

# WISCONSIN TRAFFIC SAFETY REPORTER

Vol. 12, No. 3  
2009



## A big step forward

Major Dan Lonsdorf  
Director, Bureau  
of Transportation  
Safety

Traffic safety efforts in Wisconsin attained a significant milestone when Governor Jim Doyle signed the state budget (2009 Wisconsin Act 28), which strengthens the state's mandatory safety belt law by adopting primary enforcement.

Under the previous law, officers had to stop motorists for another violation before they could issue a safety belt citation. Now officers only need to observe an unbuckled driver or passenger in order to stop the vehicle and ticket the offender.

In 2008, Wisconsin's safety belt use rate was about 74%, one of the lowest in the US and well below the 83% national average. NHTSA studies show that when states upgrade to primary enforcement, belt use rates typically increase about 10%. In Wisconsin, this would save about 44 lives and prevent 650 injuries each year.

Although primary enforcement will be a valuable tool for law enforcement officers, we're not striving to write more tickets. Instead, we are trying to save lives and prevent injuries by increasing voluntary compliance with the law. To avoid the risk of being ticketed, more people will make a habit of buckling up. If we increase voluntary compliance, officers will have more time to focus on speeding, drunken driving and other dangerous behavior.

Along with stringent safety belt enforcement, we will continue our educational efforts to motivate people to buckle up. By increasing belt use, we'll make progress toward our ultimate goal of reducing the

*continued on page 2 sidebar*

## Vehicle safety engineering

# Safer people in safer vehicles

When it comes to improving traffic safety, drivers' and passengers' behavior is always crucial. This is true with buckling up, cutting back on speeding and reducing impaired driving. It is also true with vehicle safety engineering.

Automakers are always making improvements with safety potential and proven performance on the test track. But people still have to make proper use of these advances. For example, the introduction of unibody construction (see sidebar) put passengers in an improved "safety cell," but people still need to buckle up so they remain inside it during a crash.

Vehicle safety engineering is a huge topic and this overview focuses on the following topics. In each area, technology is part of the story but human nature and the way we drive are always vitally important.

-  [Feeling safe can kill](#)
-  [In-vehicle monitoring](#)
-  [How helpful have better vehicle designs been?](#)
-  [Greener and safer vehicles](#)
-  [Resources](#)

*continued on page 2*

## SBIRT

# Helping at-risk drinkers

Wisconsin regularly lands at or near the top of national rankings for high-risk drinking (Centers for Disease Control). One out of four Wisconsin residents engage in illicit drug or alcohol use to a degree defined as "at-risk" by the National Institute on Alcohol Abuse and Alcoholism. But one piece of good news is that alcohol Screening, Brief Intervention, and Referral to Treatment (SBIRT) provides an effective process for helping at-risk drinkers, and it is becoming more widely available statewide.

Not surprisingly, a high proportion of at-risk drinkers find their way to emergency rooms and other medical facilities.

*continued on page 6*



*Primary enforcement will boost safety belt use, and devices such as Ford's MyKey are encouraging teens to buckle up (see page 3).*

*"X-ray view" of the 1942 Nash Ambassador, the first popular, US-made unibody car. Sturdy bridge-like girders arching front-to-rear enhanced strength and safety compared to body-on-frame cars. Nash's ads predicted, "All auto bodies will be built like this some day."*



## Please note ~

**September 15 is the deadline for receipt of 2010 highway safety grant applications. If you have any questions, please contact your WisDOT Bureau of Transportation Safety regional program manager.**

## Vehicle safety engineering continued from page 1

### Feeling safe can kill

When we're walking on icy pavement, we naturally proceed more cautiously. When we're walking on rough surfaces, we're more careful when we're barefoot. We're always adjusting our behavior in response to perceived risks, and this includes how we drive. The more risk we feel, the more carefully we tend to drive—and vice versa. Often when vehicle safety improvements are introduced, the actual benefits aren't as great as had been hoped for. New designs yield promising improvements on the test track, but, in the real world, drivers gradually get used to the new designs, feel somewhat safer, and some people therefore take more risks.

One well-documented example is what happened when antilock braking systems (ABS) were widely introduced in the early 1990s. Although antilocks had performed well on the test track, they didn't bring significant reductions in on-the-road crashes. An Insurance Institute for Highway Safety (IIHS) 1997 study and a 2001 update found no difference in the overall fatal crash involvement of cars with and without antilocks. Because antilocks should make the most difference on wet and slippery roads, the Highway Loss Data Institute in 1994 studied insurance claims in 29 states during winter months. Even here they found no difference.

