



Center for Excellence in Rural Safety



[Home](#)

[About CERS](#)

[Research](#)

[Events](#)

[Profiles in Rural Safety](#)

[News & Media](#)

[Publications](#)

[Home](#) > [Publications](#) > [Rural Safety News](#) > June 2007

Rural Safety News



News from the Center for Excellence in Rural Safety

[Previous issues](#)

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Rural Safety News is an electronic newsletter of the [Center for Excellence in Rural Safety \(CERS\)](#) at the University of Minnesota. *Rural Safety News* brings you the latest research and resources concerning rural safety.

In this issue:

- [Welcome to Rural Safety News](#)
- [Key facts about rural safety](#)
- [Profiles in Rural Safety: Judge James Dehn](#)
- [Research connects rural safety, public health, and emergency response](#)
- [Study aims to better understand rural road safety](#)
- [Introducing the CERS leadership team and advisory group](#)
- [CERS launches Web site](#)
- [Researcher position available](#)
- [More rural safety news and resources](#)

Welcome to Rural Safety News

This quarterly electronic newsletter has been created by the Center for Excellence in Rural Safety (CERS) to share research and resources with those interested in rural safety.

The Center for Excellence in Rural Safety (CERS) facilitates citizen-centered research, training, and outreach activities related to rural transportation safety. The Center's research activities explore policy, behavior, and technology innovations through projects addressing safety-conscious planning, ITS and rural emergency response, integrated policy approaches, and related human factors, societal trends, and stakeholder needs analysis.

The Center is a joint program between the University of Minnesota's Hubert H. Humphrey Institute of Public Affairs State and Local Policy Program and the Center for Transportation Studies, and sponsored by the Federal Highway Administration. Congress created the Center for Excellence in Rural Safety in July 2005 as part of a broader, multiyear, multimillion-dollar directive establishing four national centers for surface transportation excellence in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) transportation funding legislation.

Key facts about rural safety

- Half of the 42,000 crash-related fatalities in the United States each year occur on two-lane rural roads.
- Only 65 percent of low-volume rural roads have a program for identifying and correcting safety problems. Signs are posted on only 20 percent of low-volume rural roads.
- Sixty-two percent of all alcohol-related fatalities involving passenger vehicles occur on rural roads.

Sources: NHTSA, FHWA

Profiles in Rural Safety: Judge James E. Dehn



Isanti County Judge James E. Dehn has created some innovative tactics to prevent drunk driving and crack down on repeat offenders. Two nationally recognized approaches are Staggered Sentencing and the Liquor Provider Partnership.

Staggered sentencing

Staggered Sentencing is a four-part alternative sentencing program for DWI offenders. First, the offender's jail time is broken into installments. Instead of serving a whole sentence continuously, offenders are placed on probation for several years and serve prison time in two or more installments over the course of those years. Second, between each incarceration period, offenders can file a motion for forgiveness of all or a portion of the next period if their probation officer backs them. This gives offenders more control over the outcome of the sentence, and ultimately provides them with more of an incentive to comply with their probation.

Third, offenders are monitored between incarceration periods by Remote Electronic Alcohol Monitoring (REAM) technology. The fourth part of the strategy clearly spells out consequences for the next DWI at the initial hearing.

Research from the Minnesota Legislature House Research Department in 2002 showed offenders who receive staggered sentencing are about half as likely to re-offend than would be expected based on re-offending rates of similar DWI offenders in other courts. Consequently, in 2003, the Minnesota Legislature codified Staggered Sentencing into statutory law (Minnesota Statute 169A.275). It was also noted that Staggered Sentencing typically results in less incarceration time for offenders, which can ultimately save money and free up jail space.

Involving the courts, community, and bars

The Liquor Provider Partnership is a unique program involving the courts, community, and bars of Isanti County. The program began with Judge Dehn's tracking study, which collected information on DWI cases over six years. For each case, the "last place of drink" was recorded—and more than half could be traced to a specific bar. From there, the idea arose to launch an initiative to reduce the number of bar-related DWIs and blood alcohol content (BAC) readings by partnering with bars, liquor stores, and restaurants. Liquor-providing establishments like these are notified when they have served the last drink to a DWI offender, and are asked not to serve alcohol to that person again. In the three years of partnership the number of DWI cases that can be traced to a specific bar has dropped from 64 percent to 50 percent, and the average BAC level of those DWI has dropped from .171 to .159.

Judge Dehn also has held a slogan-writing contest for the past nine years for middle schoolers in Isanti County. The students come up with catchphrases to keep high school kids from drinking on prom night and to keep parents from providing them with alcohol.

Judge Dehn has received three national awards for his programs and said his mission is to spread the news of his programs' success so the lives lost in DWI accidents may someday be a thing of the past.

Related resources:

- [Judge James E. Dehn's bio](#)
- ["Staggered Sentencing" by Judge James E. Dehn](#)

Research connects rural safety, public health, and emergency response

In response to the SAFETEA-LU legislative mandate to assess local community needs to improve access to mobile emergency treatment, CERS researchers are focusing on technological developments that affect rural safety and the issues surrounding their deployment.

