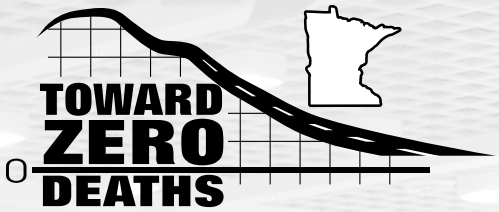
Toward Zero Deaths:

Integrating Minnesota's Traffic Safety Agenda Conference

November 16-17, 2005, St. Cloud Civic Center



A SUMMARY REPORT

Toward Zero Deaths is a cooperative program, building partnerships between community groups and state agencies to improve the traffic safety of a designated area. The program's roots stem from the 2001 North Star Safety Workshop, which assembled transportation safety stakeholders representing local, regional, state, national, and international organizations and agencies to share information and to identify new approaches to reducing the number of fatalities and life changing injuries on Minnesota's roads. The Minnesota Toward Zero Deaths Program (TZD) developed out of the ideas and momentum created by the North Star Workshop. TZD members recognize that moving toward a goal of zero deaths requires cooperation among all levels of government agencies, as well as building connections between government and local organizations whose focus is traffic safety.

The annual TZD conference provides a venue for sharing information on progress made since 2001, for sharing best practices in the areas of engineering, enforcement, education, and emergency services, and for charting the course for a future with fewer traffic fatalities and life-changing injuries.

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

Bernie Arseneau, state traffic engineer, Minnesota Department of Transportation

In his opening comments, Bernie Arseneau welcomed attendees to the second annual *Toward Zero Deaths* conference and emphasized the conference goal. "We're here to learn more about what is going on in various areas of traffic safety and to discover new tools we can use to reduce the fatal and life-changing accidents occurring on our roads," Arseneau said. "We're losing 42,000 people a year to deaths on our roads, and that is just too many lives."

He continued by explaining that the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which authorizes the federal surface transportation programs for highways, highway safety, and transit through 2009, has identified safety as an important factor in improving the national transportation system. SAFETEA-LU introduced a new highway safety improvement program (HSIP) to move toward projects that reduce the number of fatal and life-changing roadway accidents. This is in concert with an effort that Minnesota took part in last year and that was part of the successful development of Minnesota's Comprehensive Highway Safety Plan, for which the Minnesota Departments of Transportation and Public Safety received a national 2005 Roadway Safety Award.

"We are proud of this award and of our highway safety plan," Arseneau said, noting that development of the plan was a collaborative effort involving partners from across the state. "We realize that zero deaths is a lofty goal; but, it is realistic, and we will move toward it through continued partnerships, through the use of technology, and by putting to use the many ideas we will take with us from this conference."

Opening Plenary: The Backstrom Family – Personal Impact Statement

Nathan, Connie, Charles, and **Ryan Backstrom**

Connie Backstrom

…As we would find out later, the boys hadn't done anything wrong. They were going the speed limit, they had their seat belts on, they were on the right side of the road.

On October 10, 2004, brothers Matthew, Jacob, and Justin Backstrom were killed when their car was hit by a drunk driver near Farmington. The boys' mother, Connie, and their father, Nathan, with their younger sons Charles and Ryan in attendance, recounted the details of their lives immediately after learning of their sons' deaths and of their lives since. Their discussion included a poignant video consisting of family photos, video from the boys' funeral, and photos of their crashed car. The following is an excerpt from the Backstrom's presentation.

Connie Backstrom

Life changing impact: one thousand one, one thousand two, and two of my sons lay dead in a ditch. A third son was hanging on to life by a fragile thread that would soon be broken. Why? What could have happened?

…As we would find out later, the boys hadn't done anything wrong. They were going the speed limit, they had their seat belts on, they were on the right side of the road. But one young man chose to drink too much, he chose to drive too fast, and he chose to talk on his cell phone. Now there are three white crosses in a ditch where three sober brothers left this earth. One man's three choices robbed us of three sons we had labored over to raise to be responsible, respectful young men. One young man's three choices robbed Ryan and Charles of getting to know their three older brothers.

…On October 10, 2004, three brothers left home to run an errand, that's all … I looked at the clock as they went down the driveway; it was 4:36 p.m. Little did I know that would be the last time I would see them alive...

At about 7:20, Jacob called to say they were leaving the Wal-Mart parking lot … After an hour passed, [and the boys still were not home] I was concerned. … Finally, at 9:20, I saw two sets of headlights coming up our driveway … I was ready to give them a hard time for not calling when I noticed that it was two sheriff's cars. Instantly I knew someone was dead. I had no idea before the night was up it would be all three of my sons.

The two deputies asked me a few questions before saying, "We're sorry to inform you that Matthew and Justin were killed in a crash near Farmington tonight. There was a third boy with them; do you know who that was?"

"That would be my Jacob," I said. They then told me he was in critical condition and in surgery at Regions Hospital.

Immediately I went into crisis mode; I called Nathan and told him he needed to come home immediately; I called a friend to come stay with Ryan and Charles thinking they would see Jacob in the morning...

…Maybe, by sharing the brothers' story, it will make a difference. We will never know if someone will make better choices because they hear the brothers' story. … We have to try to make a difference by talking to people and by putting real faces with

those numbers, by trying to make them more aware of how deadly drinking and driving is even for those who are not drinking.

…So, now we share the brothers' story with whoever will listen. We bring the ripped clothes that the boys died in. We show videos of when they were so full of life, realizing that young people especially need something tangible to make the story they hear more real…Every time [an officer] pulls over an irresponsible driver you do make a difference. You will never know how many lives you've saved because of your actions. You will never know how many families you have spared the heartache we know. Individually, the task of reaching zero deaths on Minnesota roads is impossible. But, if each of us does all that we can, we will be a whole lot closer to reaching that goal.

Nathan Backstrom

We live in a society that has cheapened the value of human life ... This conference by the very nature of its title sends the message that every life is important, every life has value, and every life is worth saving.

…We've been reminded of how precious and how fragile life is and how short it can be here on this earth ... It is amazing how in one moment, your hopes, your plans, your dreams for the future seem to be within reach and the next moment, your world is turned upside down. Your dreams are replaced with indescribable grief and sorrow. What a difference a moment can make.

I'm a pilot for Northwest Airlines, and I was in the cockpit preparing for a flight when I received a phone call from my wife that would change my life forever. She said, "Come home right away; there's been an accident." She would not tell me any details. As I drove down I-494, I called her back and pressed the issue, and she finally told me that Matthew and Justin were dead and that Jacob was in critical condition. Can you imagine having to tell your spouse that your kids are dead? The sorrow and sadness in her voice is something I would never forget, and I can't begin to describe the feeling of hopelessness that overcame me at that point.

…When we walked into Jacob's room that night, we found him on life support…tubes coming out of his head and nose. They were trying to drain the pressure off of his brain; the crash had been extremely violent. We held his hand as he officially died at 1:15 in the morning.

