



Priority Level One

Washington State 2009-2011	Fatalities		Serious Injuries	
	# of People	% of Total	# of People	% of Total
Priority Level One				
Impaired Driver Involved	704	50.1%	1,519	21.0%
Run-Off-the-Road	615	43.7%	2,156	29.7%
Speeding Involved	555	39.5%	2,126	29.3%
Young Driver 16-25 Involved	487	34.6%	2,763	38.0%
Distracted Driver Involved	426	30.3%	868	11.9%
Intersection Related	290	20.6%	2,474	34.1%
Traffic Data Systems	**	**	**	**
Total*	1,406		7,247	

* "Total" is for all fatalities and serious injuries in Levels One, Two and Three combined. More than one factor is commonly involved in fatal and serious injury collisions. Therefore, each fatality and serious injury in "Total" may be represented multiple times in the Level tables. For the Target Zero Priorities Chart with all three priority levels, see page 9.



Impaired Driver Involved

Executive Summary

Impaired drivers were a factor in 50% of all traffic deaths (704 of 1,406) and 21% of all serious injuries (1,519 of 7,264) between 2009 and 2011. Drivers in fatal crashes were as likely to be impaired by drugs as by alcohol, with almost 25% impaired by both. Fortunately, Washington is experiencing declines in impaired driving. In 2009-2011, impaired driver involved deaths and serious injuries both

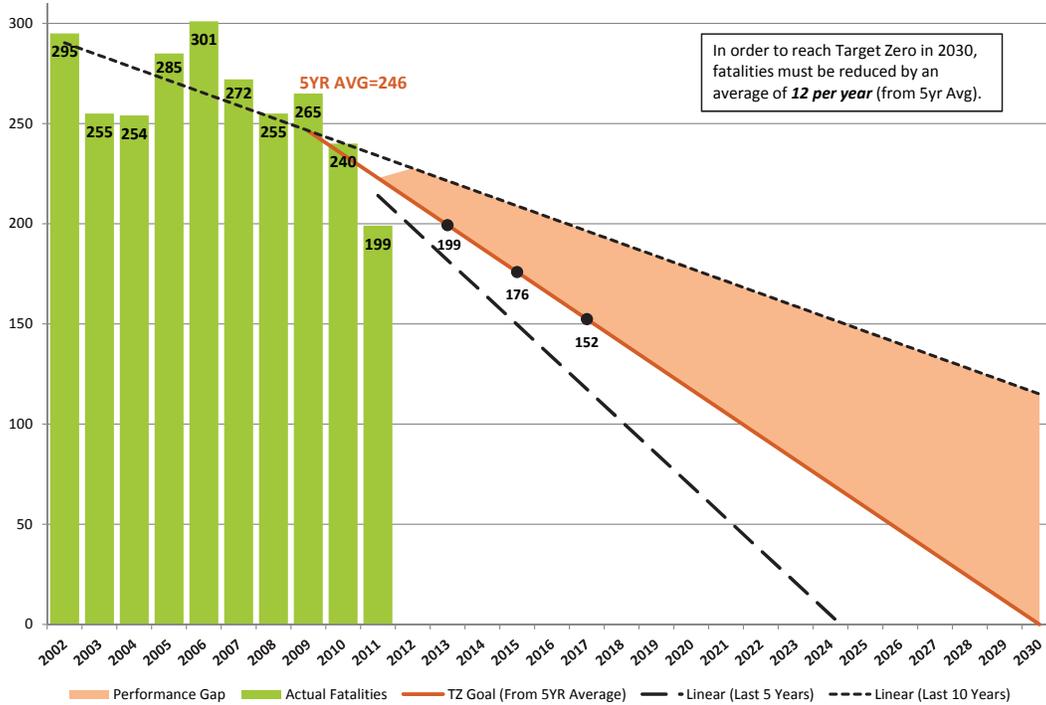
decreased by 15% when compared to 2006-2008. Washington's system-wide approach to addressing impaired driving has led to support for prevention initiatives, comprehensive ignition interlock laws, better law enforcement and prosecutor training, more Driving Under the Influence (DUI) courts, and innovative, targeted, full time DUI enforcement.



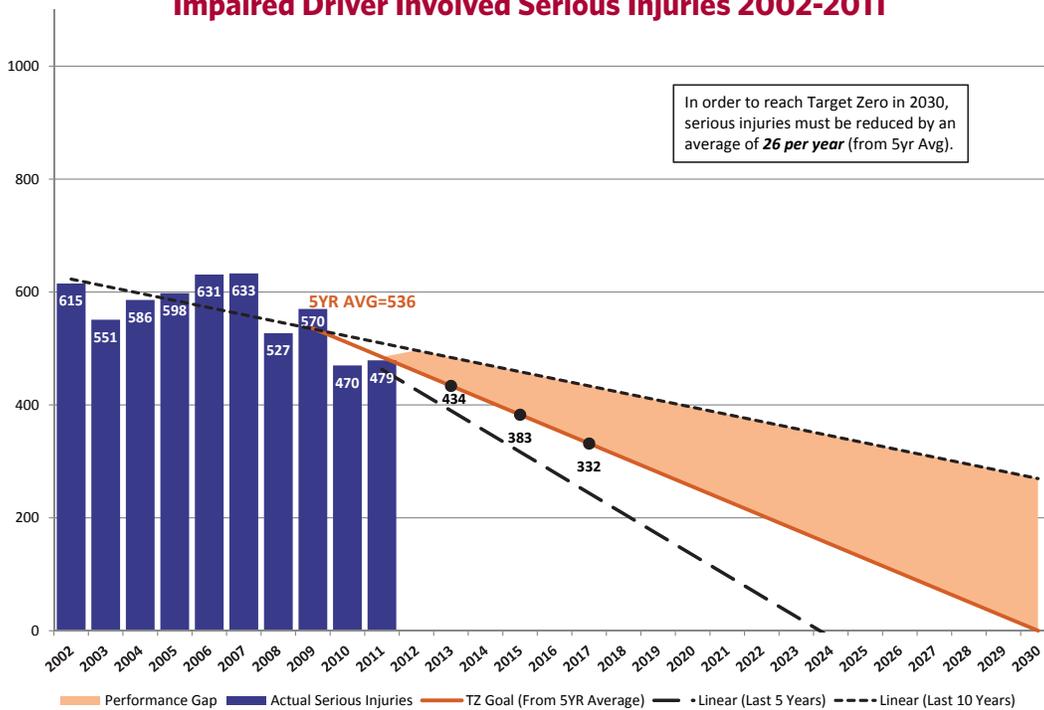
Washington Governor Jay Inslee signing the 2013 DUI Omnibus bill (ESSB 5912) into law in Tacoma on July 18, 2013.

Fifty percent of all traffic deaths in the last three years involved an alcohol or drug impaired driver, the most common factor in roadway fatalities.

Impaired Driver Involved Fatalities 2002-2011



Impaired Driver Involved Serious Injuries 2002-2011



Background

Washington has been combating impaired driving for decades and has made significant progress. While deaths and serious injuries from impaired driving both declined by 15% compared with 2006-2008, impaired driving continues to be the main factor in fatal collisions in Washington.

Much of the decline can be attributed to aggressive campaigns to change the public perception of the acceptability and consequences of drinking and driving. These have been coupled with tougher laws, from the 1968 voter-passed implied consent law to the 1999 law lowering blood alcohol concentration (BAC) per se limit to 0.08.

The state has imposed ignition interlock requirements on all DUI offenders and applied tougher sanctions for repeat and high BAC offenders. This includes the 2007 felony DUI law that applies to those offenders with four prior DUI convictions within 10 years. Strict penalties are also imposed for drivers under age 21 who drink and drive as part of the “Zero Tolerance” statute.

Despite these intensive efforts, impaired driving remains a challenging issue for both Washington and for the nation.

Current Washington law has a 0.08 BAC level at which drivers in Washington are guilty per se of the crime of DUI. However, a rigorous analysis by Peck, et. al. (2009) found that drivers ages 21 and above with a BAC of 0.07 are 39% more likely to be involved in a traffic crash than drivers with a BAC of 0.00. Furthermore, drivers under the age of 21 (who are not legally allowed to drink at all) with a BAC of 0.07 are five times more likely to crash than young drivers with a BAC of 0.00. Drivers at any BAC level, even those below 0.08 can be arrested for DUI if alcohol is impairing their ability to drive.

Recently, the National Traffic Safety Board has recommended that the per se BAC limit be lowered to 0.05 because most drivers begin to have difficulties with depth perception and other visual functions at that level. They believe if all 50 states adopted this standard, 1,000 lives could be saved nationwide annually.

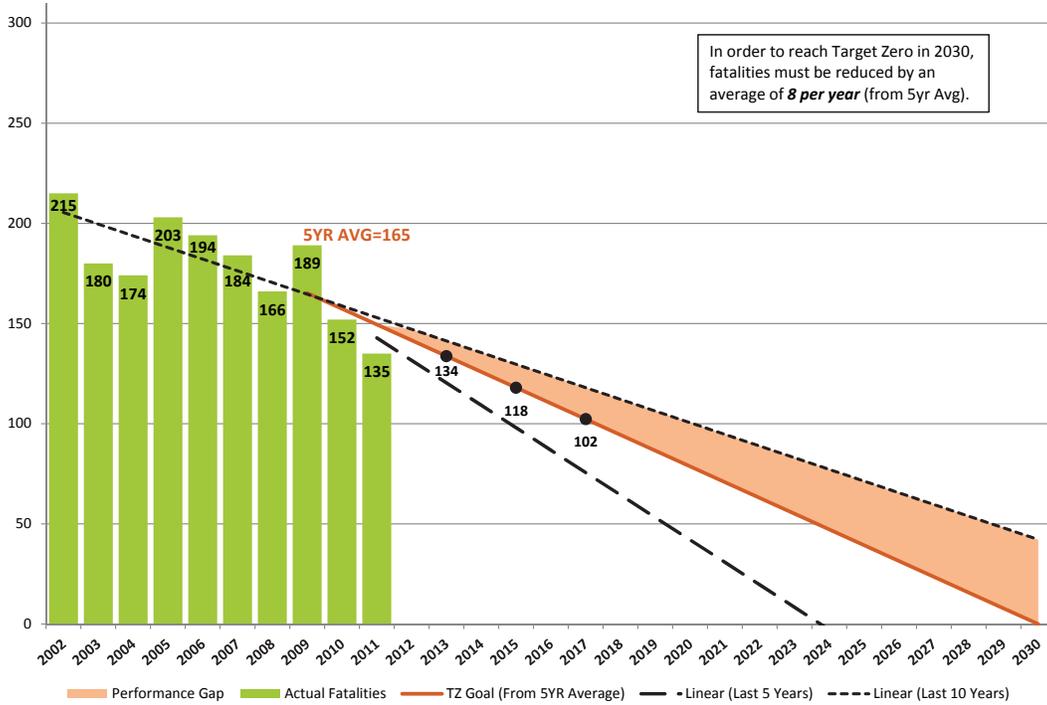
The impacts of both Initiative 1183 (privatizing sales of hard liquor in Washington) and Initiative 502 (legalizing the sale and distribution of marijuana in Washington) have presented us with new challenges. The number of stores with hard liquor licenses has gone from 328 to 1,419, and the number of hours during which liquor can be purchased has nearly doubled – from 78 hours per week to 140, according to the Washington State Division of Behavioral Health and Recovery. Marijuana will become more easily available as well.

Many other states are watching what the impacts of these initiatives will be. We need to formulate new strategies and policies to address these changes which have the potential to slow our progress toward zero traffic deaths and serious injuries by 2030.

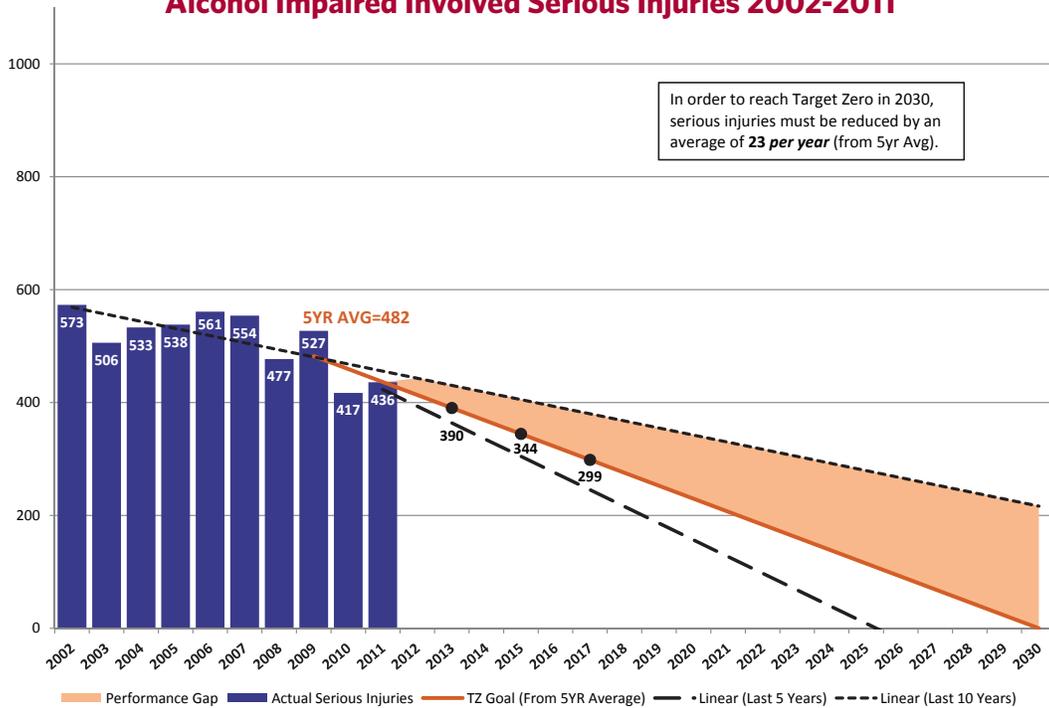
If Washington is going to reach the goal of zero impaired driving fatalities and serious injuries, we must continue past successful endeavors while also pursuing new approaches, proven strategies and best practices.



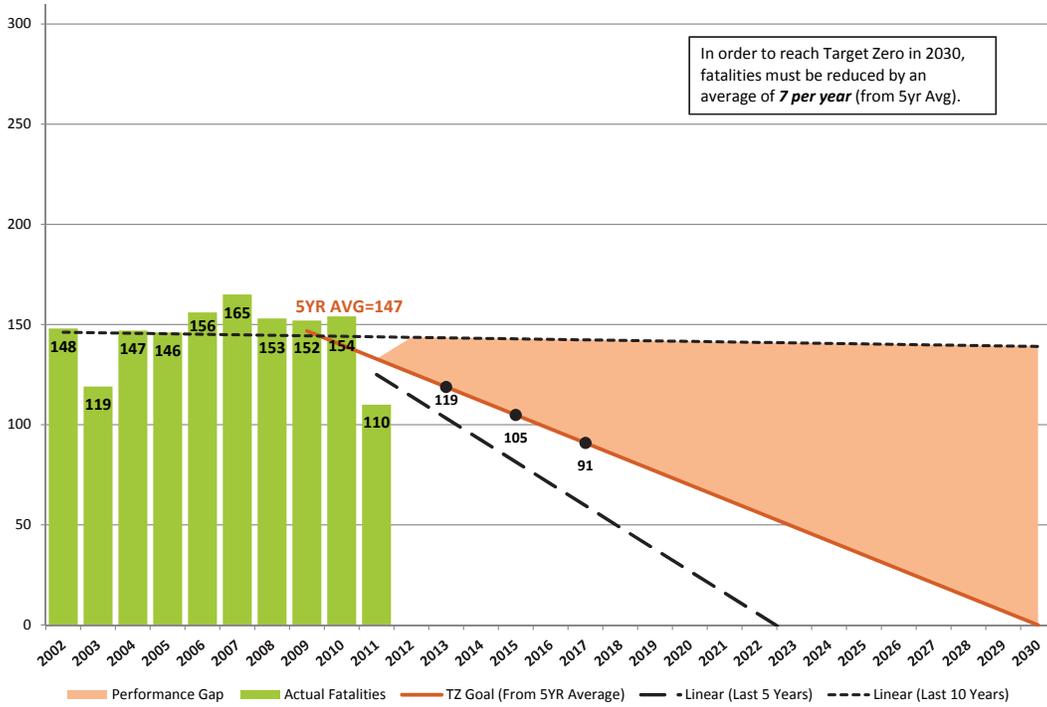
Alcohol Impaired Involved Fatalities 2002-2011



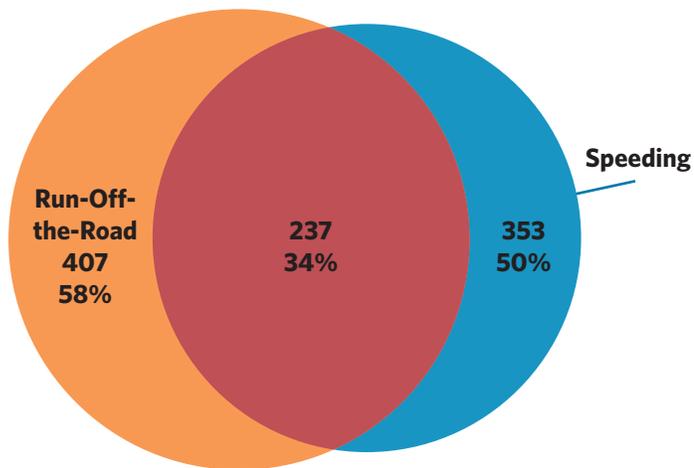
Alcohol Impaired Involved Serious Injuries 2002-2011



Drug Impaired Involved Fatalities 2002-2011



Impaired Driver Involved Fatalities Total = 704



Of the 704 impaired driver involved fatalities 2009-2011, 58% also involved run-off-the-road and 50% involved speeding. Combined, 34% of these fatalities involved both run-off-the-road and speeding.

Contributing Circumstances and Factors

Age and Gender

- Just over half of people killed and seriously injured in impairment-related crashes were ages 16-34
- Just over half (53%) of impaired drivers in fatal crashes were ages 16-34
- Four out of five impaired drivers in fatal crashes were male

Location

- Sixty-one percent of fatalities occurred on rural roads
- Five counties in Washington account for over 50% of impaired driving fatalities: King, Pierce, Snohomish, Yakima, and Spokane

Time, Day, Month

- Nearly 60% of deaths occurred at nighttime (7 p.m. - 4:59 a.m.)
- Over half of fatalities occurred on the weekend (between 7 p.m. Friday and 4:59 a.m. Monday)
- The summer months of June through September account for 42% of impairment related deaths
- The most impaired driving involved deaths occurred in August (13%) and the fewest in April (6%)

Other

- Sixty-three percent of those killed died in single-vehicle crashes
- Forty-four percent of those impaired were the sole occupants in their vehicles
- Twenty-six percent of impaired drivers were also distracted
- Motorcyclists are the only person group in which drug impairment, involved in 29% of fatalities, exceeds alcohol impairment
- Impaired drivers are 38% more likely to disobey traffic signs, signals, officers or laws



Programs and Successes

Integrated Systems Approach

Impaired driving is a societal issue that pushes us beyond traditional traffic safety partnerships. To that end, the Washington Traffic Safety Commission (WTSC) chairs the Washington Impaired Driving Advisory Council (WIDAC). This council consists of representatives from law enforcement, health, injury prevention, treatment, prosecution, judiciary, toxicology, training, private business, advocacy, community task forces, probation, corrections, Tribal nations, and liquor control. The council seeks to reduce impaired driving statewide through coordinated planning, training, programs and evaluation.

Target Zero Teams

A new program, Target Zero Teams (TZZT) placed full-time Washington State Patrol (WSP) DUI squads in King, Pierce, and Snohomish Counties. The WSP teams were joined by local law enforcement officers on the weekends or other high DUI times. These multi-jurisdictional squads focused their efforts on those locations with the highest concentrations of DUI collisions. During the first 24 months of this project:

- TZZT members contacted more than 34,000 motorists and arrested 6,693 DUI offenders
- TZZT arrests for DUI and tickets for speeding and seat belt violations have resulted in over \$14 million in fines and fees being levied
- Preliminary evaluation of the project showed that alcohol and drug-impaired fatalities decreased by 34.4% in TZZT counties during the first 10 months of the project (compared to the five-year average for the same

10 month period), whereas the control counties (Clark and Spokane) experienced a 28.4% increase in the same period (NHTSA, Nov. 2012).

Based on the Federal Highway Administration's fatality cost estimate, this project showed a 115:1 return on investment for the project funds. Following on these successes, the project has been expanded to include Yakima and Spokane Counties.

High Visibility DUI Enforcement Programs

WTSC funds quarterly statewide DUI Patrols called “Drive Sober or Get Pulled Over.” Over 150 law enforcement agencies participate in these campaigns. Paid media messages are purchased to inform the public of the increased enforcement. Information campaigns in advance, paired with high visibility emphasis enforcement patrols, and follow-up reporting of the results, have proven to be an effective combination as documented in *Countermeasures That Work*.

Law Enforcement Training in Alcohol and Drug Detection

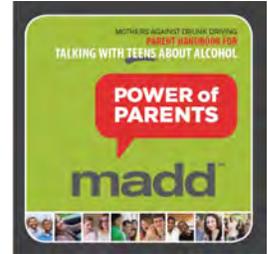
The Drug Evaluation and Classification Program, established in February 1996, trains law enforcement officers to become Drug Recognition Experts (DREs). Officers complete a rigorous training course and certification process. This enables them to recognize the symptoms of intoxication for seven different categories of drugs using a 12-step standardized process to identify drug impairment.

The WSP provides DRE training to both WSP troopers, as well as officers from local law enforcement agencies. Since the program’s inception, the number of trained DREs has risen from 16 to over 220, representing 73 law enforcement agencies. The Statewide Standard Field Sobriety Test (SFST) Coordinator Program provides comprehensive, consistent, and timely impaired driving training for all law enforcement agencies statewide.



Reducing Excessive Drinking and Underage Drinking

The Liquor Control Board’s Enforcement and Education Division identifies establishments with the greatest number of reported DUIs and focuses resources on these establishments through a program called “Locations of Strategic Interest.”



Parental influence is an important factor in helping keep children from drinking and drug use. WTSC partners with the Liquor Control Board and MADD to educate parents with the “Power of Parents” curriculum. This curriculum, developed by MADD and Pennsylvania State University’s Dr. Robert Turrisi, provides guidance for talking with teens about the dangers of drinking before age 21, and is based on research proven to reduce underage drinking by up to 30%.

