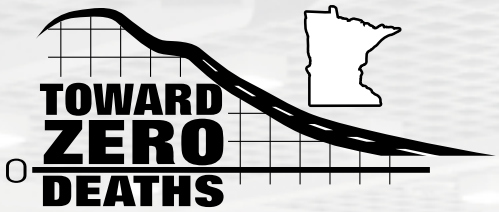
Toward Zero Deaths:

Integrating Minnesota's Traffic Safety Agenda Conference

September 13–14, 2004, St. Cloud, Minnesota



A SUMMARY REPORT

In 2001, the North Star Safety Workshop brought together transportation safety stakeholders representing local, regional, state, national, and international organizations and agencies to share information and to identify new approaches to reduce fatalities and life-changing injuries on Minnesota's roadways. The Minnesota Toward Zero Deaths (TZD) program emerged from the momentum created by the North Star workshop. The TZD members recognize that achieving the goal of zero deaths requires cooperation among all levels of government, as well as connections between government agencies and local organizations whose focus is traffic safety.

This conference provided a venue to report on the progress made since 2001, to share best practices in the areas of engineering, enforcement, education, and emergency services, and to chart the course for a future where traffic fatalities and life-changing injuries are rare events. The event also included the Minnesota Department of Public Safety Safe & Sober and Child Passenger Safety Conferences.

Sponsored by:

Minnesota Department of Public Safety
Minnesota Department of Transportation
Minnesota Toward Zero Deaths Program

Hosted by:

Center for Transportation Studies, University of Minnesota

Welcome and Opening Remarks

Michael Campion, *Commissioner, Minnesota Department of Public Safety*
Moderator: **Kathy Swanson**, *Director, Office of Traffic Safety, Minnesota Department of Public Safety*

Michael Campion and Kathy Swanson

In her opening comments, Kathy Swanson talked about how the Safe and Sober program has been instrumental in making roads safer. "This year's Toward Zero Deaths conference, the first of hopefully many such conferences, will help drive down the number of traffic fatalities," Swanson said. "This is a long-term goal, but having such a broad group of partners coming together in this way will lead to greater successes than we've seen in the past."

Michael Campion then acknowledged that for everyone involved in making roads safer, trying to get to zero deaths on our roadways is a big challenge. "There were 655 people who died last year in Minnesota as a result of roadway crashes. That's a long way from zero," he said. He did note, however, that the fatality rate in Minnesota is 15 percent lower than it was at this time last year. "And although that indicates we're having some success, that's still a lot of people dying on our roads."

Campion believes that great progress can be made by partnering around a particular issue such as traffic safety. For example, he said the coalitions formed on the blood alcohol content (BAC) issue helped to pass the .08 BAC law. "We all need to step up to the idea that when we form broad partnerships, there is a lot we can get done."

Keynote Presentation: National Perspective—Highway Safety

Beth Alicandri, *Director, Office of Safety Programs, Federal Highway Administration (FHWA)*

Beth Alicandri

"Crashes cost the state of Minnesota about $3.1 billion per year...and they cost our nation an estimated $230 billion per year."

—Beth Alicandri

"The public needs to know that vehicle crashes are a serious public health problem," keynote speaker Beth Alicandri told the audience in her opening remarks. These crashes are such a serious problem, she continued, that for the first time in the history of the World Health Organization, its 2004 World Health Day was devoted to road safety. The event focused both on raising awareness of the health impact and social and economic costs of road traffic injuries and on spreading the word that such injuries can be prevented.

Alicandri then offered a variety of crash statistics to back up the seriousness of this problem nationally and globally. She pointed out that while at one time the United States had the lowest fatality rate in the world, that rate has been steadily increasing for several decades. "We're losing ground," she declared. "If other countries are getting better [at reducing road fatalities], we can too."

She noted, however, that the 2003 Fatality Analysis Reporting System (which shows the number of roadway fatalities in the United States) indicates there were 362 fewer fatalities last year than the previous year. "That means that once a day, there was one less family involved in losing a loved one," Alicandri said. "These are small steps, and they are better than nothing. But the only way to address these kinds of fatalities is to take an interdisciplinary approach. Lives can be saved, but we need to work cooperatively to make sure we're all doing our part."

For everyone working to reduce roadway fatalities, funding is always an issue, and Alicandri said that in highway safety funding, rarely are the costs to society of these fatalities and injuries ever considered. "These crashes cost the state of Minnesota about $3.1 billion per year—that's about $623 per person," she explained, "and they cost our nation an estimated $230 billion per year. That's the same as the gross domestic product of some countries. It's also equal to the gross sales of Wal-Mart. These are big numbers. So, if we can't convince society that all of these dead people are reason enough to take highway safety seriously, maybe money will convince them. Maybe people would be willing to put more money toward highway safety…if they understood these costs."

She went on to report that the FHWA continues to keep safety at the center of its efforts as one of the agency's three "must-do" priorities. These three "Vital Few" goals—safety, environmental stewardship and streamlining, and congestion mitigation—are essential to the FHWA's success over the next three to five years, she explained, and will require the full strength of the agency to succeed.

"It's clear to us that the slow changes we see in the fatality rate are because what we've done to date hasn't worked well enough. The way to make a difference is to be strategic, so we're re-thinking our approach to safety and are focused on performance-based decision making. We know that the challenge is great, but the payoff is even greater," Alicandri said. "We're all partners in this effort, and by thinking outside of our own comfort zones, we can make a difference."