One factor in this disappointing outcome is that some people drive less cautiously because they believe antilocks allow them to brake better, so they drive faster, follow closer and brake later.

Early plans by insurance companies to offer premium reductions for vehicles with ABS were abandoned. They could have seen this coming because this human tendency has been studied for many years. Back in 1938, the *American Journal of Psychology* reported on why better braking systems don't necessarily enhance safety. (Details on using ABS safely at [www.nhtsa.dot.gov/cars/problems/equipment/absbrakes/index.html](http://www.nhtsa.dot.gov/cars/problems/equipment/absbrakes/index.html).)

Another example of this phenomenon is the case of Center High-Mounted Stop Lamps (CHMSLs). They are designed to catch the attention of drivers who might not notice your side-mounted brake lights. Pilot tests in 1983



Center High-Mounted Stop Lamp (CHMSL)

involving taxicab and corporate fleets found that CHMSLs reduced rear-end collisions by 35%. Tests immediately after CHMSLs became mandatory found reductions of 11-15%. But their utility gradually declined, reaching a "long-term effectiveness level" of 4.3% in 1989 (NHTSA Technical Report, DOT HS 808 696).

Clearly, adding devices and changing rules are easier than changing human nature and behavior. But the lights are still considered cost-effective: the total annual cost of CHMSLs is about \$206 million, and, even at 4.3%, they prevent many injuries and save an estimated \$655 million annually in medical costs and property damage.

How people deal with risk works the other way too. When perceived risks go up, we tend to be more careful. For instance, when Sweden changed from driving on the left side of the road to the right in 1967, and Iceland did the same in 1968, some expected this would increase crashes. But in fact crashes declined in both countries. With such a dramatic change, people drove more cautiously. (Source: *Traffic Safety* (2004) by Leonard Evans) As Shakespeare wrote, "Be wary then; best safety lies in fear."

*As risk experts* are fond of saying, understanding risk isn't rocket science—it's more complicated. It all depends on human nature and behavior. We can't simply "buy safety" like we can buy a bottle of soda pop. We can buy a vehicle with ABS, airbags, etc., we can design and build better vehicles, we can enact better laws, but how do all these affect our actual driving? To what extent do we tend to react by ramping up our risk-taking?

For decades, traffic safety experts have examined our complex adaptations to risk. They have studied the effects of vehicle and roadway design improvements, along with new laws and programs intended to improve traffic safety. Some have argued that people tend to react to any safety improvement by gradually taking more risk until they're back to about the same level of risk ("risk homeostasis"). But the preponderance of evidence contradicts this, showing that safety often improves. The report "Behavioral Adaptations to Changes in the Road Transport System" (OECD, 1990) was prepared by experts from 16 North American and European countries. Its key conclusion was that "behavioral adaptation generally does not eliminate the safety gains from programs, but tends to reduce the size of the expected effects." (For details, see James Hedlund's article "Risky Business: Safety Regulations, Risk Compensation and Individual Behavior" in *Injury Prevention and Control* (2000).)

So to improve safety, we need safer vehicles AND effective law enforcement AND safer drivers. We can't simply rely on vehicle improvements to do the whole job.

### A big step from page 1

number of preventable traffic deaths to Zero in Wisconsin ([www.zero.inwisconsin.gov](http://www.zero.inwisconsin.gov)).

I personally want to thank all of you who worked tirelessly for years to get primary enforcement passed. This coming holiday season, families—whose lives otherwise would have been shattered by the death or serious injury of a loved one in a crash—will be able to celebrate together. They will never know that you had a hand in saving the lives of those who matter most to them. Wisconsin is a safer place today because of your efforts. Thanks and congratulations to you all.



The *Wisconsin Traffic Safety Reporter* is published by the Bureau of Transportation Safety, Wisconsin Department of Transportation. Its purpose is to promote transportation safety, recognize worthwhile programs, and to educate and share ideas with safety professionals.