Prosecute, Sanction and Treat DUI Offenders

Washington implemented the Traffic Safety Resource Prosecutor Program in August 2009. The program provides training, technical and courtroom assistance, and reference materials to prosecutors and law enforcement officers in an effort to increase the vigorous and consistent prosecution of impaired drivers. WTSC established the Judicial Outreach Liaison program in 2013 to keep judges apprised of new legal and technical issues surrounding DUI cases.

In 2008 the new Ignition Interlock Program was created to monitor ignition interlock providers, installers and the offenders required to have them. The program serves as the statewide expert on ignition interlock devices, conducting manufacturer and installation site audits, addressing offender compliance checks, and providing educational training to law enforcement and the ignition interlock community to ensure the continued effectiveness of ignition interlocks.

There are currently DUI courts in Washington supported by the WTSC. Each of these treatment based courts has its own characteristics, but all use the DUI court principles developed by the National Center for DWI Courts. More information on those principles can be found at dwicourts.org/learn/about-dwi-courts/-guiding-principles.

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
1. Foster leadership to facilitate impaired driving system improvements	1.1 Continue to build partnerships designed to reduce impaired driving. (P, NCHRP)	Leadership/Policy
	1.2 Implement the corridor safety model in high-crash locations where data suggests a high rate of impaired driving. (P, NCHRP)	Leadership/Policy, Education, Engineering, Enforcement
	1.3 Utilize Target Zero Managers and community-based traffic safety taskforces to address impaired driving issues. (R, WTSC)	Leadership/Policy, Education, Engineering, Enforcement
2. Prevent excessive drinking, underage drinking, and impaired driving	2.1 Conduct well-publicized compliance checks of alcohol retailers to reduce sales to underage persons. (R, CTW)	Enforcement
	2.2 Conduct well-publicized enforcement aimed at underage drinking parties. (R, CTW)	Enforcement
	2.3 Encourage parents to talk with their children about the risks of alcohol and other drugs. (R, DBHR)	Education
	2.4 Continue mandatory alcohol server training, and explore mandating training for people who sell alcohol in the retail environment. (U)	Education
	2.5 Support alternative transportation services such as transit (especially at night), designated driver programs, and other alternative ride programs to help eliminate need for impaired individuals to drive. (U)	Leadership/Policy
3. Encourage the enactment of laws when research suggests such laws will result in impaired driving fatality and serious injury reductions	3.1 Encourage laws that will allow the state to utilize sobriety checkpoints. (P, CTW)	Leadership/Policy
	3.2 Explore the implications to Washington for lowering the per se BAC limit from .08 to .05 (R, META)	Leadership/Policy
	3.3 Place limits on plea agreements. (R, CTW)	Leadership/Policy
	3.4 Increase the state excise tax on beer. (R, NCHRP)	Leadership/Policy
	3.5 Encourage laws that use any money collected from DUI fines in excess of \$101 to support impaired driving efforts. (R, GHSA)	Leadership/Policy
	3.6 Establish 24/7 sobriety program. (R, CTW)	Leadership/Policy
	3.7 Require ignition interlock installation as condition of pre-trial release. (U)	Leadership/Policy

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Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
4. Discourage the enactment of laws when research suggests such laws will result in impaired driving fatality and serious injury increases.	4.1 Discourage expansion of access to alcohol, marijuana, and other drugs. (U)	Leadership/Policy
5. Enforce and publicize DUI laws	5.1 Continue statewide, high-visibility saturation enforcement and media campaigns to reduce impaired driving. (R, CTW)	Enforcement, Education, Communication
	5.2 Expand full-time DUI squads targeting areas with high numbers of DUI-related crashes. (R, DDACTS)	Enforcement, Education, Communication
	5.3 Enforce and publicize zero tolerance laws for drivers under age 21. (R, CTW)	Enforcement, Education, Communication
6. Enhance law enforcement training in alcohol and drug detection	6.1 Enhance law enforcement DUI training with Standard Field Sobriety Test (SFST) training and refresher training. (P, NHTSA)	Education
	6.2 Enhance law enforcement DUI training with Advance Roadside Impaired Driving Enforcement (ARIDE) training. (P, NHTSA)	Education
	6.3 Expand the Drug Evaluation, Recognition, and Classification Program. (R, CTW)	Education
7. Encourage consistent and vigorous DUI prosecution	7.1 Support DUI training for prosecutors and law enforcement officers. (R, NHTSA)	Education
	7.2 Provide prosecution of DUIs as part of the Target Zero Teams. (U)	Education
8. Promote evidence-based and promising court sentencing and supervision practices	8.1 Incarcerate offenders who fail to comply with court-ordered alternative sanctions. (P, NCHRP)	Leadership/Policy
	8.2 Establish and support the Judicial Outreach Liaison program. (R, NHTSA)	Education
	8.3 Support and establish DUI Courts. (R, CTW)	Leadership/Policy
	8.4 Establish method for conducting home compliance checks on DUI offenders. (R, CTW)	Leadership/Policy
	8.5 Conduct alcohol/drug assessments on all DUI offenders, and enhance treatment and probation when warranted. (R, CTW)	Leadership/Policy
	8.6 Encourage attendance at DUI Victim's Panels. (U)	Leadership/Policy

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
9. Use licensing sanctions shown to be effective at reducing recidivism and protecting the public	9.1 Suspend driver license administratively upon arrest. (P, CTW)	Leadership/Policy
	9.2 Require ignition interlock as a condition for license reinstatement. (P, NCHRP)	Leadership/Policy
10. Expand the use of Ignition Interlocks	10.1 Monitor ignition interlock manufacturers and installers to ensure a continued viability and validity of program. (P, CTW)	Leadership/Policy
	10.2 Monitor reports from ignition interlock manufacturers on alcohol failures on ignition interlocks and conduct compliance checks. (P, CTW)	Leadership/Policy
	10.3 Investigate ignition interlock circumvention attempts. (P, CTW)	Leadership/Policy
11. Identify, intervene, and refer individuals for appropriate substance abuse treatment	11.1 Continue and expand use of screening, brief intervention and referral to treatment. (P, CTW)	Emergency Medical Services
12. Establish and maintain substance abuse treatment program availability	12.1 Match treatment and rehabilitation to the diagnosis. (P,NIH)	Leadership/Policy
13. Establish programs to facilitate close monitoring of impaired drivers	13.1 Monitor DUI offenders closely. (R, CTW)	Leadership/Policy
14. Provide timely, accurate, integrated, and accessible traffic records data	14.1 Support efforts to simplify and streamline the DUI arrest process including developing an electronic DUI arrest package, utilizing the mobile impaired driving unit and BAC processors for high-visibility campaigns. (R, NHTSA)	Leadership/Policy

P = Proven R = Recommended U = Unknown

CTW = Countermeasures That Work

DBHR = Division of Behavioral Health and Recovery

DDACTS = Data Driven Approaches to Crime and Traffic Safety

GHSA = Governor’s Highway Safety Association

META = Meta Study

NCHRP = National Cooperative Highway Research Program

NHTSA = National Highway Traffic Safety Administration

NIH = National Institute of Health

WTSC = Washington Traffic Safety Commission

Definitions for Impaired Driving

Washington State has focused on impaired driving for many years and as a result, there is a great deal of data on impairment. This gives us many ways of looking at the problem. Here is a short list of impairment terms and their definitions as used in this document:

Impaired Driver Involved

Fatalities: Any driver with a Blood Alcohol Concentration (BAC) of 0.08 or higher or a positive drug result as confirmed by the state Toxicology Laboratory.

Serious Injuries: Any collision in which the investigating officer or Drug Recognition Expert (DRE) indicated that the driver was impaired by drugs or alcohol and recorded in contributing circumstances.

Drug Impaired Driver Involved

Fatalities: Any driver with a positive drug result as confirmed by the state Toxicology Laboratory.

Serious Injuries: *(Due to data limitations, including lack of confirmation by toxicology, drug impaired driver involved serious injuries are not reported.)*

Alcohol Impaired Driver Involved

Fatalities: Any driver with a BAC of 0.08 or higher as confirmed by the state Toxicology Laboratory.

Serious Injuries: Any collision in which the officer or DRE indicated that the driver was impaired by alcohol and recorded in contributing circumstances.

Drinking Driver Involved

Fatalities: Any driver with a BAC of any value except 0 as confirmed by the state Toxicology Laboratory (also includes alcohol impaired drivers).

Serious Injuries: Any collision in which the investigating officer or DRE indicated that the driver was impaired by alcohol and recorded in contributing circumstances or driver sobriety is reported as "Had been drinking."

Terms and Definitions

Driving Under the Influence (legal definition): In Washington State a person is guilty of driving while under the influence – of intoxicating liquor, marijuana, or any drug – if the person drives a vehicle within this state and:

- The person has, within two hours after driving, an alcohol concentration of 0.08 or higher as shown by analysis of the person's breath or blood made under RCW 46.61.506; or
- The person has, within two hours after driving, a THC concentration of 5.00 or higher as shown by analysis of the person's blood made under RCW 46.61.506; or
- The person is under the influence of or affected by intoxicating liquor, marijuana, or any drug; or
- The person is under the combined influence of or affected by intoxicating liquor, marijuana, and any drug.

Drug: Any substance that, when taken into the human body can impair the ability of the person to operate a vehicle safely.

Per se Alcohol and Marijuana Limit: When a person is found to have, within two hours after driving, an alcohol concentration of 0.08 or higher or a THC concentration of 5.00 nanograms per milliliter of blood or higher as shown by an analysis of the person's breath or blood, that person is guilty "per se" of driving under the influence. No further proof is needed.

Tetrahydrocannabinol (THC): The principal psychoactive constituent of the cannabis plant. Marijuana consists of the dried flowers and leaves of cannabis plants often selectively bred to produce high levels of THC and other psychoactive cannabinoids.

Additional Resources

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 7th Edition, Chapter 1 (National Highway Traffic Safety Administration), <http://www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf>

NCHRP Report 500, Volume 16: A Guide for Reducing Alcohol-Related Collisions (National Cooperative Highway Research Program, Transportation Research Board), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v16.pdf

Washington's Target Zero Teams Project: Reduction in Fatalities During Year One (National Highway Traffic Safety Administration), www.nhtsa.gov/staticfiles/nti/pdf/811687.pdf

NCHRP Report 501: Integrated Safety Management Process (National Cooperative Highway Research Program, Transportation Research Board), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_501.pdf

The Guiding Principles of DWI Courts (National Center for DWI Courts), <http://dwicourts.org/learn/about-dwi-courts/-guiding-principles>

Washington State laws (RCWs) relating to impaired drivers:

- RCW 46.61.502 - *Driving under the influence.*
- RCW 46.61.503 - *Driver under twenty-one consuming alcohol or marijuana.*
- RCW 46.61.504 - *Physical control of vehicle under the influence.*



Run-Off-the-Road



Nearly half of all traffic fatalities were run-off-the-road collisions.

Executive Summary

From 2009-2011, nearly half of all fatal collisions (44%), and nearly one-third of all serious injury collisions (30%), involved vehicles leaving the road. Speeding and impairment remain the most frequent contributors in run-off-the-road collisions, even though their numbers are declining. Keeping vehicles on the road, and reducing the impacts when they leave the road, are keys in reducing run-off-the-road fatalities and serious injuries.

Over half (53%) of all fatal and serious injury run-off-the-road collisions (56% of fatal collisions, 52% of serious injury collisions) occurred in horizontal curves. This represented 1,277 of 2,418 run-off-the-road collisions. Addressing driver behavior in curves, where curves represent a small part of the overall roadway system, can be one of the best ways to reduce run-off-the-road collisions.

Background

In 2009-2011, run-off-the-road fatal and serious injury collisions decreased by 14% when compared to 2006-2008 numbers. This decline rate is similar to the overall decline rate for fatal and serious injury collisions. The top contributing factors continue to be speeding and impaired driving, which are also decreasing at a similar rate. To achieve Target Zero for run-off-the-road collisions, there

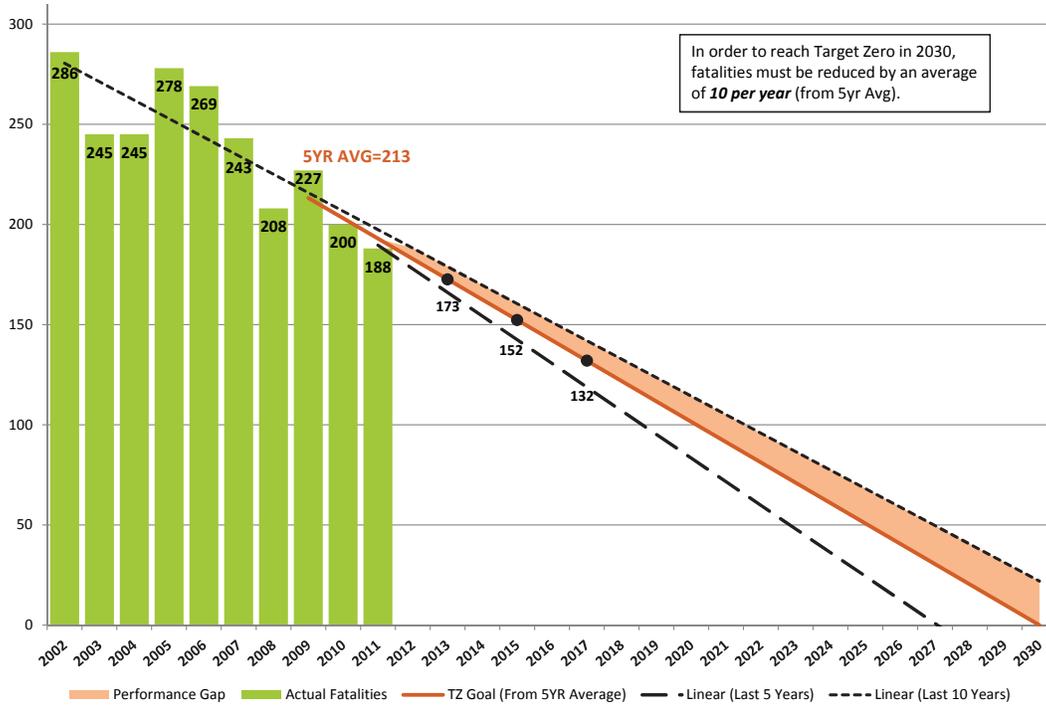
will need to be 10 fewer fatalities and 36 fewer serious injuries each year until 2030.

From 2009-2011, 36% of fatal and serious injury run-off-the-road collisions occurred on state routes. In comparison, 39% occurred on county roads. Annual breakouts of where these collisions are occurring are presented in the graphs on page 41.

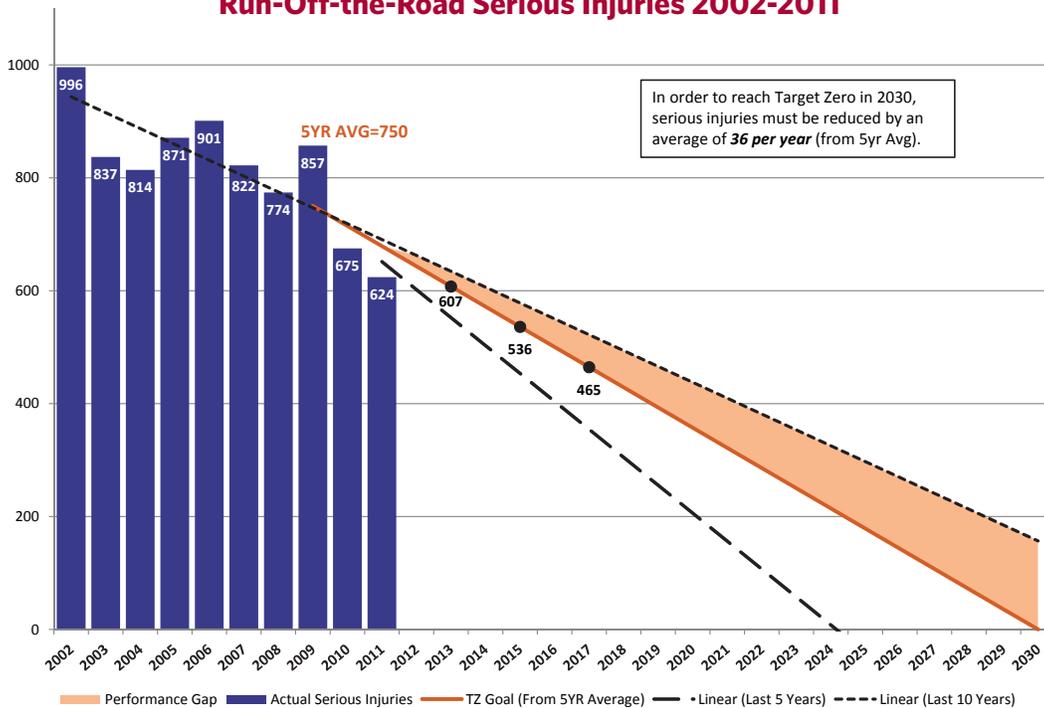
In 2010, there were 7,060 miles of state highways, while county roads accounted for more than five times that amount, with 39,748 miles of road. Comparing these two classes of roadways, state routes carry more traffic volume and had 881 run-off-the-road collisions (257 fatalities; 772 serious injuries). On the other hand, lower volume county roads had 940 collisions (243 fatalities; 812 serious injuries). This is due in part to county roads that include narrower lanes and shoulders, fixed objects closer to the road, and steeper slopes or ditches beside the road.

For all roads, but especially county roads, run-off-the-road collisions are dispersed over a large number of miles. Systematic, low-cost improvements spread over a wide area, in combination with enforcement of impaired driving and speeding, is an efficient approach to reducing run-off-the-road collisions.

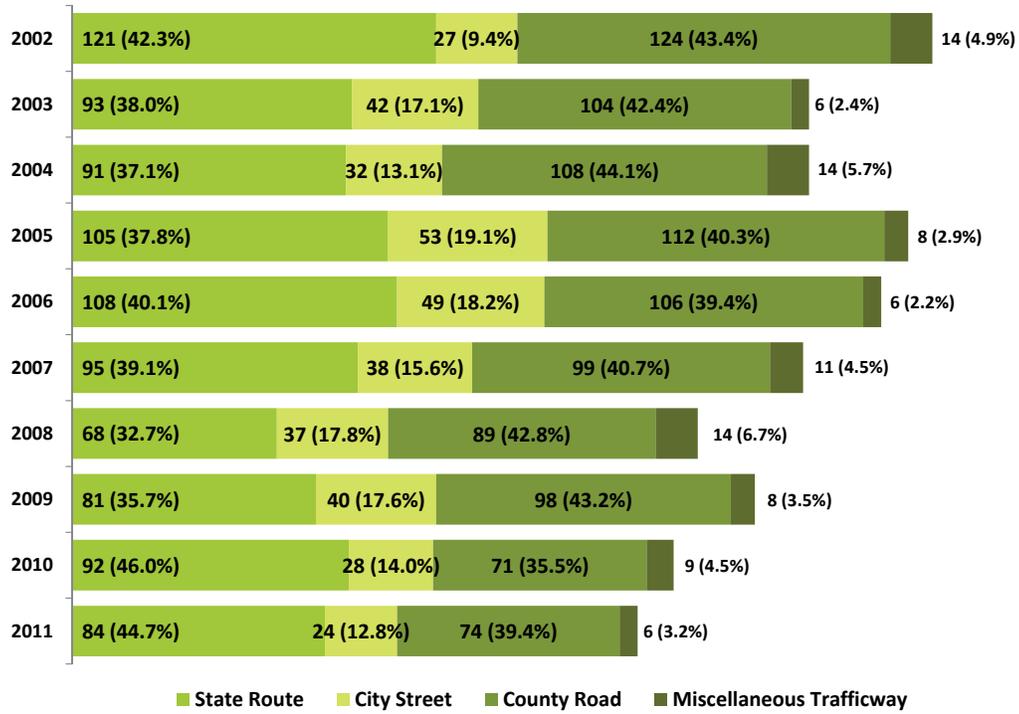
Run-Off-the-Road Fatalities 2002-2011



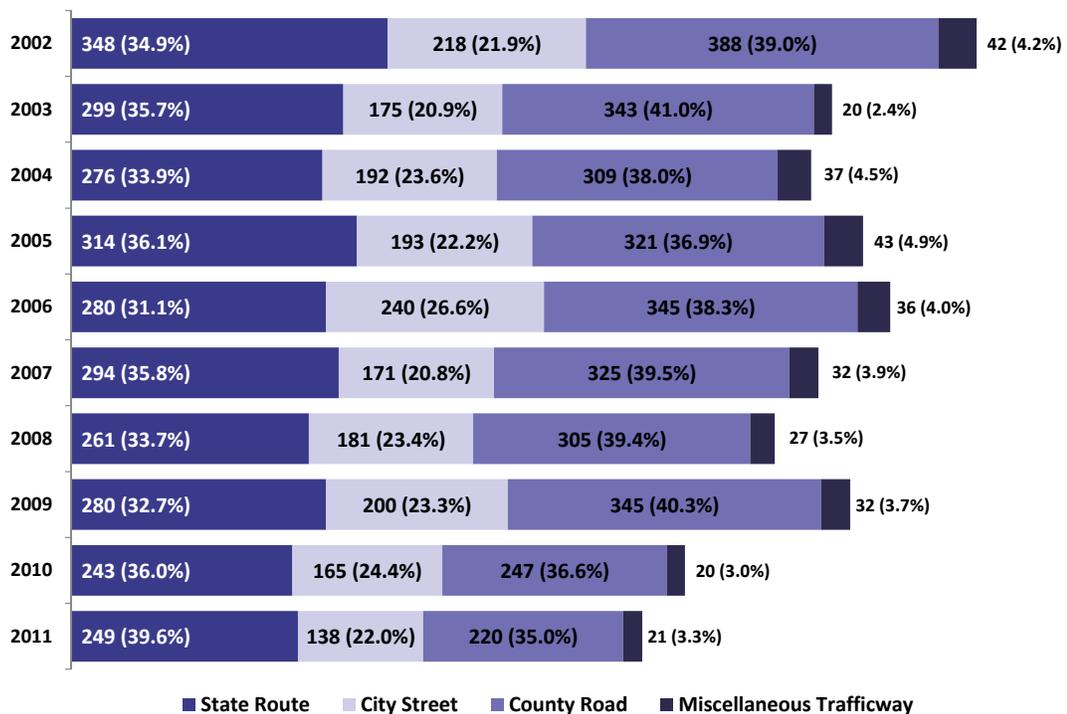
Run-Off-the-Road Serious Injuries 2002-2011



Run-Off-the-Road Fatalities by Jurisdiction 2002-2011



Run-Off-the-Road Serious Injuries by Jurisdiction 2002-2011



Contributing Circumstances and Factors

From 2009-2011, the most common contributing factors in fatal or serious injury run-off-the-road collisions were speeding (48%), impairment (41%), inattention or distraction (18%), crossing the center line (16%) and falling asleep/fatigued (8%). In fatal collisions, all of these factors are present more often.