Lunch Presentation: Comprehensive Highway Safety Plan

Loren Hill, *State Traffic Safety Engineer, Minnesota Department of Transportation,* and **Katherine Burke Moore**, *Deputy Director, Office of Traffic Safety, Minnesota Department of Public Safety*

Loren Hill and Katherine Burke Moore delivered a tag-team-style progress report on the Minnesota Comprehensive Highway Safety Plan, an effort led by the Minnesota Department of Transportation (Mn/DOT) and the Minnesota Department of Public Safety (DPS). The team explained that the state's previous approach to addressing traffic safety issues was not working, a point clearly illustrated by the fact that the fatality rate has flattened, and that the actual number of fatalities continues to increase.

The American Association of State Highway and Transportation Officials (AASHTO) developed a plan and a series of strategies to help departments of transportation focus their efforts on reducing the number of roadway fatalities. The AASHTO Strategic Highway Safety Plan includes 22 emphasis areas (based on national fatal crash data) in six basic categories. According to Hill, a key step in developing Minnesota's highway safety plan involved screening and prioritizing AASHTO's emphasis areas in order to focus on those that are most important in Minnesota. "Minnesota is not the same as the rest of the country," he explained. "We wanted to match AASHTO's broad goals to the needs of our state and see what our priorities should be."

The screening process was based on three components: the results of a "self-assessment" (based on AASHTO's strategic highway plan); a data-driven analysis of Minnesota's fatal crash statistics; and a prioritization exercise involving numerous traffic safety partners.

In May, the DPS called together 30 people from 13 agencies to look at crash data. All 22 of AASHTO's emphasis areas were presented and people offered their perspectives. "We then prioritized the emphasis areas for Minnesota," Burke Moore explained. At the top of the list were increasing seat belt use and reducing impaired driving. The other areas involve improving highway intersections, reducing lane departures, dealing with young drivers, curbing aggressive driving, increasing driver safety awareness, and improving information and decision support systems, she said.

Workshop participants then identified safety strategies for each of the emphasis areas and developed related action plans geared at reducing fatal and life-changing crashes. They considered all of the "Four Es" (engineering, education, enforcement, and emergency medical systems) as well roadway types (state, county, city, and township) to form these plans.

The next step, according to Burke Moore, is to work with Mn/DOT to identify roadway safety projects. "We're working to determine the best method to create a dynamic and useful tool to help Minnesota move toward zero deaths," she said. "If we want to reduce fatalities, we know it will take money, and it will take work. This is a dynamic, living process, and we want your input in order to make real change."

Loren Hill and Katherine Burke Moore

Following are summaries from selected concurrent sessions:

Airbags, Side Airbags, and Their Interaction with Child Safety Seats

Mitch Becker, *Technical Instructor, ABRA Auto Body & Glass*
Moderator: **Sharon Munns**, *Mayo Hospital*

> **"There are no known cases of a properly restrained child being severely injured or killed by a side-impact airbag."**
>
> *—Mitch Becker*

Since 1986, when Mercedes-Benz began offering optional driver-side front airbags in all of its vehicles, airbags have saved thousands of lives and significantly reduced the number and severity of injuries. And according to Mitch Becker, technical instructor with ABRA Auto Body & Glass, airbag technology—while initially very expensive—today is not only better than ever, but also cheaper. "Airbags really are cost-effective for manufacturers to put in vehicles," he said. "Installing airbags doesn't change the cost of the vehicle much, yet [airbags] add tremendous live-saving capabilities." Thus, more and more car manufacturers are voluntarily adding side-impact airbags, and experts predict that as a result, even more lives will be saved, especially considering that one in four traffic deaths is the result of a side-impact collision.

But with the increasing use of side airbags, questions have surfaced regarding the safety of these systems when child safety seats are used in the vehicle. "People are scared of side-impact airbags," Becker reported, blaming the media for creating much of the hysteria. "Although most child restraint-seat warnings include all types of side airbags, there are no known cases of a properly restrained child being severely injured or killed by a side-impact airbag," he said. The bottom line, according to Becker, is that when child safety seats are properly installed and children are properly restrained, the risk from injury is small. The only problem may be with older kids in booster seats, and adults who fall asleep and fall into the airbag zone, he said. "But side airbag injuries are just not that common. They [side airbags] cause more of a slapping injury, not a pushing injury like a front airbag. Kids are definitely more protected with the side airbags than without," Becker contends.

Because airbag technology is changing so fast, and many new types are being installed, Becker urges vehicle owners always to carefully read their vehicle owner's manual to fully understand the safety features of their vehicle and minimize any risk associated with misuse of various safety features within the vehicle. He reminded audience members that airbags are also known as supplemental inflatable restraint (SIR) or supplemental restraint systems (SRS); "supplemental" because they are supposed to be used with—or as a supplement to—seat belts. Although airbags may save an unbelted person from death, maximum effectiveness is achieved only by combining a seat belt and an airbag. "You are an active participant with the systems in your vehicle, and you have a job to do. You need to know how these systems work and how to maximize the benefits of all of your vehicle's safety features," he said.

Getting the Media's Attention

Panelists: **Marilyn Butler**, *News Director, Minnesota News Network (WMNN)*; **Caroline Lowe**, *Reporter, WCCO-TV*; and **Kelly Scott**, *Reporter, St. Cloud Times*
Moderator: **Dennis Smith**, *Information Officer, Department of Public Safety (DPS)*

Many people working in the field of traffic safety have stories they want to share with the general public—stories that must be told through the media. How best to do that was the subject of a concurrent session moderated by Dennis Smith from the DPS Office of Communications. The session gave insight into what reporters are looking for and how to communicate with them effectively.