WisDOT SECRETARY  
**Frank Busalacchi**  
DIRECTOR—BOTS  
**Major Dan Lonsdorf**  
TSR COORDINATOR  
**Steve Olson**

Comments/questions invited: (608) 261-5896  
[steve.olson@dot.state.wi.us](mailto:steve.olson@dot.state.wi.us)

Bureau of  
Transportation Safety  
P.O. Box 7936  
Madison, WI 53707

Funded by WisDOT and the National Highway Traffic Safety Administration.

## In-vehicle monitoring

Effective, well-enforced laws are one of the proven keys to traffic safety. For instance, when states upgrade to primary enforcement, their safety belt use rates typically increase about 10%, and buckling up reduces the risk of serious crash injuries by 50% (NHTSA).

But there are only so many law enforcement officers, they have many responsibilities, and they can't possibly be everywhere monitoring traffic all the time. Fortunately, new technology is helping out with monitoring. For example, red light cameras are being used in many communities nationwide, and studies show they lead to significant reductions in red-light running and crashes (Sources: FHWA, IIHS).



CREDIT: NISSAN

Concept version of an Infiniti M45 showcasing anti-impaired driving technology: facial recognition and a high-sensitivity alcohol sensor in the transmission shift knob.



Now automakers are introducing devices that monitor driver behavior in order to improve safety. For example, a wide variety of devices are coming onto the market to help parents monitor their teenagers' driving. These include video and GPS-based systems along with use of the vehicle's electronic onboard diagnostics recorder. Ford is introducing MyKey, designed to help parents set limits on teens' driving. The computer-coded key enables parents to limit the vehicle's top speed and audio volume. MyKey also encourages safety belt use and can be programmed to sound chimes at 45, 55 and 65 mph.

IIHS recently studied how in-vehicle monitoring influences teenagers' driving. Groups of teens were monitored in several different ways. For teens in one group, the information was automatically relayed to their parents, but other teens could avoid this by correcting their driving within 20 seconds of an alarm sounding. Generally the study found that monitoring helped reduce risk-taking. For example, the risk of speeding by more than 10mph barely declined for teens who were alerted they were speeding and had 20 seconds to slow down before data was sent, but the

risk dropped by about 50% for teens under the same conditions but whose parents also received driving "report cards" every 2-3 weeks.

A surprising finding was that it was difficult to get parents involved. As usual when it comes to our behavior, technology is only part of the solution. (For details, see IIHS *Status Report*, 5/7/09.)

*In-vehicle monitoring* might also help in the battle against impaired driving. A

coalition of automakers and NHTSA have entered into a cooperative research agreement to explore the feasibility and public policy challenges associated with more widespread use of in-vehicle technology to prevent impaired driving. The Driver Alcohol Detection System for Safety program ([www.dadss.org](http://www.dadss.org)) will research, develop and demonstrate non-invasive detection technologies that can quickly and accurately measure a driver's BAC. Such systems would prevent the vehicle from being started when the driver's BAC exceeds the legal limit.

Researchers are aiming for systems that would be accurate, reliable, low-cost and require no special driver effort. Technologies being explored include use of infrared or laser light to measure driver BAC without having to breathe into a device (as with ignition interlocks) and use of tissue spectrometry to estimate BAC by analyzing a beam of near-infrared light reflected from the driver's skin.

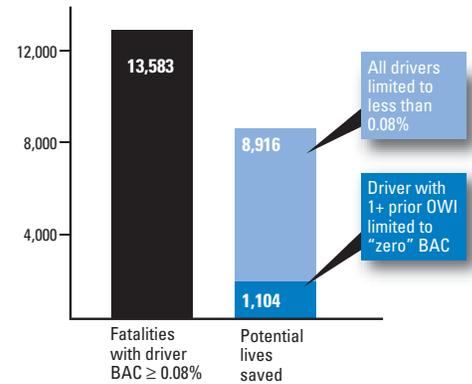
Research is just a starting point though, and, as usual, the technology is the simple part. Such monitoring will help only if the public welcomes it. One encouraging sign: in a 2006 MADD survey, 58% of the US public supported smart technology to prevent impaired driving.

MADD's national *Campaign to Eliminate Drunk Driving* includes support for the development of voluntary in-vehicle technology that prevents impaired driving, provided it is non-intrusive to sober drivers. See MADD's presentation at the 2009 Lifesavers National Conference: [www.dadss.org/node/76](http://www.dadss.org/node/76).

