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Publication Guidelines

Articles submitted for The Chronicle are subject to peer review and should conform to the American Psychological Association style. The basic reference for style is 1983 Publication Manual of the American Psychological Association (3rd ed.). Authors are responsible for adherence to style. A Word for Mac 6.0 or RTF file is required for peer review. Articles may be reprinted with credits to the author and to The Chronicle.

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Dale O. Ritzel, Ph.D. Director, Center for Injury Control Southern Illinois University
Greetings to all and hope my message finds you all well. It was wonderful to see so many of you in Burlington, Vermont. I had a great time talking with and sharing ideas with each of you.

While I'm quite a talker, I do find my writing style is one that is short and sweet to say the least. My dad told me once not to dry out the ink, say what I had to say and get on with it. I guess I'm always true to doing that, but today, I may not. I got a new pen!

I've also always taken an approach not to share much about myself and family and try to make professional impressions and relationships. Again, I think I have met enough of you folks out there to leave that approach behind and not save any ink in the process. How can you trust, bond or even listen to a word someone says when they don't share their stories, their heart and their passions for what they do and believe in? I think that not sharing makes educators and leaders contradictory and hypocritical of what we ask of our students and colleagues everyday. Think of the special teacher/mentor in your life...who shaped you and really made you think. I'm guessing they shared a story or two and made you believe in them and their message.

I'm a life-long native of Western Pennsylvania. I had never been on a plane, never rented a car, never saw more than a few states away until July of 2005 when Allen, (Robbie), said, “You’re ready,” and this country gal got on her first airplane. I had the honor of joining the NSSP crew in Jackson Mississippi and immediately knew, “These kids get it!” Their advisors welcomed me with open arms and I never looked back since. Don’t get me wrong, I started my “working years” working with youth and adults with the disease of addiction. So, I never got much further than the county jail, hospital, my office or group homes to see our youth embracing much of anything besides a session, meeting, or adjudication hearing. So, this group seemed unbelievable and overwhelming to me. But, they too, in many ways and in many different ways were just as amazing as my kids back in PA who I pray have found their way.

You learn a lot in the outpatient alcohol and other drug treatment field. You get how the brain works, you know how to run a structured group, you guide with love, patience and structure and again you pray.

Guess what, driver and safety education has a lot in common. We care, we learn, meet, work, grow professionally and in the end hope we don’t “fizzle out” and pray “they’ll get it.” All the while, funding is cut or eliminated, enrollment is up, 24 hours still remain in a day and we know we can’t possibly touch the hearts and minds of our kids in the cut timed/cut funded half of a program that never really was. We beg out legislators. We tell our stories, we go to conferences, we also pray... common theme there. And we wonder “Do they get any of it?” “Where will we be in 5 years, 5 months, 5 days?” Of course not all programs are like this...some of you are so fortunate and work in great places among wonderful people with some great programs in place. Some of you are not so fortunate and are the people needing additional support. I hear you.

I won’t pretend to tell you I know the answers to anything. I’ve watched in awe as so many wonderful human services programs and people working within the programs or needing them in my state got turned upside down in the past six years, but the people needing the help couldn’t go away. They just waited longer, for less time, less guidance and less help. Is this our fate? I pray no. But I also know without a voice, a fight, leadership, guidance and support, we too will end up like my human service colleagues in Western Pennsylvania. Yeah, they fought too, for their clients and jobs – but they fought too late.

I’d like to say that I have a crystal ball, yeah right! I do have ears, ability to use them and listen effectively and the notion to know when to guide, lead, trample or get the hell out of the way. Folks, I’m not getting the hell out of the way. I’m going to do my best to teach, guide, lead, support and make waves for you. ADTEA has been silent for too long.

May you keep your passion, your fight and love of your craft and your kids.

Getting to know me

Dana Sosnick-Bowser

Since meeting and seeing many of you in Vermont this summer, I have gotten many emails, notes and questions regarding who I am and what I do within ADTEA and IUP. I am writing to let you know a few things about myself and to welcome any additional questions. Feel comfortable to call on me at any time.

Since May of 2000 I have worked at IUP’s Highway Safety Center. My first endeavor included working on a Comprehensive Highway Safety Program grant through the PA Department of Transportation. I presented, researched and developed safety programs for citizens of five counties of PA. It was a large task, but looked much smaller when in

( go to page 3)
Back then, I was a Project Manager. I was so thrilled to do the level of research and writing I finally had the opportunity to do. But, I wanted to lead. I felt I could do so much more for the organization. And, I thoroughly enjoyed the relationships I had formed thus far with so many of you. I had always believed in ADTSEA and that more needed said for the group...press, press, press is what I believed we needed to express our views and gain more of an awareness and respect for driver education.

In Burlington this summer, it was announced that I would take the reigns of Executive Director of ADTSEA. I can’t tell you how surprised, proud and excited I was. Not to mention the level of press we got in Burlington! I called home, my mom cried a little, yes mom, I could tell. And, my dad was thrilled. They have supported me immensely. More than words can say. I loved giving them my new business card, and took back my maiden name of “Sosnick” to show my gratitude to them and their ambition and belief in me for the past 30 years. Thank you Mom and Dad and I love you very much.

My husband Gino was hesitant. While he’s accomplished so very much in his work that I am proud of, I think he was just looking out for me in a leadership role. He’s a caring, and considerate man, and likes to look after everyone in his life. I respect him for that. I hope that’s a trait or two I’ve brought with me along the way. Thank you Gino, or “G”, you’re incredible.

If I can ever be of assistance, or just an ear or shoulder that you find you might need, don’t hesitate to contact me. I am best contacted by email, but letters, calls or visits are always welcomed.

Thank you to everyone, and I look forward to serving you for many, many years to come.

Hello, my fellow ADTSEA members!!

Gary Scott, President

I am truly excited about serving as your President. I have much anticipation and hope for what we can accomplish for traffic safety through our ADTSEA organization this year.

I hope that each of you who attended the conference in Burlington, Vermont, benefited from the excellent program that Past President James Gibb organized. As usual, the host committee led by Joe Barch and Barbara Brody, with assistance from Nancy Andrus and Lindsey Townsend plus many others, did an excellent job displaying their wonderful town and state. Each year I am pleasantly surprised what each community and state have to offer that is unique in their own way.

I am looking forward to this year’s conference in Fort Worth (July 27 – 30) and what the Texas host committee has in store for the 2008 ADTSEA Conference. (My only visit to Fort Worth was on way to San Antonio for the 2004 NCAA Mens’ Final Four. I had a good time - even though my KU Jayhawks were not there). I know that it will be better this time with the assistance of the host committee. Since this city has so much to offer a family while visiting, I strongly encourage you to start planning your trip to the 2008 ADTSEA Conference.


With support and assistance from each of you, I firmly believe that ADTSEA will have a great year. Please contact me with any suggestions or concerns at scottskufhsu@sbcglobal.net.

Oregon teen driving laws improve safety, support value of driver education, national study says

The first six months after obtaining a driver license tend to be the most dangerous for teenage drivers across the nation, but Oregon’s graduated driver licensing program has improved safety since it started in 2000, according to a new study.

“I’m pleased that the Oregon Driver Education program is saving lives and reducing injuries,” said Troy E. Costales, administrator of Transportation Safety at the Oregon Department of Transportation. “The study shows we are succeeding in making our newest drivers better and safer and dramatically reducing the potential negative impacts of teen driving.”

Graduated driver licensing in Oregon, as in most other states, places a variety of restrictions on drivers younger than 18, an age when novice drivers are gaining experience behind the wheel.