The first speaker was Marilyn Butler, news director of WMNN, a statewide radio service providing news to 77 stations. With its broad reach, WMNN is interested in stories with a cohesive state view, not just those specific to one area or city.

Butler shared some advice for press releases: If you send a release and your name is on it, make sure you are available to answer calls promptly—and don't let calls go to your voice mail. Also, put the point of the story on top. "We won't plow through six paragraphs to get to the story," she explained; just describe what happened, why it matters, and how to reach you.

With radio's very tight deadlines, stories that aren't breaking news may not be aired right away. If you have news that you've had trouble getting out, try e-mailing or faxing it on holidays or long weekends when there may be some downtime, she advised. On weekends they may also be able to give your item more time—a minute and a half rather than just 30 seconds.

Overall, WMNN is very interested in issue-oriented news that they can break into sound bites. "We just want to find out what happened and get as much information to people as you can tell us," Butler added.

Next was Caroline Lowe, crime beat reporter for WCCO-TV news in the Twin Cities. The newsroom may get 30 press releases a day—Monday mornings and weekends tend to be slower—so a phone call

may help get your story noticed.

While TV reporters are always looking for tips, be aware of their deadlines: for example, don't send them news at 4:00 in the afternoon. She also noted that TV is visual, so if you're having a news conference, plan it with a news backdrop.

She also encouraged the audience to establish an ongoing link with reporters. "The main thing is to think of reporters as people and build a relationship before a crisis, and get to know somebody in the newsroom," she said. Visiting a newsroom and watching a newscast is one way to learn more and make these valuable connections.

In summary, Lowe said, don't give up or get discouraged even if you haven't gotten your news item on the air—keep trying, or find a new angle.

Kelly Scott, public safety reporter for the St. Cloud *Times*, agreed with Lowe that because the newsroom receives so many press releases, a personal phone call might make a difference. It's also helpful to give different timing options in your press releases: perhaps an angle for that day plus something else she could hold for the next week.

Papers do a variety of stories on traffic, trooper levels, crash locations, and more. But the stories that will be a "big splash" in the newspaper and make the front page are those that have the most impact on readers—stories that get readers to keep themselves safe or perhaps change their driving behavior. Papers also love statistics, graphics, and photos to attract readers' attention, she said.

Marilyn Butler, Caroline Lowe, and Kelly Scott

Scott echoed Lowe's comments about having a contact in the newsroom and knowing your beat reporter. And on the lighter side, she encouraged sources to speak in plain, everyday language: don't say "altercation" when "fight" will do.

Moderator Smith closed the session by noting that on both sides—the traffic safety professionals and the media—are communicators. "Let's not forget that the media are part of our coalition to raise awareness and meet some of our tactical objectives," he said. "Our partners in the media are a very important conduit to the general public."

Law Enforcement and Communities Working Together

Panelists: **Bob Bollenbeck**, *TZD Cambridge/Isanti Safe Communities;* Major **Mike Asleson**, *Minnesota State Patrol;* **Kris Moky**, *Health Educator, Winona Health Services/Winona Buckles Up for Life;* and Deputy Chief **Tom Williams**, *Winona Police Department.* Moderator: **Brad Kollmann**, *Safe & Sober Liaison, Office of Traffic Safety*

While communities and law enforcement personnel have the same goal of reducing fatalities, they don't always work together toward the goal. However, the panelists in this session represented communities and law enforcement agencies that are working together and making strides toward zero deaths.

First, Bob Bollenbeck outlined the TZD pilot program currently being implemented in Isanti and Mille Lacs Counties. The specific problems in this corridor involve higher-than-expected crash rates with deaths and serious injuries. "Speed is a major problem in this area," Bollenbeck said. "The area is also experiencing a high population [growth], which means vehicle miles traveled on the corridor are increasing every year."

In this pilot program, TZD groups were formed in both counties. Partnerships involve Rum River Health Services in Princeton (Mille Lacs County), with several coalition members identified in both counties. Bollenbeck says they tried to get a variety of people in the coalition and included engineers, city representatives, law enforcement, public health, concerned citizens, and state and local government.

To date, the group has embarked on several activities. "First we analyzed our crash data; what we thought was happening wasn't really what was occurring," he explained. "We thought most of the fatal accidents involved young inexperienced drivers. The reality was that the rush-hour times had more accidents."

Next, the team crafted a series of articles aimed at attracting media attention and began local saturation campaigns that included hosting booths at county fairs and conducting surveys. "We also worked with the school systems to conduct seat belt audits and impact panels involving driver-education students and their parents," Bollenbeck said. "And we worked with the student council at Cambridge-Isanti High School to develop traffic safety messages for a four-month billboard campaign."

Tom Williams

Since alcohol also is an issue for this area, the TZD coalition is now partnering with liquor providers in Isanti County to discuss and identify solutions these providers can help deliver. "We're trying a variety of things to see what works well," he said. "We'll also continue developing partnerships, since they are critical to the overall success of our program."

Next up was the team of Kris Moky and Tom

Williams. Moky explained that although there are 49,000 permanent residents in Winona County, the area sees an influx of more than 10,000 college students each year. "Alcohol by far is one of our top problems, and we're up to our necks in alcohol enforcement and education this time of year," Moky said.

