



## Unsafe Driving Behaviors by Public High School Students in Oklahoma

Youth Risk Behavior Survey, 2003 to 2015

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### Introduction

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Motor vehicle crashes (MVCs) are the leading cause of death for teenagers both nationally and in Oklahoma; from 2006 to 2015, 597 Oklahoma youths aged 16 to 19 years lost their lives in MVCs.<sup>1</sup> Each year since 2005, the number of teens involved in crashes in Oklahoma has decreased due in part to the implementation of the Oklahoma Graduated Driver Licensing (GDL) program.<sup>2</sup> Despite the consistent improvement, Oklahoma still ranks in the top 10 states with the highest teen MVC fatality rates. The Oklahoma Youth Risk Behavior Survey (YRBS) provides a glimpse at some of the behaviors most commonly associated with teen crash injuries and fatalities, including impaired driving, distracted driving, and failure to use a seat belt. The purpose of this study was to assess seat belt use and other unsafe driving behaviors by demographic characteristics among public high school students in Oklahoma and to examine these behaviors over time.

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### Methods

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The YRBS is a statewide, randomized survey conducted biennially on odd-numbered years. The 2015 sample was selected using a two-stage sampling design. Schools were first selected for participation based on probability proportional to size (school enrollment in grades 9 through 12). Classes were then selected from each school using systematic equal probability sampling with a random start. For the 2015 YRBS, 1,611 questionnaires were completed in 41 public high schools representing an overall response rate of 69%. The sample was weighted and is representative of Oklahoma public high school students in grades 9 through 12 based on the demographic distribution of the enrolled student population provided by the Oklahoma State Department of Education. A detailed explanation of YRBS methodology has been well documented elsewhere.<sup>3</sup>

SAS 9.4 was used to perform analyses.<sup>4</sup> SAS *PROC SURVEYFREQ* was used to generate descriptive

statistics and to perform bivariate analyses. Variables were examined using percentages and 95% confidence intervals (CI). The chi-square test was used to test for differences in proportions. Variables were considered statistically significant at  $p < 0.05$ . Trend data were analyzed for years 2003 to 2015. The questions that assessed the prevalence of driving while drinking and texting while driving were added to the 2013 and 2015 questionnaires.

Four questions were examined in this analysis. 1.) *How often do you wear a seat belt when riding in a car driven by someone else?* Response options were never, rarely, sometimes, most of the time, and always. 2.) *During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?* Response options were 0 times, 1 time, 2 or 3 times, 4 or 5 times, and 6 or more times. 3.) *During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?* Response options were I did not drive a car or other vehicle during the past 30 days, 0 times, 1 time, 2 or 3 times, 4 or 5 times, and 6 or more times. 4.) *During the past 30 days, on how many days did you text or e-mail while driving a car or other vehicle?* Response options were I did not drive a car or other vehicle during the past 30 days, 0 days, 1 or 2 days, 3 to 5 days, 6 to 9 days, 10 to 19 days, 20 to 29 days, and all 30 days. For the first question the responses were examined both unchanged and dichotomously with rarely or never being combined as one

response and sometimes, most of the time, and always being combined as one response. For the other three questions, the responses were dichotomized as yes if the student engaged in the activity one or more times or on one or more days and no if the student did not.

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## Results

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One in seventeen students (5.7%) rarely or never wore a seat belt when riding in a vehicle being driven by someone else and nearly one in five students (17.4%) reported riding in a vehicle being driven by someone who had been drinking alcohol (Table 1). Less than one-third of students (29%) did not drive a vehicle during the 30 days before the survey. Among students who drove a vehicle during the 30 days before the survey, 6.4% drove after they had been drinking alcohol and nearly half (44.2%) texted or emailed while driving.