CERS research director Thomas Horan and research associate Benjamin Schooley have been investigating the role information technologies play in reducing response times and increasing health care service quality of emergency responses to traffic crashes in rural settings.

In collaboration with the Mayo Clinic, Horan and Schooley have been analyzing emergency processes and data, and the flow of information to understand system performance across informatics providers (e.g., OnStar), 9-1-1, medical dispatch, emergency responder, and trauma center organizations. Their goal is to develop an information framework that could act as the "gold standard" for end-to-end information sharing and performance assessment in rural areas across the United States.

"At the Mayo Clinic, we are interested in providing not only timely response, but the highest quality emergency care for our patients," says Dr. Scott P. Zietlow, director of trauma care at the Mayo Clinic in Rochester, Minnesota. "Our research provides an important opportunity to take a comprehensive look at how pre-hospital care can be linked to health outcomes."

To do that, information sharing is essential—information about the patient, the nature and type of accident, health care interventions provided on the scene, specialties and capabilities of care centers, availability of resources, and system performance. The research team believes its work will help lay the groundwork for more advanced information systems that will enable more efficient use of emergency resources, better medical decision making in the field and in the hospital, and improved emergency response in rural areas.

Researchers aim to use their findings to arrive at a set of national implications, including adaptable Mayo/CERS models for end-to-end performance management. Their research builds on several years of prior research sponsored by the National Science Foundation as well as the Center for Transportation Studies (CTS) and the Intelligent Transportation Systems (ITS) Institute at the University of Minnesota.

Packaging safety information for decision makers

A wide variety of safety initiatives, data collection efforts, research projects, and analyses conducted at the local, state, and national levels has made it difficult to aggregate and assemble transportation safety information in a way that is useful for policymakers and political leaders to make decisions. In addition, policymakers need to visualize and understand multifaceted data to see the overlap between behavioral and road engineering causes for crashes, capabilities to prevent and respond to crashes, and impacts (including costs) on community and public health systems.

To address these crosscutting needs, Horan and Schooley plan to conduct a series of "best practices" case studies in states that have deployed decision-support information systems for informing safety policy. Case studies will delve into the specific needs and requirements that policy decision makers would like to see in an electronic performance "dashboard" system. This type of system would include key safety performance measures, data and information types, and visual presentation formats.

Researchers will engage decision makers through interviews, roundtable discussions, and a CERS-sponsored policy forum. An important goal is creating a system to visualize and present safety data for safety decision makers.

This project stems from a policy roundtable discussion facilitated by Horan in Washington, D.C., to identify critical information that state and national leaders and policymakers need to advance rural safety initiatives. Representatives of the U.S. Department of Transportation, Federal Highway Administration, and the American Association of State Highway and Transportation Officials participated. The group's goal was to further refine the behavioral, technology, and policy research themes introduced at the first CERS Summer Institute, held in Duluth, Minnesota, in 2006.

Related resources:

- [Rural Safety, Health, and Emergency Response](#)
- [Towards Performance Dashboards for Integrated Rural Public Health and Transportation Safety Decision Making: A Policy Leader Approach](#)

Study aims to better understand rural road safety



Safety on our nation's rural roads has long been a significant, and often overlooked, challenge for states. But new research at the University of Minnesota's Center for Excellence in Rural Safety could change all that.

Federal legislation typically has included funding for safety planning and engineering measures, yet the thrust of these efforts has focused primarily on the needs of urban and suburban transportation systems. Not until Congress passed SAFETEA-LU did the federal government fund research and require states to report on rural roads, where crashes annually claim the most lives.

In May, research assistants Alec More and Tyler Patterson, working with CERS director Lee Munnich, introduced

potentially groundbreaking research into rural road safety at the University of Minnesota's Center for Transportation Studies annual transportation research conference. Each presented preliminary research results examining driver behavior in rural regions and evaluating the practices of states with established or developing roadway safety programs.

Determining best practices for reducing roadway crashes

In one of the first CERS research projects, More has been conducting case-study evaluations of states with existing or developing roadway safety plans and programs to determine the best practices for reducing roadway crashes. At present, the project is considering nine states, four of which have established safety programs similar to Minnesota's Toward Zero Deaths (TZD) program. The goal is to raise awareness of traffic safety issues and to develop tools to reduce the number of deaths and injuries resulting from traffic accidents in Minnesota.

So far, the research has yielded specific themes common across state boundaries. Driver behavior—particularly speed and impaired driving—is most frequently cited by state officials as contributing to crashes on rural roads.

A second theme to emerge has been the need for enhanced data collection and analysis. Perhaps most important, however, is the need for communicating the results of the collected information to police or emergency response professionals in real time, not only to provide access to accurate information but also to demonstrate the value of their efforts.

A third theme, which builds on the previous two, is the need for innovative, cost-effective approaches to safety. "State funds are stretched," More added, "but there are simple, cost-effective solutions to the problem, which can give states a real bang for the buck."