Since alcohol also is an issue, the TZD coalition is partnering with liquor providers in Isanti County to discuss and identify solutions these providers can help deliver.

She then described how Winona Health Services originally got involved in working with law enforcement as part of Minnesota's tobacco company settlement. "We were given the task of handling [tobacco settlement] compliance checks… and pursued the idea of doing alcohol compliance checks as well," Moky said. The agency applied for, and received, a $5,000 Minnesota Join Together (MJT) grant (MJT works to protect the health and safety of young people and communities by reducing underage alcohol use and its negative consequences); eventually, it got involved with the Safe and Sober program, she said.

Williams added that the Winona Police Department saw a need to collaborate with other agencies in order to get the best bang for the buck. "We realized that the police are good at enforcement and community health is good at education. As we developed our Safe and Sober community program, Kris came forward to handle education and media relationships, with input from law enforcement, and we took over scheduling, contacting other police departments, reporting to the state, and so on," he said. He added that they've also partnered with one local university, St. Mary's, and are working on getting Winona State on board.

The session concluded with a presentation by Major Mike Asleson, who told audience members that last year, state patrol leaders felt that the death count [on Minnesota roadways] was simply unacceptable and decided that the issue needed more visibility. "One of the things we've done on that line is to change the role of the safety education trooper to that of public information troopers," Asleson said. "We're also trying to be creative and do all we can with the resources that we have."

He described, for instance, how the Minnesota State Patrol's Mankato district 2200 is involved in broad partnerships that include hospitals, emergency medical services, law enforcement, and local government. "We have realized impressive results by working together on enforcement efforts," Asleson said. "And it's not like we have to add 20 patrol cars—it's just a couple of troopers taking a few extra hours to work on problem areas," he explained.

Asleson also discussed the State Patrol's role in helping to coordinate and administer the Operation Night-Time Concentrated Alcohol Patrol (NightCAP) impaired-driving prevention program that involves law enforcement saturation efforts throughout the state; these efforts are coordinated by staff in each of the Minnesota State Patrol districts and include participation by county and local law enforcement agencies.

Intelligent Transportation Systems and Safety

Dean Larson, *International Idea Institute, Inc.,* and **Jeff Benson**, *Vice President, URS Corporation*

U.S. Secretary of Transportation Norman Mineta has said that when something is known to save lives, there's a moral obligation to use it. That "something" is intelligent transportation systems, said the presenters at the concurrent session on ITS and safety. Jeff Benson and Dean Larson discussed emerging ITS technologies and how they might be used to reduce the number of vehicle crashes and the deaths and injuries that result.


Dean Larson

"ITS can make roads safer, vehicles safer, and our behavior safer," Benson began. Specifically, he continued, ITS can help solve problems that are the leading contributors to crashes: human error, running off the road, driver distraction, rollover, and low visibility. Some examples of how ITS can do this include anti-rollover systems, adaptive cruise control (ACC), and collision-avoidance systems.

"By using ITS technologies, the focus shifts to avoiding a crash rather than surviving a crash," Benson said. ITS can prevent crashes by integrating roadway and in-vehicle technology to monitor highways, respond to incidents, collect real-time information about travel and road conditions, and get that information back to the drivers so they know what to expect.

"The only real reason for a lot of these technologies is saving lives," Larson said. However, ITS can also save money when considering the costs (e.g., insurance costs, property damage) of vehicle crashes, he said.

Both presenters agreed that technologies are changing every year and will eventually take us to fully automated cars and highway systems. The technology exists and will probably be implemented over the next 15 to 30 years, they predicted.

Key national programs are already underway, and Minnesota is playing a role. For example, the FHWA is funding the University of Minnesota's research on preventing crashes at rural intersections. Led by Max Donath, director of the ITS Institute, this project is developing technology to tell drivers on collector roads when it is unsafe for them to turn onto a highway.

Larson said that implementation of the technology is "not something that's way out there," noting that major automobile manufacturers are already touting lane-keeping and ACC technologies in addition to OnStar.

"You folks are going to be part of a revolution," he said.

Insights into Driver Behavior

Janet Creaser, *Research Associate, HumanFIRST Program, University of Minnesota,* and **Kathleen Harder**, *Research Associate, Center for Sustainable Building Research, University of Minnesota*
Moderator: **Gina Baas**, *Center for Transportation Studies, University of Minnesota*

One of the key components necessary for reducing traffic fatalities involves gaining a better understanding of the human component as it relates to safety on the roadways. Two University of Minnesota researchers conducting such research shared insights into driver behavior from a human factors standpoint.

First, Janet Creaser discussed the various characteristics of younger and older drivers that put these groups "at-risk." In both cases, there are several factors that, combined and individually, increase fatality rates in these age groups. For both of these at-risk groups, appropriate types of traffic and vehicle engineering, education, enforcement and licensing, and intelligent transportation systems can be used to mitigate drivers' risks. "Driver-centered interventions are specific depending on age group and crash types," Creaser explained. "For example, young drivers need interventions related to risk-taking and inexperience, while older drivers need interventions related to handling complex situations such as intersections."

Although there are many intervention options that, if implemented, would make everyone on the roadways safer, they all require money. "The amount spent on tobacco advertising in this country is more than the total amount of federal government spending on traffic safety research," she explained. Quoting the Insurance Institute for Highway Safety, Creaser added that "the priority assigned to highway safety in the United States is likely to remain low until the public, politicians, and key decision makers become convinced that the prevention of crash deaths and injuries deserves priority comparable to what we assign to other leading public health problems."