…What happened that night in the hospital we will never fully understand. Just a few doors down the hall was a young man by the name of Boe, and he was also hanging on to life by a thread…[That young man] is responsible for the death of our sons, but that night, God chose to take our Matthew, Jacob, and Justin from us, and he chose to let Boe live. Boe has been given another opportunity to make a difference, and we hope and we pray that he will use this opportunity wisely.

After we said our earthly good-byes to Jacob, we then had to go to the county morgue in Hastings to officially identify the bodies of Matthew and Justin… I can tell you from personal experience that death is real, it is cold, and it is very final as far as this life is concerned. At the funerals for our three sons, closing the coffins was the hardest thing I've ever done in my life.

…[Since the crash,] we've been blessed with the opportunity to talk to so many different groups in so many different places. Many of the people we have spoken to have responded by saying the story that God has given us to tell has caused them to change their behavior. Some have said it has caused them to change their priorities because they want to make a difference in their schools, their neighborhoods, and family…It is with a grateful heart that I can say Matthew, Jacob, and Justin did not die in vain.

But many others are dying every day…The obvious question is why, as a society, are we refusing to confront this issue [of impaired driving]? I believe the answer is very simple, but one that we are still refusing to deal with. If we confront this issue, we then must confront our own behavior. I do not believe our society is willing to do that.

…I have a request, a challenge, or maybe it's a plea from the bottom of my heart. I do not believe we can continue to hide behind the law and say to our kids "We can drink, but you can't." When our kids see us at a bar, restaurant, or ball game having a few drinks and then getting in a car and driving home, what are they learning? I know you love your kids, but do you love them enough to change your behavior? Think about your kids and the influence they can have on others. Sometimes peer pressure can be a good thing. A changed heart can influence others in this life and for all eternity. So, do it for yourself, and do it for your kids.

…It is by the grace of God that our family looks forward to the future. We take one step at a time as we live one day at a time, because we're only given today, only this moment. As you go about your work, I ask you to keep in mind that all you have is today, but then look toward the future, toward zero deaths.

Nathan Backstrom

When our kids see us at a bar, restaurant, or ball game having a few drinks and then getting in a car and driving home, what are they learning?

The clothes Matthew, Jacob, and Justin Backstrom wore the night they died.

Following are summaries from selected concurrent sessions:

DWI as a Community Concern

Lieutenant Phil Bartusek, Albert Lea Police Department
Bob Bollenbeck, transportation planner, East Central Regional Development Commission (Isanti Co.)
Judge James Dehn, 10th District Court

In this session, speakers discussed proactive approaches some groups are taking to reduce the occurrence of DWIs in their communities.

Lieutenant Phil Bartusek began by describing a program that aggressively targets adult providers. A provider could be anyone—even a parent—who gives alcohol to a minor, he explained. The Zero Adult Provider (ZAP) program's goal is to raise public awareness while significantly reducing underage drinking in Freeborn County.

According to Bartusek, rural Minnesota law enforcement is challenged by limited resources—especially personnel. Partnerships with neighboring law enforcement agencies, however, have allowed for pooled resources. For example, when 19 officers showed up to bust an underage drinking party, "The kids couldn't believe it," Bartusek said. As a result, officers made 47 underage drinking arrests. "That hit the county like a tidal wave. The kids…saw that we were serious about this stuff."

Another successful technique has been to change the way underage drinking parties are investigated, Bartusek said. "Cops know how to investigate burglaries and robberies and car thefts ... You protect the scene. Identify witnesses. Gather your evidence. Interview suspects … They do it for all crimes—except underage drinking parties. So we just changed our way of approaching it," he said. As a result, the county had a 600 percent increase in adult provider arrests, from 5 in 2003 to 30 in an eight-month period in 2004. Arrests for underage drinking were up about 34 percent, Bartusek added.

Finally, Bartusek credited the county's courts for "stepping up to the plate." "Our judges said we have to change what happens when kids get arrested for underage drinking. We want to make this a prevention and early intervention program, not [about] crime and punishment," he said.

Next, Bob Bollenbeck and Judge James Dehn discussed a project to make local liquor providers stakeholders in preventing impaired driving.

Eight years ago, Dehn started taking notes of the DWI cases in his court, gathering information on where defendants had been drinking, what they had been drinking, and for how long. A statistician then ran reports on the data. Of the DWI pleas, approximately 69 percent could be traced to a specific bar.

"I got a lot of great information," Dehn said, but he wondered how he could use it. Then he heard about the local TZD group.

Bob Bollenbeck said the TZD coalition wanted to establish a unique approach to reducing the number of DWIs in Isanti County rather than "alienating the people that could help us the most." With Dehn's information, the coalition in the spring of 2004 organized a community meeting to which they invited liquor providers and community leaders (e.g., bars, liquor stores, distributors, stakeholders, courts, law enforcement, and others). During the meeting, presenters discussed the state and local data that had been collected. Data specific to a particular bar was shared privately with that bar only. "We also invited the media, and that was a huge component in getting the word out," Bollenbeck said.

From that initial meeting, a decision was made to launch the Liquor Provider Partnership program, an initiative designed to engage the entire community in resolving DWI issues.

"Bar owners were getting positive press…I think that launched the cooperative effort," Dehn said.

The program has created signage for bars and liquor stores; developed a sober cab program; trained bar owners, tenders, and wait staff on pertinent topics; started police "walk-throughs" to establish strong relationship with local police and to deter crime in local businesses; and has approached city councils with sample ordinance language and other proposals to benefit participating businesses, among other activities.

Year-end tracking results show that Isanti County arrests for DWIs went up 50 percent; there was an 11 percent decrease in bar-related DWIs. However, the percentage of DWIs that reported "home" as the last place they drank increased.

Dehn said that when sentencing DWIs, he will sometimes offer to forgive a substantial part of a fine if the defendant writes a letter to the editor. "Unless the public hears about it, it's floating away in the breeze," he said.

Lieutenant Phil Bartusek, Bob Bollenbeck, and Judge James Dehn

Putting the Heat on Drivers: Speed Management Program

Dan Brannan, traffic safety specialist, Mn/DOT Office of Traffic, Safety and Operations
Lieutenant Mark Peterson, Minnesota State Patrol
Moderator: **Lori Laflin**, senior market research analyst, Mn/DOT Office of Traffic, Safety and Operations

When Minnesota raised speed limits on many roadways in 1997, speed trends rose too—and tragically, so did the number of fatalities. On some of these roads, fatalities soared by nearly 100 percent between 1997 and 2002. To address this problem, Mn/DOT and the Department of Public Safety have initiated a statewide speed management program to put the heat back on drivers. The pilot program, said Dan Brannan, is designed to better control speeding, increase safety on state roadways, and remind drivers that the posted speed limit is the speed limit.

HEAT (highway enforcement of aggressive traffic) meets the goals of Mn/DOT's Comprehensive Highway Safety Plan (CHSP; see www.dot.state.mn.us/trafficeng/safety/chsp). It is a $3 million program funded by a combination of federal money and CHSP money, with $2.5 million directly for increased speed limit enforcement. The program kickoff, held September 26, 2005, was attended by Mn/DOT and DPS commissioners and received considerable media attention.