Studying rural road safety in Minnesota

In a more localized study, Patterson presented his findings for rural road safety in Minnesota. More than 70 percent of all crashes occur in urban areas, yet 70 percent of fatalities occur on rural roadways—highlighting the need to develop a more complete understanding of rural roadway safety.

Patterson explained that young male drivers are of particular concern. His case-study research in east-central Minnesota found that 25 percent of fatal crashes involve males between the ages of 15 and 29. Those young males, however, make up less than 10 percent of the population. "While lower design standards on rural roads contribute to the severity of the crashes," Patterson said, "behavior issues exist as well."

Another challenge, according to Patterson, is impaired driving. In response, one program, developed by Judge James Dehn in Isanti County, Minnesota, is helping to address the problem. Dehn has implemented a staggered sentencing program for people who have been arrested for drinking and driving, and he has encouraged greater community involvement in the process. (For more, see [Profiles in Rural Safety: Judge James Dehn](#))

Though their quest to understand the unique issues facing rural roadways has only begun, researchers More and Patterson hope to achieve a new standard in communication both between states and within public agencies.

Related resources:

- [Investigating Rural Safety: A Minnesota Case Study](#)

Introducing the CERS leadership team and advisory group

The Center is led by Lee Munnich of the University of Minnesota's Humphrey Institute of Public Affairs. The Center for Transportation Studies, with staff leadership from Robert Johns, is collaborating with the Humphrey Institute to provide the Center's outreach and training services. Thomas A. Horan, a visiting scholar with the State and Local Policy Program at the Humphrey Institute of Public Affairs, serves as the Center's research director.

An advisory group assists the Center's leadership team by providing guidance on research, training, and outreach activities. The group's membership consists of a federal representative overseeing the Center's operating agreement and other experts in transportation safety fields that relate to the Center's theme, focus areas, and core research areas. The advisory group also includes at least two members representing rural road safety outside of Minnesota and Vermont.

The advisory group provides expert input on the Center and meets each year at the Center's annual Summer Institute. Within the two-day meeting, the group discusses the Center program, its collaborative activities, partnerships, and research, training, and outreach activities. A larger stakeholder group representing national transportation safety organizations and initiatives augments the advisory group.

CERS Advisory Group:

- Thomas Adler, Board Member, New England Transportation Institute
- James Bourgart, Deputy Secretary for Transportation and Infrastructure, California Business, Transportation, and Housing Agency
- David Brand, County Engineer, Madison County, Ohio
- Benjamin Gribbon, Program Manager, Roadway Safety Professional Capacity Building, Federal Highway Administration
- Michael Halladay, Director, Safety Program Integration and Delivery, Federal Highway Administration
- Anthony Kane, Director, Engineering and Technical Services, American Association of State Highway and Transportation Officials
- Thomas Sorel, Minnesota Division Administrator, Federal Highway Administration
- Jeffrey Squires, Vice President, Transportation Program Development, Parsons
- Bob Winter, Division Director for Operations, Minnesota Department of Transportation

CERS launches Web site



In January, the Center for Excellence in Rural Safety launched its Web site featuring detailed information on the organization and its activities. The new Web site offers a wealth of rural safety facts, data, and links to more news and resources. The site plays a key role in communicating the results of national rural transportation safety research projects to policymakers and the public.

Researcher position available

The [Hubert H. Humphrey Institute](#) is seeking a full-time research associate or research fellow in the [State and Local Policy Program](#), which is within the Institute's regional policy and planning area. The position involves work on projects related to grants received from the Federal SAFETEA-LU legislation, specifically, the Center for Excellence in Rural Safety, and "TechPlan," an Intelligent Transportation Systems (ITS) research program funded by the University of Minnesota's ITS Institute. More details and application instructions are online at <https://employment.umn.edu> (please search for requisition number 148759).

More rural safety news and resources

Rural car crash mortality rate higher

Southwest Farm Press (May 11, 2007)

Studies show that 56 percent of pickup crash fatalities in Texas occur in rural areas, compared to 44 percent in urban areas. NHTSA's annual two-week-long "Click It or Ticket" campaign is designed to emphasize the ease—and cost effectiveness—of using a seat belt.

[Read story](#)

Traffic Crashes Take Their Toll on America's Rural Roads: The Need to Establish Rural Seat Belt Programs

National Highway Traffic Safety Administration, 2006

This report outlines the critical need for active, ongoing seat belt use programs in rural areas. In addition, the report provides ways to increase seat belt use rates in rural communities, communications strategies, and how to making the case for your rural seat belt program.

[More](#)

Australasian College of Road Safety (ACRS): Rural Roads (2004)

Like the United States, Australia experiences a high rate (nearly 50 percent) of rural traffic fatalities. This discussion piece from 2004 outlines the issues and possible solutions. Engineering and enforcement resources need to be expanded, and education and enforcement of driving behavior needs to be increased.

[View Web site](#)

Rural Assistance Center's Transportation Information Guide

An initiative of the U.S. Department of Health and Human Services, this guide lists resources for transportation in rural areas.

[View Web site](#)

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