“After GDL implementation, conviction and suspension rates

(continued on page 7)
US teenagers’ high rates of traffic accidents have been ascribed to traits allegedly innate to adolescence, such as developmental immaturity, impulsiveness, and risk-taking; in short, “the adolescent does...not think like the adult” (Floyd-Bann & Van Tassel, 2006, p. 8). A recent review attributed “adolescents’ inclination to engage in risky behavior” to “the temporal gap between puberty, which impels adolescents to thrill-seeking, and the slow maturation of the cognitive control system, which regulates these impulses” (Steinberg, 2007, p 55).

However, these conclusions appear to have been reached in haste. We know that socioeconomic status powerfully influences risk, yet researchers continue to compare adolescents’ and adults’ behavior outcomes “straight across” without employing even rudimentary controls for economic or environmental differences. As will be seen in the following analysis of California teenaged drivers’ fatality risks, teenagers and older adults occupy very different socioeconomic worlds. In every county, teenagers and young adults are two to three times more likely than middle-aged adults to live in households with incomes below federal poverty thresholds. Age-based income stratification is so pronounced that teens enjoy poverty rates averaging below 10% in only four of the 27 most populous counties examined, versus in 19 counties for ages 45-54. Meanwhile, average poverty rates of 15% or higher afflict teenagers in 15 of the 27 counties, versus none for Californians ages 45 and older (US Census Bureau, 2000). The contribution of low socioeconomic status to what we call “adolescent risk,” especially for motor vehicle fatality, has profound implications for safety education and policies.

**Analysis.**

From 1994 through 2005, resident drivers ages 15-74 were involved in 52,416 fatal crashes in California’s 27 largest counties (those over 200,000 population), the US Department of Transportation’s Fatality Analysis Reporting System (FARS, 2007) reported. Drivers’ fatal crash rates per billion vehicle-miles driven (VMD) were subjected to regression with each driver age group’s average poverty rate, percent licensed to drive, percent of crashes involving unlicensed drivers, number of vehicle occupants in fatal crashes, time of day of crash, and VMD for each county along with median family income, urbanization, and per-capita motor vehicle registrations by county. VMD, calculated by a standard technique (see McCarthy, 2002) from CalTrans and National Household Travel Survey (2001) figures, showed California teens ages 15-19 averaging fewer than half as many VMD as adults, consistent with national estimates.

## Table 1. Poverty and fatal crash involvement rates by age, selected California counties, 1994-2005

<table>
<thead>
<tr>
<th>County</th>
<th>Fatal Crash Rate per Billion Vehicle-Miles Driven by Driver Age (Fatal Crash Rate)</th>
<th>Percent of Population Living in Poverty by Age Group (Percent in Poverty)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marin</td>
<td>17.9, 14.3, 10.4, 5.8, 6.3, 4.8, 12.7</td>
<td>10.4, 13.7, 8.9, 6.1, 5.2, 4.4, 3.3</td>
</tr>
<tr>
<td>San Mateo</td>
<td>19.5, 14.3, 8.6, 7.5, 6.8, 10.0, 10.1</td>
<td>7.9, 11.6, 6.2, 4.8, 4.1, 4.4, 4.7</td>
</tr>
<tr>
<td>Orange</td>
<td>29.0, 19.6, 11.9, 9.8, 8.4, 9.7, 11.6</td>
<td>13.8, 17.6, 10.9, 8.2, 6.0, 6.4, 5.1</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>33.0, 20.1, 11.4, 9.5, 8.3, 8.2, 12.2</td>
<td>11.2, 14.7, 7.6, 5.7, 4.8, 5.2, 5.7</td>
</tr>
<tr>
<td>Solano</td>
<td>34.4, 22.3, 18.6, 14.5, 10.2, 14.0, 18.2</td>
<td>10.4, 11.4, 8.9, 6.6, 5.3, 5.7, 5.0</td>
</tr>
<tr>
<td>Fresno</td>
<td>70.0, 57.0, 42.1, 32.8, 26.0, 26.0, 33.1</td>
<td>27.0, 29.9, 22.8, 18.7, 13.2, 13.0, 9.1</td>
</tr>
<tr>
<td>Stanislaus</td>
<td>80.9, 51.3, 31.7, 31.9, 24.4, 24.8, 27.3</td>
<td>19.8, 20.9, 17.0, 13.5, 11.0, 10.1, 8.4</td>
</tr>
<tr>
<td>Butte</td>
<td>92.0, 51.2, 41.9, 38.0, 34.0, 29.8, 29.8</td>
<td>19.3, 45.7, 22.3, 13.9, 11.8, 10.3, 5.3</td>
</tr>
<tr>
<td>Tulare</td>
<td>105.5, 74.1, 52.4, 52.5, 39.8, 35.8, 42.0</td>
<td>29.8, 27.4, 25.6, 20.6, 13.4, 13.5, 10.5</td>
</tr>
<tr>
<td>Merced</td>
<td>118.6, 79.5, 56.7, 40.0, 41.8, 41.2, 53.1</td>
<td>27.6, 27.5, 21.5, 18.0, 13.6, 13.8, 10.3</td>
</tr>
</tbody>
</table>

Sources: Authors’ calculations from FARS (2007); US Census Bureau (2000).

**Effects of socioeconomic status on fatality risk.**

Poverty and related social conditions were associated with substantially higher fatal crash risks, as the unadjusted rates in Table 1 show. Teenaged fatal crash rates per billion vehicle-miles driven (BVMD) were subjected to regression with each driver age group’s average poverty rate, percent licensed to drive, percent of crashes involving unlicensed drivers, number of vehicle occupants in fatal crashes, time of day of crash, and VMD for each county along with median family income, urbanization, and per-capita motor vehicle registrations by county. VMD, calculated by a standard technique (see McCarthy, 2002) from CalTrans and National Household Travel Survey (2001) figures, showed California teens ages 15-19 averaging fewer than half as many VMD as adults, consistent with national estimates.
(from page 4) 
varied 6.6 times from the most hazardous county (Merced) to the safest (Marin). Adult fatal crash risks showed similar patterns at every age level. The regression models accounted for three-fourths of the variance in fatal crash rates by age and county.

After poverty, the biggest risk factors boosting teenaged drivers’ fatality rates were driving fewer miles and residing in counties with low household incomes. Table 2 illustrates these risk factors in two major urban counties. Within each county, teenaged drivers suffered poverty rates double and fatal crash rates triple those of middle-aged drivers. Between the two counties, teenagers’ and middle-agers’ fatal crash rates both averaged two to three times higher in poorer Fresno County than in richer Orange County even though Fresno residents averaged 800 fewer miles driven per year. Fresno 45-54 year-olds, with similar numbers of drivers and poverty rates, had fatal crash risks per VMD similar to those of Orange County teenagers. The number of passengers and time of crash were not associated with teen fatality risk once poverty was controlled.

For the 27 counties as a whole, differences in poverty and related conditions explained five-sixths of the difference between teenaged and adult traffic safety: 
Σ When rates were compared straight across (as researchers have), teenaged drivers suffered fatal crash involvement rates 3.19 times those of the safest adult age group (45-54).
Σ But when the multiple regression standardized poverty and other social conditions for all age groups, teenaged drivers’ fatal crash rates fell to just 1.32 times those of drivers ages 45-54. That is, external conditions, not age, explain around 85% of the difference between teenage and middle-aged crash rates.
Σ Similarly, under standardized conditions, the fatality gap between richer and poorer teens narrows sharply. In Table 2, Fresno’s actual teenage fatal crash rate, 7.0 per BMVD, is 2.42 times Orange County teens’ rate (28.9). However, under equalized poverty and related conditions, of California’s Graduated Driver Licensing (GDL) law, which took effect July 1, 1998, and is among the nation’s strictest (see California Department of Transportation, 2006a; Males, 2006; Masten & Hagge, 2004). Compared to the prelaw period (January 1995 through June 1998, when no teenage drivers were subjected to GDL restrictions and delayed licensing), teenaged drivers’ fatal crash involvement rates rose by 3.6% relative to adult crash rates in the postlaw period (July 2002 through December 2005, when virtually all 15-19-year-old drivers had grown up with GDL). Recent investigation has found initially-reported declines in crashes among 16-year-olds were more than offset by significant fatality increases among 18- and 19-year-olds affected by the law (Table 3 on page 8).