The program is guided by data from a recent Mn/DOT speed limit study of selected roads. For the study, Brannan said, automatic traffic recorders collected "gigabytes" of data 24/7 to better understand driver behavior. The analysis found that drivers on two-lane roads travel anywhere from the posted limit to more than 10 mph above it—a spread that poses a safety hazard. Speeding patterns also vary by day of week. Rural expressways and interstates saw the greatest percentage increase in fatalities (93 and 70 percent, respectively) since speed limits were raised in 1997.

The HEAT program will blanket about 2,900 miles of road—picked from the interregional/regional corridor system—with strict enforcement. It also *raises* limits from 55 to 60 mph on 930 miles of state highways to foster speed consistency. Troopers will target areas where fatalities were overrepresented, said Lieutenant. Mark Peterson, and DPS will schedule overtime when speeding traffic is heaviest. "We want to create a fear of apprehension," Peterson said.

The additional enforcement will run for eight weeks, then return to normal levels for four weeks in order to analyze data. This, Peterson said, "will help the State Patrol schedule better and smarter, and see how to best use resources." DPS will also analyze the "halo effect" to gauge how long drivers maintain slower speeds after seeing an arrest. This visible police presence "has an education value in itself," Peterson explained.

HEAT also includes a statewide public education campaign. Press releases capitalized on the free earned media, and public service announcements were scheduled to begin in December 2005—10,000 radio spots over the next year, many during commute times.

Mn/DOT and DPS will partner with the University of Minnesota to conduct a complete evaluation of the program, including before-and-after data on actual speeds of vehicles, number of citations issued, and number of serious crashes. In addition, they will integrate a market research survey to learn if motorists' perceptions match their actual behavior.

Currently the largest statewide speed study in the nation, HEAT is capturing the interest of other states and federal officials. Although the program is scheduled to end after one year, Brannan's hope is that "the legislature will recognize it is a program that saves lives and fund this higher level of enforcement."

"Speeding in Minnesota is out of control, especially on expressways and interstates," Peterson added. "This is an opportunity to make a difference on Minnesota roadways.

Dan Brannan

Drivers on two-lane roads travel anywhere from the posted limit to more than 10 mph above it—a spread that poses a safety hazard.

Bob O' Brien

In Minnesota, drivers aged 65 and older are under-involved in crashes, but over-involved in fatalities.

Older Driver Strategies

Jody Oscarson, driver improvement specialist supervisor, Driver and Vehicle Services, Minnesota Department of Public Safety

Mike Weiss, state signing engineer, Minnesota Department of Transportation

Moderator: **Bob O'Brien,** Safe and Sober/law enforcement liaison

In Minnesota in 2004, drivers aged 65 and older made up 14 percent of the driving population and accounted for 7 percent of the crashes; however, they accounted for 19 percent of traffic fatalities. They are "under-involved in crashes, but over-involved in fatalities," said session moderator Bob O'Brien. O'Brien gave an overview of the safety issues of a rapidly aging population that is driving more miles than ever before, and at older ages than ever before.

"Fatalities per 100 million vehicle miles traveled for people over 75 years of age is quite radical," O'Brien said. "The only [age group] with a higher fatality rate is 16–20-year-olds."

Older drivers involved in crashes also are more likely to break bones and sustain injuries at lower speeds, to have lengthy hospital stays, and to need lengthy rehabilitation time, O'Brien said.

Among other actions, O'Brien believes we need better public education, safer and easier-to-use automobiles, safer roads, policies for evaluating driving competency, and stricter sanctions, such as a primary seat belt law, to reduce crashes and fatalities. In addition, health and social service personnel should be trained in older driver safety, and alternatives to driving should be more readily available.

Jody Oscarson with Driver and Vehicle Services (DVS) echoed O'Brien's remarks, adding that the most important thing police officers can do for older drives is send in re-exam requests. The process involves an interview with the driver (and children, separately, if applicable), medical questions, then a road test, written test, and/or a doctors' statement and vision report.

Oscarson says the interview can be difficult for older drivers, and some of those scheduled opt not to show up. "It's the last form of independence they have," she said. Therefore, the process might result in restrictions rather than a loss of license. "We try to work with them so they can do what they need or want to do…like drive to the store, or drive to their kid's house…or within a three-mile radius."

If the DVS office receives a letter expressing concern about an individual's driving, the driver is called in for an interview. Information from friends and neighbors is shared with the driver; that from family members is not. "We can be the 'bad guy,'" Oscarson said. "We sometimes have to work it out with the family...show them proof, tell them that this is to save lives—not only other people on the road but their own parents'."

Some things to look for with older drivers is whether the person seems confused—for example, is making a left turn from the right-hand lane—or is involved in minor accidents—even within their own yard, such as hitting the side of their garage, Oscarson said. She urged police officers to issue tickets for ticketable violations, even if minor, because that might help these drivers realize they need to be evaluated.

Next, Mike Weiss discussed new guidelines to improve traffic signing in Minnesota, which are found in the *Minnesota Manual on Uniform Traffic Control Devices Revisions/Updates*. [The manual can be viewed online at **www.dot.state.mn.us/trafficeng**].

In the last several years, the federal government has issued new guidelines, standards, and revisions to signing. Weiss said the FHWA's recommendations relate to "demonstrated performance deficits of naturally aging drivers." [The FHWA's *Older Driver Highway Design Handbook*, available at www.tfhrc.gov/safety/pubs/97135/#rs, describes older driver characteristics and contains related recommendations.] Some examples of new signage include a larger symbol on the "stop ahead" sign, and an increase in the size of several different warning signs. This last move will make all warning signs the same size nationwide.

"Conformity, uniformity are number one," Weiss said. "If we can design things for older drivers, we're actually designing them for all drivers."

Weiss also noted that for all signs, every part—border, lettering, background color—must be fully reflectorized. Minnesota has recently created new standards for reflective sheeting material, adopting 3M DG2 Microprismatic sheeting for all signs, markers, and delineators statewide. According to Weiss, older drivers need high contrast, and this new reflective sheeting is brighter than previous sheeting for increased sign-recognition distance and increased legibility distance. Minnesota is the first state to adopt this new sheeting material, Weiss said. "I think we've raised the bar for all signs in the U.S."

Law Enforcement and Teen Drivers: New Directions

Lieutenant Craig Lindman, Plymouth Police Department
Sergeant Eric Leander, Wright County Sheriff's Department
Max Donath, director, Intelligent Transportation Systems Institute, University of Minnesota
Moderator: **Gordy Pehrson**, state program administrator, Office of Traffic Safety

Parents have good cause to worry when their teens leave the driveway. Auto crashes kill 6,000 teenagers every year in the United States and are the leading cause of death among 13- to 19-year-olds. In this session, speakers described innovative approaches that may allay parents' anxiety: education programs to coax teens into driving more safely, and in-vehicle technologies to prevent them from driving if they don't buckle up or are intoxicated.