## How helpful have better vehicle designs been?

For many years, traffic fatality rates have been declining (see the "actual rates" line on the graph at top of next page). But how much of this has been due to vehicle design improvements and how much to other factors such as public policy?

IIHS has done a careful statistical analysis to separate design improvements. They focused on the driver death rates per registered vehicle during 1985-2004. They computed death rates for vehicle models that didn't change in design over three model years—for example,

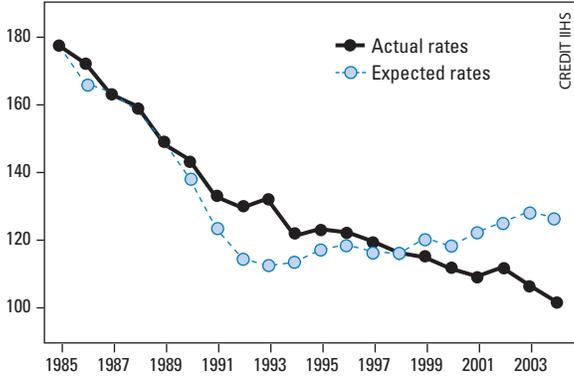


Potential lives saved in the US in 2005 if vehicle technologies limited driver BAC to these specified levels.

**Vehicle safety engineering** *continued from page 3*

death rates during 1999 for 1996-98 models. This eliminated the effects of any design changes on death rate because there were no such changes. They also eliminated the effect of rising driver death risk as vehicles age, which is probably due to changes in vehicle use, not vehicle deterioration, at least during the early years of a vehicle's use.

This graph shows their study's results. The actual driver death rate trends



*Actual driver death rates per million registered passenger vehicles, and expected rates based on the 1985 vehicle fleet*

downward. But the trend is very different once the effects of vehicle design and age have been removed. With them removed (see the "expected rates" line), the decline in the death rate ends in 1993 and has risen ever since. Since 1993, the death rate would have been on an upward trend if vehicle design improvements hadn't continued to push it downward.

IIHS president and study co-author Adrian Lund says the study shows that "We haven't seen the concentrated push in recent years for effective traffic safety policies that we saw in the 1980s. Serious problems still are out

there—faster travel speeds, for example—and we need to address them with the same resolve we applied to raising belt use and reducing alcohol-impaired driving in the 1980s and early 1990s." (For details, see the 4/22/06 *Status Report* at [www.iihs.org](http://www.iihs.org).)

**Greener and safer vehicles**

Many things matter when we buy a vehicle, such as cost, safety, performance, fuel economy and environmental impact. As we weigh our priorities, sometimes one thing works against another. For example, bigger, heavier vehicles generally are safer (see graph below), so we have to consider if we're willing to give up some weight and safety for better fuel efficiency, less dependence on oil and a greener planet.

Certainly we can't change the laws of physics. To see the importance of vehicle size and weight in a crash, see the photos at left. As the caption explains, when a vehicle is struck head-on by one twice as heavy, the forces on the passengers in the lighter vehicle will be twice as great. So heavier is generally safer. Also, bigger vehicles tend to have more extensive crumple zones to protect passengers.

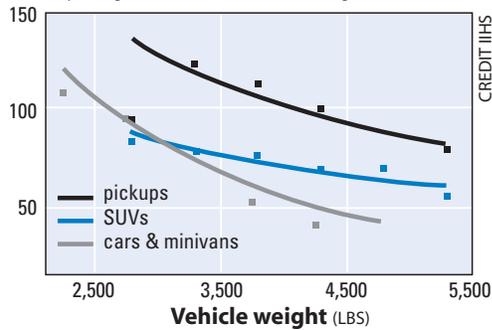
To illustrate this, IIHS test-crashed small cars into larger cars from the same automaker. They crashed a Honda Fit into an Accord, a Smart Fortwo into a Mercedes C class, and a Toyota Yaris into a Camry. See the photos below for what happened with the latter two.

"There are good reasons people buy minicars," says David Zuby, IIHS's senior vice president for vehicle research. "But the safety trade-offs are clear from the results of our new tests." (See IIHS's 4/14/09 *Status Report*.)

Crash test ratings from NHTSA and IIHS are useful only for comparing vehicles that are similar in size and weight.