The teenage fatality increase was more pronounced among unlicensed drivers in inland and poorer counties, though county-by-county experiences were extremely variable. Whether the GDL law caused or contributed to the fatality increase among the older teenage drivers it affected or simply failed to address important factors causing the increase, reassessment is needed. We suggest there are serious flaws in American GDL laws (more on page 8)
Aloha! My name is Jan Meeker. I'm from Honolulu, Hawaii. I'm the Department of Education Director of Education Resource Teacher, which means I'm in charge of the troops. I don't actually teach, but I have to make sure they all meet their criteria and have their licenses in place. I was introduced to ADTSEA about 13 years ago, and I am here today, honored to present to you the Academy Award for ADTSEA, the "Oscar" winner for this year.

The task is difficult. Like every one of you with your years on this Earth, there is so much to say, so how do you put that down in three paragraphs to make sure you give the person time to acknowledge who wants to acknowledge? So I stayed up last night until 3:30 and I thought "I'm going to give you the formal part, and then heck, I'm going to continue giving my own interpretation as to how he got here."

All Right, Dr. Allen Robinson earned his bachelor in Secondary Education in 1964 from Eastern Illinois University. When he graduated, he began his 33 years in driver education by becoming a driver education teacher in Wheaton, Illinois. Then after three years of doing that, he decided that he wanted to go back and get a Masters Degree, so he went to Illinois State University and he began his master's program there. After completing his masters degree in traffic safety he joined the staff of the Automotive Safety Foundation as a research associate.

In 1971 Allen became a graduate assistant for the Highway Traffic Safety Center at Michigan State University. One year later he got his PhD in secondary education with a focus in curriculum development from Michigan State University.

From 1972 to 1980 Allen served as the Director of Education and Research for the Motorcycle Safety Foundation. In 1981 Indiana University of Pennsylvania hired him as a professor for their Highway Safety Center, and that is where he has continued to stay. Over the years he has been a consultant and contractor for many, organizations, state and national. To name a few: National Transportation Safety Board, the Consumer Product Safety Commission, the American Trucking Association, and many more. You know the recent years he has been working very closely with NHTSA to obtain funds to assist with the ADTSEA program. In 1993 ADTSEA contracted with IUP for management services. IUP agreed to provide day to day management of the American Driver and Traffic Safety Association. As a professor in the Highway Safety Center Allen also undertook the role of C.E.O. of ADTSEA. In 1999 he was selected to be the Director of the Highway Safety Center at IUP. In 33 years has produced and published 18 professional publications. He has co-authored seven with other individuals. He is a member of several professional organizations; he has devoted a lot of his focus with us at ADTSEA. He has received six other rewards, one of which I was surprised to learn was a Lifetime Chief Instructor award from the Motorcycle Safety Foundation because of his contributions in developing motorcycle safety and rider education programs nation wide.

He has several bosses. When I first got to here in 1994 I did not like the man. He was mean looking, he was not friendly. And I thought "oh, I don't know if I want to do this." When you get to know him he's just rough on the outside. Remember the saying: don't judge a book by its cover," and it's true. I got to know him in a real different light. I'm a straight up person, when I think of something I'm going to ask you directly if you're the one involves he's the same way. We have our disagreements but we are allowed to disagree in a nice way, and I have learned through the years on this Earth that you meet people for a certain reason. I met him, he introduced me to all of you and I introduced him to about 1,000 kids across the country, and to me that is my blessing. So I am very happy to be a part of his program this morning.

He has complained about having too many bosses. Number one is Becky, number two is Terry Kerfonta and he reports to Dr. Carleen Zoni, Dean of the College of Health and Human Services and to Dr. Elaine Blair Department Chair. His current ADTSEA bosses are Carol Hardin and myself.

When I met Allen several years back in NSSP there was not even a thought to come to Hawaii for NSSP or for ADTSEA Conference. He brought NSSP over because he believed in us and he brought the kids over twice, and he also brought all of you over two years ago with the 2005 ADTSEA Conference. So with that I truly appreciate his open mind.

I am truly honored to present to you Dr. Allen Robinson as the Kaywood Award winner for 2007.

Jan said some things that, as I remember, I might want to clarify. As Jan described some of the things we've done in the past probably 80% of them were true, and some of the others is a little bit of her memory problems because of her older age. Even though she hasn't wrinkled and she's a delight to be with. What actually happened in 1994 in Tacoma, Washington: she was the grumpy one. She said, in fairness to my predecessors, they would never listen to her, she didn't like them; she didn't want any BS about your
(from page 6) willingness to come to Hawaii. I said "you don't even know me; you've got to give me a chance. If you think there is a way to host conferences in your state we will figure out how to do it." And she is correct about the fact that we've been there twice with NSSP (huge attendance), and we've been there once with this conference which was two years ago and many of you were there and remember just how much fun that was.

I want to also thank Pierson Prentice Hall for this continued support of the Kaywood award. The significance of Dick, that Terry so well described, is important to all of us. Because I look back to 1968 when James Aaron from Southern Illinois University was our president and we were in Ypsilanti, Michigan and I just remember that Dick Kaywood was one of the first people to greet me at that conference. It was the first ADTSEA Conference I attended and Dick made me feel welcome.

I am able to accept this award because of the educational and professional guidance I received in College. If it wasn't for the inspiration and guidance from Dr. Harland Riebe at Eastern Illinois University I would have never entered the driver education field. Dr. Frank Kenel at Illinois State University convinced me that I could accomplish greater goals. Dr. Bob Gustafson guided me through my doctoral program.

This award is due to the supportive effort that I've had from all of the ADTSEA Presidents since 1994. I would like all of those present to please stand and remain standing. Our current president Carol Hardin has been a great pleasure to work with. Others present are Jim Gibbs, Randy Thiel, Jim Lewis, Kal Kelliher, Marty Rossini, Gerry Apple, C. E. Welsh, and Barbara Brody. John Palmer was president when ADTSEA and IUP developed this contract for management.

The ADTSEA Executive Committee is the group that makes this association function. Would all the past Executive Committee members please stand. Would the entire board members stand up who have been active since 1994. This is not an organization of one. This is an organization of many. Now, would we have one more group stand up and then I'll let you sit down. I would like all the previous Kaywood award winners to please stand. I know that several are here. Owen Crab, John Harvey, Terry Klein, Fred Mottola, John Palmer, Frank Kenel, and of course Joe Intore.

The last group that is so essential is the staff that works at IUP. I'm not sure where they all are but Dana Bowser, Lou Pesci, Velian Georgiev and Joani Bowser are essential in providing management services to ADTSEA. We've also had Becky working at our registration desk for the last three days and we certainly appreciate that continued help. But my staff works hard, and they work hard for you, and they are a great asset, so I give my thanks to all of them in appreciation of this award.