Lt. Craig Lindman described the Teens Driving Safe (TDS) initiative, a joint program of the Twin Cities suburbs of Plymouth, Maple Grove, and Minnetonka. The program began with a grant from the National Highway Traffic Safety Association (NHTSA), one of four demonstration grants nationwide.

Teens from six area high schools were actively involved with TDS: they chose its name, created the logo, and helped with the program's media kickoff event in April 2002. Other outreach efforts included fliers, movie theater advertising, and a "TDS sober concert" coproduced by the students, Lindman said.

The bulk of TDS funding was directed to additional law enforcement, such as first-day-of-school saturation patrols, sporting event enforcement, and the "party car"—a squad car that targets teen parties.

A new tool is the Traffic Diversion School. When officers pull over a teen, Lindman said, they have the option of issuing a citation that imitates a real one but which instead requires the teen to attend Traffic Diversion School, along with a parent or guardian. If they do so, the violation isn't reported to the county or to the parents' insurance company.

Taught by two uniformed officers, the class presents crash facts, Minnesota statutes, hazards of aggressive driving, and much more. A particularly effective element of the class is the death notification exercise in which teens are asked to write their headstone inscription and farewell letters to friends, and choose their pallbearers and eulogists. "This brings home to them that they are vulnerable," Lindman said. "It hits the parents hard too, and they watch their kids more closely."

Next, Sergeant Eric Leander described Wright County's parent-teen driving presentations, part of a range of education tools developed by Safe Communities of Wright County. Founded in 1997, the coalition found that the youngest and most inexperienced drivers were involved in 40 percent of crashes.

The parent-teen presentations are mandatory for all students in driver education. Officers discuss the top 10 crash risks, effects of crashes, relevant laws, seat belt use, and alcohol and drugs. A key to the program's success is the mix of people—from insurance agents to paramedics—represented on the agenda. "A personal crash victim really hits people," Leander added, "and puts [the class] in some context." The class also introduces measures parents and teens can take together, such as driving contracts.

As of November 2005, Wright County had held 29 presentations for 1,131 teens and 1,366 parents. According to evaluations, 99.9 percent of students felt the class added value to their driver education course, and 89 percent of parents said they would change their own driving behavior.

What's more, data from 2004 show that 35 percent of crashes in Wright County involved teens—a 5 percent decrease since 1997. "That means each year there are 46 teens not crashing and not being injured," Leander said. "Financially, that equals about a half million dollars annually for Wright County's economy."

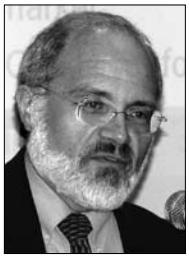
The session's final speaker was Professor Max Donath, director of the Intelligent Transportation Systems (ITS) Institute at the University of Minnesota. Teens have the highest crash risk of any age group on the road, he said, yet are the least likely to use seat belts. Alcohol is also a factor in many teen-related crashes. In 2003, for example, 24 percent of the 16- to 19-year-old drivers killed in vehicle crashes were intoxicated.

Given teens' tendency to test their boundaries—and their underdeveloped risk-assessment abilities—what can we do to modify their behavior? In-vehicle technologies could be an answer, Donath said.

Donath's research team is developing an in-vehicle "black box" called the Teen Driver Support System (TDSS) that will take a three-tiered approach to reducing unsafe teen driving behavior:

- Seat-belt/ignition interlocks and alcohol breath-testing to prevent teens from starting the engine.
- Devices to detect speeding or other unsafe maneuvers, then warn the driver—and in some cases, take control of the vehicle.
- Systems to log speeding or unsafe operation for later analysis by parents or licensing officials.

Alcohol interlock devices (designed for DUI offenders) are already on the market for about $800, he said, and biometric fingerprint identification



Max Donath

For teens, who are at a much higher risk, alcohol interlock devices and biometric fingerprint identification systems are warranted.

systems cost about $150. "For special applications like teens, who are at much higher risk, [the systems] are warranted," he said.

Devices that correlate a vehicle's speed with its location have been tested extensively in Europe, but Donath's group is the first to evaluate this technique in the United States and the first to apply it specifically to teen drivers. The system not only looks at current conditions but also scans ahead to evaluate sudden curves or other changes in road geometry, and then tells the driver to adjust speed.

Parents may decide to use feedback from monitoring technology to reward teens for good driving and introduce restrictions for poor driving. Such a monitoring system could potentially be integrated with graduated licensing procedures for beginning drivers, Donath added. (For more about the research, please visit **www.its.umn.edu**.)

Trucking Safety 101

Jack Shawn, senior operation manager and safety director, TFE-Toro Express
Albert Eiden, division manager of safety, CHS, Inc.
Bill Frank, president, Lawrence Risk Management Services
Moderator: **John Hausladen**, president, Minnesota Trucking Association

A tractor trailer truck crash is often big news, but these big rigs are involved in relatively few fatalities and crashes—and most crashes involving passenger cars and commercial motor vehicles are caused by the car driver. This session benchmarked safety practices generally used by the trucking industry and offered suggestions to attendees on safety practices they can incorporate into their company's ongoing crash-prevention campaigns.

Jack Shawn started by mapping out the steps his company follows to hire and maintain safe drivers. Prior to hiring, this includes a Motor Vehicles Records (MVR) check to ensure a potential driver is competent, close examination of any past citations, previous employment verification process, and a thorough background check, Shawn said.

In addition, potential drivers must complete a DOT-mandated physical and drug screen and a road test. Once hired, his company has an enforcement and bonus program, Shawn explained; a citation costs a driver bonus dollars, and two citations result in termination.

The stringent hiring process enables the company to select compatible drivers who stay with the company long term, Shawn added.

Bill Frank then discussed the second component of truck safety: the equipment itself. "Vehicle maintenance and safety begin even before a commercial motor vehicle (CMV) is purchased by a carrier," Frank said. The federal government requires that many safety components be built in to a CMV during the manufacturing process, and once the vehicle is on the road, various types of ongoing inspections are required by the Federal Motor Carrier Safety Administration (FMCSA), he explained.

Frank said that his company schedules regular preventative maintenance service and documents it in case of an FMCSA compliance review. During such a review, the FMCSA will want to see that a company has a systematic maintenance program in place, Frank said.

Frank reported that FMCSA puts a lot of weight on what it sees during routine roadside inspections. "A carrier's safety performance is also a matter of public record," Frank explained. "This includes the number of crashes the company has been involved in and what the company's safety rating is … Some customers simply won't do business with carriers with an unsatisfactory safety rating."

The session then moved into a discussion on hazardous material, or hazmat, hauling—a large segment of the trucking industry. Although safety is the goal across the industry, safety becomes even dicier when handling hazardous materials. "We have different shipping requirements and are very concerned about security and emergency response," Albert Eiden said.

Equipment inspections are an important part of hazmat hauling, and this includes meeting DOT requirements of both daily and annual inspections of hazmat vehicles. Drivers must obtain a hazmat endorsement on their commercial driver license and participate in special hazmat driver training.

