens are when they get their permits, the lower their crash risk. Iowa allows 14 year-olds to get learner permits. Raising the age to 16 would help save lives.



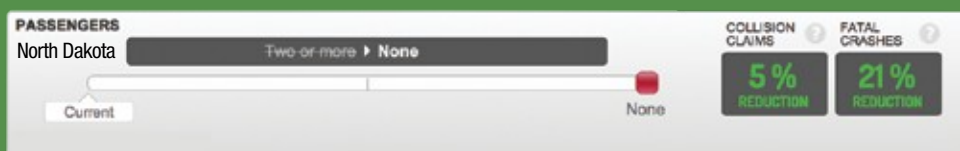
Practice hours: Most states require a minimum number of supervised practice hours before learners can progress to an intermediate license. Requiring more practice reduces the number of collision claims filed for novice drivers. New Jersey doesn't have a practice driving requirement.



License age: The older teens are when they become eligible for a license, the fewer fatal crashes there are. South Dakota licenses at 14 years 3 months. Raising the age to 17 would reduce fatal crash rates among young drivers by 32 percent and insurance collision claims by 13 percent.



Night driving: Most states restrict teens in the intermediate stage of licensure from driving without adult supervision at night. Starting times vary. Restrictions work best if they begin at 10 p.m. or earlier. Alaska's doesn't start until 1 a.m.



Passengers: When novice drivers travel with other teens in their car, fatal crash risk increases. Most states limit passengers for unsupervised intermediate-stage drivers. North Dakota doesn't restrict teen passengers. The state could sharply reduce fatal crashes by prohibiting all teens.

Best GDL provisions by state, May 2012

Permit age of 16

Connecticut
Delaware
District of Columbia
Kentucky
Massachusetts
New Jersey
New York
Pennsylvania
Rhode Island

65 practice hours

Pennsylvania

Licensing age of 17

New Jersey

8 p.m. night driving restriction

Idaho (sunset to sunrise)
South Carolina (6 p.m. EST)

No teenage passengers

Alaska	Maryland
California	Massachusetts
Colorado	Nevada
Connecticut	Oregon
D.C.	Utah
Georgia	Vermont
Indiana	Washington
Maine	West Virginia

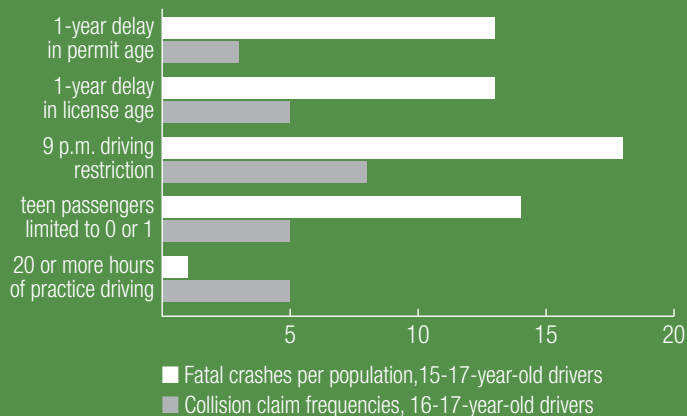


Overall: The safety payoff of adopting all the best provisions is huge for states such as South Dakota, which has lots of room to improve.

Even the best states can do better. There's room for improvement across the board, and states could see immediate reductions in fatal crashes as soon as the tougher provisions are in force.



Percent reduction in teenagers' crash rates
by graduated licensing component



No states earned poor ratings. In recent years, legislators have been slow to toughen graduated licensing laws, particularly when it comes to raising the age for a permit or license. During the 2010-12 legislative sessions, for example, nine states strengthened elements of their young driver laws, compared with 20 states during 2007-09 sessions.

The ratings initially encouraged states to adopt three-phase graduated licensing systems. The ratings, however, didn't show legislators how any state — even ones with already-strong laws — could boost the benefits of graduated licensing by targeting specific components, such as night restrictions, for improvement. The Institute now knows more about what works and what doesn't when it

comes to keeping young drivers safe. Based on more than a decade of data, researchers are able to estimate the effects of changing individual provisions of GDL.