Next, Kathleen Harder reported that according to the American Automobile Association (AAA), driver aggression (not including road rage) is one of the major threats to safety in future roadway environments. Therefore, she explained, "understanding the factors that contribute to aggressive driving will allow us to develop programs and policies to prevent and reduce it."

In efforts to identify factors that contribute to aggressive driving behavior, Harder and her team used survey data to investigate the relationship between personality, emotional, and behavioral variables and self-reported driving behavior. They then validated the survey findings using a driving simulator experiment.

Kathleen Harder and Janet Creaser

"Drivers need clues, besides speed limit signs, that tell them to slow down."

—Kathleen Harder

Through the driving simulation study, the researchers found that self-reported "high hostile" drivers exhibit more aggressive driving behaviors in a driving simulator than self-reported "low hostile" drivers. In addition, other self-reported psychological variables accounted for a significant amount of variance in driving behavior in the driving simulator. And while these findings may seem obvious, Harder explained, they had never before been demonstrated.

It is through experiments such as this, Harder said, that researchers may find ways to alter the driving environment to potentially change the behavior of people who are tripped into aggressive behavior. One way might be to use self-explaining roads that "tell" drivers how fast they should drive. "Drivers need clues, besides speed limit signs, that tell them to slow down," Harder said. "For instance, using pavement coloration in turn lanes and on shoulders signals that there is a small amount of space, and people do slow down." Other ways of altering the driving environment include designing roads that include traffic-calming features, providing travel time information via changeable message signs, creating better roadway signage, and developing various mass transit options.

Barriers to Traffic Enforcement

Panelists: Deputy Chief **Mark Arnold**, *Waite Park*; Major **Mike Asleson**, *Minnesota State Patrol*; Chief **Mike Goldstein**, *Plymouth Police Department*; and Sargeant **Dan Malmgren**, *St. Paul Police Department*
Moderator: **Bob O'Brien**, *Safe & Sober Liason, Office of Traffic Safety*

The importance of routine traffic enforcement is often underrated by both police officers on the street and administrators setting policy. Yet ticketing speeders, stopping red-light runners, and taking drunk drivers off the road can go a long way toward saving lives. In this session, panelists addressed some of the challenges they face enforcing traffic laws and ideas for overcoming them.

Moderator Bob O'Brien kicked off the session by noting that regardless of a community's size, "the number one complaint in [that] community is traffic law enforcement." Citizens want to see a visible police presence in their communities, yet often get angry when they are asked to slow down, or complain about the expense of traffic tickets, O'Brien said. "But it's time to stop worrying about citizens' pocketbooks and start worrying about their children. Parents teach children how to drive by example."

Motivating officers is one major challenge, because traffic law enforcement is often viewed as a "necessary evil"—despite the fact that an estimated 40 percent of all drug arrests, for example, start with a traffic stop. To change attitudes, the message that traffic enforcement is a priority needs to be sent from administration down to the officers on the street, O'Brien said.

To change attitudes, the message that traffic enforcement is a priority needs to be sent from administration down to the officers on the street.

The first panelist, Deputy Chief Mark Arnold of Waite Park, began by relating how he recently had to deliver news to a family that their child had been hit (and fatally injured) by a drunk driver.

"That should send a message to all of us," he said. "We're never going to eliminate [accidents], but we can make an impression."

One barrier his agency faced was getting the county sheriff on board for increased traffic enforcement, since it meant arresting those who elect him to office. But since Carver County is the 13th deadliest in the state in terms of alcohol-related accidents, Arnold said something urgently needed to be done.

"There should be no barriers, because we're all in this job together, and that's to go out and enforce traffic laws," he said. Because most departments are strapped for resources to focus on traffic enforcement, departments should work together and help others whenever possible, he added.

Major Mike Asleson of the State Patrol identified limited budget and staffing resources, anti-quota laws, strong law enforcement unions, and restrictions on financial incentives as just a few of the barriers to traffic law enforcement he's experienced.

"However, there are multiple things we can do," he said. "One is to work for additional resources, yet don't allow the lack of resources to be a show stopper." In other words, focus on what can be done, he said.

Another idea is to use facts to inspire emotion among staff. Emphasizing that traffic deaths are the number one killer of youth—and law enforcement officers—should develop a passion in officers and a sense that traffic law enforcement is vital to public safety. And the death notification process is a good time to remind officers how important it is to never look the other way when violations occur in their presence, he added.

In addition, recognition of good work is a powerful motivator, Asleson said, and acknowledging who's worked really hard is a good way for others to pick up the slack.

Following Asleson, Chief Mike Goldstein told the audience that he's come to understand the huge costs that traffic law violations can inflict on a community in terms of injuries and property damage.

Since becoming chief of police for the city of Plymouth, Goldstein has made traffic law enforcement a directive in which every sworn person on the force is compelled to initiate some form of traffic enforcement initiative. "From the top on down, we work the road," he said. As a result, the department's traffic enforcement is up about 151 percent over the last year.

He added, however, that money is not—and should not be—the incentive, but rather an added benefit. "This is not about dollars, this is about saving lives in your community."

The final panelist, Sergeant Dan Malmgren of the St. Paul Police Department, said that scheduling officers on traffic enforcement for four- or six-hour shifts, rather than eight-hour shifts, results in more productive officers and less down time.