I do want to say a little about what has happened since 1993. We actually started, as John can tell you, with a negative balance in our checkbook and thanks to 16 states who loaned money to ADTSEA, ADTSEA was able to pay the bills and continue to function as an association. Within one year we were able to pay back that money. Since 1994 we have always had a positive cash balance, I sometimes worry when I tell people how positive because then they think we should spend it. In 1994, we were here in Burlington and we had very little food service. The Wednesday night banquet was the only meal provided. Today we have very good food service. So now we have a substantial amount of meal functions that I think are good, and I know that there are times that you maybe you may not like exactly what is served, but at least there was a variety of food and beverage choices to help you get through the week.

I'm always asked about attendance. I can tell you what the averages are: 225 delegates attend every year, that's all of us; 60 spouses and 20 people representing exhibitors. So when you do your quick math you have over 300 people who attend our national conference on a regular basis.

So I close in thanking all of you for your participation and allowing me to work through the IUP office as a professor at the Highway Safety Center, Indiana University of Pennsylvania, and as your Chief Executive Officer.

Again, thanks, I hope you enjoy this conference; the host committee has done a beautiful job planning activities. They even went out and changed the weather: it's mild, it's not real humid. So I hope you have a good time. Thank you very much for your support and recognition.

(Oregon from page 3) were lower for all age groups, even among the unrestricted 18- and 19-year-old novice drivers," according to the study released Sept. 24 by the National Highway Traffic Safety Administration (www.nhtsa.gov).

"Particularly for 16-year-old drivers, suspensions and crashes dropped by the second year of GDL implementation," the study said. "The drivers who show the most improved safety are those who were most affected by the law, though enhanced safety is seen even in older teens (18- to 19-year-old drivers) who are not restricted by GDL regulations."

Parents’ involvement in supervising their teenage children’s driving is a key in improved safety, the study found.

“The clearest safety improvements (e.g., 16-year-old drivers in their first six months of licensure) occur not only when the (continue on page 14)
drivers’ full licensing, supervision, passenger transport, etc., are based on age alone. These provisions codify the assumption that teenagers are fundamentally different from adults: that is, 16-17 year-olds are too reckless to permit unsupervised driving while adults ages 25-older with driver’s licenses are safe, qualified driving instructors. Yet, our study’s findings argue that whether or not teens “think” differently than adults, they act in strikingly similar ways under similar conditions. Marin teenagers drive more like Marin adults than like Tulare teenagers, who drive more like Tulare adults. Low-income drivers of all ages tend to drive older, less-maintained vehicles (Bureau of Transportation Statistics, 2001), live in areas where driving risks are lower, better control their driving conditions, and avail better health care. Indeed, we might wonder why middle-aged drivers with three decades’ driving experience (and whose highest-risk contingent should have died out at earlier ages) are only marginally safer from fatality under similar conditions than teenaged drivers with only a couple of years behind the wheel.

The persistence of bad driving habits into older years, visible when socioeconomic factors protecting older ages are controlled, suggests attention to the second important variable: driving experience, which may be positively affected by driver education and safety programs. These findings suggest that, independently of economic status, teens who are least at risk of fatality occupy groups that drive the most. While teenagers suffer approximately 7% more fatal crashes for each 1% increase in poverty, they average 9% fewer fatalities per VMD for each additional mile driven per day. The rapidity of young drivers’ learning curves logically depends on the quality of their accumulating experience.

This preliminary analysis argues that socioeconomics harbors potentially powerful implications for traffic safety. Those experienced in driver and safety programs may see more than the few suggested here. First, the anti-youth rhetoric common...

(more on page 19)
Teenage Drivers and Hand-free Cellular Phones: An Equation for Tragedy
Dr. Shari Willis, Rowan University, Ms. Dawn Tarabochia, Montana State University
Dr. Michele DiCorcia, Rowan University

Introduction

fatalities from motor vehicular accidents continue to impact the lives of all Americans. According to Lewis (2006), a baseball stadium seating over 40,000 spectators could provide a seat for the approximate number of individuals killed in vehicular crashes in 2004. Consider that in the United States, 16- to 19-year-olds run the highest risk of motor vehicle crashes than any other age group (IIHS, 2006). “In fact, per mile driven, teen drivers are four times more likely than older drivers to crash” (IIHS, 2006). In addition, teen drivers are at greater risk for motor vehicle fatalities. In 2004, nearly 6,000 teens were killed and 303,000 were injured. While teen drivers make up 6% of all licensed drivers, they are involved in 14% of deadly automobile crashes (USA Today, 2006).

According to Van der Hulst, Meijman, and Rothengatter (1999), being involved in a crash. A Direct Line Insurance study (2002), titled the Mobile Phone Report, reported results consistent with the statements of Redelmeier and Tibshirani (2001). “Mobile phone users are as dangerous as drunk-drivers” (Direct Line Insurance, 2002, p. 2). Drivers using the phone while operating a vehicle failed to notice more road signs than when under the influence of alcohol. In essence, when drivers converse on their cell phones while driving, they subject “themselves and other road users to unacceptable dangers” (Direct Line Insurance, 2002, p. 3). Furthermore, Strayer, Crouch and Drews (2004) found that when controlling for driving conditions and time on task, cell phone users exhibited greater impairment than intoxicated drivers.

In a study by Strayer, Drews & Johnson (2003) phone conversations impaired a driver’s reaction when the preceding vehicle applied their brakes, and that this phenomenon was mediated, in part, to decreased attention to visual inputs. Furthermore, Strayer (2006a) presented research findings regarding cell phones, driver distraction and multi-tasking. Strayer (2006a) found that out of 100 drivers attempting to stop at a red light while utilizing their cell phone, 82 users did not stop at the red light as compared to 352 of 1,246 non-cell phone users. This demonstrates approximately 25% of those driving with cell phones stopped for the red light while approximately 75% without the use of cells phones came to a complete stop.

For simulator based studies in following a periodically braking lead vehicle and using a hands-free cell phone in medium density traffic, the dual task of driving and using a cell phone slowed the driver reaction time, increased the following distance and caused rear end collisions. Strayer (2006b) discovered that cell phones create inattention blindness for traffic related events. Accordingly, cell phone drivers look but fail to see up to half of the information in the driving environment. Even more astounding was the finding that brain waves were depressed in traffic situations when a cell phone was being used.

Cellular phone conversations of drivers, especially hands-free, have been compared to passenger conversations (Haigney & Westerman, 2001). Both Strayer (2006b) and Hunton and Rose (2005) have indicated that driving with a cell phone is more distracting that conversing with a passenger. This is due to the fact that the passenger will stop conversing at a time when the driver must pay attention to the traffic environment as the passenger is able to recognize the needs of the driver. Conversely, during a cell phone conversation between a driver and another individual, the individual will not stop the conversation because they are unaware of the driving environment (Strayer, 2006b; Hunton & Rose, 2005; Elias, 2006). A higher cognitive demand is, therefore, placed upon the driver using a cell phone.

Teenagers operating vehicles represent a category of drivers of particular concern. As stated by the Intermountain Injury Control Research Center (2001), young individuals have elevated crash rates while they are learning the new skill of how to drive. Driver education classes have emphasized the deadly effects of driving under the influence of alcohol and other addictive substances and with the (more on page 10)
recent research suggesting the use of cellular telephones while driving is as devastating as driving under the influence of alcohol, drivers’ education classes must assess and address the problems associated with the new technology (Redelmeier & Tibshirani, 2001). Developed habits during formative driving experiences for adolescent vehicle operators can be difficult to alter later in life. Establishing dangerous or high-risk driving behaviors is a detriment to the teen driver, their parents and the broader society.

Methods

Student Recruitment

With Institutional Review Board approval, permission from the school district and high school driver education instructors, students were apprised of the research study. This study was voluntary and students from two sections of a Driver’s Education class were given the option of not participating without penalty to their grade. Furthermore, a notification letter was distributed to the parents or guardians of all potential participating students to inform them about the research project. The parents or guardians had the option of signing the form, which would withhold their students from participation. At the request of the school district, parents who did not object to the study were not required to sign a permission statement.