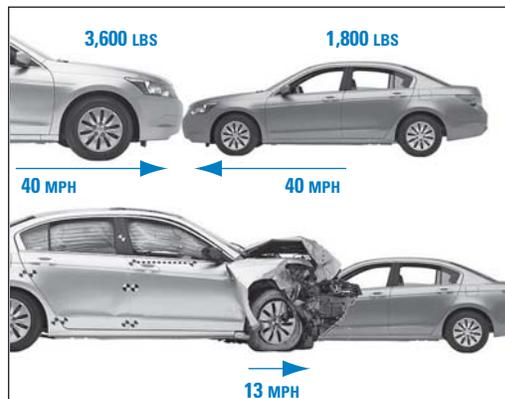
**Bigger generally is safer**

Driver deaths per million registered vehicles, by weight, 2001-04 models during 2002-05

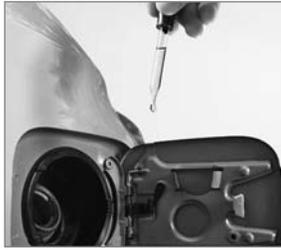


*Rates are adjusted to account for some differences in driver age and sex within and between vehicle types. Remaining differences in vehicle use patterns and driver demographics may account for some of the death rate differences.*

*When these cars collide, each going 40 mph, the heavier one pushes the lighter one backward at 13 mph. The velocity change of the lighter car (53 mph) is twice that of the heavier one (27 mph), as are the forces on passengers in the lighter car.*



*In the past,* government fuel conservation policies have conflicted at times with vehicle safety policies. But they don't have to.

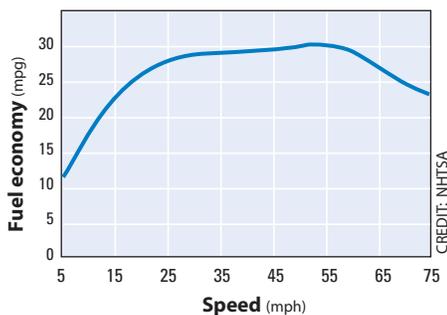


In 1975, Congress required automakers to build vehicles that use less fuel. Each automaker's entire fleet had to meet a Corporate Average Fuel Economy (CAFE) target. And, during the first 15 years of this law, the overall fuel economy of the US car fleet did improve by about 75%. The main way automakers achieved this was by reducing car weights, and by 1985 cars averaged 500 pounds lighter than they would have been without the federal requirements.

But the downside is increased fatality risk, documented by many studies. The National Academy of Sciences estimates that if the cars and light trucks on the road in 1993 returned to their average weight as of 1976, about 2,000 lives would have been saved in crashes in 1993 alone.

This outcome can be seen in the top graph on page 4. The vehicle fleet changes occurring during the late 1980s and early 1990s were not beneficial to drivers. That is, the risk of driver death in the actual 1993 vehicle fleet was higher (see the "actual rates" line) than it would have been in an equivalent 1985 fleet (the "expected rates" line). One key factor: automakers were downsizing their fleets to comply with fuel economy requirements.

But this problem is gradually being addressed. In 2006, NHTSA adopted a fuel economy system for SUVs, pickup trucks and vans that mandates lower fuel consumption as vehicles get smaller and lighter (a size-based system),



thus removing the incentive for automakers to downsize their lightest vehicles to comply. And now the Obama administration is boosting the fuel economy standard for cars, beginning with 2011 models, and this will also be accomplished under a size-based system.

There are other ways the government could help, but some steps would be politically difficult. Lowering highway speed limits saves fuel (see graph) and lives. In response to

the 1973 oil embargo, states adopted 55mph speed limits on the interstates, and the National Research Council estimates that by 1983 this reduction was a key factor in saving more than 2,000 lives annually. Also, the horsepower race could be curtailed. Average horsepower is now 70% higher than in the mid-1980s, and high horsepower uses more fuel and is associated with increased injury risk (IIHS).

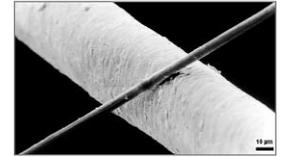
But individual car buyers are always free to make good safety choices. As IIHS president Adrian Lund notes, "Drivers don't have to wait for the government to act. They can simply choose to drive slower or choose to buy cars that aren't the smallest ones available but still earn kudos for fuel economy."