When analyzing seat belt use and unsafe driving behaviors by demographic characteristics, significant differences were observed. Males were significantly more likely than females to rarely or never wear a seat belt ( $p = 0.036$ ), to have ridden with a driver who had been drinking ( $p = 0.019$ ), and to have driven after drinking ( $p = 0.004$ ). No differences were observed by gender for texting or emailing while driving ( $p = 0.605$ ). Differences were observed by grade for drinking while driving ( $p = 0.021$ ) and texting or emailing while driving ( $p < .001$ ). Differences were observed by

**Table 1. Unsafe Driving Behaviors by Demographic Characteristics: Oklahoma YRBS 2015**

	Rarely or never wore seat belt		Rode with drinking driver <sup>1</sup>		Drove while drinking <sup>1</sup>		Texted or emailed while driving <sup>1</sup>	
	% <sup>2</sup>	p value	%	p value	Yes	p value	%	p value
<b>Gender</b>								
Female	4.4	0.036	14.7	0.019	4.0	0.004	43.0	0.605
Male	6.9		20.4		9.0		45.0	
<b>Grade</b>								
9th	5.0	0.674	16.1	0.859	3.3	0.021	16.3	<.001
10th	4.7		18.1		3.3		27.7	
11th	6.8		16.3		7.2		50.7	
12th	5.9		18.8		9.4		69.3	
<b>Race/Ethnicity</b>								
NH Black	4.5	0.021	20.1	0.059	5.2	0.047	47.4	<.001
Hispanic	6.4		18.7		9.2		31.9	
NH Native American	10.4		24.7		6.4		29.0	
NH Multiple	5.5		19.3		15.3		36.4	
NH White	4.3		14.5		5.0		52.5	
<b>Total</b>	<b>5.7</b>		<b>17.3</b>		<b>6.4</b>		<b>44.2</b>	

1 During the 30 days before the survey

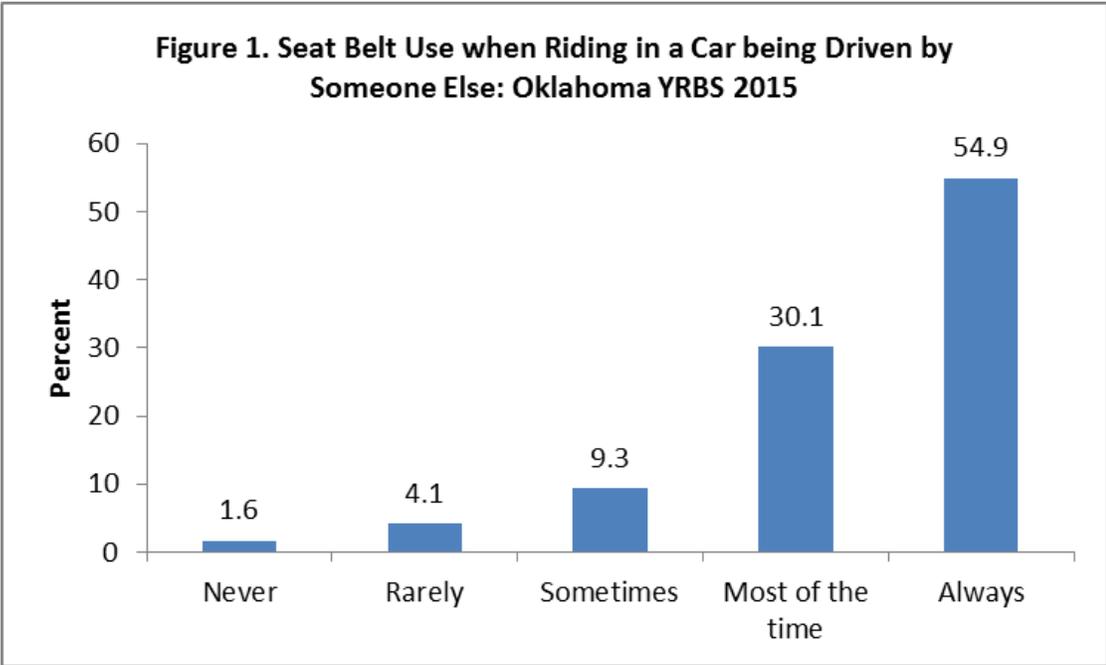
2 Weighted percent representative of all public school 9-12 graders