Speeding was involved in 55% of run-off-the-road fatalities and in 44% of serious injuries. Impairment contributed to 66% of fatalities and 33% of serious injuries. Impairment is underreported in serious injury collisions, compared to fatalities where impairment is confirmed by toxicology. Inattention or distraction contributed to 32% of fatalities and 13% of serious injuries.

Young drivers age 16-25 were involved in over 35% of fatal and serious injury run-off-the-road collisions.

Once a vehicle left the roadway, the most common occurrences in fatal and serious injury collisions were: overturn (18%), hit tree (15%), ran into ditch (8%), hit utility pole (7%), ran over embankment (7%), hit earth bank (6%), hit guardrail (6%), hit fence (5%) and hit parked car (4%).

Over 90% of fatal and serious injury run-off-the-road collisions involve only one vehicle.

Programs and Successes

Keeping Vehicles on the Road

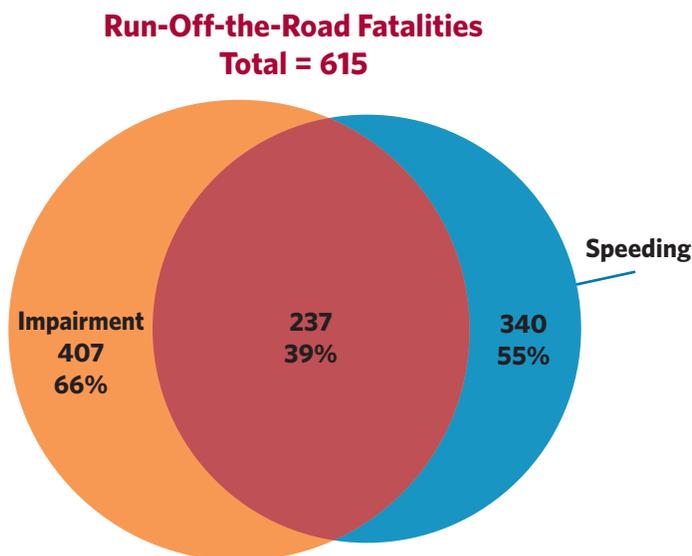
By implementing effective strategies to combat impaired driving, speeding, and distracted driving, Washington hopes to reduce the behaviors causing a vehicle to leave the roadway. Strategies to address these behaviors are listed in the respective chapters. In addition, applying engineering strategies – such as installing rumble strips, installing high friction surface treatments, and improving signing and striping – can reduce the chance a vehicle will leave the roadway.

Minimizing Consequences of Leaving the Road

Although preventing a vehicle from leaving the road in the first place is the best solution, run-off-the-road collisions still occur. The second line of defense for reducing fatalities and serious injuries is minimizing the consequences of leaving the road. By removing or relocating roadside objects, creating more gentle roadside slopes, and improving ditch design, engineers can reduce deaths and serious injuries from a vehicle crashing or overturning. In addition, installing guardrails and other barriers can reduce the severity of impacts.

Future Technology

Vehicle technology improvements also have the potential to help reduce run-off-the-road collisions. For example, some vehicles entering the marketplace have lane departure warning systems, alerting drivers when they're crossing over a road edge line. These types of systems, along with other future technology developments, will assist with keeping drivers on the road.



Of the 615 run-off-the-road fatalities 2009-2011, 66% also involved impairment and 55% involved speeding. Combined, 39% of these fatalities involved both impairment and speeding.

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
1. Reduce the number of vehicles leaving the roadway	1.1 Improve roadway signing and shoulder delineation, especially in curves. (P, NCHRP)	Engineering
	1.2 Improve roadway geometry. (P, NCHRP)	Engineering
	1.3 Increase road surface skid resistance (higher friction factor) using high friction surface treatments. (P, NCHRP)	Engineering
	1.4 Install center and/or edge line rumble strips. (P, WSDOT)	Engineering
	1.5 Install/increase illumination at locations with night time crashes. (R, FHWA)	Engineering
	1.6 Install optical speed markings at curves. (R, LIT)	Engineering
	1.7 Install delineation on fixed objects that cannot be removed from the clear zone. (U)	Engineering
	1.8 Install profiled center and edge lines. (U)	Engineering
	1.9 Install wider edge lines. (U)	Engineering
	1.10 Install dynamic curve warning signs. (U)	Engineering
2. Minimize the consequences of leaving the roadway	2.1 Widen the clear zone. (P, NCHRP)	Engineering
	2.2 Install/maintain roadside safety hardware such as guardrail, cable barrier, concrete barriers, crash cushions, etc. (P, NCHRP)	Engineering
	2.3 Design safer slopes and ditches to prevent rollovers. (P, NCHRP)	Engineering
	2.4 Remove/relocate objects, such as trees and utility poles, in hazardous locations in the clear zone. (P, NCHRP)	Engineering
	2.5 Implement safe urban street designs. (P, NACTO)	Engineering
	2.6 Remove or replace all non-standard guardrail. (R, NCHRP)	Engineering
	2.7 Install safety edge. (R, FHWA)	Engineering
	2.8 Locate and inventory fixed objects inside the clear zone to support development of programs and projects to reduce the severity of run-off-the-road collisions. (R, WSDOT)	Leadership/Policy

P = Proven

R = Recommended

U = Unknown

FHWA = Federal Highway Administration

LIT = Literature Review

NACTO = National Association of City Transportation Officials

NCHRP = National Cooperative Highway Research Program

WSDOT = Washington State Department of Transportation

Additional Resources

Crash Modification Factors Clearinghouse, <http://www.cmfclearinghouse.org/>

Low Cost Local Road Safety Solutions (American Traffic Safety Services Association), <http://safety.fhwa.dot.gov/intersection/resources/fhwasa09027/resources/Low%20Cost%20Local%20Road%20Safety%20Solutions.pdf>

NCHRP Report 500, Volume 3, A Guide for Addressing Collisions with Trees in Hazardous Locations (National Cooperative Highway Research Program, Transportation Research Board), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v3.pdf

NCHRP Report 500, Volume 6, A Guide for Addressing Run-Off-Road Collisions (National Cooperative Highway Research Program, Transportation Research Board), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v6.pdf

NCHRP Report 500, Volume 7, A Guide for Reducing Collisions on Horizontal Curves (National Cooperative Highway Research Program, Transportation Research Board), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v7.pdf

NCHRP Report 500, Volume 8, A Guide for Reducing Collisions Involving Utility Poles (National Cooperative Highway Research Program, Transportation Research Board), http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v8.pdf

Roadway Departure Safety Resources (Federal Highway Administration), http://safety.fhwa.dot.gov/roadway_dept/



Speeding Involved

Executive Summary

Speeding is the third-most common factor contributing in fatal and serious injury collisions. From 2009-2011, speeding was involved in nearly 40% of fatalities and 30% of serious injuries, right behind impaired driving and run-off-the-road. While speeding contributes to a large percentage of collisions, the number of speeding involved crashes keeps going down. Ongoing education of the public about the dangers of speeding, partnered with high visibility patrols to enforce speed limits, have proven to be effective countermeasures.



Speeding was involved in nearly 40% of all traffic fatalities in Washington 2009-2011.

Background

Speeding involves drivers traveling above the posted speed limit or too fast for conditions. The risk of death and injury increases substantially as collision speed increases. As vehicle speed increases, the amount of energy generated increases exponentially as a result. For example, crashing into a wall at 80 mph generates four times as much kinetic energy (the harmful force in a crash) as hitting the same wall at 40 mph (Department for Transport, London, September 2010).

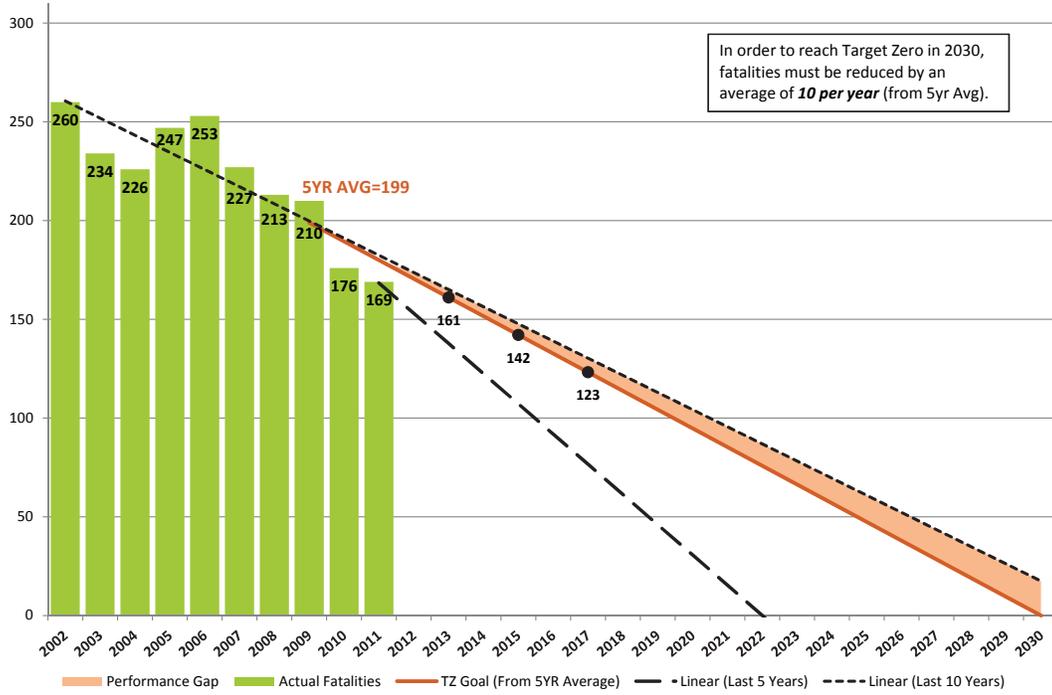
A review of 2009-2011 fatal and serious injury speed related collisions shows the collisions almost equally split on city streets, county roads and state highways. On state highways, most of the collisions are on routes with a 60 mph speed limit. Most speed related fatal and serious injury collisions on city streets and county roads are occurring with posted speed limits of 35 mph.

For pedestrians, the risk of death is nine times higher when struck at 30 mph than at 20 mph. For both older and child pedestrians, this increase in risk is even greater but occurs at lower speeds (just over 20 mph). (see Pedestrians chapter for more information.)

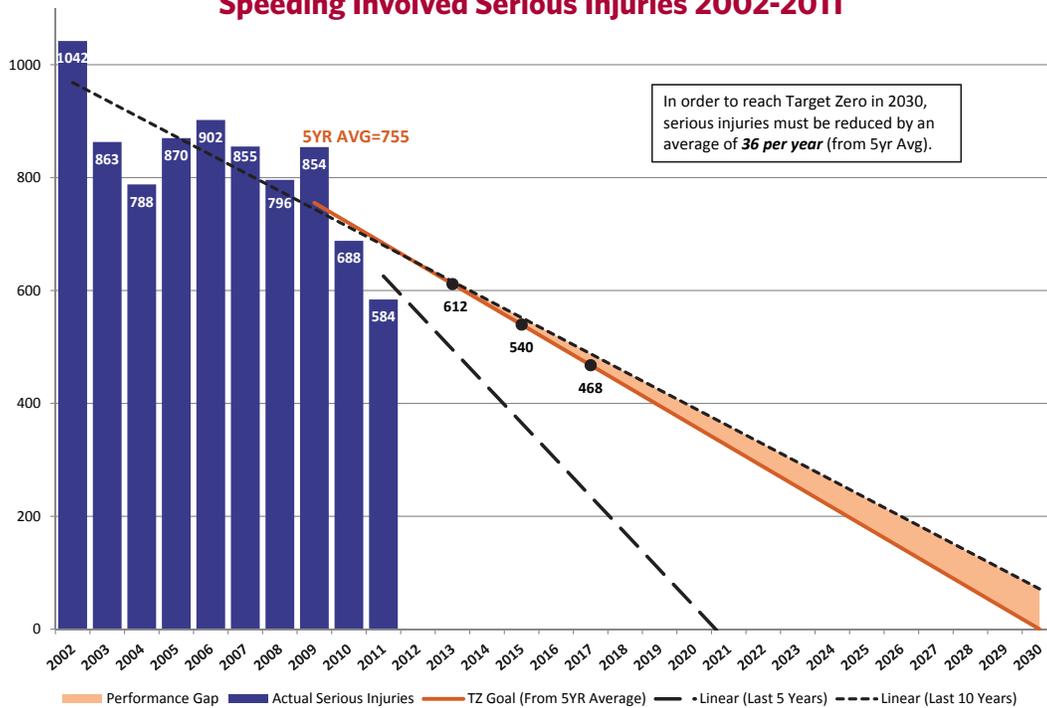
From 2009-2011, speeding-involved fatalities and serious injuries declined slightly faster than overall statewide fatalities and serious injuries. Compared with 2006-2008, speeding-involved fatalities have declined 20% and serious injuries have decreased 17%. Speeding continues to frequently be coupled with impairment and run-off-the-road. In 2009-2011, 64% of speeding involved fatalities also included impairment, and 61% resulted in a run-off-the-road collision.

Although the decline in speeding involved fatalities and serious injuries is promising, much work remains to be done. A statewide advisory council on reducing speeding involved deaths and serious injuries is in the process of being formed. The council is modeled after the successful structure of the Traffic Records Committee (TRC) and the Washington Impaired Driving Advisory Council (WIDAC). This advisory body will meet to examine recent data and research, and also to identify and recommend strategies for reducing these crashes.

Speeding Involved Fatalities 2002-2011



Speeding Involved Serious Injuries 2002-2011



Contributing Circumstances and Factors

While speeding may be the only contributing factor in some fatal and serious injury crashes, it is often combined with other dangerous driving behaviors. These include aggressive driving, impairment by drugs or alcohol, and not wearing a seat belt.

Impairment was involved in 64% of speeding involved fatalities. Sixty-one percent of speeding involved fatalities resulted in run-off-the-road crashes. In 43% of speeding involved fatalities, both impairment and run-off-the-road were factors.

Speeding occurs more often among male drivers, young drivers and motorcyclists. Males accounted for over 78% of speeding-involved fatalities and over 66% of speeding-involved serious injuries. Young drivers (ages 16-25) represented 33% of speeding-involved fatalities and 35% of speeding-involved serious injuries. Over half of all motorcyclist fatalities involved speeding.



There are also trends with respect to when and where speeding involved fatalities and serious injuries occur.

Speeding fatalities are highest when the weather is warmer, on weekends, and on rural roads. More than half of speeding related fatalities 2009-2011 were on rural roads. Nearly one-third of both speeding involved fatalities and serious injuries occurred between June and August. Almost half of fatalities and 33% of serious injuries involving speeding occurred on weekends.

Programs and Successes

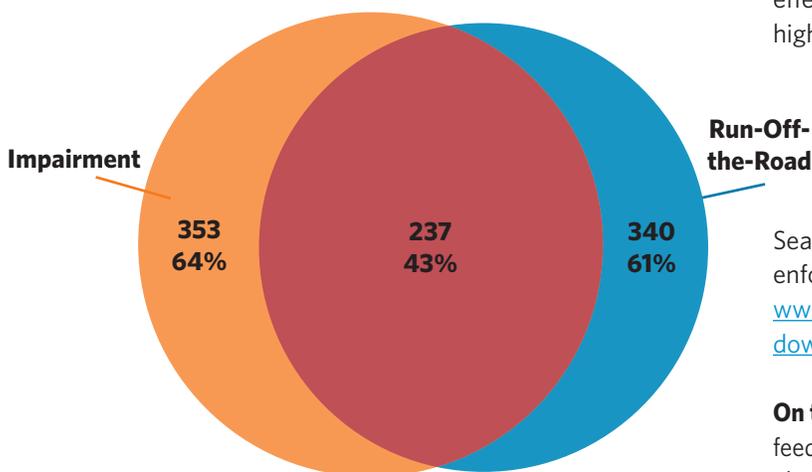
Education, enforcement, and engineering all play a role in getting drivers to slow down.

High Visibility Enforcement Campaigns, such as “Slow Down or Pay Up,” are effective in changing and maintaining safe driving behavior. They increase public awareness about a particular issue, as well as educate about how to reduce unsafe driving behaviors. The education is paired with emphasis enforcement patrols, which deter targeted behaviors by enforcing the moving violations with which they are associated. These emphasis patrols are even more effective when conducted in areas identified as having a high number of speed related collisions.

Automated Speed Enforcement (ASE) cameras, which have been installed in school zones and at some railroad crossings across the state, are another means of enforcement. The cities of Seattle and Tacoma have piloted automated speed enforcement cameras in other areas as well. (<http://www-stage.wtsc.wa.gov/wp-content/uploads/downloads/2013/01/ASEReport123112.pdf>)

On the engineering side, traffic calming techniques and speed feedback signs help reduce speeds. Traffic calming measures physically alter the road or layout to slow traffic. Examples include speed bumps, narrowing roads by expanding sidewalks, and even removing lanes. Speed feedback signs are triggered when drivers exceed the speed limit, sending a visual cue to slow down. These measures have been found most effective in areas with posted speeds of 25-35 mph.

Speeding Involved Fatalities Total = 555



Of the 555 speeding involved fatalities 2009-2011, 64% also involved impairment and 61% involved run-off-the-road. Combined, 43% of these fatalities involved both impairment and run-off-the-road.

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
1. Reduce speeding through enforcement activities	1.1 Increase use of speed enforcement. (P, CTW)	Enforcement
	1.2 Conduct high visibility enforcement efforts at locations where speeding-related crashes are more prevalent. (P, NCHRP)	Enforcement
	1.3 Increase penalties for repeat and excessive speeding offenders. (R, CTW)	Leadership/Policy
	1.4 Ensure law enforcement officers have appropriate equipment for speeding enforcement. (R, WSP)	Enforcement, Leadership/Policy
	1.5 Establish and enforce lower speed limits for commercial vehicles on higher-speed roads. (R, NCHRP)	Engineering, Enforcement
	1.6 Increase use of aerial speed enforcement. (U)	Enforcement
2. Use engineering measures to effectively manage speed	2.1 Set speed limits which account for roadway design, traffic, and environment, including traffic volume, modal mixed-use, and local and regional function. (R, NCHRP)	Engineering
	2.2 Use traffic-calming and other design factors to influence driver speed. (R, NCHRP)	Engineering
	2.3 Design and maintain speed limit and ensure warning signs are visible and installed at appropriate intervals. (R, NCHRP)	Engineering
	2.4 Use electronic variable speed limit signs that change according to conditions such as weather and congestion. (R, NCHRP)	Engineering
	2.5 Support the limited use of speed feedback signs to warn motorists that they are exceeding the speed limit; continue to research the most effective locations for these signs. (R, NCHRP)	Engineering, Education
	2.6 Separate motorized traffic from non-motorized traffic using shared-use paths, sidewalks, bridges, etc. (R, NCHRP)	Engineering
	2.7 Implement timed and coordinated traffic signals to improve traffic flow, reduce red-light running, and manage speeds. (R, NCHRP)	Engineering
	2.8 Set consistent speed limits based on existing operation considering for road design, traffic flows, traffic mix and other environmental factors. (R, NCHRP)	Engineering

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Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
3. Build partnerships to increase support for speed reducing measures	3.1 Expand corridor safety model to high-crash locations where data suggests a high rate of speeding-related fatal or serious injury crashes. (P, CTW)	Leadership/Policy Education, Engineering, Enforcement
	3.2 Educate the public about the dangers of excessive speed and speed too fast for conditions, and its role in traffic fatalities. (R, CTW)	Education
	3.3 Encourage data sharing between local officers, Tribal police and engineering agencies to identify and develop solutions for areas where speeding is a problem. (R, DDACTS)	Leadership/Policy
	3.4 Educate prosecutors and judges to ensure speeding violations are treated seriously and fairly. (R, NCHRP)	Education, Enforcement
	3.5 Work with Washington Trucking Association and WSP's Commercial Vehicle Enforcement Division to encourage company policies which, when backed with speed monitors or speed regulators, can reduce speeding in commercial vehicles. (R, WSP)	Leadership/Policy
	3.6 Develop appropriate messages and methods to reach segments of the population inclined to speeding or driving too fast for conditions. (U)	Education
	3.7 Develop education messages in multiple languages. (U)	Education
	3.8 Educate about the effects of weather on appropriate speed. (U)	Education
	3.9 Collaborate with BIA, Indian Health Services, and NATEO to support Tribal nations who seek to reduce speeding-related collisions on Tribal lands. (U)	Leadership/Policy
	3.10 Implement neighborhood speed watch/traffic management programs. (U)	Education, Enforcement

P = Proven **R = Recommended** **U = Unknown**

CTW = Countermeasures That Work

NCHRP = National Cooperative Highway Research Program

DDACTS = Data Driven Approaches to Crime and Traffic Safety

WSP = Washington State Patrol

Additional Resources

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 7th Edition, Chapter 3 (National Highway Traffic Safety Administration),
<http://www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf>

Guidelines for Developing a High-Visibility Enforcement Campaign to Reduce Unsafe Driving Behaviors among Drivers of Passenger and Commercial Vehicles (National Highway Traffic Safety Administration, 2007),
<http://www.nhtsa.gov/DOT/NHTSA/Traffic Injury Control/Articles/Associated Files/HS810851.pdf>

"Literature review on vehicle travel speeds and pedestrian injuries among selected racial/ethnic groups," Figure 1, Chapter III (W.A. Leaf and D.F. Preusser, National Highway Traffic Safety Administration, 1999),
<http://www.nhtsa.gov/people/injury/research/pub/hs809012.html>

"National Traffic Speeds Survey 1: 2007" (National Highway Traffic Safety Administration, 2012),
www.nhtsa.gov/staticfiles/traffic_tech/811644.pdf

NCHRP Report 500, Volume 23: A Guide for Reducing Speeding-Related Crashes (National Cooperative Highway Research Program, Transportation Research Board),
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v23.pdf

Road Safety Web Publication No. 16: Relationship between Speed and Risk of Fatal Injury: Pedestrians and Car Occupants (UK Department for Transport, 2010),
<http://assets.dft.gov.uk/publications/pgr-roadsafety-research-rsrr-theme5-researchreport16-pdf/rswp116.pdf>

Washington State laws (RCWs) relating to speeding:

- RCW 46.61.400 - Basic rule and maximum limits.
- RCW 46.61.410 - Increases by secretary of transportation - Maximum speed limit for trucks.
- RCW 46.61.440 - Maximum speed limit when passing school or playground crosswalks.
- RCW 46.61.465 - Exceeding speed limit evidence of reckless driving.
- RCW 46.61.470 - Speed traps defined, certain types permitted - Measured courses, speed measuring devices, timing from aircraft.
- RCW 46.61.275 - Reporting of certain speed zone violations - Subsequent law enforcement investigation.