In addition, a hazmat vehicle must be clearly marked with the appropriate warnings and placards to indicate the type of material on board. When accidents do occur, a variety of federal, state, and local agencies are immediately contacted to help control the situation and clean it up quickly, Eiden concluded.

For more information on hazardous materials safety regulations and interpretation, see the Code of Federal Regulations (CFR) Title 49, Parts 100-185, including a hazardous materials table located in section 172.101.

How safe is your driving? Do you recognize yourself?

Mick Rakauskas, research associate, HumanFIRST Program, University of Minnesota
Sergeant Don Marose, Minnesota State Patrol
Moderator: **Gina Baas**, director of communications and outreach, Center for Transportation Studies

Mick Rakauskas

Sanctioning handheld phones will not solve the problem... There are a lot of distractions in a vehicle already.

Drivers can be impaired in a number of ways—by their car's stereo or their cell phone, or from alcohol or prescription drugs. Speakers in this session discussed how various factors can make driving more dangerous and possible ways to prevent impaired driving incidents.

First, researcher Mick Rakauskas described a University study that examined how driving performance is affected when a driver is using a cell phone compared to driving while intoxicated or while operating common in-vehicle controls such as the radio, fan, or air conditioning. Researchers also examined the combined effects of being distracted and being intoxicated.

Through experiments in a driving simulator, the researchers gathered data from test subjects outfitted with a device to measure brain activity. Half of the test subjects drank alcohol to near intoxicating levels (just under .08 blood-alcohol content), and the others were sober.

Participants drove along a simulated rural route, and impairment was measured in terms of how difficult they thought driving was, how they handled their vehicle, how their mind and body reacted, and how aware they were of their surroundings.

Drivers completing either cell phone or in-vehicle tasks during a car-following scenario showed worse performance than those driving without a task in terms of time headway, maintaining a consistent speed profile with respect to the lead vehicle, and steering. And the intoxicated driver doing nothing but driving performed better than those completing tasks or talking on the phone.

Measurements of brain activity showed that drivers who were engaged in secondary tasks were less attentive and mindful of unexpected events, and during an environmental awareness task, both cell phone and in-vehicle secondary tasks led to less accurate identification of road signs, among their results.

Rakauskas said that education is necessary in order to understand the risk and to inform drivers when it is safe to engage in secondary tasks and when these events can be distracting. "Sanctioning handheld phones will not solve the problem," he added.

"There is a lot of focus on cell phones, but really there are a lot of distractions in a vehicle already," Rakauskas said. More attention should be focused on what can be done now to promote safe driving despite these distractions.

Next, Sergeant Don Marose discussed how prescription drug abuse can impair driving, and related law enforcement limitations.

Marose, who coordinates Minnesota's drug evaluation and classification program, defines a drug as "anything that is going to impair someone's ability to drive." This might be a prescription drug or paint thinner, he said. "It really doesn't matter what the impairing substance is, impaired is impaired."

According to Marose, the combination of illicit drug use and driving is a rapidly growing problem. "We have 15.1 million prescription drug abusers in the U.S—a figure that has almost doubled in the last decade," Marose said.

In addition, a Partnership for Drug-Free America study found that 20 percent of teenagers have abused a prescription painkiller to get high. Ten percent have used an over-the-counter medicine (such as cough syrup) to get high.

Drugs are classified into three different categories: over-the-counter (e.g., cough syrup, cold medicine), prescription (e.g., Paxil, Wellbutin), and controlled (e.g., Valium, methamphetamine). A controlled substance is one that has been registered with the DEA and assigned a schedule number according to its medical use in the United States, its potential for abuse, and its potential for addiction.

According to Minnesota law, to be arrested for a DWI, an impaired driver needs to be under the influence of a controlled substance, Marose said. He feels this is a significant loophole, because many drugs that, when abused, can make driving dangerous are not classified as controlled. "I've seen people impaired by these [non-controlled substances] as much as anything else," he said. A police officer who stops this type of impaired driver can only issue a ticket for careless driving or a similar offence.

Marose would like to change the law, but he's been told by the legislature that the issue isn't a priority. And because offenders cannot be arrested for DWI, data is lacking on the extent of the problem, Marose said. He also suspects some of the political resistance may stem from a fear that those who legitimately use medications will become targets for arrests. "The question is impairment when operating a vehicle … We're not going to arrest everyone who takes medications."

For more information on Minnesota Drug Recognition Experts program, Marose referred audience members to **www.mspta.com/dre**.

Innovations for Reducing Crashes

Gary Dirlam, Distric 3 traffic engineer, Mn/DOT
Dr. Michael Hanen-Smith, River Lake Eye Clinic
Moderator: **Bernie Arseneau,** state traffic engineer, Mn/DOT

Gary Dirlam

Currently, there is no other safety device (than cable median barriers) that virtually guarantees consistent success in saving lives every year on the interstate system.

Departments of Transportation across the country are taking innovative steps to reduce vehicle crashes. In this session, Mn/DOT traffic engineer Gary Dirlam discussed one such innovation—median cable barriers. Minnesota averages 15 fatal cross-median crashes (CMCs) annually, with that number on the rise. In efforts to combat this problem, Dirlam, along with other DOT representatives from Minnesota, Iowa, Illinois, and Wisconsin, visited DOT representatives in Ohio, Oklahoma, and Texas to learn from these states' use of cable median barriers.

A cable median barrier is a high-strength, flexible cable system that catches vehicles in the median and helps to prevent head-on crashes when vehicles cross through the median into the on-coming traffic lanes. There are a variety of different types of cable median barriers and different installation techniques.

Mn/DOT uses the Trinity CASS system, a three-cable system, throughout district three, Dirlam reported. "I was concerned when we put it in that it wouldn't handle an impact from a semi-trailer truck. Though I've seen an instance with the Trinity system where two heavy vehicles hit the system at the same time and the system kept the vehicles on the right sides."

According to Dirlam, the three-state tour helped answer many of Mn/DOT's questions about cable median barriers; however, other questions remain, such as, are three- or four-cable systems better? Should Mn/DOT use pre-stretched systems? Where is the optimal placement to minimize damage from hits?

With CMCs occurring at increasing frequency along the Interstate 94 corridor, Mn/DOT has already installed cable median barriers along several segments of I-94. "We know major roadways that do not have CMC problems today eventually will," Dirlam said. Because cable median barriers are so effective in preventing fatal CMCs, the public will want more barriers installed, not just on freeways, but on other roads as well, Dirlam added. "Currently, there is no other safety device available that virtually guarantees consistent success in saving lives every year on the interstate system."

In the second part of this session, Dr. Michael Hanen-Smith discussed visual system issues related to driving ability, pointing out that the way vision is often tested may not be accurate in determining whether someone's vision is sufficient for driving. Visual acuity, for example, is the one thing that virtually all state departments of motor vehicles (DMV) include in their vision test, yet it is the one thing that predicts driver capability the least.