NH= Non-Hispanic

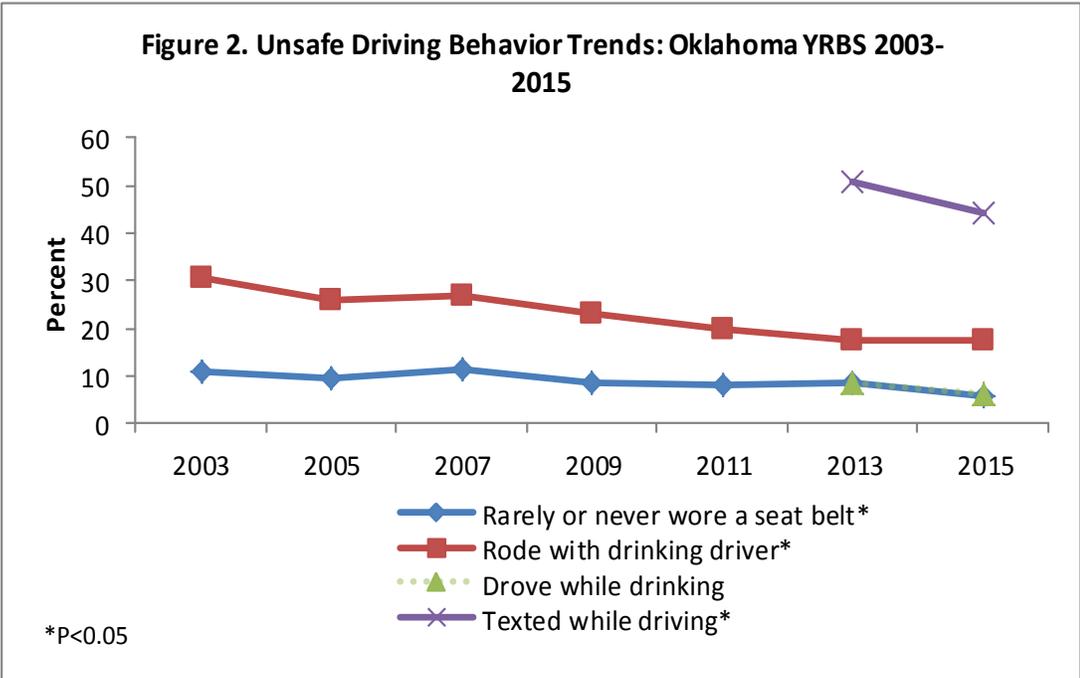
Data for Asian/Pacific Islanders are not shown due to statistical imprecision

race/ ethnicity for rarely or never wearing a seat belt when riding with someone else, drinking while driving, and texting or emailing while driving. When riding in a vehicle being driven by someone else, just over half of students (54.9%) always wore a seat belt; 30.1% of students wore a seat belt most of the time; 9.3% wore a seat belt sometimes; 4.1% rarely wore a seat belt; and 1.6% never wore a seat belt (Figure 1). Differences were observed by gender as males were more likely than females to sometimes use a seat belt at 11.9% and 6.8%, respectively. No differences were observed by grade or race/ ethnicity.

Seat belt use and unsafe driving behaviors among high school students in Oklahoma have improved over time (Figure 2). Rarely or never wearing a seat belt decreased significantly from 11.1% in 2003 to 5.7% in 2015 ( $p<.05$ ). Riding in a vehicle with a driver who had been drinking decreased significantly from 30.6% in 2003 to 17.4% in 2015 ( $p<.05$ ). Texting or emailing while driving decreased significantly from 50.7% in 2013 to 44.2% in 2015 ( $p<.05$ ). No significant difference was observed from 2013 to 2015 for driving after drinking alcohol. Differences were observed by gender as males experienced significant decreases for rarely or never wearing a seat belt,



down from 16.3% in 2003 to 6.9% in 2015 and for riding with a driver who had been drinking, down from 32.7% in 2003 to 20.4% in 2015. Females experienced significant decreases for riding with a driver who had been drinking, down from 28.3% in 2003 to 14.7% in 2015 and for texting while driving, down from 51.4% in 2013 to 43.0% in 2015.