As a result, the Institute has decided to stop grading state GDL laws and switch to a calculator system designed to outline opportunities for improvement in every state. In addition to the best-practice scenario, the calculator shows the estimated fatal crash and collision claim reductions that a given state can achieve with any combination of specific law changes.

"States don't have to adopt the toughest laws in the nation to realize safety gains. Strengthening one or two components pays off. To maximize all of the benefits of graduated licensing, however, we would encourage lawmakers to consider the strongest provisions," McCartt says.

Stronger laws yield benefits

Iowa and South Dakota are examples of states that could sharply lower fatal crash and collision claim rates among teen drivers. Both states allow 14 year-olds to obtain learner permits. Iowa makes drivers wait until they're 16 to get a license, but South Dakota allows teens to get a license three months after their 14th birthday. The state has the youngest license age in the nation.

"That's too risky," McCartt says. "The younger teens are when they get their licenses, the higher their crash rate."

If South Dakota raised its license age to 17, the benefit would be an estimated 32 percent reduction in fatal crash rates among 15-17-year-old drivers and a 13 percent reduction in collision claims among 16-17-year-old drivers. Raising the license age to 15½ could reduce fatal crashes by an estimated 16 percent and collision claims by 6 percent.

A crucial provision of any graduated licensing system is a night driving restriction. South Dakota's starts at 10 p.m., but Iowa's doesn't begin until 12:30 a.m. Moving Iowa's restriction to 8 p.m. would reduce teens' fatal crashes 10 percent.

Neither state bars beginners from transporting other teens, a practice that increases crash risk. If both states adopted such a policy, they each could realize a 21 percent drop in fatal crashes among 15-17-year-old drivers and a 5 percent decline in collision claim rates among 16-17-year-old drivers. A one-teen-passenger limit would reduce teens' fatal crash rates 7 percent in either state.

If Iowa adopted the strongest provisions across the board, the state could see a 55 percent reduction in teens' fatal crash rates. South Dakota's estimated safety gains are even bigger — a 63 percent reduction in fatal crashes and a 37 percent drop in collision claims.

Even best states can improve

Connecticut comes closest to the current best-practices system. The state makes teens wait until age 16 for a permit and restricts all teen passengers during the intermediate license stage. If Connecticut also adopted the best provisions for practice hours, license age and night driving, it could realize a 17 percent reduction in fatal crashes and a 13 percent reduction in collision claims among teen drivers.

New York is another state with a strong GDL program. It has a permit age of 16, a license age of 16 ½, a night driving restriction beginning at 9 p.m., a one-teen-passenger limit and a 50-hour supervised-practice-driving requirement. Adopting the toughest provisions would reduce fatal crashes among 15-17-year-old drivers by 24 percent and collision claims among 16-17-year-old drivers by 7 percent.

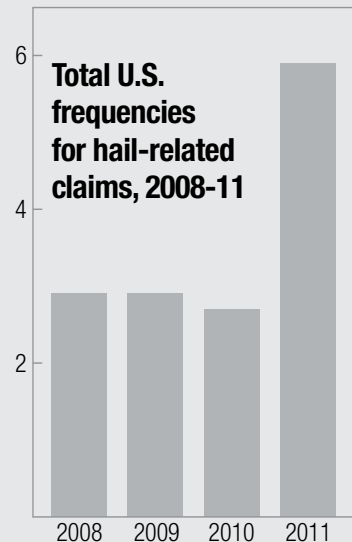
Hail claims spiked in 2011

Insurance losses for hail-related damage to vehicles more than doubled last year compared with the previous three years, an analysis by the Highway Loss Data Institute (HLDI) shows. Using information from insurers about weather-related losses under comprehensive coverage, HLDI matched the dates of those