DMV vision tests also include field-of-vision testing, during which drivers are asked if they can see the yellow lights blinking on either side of the testing equipment. Again, says Hanen-Smith, this test does not isolate a driver who will be impaired on the highway. A much more important factor is drivers' awareness of their impairments and of their own limitations. "It's the job of an optometrist or ophthalmologist to inform patients when they are visually impaired. Yet, generally, doctors don't tell their patients, and no one is telling doctors that they should do this," Hanen-Smith said. "In many cases, people with impairments can pass the DMV vision tests even if they lack the vision performance required to safely drive a vehicle."

Hanen-Smith then suggested some important visual factors engineers should consider when designing roadways. There is a certain distance from a sign at which drivers make decisions, so directional signs must be large enough to read and properly aligned at this decision-making distance.

Additionally, construction zones often use too many orange safety cones or barrels spaced too close together, he said. "Beyond 60 feet we do not have depth perception, so unless your construction zone has a 'where to go target,' the visual system fuses the cones or barrels into a solid wall. Again, you need to tell the driver *where* to go, not *where not* to go."

Best Practices for Communities

Sergeant Rich Watkins, Faribault Safe & Sober
John Justin, crime prevention officer, St. Cloud Police Department
Sergeant Dan Griffin, vice chairperson, Moorhead Safe Communities
Dick Larson, county engineer, Mille Lacs County
Moderator: **Pat Hackman**, executive director, Safe Communities of Wright County

There are numerous ways community members representing the "four Es" (engineering, education, enforcement, and emergency response) have creatively addressed traffic safety problems in their areas.

Rich Watkins began this session by talking about some of the unique approaches taken by his region's Safe & Sober program. The Safe & Sober team came up with two different strategies: create a strong media presence to advertise the program and inform the public, and take a more unified approach to enforcement.

Prior to undertaking three enforcement waves last spring and summer, team members tried to set up as much media exposure as possible. They contacted several business owners in the community, who were eager to get involved. A local photographer donated time for a photo shoot, a printer donated posters, a sign company posted a variety of billboards, and local radio stations aired public service announcements. Their safety belt campaign increased the compliance rate from around 70 percent to 81 percent, and the number of crashes with injuries decreased within Rice County. "I guess time will be the true test as to how well this worked, but our officers enjoyed this initiative, and it rejuvenated the entire program to a degree," Watkins said.

Following Sergeant Watkins, John Justin described his work with the St. Cloud Area Child Passenger Safety (CPS) program. He reported that several years ago the local CPS program lost its funding and needed to find another approach. One of the first steps was to ask the local CentraCare Health Foundation, a 501(c)3 organization, to act as the CPS program's fiscal agent. A 501(c)3 tax status means that a nonprofit charitable organization is exempt under section 501(c)3 of the Internal Revenue Code.

The St. Cloud Area CPS program also teamed up with Miller Auto, a local auto dealership that allows CPS instructors to conduct courses at its facility. "Our instructors can actually install the seats and work with different types of cars," Justin said.

Some businesses are reluctant to participate in a CPS program because of potential liability issues. Through the State Farm Foundation, which has donated $15,500 over the past two years, the St. Cloud Area CPS program created what Justin calls a "technician grant." In the course of a scheduled inspection, if a technician finds a deficient seat or sees a child leaving in an unsafe condition, that technician has the resources to give a

Sergeant Dan Griffin next discussed the extensive traffic safety efforts his department has used as part of the Safe Communities Coalition of the Red River Valley. Through a number of initiatives, including posting signs displaying the safety belt use rate, asking businesses to post a "Buckle Up" message on their marquees, and putting that same message on utility bill stuffers, city employee paycheck stuffers, and grocery store bags, safety belt use increased from 53 percent to 84 percent between 2002 and 2005 in Clay County, Griffin explained. "The key here is that we asked for help from businesses, and they responded. If you don't ask, you don't get."

In another initiative, Griffin's coalition provided local churches with information for their bulletins about the importance of using safety belts. The coalition also works with a local university and high school, conducting twice-monthly seat belt checks on campus and at a high school parking lot. "Students are a targeted age group because historically this group has a low seat belt use rate," he said. In addition, the coalition conducts monthly child safety seat checks using an indoor area at a local ambulance service.

As a county engineer, Dick Larson says his office is often asked to address a variety of issues. One difficult situation is knowing what to do when accidents that result in fatalities occur. "People come into our office, and they want something done. They don't care what, they just want something," Larson said. "The difficulty is ... trying to figure out what to do every time there is a fatality." Part of the problem, he said, is that people don't really perceive how dangerous our roads can be. "It used to be that only 20 percent of drivers didn't stop at a stop sign; now it's 80 percent who don't stop. [As engineers,] we're not always sure what we can do to fix that."

Everything starts with one individual, he added, and he urged audience members to get involved and get others in their communities involved. "If you have a concern, and you sit back and do nothing, you're dropping some of your responsibility ... I always try to look at a crash site and think about what more I can do to make the road safer even for people who have made bad choices."

Dick Larson

It used to be that only 20 percent of drivers didn't stop at a stop sign; now it's 80 percent who don't stop. We're not always sure what we can do to fix that.

Sue Groth

We rely on data to help us understand what works and what doesn't.

De-mystifying Traffic Engineering

Paula Stoddard, Mesabi Safe Communities

Sue Groth, assistant state traffic engineer**,** and **Lesa Monroe**, traffic safety/GIS specialist, Mn/DOT

Moderator: **Dan Brannan**, traffic safety specialist, Mn/DOT

For those who often work with traffic engineers but who are not engineers themselves, understanding engineer-speak or fully understanding what traffic engineers even do can be challenging. In this session, Mn/DOT representatives worked to unlock these mysteries and open up the communication lines.

In short, traffic engineers design signs and pavement markings, operate signal and lighting systems, maintain work zone traffic control and freeway management and intelligent transportation systems, and conduct traffic studies, Sue Groth explained.

Part of a traffic engineer's job is to collect many different types of data including crash frequencies, crash rates, crash severity, and crash patterns. "We use the data to look at a situation before we do something, and then to look at what happens after we do something to determine if we've made an improvement," Groth said. "We rely on data to help us understand what works and what doesn't. Data also helps us prioritize projects by revealing which intersections or road segments are the worst problem areas."

There area times, however, when the science of traffic engineering is counterintuitive and results in perceptions Groth classified as "traffic engineering myths." These include the notion that reducing speed automatically improves safety, that traffic signals are safety devices, and that pedestrian crosswalks are safe. "One in-depth study revealed that the presence of a marked crosswalk on multilane roads with high-volume roadway was associated with a higher pedestrian crash rate," Groth said. "This indicates that just adding a crosswalk is not the solution. Instead, we may need to add raised medians and pedestrian signs and introduce other speed-reducing measures."

Lesa Monroe, a geographic information systems (GIS) expert with Mn/DOT, followed Groth and explained how she uses GIS mapping to make traffic data easier to analyze and understand. GIS maps can help link the spatial relationships between different elements such as crash location, crash severity, crash type, time of day and day of week, traffic control devices at the location, and personal data such as driver age, gender, and physical condition.