Young Driver 16-25 Involved

Executive Summary

Motor vehicle crashes are the leading cause of death for young people ages 16 to 25 in Washington. Drivers in this age group have the highest crash rate, and the highest rates of speeding, impaired driving, and distracted driving of any driver age group in the state.

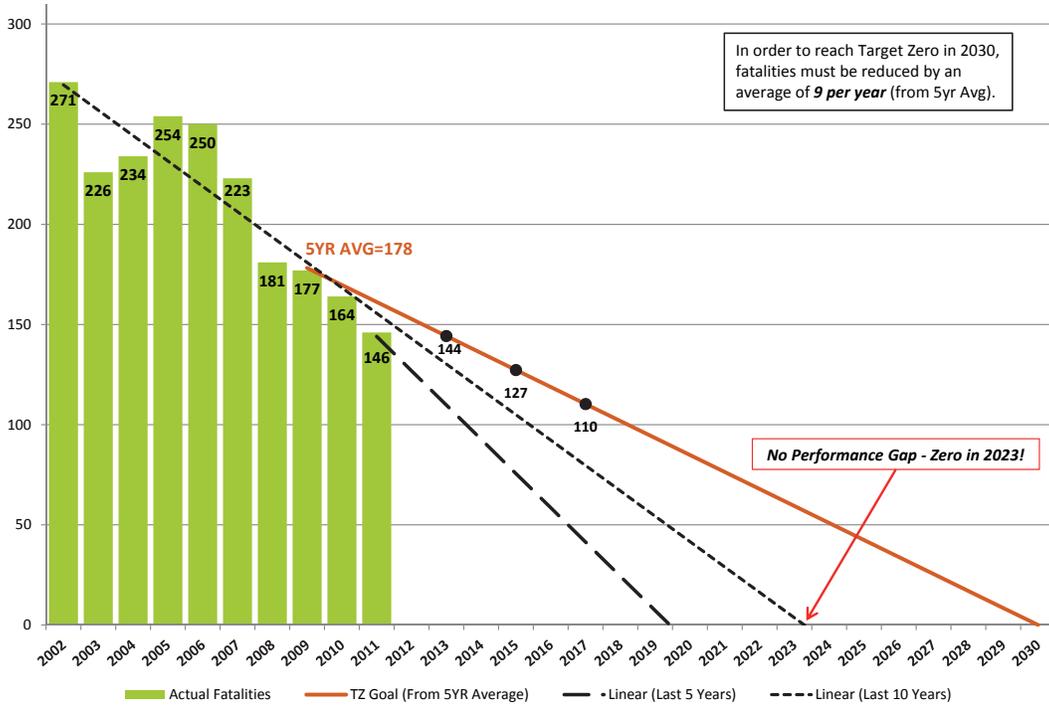
From 2009-2011, 35% of traffic fatalities involved a young driver age 16 to 25. In that same time frame, young drivers were involved in 38% of all serious injury collisions. Compared to 2006-2008, there has been a 26% decrease in traffic fatalities involving a young driver and a 15% decrease in serious injuries. These declines are greater than declines in overall fatalities and serious injuries and both the five- and ten-year trend lines predict zero young driver involved fatalities and serious injuries before 2030.

Nevertheless, we must press ahead with further improvements to our young driver safety program. The core problem comes down to poor choices and behaviors greatly heightening their risk of crash involvement. The reasons for this young driver pattern stems from brain developmental processes, recently identified in research studies. Further reductions in young driver involved serious injury and fatality collisions will require us to deepen our understanding of adolescent development and alter our interventions accordingly.

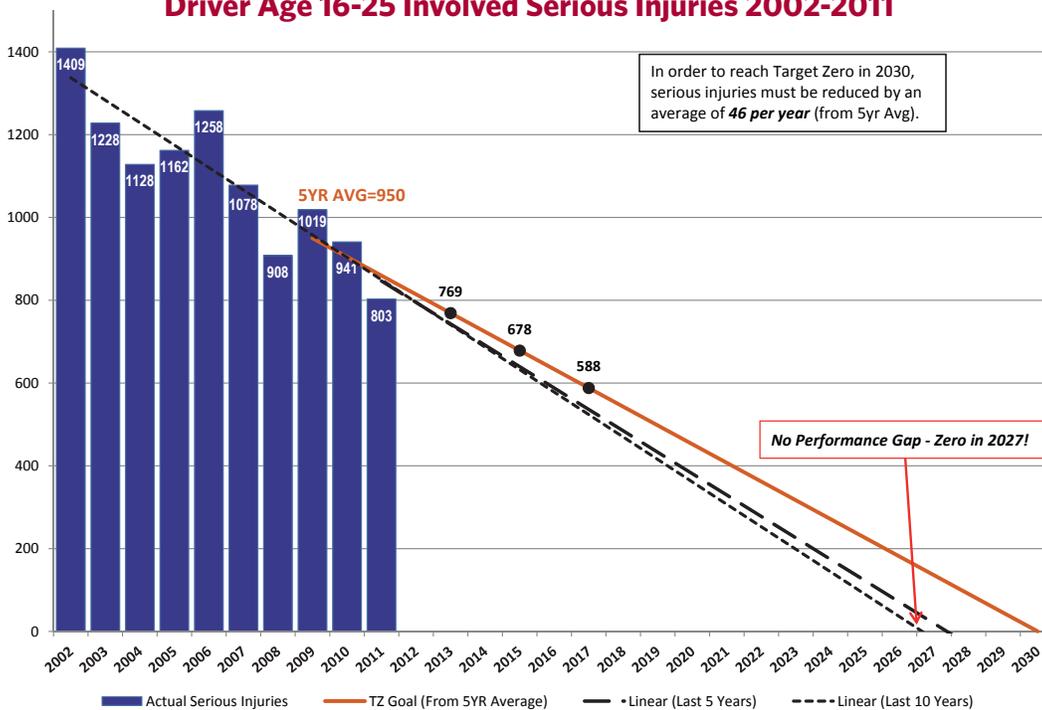
Young drivers constituted 30% of impaired drivers, 40% of speeding drivers, and 27% of distracted drivers in 2009-2011 fatal crashes.



Driver Age 16-25 Involved Fatalities 2002-2011



Driver Age 16-25 Involved Serious Injuries 2002-2011



Between 2009 and 2011, young drivers (ages 16-25) made up 14% of Washington licensed drivers, but were involved in crashes leading to 35% of traffic fatalities and 38% of serious injuries.

Background

Developmental Factors

Numerous research studies have shown young drivers are more likely to crash for two principal reasons: 1) inexperience and 2) immaturity (see, e.g., Hedlund, Shults, & Compton, 2003).

Young drivers are just learning to drive, so the “basics” (e.g., staying centered in the traffic lane) require more of their attention than that of experienced drivers. Their inexperience also means that they have insufficient skill at recognizing potential driving risks – or responding appropriately to those risks.

However, new drivers of all ages are more likely to crash. The difference is that young drivers are also developmentally immature, sometimes seeking risks for the thrills involved. They are also generally less able or willing to think ahead to the potentially harmful consequences of their risky actions. In fact, research on adolescent development suggests key areas of the brain (especially in the prefrontal cortex, the brain center for judgment, decision-making, and deferring immediate reward) are not fully developed until about age 25 (Dahl, 2008; Keating, 2007; Steinberg, 2007).

During the same developmental period, the area of the adolescent brain that mediates the anticipation of reward becomes much more responsive to the presence and influence of other teens than to that of adults.

These and other developmental changes combine to render all young people much more vulnerable to the dangers of driving (as well as other privileges associated with adult life; see Van Leijenhorst, et. al, 2009; Chein, et. al. 2010). Inexperience and immaturity combine to make young drivers especially at-risk for crashing. Their risk is especially heightened at night, after consuming alcohol or drugs, with passengers in the car and when distracted.

Washington’s Intermediate Driver License Law

In Washington, drivers who are 16 to 17 years old face license restrictions designed to improve their safety, as well as the safety of others. They are required to complete a state certified driver training school curriculum and other prerequisites to receive an Intermediate Driver License (IDL). Following IDL licensure, those 16 to 17 years old have restricted driving privileges (see box on page 54) which can be lost with certain violations. After a third violation the young driver’s IDL is suspended until age 18.



In the 12 years since implementation of Washington’s IDL law, fatal and serious injury collisions involving 16- and 17-year-old drivers have declined an average of 9% per year.

Young drivers who wait until age 18 to apply for a driver license are currently required only to pass the driving knowledge and skill tests, the same as for new drivers of any age in Washington.

Impact of Waiting to Get a License Until 18 Years Old

Washington State Department of Licensing (DOL) data shows that a significant number of teens wait until age 18 to get a driver license. This is of concern because newly licensed drivers at age 18 may begin driving without any driver training, road experience, or any of the IDL restrictions imposed on 16- and 17-year-old drivers.

Approximately 35,000 16-year-olds, 10,000 17-year-olds and 15,000 18-year-olds obtain a first time license annually. About 5,000 19- to 25-year-olds obtain first time licenses each year. Not all of the reasons some adolescents are waiting for licensure until 18 years old have been identified, though possible causes include the high cost of driver education programs, a desire to avoid IDL restrictions, and economic burdens related to the recent recession.

Privatization of Knowledge and Skill Tests

In October 2012, DOL implemented legislation allowing private and public driver training schools to administer the knowledge and skills tests for licensure in Washington. Formerly, this test was administered exclusively by DOL. From October 2012 to May 2013, approximately 100,000 tests have been administered by over 280 approved driver training schools, making the testing more available to the public. Prior to October 2012, there were only 54 licensing services offices across the state providing testing.

All driving schools providing testing will be audited annually to ensure compliance with rules and regulations. DOL is collecting data to identify and address any issues or concerns regarding this transition. The impact on competency in driving skills has not been assessed, as time must pass to determine needed changes, if any.

Intermediate Driver License Requirements

- Get the consent of a parent or guardian
- Hold an instruction permit for at least six months
- Complete a Driver Training School course
- Complete 50 hours of supervised driving, 10 of which are at night
- Commit no violations within six months of application
- Pass a knowledge test and driving test
- During the first six months of licensure, carry no passengers under 20 years old except members of the driver's immediate family
- During the second six months of licensure, carry no more than three passengers under 20 years old except members of the driver's immediate family
- Refrain from driving between 1-5 a.m. unless with a parent, a guardian, or a licensed driver who is at least 25 years old
- Refrain from using wireless devices while driving, even hands-free. This includes talking on cell phones and sending or receiving text messages. Wireless devices may be used to report an emergency

Contributing Circumstances and Factors

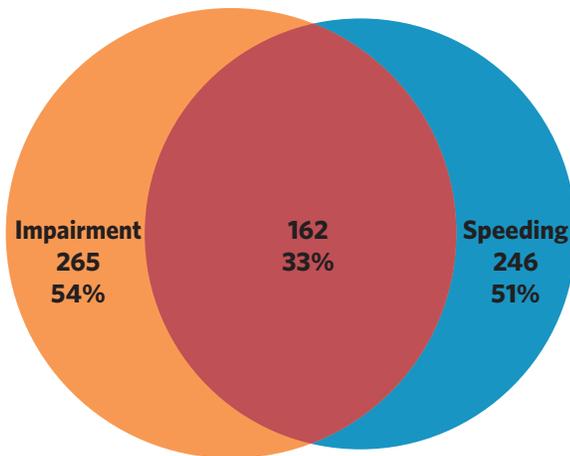
In fatal collisions 2009-2011, drivers age 16 to 25 were about twice as likely to be speeding, and three times more likely to be passing improperly, compared to drivers ages 26 and older. Drivers ages 16 to 25 were also 20% more likely to be impaired. Fatalities and serious injuries involving 16- to 17-year-old drivers are decreasing twice as fast as those involving 18- to 20-year-old drivers. The reasons for this progress are unclear, though Washington's IDL restrictions may play a role.

Impairment remains a critical issue for young drivers. During 2009-2011, over 40% of 16- to 25-year-old drivers in fatal collisions were impaired, a higher percentage than for any other age group. The Venn diagram below (with 54% impairment) represents the percentage of fatalities involving 16- to 25-year-olds regardless of who was impaired: the young driver or an older driver in another vehicle.

Male 16- to 25-year-old drivers in particular are more than twice as likely to be impaired in fatal crashes as 36- to 45-year-old males. Sixteen and 17-year-old male drivers were twice as likely to be impaired by drugs as by alcohol. Far and away, the drug of choice in this age and gender group was marijuana. Conversely, 21- to 25-year-old male drivers were twice as likely to be impaired by alcohol as by drugs.

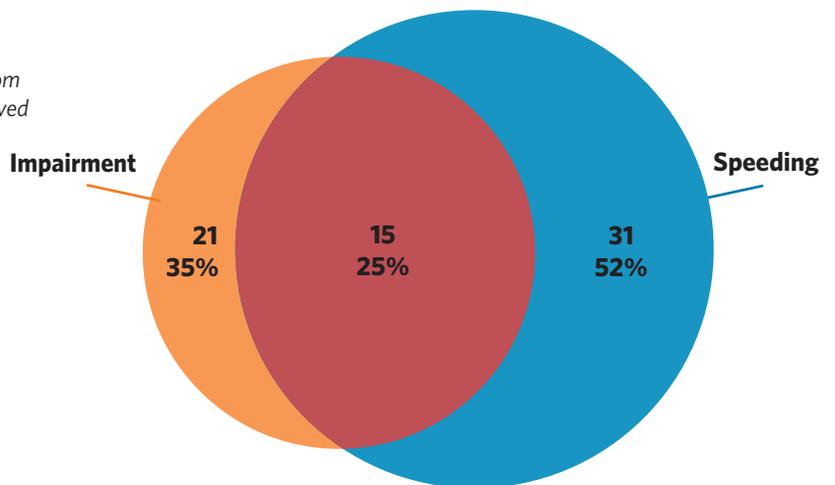
Both 16- and 17-year-old males and 18- to 20-year-old males were over three times more likely to be impaired in fatal crashes than their female counterparts. An even greater disparity exists with 21- to 25-year-old males, who are over five times more likely to be impaired than their female counterparts. They are also nearly three times more likely to be impaired than male drivers ages 36 to 45.

Young Driver 16-25 Involved Fatalities Total = 487



Of the 487 young driver (age 16-25) involved fatalities from 2009-2011, 54% also involved impairment and 51% involved speeding. Combined, 33% of these fatalities involved both impairment and speeding.

Young Driver 16-17 Involved Fatalities Total = 60

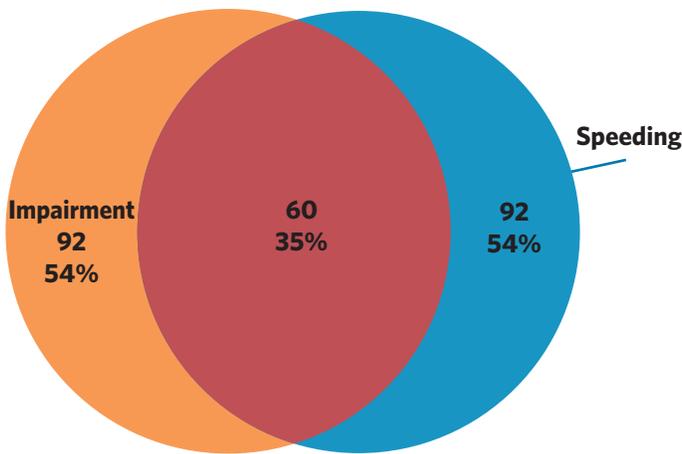


Of the 60 fatalities involving young drivers age 16-17 from 2009-2011, 35% also involved impairment and 52% involved speeding. Combined, 25% of these fatalities involved both impairment and speeding.

Speeding is more frequent among drivers age 16 to 25 than any other age group. Drivers age 16 to 25 involved in fatal collisions were nearly twice as likely to be speeding as drivers ages 36 to 45. Overall, speeding contributed to 51% of fatalities involving a driver age 16 to 25. Males in this age group were five times more likely to be speeding as their female counterparts, and over six times more likely to be speeding as 36- to 45-year-old males.

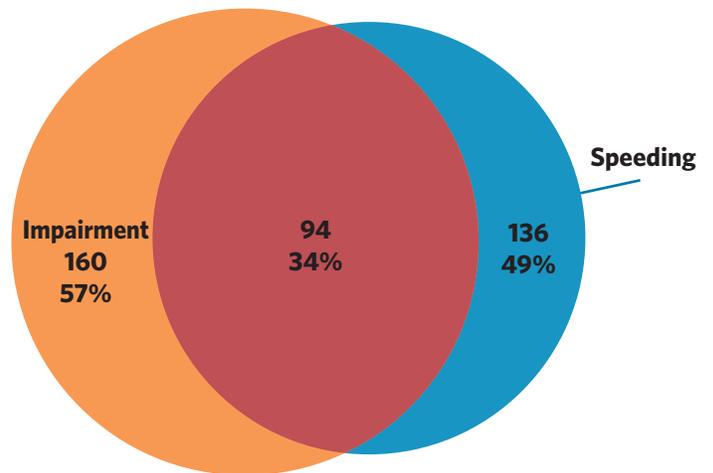
Looking at all ages, male drivers outnumber female drivers in fatal crashes by roughly 3 to 1. However, female drivers in fatal crashes drive distracted at a greater rate than their male counterparts. In particular, 16- to 17-year-old female drivers involved in fatal collisions were more than twice as likely to have been driving distracted as their male counterparts. Over 44% of 16- to 17-year-old female drivers involved in fatal collisions were identified by police as driving distracted, compared to 23% of 18- to 25-year-old females.

**Young Driver 18-20 Involved Fatalities
Total = 171**



Of the 171 fatalities involving young drivers age 18-20 from 2009-2011, 54% also involved impairment and 54% involved speeding. Combined, 35% of these fatalities involved both impairment and speeding.

**Young Driver 21-25 Involved Fatalities
Total = 279**



Of the 279 fatalities involving young drivers age 21-25 from 2009-2011, 57% also involved impairment and 49% involved speeding. Combined, 34% of these fatalities involved both impairment and speeding.



Violation Rates of Younger Drivers

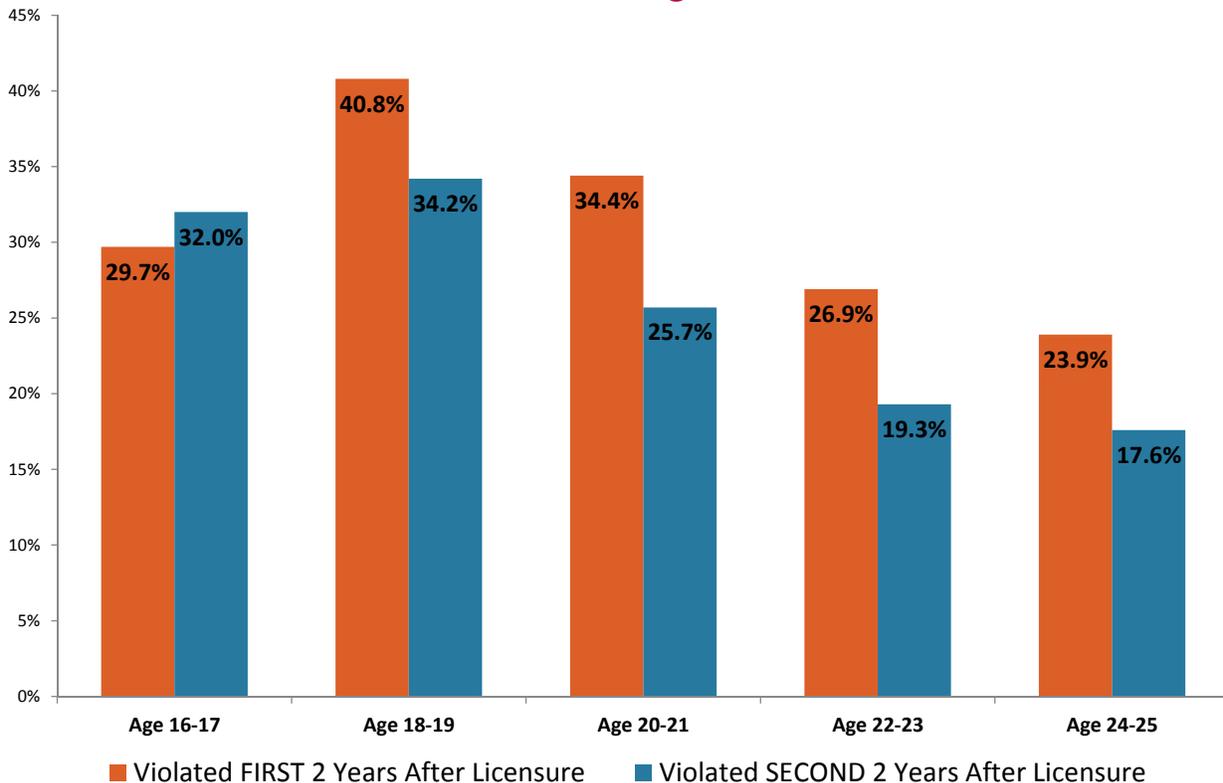
A 2013 DOL analysis compared violation rates among newly licensed 16- to 25-year-old drivers during their first four years of licensure. Violation figures for each driver were grouped into an initial two-year period and the following two-year period (after licensure).

The analysis showed 40% of newly licensed 18- to 19-year-olds received a violation in their first two years of driving but then improved slightly in their second two years, the violation rate dropping to 34%, still highest among all age groups. It is important to note that the initial violation rate among 18- to 19-year-olds was far worse than the comparable rate for 16- to 17-year-olds (29.7%).

However, 16- to 17-year-olds were the only group whose violation rates deteriorated in their second two-year period. This outcome may result from the fact that at age 18 or 19 they were no longer driving under IDL restrictions, less likely to receive parental supervision, and more likely to increase their driving mileage, thus becoming more exposed to opportunities for committing (and being cited for) driving violations.

The remaining newly licensed groups (ages 20 to 25) all progressively improved during their second two-year period of licensure.

Young Driver Newly Licensed in 2007-2008 with Violation(s) in the First Four Years Following Licensure



Programs and Successes

Young Driver Task Force

The Young Driver Task Force, comprising representatives from both public and private organizations, is working to improve young driver safety. They meet at least quarterly to ensure a coherent policy and program approach to reducing fatalities and serious injuries among young drivers in Washington. The task force's priorities include working to increase compliance with the IDL by involving parents and law enforcement, strengthening pre-licensure driver education and recommending improvements to the IDL law.

Department of Licensing Letters

In March 2011, the DOL began sending letters to all 18- to 21-year-old drivers receiving their first moving violation. DOL implemented this program because data shows a driver's chances of collision doubles after receiving their first violation. Sixteen and 17-year-olds were already receiving a similar letter while under the rules of the IDL. About 2,000 letters per month have been sent to young drivers since the start date. Review and analysis began in the spring of 2013 to determine if the program reduced recidivism among these first-time violators.