The pretest questionnaire was given two weeks prior to any actual simulation driving. At the time of the study, all of the participants (N = 51) had prior experience with driving simulators and all students had passed their written driving examination. Of the original 51 participants, 19 were females and 32 males; however, due to attrition, the final number of participants was 45.

Driving Simulator Information

Each student-driver drove a simulator that corresponded with a driving movie being observed at the front of the classroom. The driving movie included four distinct driving segments and the movie lasted a total of 18 minutes. Each student-driver drove the first segment of the movie in which four maneuvers were practiced. The students drove this portion without the use of a hands-free cell phone. Each maneuver was completed in order to avoid a potential crash. The students then drove a second segment where the maneuvers were again needed to avoid potential crashes. During the second driving segment students used hands-free cell phones and participated in a discussion. The nine simulators were arranged in a classroom and included two rows of simulators; four simulators in the front row and five in the rear row. The simulator classroom was windowless; thus, the driving movie could be clearly viewed without additional lighting or glare. The simulators recorded miscues in the areas of acceleration errors, signaling errors, braking errors, steering errors, and excess speed. The simulator recorded only the number of errors, not the correct number of maneuvers achieved.

Cell Phone Protocol

The cellular phones used by the participants were identical in brand, model number, shape, color, and functioning. All students were given earpieces; thus, the phones were considered hands-free models, as the students did not need to physically hold the phone with their hand or shoulder. Prior to the driving segment that utilized the cellular phone, each student-driver made a phone connection with their partners who were out of sight in a secluded room. Simply stated, the drivers did not dial the phone while driving the simulator. At the conclusion of the driving movie, each student was informed of his or her errors with and without cell phone use.

Group Protocol

All student participants were divided into three equal groups. Each group completed all three protocols which included driving while talking on a hands free cell phone, sitting alongside the driver and recording answers to a standard set of questions, and using the cell phone in a secluded classroom to ask questions to the driver performing the simulated driving tasks. To ensure that the sample questions were being asked and answered, a student was placed next to the driver during each simulation and recorded the answers of the driver as they were given. The student recording the answers to the questions did not interact with the driver at any time during the driving simulation. Questions for the drivers were developed prior to testing to create a planned discussion. The purpose of the planned discussion was to create a consistent and continuous discussion that would last throughout the entire driving simulation. The questions ranged from easy to difficult and emotional or shock value questions were not included in this study (Table 1). A case crossover technique was utilized to obtain results for this study. Each student driver was compared against himself or herself regarding the number of errors that occurred while driving undistracted as compared to distracted by a hands-free cell phone.

Table 1

Sample Questions from the Planned Discussion
1. Describe the yield sign.
2. What is the speed limit in a residential area?
3. What is 8X8?
4. What is 93+7-29?
5. What is the difference between a flashing yellow light and a yellow light?
6. How long should you signal before making a turn?

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Results

The combined average error rate for both classes while driving without a cell phone was 9.71 compared to 50.20 when driving with a cell phone (Table 2). The class ratio was greater for the first class because this class initially had fewer driving errors when driving without a cell phone. The combined classes had a 6.37 increase in driving error when distracted by hands-free cell phones while driving.

A t-test was computed to ensure that there were significant differences between simulated driving segments when student-drivers were undistracted by cell phones and distracted by cell phones. The two classes were combined for the t-test and the t-value was 31.87 which showed significant difference (p < .0001) between the number of driving errors without a cell phone compared to the number of driving errors with a cell phone (Table 3).

Limitations

A major limitation to the study was the fact the students utilized driving simulators rather than in automobiles and on actual roads. While students had previous practice and felt comfortable driving the simulators, the technology of the simulators is not equal with an actual driving experience. In addition, actual road driving would have been a more realistic test of the driving abilities of student-drivers while using a hands-free cell phone; however, due to an increased chance of an accident and the inherent risk to the student-drivers and other driver’s, actual road driving was not utilized for this study.

Discussion

The ultimate goal of driver education is to create a safe environment for students as they learn how to operate a motor vehicle. As educators, it is important to teach student-drivers safe, healthy driving habits. Without educating these new drivers about the harm that can come from driving while talking on a cell phone, we are not ensuring their individual safety or the safety of others. Unfortunately, cell phone use while operating a motor vehicle is becoming common practice as is the belief that a hands-free cell phone is less dangerous than a hand held phone.

Table 2

<table>
<thead>
<tr>
<th>Class</th>
<th>Class total</th>
<th>Class error without cell phones</th>
<th>Class average error without cell phones</th>
<th>Class error with cell phones</th>
<th>Class average error with cell phones</th>
<th>Class ratio of increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>168</td>
<td>7.00</td>
<td>1,237</td>
<td>51.54</td>
<td>8.52</td>
<td>8.52</td>
</tr>
<tr>
<td>Class 2</td>
<td>269</td>
<td>12.81</td>
<td>1,022</td>
<td>48.67</td>
<td>3.92</td>
<td>3.92</td>
</tr>
<tr>
<td>Total</td>
<td>437</td>
<td>9.71</td>
<td>2,259</td>
<td>50.20</td>
<td>6.37</td>
<td>6.37</td>
</tr>
</tbody>
</table>

Table 3

<table>
<thead>
<tr>
<th>Group</th>
<th>No Phone</th>
<th>With Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>9.71</td>
<td>50.20</td>
</tr>
<tr>
<td>SD</td>
<td>3.84</td>
<td>6.52</td>
</tr>
<tr>
<td>SE of Measurement</td>
<td>.57</td>
<td>.97</td>
</tr>
<tr>
<td>n</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>

Translation to Driver Education

There is a need in drivers’ education to create curricular components that positively affect the attitudes and beliefs of students towards cellular use while driving. Teaching the facts related to cell phone use while driving is necessary for students to understand; however, drivers’ education must go beyond the facts and begin to impact the attitudes and beliefs of each new driver and ultimately their intentions to be safe drivers. Driver education teachers are educators and are, therefore, a vital component to carrying the message of safety through the avoidance of distraction.

Driver Education teachers need to be appraised of the distraction potential of the technology in vehicles and the methods to educate the public concerning those dangers associated with distractions. According to Szyman, Wanner, and Spencer (2003), health educators “should be aware of the threat to personal and public safety posed by cellular phone use while driving and address the practice with students through” curricular efforts. The driver education teacher must make a conscious effort to increase the understanding of risk reduction to his or her students. Driver Education needs to go beyond competency based learning and include objectives in the affective domains. Only then will educators begin to make a difference in the lives of new drivers.

It is not known why one class had significantly more driving errors than the other class. One suggestion...
The hazards of hands-free phones are greater than originally believed. In contrast to public belief, the content of a cell phone conversation is more determinate of driver distraction than the type of cell phone (hands-free vs. hand held) is being used (Elias, 2006). Furthermore, experimental studies have indicated that simulated driving tasks are compromised when drivers are distracted by a cell phone conversation regardless of whether or not they are using a hand-held or a hands-free cell phone. The mental distraction created from the use of cellular technology while driving transfers the drivers’ attention from where it should be, on the road environment, to the conversation on the phone. While drivers focus on the conversation, they are “naturally distracted from their primary task” (Direct Line Insurance, 2002, p. 4). This mental disruption occurs regardless of whether the cell phone is being held or a hands-free device is being utilized.