Monroe explained that Mn/DOT offers a variety of GIS services, and she showed several examples of the products available. "It really depends on what the client wants to get out of a map as to what we include on a map," she said. "In one case, a state patrol district was interested in fatal and injury crashes by day of week and hour of day to help them better schedule their troopers."

There are other types of data that can be added to Mn/DOT's GIS maps, Monroe explained. "We can combine crash data with other data such as school locations, trauma center locations, emergency response times, and bridge locations."

GIS maps are used by many different types of organizations including Mn/DOT offices and districts, counties, cities, and other organizations that are interested in traffic safety. Organizations interested in producing their own maps using Mn/DOT's crash data can access the Mn/DOT basemap, download shapefiles for Minnesota roads statewide or by county, and then create events and shapefiles of the crash data and symbolize it to meet their needs. The basemap is available at **www.dot.state.mn.us/tda/basemap/index.html**.

Improving Traffic Enforcement and Education

Lila Sturgeon, officer, St. Paul Police Department

Char Rayl, deputy sheriff, Dakota County Sheriff's Office

John Justin, crime prevention officer, St. Cloud Police Department

Moderator and presenter: **Sergeant Jaci Sticha**, Minnesota State Patrol

Understanding the child restraint law is essential to making effective traffic stops, yet it doesn't require a 32-hour class in child passenger safety. This session provided tips, techniques, and anecdotes from experienced officers who work with the child restraint law and use it to educate their community about a variety of traffic safety issues.

Minnesota Statute 169.686, the safety belt law, requires that safety belts be properly worn and adjusted. Further, all children four to ten years old must wear a safety belt while in any seat position in the vehicle, and individuals 11 years old or older must wear a seat belt while riding in the front seat.

Enforcement of this particular law is especially important, Sergeant Jaci Sticha said, because it is the single factor most likely to save lives on any given day. "No one can approach you with philosophies on this issue any more. It is a fact that seat belts save lives."

Sticha next reviewed Minnesota's child restraint

law, statute 169.685, explaining that there is no child weight mentioned in the law. "The statute says that children under four years old, not under 40 pounds as many people believe, must be properly restrained according to manufacturer instructions. The seat manufacturer sets the weight restriction, not the law," Sticha clarified.

She reminded audience members that when an officer sees a vehicle with a potential child restraint violation, a moving violation is not required to initiate the stop, as it is with the seat belt law. "All that's needed to make a child restraint violation stop is that the officer in good faith believes a child is less than four years old and not restrained properly," Sticha explained.

Lila Sturgeon with the St. Paul Police Department added that the safest place for a child is in the backseat—specifically, in the middle, because that is the furthest point from a potential side impact, often the most deadly type of crashes. Sturgeon continued by discussing the basic installation and use of several different types of child safety seats. During a child restraint violation stop, officers typically observe an average of three misuses per car seat. These include improper seat installation (the seat should not move more than an inch) and improper placement of the harness retainer clip (the clip should be at the child's armpit level). In infant seats, officers often see the seat handles up, when they should be down. Infant seats also need a 45-degree angle to keep an open airway.

When children either reach the top weight or height allowed for their child safety seat, or their shoulders are above the harness slots, or their ears have reached the top of the seat, they should transition to a belt-positioning booster seat. Booster seats are designed to raise a child so that the lap/shoulder belt fits properly. Because children over the age of four are not required by law to be in a child seat, they are oftentimes buckled in with just the safety belt, and because the shoulder belt doesn't fit properly, children may put it behind their back, often without the parents realizing it.

Char Rayl with the Dakota County Sheriff's Office next reported that traffic stops can be a great opportunity to provide education. "I get a lot of free booklets on seat belt and car seat safety. I hand them out like candy anytime I stop someone who has kids in the car. It's really non-confrontational and is the chance to give parents the information they need."

She told the officers in the audience that they don't have to know exactly how to install a child safety seat to make a stop, they just need to know the basics. "Once you start looking for things, you'll see obvious mistakes out there all the time."

John Justin of the St. Cloud Police Department followed Rayl with a few words on what the St. Cloud Area Child Passenger Safety (CPS) program is doing, stressing the importance of getting law enforcement personnel educated on child passenger safety. The St. Cloud Area CPS program involves the local healthcare community, which distributes CPS information pamphlets, monthly child passenger safety schedules, and lists of independent child seat inspectors to parents.

The major automotive dealers in St. Cloud also have child passenger safety technicians, as do the St. Cloud Police Department and surrounding law enforcement agencies. In addition, the St. Cloud Area CPS program has large retailers such as Target, Wal-Mart, and Toys-R-Us distribute CPS information, Justin said.

It's easy today for any parent to obtain a proper child safety seat, and vouchers are available for low-income families, Justin said. It's also easy for parents to get the information they need to ensure proper installation and use of the seats, he added. Nonetheless, about 80 percent of the child safety seats being used are not used correctly, and 30 percent of those are being "grossly misused." " As officers, you can take a two- or four-day course to learn how to spot the major violations and help parents correct these mistakes. It takes about 15 minutes to get a seat and about 30 minutes to have it inspected and installed right. If parents don't think that 45 minutes of their time is worth it for the safety of their children …these parents deserve a ticket."

To find child safety seat specialists, training schedules, and other related information, visit the Office of Traffic Safety, Child Passenger Safety Web site at: **www.dps.state.mn.us/ots/CPS_Program/childhome.asp**.

Luncheon Presentation: The Developing Adolescent Brain and Alcohol

Ken Winters, Ph.D., professor, Department of Psychiatry, University of Minnesota
Moderator: **Robert Johns**, director, Center for Transportation Studies


Ken Winters

Risky and impulsive adolescence behaviors are accentuated by being in a group. Restricting the number of teens that can be in a car driven by a teen makes good sense.

Until recently, it was thought that human brain development was complete by adolescence. Improvements in brain imaging techniques throughout the 1990s, however, show that human brain maturation is not complete until about age 24.

"Twenty-four is an interesting age," Dr. Ken Winters said. "It's not even close to the milestone ages our culture grants to our youth. I do know of one privilege not granted in most states until age 24—renting a car. Car rental agencies know the data about the risky behavior of young people with cars. But we know that most parents give their own children cars at a much earlier age."

Significant growth of the brain's nerve cells occurs through late childhood. Around age 11 for girls and 12 ½ for boys, unused nerve cell connections begin to be "pruned." During this process, the brain is not functioning at full capacity. Once pruning is complete, around age 24, the brain is faster and more efficient, Winters explained.

This pruning process occurs in stages, Winters continued. As such, the fast-developing parts of the brain, including physical coordination and sensory processing, dominate the slow-developing parts, including judgment. "This process may have had high survival value in pre-modern times," Winters said. "In modern times, however, I wish this was the other way around, because it is a dangerous mix for young people." Research indicates that risky and impulsive adolescence behaviors are also accentuated by being in a group. "Restricting the number of teens that can be in a car driven by a teen makes good sense," he said.

Winters presented direct evidence from studies that show that adolescents and the adolescent brain are highly vulnerable to the effects of alcohol, more so than adults. These findings reveal that teens who drink experience greater rates of alcohol dependence, reduced sensitivity to intoxication, increased social disinhibition, and increased cognitive disruption.