Malmgren also suggested that agencies form partnerships with other agencies and jurisdictions. For example, in an effort he referred to as "You catch 'em, we'll clean 'em," Safe and Sober or NightCAP staff process drunk drivers picked up by other agencies.

This custom-designed Breath Alcohol Testing (BAT) Mobile contains facilities for processing impaired drivers arrested as part of the State Patrol's Operation NightCAP saturation patrols.

The Role of Safe Communities in Toward Zero Deaths

Panelists: **Stephanie Williams**, *Northland Safe Community Coalition;* **Amy Reineke**, *Douglas County Safe Community Coalition;* **Kirsten Lindbloom**, *Mower County Safe Communities;* and **Pat Hackman**, *Safe Communities of Wright County.* Moderator: **Nancy Franke Wilson**, *Department of Public Safety*

It takes a village—many villages, in fact, working together with schools, law enforcement, and other local organizations—to change driving behavior. Safe Community Coalitions are intended to do just that. Developed by the National Highway Traffic Safety Administration, the Safe Communities model promotes traffic injury prevention through collaboration and cooperation. Multi-partner coalitions assess traffic safety issues in their communities, then rank those concerns and develop tools to address them. In Minnesota, Safe Community Coalitions are a key part of the TZD program.

In a concurrent session moderated by Nancy Franke Wilson of the DPS Office of Traffic Safety, four speakers described the Safe Communities activities in their areas.

First was Stephanie Williams, coordinator of the Northland Safe Community Coalition in northern Cass County. Per capita, Cass County has the highest alcohol-related fatality rate in the state. Due to the area's rural nature and high tourist population, the coalition decided a road sign campaign would be the best way to get its message across. Northland High School's Youth in Action group designed the logo and slogan, and the county highway department donated staff time to install a sign at each alcohol-related death or serious-injury crash site. About 20 signs are up, and the effort has received a lot of media coverage, she said.

The coalition also produced five 30-second public service announcements (PSAs) in an effort to reduce impaired driving and increase seat belt usage. The ads were a no-cost activity: a local radio station donated production time, local law enforcement volunteered to read them, and three prominent radio stations played them in heavy rotation. The announcements have received an "extremely high amount of positive feedback," she said. "People like hearing their local cops."

The next speaker was Amy Reineke, coordinator for Douglas County Safe Community Coalition. Her coalition established three goals: increase seat belt use among adolescents, increase the knowledge and proper use of child car seats, and reduce risk factors at two of the six identified crash locations in the county.

To address the first goal, the coalition held activities in schools to raise awareness of passenger restraints and the potential negative effects of not buckling up. A post-campaign survey showed each school had about a 10 to 15 percent usage increase.

For its second goal, the coalition initiated ongoing car seat clinics and provided grants for low-income residents. And for the third goal, they analyzed data to understand the dangers in the area and publicized the results to the community through the media.

A key to the coalition's success, Reineke said, was recruiting members who are the decision makers in their organizations.

Kirsten Lindbloom, coordinator of Mower County's Safe Communities, said her coalition approaches activities from three angles. First is a media component, including television PSAs. Second are activities to keep the program visible in the community. For example, they hold an exhibit at the county fair and run a nonalcoholic drink contest as part of Austin's "Christmas in the City."

The third element is a print campaign involving several different pieces, including "power letters" to parents. These letters, on letterhead from the Austin police department or the county sheriff's office, inform parents of statistics on adolescent driving and encourage them to remind their children to buckle up and drive safely. A follow-up survey shows "everyone opens those letters," she said.

Stephanie Williams

Another example within the print campaign is the use of bilingual payroll inserts for employees of Hormel, the county's main employer, to reach the large immigrant population.

The final speaker was Pat Hackman, executive director of Safe Communities of Wright County. Formed in 1997, Wright County's coalition learned that young drivers were involved in the highest proportion of crashes. In response, they initiated parent-teen driver's education presentations, a high school seat belt challenge, and prom and other school-related promotions. The efforts have been "extremely successful at reaching those young drivers," she said.

They also learned that driver distraction was the most common cause of crashes on 55 m.p.h. roadways in Wright County. To reduce these crashes, they partnered with law enforcement to conduct enhanced speed enforcement and launched a public service campaign using brochures, direct mail, and billboards. The campaign increased awareness of distractions by 73 percent.

In 2001 the coalition partnered with the TZD program to reduce the number of fatalities on the Highway 55 corridor from Medina to Buffalo. While it is too soon to judge the success of that campaign, overall the number of severe injuries and fatalities in the county has fallen 34 percent since 1997.

Because of the program, "there are a lot of people walking around Wright County who otherwise wouldn't be alive," Hackman concluded.

The CODES Project: Linking Hospital Data to Crash Data

Tina Folch, *Minnesota Department of Public Safety,* and **Mark Kinde,** *Minnesota Department of Health*
Moderator: **Evelyn Anderson**, *Minnesota Department of Health*

In their presentation, Tina Folch and Mark Kinde discussed the Minnesota Crash Outcome Data Evaluation System (CODES) project. They explained that the program began after the Department of Health realized that different agencies were collecting different data to answer different questions, and it wanted to find a way to combine these data sets to answer broader questions.