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## Discussion

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Since 2003, there was a 43% decrease in the proportion of Oklahoma teens who reported riding with a driver who had been drinking. Oklahoma's strict alcohol laws are likely the key contributor to the decrease in teens riding with drivers who had been drinking. These laws include the zero tolerance law, which prohibits teens from driving with any traceable amount of alcohol in their system and the social host law, which prohibits the provision of alcohol or a location to consume alcohol for teens. Consistent enforcement of these laws along with targeted alcohol and drug education may continue to decrease the prevalence of Oklahoma teens driving or riding with someone under the influence. The proportion of Oklahoma teens that reported never or rarely using a seat belt decreased by nearly 50% from 2003 to 2015. Oklahoma has a primary seat belt law that requires drivers and front seat passengers to be restrained, but it has been criticized as weak because it does not require rear seat passengers to be restrained and carries a low fine in comparison with other states. It's quite likely that the Oklahoma GDL program has been a major factor in increasing teen seat belt use. Teen drivers who are in the GDL program, possessing a learner's permit or intermediate license, must wait an additional six months to move to the next stage of the program if they get any type of traffic violation, including a seat belt violation. Once teen drivers advance to their unrestricted license, the GDL program is no longer a factor in their

decision to use a seat belt. Raising the fine and expanding the seat belt requirement to cover backseat passengers could further increase seat belt use across the state for all age groups. Until such time that the law is strengthened, consistent enforcement of the existing law and targeted education may encourage greater seat belt use. Of the dangerous driving behaviors assessed in the survey, texting while driving was, by far, the most prevalent. Despite the lack of historical data, there was a slight decrease in the percentage of teen girls who reported texting while driving. The prevalence of texting and emailing while driving may be attributable to the absence of a law prohibiting texting and driving for drivers in possession of an unrestricted license at the time that the survey was administered. Oklahoma GDL laws only prohibit teens in possession of a learner's permit or an intermediate license from operating an electronic device while driving. High school juniors and seniors, who are most likely to possess an unrestricted driver's license, reported texting and driving twice as much as freshmen and sophomores. Effective November 1, 2015, the Trooper Nicholas Dees and Trooper Keith Burch Act of 2015 prohibits all Oklahoma drivers from composing, sending, or reading text messages on any type of hand-held electronic device while operating a motor vehicle. Strict enforcement of GDL laws and the Trooper Nicholas Dees and Keith Burch Act along with targeted educational efforts should lead to a reduction in texting and driving in Oklahoma.

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## Recommendations

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- Decreasing the rate of teen driver crashes in Oklahoma involves not only law enforcement, but also parent and community involvement. Children observe and learn driving behaviors from their parents, so it is important that parents model safe driving behaviors for their children.
- Parents and teens should have conversations about impaired driving, distracted driving, and the importance of using a seat belt. The Centers for Disease Control and Prevention recommends parents and teens develop a safe driving contract that outlines what is expected of teens when they drive and what the consequences are for breaching the contract.
- Schools and community organizations can also help reduce the rate of teen driver crashes. Student-led safety campaigns against distracted driving and impaired driving are popular in high schools and have been proven to be effective, especially when led by strong, established organizations within the schools.
- These campaigns often affect not only students, but the community as well. Businesses and organizations in the community partner with schools in these campaigns by providing financial support and assistance in spreading the safety message. If students see the community take driving safety seriously, they are more likely to do so as well.

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## References

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