As previously mentioned, Redelmeier and Tibshirani (1997) reported that cellular telephone use quadrupled a driver’s risk of a collision during the time of the call. Redelmeier and Tibshirani (1997) did not consider implications exclusively of hands-free cell phones as this cellular technology was not commonly available when their study was conducted. According to findings from this study, an adolescence risk has been more than sextupled when using a hands-free cell phone, indicating that whether or not the cellular phone is hand-held or hands free, the danger comes from the distraction that is associated with the mental task of a phone conversation. When combined with the knowledge that teenagers in their initial years of driving are prone to more automobile crashes than other age groups (Center for Disease Control, 2006), the use of cellular phones by young drivers becomes an equation for tragedy.

Laws and ordinances have been created regarding the use of hand held cell phones. Brooklyn, Ohio, was the first U.S. city to pass an ordinance restricting the use of cellular phones. Mayor John Coyne, in conjunction with other city officials in Ordinance Number 1997-27, suggested that the operation of a motor vehicle on the public roadways while using a telephone may cause the operator to maintain less than full time and attention to the operation of said motor vehicle, and...the regulation of the use of mobile telephone while operating a vehicle in the City will enhance the safety of those persons operating motor vehicles as well as pedestrians in the City (n.p.).

The law was adopted March 22, 1999. As an aside, under the supervision of long-standing Mayor Coyne, Brooklyn was the first city to enact an ordinance mandating the use of seat belts in 1966.

The aforementioned ordinances were a step in the right direction; however, with the potential for drivers using hands-free cell phones having the same error rate as those using hand held (Elias, 2006), the laws give consumers the false sense of security that hands free is safer. Public health measures as well as legislative acts based upon current research are efforts needed to decrease the problems associated with the distractions created by cell phone use while driving. Legislative efforts need stronger driving laws and regulations to require students not to use cell phones and to not acquire the habit.

While this study only focused on the distraction potential of the hands-free cell phone, the distraction potential of other low technological activities while driving (e.g., reading a newspaper, shaving, and putting on make-up) and high technological activities (e.g., operating a computer and watching digital video discs) are also deterrents to safe driving. Future interventions with beginner drivers should include a myriad of new technologies desired by teen drivers. Cellular phones have been commonplace since the 1990s. Newer technologies such as text messaging and computer capabilities in an automobile should be included in future research to establish their distraction potential. Furthermore, future interventions for drivers’ education should consider adding these distractions to demonstrate the technology’s potential for distractions and errors of users while driving.

According to Mintz (1995, p. 1), "Most automobile crashes are not accidental, but are situations that should have been avoided". Mintz (1995) suggested that the failure of a driver to recognize an impending dangerous driving situation and deal with the situation prior to it becoming a crash is “not often a knowledge problem, but usually an attitude problem” (p. 1). Driver education and further research should also make a conscious effort to increase the attitude that it is not appropriate to use a cell phone while operating a vehicle (concluding on page 14).
Vehicle Dynamics and their Impact on Directional Control While in Turns
William E. Van Tassel, Ph.D. and Richard Chidester
Traffic Safety Programs, AAA National Office

Turning the steering wheel has traditionally been the method most often used for initiating a change in vehicle direction, as well as to make adjustments to one’s path of travel once in a turn. However, there are at least two additional techniques capable of adjusting a vehicle’s path of travel (POT) while in a turn that are available to all drivers. And although the techniques discussed are equally effective when turning left or right, for simplicity’s sake it shall be assumed that all turns discussed in this article are right turns.

If a vehicle is going straight on a flat surface, the most effective way to change its direction is to turn the steering wheel. To accomplish this is simple; the driver turns the steering wheel to the right to turn right, and to the left to turn left.

However, once in a turn, a driver may need to adjust the vehicle’s direction to maintain proper lane position and the intended path of travel. For example, a driver who may have initially turned the steering wheel too much may need to “widen” their POT through the turn to maintain proper vehicle positioning on the roadway. Alternatively, a driver may have initially not turned enough, resulting in a need to tighten the vehicle’s POT.

Available Techniques
Adjusting vehicle direction mid-turn is where a driver’s options increase in number. While turning the wheel is the sole way to initiate a turn from the “straight ahead” position, there are at least three ways to adjust vehicle direction once in a turn. The first and most common way to is to use the steering wheel. Steering wheel inputs can result in additional or reduced turning force. The effect on POT is usually immediate and relatively accurate: the driver turns the wheel and the vehicle changes direction.

A second way to adjust POT while in a turn is to brake slightly or just lift off the accelerator a bit (Lopez, 1997). Either of these actions will result in an “tightening” of the vehicle’s POT. When a driver lifts off the accelerator or applies the brakes, this has the effect of transferring weight toward the front of the vehicle. This extra weight presses down more on the front tires, resulting in extra traction from the front tires, especially the tire toward the outside of the turn. The resulting extra traction causes the front tires to grip more relative to the rear tires, bringing the vehicle toward the inside of the turn.

A third way to adjust POT while turning is to accelerate. This action is not performed to increase the vehicle’s speed, but rather to shift the vehicle’s weight rearward. As the weight moves rearward, the rear tires are pressed downward and there is a reduction in downward pressure on the front tires. As the pressure on the front tires is a corresponding reduction in traction occurs. This has the effect of pushing the front end of the vehicle out a bit wider, toward the outside of the turn. While this third technique is not used as often as the braking/lifting technique, it still remains a valuable tool in the driver’s repertoire of actions. Table 1 summarizes the techniques, processes and outcomes.

Additional Points
Several additional points of information are relevant here. First, note that the braking and accelerating techniques discussed above are both accomplished by changing the amount of weight over the front tires, rather than by turning

<table>
<thead>
<tr>
<th>Turning Technique (While Turning Right)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial Action</strong></td>
</tr>
<tr>
<td><strong>Principle Applied</strong></td>
</tr>
<tr>
<td><strong>Impact on Vehicle Components</strong></td>
</tr>
<tr>
<td><strong>Impact on Vehicle Attitude</strong></td>
</tr>
<tr>
<td><strong>Impact on Vehicle Direction</strong></td>
</tr>
</tbody>
</table>

(continued on page 15)
the steering wheel. Thus, it becomes clear that instead of being something that “happens” to a vehicle, weight transfer becomes the driver’s tool with which to adjust traction and thus POT while in a turn (Karasa, 2001).

Second, these two weight transferring techniques are most effective when traveling at highway speeds. At city driving speeds, the steering technique remains the most effective. Finally, be aware that too aggressive application of either the braking or acceleration techniques can result in loss of traction in the form of understeer (front tire) or oversteer (rear tire) skids.

In summary, the steering wheel remains the sole method to initiate a turn drivers have three options for adjusting path of travel while in a turn. Braking and acceleration techniques can help drivers adjust their vehicle’s position with enhanced precision, resulting in decreased chance of colliding with other vehicles or fixed objects.

While instructors may find this information useful in discussing basic vehicle dynamics with students in the classroom, these concepts are not intended to be used during actual in-car training with novice drivers. These concepts are relatively advanced, and are applicable only while driving at higher speeds. These techniques may involve higher risk than would appropriate during in-car training; thus, it is recommended that instructors not attempt to teach, perform or otherwise apply the techniques during in-car training. Application of the concepts should be limited to supplemeting classroom discussions about basic vehicle dynamics.

References

References


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The Role of Driver Educators in Instructing Students to “SEE” Engineering, Human and Other Attributes and Obstacles of the HTS

Dana Sosnick-Bowser, Executive Director

The role of the driver in the highway transportation system (HTS) is primarily that of processing information and making decisions. Competent drivers do not just operate and guide vehicles: stop, go, turn; they are involved in a complex and constant process of perceiving and deciding how best to control the speed and position of their vehicles in one traffic situation after another. This is an attribute or characteristic of a competent driver because they have been introduced to, taught and practiced over a prescribed amount of time such skills that allow for ideal perception of HTS characteristics and the proper action to deal with such features.