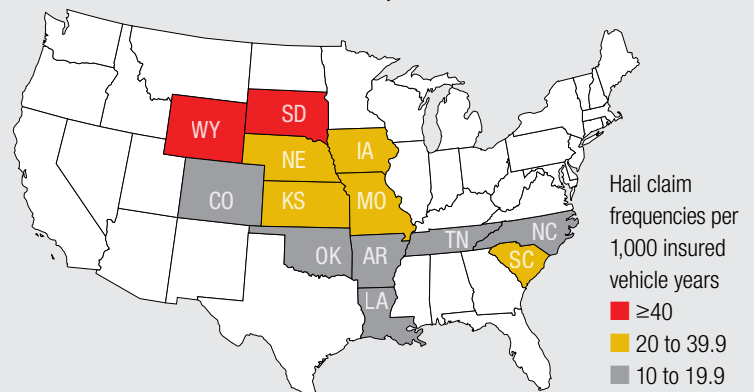
claims to hail events recorded by the National Oceanic and Atmospheric Administration to determine which claims were for hail damage. The results showed a frequency of 5.9 claims per 1,000 insured vehicle years in 2011, compared with 2.9 in 2008 and 2009 and 2.7 in 2010. Overall losses in 2011

were \$19 per insured vehicle year compared with \$8-\$9 in the other years. The analysis excluded any hail storms that accompanied tornadoes, since it would be impossible to determine which weather event caused the damage that led to the claim.

Hail claims are primarily concentrated in the Midwest, with states such as South Dakota, Nebraska, Kansas and Oklahoma frequently showing high rates. However, hail can occur almost anywhere, and many of the high claim rates last year were seen in states that don't typically have many hail claims. ■



States with highest frequencies of hail-related claims, 2011



“We encourage states to sharpen the core elements of their teen driver laws, particularly restrictions on night driving and young passengers,” McCartt says. “Raising the licensing age would help in many states, but we realize that this isn’t always a politically popular option.”

About the calculator

The calculator grew out of the Institute’s and HLDI’s 2009 evaluation of the effects of

various provisions of teen licensing laws on fatal crashes and collision claims for teen drivers. In this analysis, fatal crashes are the rate of 15-17-year-old passenger vehicle drivers involved in fatal crashes per 100,000 teens. Collision claims are the frequency of collision claims per 100 insured vehicle years for 16-17-year-old drivers (an insured vehicle year is one vehicle insured for one year, two insured for six months each, etc.). Collision coverage insures against damage to the

policyholder’s vehicle. The findings indicate strong benefits of restricting when teens are allowed to drive and how many young passengers may ride along. Raising the license and permit age also reduces teens’ fatal crashes. The calculator estimates reflect the relative importance of each provision and reductions states have seen as a result of GDL. Longer learner permit holding periods, a criterion under the prior rating system, don’t show independent benefits in the analysis. ■

A large photograph of a red motorcycle with a rider and a passenger on a winding road. The motorcycle is in the foreground, leaning slightly to the left. The road curves to the right, and there are other motorcycles in the distance. The background is a lush green landscape with trees and a clear sky.

Antilocks slash claims for newly insured riders

Antilock brakes cut crashes for motorcyclists of all abilities, but the benefit is especially large for those new to riding or to a particular bike, a new analysis of insurance claims suggests.

The Highway Loss Data Institute (HLDI) compared the rate at which collision claims were filed for motorcycles equipped with antilock braking systems (ABS) with the rate for motorcycles without ABS. It found that ABS bikes were 30 percent less likely to have a collision claim within the first 90 days of a policy and 19 percent less likely after that.

“We already knew that motorcycle ABS cuts crashes. What this study shows is that ABS may help compensate for beginners’ mistakes,” says HLDI Vice President Matt Moore. “At the same time, riders with more experience also reap large benefits from the technology.”

Preventing wheels from locking up is crucial on a motorcycle. On a car, a lockup might result in a skid, but on a motorcycle, it often means a loss of balance and a potentially deadly fall. ABS prevents lockup by automatically reducing brake pressure if it detects that a

wheel is about to stop rotating, then increasing it again after traction is restored. That way, a rider can brake fully in an emergency without any hesitation.

HLDI also updated a broader analysis of motorcycle ABS. Comparing ABS and non-ABS versions of 22 motorcycles from the 2003-12 model years, HLDI analysts found that collision claims were filed 23 percent less often for antilock-equipped bikes, and medical claims related to riders’ injuries were 34 percent less frequent. Those findings are in line with earlier HLDI analyses and with research from the Insurance Institute for Highway Safety showing a 37 percent reduction in the fatal crash rate with ABS (see *Status Report*, March 31, 2010; on the web at iihs.org).