Today, CODES links statewide motor vehicle crash data to hospital injury and charge data. It has the specific mission to provide crash and hospital data in aggregate form to be used in determining the cost-effectiveness of safety measures and initiatives in Minnesota. For example, do helmets really work?

In most types of crashes...brain and spinal cord injuries are the most prevalent type of injury, and these injuries incur the highest costs.

Why this push for seat belts? Are these cost effective? "It's always good to evaluate these types of things," Kinde said, "and use the data to drive intervention and evaluation to modify safety initiatives."

To date, there are two sets of CODES data that have been released; this information is available at www.dps.state.mn.us/ots/crashdata/codes_project.asp. These linked data sets reveal, among many other comparisons, that in most types of crashes involving almost all types of vehicles, brain and spinal cord injuries are the most prevalent type of injury, and the type that incurs the highest costs. "There are a lot of variables involved in crashes, such as vehicle type, impact location, and seat belt use. Despite this complexity, CODES goes a long way to showing us how these variables work together," Folch said.

In the future, the CODES project will center on seat belt use, teen driver, bike, and child passenger safety data. "We can, for example, look at injury severity when kids are not in car seats or are not buckled up," Folch said. "With this information, perhaps we can create safety initiatives that get people focused on this problem and finding solutions."

Engineering Solutions—Working Together for Minnesota

Gary Dirlam, *District 3 Traffic Engineer, Minnesota Department of Transportation,* and **Ken Johnson**, *Transportation Planner, Mn/DOT*

Innovation doesn't just mean computers and high-tech materials—backed by the latest safety research, highway engineers are finding new ways to use established engineering and construction techniques. In this session, Gary Dirlam and Ken Johnson discussed how pioneering efforts in Minnesota and other states are paving the way toward a future with fewer fatalities and serious injuries on our roads.

Gary Dirlam and Ken Johnson

One example of innovative engineering is a new application for a familiar safety measure—rumble strips. For years, engineers have used areas of rough pavement on road shoulders as a warning to drivers who veer toward the outside of the roadway. Now, rumble strips are being installed along the center of some two-lane rural roads to help prevent drivers from crossing the line into oncoming traffic.

In Minnesota, centerline rumble strips have been installed on approximately 250 miles of highway, including Highway 23 between St. Cloud and Willmar, and several areas around Brainerd. Mn/DOT engineers are collaborating with researchers at St. Cloud State University to test the effectiveness of different rumble-strip patterns and how drivers respond to the strips.

When deciding whether to use centerline rumble strips, engineers have to balance potential safety benefits with maintenance and funding issues, including the cost of installation and more rapid pavement degradation due to breaks in the pavement surface, Dirlam said. Increased pavement noise may also have an impact on residents near highways where new rumble strips are installed.

Another example of innovative engineering is the increased use of an old traffic-management technique: highway intersection roundabouts. Ken Johnson explained the use of roundabouts in Minnesota, the differences between a roundabout and a traffic circle, and why roundabouts are likely to become more common.

There are many misconceptions about roundabouts, Johnson said, but the modern roundabout is basically an update of the traditional "traffic circle." Single-lane roundabouts (at the intersection of a pair of two-lane roads) are the most common type. Johnson explained that all vehicles must yield before entering a roundabout, and once inside, there are no stop signs or electronic signals.

Roundabouts reduce crashes by reducing the number of places where vehicles have to cross paths to make a turn. Most accidents involve left turns, and roundabouts allow only right turns. Roundabouts also encourage moderate traffic speeds, giving drivers more time to avoid other vehicles and reducing the severity of crash injuries. In addition, roundabouts can create attractive open spaces for landscaping.

One excellent example of a roundabout installed by Mn/DOT is the intersection of I-35 and Steele County Road 12 near Medford. The new intersection design is credited with reducing vehicle crashes while providing an efficient and aesthetically pleasing solution to increased traffic volumes near a group of popular outlet stores.

Roundabouts deserve serious consideration for many situations, Johnson said, and Mn/DOT is currently developing formal statewide guidelines for their design and operation.

Safety Solutions and Local Government

Eugene Wilson, *Transportation Engineering Safety Consultant*

From across Minnesota and beyond its borders, representatives of local governments came to the TZD conference in search of new ideas to help them improve road safety. This diverse group brought a wide range of issues and concerns to the local governments session, where presenter Eugene Wilson laid out a toolbox of innovative measures from local governments around the world.

A passionate advocate of improving roadway safety, Wilson is also a practicing engineer with a long career as a professor at the University of Wyoming and in private consulting. His expertise extends beyond the field of engineering to include legislative measures, driver education, and law enforcement options.

Wilson began his presentation by introducing the idea of making incremental improvements to the safety of our roads, rather than holding out for all-in-one solutions that may never be implemented. By taking a series of well-planned steps to improve safety, he stressed, local governments can bring themselves closer to the goal of zero deaths.

As a participant in a fact-finding tour of European transportation agencies, Wilson had the opportunity to observe firsthand many of the strategies these agencies employ to reduce traffic deaths. Although many of these measures are built on European legal systems and government practices, they offer a fresh perspective to American safety workers.

[The FHWA's findings on European road safety practices are collected and synthesized in FHWA PL-03-006: *Managing and Organizing Comprehensive Highway Safety in Europe*.]

Looking at road crashes as system failures, rather than simply the results of driver error, means seeing driver training, road engineering, safety legislation, law enforcement, and emergency services as interrelated parts of a total road safety equation. To find the cause of a fatal crash, it is necessary to look at all aspects of the system, Wilson said.