Seat Belt and Impaired Driving Patrol Media Outreach

For over 10 years, Washington State has been conducting High Visibility Enforcement (HVE) patrols to decrease impaired driving and increase seat belt use. Prior to conducting these patrols, a media campaign is made to warn citizens about the impending extra enforcement. This model has been shown to change behavior over time. Because young drivers are over-represented in fatal and serious injury crashes, media campaigns are heavily focused on the media outlets to which they pay attention.

Driver Training Programs

Since traffic safety education funding was decreased dramatically in 2001, a large majority of driver training schools in Washington are now privately owned businesses. Currently there are over 300 private business-based and 82 public school-based driver training school programs in place across the state. Regulation of private driving schools is done by DOL. Regulation of programs in high schools is handled by the Office of Superintendent of Public Instruction. Efforts are underway to align these programs.

Washington State Coalition to Reduce Underage Drinking (RUaD)

The RUaD Coalition provides state-level leadership to reduce underage drinking by leveraging resources and strengthening communities in Washington State. Reducing underage access to alcohol is one way to curb young driver crashes involving impairment. The coalition goals are to:

- Analyze and disseminate information and, as appropriate, promote public or corporate policy changes (includes information on laws, ordinances, advertising, packaging, energy drink mixing, emerging issues, and others)
- Monitor pertinent legislation and rule-making
- Support youth influencers such as parents, caregivers, educators, coaches, religious leaders and other youth

RUaD's StartTalkingNow.org program is based on research showing parents are a significant influence in a child's life. The program supports parents and other youth influencers such as coaches, religious leaders and educators by providing information and resources that help youth make healthy choices and lead substance-free lives. Its Let's Draw the Line between Youth and Alcohol (LDTL) program helps support groups across the state, mostly comprised of youth, carry out a variety of underage drinking prevention activities in their communities. The range of LDTL activities has included partnering with law enforcement, assessing local alcohol advertising, and promoting the positive, healthy norms most teens have.

High School Outreach

The Washington Traffic Safety Commission (WTSC) partnered with State Farm® Insurance to promote awareness among high school students about distracted and impaired driving, as well as seat belt use. Teens reach a developmental stage where the influence of other teens is much more powerful than that of parents and other adults. Therefore peer-to-peer education programs provide a valuable format for promoting healthy behaviors.

Through the program, teens are given a list of educational action steps to guide them in the process of learning about the dangers of distracted and impaired driving. They learn ways to re-package the information and share it with teens, as well as members of the community at large. During one school calendar year (September 2012 – June 2013) 102 high school educational projects were conducted on themes that included distracted driving, teen alcohol use and impaired driving and the promotion of seat belt use.

Party Intervention Patrol

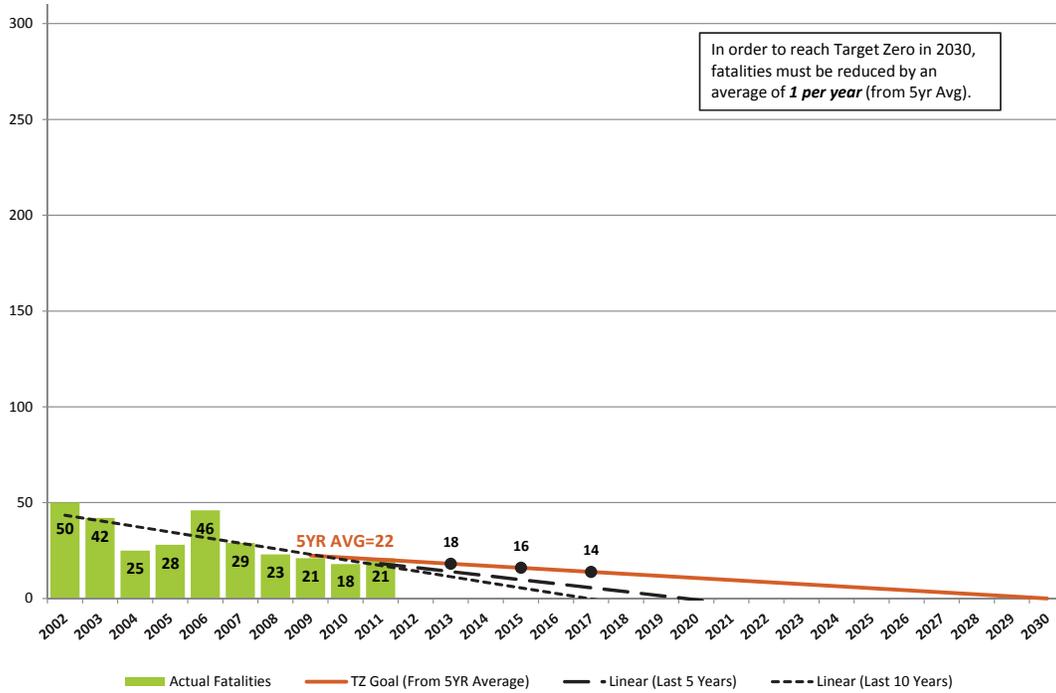
Pierce and Thurston Counties have implemented Party Intervention Patrol (PIP) projects that use multijurisdictional law enforcement teams to locate underage drinking parties. This project uses the core components of successful intervention programs: alcohol screening and motivational interviewing.

Immediate volunteer and professional support is provided to the kids and their parents through an alcohol screening process known as “Brief Intervention.” Alcohol screenings and brief interventions, at a location other than the party, have been shown to successfully reduce future underage drinking (D’Onofrio and Degutis, 2004). Youth have the opportunity to meet one-on-one with chemical dependency professionals and receive referrals to relevant resources.

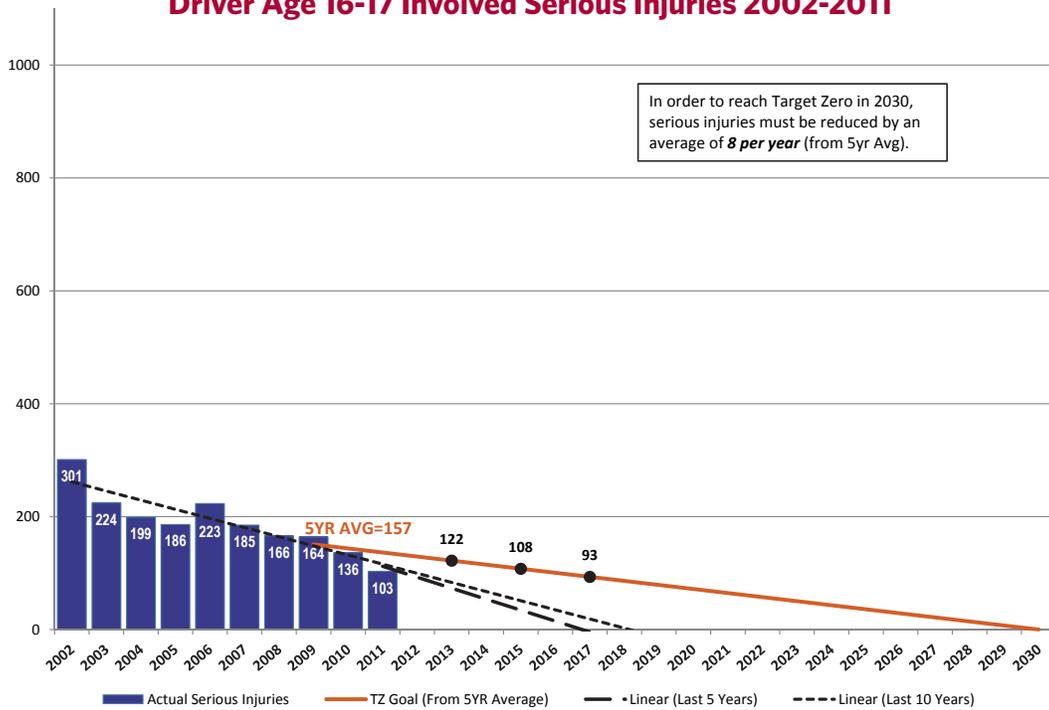
In advance of the PIP patrols, media campaigns and news media outreach are used to publicize PIP patrols to both teens and their parents in an effort to deter the behavior before it happens. Mass media campaigns are a proven countermeasure when combined with program activities. Alcohol compliance checks using underage decoys, citations and rechecks of offending stores are also a part of the PIP program.



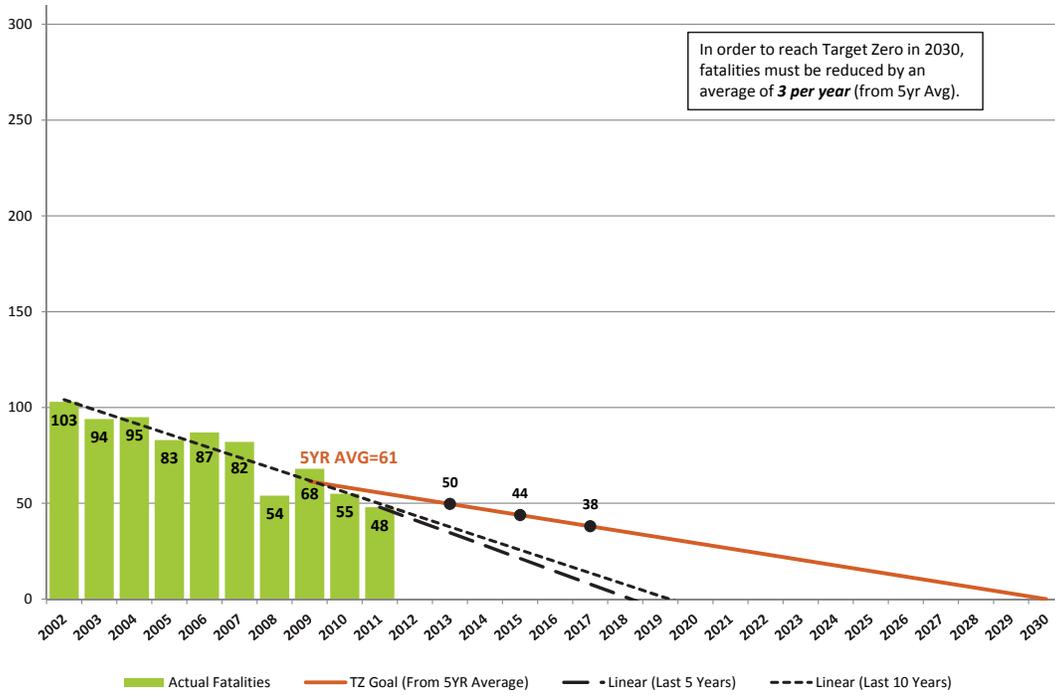
Driver Age 16-17 Involved Fatalities 2002-2011



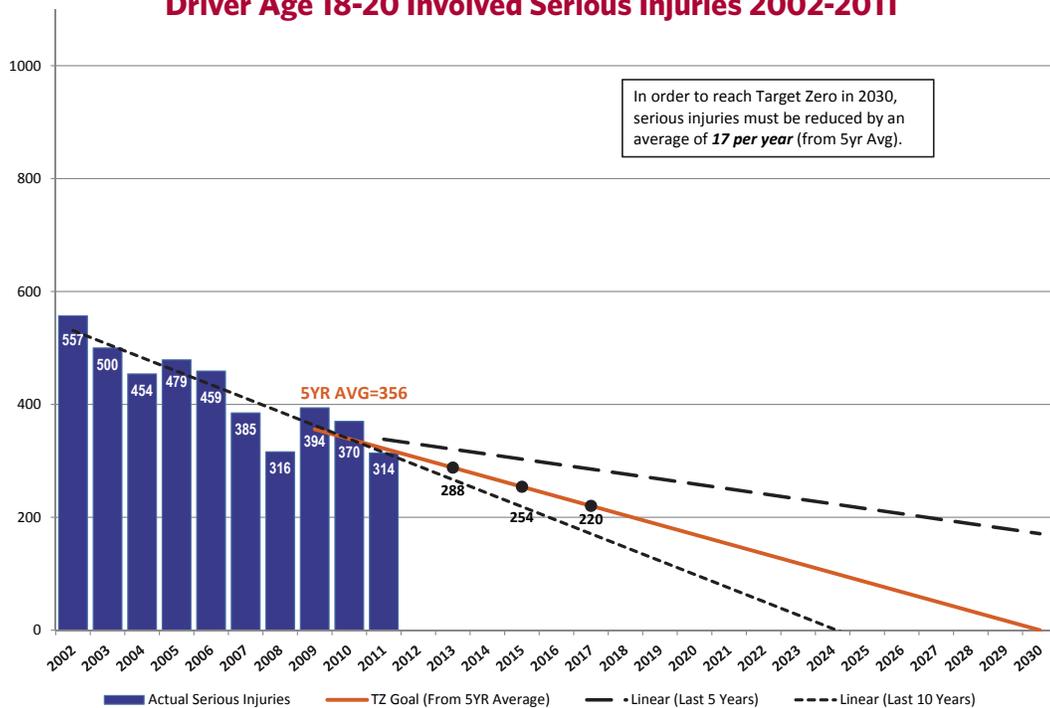
Driver Age 16-17 Involved Serious Injuries 2002-2011



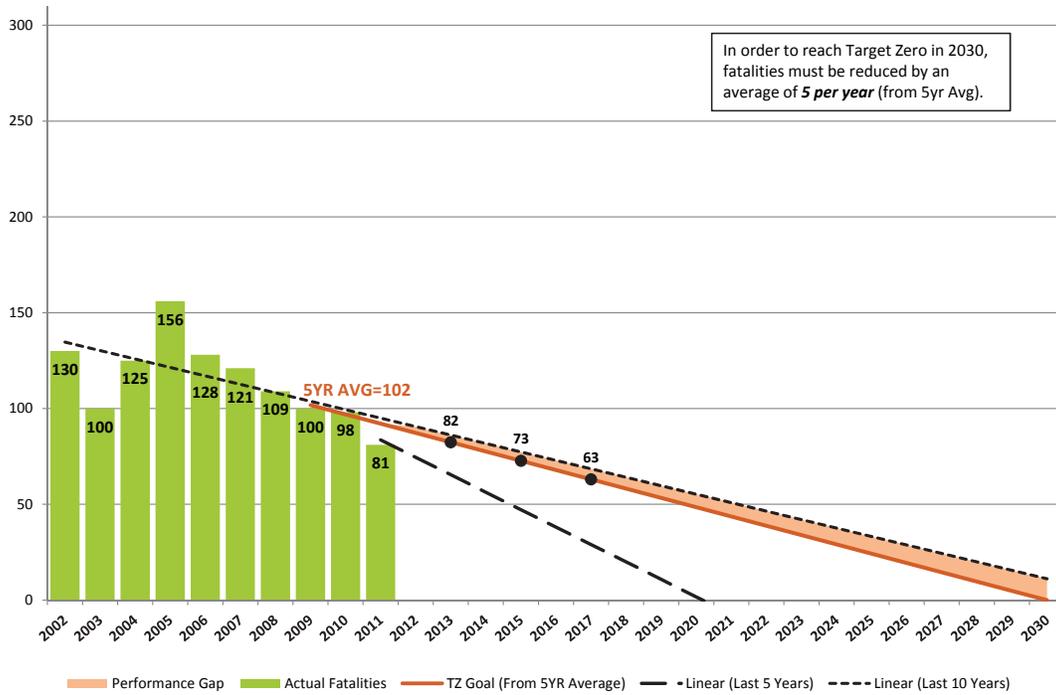
Driver Age 18-20 Involved Fatalities 2002-2011



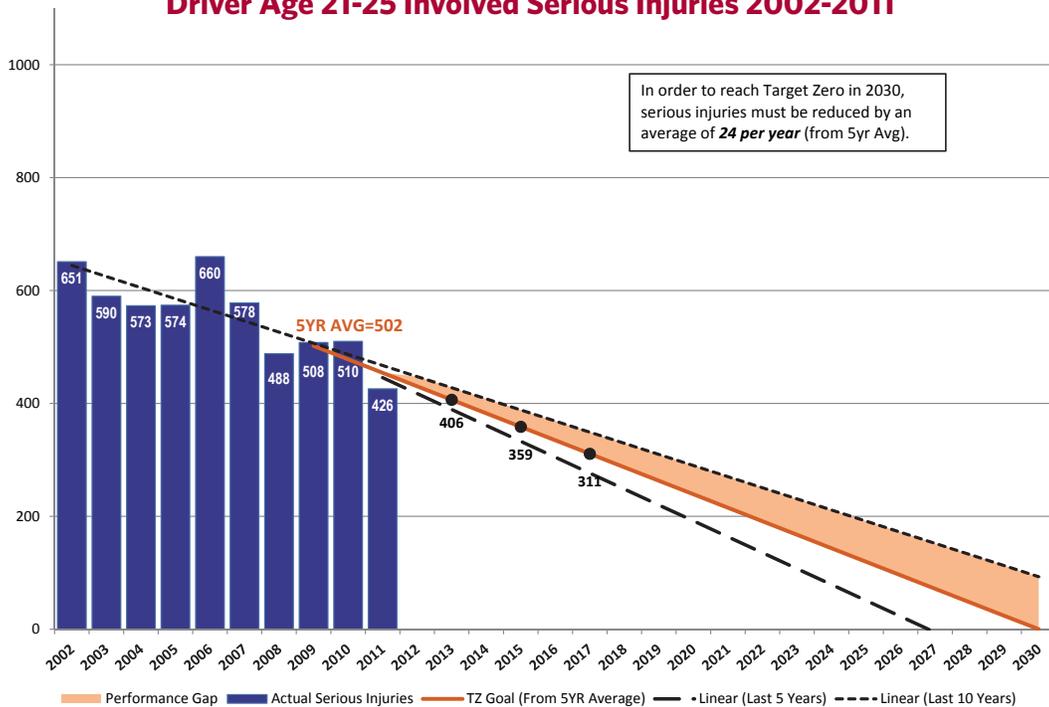
Driver Age 18-20 Involved Serious Injuries 2002-2011



Driver Age 21-25 Involved Fatalities 2002-2011



Driver Age 21-25 Involved Serious Injuries 2002-2011



Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
1. Foster compliance with the State's IDL laws	1.1 Encourage Tribes to pass IDL laws. (P, CTW)	Leadership/Policy
	1.2 Provide resources to Young Driver Task Force to improve awareness of (especially for parents and teens) and compliance with the IDL law. Highlight high-risk situations where clear parental limit-setting will be most effective. (R, CTW)	Leadership/Policy
	1.3 Promote better enforcement of IDL by passing legislation requiring a "sticker" program for marking vehicles used by IDL license holders and by educating and encouraging officers to enforce the law. (R, LIT)	Leadership/Policy
	1.4 Provide local Target Zero Task Forces with information and materials about IDL for teens, parents, law enforcement, and driver education programs. (R, WTSC)	Education Leadership/Policy
2. Strengthen Intermediate Driver License restrictions	2.1 Adjust curfew to include 9 p.m. - 1 a.m., the hours when young driver serious injury and fatality crashes are highest. (P, CTW)	Leadership/Policy
	2.2 Lengthen permit holding period beyond six months. (R, CTW)	Leadership/Policy
	2.3 Extend passenger restriction to one full year after licensed. (R, NCHRP)	Leadership/Policy
	2.4 Strengthen requirements for parents around the documentation and certification of the 50-hour behind-the-wheel time young drivers are to complete before licensure. (U)	Leadership/Policy
	2.5 Strengthen restrictions so penalties kick in with the first ticket IDL driver gets. (U)	Leadership/Policy

Continued on next page.

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
3. Improve young driver education and intervention	3.1 Review and revise the Driver Guide, testing process, curriculum guidelines, and training standards to construct an overall driver training package focused more on hazard identification and less on skill training. (R, CTW)	Leadership/Policy
	3.2 Conduct a recidivism study to assess the impact of the DOL early warning letter program for 18- to 21-year-olds. (U)	Leadership/Policy
	3.3 Consider expanding driver restrictions and driver education requirements to new drivers of all ages. (U)	Leadership/Policy
	3.4 Update model traffic safety education curriculum to match NHTSA standards. (U)	Leadership/Policy
	3.5 Consider implementation of licensing standards used in countries with superior driving statistics such as the United Kingdom. (U)	Leadership/Policy
	3.6 Promote teen/parent safe driving contract. (U)	Education
4. Improve enforcement of high risk behaviors among young drivers	4.1 Conduct statewide high-visibility enforcement and media campaigns focused on young drivers. (U)	Enforcement, Education
5. Enforce compliance with the State's underage drinking law	5.1 Conduct well-publicized enforcement aimed at underage drinking parties. (R, CTW)	Education Enforcement
	5.2 Publicize and enforce underage drinking and driving laws. (R, CTW)	Education
	5.3 Track underage drinking violations pre- and post-liquor privatization. (U)	Leadership/Policy

P = Proven **R = Recommended** **U = Unknown**

CTW = Countermeasures That Work

LIT = Literature (Although we could not locate a meta study, there is sufficient independent literature with favorable results to justify as a recommended strategy)

NCHRP = National Cooperative Highway Research Program

NHTSA = National Highway Traffic Safety Administration

WTSC = Washington Traffic Safety Commission

Additional Resources

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 7th Edition, Chapter 6 (National Highway Traffic Safety Administration), <http://www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf>

OECD Young Drivers, *The Road to Safety* (2006) www.internationaltransportforum.org/Pub/pdf/06YoungDrivers.pdf

Promoting Parent Involvement in Teen Driving: An In-Depth Look at the Importance and the Initiatives (Governor's Highway Safety Association, 2013), <http://www.ghsa.org/html/publications/pdf/sfteens13.pdf>

RUaD Coalition Strategic Plan 2011-2013 (Washington State Coalition to Reduce Underage Drinking), <http://www.starttalkingnow.org/our-efforts/strategic-plan-2011-2013>

Screening and Brief Intervention in the Emergency Department (Gail D'Onofrio, MD, MS and Linda Degutis, DrPH, in *Alcohol Research & Health*, 2004), <http://pubs.niaaa.nih.gov/publications/arh28-2/63-72.pdf>

Teen Driver Safety (AAA Foundation for Traffic Safety), <https://www.aaafoundation.org/teen-drivers>

Washington State Department of Licensing website, <http://www.dol.wa.gov/>

Washington State laws (RCWs) relating to young drivers:

- RCW 46.20.055 - Instruction permit.
- RCW 46.20.075 - Intermediate license.
- RCW 46.20.267 - Intermediate licensees.

The Danger is Real

- One study shows that cell phone drivers are as impaired as drunk drivers who have a .08% blood-alcohol level.
- Talking on a cell phone—with or without a hands-free device—increases the chance of crashing by four times.
- Texting drivers look down for 5 seconds at a time on average—enough time at highway speeds to cover more than a football field.