## Lighter and safer

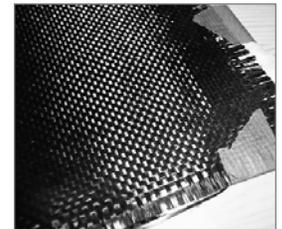
Our vehicles could be lighter, greener . . . AND safer. The key is twofold: (1) use advanced lightweight materials, and (2) enlarge the areas of vehicles (e.g., front-ends) with the life-saving crumple zones. And exciting new prospects are on the horizon. At research centers such as the Argonne and Oak Ridge National Laboratories, the federal government and industry have teamed up to develop cheaper ways to manufacture high-strength materials such as ultra-light steel, carbon fiber composites, and other advanced materials being developed at places such as the US Forest Products Lab in Madison.

Carbon fiber composites were first developed in the 1960s for military aircraft, where lightweight strength is crucial. They are about five-times stronger than steel, and are now widely used in everything from commercial airliners and the "safety cell" unibody chassis of high-performance racecars to motorcycles and bicycle frames (e.g., from Wisconsin's own Trek Bicycle Corporation).

*continued on page 7*



*A carbon fiber laid across a human hair. Fibers are woven into fabrics that are imbedded in various composites, with the fabric arranged so the resulting part has strength where needed.*



CREDIT: TREK BICYCLE CORPORATION

*Trek with carbon fiber composite frame: light and strong*



*This spring, US Transportation Secretary Ray LaHood (r) tours his home state's Argonne National Laboratory, noting that "Research facilities like Argonne are critical in developing technological solutions for the transportation sector that are environmentally friendly, energy-efficient and sustainable." Researchers aim to improve vehicle efficiency through technologies like advanced plug-in hybrids and hydrogen fuel cells.*



## Highway Safety Partners

This section profiles people who are helping improve traffic safety in Wisconsin.



**Cinda Werner** MS, RN  
Trauma Program Manager  
Children's Hospital of  
Wisconsin (CHW)

"My role as trauma program manager is to assure that we meet all criteria to be a Pediatric Level I Trauma Center. This assures that we are providing the highest standard of care for children who are injured," Cinda explains. Pediatric trauma care covers the continuum from emergency services all the way through to rehabilitation and return to school. "My work includes quality improvement, research and education, and I'm responsible for the trauma registry." Data on every injured child who comes into CHW is placed into a trauma registry that becomes part of a national database used for injury reporting and analysis.

Cinda grew up in Platteville and received her nursing diploma from Lutheran General and Deaconess Hospitals in Park Ridge, Illinois, her BSN from Marian College, and MS from the UW-Milwaukee school of nursing. She came to CHW in 1982 as a staff nurse.

At all Level I trauma centers (in Wisconsin: UW, Froedtert and CHW), trauma patients must be screened for alcohol use. A brief intervention is then provided, and, if necessary, patients are referred for treatment. Level II trauma centers are only required to screen. (See SBIRT on page 1.)

"Various tools are used to screen adults, but there are very few for teens and children," she says. "I'm on a national workgroup (Society of Trauma Nurses Pediatric Committee) that is looking at this for the teen/peds population. We have found that practice varies nationally and there is no standard."

At CHW, we decided to screen for risk, not for use. We use the CRAFFT tool which is validated for children and teens 12 years and older. Chapter 51 of Wisconsin's statutes mandates consent. Our hospital's legal department has interpreted the law to mean that all patients, age 12 and over, must give consent to allow screening results to be provided to parents."

"We have decided to do brief interventions even if the screen is negative, because we have a captive audience and this is a great opportunity. A big problem, both nationally and in Wisconsin, is the lack of drug and alcohol rehab/treatment facilities for teens. Another is the lack of a validated tool to screen children younger than 12."

Cinda's husband, a firefighter/paramedic with the Sheboygan Fire Department, is EMS director for the service in their community, and is involved in "prom night" scenarios for teens. They both deal with the preventable but all-too-common tragedies caused by alcohol and other drug use.

Email Cinda at [CWerner@chw.org](mailto:CWerner@chw.org).

### Resources

**SBIRT Alcohol  
Screening Toolkit**  
Emergency Nurses  
Association  
[www.ena.org](http://www.ena.org)

**SBI Training for  
Trauma Care  
Providers**  
[sbirt.samhsa.gov](http://sbirt.samhsa.gov)

### Helping at-risk drinkers con't from page 1

These visits provide a golden opportunity because patients are often acutely aware of the trouble their drinking is causing. This is the moment for SBIRT. Trauma centers, hospital ERs, primary care centers and other community settings are increasingly using SBIRT with at-risk drinkers before more severe consequences occur.