Fortunately, most traffic situations to be encountered are routine and easy to deal with due to engineering considerations. However, every now and then a rather complex traffic problem arises which drivers must cope with in a very limited amount of time due to many factors including, but not limited to, need for change in the roadway, work zones and/or traffic congestion. And, it is the failure of drivers to respond properly to such problem situations that lead to most collisions. Therefore, the development of traffic problem solving skills is a basic requirement of safe driving.

Perceptual Driving: Skills for Learning to Deal with the HTS

The Defensive Driving Course, the Smith System for Expert Seeing, and the Identify, Predict, Decide and Execute (IPDE) and Search Evaluate Execute (SEE) process have been introduced in varying manners into high school driver education programs, etc.

SEE involves, as mentioned above, searching for highway signs, signals and pavement marking. Obviously, highway design characteristics play heavily in scanning or searching for these items for driver guidance. Evaluating is the process of determining what all has been perceived within the search stage and what these may be telling a driver to do. Executing involves making a final conclusion of the safest action to take for what has been perceived in the traffic scene ahead and then doing it. For the first time, the best ideas from these programs have been integrated into one comprehensive and coherent program of instruction; Perceptual Driving.

Perceptual driving best describes such a program where students, administrators, parents, traffic engineers, inspectors and workers better understand perceptual driving skill development as thinking skills and problem solving skills that should become a high priority in the educational reform movement and within workplace training and development. Hence, the teaching of problem solving skills in driver education can make a significant contribution to the general objective of high schools as well as traffic safety in many venues.

In addition to the driver’s mental skills or processes, perceptual training highlights the five basic requirements that are needed for the safe control of a motor vehicle. Then, they are applied and reinforced during succeeding sessions. These five basic concepts are traction, space, time, visibility, and the path of travel. As highway engineering is involved, all five of these concepts are essential in HTS development, design and construction and thus should be a vital part of driver education and continued education programs for those in the HTS field.

Adequate Traction — Without traction, vehicle movement and control would not be possible. Traction is required for accelerating, decelerating, and steering. A driver must constantly assess the traction demands of his or her vehicle.

Adequate Space — An adequate margin of space gives drivers plenty of time to react to the changing conditions. It also gives them better visibility. As a result, they rarely need to make sudden stops or swerving actions. Space is needed for crossing, joining, turning, and any other maneuver. Space needed, will vary with the speed being traveled.

Adequate Time — The driver must assess the time needed for driver control actions, vehicle responses, maneuvers, and processing information. The use of timing is extremely important for avoiding hazards.

Adequate Visibility — How well a driver can guide his or her car along a pathway depends on visibility and how well the eyes are being used. Changes in visibility must be perceived and responded to.

Path of Travel — The path of travel is that strip of roadway, wide enough and long enough, to permit the safe forward movement of your car. This concept serves as the basic point of reference for all perceptions and evaluations.

Another issue to consider that has been heavily researched evaluated and taught within the driver education community is the effect the roadway and vehicle itself has on vehicle balance characteristics. Obviously, highway design and structure can affect...
SECONDARY REVIEW OF DATA FROM “TEEN DRIVER LICENSING PROGRAM SURVEY – 2005”

EXECUTIVE SUMMARY

By Jessica Hartos, PhD,*Assistant Professor, Department of Public Health Sciences, UNC Charlotte for John Harvey Program Manager, Driver Education Program ODOT-Transportation Safety Division

Motor vehicle crashes are the leading cause of injury and death for youth in the United States and cause more deaths than do the next four causes (i.e., homicide, suicide, cancer, and heart disease) combined. Three countermeasures exist to help combat high crash rates among young drivers—graduated driver licensing (GDL), driver education, and parental involvement in teen driving—and each state has some combination of these in place. In 2004-05, the “Oregon Department of Transportation (ODOT) arranged for the Oregon Survey Research Laboratory (OSRL) to conduct a survey in Oregon with parents and their 16- and 17-year-old teenage drivers with and without crashes posted to their Oregon driver records about attitudes, behaviors, and experiences related to teen driving, including aspects of GDL, driver training, and parent involvement in teenage driving. A final report was issued by OSRL for the survey data; however, it did not include significant results or interpretation of any significant results.

The purpose of this project was to conduct a secondary review of the data in the “Teen Driver Licensing Program Survey – 2005" final report that includes survey results for 1,125 parents and their 16-and 17-year old teenagers (42% of which had crashes posted to their state driver records). Variables of interest included the following: attitudes toward Oregon’s teen driving laws, teen driver training, opinions about DMV family materials, factors related to choosing education course or 100 hours, amount of supervised practice driving, factors related to age at licensure, teen adherence to Oregon’s teen driving laws, parent confidence in teen driving, parenting practices, teen substance use, teen driving behaviors, and teen driver skills. Responses for all variables were dichotomized as “category of interest” vs. “referent category” and odds ratios were calculated to represent the difference in risk for crash due to being in the first category vs. the referent category. Policy Implications

Summary of Study Findings and Policy Implications

A number of variables of interest showed significant relations with crash group: some were positively related (“risk” factors) and some were inversely related (“protective” factors). But, there were no significant differences in parent reports or in teen reports for any variables of interest related to the two adolescent age groups addressed in this study (16-only vs. 16-and-17). Therefore, there would be no need to enact different strategies or policies for 16-year-olds than for 17-year-olds.

DMV family materials: Oregon should assess and utilize various strategies to promote (even require) the use of DMV family materials because in this study, use of a log book and the Tuning Up Manual was related to a reduction in teen crash risk of 40% to 60% (1.4 to 1.6 less crash risk).

Parent confidence in teen driving: Oregon should assess and support (even require) parent confidence in teen driving, especially as related to teenagers taking driver education and being supervised, was related to a reduction in teen crash risk of 50% to 80% (1.5 to 1.8 less crash risk).

Driver education vs. supervised practice: Oregon should promote and support (even require) the completion of driver education for teenagers because in this study, completing driver education vs. 100 hours of supervised practice only was related to a reduction in crash risk of 40% to 70% (1.4 to 1 times less crash risk). Parent confidence in teen driving and adherence to GDL laws: Oregon should assess and utilize various strategies to promote (even require) parent confidence in teen driving, especially as related to teenagers taking driver education and being supervised, was related to a reduction in teen crash risk of 40% to 70% (1.4 to 1.7 times less crash risk).

Parenting practices: Oregon should assess and utilize various strategies to promote the monitoring of teenagers’ whereabouts by parents AND the following of parent guidelines by teenagers as they relate to teen driving because in this study, these were related to a

Data were abstracted from the “Teen Driver Licensing Program

(more on the next page)
vehicle and roadway design, along with safe driving lessons.

**Driver Actions**

Every action we take with our motor vehicle is determined by what we identify and process in our brain. The actions we are referring to are speed selection, position and/or direction selection and communication selection. As drivers we are constantly adjusting our speed, position and communicating, and this is all determined by what we identify and evaluate. Identifying is done with all of our senses, but in driving, it is primarily done with our eyes. The average driver who is involved in a collision will usually indicate with one of three responses as to why the collision occurred and these are:

> "I didn’t see him;"
> "I didn’t see him in time;" and
> "I didn’t think he would do what he did."

These three statements indicate most drivers do not know how to use their eyes in an effective manner. And they do not know what to search for in an orderly manner. Highway construction features, roadway types and heavy highway work zones are features that further add to what drivers need to see, process and deal with on a frequent basis dependant upon the area the driver utilizes.