Park your phone when you drive.

On February 23, 2010, Heather Lerch of Tumwater crashed her car and died. She was texting at the time of the crash. Below is Heather's car after the crash.



"More than 50% of the visual cues spotted by attentive drivers are missed by cell phone talkers. Not surprisingly, they get in more wrecks than anyone except very drunk drivers."

— Univ. of Washington Brain Scientist Dr. John Medina

Heather Lerch
Jan. 23, 1991 -
Feb. 23, 2010



**TextTalk
TICKET**
Hang Up & Drive



For more information: www.dol.wa.gov/driverslicense/distracteddriving.html
www.distraction.gov • www.distracteddriving.nsc.org • www.nodistractions.com

Brought to you by Washington Traffic Safety Commission, Washington State Patrol, Dept. of Licensing, Dept. of Health and the Driven to Distraction Task Force of Washington State. This information is also available at www.TextTalkTicket.com



AAA Parent-Teen Driving Agreement

Learning to drive can be both exciting and stressful for a teenager — and his or her parents. AAA has developed this parent-teen driving agreement to help families work together to safely navigate the learning process. The agreement helps establish rules and consequences for teens, but also places responsibilities on parents. Safe driving generally requires much more than what state laws call for, and signing an agreement before the teen starts driving can be helpful in establishing expectations for the whole family. By working as a team, parents and teens can accomplish their shared goal — a safe, successful teen driver. **Note: Driver licensing requirements vary by state and should be considered a *minimum* for teens. Find state-by-state requirements and a full-length driving agreement at AAA.com/publicaffairs.**

Non-Negotiable Rules for Everyone

Parent(s) and teen will:	Parent(s) and teen will NOT:
<ul style="list-style-type: none"> Wear seat belts and require all passengers to wear seat belts Obey all traffic laws Drive at safe speeds for road conditions — at or below the speed limit Be a courteous driver Agree to meet at least once per month to discuss the teen's driving performance and plans for the next month 	<ul style="list-style-type: none"> Drive under the influence of alcohol or other drugs or ride with an impaired driver Engage in racing, stunts, or other thrill-seeking while behind the wheel Conceal tickets, warnings, or crashes Allow anyone else to drive the car

Learner's Permit

Parents and teens should practice a minimum of two hours each week for at least six months (several states require longer) to ensure the teen gains ample experience in a range of driving conditions before solo driving.

Parent(s) will:	Teen will:
<ul style="list-style-type: none"> Provide and maintain a safe vehicle Pay for driver training classes and materials Be available for practice driving above and beyond what is required by law Provide practice on a variety of road types and driving conditions Share observations and provide coaching in a calm, respectful manner 	<ul style="list-style-type: none"> Actively participate in driver training classes Make time for practice driving Not drive without parent(s)

Intermediate License/Solo Driving

Driving without a parent poses new challenges for a teen. Crash rates are especially high during the first year of driving. Research shows that teens have fewer crashes when there are limits on solo driving that gradually relax as they gain experience. The table below is based on research and modeled after the National Institute of Health's Checkpoints program. Suggestions are provided in the boxes below; check that the rules you set meet requirements in your state. Breaking rules, at-fault crashes, and moving violations should result in reverting to an earlier phase for a pre-determined time. Critical violations (racing, reckless driving, drinking and driving, etc.) should result in license suspension for a pre-determined time.

	First Two Months	Months 3-6	Months 7-12
Start date	___/___/___	___/___/___	___/___/___
No driving after	8 p.m. or dark	9 p.m.	10 p.m.
Passengers	No one under 25	No other teens	No more than one
Roads	Local	No highway	Most
Weather	Dry	Moderate	Most

Parent(s) will:	Teen will:
<ul style="list-style-type: none"> Continue to provide practice on a range of road types and in various driving conditions Consider appropriate exceptions when asked in advance 	<ul style="list-style-type: none"> Always tell parent(s) where he/she is going and with whom Always call home if going to be late Always call home if it's not safe to drive or ride Pull safely off the road before using a cell phone or other electronic device

Signatures

Teen: _____ Parent/Guardian: _____ Date: _____

Distracted Driver Involved

Executive Summary

Distracted driving includes any non-driving activity that diverts a driver's attention from the task of driving itself. This includes general inattentiveness/carelessness, cell phone use, eating, drinking, smoking, attending to objects inside or outside of the vehicle, and manipulating vehicle controls.

From 2009 through 2011 distracted driving was a factor in 426 fatalities (30%) and 868 serious injuries (11.9%). During this period Washington saw a 6% decrease in distracted driver involved fatalities and an 18% decrease for distracted driver involved serious injuries compared to 2006-2008. While this decrease is encouraging, the five- and 10-year trend lines point out where we appear to be losing ground.

Distracted driving as a contributing factor in collisions is difficult to estimate as crash investigators can identify it only through actual evidence such as self-reporting, witness testimony and evidence indicating distraction. It is suspected to be underreported in fatal and serious injury collisions because police investigators frequently have difficulty confirming distraction as a factor.

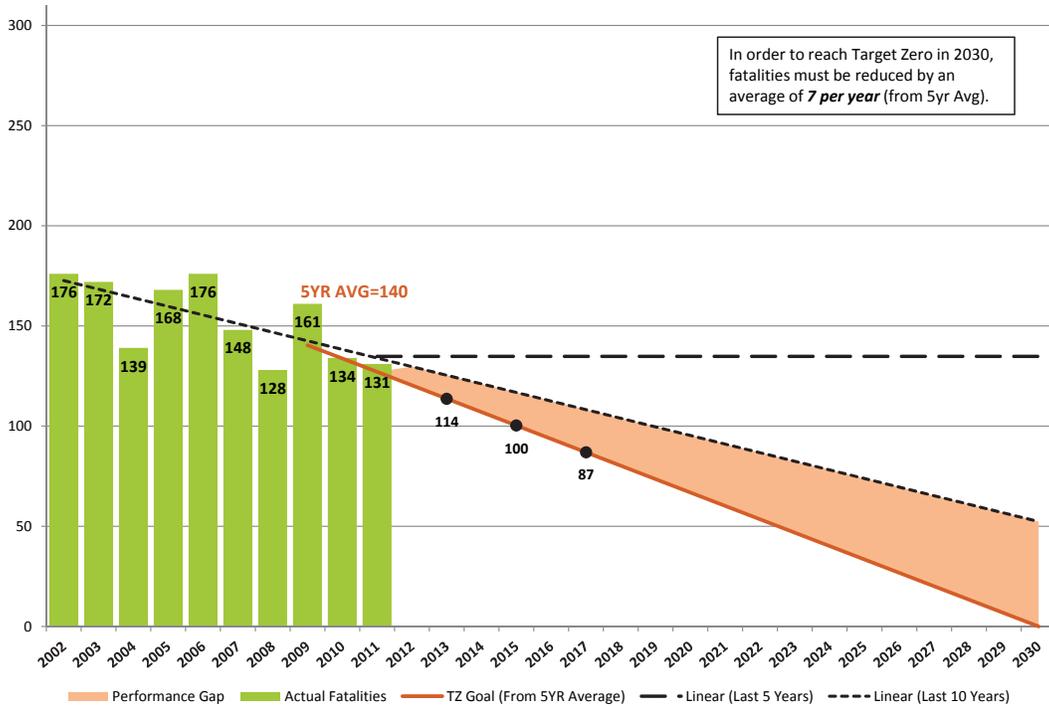
Furthermore, while cell phone involved distraction currently gets a lot of attention, it is rarely reported as a contributing factor in collisions when distractions are noted. For instance in the 2009-2011 period, driver cell phone use was noted as a contributing factor in only seven fatality crash reports. Despite collision data limitations, observation data suggests distracted driving is increasing.



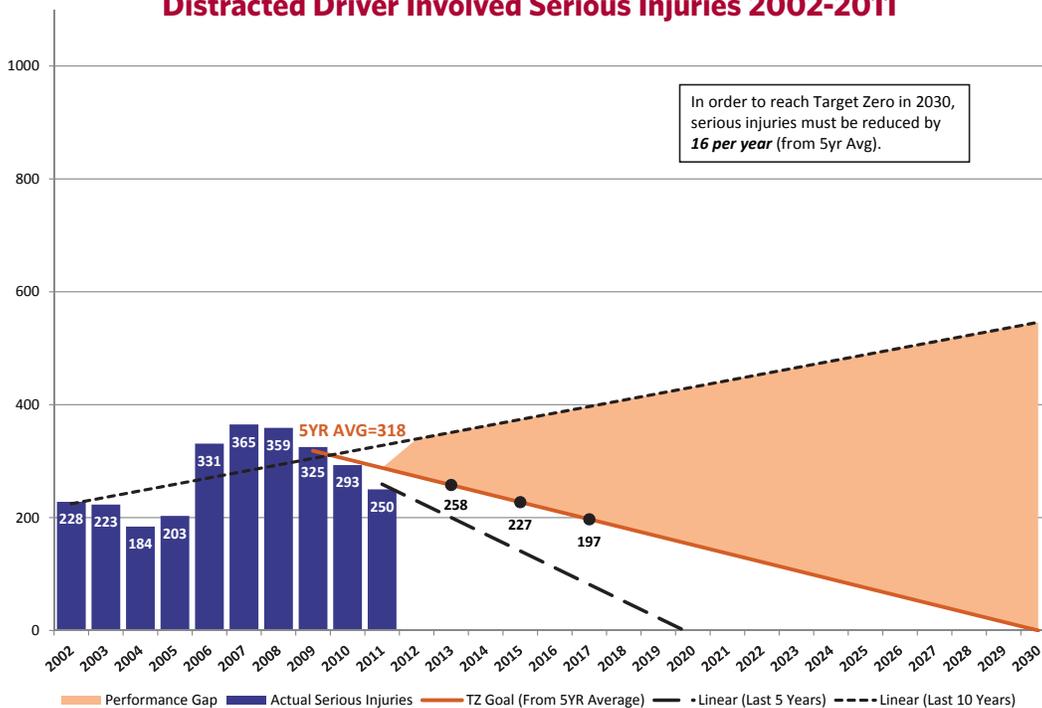
The data in this chapter reflects only those collisions that police are certain involved a distracted driver. However, it is believed distracted driving plays a larger role in fatal and serious injury collisions than these numbers indicate.

Male drivers typically engage in high risk behaviors, such as impairment and speeding, more often than female drivers. However, female drivers in fatal collisions were slightly more likely to be distracted than their male counterparts, 23% versus 21%.

Distracted Driver Involved Fatalities 2002-2011



Distracted Driver Involved Serious Injuries 2002-2011



In 2006, the Police Traffic Collision Report was modified to more accurately capture driver distraction in traffic collisions, as directed by the Washington State Legislature (RCW 46.52.060). This change resulted in more detailed, accurate reporting of distracted driving but also in a 'data spike' of distracted driving in collisions. The 10-year trend has been distorted by this change, so it appears as if we are losing ground. The five-year trend line represents a more complete picture of distracted driving, including the downward trend in distraction involved serious-injury collisions.

Background

Compared to 2006-2008, between 2009-2011 Washington saw a 6% decrease in traffic fatalities and an 18% decrease in serious injuries where distracted driving was involved.

Who's Driving Distracted?

From 2009-2011, male drivers outnumbered female drivers by roughly 3-to-1 in all fatal collisions statewide. However, a greater proportion of those female drivers (23%) were identified by investigators as distracted than their male counterparts (21%).



This gender gap is most distinct for 16- to 17-year-old drivers. Law enforcement noted distraction as a contributing factor for 47% of 16- to 17-year-old female drivers involved in fatal collisions, but for only 20% of same-age males. This is contrary to the more common pattern of males being greater represented in other contributing factors. For instance, 55% of male drivers 16 to 17 years old were cited for speeding, versus only 21% of same-age females.

Challenges Documenting Distracted Driving

It's hard to track collisions caused by distracted driving. While distracted drivers are a common spectacle on our roads, identifying distraction as a contributing factor of a collision is not so easy to do. By the time investigators arrive at the scene, the distraction has passed or been put away. Drivers rarely volunteer the information they were talking on their phone or distracted in some other way. Additionally, independent witnesses or specific evidence is rare.

Before selecting any of the 13 specific distraction codes listed on the collision report, an officer or an involved party needs to witness the distraction, a driver must self-report the action, or cell phone records must be subpoenaed, as sometimes happens in a serious injury or fatality collision investigation.

Surveys of driver handheld cell phone use in Washington reported 2-3% of daytime drivers were observed talking on these devices (phone to ear, thus excluding hands-free use). However, less than one-half of one percent of drivers in crashes are identified by police as talking on handheld cell phones. Therefore the conclusion is cell phone use is underreported in both fatal and serious injury collisions.

Cell Phone Use

Cell phone use has increased dramatically in a short time. The National Center for Health Statistics estimates in 2011, 55% of Washington households used cell phones exclusively or mostly (versus landline phones). This is an increase of 25% in one year, up from 44% of households in 2010. This fast rise in mobile technology has allowed us to stay connected to people and information no matter where we are.

Unfortunately this connectivity also extends to our time behind the wheel. Even so, there has not been a sharp rise in collisions involving cell phone use, or even a rise in "unknown distraction" collisions, which could be attributable to cell phones. More detailed information is needed on the role of cell phones in Washington traffic collisions.

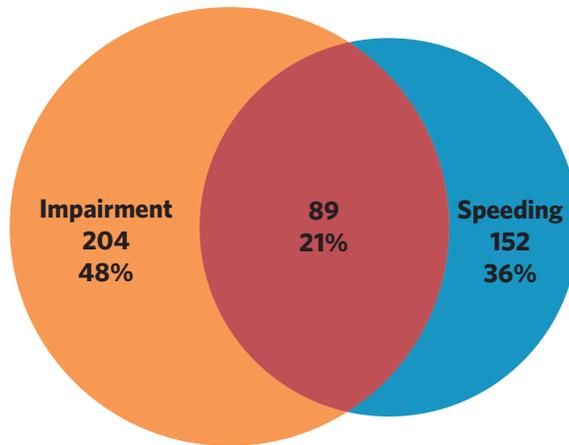
Inexperience and immaturity combine to make young drivers especially at-risk for crashing. Their risk is especially heightened at night, after consuming alcohol or drugs, with passengers in the car and when distracted.

Contributing Circumstances and Factors

Other high-risk behaviors are also often coupled with distracted driving. During the 2009-2011 period, impairment was involved in 48% of distracted driver involved fatalities and speeding was involved in 36%. Twenty-one percent (21%) of fatalities included both speeding and impairment. Not surprisingly, 47% of distracted driver involved fatalities also included a run-off-the-road event.

Surprisingly, among all distracted drivers involved in 2009-2011 fatal collisions, 30% were drivers ages 66 and older. These older drivers were followed by drivers age 16-25, who represented 23% of distracted driving involved fatalities.

Distracted Driver Involved Fatalities Total = 426



Of the 426 distracted driver involved fatalities 2009-2011, 48% also involved impairment and 36% involved speeding. Combined, 21% of these fatalities involved both impairment and speeding.

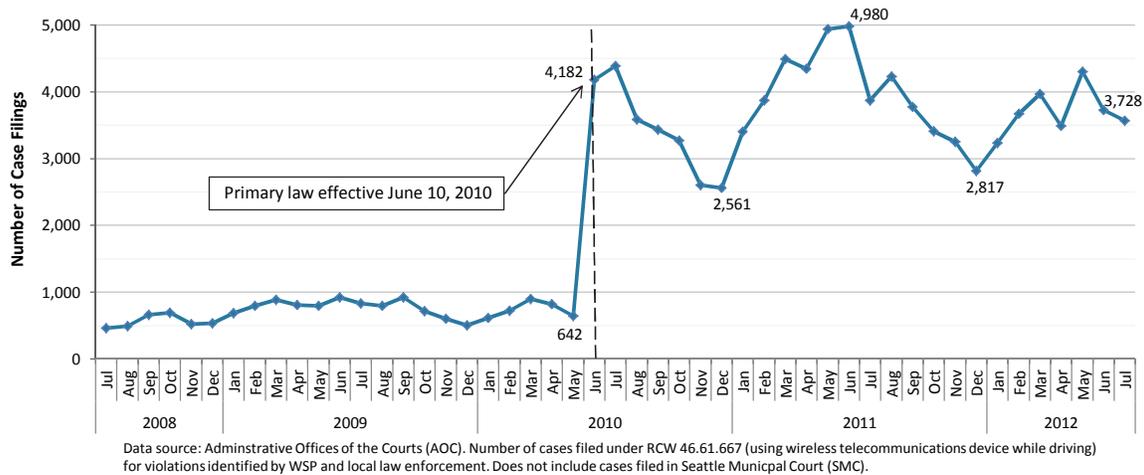


Programs and Successes

Washington’s Cell Phone Law is Being Enforced

Enforcement of using a handheld wireless communications device or texting while operating a motor vehicle became a primary enforcement law in Washington effective June 10, 2010. In the years preceding this change, handheld cell phone citations averaged 700 per month. After the law changed, the average rose to 4,000 per month.

Washington Case Filings for ‘Handheld Cell Phone Use’ Violation



Texting while driving is harder to enforce, as evidenced by a lower number of citations both before and after the law change. Texting citations prior to the change averaged 30 per month, and after, 130 per month (source: Administrative Office of the Courts). To combat this enforcement challenge with texting, law enforcement officers sometimes work in tandem. One will be posted at a safe observation point and radio a downstream officer after witnessing someone breaking the law.

Click It or Ticket Mobilization Dual Messaging and High Visibility Enforcement

Washington included a cell phone component in its media messages for the 2013 Click It or Ticket (CIOT) campaign. The sharp increase in cell phone citations referenced above was also reflected in previous years’ annual CIOT campaign statistics. Warning the public of their increased chance of receiving both seat belt and cell phone violations seemed like the right thing to do. A new radio ad was developed to address this dual message.

During the 2013 fiscal year, the King County Target Zero Task Force implemented a multijurisdictional high visibility enforcement campaign to reduce distracted driving. Law enforcement agencies conducted patrols. An educational component informed motorists not only of the hazards of distracted driving, but warned about extra patrols. This reinforced the message that distracted driving carries consequences.

Some city and county prosecutor’s offices have enjoyed successes by dedicating “Rule 9 intern” prosecutors in their district courts to distracted driving infractions. The interns have paid for themselves through upheld infractions with stiffer fines and gained valuable court experience.

High School Distracted Driving Project

The Washington Traffic Safety Commission (WTSC) and State Farm® Insurance have partnered to promote awareness about the dangers of distracted driving among high school students. Many teens reach a developmental stage where the influence of other teens is much more powerful than that of parents and other adults. Therefore, peer-to-peer education programs provide a valuable format for promoting healthy behaviors.

As part of this program, teens are given a list of educational action steps which guide them in the process of learning about the dangers of distracted driving. They learn ways to re-package the information and then share it (i.e. promote anti-distracted driving safety messages) with other teens, members of the education community and the community at-large. Students then document their efforts to qualify for \$500 grants. The program is funded by State Farm® and administered by the WTSC. It began in February 2012 and, as of June 2013, distracted driving and teen alcohol projects have taken place in over 90 Washington high schools.

Intervention Strategies for Implementation of Distracted Driving Laws

The Intervention Strategies for Implementation of Distracted Driving Laws project grew from a statewide collaboration in Washington State between the Harborview Injury Prevention & Research Center, Public Health – Seattle & King County, and King County prosecutorial leadership. The project's overarching goal is to reduce cell phone use among Washington drivers by identifying effective strategies to improve implementation, enforcement and prosecution of distracted driving legislation.

Project components include law enforcement focus groups, interviews with legal and judicial experts, observations of cell phone use among Washington drivers and development of a public health law database. Tailored intervention strategies for law enforcement and prosecutors are planned to be developed, conducted and evaluated in six Washington counties. Results will be shared to inform state policy makers and to provide recommendations to other states.

Driving Expectations Contracts

Some insurance companies, schools and parents are utilizing signed contracts with young drivers who promise not to use cell phones or text while driving. Part of the success of these contracts is also for the adults to lead by example.

Distracted Driver Definition:

Any driver with the following attributes as recorded by the investigating officer:

- Looked but did not see
- Distracted by vehicle occupant or object
- While using a cell phone (talking, listening, dialing, etc.)
- Adjusting vehicle controls
- Distracted by object/person outside the vehicle
- Eating, drinking, or smoking; emotional or lost in thought; other or unknown distraction.

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
1. Better understand the distracted driving problem in Washington	1.1 Explore options for gaining a measure of statewide cell phone use while driving, such as expanding the annual seatbelt observation survey to include observations of cell phone use, including hands free use. (R, DDACTS)	Leadership/Policy
	1.2 Revise fields on the Police Traffic Collision Report to enhance clarity for officers coding distraction in collision investigations. (R, WSDOT)	Leadership/Policy, Education
	1.3 Encourage law enforcement to thoroughly investigate distraction during crash investigation. (R, WTSC)	Enforcement, Leadership/Policy
	1.4 Encourage all law enforcement agencies to adopt no tolerance cell phone and driving policies in their agencies. Track citations given by law enforcement agencies with/without strict cell phone and driving policies. (U)	Enforcement, Leadership/Policy
2. Use roadway engineering to reduce the consequences of distracted driving	2.1 Continue a targeted shoulder rumble strip program: centerline, shoulder, horizontal curves. (P, NCHRP)	Engineering
	2.2 Implement corridor safety model at high-crash locations where data indicates a high incidence of distracted crashes. (R, DDACTS)	Leadership/Policy, Education, Engineering, Enforcement
3. Increase driver awareness of the risks of distracted driving	3.1 Conduct statewide distracted driving high-visibility enforcement campaigns. (P, CTW)	Enforcement, Education
	3.2 Add distracted driving information and questions to driver license test and guide. (R, GHSA)	Leadership/Policy
	3.3 Promote applications which shut off or limit phones while driving. (U)	Education
	3.4 Encourage large employers to implement employee bans/agreements on cell phone use and other distracted driving behaviors. (U)	Leadership/Policy
4. Increase/strengthen fines and assist in improved adjudication of distracted driving citations	4.1 Classify distracted driving offenses as “moving violations” so they affect insurance rates. (U)	Enforcement, Leadership/Policy
	4.2 Visibly enforce existing statutes to deter distracted driving. Consider increasing penalties for distracted driving collisions. (U)	Enforcement, Leadership/Policy
	4.3 Have Rule 9 interns appear in traffic infraction court. (U)	Enforcement

Continued on next page.