Previous HLDI research has shown that, regardless of whether a motorcycle has ABS, collision claims are more likely to be filed under a new policy than under one that has been held for several months or longer.



The findings suggest ABS helps compensate for beginners' mistakes, but experienced riders also benefit.

 iihs.org/research/topics/motorcycles

A rider's level of experience is not directly reflected in the HLDI data. Researchers analyzed the amount of time a policy has been held with the idea that many new policies are associated with novice riders. In addition to novices, new policies also include purchases of new bikes by experienced riders and situations in which a rider switches insurers or drops and then restarts coverage based on seasonal riding habits.

To find out how the effect of ABS varied at different points in the policy period, HLDI looked at claims filed during the first two years of a motorcycle collision policy. Collision insurance covers damage to a motorcycle in a crash in which the rider is at fault. The analysis, which controlled for motorcycle class, model year, rider age and other factors, showed that ABS bikes had consistently lower claim frequencies throughout the two years. Claims for both groups were much higher at the beginning of policies than later on.

The difference in claim frequency for motorcycles with and without antilocks was much more pronounced in the first 90 days than

Michigan drops helmet requirement for most motorcycle riders

Michigan has abandoned its four-decade-old helmet requirement for motorcycle riders, a decision that's likely to lead to increased fatalities and traumatic brain injuries.

Gov. Rick Snyder signed the bill on April 12. His predecessor, Jennifer Granholm, had vetoed similar legislation twice.

Under the new law, only riders younger than 21 are required to wear helmets. All others have the option of riding bareheaded, provided they have either passed a motorcycle safety course or held the motorcycle endorsement on their driver's license for at least two years. They also must carry at least \$20,000 in medical coverage.

"Michigan has just taken a big step backward," says Anne McCartt, the Institute's senior vice president for research. "Just like safety belts and airbags for vehicle occupants, a helmet is a crucial piece of safety equipment for people on motorcycles."

The National Highway Traffic Safety Administration estimates that helmets cut the risk of a motorcycle fatality by 37 percent. Motorcycle deaths have risen in other states that have weakened helmet laws. For example, the fatality rate among motorcyclists in Florida rose about 25 percent after that state exempted riders over 21 years old with medical coverage in 2000. An Institute study found the change led to an estimated 117 additional deaths in the first two years (see *Status Report*, Sept. 28, 2005; on the web at iihs.org).

Michigan's original helmet law dates back to 1967, when the federal government required states to pass helmet requirements in order to qualify for certain highway funds. It was repealed the next year but reinstated in 1969.

The change in Michigan leaves just 19 states and the District of Columbia with universal helmet laws. Twenty-eight states require some motorcyclists — usually those under a certain age — to wear helmets, while Illinois, Iowa and New Hampshire don't have helmet-use laws (see iihs.org/laws).

Universal helmet laws are effective. Nearly all motorcyclists report that they always wear helmets in states where the laws apply to all riders, but only about half report doing so in states with no laws or laws that apply to some riders (see *Status Report*, March 31, 2010). ■



in any of the subsequent 90-day periods. Since the effect of ABS was similar in all of the subsequent periods, days 91-720 were combined into one period. The estimated reduction in claim frequency from ABS within this later period was 19 percent, compared with a 30 percent reduction for the first 90 days.

"While not all motorcyclists with new insurance policies are novices, those in the later period invariably have at least three months of riding under their belt, so the 19 percent reduction is a key finding," Moore says. "Experienced riders should think twice before they dismiss ABS as something for beginners."

HLDI didn't look at claim frequency beyond two years because the mix of motorcycles changes too much after that point. Certain types of bikes are more likely to be totaled in the first two years, and many motorcycle owners drop their collision insurance after their loans are paid off. However, there's no reason to believe that riders with more than two years of experience wouldn't benefit from antilocks. ■

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The **Insurance Institute for Highway Safety** is an independent, nonprofit scientific and educational organization dedicated to reducing the losses — deaths, injuries and property damage — from crashes on the nation's roads.

The **Highway Loss Data Institute** 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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