**Not all Drivers Learn Perceptual Skills; Why?**

Historically, Driver Education was a highly sought-after, nearly universally offered discipline offered in public and private school programs throughout the United States since the 1950’s. In 1977-1981, the DeKalb study was initiated in DeKalb County, Georgia through the National Highway Traffic Safety Education Association to evaluate the effectiveness of Driver Education. The study included three groups. Group one received the highest level of education. Group two received just enough training to deal effectively with a driver examination. Group three received little or no training.

The expectation of the study was that highway fatalities would decrease by 10% with the aid of driver education. The expectation of the study was far too great; therefore experts ruled that driver education was ineffective.

However, if one really processes this data, it is evident that exposure to driving was not considered. Obviously, group one received ample training and therefore pursued, earned and utilized a driver’s license more often than group two. Group three with little or no training, mainly did not pursue or earn a driver’s license. Therefore, who do you think will be on the roadways more, logging more miles as a novice driver? Group one.

Despite some true positives discovered in the study supporting driver education, since the study, programs throughout the US have declined by greater than 50%. The way driver education is being offered is inconsistent and lacking monitoring in nearly 40% of the US. Hence, how can we as safety, engineering and construction professionals expect to develop the "perfect" roadway and HTS situations when driver education is unable to support your efforts with programs such as the Perceptual Driving Program?

**Driver Education NOW!**

As professionals intertwined in our own fields, yet linked together with the interest of traffic safety in mind, what needs to happen in the future to ensure novice drivers or all drivers for that matter, gain the skills necessary to encounter the complex HTS?

First, one must be aware, there are in place approved National Driver Education Classroom Standards in place that prescribe what should be taught within the
effectively with the HTS.

A fair shake at successfully dealing being taught so that all students get a fair shake at successfully dealing with the HTS.

ADTSEA also has in place delivery standards for programs that prescribe how, how long and how often students need to be exposed to knowledge and practice to gain as much information and practice as possible. For example, the original prescription for driver education has been, in most states, 30 hours of classroom training with six hours of behind the wheel training. This was prescribed in the 1950’s. Certainly, our students, vehicles and roadways have changed substantially since the 1950’s. Current ADTSEA documentation advocates for at least 45 hours of classroom instruction with at least eight hours of behind the wheel training. Perceptual driving is one skill included in the training prescription.

Graduated driver licensing requirements at high levels are also advocated to aid students in getting the most practice in the safest situations during at least their first six months of driving as that is when most crashes occur for novice drivers.

Food for Thought

For several years, and emphasis has been placed upon driver and traffic safety educators to emphasize the importance of safer driving habits within heavy highway construction work zones. Many drivers, novice or seasoned, have little knowledge or empathy for the general safety of those working on improving or building our roadways.

Studies show the following:

- Workers encounter about 27,000 reportable injuries on highway work zones per year.
- This costs approximately $2.6 Billion per year.
- There has been a 50% work zone fatality increase between 1997 & 2004.
- One worker dies approximately every nine hours.

According to PennDot Publication 203, the primary function of temporary traffic control is to provide for the safety and efficient movement of traffic. Temporary traffic control zones present to drivers a sometimes constantly changing environment. Thus, no one set of traffic control devices can satisfy all conditions for any given project.

Primarily, the function of the traffic control zone is to provide the most safe and visible area for workers to perform all necessary tasks. The overall goal, therefore, is to provide roadway user safety, worker safety and efficient traffic flow.

Unfortunately, driver behaviors that include; speeding, distractions, (i.e. cell phone use), and emotion among others often interfere with the goal of the traffic control zone. When drivers enter a work zone too quickly without their full attention to the scene ahead, they are not utilizing perceptual driving skills and create a potentially dangerous situation for themselves, other roadway users and workers.

Below are some statistics involving the types of crashes in work zones:

- Drivers encounter approximately 40,000 reported injuries in work zones per year, along with 52,000 crashes without reported injuries.
- Most drivers report rear-ends collisions, (31%), while others report small object collisions, (11%).

The remaining 58% of crashes appear to be a mixture of incidents.

Driver education needs to address these issues. Since 2005, ADTSEA has done that with teaching workshops on the topic and information within their national curriculum. Emphasis has also been given to other providers of highway safety information to provide traffic control zone safety education.

New Gains: Support for D.E.

New initiatives to support driver education that leads to safer highways are explored and then handed to numerous organizations develop programs to provide students and the general public with the most up to date safety information that is available. The DeKalb study may have not yielded numbers to support initial hypothesis on the effectiveness of driver education, however the following was realized:

Students receiving full scale driver education showed fewer crashes than the control group receiving no driver education during the first six months of their driving experiences.

Students receiving full scale driver education experienced a fewer number of crashes by approximately 6%.

Preliminary data showed that students receiving full scale driver education reported fewer violations than the control and partial educational groups for two years. Those receiving partial programming also received fewer violations than the control group.

Over a six year period, those receiving full scale driver education had approximately 10% fewer violations. Those receiving partial programming had 9% fewer violations.

NTSB Report on Driver Education

In the summer of 2005, the National Transportation Safety Board (more on next page)
Board released a report on the status of and recommendations for driver education. Briefly, this report supported many ideals outlined within ADTSEA’s Driver Education Standards and Delivery Standards documents. Basically, what was emphasized as effective in the minds of NTSB was prescribed nationally by ADTSEA even prior to the report. Therefore, it can be said that it has been known for years by professionals in the field them more education, taught differently about even more safety topics was needed. NTSB validated many ideologies and has made Driver Education more visible as a need for novice drivers to increase safety on our roadways, in many situations including work zones.

As mentioned previously, the report outlined that, “Despite the dramatic changes in vehicles, highways, and the driving environment over the past 56 years, the approach to driver education has changed little. According to one of the speakers at the Safety Board’s public forum, many schools still regard the 30 + 6 formula as the standard.” Therefore, again, how can we enrich our classrooms when utilizing prescriptions that are nearly 60 years old? Imagine engineering and building highways with ideals, materials and equipment that are nearly 60 years old?

Are We Dreaming?

No, we are not dreaming. But, we are continually advocating and working toward making key stakeholders aware that quality driver education is possible and necessary. It can be technologically advanced for the classroom of the 21st century and with the support of stakeholders along with federal and state legislation, funding and supervision for such programs is possible.

With the incredible rates of work zone crashes and potential deaths to those in the field, we cannot afford to avoid this educational area any longer. It is necessary to work toward teaching our students of all ages how to perceive traffic situations, process this information and deal effectively with what is ahead.

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AAA Foundation for Traffic Safety
American Automobile Association
Continental Teves
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International Traffic Safety Publishers
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(Oregon from page 14)
restrictions are greatest, but also when parents report the greatest vigilance in supporting the GDL restrictions,” the study said. Focus group parents reported relaxing their supervision over time, and the study showed this easing parallels the lessening in safety improvements as time goes on. “We’ve always known parents play an important part in safe driving for teens,” said Costales. “In addition to close supervision, we encourage parents to consider an ODOT-approved driver education program in preparing their teen to drive.”

According to the study, graduated driver licensing laws also reduced the number of traffic tickets and crashes by male teen drivers, who typically record more traffic convictions and accidents than their female peers.

“It is extremely promising that after GDL implementation, male crash rates dropped to levels approximating female crash rates. Because young male crash rates are typically higher than female crash rates, a reduction in those crash rates may be an important finding,” the study said.

Regardless of GDL restrictions, the study found that Oregon teens who took an approved ODOT driver education course, in lieu of an additional 50 hours of supervised practice, had fewer crashes, traffic convictions and suspensions.

ODOT-approved driver education programs can be found at www.oregon.gov/ODOT/TS/drivers_ed.shtml or by contacting Driver Education Program Manager John L. Harvey at 503-986-4413.
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