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
5. Strengthen distracted driving laws	5.1 Modify existing cell phone law to clarify “when a car is running on a public roadway” to clear up ambiguity about use at traffic lights, etc. (U)	Leadership/Policy
	5.2 Align current cell phone law with commercial vehicle statute; no device in hand at all. (U)	Leadership/Policy
	5.3 Encourage cities/counties to pass ordinances that are tougher than the state law. (U)	Leadership/Policy

P = Proven **R = Recommended** **U = Unknown**

CTW = Countermeasures That Work

DDACTS = Data Driven Approaches to Crime and Traffic Safety

GHSA = Governor’s Highway Safety Association

NCHRP = National Cooperative Highway Research Program

WSDOT = Washington State Department of Transportation

WTSC = Washington Traffic Safety Commission

Additional Resources

Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices, 7th Edition, Chapter 4 (National Highway Traffic Safety Administration),

<http://www.nhtsa.gov/staticfiles/nti/pdf/811727.pdf>

NCHRP Report 500, Volume 14: A Guide for Reducing Crashes Involving Drowsy and Distracted Drivers (National Cooperative Highway Research Program, Transportation Research Board),

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v14.pdf

Washington State laws (RCWs) relating to distracted drivers:

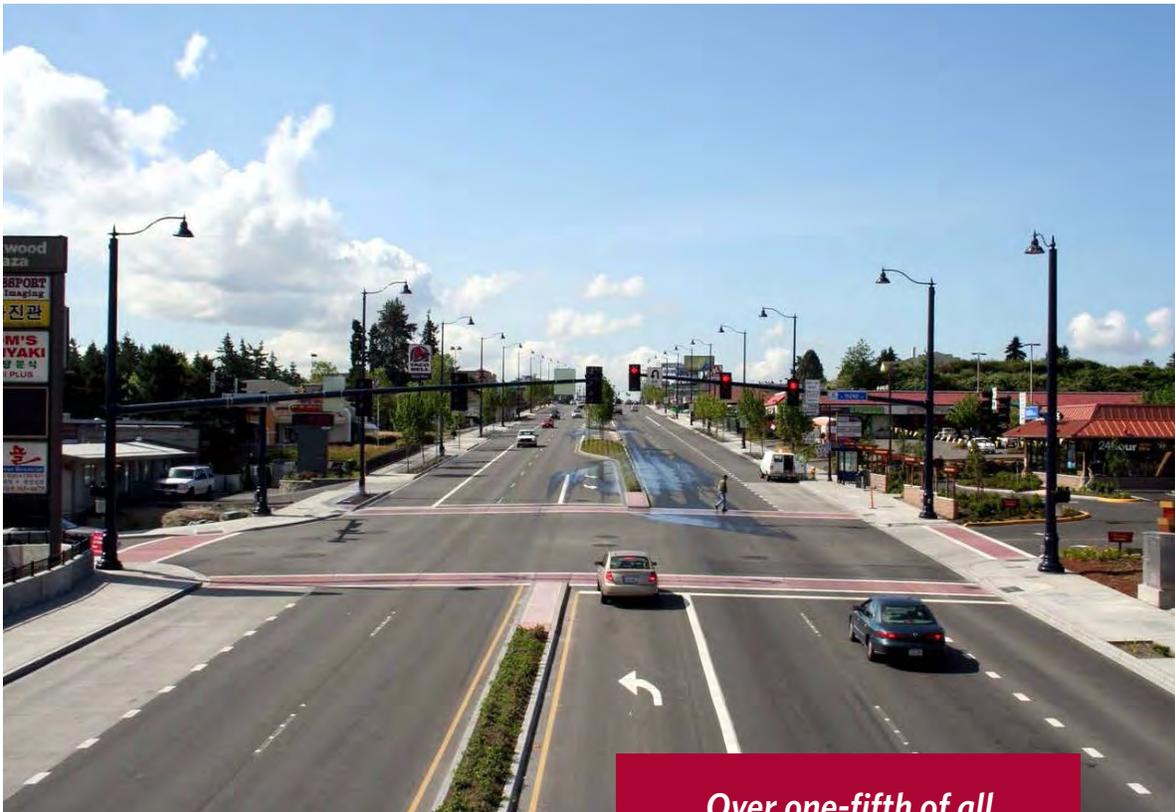
- RCW 46.61.667 - Holding a wireless communications device to ear while driving.
- RCW 46.61.668 - Sending, reading, or writing a text message while driving.
- RCW 46.20.055 - Using a wireless device of any kind during permit phase of licensure.
- RCW 46.20.075 - Using a wireless device of any kind while in intermediate driver license status.
- RCW 46.52.060 - Tabulation and analysis of reports - Availability for use.

Intersection Related

Executive Summary

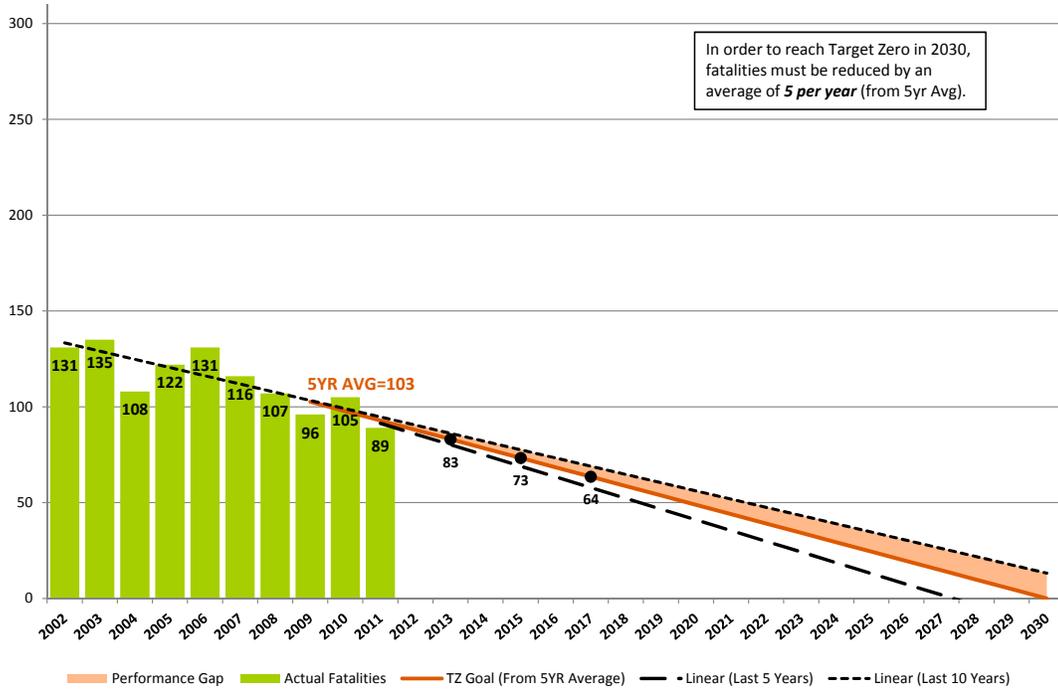
While declining at a rate similar to overall fatalities and serious injuries, intersection related collisions have been elevated to the Priority One Level. This is primarily due to the number of serious injuries occurring at intersections. From 2009-2011 more than one-fifth of fatalities and one-third of all serious injuries were intersection related.

Forty-four percent of fatal and serious injury collisions at intersections came from “T-bone” and “left turn” angle collisions. Nineteen percent were from pedestrians being hit. Implementing current intersection safety technologies, including roundabouts and flashing yellow arrows, while also focusing more on pedestrians, will help to achieve Target Zero for intersection related collisions.

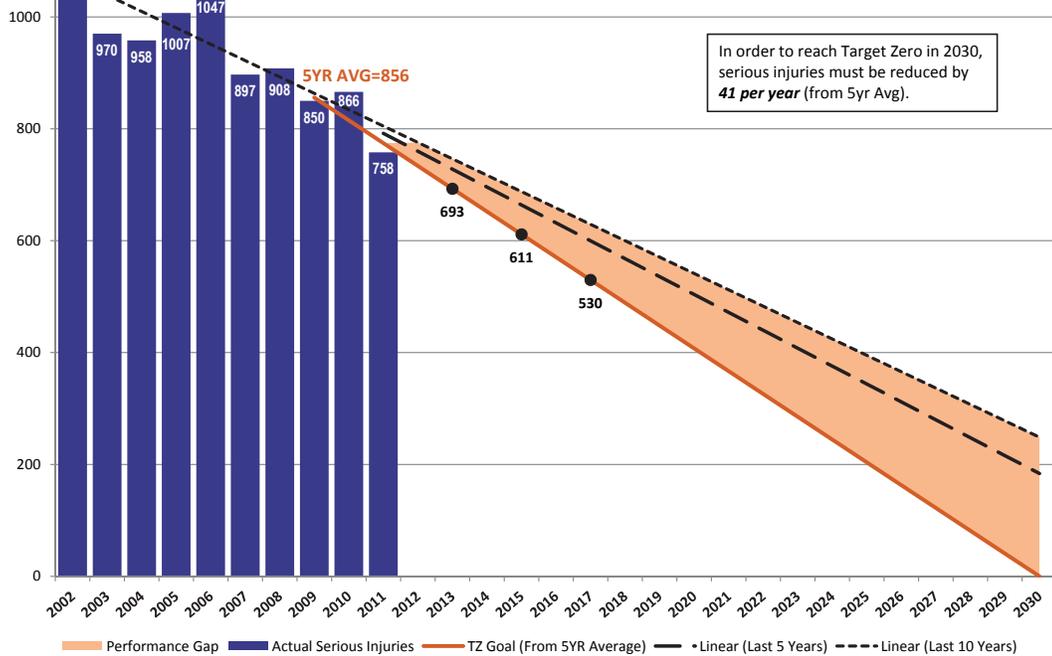


Over one-fifth of all Washington traffic fatalities, and one-third of serious injuries, were intersection related.

Intersection Related Fatalities 2002-2011



Intersection Related Serious Injuries 2002-2011



Background

For intersection related collisions there was a combined 13% decrease in fatal and serious injury collisions (20% decrease in fatal collisions and 12% decrease in serious injury collisions), when comparing 2009-2011 to 2006-2008. This is similar to the overall decline rate for fatalities and serious injuries. To achieve Target Zero for intersection related collisions, there needs to be five fewer fatalities and 41 fewer serious injuries each year until 2030.

There are many kinds of intersection related collisions. From 2009-2011, the top types of fatal or serious injury intersection related collisions were:

- Angle (T-bone) - 29%
- Hit pedestrians - 19%
- Angle (left turn) - 14%
- Rear-end with - 12%
- Hit bicyclists with - 8%

The greatest number of these collisions occurred on city streets. Looking at fatal and serious injuries combined from 2009-2011, 60% of intersection related collisions were on city streets, resulting in 130 fatalities and 1,492 serious injuries. Another 22% (88 fatalities and 553 serious injuries) were on state highways and 17% (70 fatalities and 419 serious injuries) were on county roads. See the charts for intersection related collisions by jurisdiction (page 78) for annual fatality and serious injury break outs.

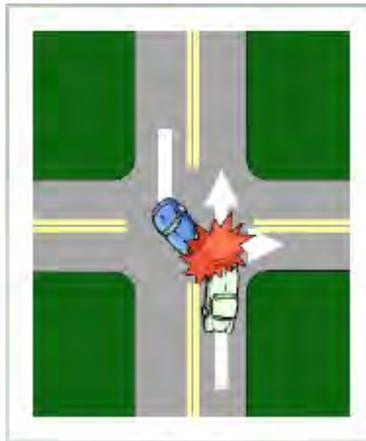
Protected Left Turn = At a traffic signal, left turns that have a green arrow are protected (no other conflicting vehicles or pedestrians are being allowed to go).

Permitted Left Turn = At a traffic signal, left turns that do not have a green arrow are permitted (other conflicting vehicles or pedestrians are also being allowed to go).

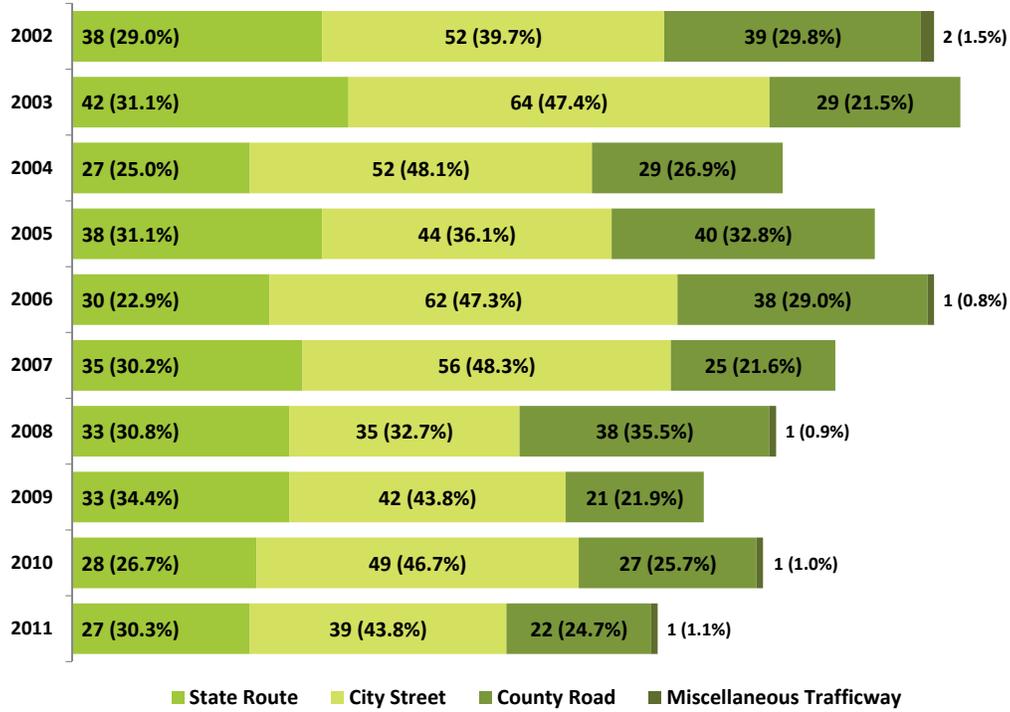
Angle (T-bone) Collision



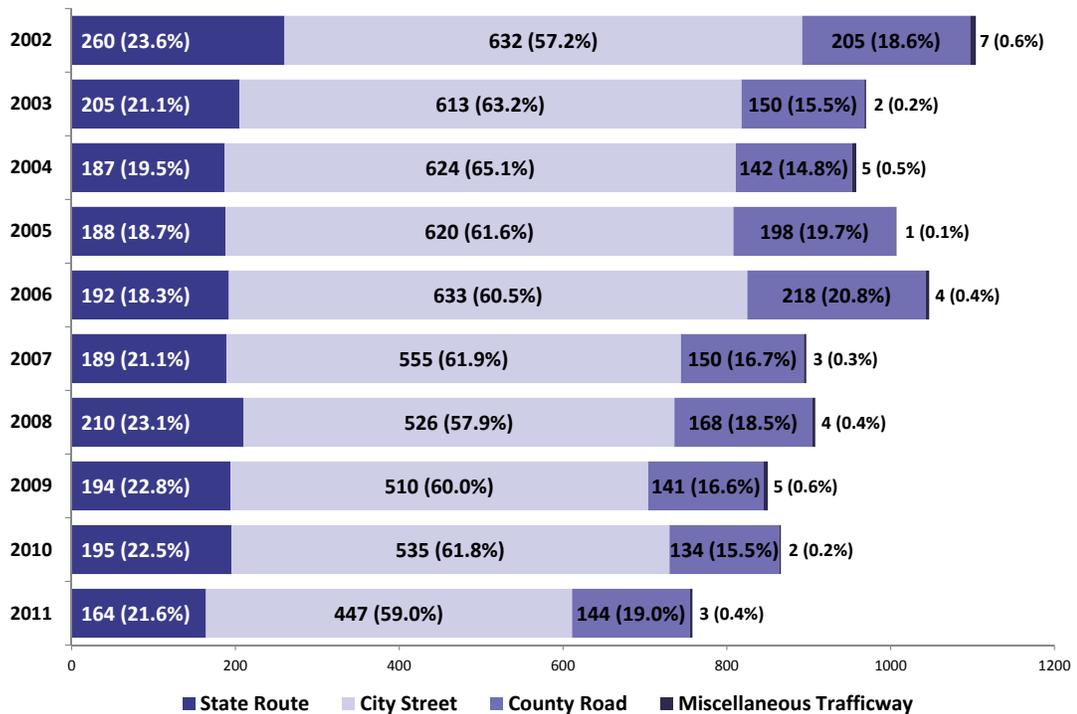
Angle (Left Turn) Collision



Intersection Related Fatalities by Jurisdiction 2002-2011



Intersection Related Serious Injuries by Jurisdiction 2002-2011



Contributing Circumstances and Factors

From 2009-2011, the top contributing circumstances in fatal or serious injury intersection related collisions were failing to yield (39%), speeding (16%), impairment (14%), driver inattention or distraction (13%) and running red lights (11%).

There are two major types of failure to yield. Failing to yield to vehicles was involved in 26% of fatal and serious injury collisions. Failing to yield to a pedestrian or bicyclist was involved in another 13% of fatal and serious injury collisions.

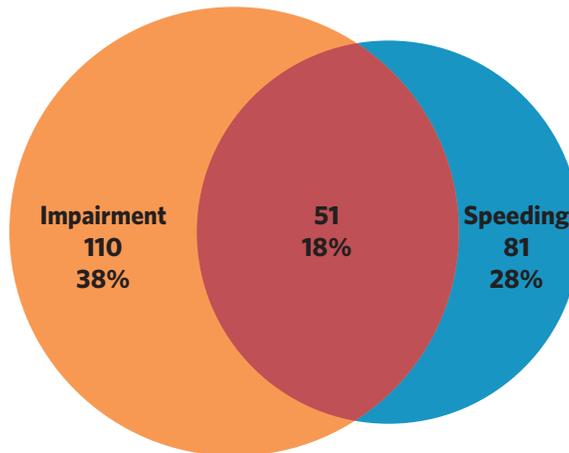
Impairment and speeding are more likely to be factors in fatal intersection related collisions than in serious injury collisions. Impairment was involved in 35% of fatal collisions (contributing to 38% of intersection fatalities) and speeding in 27% of collisions (contributing to 28% of intersection fatalities). Impairment is underreported

in serious injury collisions (although documented in 12% of collisions) compared to fatalities, where impairment is confirmed by toxicology.

Speeding was noted in 15% of serious injury intersection collisions. For fatal and serious injury collisions combined, impairment is involved in 14%, contributing to 16% of fatalities, and speeding in 16%, contributing to 18% of fatalities.

Driver inattention or distraction, involved in 13% of collisions, is likely underreported yet still contributed to 32% of intersection related fatalities and 11% of serious injuries. A significant percentage of bicyclist and pedestrian fatalities and serious injuries occur at intersections. From 2009-2011, 55% of bicyclist fatalities and serious injuries occurred at intersections (54% of fatalities and 55% of serious injuries). For pedestrians, over 45% of fatalities and serious injuries occurred at intersections (32% of fatalities and 55% of serious injuries).

Intersection Related Fatalities Total = 290



Of the 290 intersection related fatalities 2009-2011, 38% also involved impairment and 28% involved speeding. Combined, 18% of these fatalities involved both impairment and speeding.

Programs and Successes

Several high- and low-cost strategies can reduce collisions at intersections. Many low-cost strategies make changes to existing traffic controls (signals or signs), such as modifying signal timing or adding flashing beacons to signs. Higher-cost strategies often involve changing traffic control devices, such as converting signs to signals or roundabouts, or converting signals to roundabouts. A balanced approach of making systematic low-cost improvements area-wide, in addition to addressing key locations with higher-cost improvements, can have the greatest impact in reducing collisions.

Roundabouts

Converting intersections to roundabouts has been shown to reduce fatal and serious injury collisions by 90% (Transportation Research Record 1751, 2001). In Washington similar results – an 80% reduction – have been found (WSDOT Gray Notebook 27, 2007). There are currently 245 roundabouts installed across the state, including both urban and rural locations.

Left Turn Flashing Yellow Arrows

One of the most recently embraced low-cost improvements is using flashing yellow arrows at “permitted” (not protected with a green arrow) left turns. This helps prevent drivers from seeing a green ball for the permitted left turn, and assuming they can proceed even when there is opposing traffic. The flashing yellow arrow helps to more appropriately display that a left turn should be made with caution.

Depending upon the location in the state, some agencies have made complete conversions to the flashing yellow arrow for all appropriate locations. Many other agencies have begun to convert some of their locations to use this display. While most installations of flashing yellow arrows are new, one study of locations in Washington, Oregon and North Carolina showed a 19% decrease in left turn collisions when converting from protected and permitted left turns to the flashing yellow arrow (Srinivasan et. al., 2011).

Pedestrians

Significant progress has yet to be made in reducing pedestrian fatalities and serious injuries at intersections. This is the only area out of the top collision types at intersections that has not improved during 2009-2011 compared to 2006-2008. Rather than a decrease, the total number of intersection related pedestrian fatal and serious injury collisions has increased by 2%. Although fatal collisions decreased from 69 to 61, the number of serious injury collisions increased from 393 to 411.

Addressing pedestrian collisions at intersections has the potential to have a significant impact on intersection and pedestrian safety. (See section on Pedestrians on page 120 for programs being implemented to address pedestrian safety.)



Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
1. Reduce motor vehicle collisions at intersections	1.1 Install or convert intersections to roundabouts. (P, NCHRP)	Engineering
	1.2 Optimize traffic signal clearance intervals. (P, NCHRP)	Engineering
	1.3 Provide/improve left- and right-turn channelization. (P, NCHRP)	Engineering
	1.4 Install illumination at locations with night time crashes. (P, NCHRP)	Engineering
	1.5 Convert permitted left turns to protected left turns at signals. (P, HSM)	Engineering
	1.6 Remove unwarranted signals. (P, NCHRP)	Engineering
	1.7 Employ signal coordination. (P, NCHRP)	Engineering
	1.8 Employ flashing yellow arrows at signals. (P, CMF)	Engineering
	1.9 Restrict or eliminate turning maneuvers at intersections. (R, NCHRP)	Engineering
	1.10 Implement restricted access to properties/driveways adjacent to intersections using closures or turn restrictions. (R, NCHRP)	Engineering, Leadership/Policy
	1.11 Provide skid resistance in intersections and on approaches. (R, NCHRP)	Engineering
	1.12 Improve visibility of intersections by providing enhanced signing and delineation. (R, NCHRP)	Engineering
	1.13 Provide dynamic intersection warning (real-time) to drivers on mainline or side streets of conflicting vehicle traffic at rural intersections. (U)	Engineering
2. Improve driver compliance at intersections	2.1 Implement automated enforcement (photo red cameras) of red-light running at locations with angle crashes. (P, NCHRP)	Enforcement, Engineering, Leadership/Policy
	2.2 Provide targeted speed enforcement. (P, NCHRP).	Enforcement
	2.3 Provide targeted conventional traffic law and stop sign/signal enforcement at intersections and intersection approaches. (R, NCHRP)	Enforcement
	2.4 Implement automated enforcement (cameras) of approach speeds. (R, NCHRP)	Enforcement, Engineering, Leadership/Policy

Continued on next page.