There is also indirect evidence suggesting that youth are highly vulnerable to the effects of alcohol. "If we just look at regular brain development, realizing that the judgment center is last to develop, teenagers are not good at exercising 'sober second-thought,' they have trouble delaying gratification, they exhibit impulsive behaviors, and they are energized by the group phenomenon—all of these may contribute to curiosity and exposure to use drugs and to continue using drugs," Winters said.

Substance use and abuse prevention programs that include curriculum that is not too sophisticated for the teenager to assimilate and that also offers strategies to deal with some of these normal brain development deficits are more likely to be effective. "Take advantage of the fact that the youthful brain responds to novelty, is influenced by peer issues, and is primed for physical and sensory activities," Winters concluded.

2005 Star Awards Presentations

Moderator: **Kathy Swanson**, director, Office of Traffic Safety, Minnesota Department of Public Safety

The Star Awards are given to recognize excellence in child passenger safety, safe communities, law enforcement, and engineering. "There is no doubt that the thread that binds all of this year's Star Award nominees is their passion for traffic safety," said Kathy Swanson, who announced the awards. "Our 2005 award winners have made a huge commitment to the educational effort of changing behavior while saving lives and helping us achieve our goal of Toward Zero Deaths."

2005 Star Award Recipients

Child Passenger Safety

- *Award Category:* Professional
  Jon Young, Wright County Human Services
- *Award Category:* Volunteer
  Patty Graham, Metropolitan Health Plan
- *Award Category:* Organization
  Paul Hanson, State Farm Insurance – Paul Hanson Agency

Safe & Sober

Southern Minnesota

- *Individual:*
  Sergeant Rich Watkins, Faribault Police Department
- *Agency:*
  Blue Earth County Sheriff's Department
  (Sheriff Brad Peterson, Administrative Assistant Brenda Tuomala, Captain Rich Murray, Sergeant Tom Coulter, Officer Matt DuRose, and traffic enforcement officers)

Metro Minnesota

- *Individual:*
  Sergeant John Bermel, Apple Valley Police Department
- *Agency:*
  Award to the **Dakota County Chiefs Association**

Northern Minnesota

- *Individual:*
  Deputy Terry Boltjes, Mille Lacs County Sheriff's Office
- *Agency:*
  Moorhead Police Department

Safe Communities

- **Countryside Safe Communities Coalition**
- **Douglas County Safe Communities**
- **Mesabi Safe Communities**

Engineering

- **Dick Larson**, Mille Lacs County (retired) Loren Hill, Mn/DOT

Closing Plenary: Revisiting the Backstrom Crash – What Does Each of Us Bring to the Table?

James Backstrom, Dakota County Attorney
Jill Romann, senior investigator, Minnesota Regional Coroner's Office
Char Rayl, deputy sheriff, Dakota County Sheriff's Office
Dave Engstrom, Metro District traffice engineer, Minnesota Department of Transportation
Sergeant John Thompson, Minnesota State Patrol Accident Reconstruction Team
Moderator: **Kathy Swanson**, director, Minnesota Department of Public Safety, Office of Traffic Safety

The conference ended by revisiting the Backstrom tragedy. Five individuals who worked on some aspect of the crash described their experiences relating to the crash and its aftermath.

Sergeant John Thompson recounted how the accident reconstruction team collected crash scene evidence to create a scale diagram of the scene and ultimately create an animation of the moments leading up to, during, and immediately after the crash. The investigation revealed that the Barlage car, the driver of which was drunk and talking on a cell phone, tried to pass another vehicle, lost control, and then collided with the Backstrom vehicle.

"In a case like this, the recommended charge is either negligence or gross negligence. To me there is a big difference between the two, but it is nearly impossible to prove gross negligence," Thompson said. "We need something to bridge the gap, and people need to be responsible for killing someone with their car."

Dave Engstrom then talked about the two-lane road on which the Backstrom crash occurred. This segment of Minnesota 50 is straight and flat and allows passing, he said. At the time of the crash, the road was dry and clear. "Generally speaking, this appears to be a safe road," Engstrom explained. "From a practical engineering perspective, there isn't much we could have done. A driver was drunk and made very poor choices, and this makes me feel helpless."

In-vehicle engineering is one future avenue that might prevent similar tragedies, he said. "There is technology available that may have prevented this drunk driver from starting his car in the first place, but using such systems will require both new innovations and [new] laws."

Char Rayl was first responder on the scene of the crash. "When I pulled up to the scene I saw the Barlage car sideways on the eastbound lane. Barlage was lying on the westbound lane…he had done everything wrong, yet somehow he regained consciousness, and we had to restrain him." She said the Backstrom vehicle sustained some of the worst damage she had ever seen. Farmington police, fire, and other emergency responders arrived a few minutes later. Time-wise, Rayl said, responders were as fast as they could have been. "I'm not sure what else we could have done differently," she said. "We don't come across triple fatalities like this that often. This was just an unsurvivable crash."

Next, Jill Romann talked about the importance of sharing stories like this and discussed a "scared straight" program she created nearly 15 years ago through which she gives talks to high schools several times a year. "I bring photos and show them blood, guts, and gore [resulting from traffic crashes] ... Through these presentations, each one of those kids develops a level of power that may help them make better choices."

We don't have to be experts to share our knowledge, she continued. "Connie and Nate mentor hundreds of kids across the state," Romann said of how the Backstroms share their story at schools across Minnesota. "We see the clothing the boys were wearing the night of their deaths [displayed at the conference on three empty chairs]. I had no idea when I picked up their clothes, stuffed them into a bag, and headed back to the office with two of Connie and Nate's children, the power those clothes eventually would have on the hundreds of kids who would later see them."

Jim Backstrom, who is not related to the Backstrom family, prosecuted the drunk driver who killed Nathan and Connie Backstrom's sons. "We dedicate a lot of resources in Dakota County to try to prevent these tragedies before they get started. To do this, we have to work on the front end of early intervention."

According to Backstrom, the drunk driver in this case, though seemingly remorseful for what he has done, minimizes the extent of what happened. "He claims to have had only a couple of beers. But his blood alcohol level was .15 … He probably had between 10 and 15 alcoholic beverages, and that's a lot of liquor for anyone to put into their system. He is minimizing his conduct. He thinks he's made a mistake, but it's more than that—it was a choice."

Backstrom explained further that the Farmington man who killed the boys' had previously been cited for five alcohol-related driving offenses in five years with no significant consequences or jail time sentenced. "Our justice system had many opportunities to intervene, and it failed. The greatest tragedy of this case is that Boe Barlage should never have been behind the wheel of the car; he should have been in jail for repeated violations of the law, and he wasn't. We have to have the penalties in place, and they have to be imposed or there will be no lesson learned by the offenders. "

In this case, Jim Backstrom asked for a 12-year sentence. Last May, Boe Barlage pleaded guilty to criminal vehicular homicide and was sentenced to eight years in prison.

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