Local governments have traditionally taken a reactive approach to road safety—looking at crash reports to identify problems. But several factors limit the effectiveness of this approach, including the small number of crashes in many areas, the potential for crashes to go unreported, and the difficulty of determining the true causes of crashes. In order to make further advances in road safety, local agencies are increasingly turning to new, proactive tools. These include the Roadway Safety Audit (RSA), the Roadway Safety Audit Review (RSAR), and the Local Safety Improvement Program.

[The National Cooperative Highway Safety Program (NCHRP) of the Transportation Research Board provides an overview of tools for local governments, including how to develop a Local Safety Improvement Program, in NCHRP Synthesis 321: *Roadway Safety Tools for Local Agencies*.]

The Road Safety Audit is a powerful tool that can be adapted to local needs and conditions. An RSA is a structured examination of planned or existing roadways by an independent, qualified audit team, usually including road supervisors and engineers. A Road Safety Audit Review is simply an RSA carried out on a road that has already been constructed, either prior to use or after opening.

Since the introduction of the RSA to the USDOT in 1996, the RSA procedure has been used to improve the design of many federally financed projects. Wilson asserted that all the projects where he had seen an RSA performed had been improved by the procedure—often at a relatively low cost.

Because few new roadways are now being constructed, the RSAR is an appropriate tool for local governments to evaluate their roadways, Wilson said. An RSAR evaluates the safety features of a road based on its functional classification, with an awareness that different types of roads have different safety issues, and that the classification of a road may change over time. The audit team identifies all safety issues they find in each road section, and recommends what action, if any, should be taken.

Wilson pointed out that communicating and publicizing the results of an RSA or RSAR is an excellent way to raise safety awareness within a community. The audit results give local agencies a solid tool to help convince residents to invest in road safety improvements and supports the implementation of a Local Safety Improvement Program.

A Local Safety Improvement Program is the single most valuable safety tool that a local government can develop, Wilson said. These programs can build on the findings from an RSA or RSAR by establishing a timeline for implementing safety improvements and formalizing commitments by managers and government officials.

Ironically, many local governments have been discouraged from adopting safety programs, due to concern that identifying safety problems would expose the local government to tort liability for vehicle crashes. However, Wilson explained, the existence of a documented program to correct safety problems using available resources is a strong defense against tort liability arising from crashes. The program documentation, once agreed to by all levels of local government and updated regularly, can be used to establish that concrete actions are underway to deal with safety problems.

Eugene Wilson

Communicating and publicizing the results of a Road Safety Audit or Road Safety Audit Review is an excellent way to raise safety awareness within a community.

Closing Session

Gordon Graham, *Graham Research Consultants. Moderators:* **Bernie Arseneau**, *State Traffic Engineer,* and **Doug Differt**, *Deputy Commissioner, Minnesota Department of Transportation*

"One of the great benefits of this conference has been the opportunity to view the issues we deal with every day from different perspectives," Bernie Arseneau stated prior to introducing the final speaker. "For example, when I see officers pulled over on the side of the road with lights flashing, I automatically think, 'How can we avoid traffic backups and secondary crashes.' Now I realize, based on the session I heard, that cops have a different perspective—they don't want to get killed. Clearly, we must consider all of the factors involved in the traffic issues we deal with."

Bernie Arseneau, Gordon Graham, and Doug Differt

"I am firmly convinced that risk management is the answer to all of the problems we face in traffic safety as an organization, as a society, and as a nation."

—Gordon Graham

Next, in his closing address, risk management specialist Gordon Graham shared several philosophies and strategies he believes can go a long way toward achieving zero deaths on our roadways. "I am firmly convinced that risk management is the answer to all of the problems we face in traffic safety as an organization, as a society, and as a nation," he said. "No matter what job you're in, it all gets down to risk management. Bad things do not have to happen. The bottom line is that identifiable risks are manageable risks."

Specifically, Graham suggested that rather than focus solely on after-incident damage control, it is better to focus efforts on preventing mistakes through proper risk management. "We need to teach employees, supervisors, and managers why things generally go wrong and how to prevent these unfortunate situations from happening." In the area of traffic safety, he noted, this means asking, "What we can do up front to prevent traffic tragedies?"

While Graham discussed several ideas of what can be done to prevent things from going wrong in the first place, he also offered several reasons why risk management generally is not taken seriously. One factor has to do with the systems in place within an organization. "Systems will never let you down when they are properly designed, kept up to date, and fully implemented," Graham explained. "Unfortunately, it is the lack of implementation that continually gets us in trouble."

Rather than making new mistakes, "we're getting run over by the same trains over and over," Graham said—driving impaired, speeding, not wearing seat belts. There is a need to study past data thoroughly and use it to predict the future. "Predictable is preventable, so we can get to zero deaths," he said. "True, it will take a while, but if we work together, build complementary systems, learn from the past, and learn from each other, we can go further in protecting ourselves and our great motoring public." Graham urged the audience to avoid thinking that individuals can't make a positive impact. "Can one person in your job screw up your organization? Yes? So the opposite is true—one person can make a difference, and this is up to you."

Finally, Doug Differt closed the conference by acknowledging the power in having such a diverse group come together. "It's phenomenal what happens when 400 people get together with the goal of reducing traffic fatalities. This is an important issue from the state's standpoint. You are the people who can make it happen, and as a representative of [Governor Pawlenty's] administration, we pledge to help you do just that."

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