- **Screening** quickly assesses the severity of alcohol abuse and identifies the appropriate level of treatment.
- **Brief intervention** focuses on increasing patients' awareness regarding alcohol abuse, and boosting motivation to change their behavior.
- **Referral to treatment** provides those who need more extensive treatment access to appropriate specialized care.

Many studies have shown SBIRT's effectiveness. In 2006, the *Journal of Trauma Injury, Infection and Critical Care* published a study of patients involved in motor vehicle crashes. Of those who received standard care, 21.9% were arrested for OWI within the following three years, compared with only 11.3% of those who received a 30-minute brief intervention. Not only are people's lives improved, but a Wisconsin study shows

that the state saves nearly \$1,000 in health care and criminal justice costs for every patient receiving SBIRT. (*Fleming et al., Medical Care, 2000*)

SBIRT is becoming more widely available, in part due to the Wisconsin Initiative to Promote Healthy Lifestyles ([www.wiphl.com](http://www.wiphl.com)), a five-year, \$12.6 million project to expand alcohol and drug SBIRT and other prevention services in primary clinics statewide. Funded by the US Substance Abuse and Mental Health Services Administration, the project is coordinated by the Department of Family Medicine of the UW School of Medicine and Public Health. Program director Richard Brown, MD, an associate professor of family medicine, says that SBIRT "gives us better health and public safety and it also saves us money at the same time."

With funding support from Wisconsin DOT, all of Wisconsin's nine Level I and II Trauma Centers attended an alcohol SBIRT conference and training last September, hosted by the Injury Research Center at the Medical College of Wisconsin. And in another step forward, Wisconsin's Medicaid Program Director, Jason Helgeson, recently announced that Medicaid reimbursement for SBIRT services will commence in January 2010.

Also see Cinda Werner's profile above.



## Vehicle safety engineering *continued from page 5*

Researchers are finding ways to bring down the cost of these advanced materials so they can be widely used in mass-produced vehicles.

In June, the US Department of Energy began lending money from a \$25 billion loan program to boost development of fuel-efficient vehicles and more powerful batteries. Ford, Nissan and Tesla Motors received the first round of loans. Also in June, Nobel Prize winner and current US Secretary of Energy Stephen Chu told the graduating class at the California Institute of Technology commencement they must prepare for "the inevitable transition to electricity as the energy for our personal transportation."

*The planet-friendly Toyota iX concept plug-in hybrid weighs just 926 pounds—one third what a Prius weighs—because of extensive use of carbon fiber composites.*



## Automotive X PRIZE

As the saying goes, necessity is the mother of invention. And competition often helps the process along. The nonprofit X PRIZE Foundation manages high-profile competitions to foster technological breakthroughs. Modeled after the prize Charles Lindbergh won in 1927 for the first solo, non-stop New York to Paris flight, X PRIZES foster innovation and entrepreneurship to solve grand challenges. The first X PRIZE competition challenged teams to build private spaceships to open up the space frontier—and an enterprising team won it in 2004.

Now the Automotive X PRIZE, sponsored by Progressive Insurance and supported by NHTSA, challenges teams to design and build production-capable 100 MPGe (miles per gallon energy equivalent) vehicles that meet market needs for price, size, performance and safety. The winning team must be able to produce at least 10,000 cars a year. Resulting production vehicles sold in the US must be fully compliant with Federal Motor Vehicle Safety Standards (FMVSS) and other applicable NHTSA requirements.

Visit [www.progressiveautoprize.org](http://www.progressiveautoprize.org). With US Department of Energy funding, a program has been launched to help young people learn about the contest and green technologies. Visit [www.fuelourfuturenow.com](http://www.fuelourfuturenow.com).

Over the next few decades, our nation might greatly reduce its dependence on oil and develop new industries that build vehicles that are greener but don't compromise on size or safety.

## Resources: Safer Drivers in Safer Vehicles

Visit NHTSA's [www.safercar.gov](http://www.safercar.gov) for a wealth of information on becoming a safer driver and buying a safer vehicle.

Visit the Research and Statistics section of the Insurance Institute for Highway Safety website [www.iihs.org](http://www.iihs.org) for topics including: crash testing and crash compatibility, rollover and roof crush tests, motorcycles (e.g., antilock brakes) and electronic stability control. Also see their Q&A section, brochures and their excellent *Status Report* newsletter.

