



# Implementation of an Education Session to Reduce the Incidence of High Risk Driving Behaviors Among Teen Drivers

Beverly Shirk, RN BSN and Jodi Yocum, RN BSN

Penn State Hershey Children's Hospital, Pediatric Surgery/Trauma and Emergency Departments

## Introduction

Trauma is the leading cause of injury, disability and mortality among teenagers (ages 16-19). According to the National Highway Traffic Safety Administration (NHTSA), motor vehicle-related crashes are the leading cause of death in this age group. Lack of driving experience and prominence of risk-taking behaviors contribute to the increased risk of injury or death. Over the past 5 years, many high schools in PA have altered or eliminated formal driver education classes, so teens primarily receive driver education from their guardians. Our trauma center mission is "Saving Lives, Preventing Injuries". For the 5 year period 2002-2006, 667 patients, ages 16-20, were treated at our trauma center following vehicular crash. Of these, 101 patients (15%) had + alcohol screen, and 136 patients (32%) were documented as unrestrained drivers or ejected from the vehicle. We hypothesized that exposure to an educational session provided by healthcare providers in a trauma center would influence this high risk age group to reduce their risk factors.

## Methods

A 4 hour class curriculum was established. We partnered with district magistrates (DMJ) and police officers in our region to establish referral partnerships. Teens (ages 16-19) who have committed a traffic offense were referred to the program from the DMJ. Drivers were deemed high risk by actions such as underage drinking, or traffic offenses (see Chart 1). During the class, teens were presented with information via participative lecture, video, social media sites, demonstration, and direct observation inside a trauma center. Education targeted motor vehicle crash dynamics, high-risk behaviors with safer alternative choices, and injuries/disabilities that may occur following a crash. They met a family who has been through a traumatic event. Participants completed a pre-class survey of driving behaviors and post-class test/questionnaire. This self-reported data was collected and summarized.

Chart 1

Driving Offense, reason for referral	N
Under Age Drinking	41
Speeding	80
Traffic Violation	39
Careless Driving	23
Non-specified or self-referral	22

## Results

Between 2007-2011, 205 teens completed the Penn State Teen Driver Education Class. Ages ranged from 16-20, with the mean age of 17. 135 (67%) were male, and 70 (34%) were female. Pre-class surveys revealed the incidence of risk factors for this group. 38 (18%) reported driving with 3 or more passengers in the vehicle. 36% reported that they are usually out as late as 12MN or 1AM. While most reported using seat belts for every ride (74%), 6 (3%) reported never using a seat belt, and 29(14%) never ask passengers to buckle-up. Only 16% reported never using a cell phone while driving, and 4% reported using a cell phone 'every time' while driving. 72% of participants speed through yellow lights 'sometimes', and 9% reported performing this action 'every time'. Most participants (78%) reported speeding 'sometimes', while 9% reported speeding 'every time' while driving. 14% of participants admitted to driving after consuming alcohol/drugs, and 32% admitted to being a passenger with a driver who has consumed (See Chart Series 3).

Post-class surveys revealed that most (82%) planned to change their driving behaviors as a result of attending this class. 3 participants stated plan to not change any behaviors. Most commonly, participants reported plan to increase seat belt usage, decrease speeding, and decrease phone usage while driving as a result of attending the class (see Chart 2). They also noted that the class increased their over-all awareness of how driving behaviors influence the incidence of injury -related crashes.

Chart 2: Post-Class Survey Results

Behavior Change as a Result of Attending This Class:	N
Increase seat belt use	15
Stop Speeding	11
Stay off my phone	8
Increased focus/attention while driving	7
Increased awareness of hazards	6
Limit distractions	3
Limit number of passengers	1
Increase following distance	1
Stop at yellow lights and stop signs	1

Chart Series 3: Driving Behavior Risk Assessment:

Age of Participants (years)	N
16	9
17	94
18	58
19	23
20	12

Passengers in the car	N
1 or 2	167
3	31
4+	7

Out as Late as:	N
11 PM	52
12 MN	33
1 AM	41
None of the above	34

	I use seat belt	Passengers wear seat belt
Every time	152	108
Sometimes	47	65
Never	6	29

	Speed through Yellow	Speed
Every time	18	20
Sometimes	148	160
Never	39	25

	I have driven after consuming	Been passenger after driver consumed
Yes	29	66
No	175	139

## Conclusions

Immediately following 1 four-hour educational session, participants accurately report risky driving behaviors and alternative choices to avoid crashes/injury. While most participants report that they will change their driving behaviors, only a small group list a specific implementation plan to reduce their risks. Meeting someone who has experienced trauma first-hand was cited as having the biggest impact on future decisions. The duration of lasting effect is unknown. We are currently exploring alternative methods to measure duration of impact. For this group of high-risk teenagers, providing a focused educational session after they have experienced a traffic violation appears to be an effective method for impacting driving behaviors.

## References

Penn State Hershey Trauma Registry, 2002-2006.  
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