## X PRIZE contenders



*In India, Tata Motors has introduced the Nano, with a \$2,200 base model. A better-equipped Nano will arrive in Europe by 2011, meeting European safety and emission standards. The Nano Electric is in the contest's alternative class.*

### The inexpensive ...



*Tesla Motors' entry in the mainstream class, the Model S, will go into production in late 2011. Tesla already produces an all-electric roadster.*

### the all-electric ...



*The West Philly Hybrid X Team, from West Philadelphia High School (below), is building a hybrid based on a Ford Focus chassis, chosen for its safety record.*

### and the high school project

[www.evxtteam.org](http://www.evxtteam.org)

*The engine is a donated 1340 cc Harley-Davidson. Drexel University is helping with the engineering and business plan which targets government car fleets.*



NEW

## Wisconsin CPS Advisory Board

Improving child passenger safety statewide. This is the board's goal. Board members represent Safe Kids coalitions, health care, health departments and law enforcement, and their focus will include both urban and rural areas and children with special needs. After their first meeting in June in Stevens Point, they'll now meet quarterly to discuss CPS issues, challenges and opportunities and to advise the Bureau of Transportation Safety.

Board member Paula Pater, Safe Kids Chippewa Valley coordinator, says, "I love to have this opportunity to be on the front lines when looking at issues facing our state and ways to improve overall promotion of the CPS message."

Contact the Wisconsin Information Network for Safety (WINS): toll free at (866) 511-9467 or [www.wcpsa.com](http://www.wcpsa.com).



## Motorcycle safety Where many gather

Last year, motorcyclist fatalities increased for the 11th straight year and are now 14% of all traffic fatalities (NHTSA). To help reverse this trend, a new campaign, *5=Zero in Wisconsin*, is bringing the safety message directly to major motorcyclist gatherings statewide. The campaign theme ties in with the state's broader ZERO IN WISCONSIN public awareness campaign.

With funding support from the Wisconsin DOT, Blue Knights of Wisconsin Chapter XVIII and Innocorp, Ltd. teamed up to develop and coordinate the campaign. Blue Knights, with about 600 chapters in 29 countries, is a fraternal organization of law enforcement officers who enjoy motorcycling.

The campaign kicked off at the June 4-7 Road America motorcycle races in Elkhart Lake. At the 5=Zero tent, five key topics were highlighted.

### 5 = Zero

1. Ride sober
2. Wear safety gear
3. Get trained & licensed
4. Use safe riding practices
5. Inspect & maintain your motorcycle

Experts answered questions and visitors could win gift certificates and safety gear donated by Harley-Davidson. Campaign manager and Blue Knight Jody Ward, Assistant Chief of the Wisconsin Dells Police Department, says, "We are giving motorcyclists the tools to minimize their risk and maximize their joy of riding." Mike Panosh, BOTS Regional Program Manager for northeast Wisconsin, helped coordinate the event along with Road America. "We're reaching a different audience compared to events like the HOG Rally or Fall Color Ride," he says. "Many young people here ride sports bikes rather than Harleys or other traditional bikes."

The campaign moved on to the June 18-20 HOG state rally in Appleton. Next up will be the September 17-20 Fall Color Ride in Tomahawk and the October 3 Kilbourn Fire Run in Wisconsin Dells.

At these events, a team of UW-Madison researchers is surveying motorcyclists to assess attitudes and gather data for future social marketing programs like the successful Project Green-Yellow-Red ([www.gyr-riders.com](http://www.gyr-riders.com)).

[www.5equalzero.com](http://www.5equalzero.com)

## Road America in June



(l) State trooper provides safety expertise; (c) Michael Aguilar, Innocorp president and 5=Zero campaign coordinator, and Clint Cagle, Blue Knights of Wisconsin Chapter XI president and the group's state safety officer; and (r) Dave Keery, a Blue Knight, a gift certificate winner who answered a motorcycle safety question, and BOTS law enforcement liaison Bill Gau.

## Wisconsin Department of Transportation

Bureau of Transportation Safety  
P.O. Box 7936  
Madison, WI 53707-7936

PRSR STD  
US POSTAGE  
PAID  
MADISON WI  
PERMIT NO 1369