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
3. Improve driver awareness of intersections	3.1 Redesign intersection approaches to improve sight distances. (P, NCHRP)	Engineering
	3.2 Add back plates with retro-reflective borders to signals. (P, CMF)	Engineering
	3.3 Provide advance warning of intersections using dynamic signal warning flashers or actuated advance warning dilemma zone protection systems at high-speed signalized intersections. (P, CMF)	Engineering
	3.4 Improve visibility of intersections on approaches. (R, NCHRP)	Engineering
	3.5 Improve visibility of signals and signs at intersections. (R, NCHRP)	Engineering
	3.6 Install transverse rumble strips on intersection approaches. (R, NCHRP)	Engineering
	3.7 Provide targeted public information and education on safety problems at specific intersections. (R, NCHRP)	Education
4. Reduce vehicle collisions involving pedestrians and bicyclists at intersections	4.1 Improve safety at pedestrian crossings by installing refuge islands, scale lighting, and shortening crossing distances. (R, CMF)	Engineering
	4.2 Expand targeted crosswalk enforcement and education for both vehicles and pedestrians. (R, CTW)	Enforcement, Education
	4.3 Improve sight distances and/or visibility between motor vehicles and pedestrians at high risk and high volume pedestrian crossings. Move the stop bar farther back from the intersection, clear vegetation, extend crossing times, and implement pedestrian lead intervals. (U)	Engineering
	4.4 Upgrade pavement markings using high visibility crosswalks and bicycle lanes. (U)	Engineering
	4.5 Install bicycle lanes and bicycle boxes. (U)	Engineering
	4.6 Implement Complete Streets to provide for all modes of transportation. (R, NCSC)	Leadership/Policy, Engineering

P = Proven **R = Recommended** **U = Unknown**

CMF = Crash Modification Factors

CTW = Countermeasures That Work

HSM = Highway Safety Manual

NCHRP = National Cooperative Highway Research Program

Additional Resources

Crash Modification Factors Clearinghouse, <http://www.cmfclearinghouse.org/>

Intersection Safety Resources (Federal Highway Administration), <http://safety.fhwa.dot.gov/intersection/>

NCHRP Report 500, Volume 5, A Guide for Addressing Unsignalized Intersection Collisions, (National Cooperative Highway Research Program, Transportation Research Board),
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v5.pdf

NCHRP Report 500, Volume 10, A Guide for Reducing Collisions Involving Pedestrians, (National Cooperative Highway Research Program, Transportation Research Board),
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v10.pdf

NCHRP Report 500, Volume 12, A Guide for Reducing Collisions at Signalized Intersections, (National Cooperative Highway Research Program, Transportation Research Board),
http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_500v12.pdf

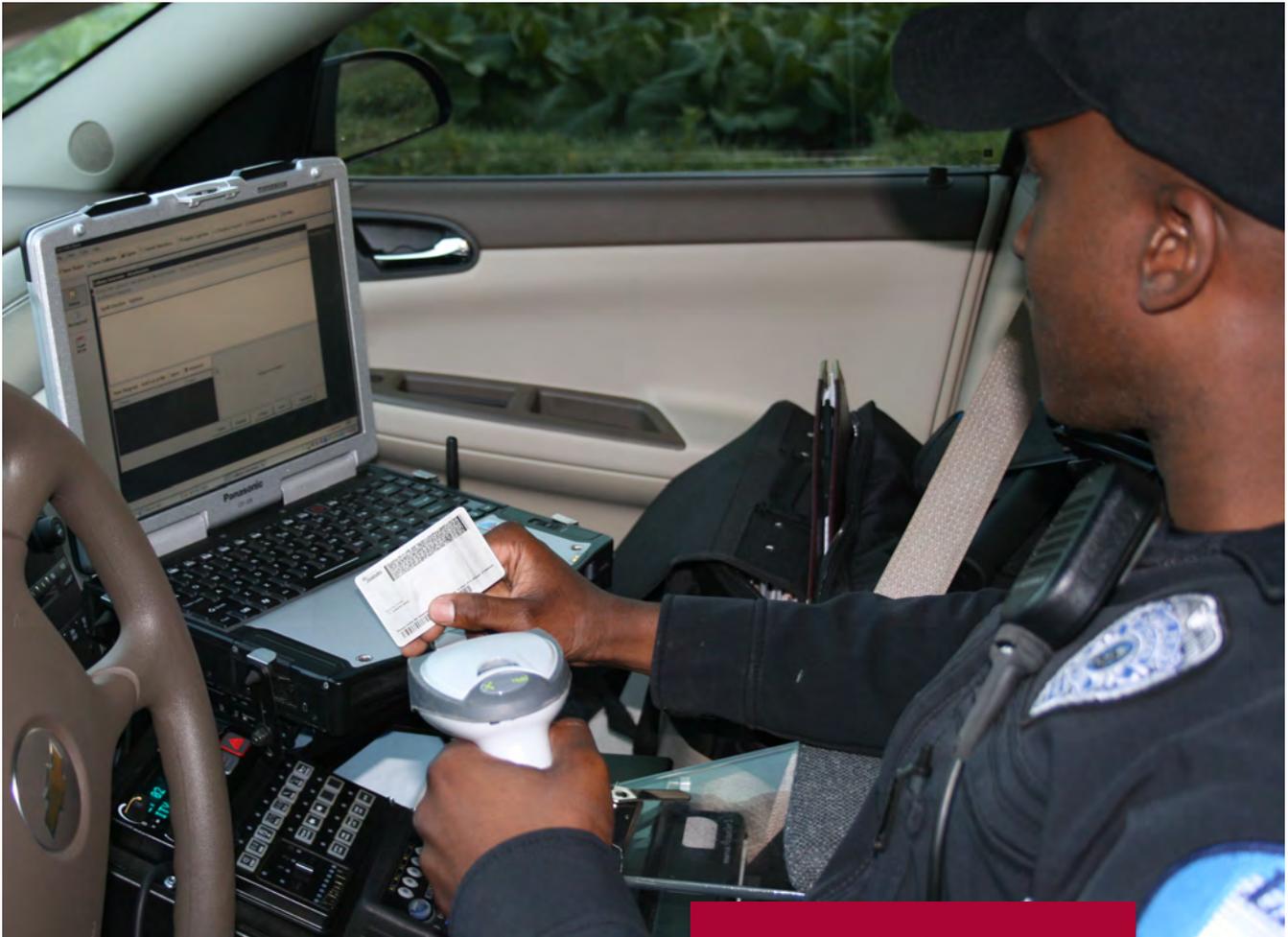
Q&A: Roundabouts (Insurance Institute for Highway Safety),
<http://www.iihs.org/research/qanda/roundabouts.aspx>

The Gray Notebook, Edition 27 (Washington State Department of Transportation),
<http://wsdot.wa.gov/publications/fulltext/graynotebook/Sep07.pdf>



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Traffic Data Systems



*As of July 2013,
70% of tickets and
collisions are processed
electronically statewide.*

Executive Summary

Target Zero is a data-driven approach to reducing traffic fatalities and injuries. Timely, accurate, integrated, and accessible data is the foundation for targeting resources and monitoring progress toward zero traffic fatalities and serious injuries by 2030. Quality data is essential in the ever evolving need to diagnose the contributing factors to crashes and assessment of implemented countermeasures. The data assists in identification of innovative and targeted strategies in areas that will have the greatest impact on achieving our goal.

Background

Washington’s traffic information and support data systems are comprised of hardware, software, and accompanying processes that capture, store, transmit, and analyze a variety of data. The following information is used to make up Washington’s Traffic Records System:

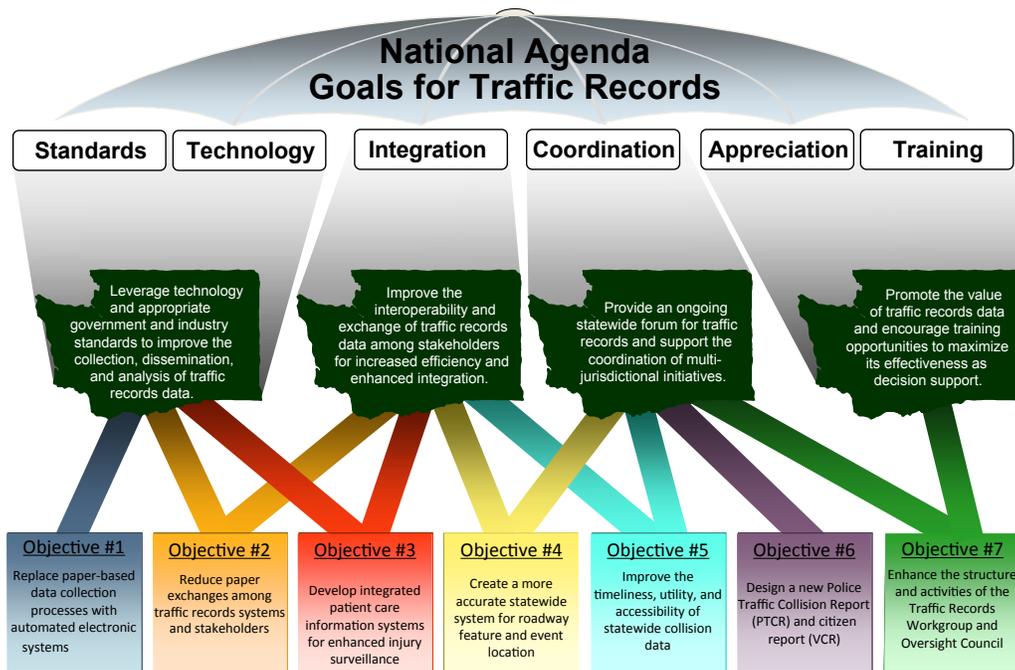
- Traffic fatalities and serious injuries
- All statewide traffic collisions
- Driver citations
- Criminal history and judicial outcome data
- Driver licenses and registered vehicles
- Commercial motor vehicles
- Emergency Medical Systems
- Vital statistics
- Trauma and inpatient hospital records
- Roadway geometrics and features
- Traffic volumes, traffic mix and freight
- Location information via Geographic Information Systems
- Population estimates

The Washington Traffic Records Committee

The Washington Traffic Records Committee (TRC) is a partnership of federal, state, local, and tribal stakeholders from transportation, law enforcement, criminal justice, and health disciplines. The statewide TRC was created to foster collaboration and facilitate the planning, coordination, and implementation of projects which will improve the state’s traffic records system. The TRC website may be accessed at <http://trafficrecords.wa.gov/> and contains the TRC Strategic Plan and current project portfolio.

Each component of Washington’s Traffic Records System provides key information for diagnosing the contributing factors to collisions and decision support related to public and transportation safety. The information enhances management and accountability in public service by gauging progress toward key measures of performance.

Washington’s Strategic Direction



Washington’s strategic goals (shown in dark green) and the resulting objectives are driven by the National Agenda for the Improvement of Highway Safety Information Systems (http://www.atsip.org/committees/documents/natagenda/National_Agenda.pdf)

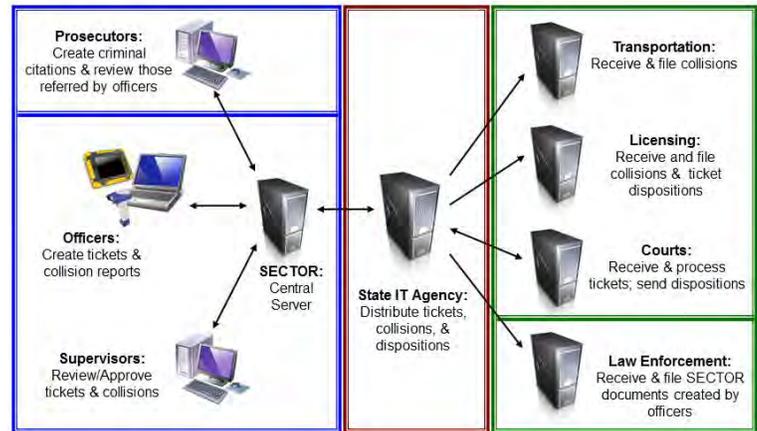
Programs and Successes

Electronic Ticketing and Collision Reporting Program (eTRIP)

The eTRIP Initiative is a series of projects coordinated by the TRC and implemented by various state and local agencies. It's designed to create a seamless and integrated system for collision reports and tickets, as well as a way for information on subsequent activity on those events to be disseminated to agencies. This significantly reduces the inefficiencies of the paper-based system. The following diagram provides a conceptual illustration of how the eTRIP Initiative functions:

There has been significant adoption of the electronic records systems statewide since 2010. As of July 2013, 202 or 73% of all law enforcement agencies in Washington are using the Statewide Electronic Collision and Ticket Online Records (SECTOR). Agencies have benefitted in many ways, including:

- For law enforcement, use of SECTOR resulted in a 15% reduction in the total time of a collision response or traffic stop through reduced data entry time
- Court staff have reported a reduction in ticket errors and can process SECTOR infractions 80% faster than paper-filed infractions
- The Washington State Department of Transportation (WSDOT) receives SECTOR collision reports approximately 85% faster than paper reports, usually within one day of the collision
- SECTOR collision reports are also processed 40% faster, and fewer than 1% are returned to officers for corrections, compared to 11% for paper reports
- The Washington State Department of Licensing (DOL) can completely automate creation of citizen reports for Financial Responsibility cases with SECTOR collision reports and 98% of electronically submitted dispositions post to the DOL driver database without any action by DOL staff



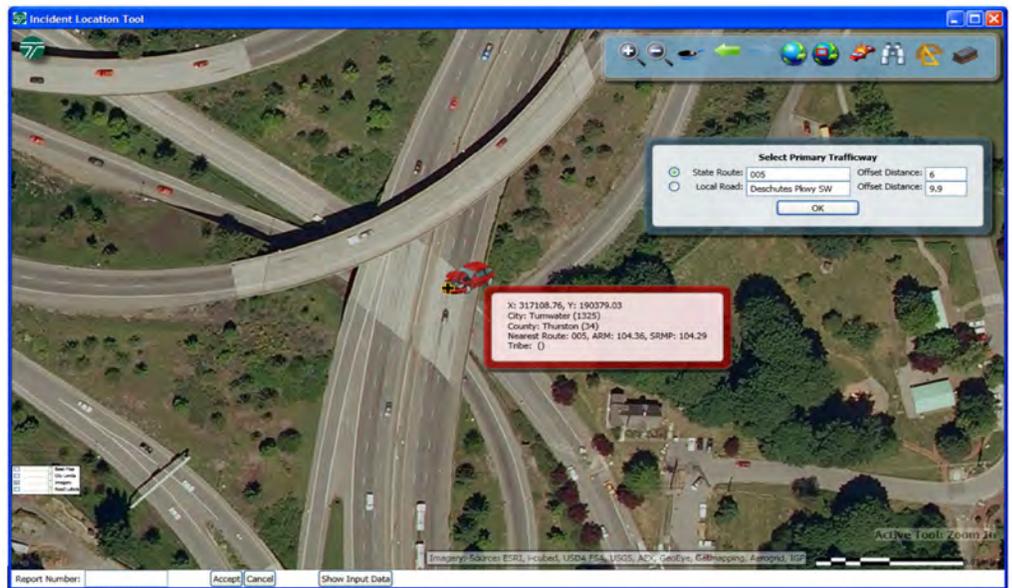
Pictured from left: Assistant Chief Jim Lever, WSP; Marcus Bailey, DOL; Mike Martin, DOL; Tom Wallace, WSP; Deputy Chief David Karnitz, WSP; Lowell Porter, WTSC Director; Keri Sullivan, WTSC; Dirk Marler, AOC; Doug Mah, Office of the Chief Information Officer; John Rosen, WSDOT and Warren Stanley, WSDOT.

The functionality of the electronic system continues to expand to benefit users. Tickets and collision reports can now move seamlessly to agencies' Records Management Systems. Prosecutors can now access tickets and collisions reports directly.

This type of progress is attributable to the group of operation managers from seven agencies and organizations that meet weekly, and the dedicated system support group that works continually to address technical problems and provide user enhancements. The system has been so successful that Washington State was nationally recognized with the Council of State Governments' 2011 Innovation Award.

Data Integration

The TRC has a Data Integration Subcommittee to promote the integration of different data records to create a population-based, comprehensive and representative crash outcome dataset. Data integration enhances data's value beyond the limited, agency-specific purpose for which it was initially gathered. Linked together, data provides a more complete picture of crash causes and outcomes.



Furthermore, utilizing health care provider assessments of injury severity will significantly enhance the quality and accuracy of collision data, which guides the state's public safety investments in both behavioral and roadway improvement programs. This comprehensive information is needed to develop best practice traffic safety strategies and countermeasures, and evaluate their effectiveness.

Since the last edition of Target Zero, the data integration subcommittee supported two proof of concept projects. The first involved linking three years of collision data from the Collision Location and Analysis System (CLAS) to Washington Trauma Registry data. In the second, one year of emergency department data from seven hospitals was linked to collision data from CLAS.

Both of these projects included analysis of the clinical accuracy by on-the-scene officers in assessing injuries. Both revealed serious injuries are both over and underestimated by officers, resulting in about 40% accuracy for serious injury assessment. Currently, data collected by officers at the scene are the only source of traffic serious injury data, and it's highly relied upon for problem identification, resource allocation and targeting.

The Data Integration Subcommittee is currently proceeding with the development of linkage procedures for the initial phase of developing an integrated traffic records system. This initial phase will link collision and health records. The second phase of the project will include broad analysis to demonstrate the value of the linked information. Throughout the project, the Data Integration Subcommittee continuously informs the TRC and provides recommendations for action outside the scope of the subcommittee.

Incident Location Tool

WSDOT recently developed the Incident Location Tool (ILT) which could be implemented as early as 2014. The ILT will greatly increase WSDOT's efficiency and accuracy in processing collision records by replacing the less productive method of using online map resources to verify collision locations. The tool is used to query map layers and automatically populate several database fields such as city, county, Tribal reservation name, roadway name, milepost, and the direction and distance to the cross street nearest to the collision location.

The ILT also captures the latitude and longitude of the collision, allowing collisions to be geocoded to map-based software, such as ArcGIS. This provides advanced spatial analysis opportunities for the traffic safety community. WSDOT will share the tool with Washington State Patrol and other local law enforcement officers to ensure accurate data collection while in the field.

Emergency Department Data System

In 2011, the Washington State Department of Health (DOH) completed a pilot study on the feasibility and utility of establishing a statewide emergency department (ED) data system using the existing CHARS (hospital inpatient discharge billing records) infrastructure. While the pilot was successful, the Health Information Exchange (HIE) is being implemented in Washington and may fill the need for ED data and be even more comprehensive and detailed than an administrative data system would be. For this reason an ED data system has been postponed to allow for further development of the HIE.

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
1. Expand the capabilities and use of the eTRIP system for electronic data generation, transfer, filing, reporting, and analysis	1.1 Develop new features in SECTOR to address user needs, including additional ticketing options and report types. Expand SECTOR software edit checks to enhance reporting accuracy and consistency. (R, eTRIP GT)	Leadership/Policy, Enforcement
	1.2 Expand prosecutors' use of SECTOR statewide to create, review, amend, and electronically file criminal cases with the courts. (R, TRC)	Leadership/Policy, Enforcement
	1.3 Increase the number of electronic tickets and collision reports through expanded adoption and agency-wide implementation of SECTOR. (R, TRC)	Leadership/Policy, Enforcement
	1.4 Incorporate the incident location tool (ILT) component into SECTOR to enhance accurate reporting of location data. (R, TRC)	Leadership/Policy, Enforcement, Engineering
	1.5 Provide officers with roadside access to driver and vehicle history information through SECTOR. (R, TRC)	Leadership/Policy, Enforcement
	1.6 Expand the use of the Justice Information Network Data Exchange (JINDEX) system to electronically disseminate ticket, collision, and disposition data to state and local records management systems. (R, TRC)	Leadership/Policy, Enforcement
	1.7 Create a maintenance and support model for SECTOR that further that improves operations, speeds change request implementation, and enhances user support. (R, eTRIP GT)	Leadership/Policy
	1.8 Develop an electronic system for DUI reporting and tracking. (R, NHTSA)	Leadership/Policy, Enforcement
	1.9 Enhance SECTOR functionality to allow violations bureaus (not part of the state JIS system) to electronically process tickets from SECTOR to DOL. (R, TRC)	Leadership/Policy
	1.10 Expand Violation Bureaus use of JIS to electronically process tickets (R, TRC)	Leadership/Policy
2. Develop and expand integrated traffic information systems and enhance injury surveillance	2.1 Derive a more accurate classification of injury severity based on clinical assessments from medical records to augment the investigating officer's assessment of traffic collision injury severity. (P, CODES)	Leadership/Policy, EMS
	2.2 Initiate a statewide Emergency Department Data System to enhance Injury Surveillance capabilities. (P, CODES)	Leadership/Policy, EMS
	2.3 Create a central repository for integrated, linked data records including collision records, health (EMS, Trauma, CHARS) records, court records, licensing records, and state toxicology records. (P, CODES)	Leadership/Policy, EMS
	2.4 Increase EMS reporting by first responders throughout the state to the Washington Emergency Medical Services Information System (WEMISIS). (R, DOH)	Leadership/Policy, EMS Leadership/Policy,
	2.5 Implement Data-Driven Approaches to Crime and Traffic Safety (DDACTS) model in local law enforcements agencies statewide. (R, DDACTS)	Enforcement
	2.6 Make system changes necessary at WSDOT and DOL to enable analysts to identify unlicensed drivers involved in serious injury collisions.(R, DDACTS)	Leadership/Policy

Objectives & Strategies		
Objectives (What)	Strategies (How)	Implementation Arena(s)
3. Improve data quality through reporting timeliness, data collection consistency, and data accuracy	3.1 Develop a linear referencing system (LRS) for remaining public roadways without a LRS to maintain geospatial location data, improve location accuracy and advance overall integration. (P, NSDI EO12906)	Leadership/Policy
	3.2 Educate data reporting agencies about state/federal timeliness reporting statutes and increase enforcement of these statutes. (P, WTSC)	Leadership/Policy, Education
	3.3 Revise the Police Traffic Collision Report, including both SECTOR and paper reports, to improve nomenclature and ensure business needs are met with stakeholder involvement. (R, TRC)	Leadership/Policy, Enforcement
	3.4 Provide more frequent and enhanced traffic safety trend reporting. Present data/trends in a manner that is easy to understand and is actionable. (R, DDACTS)	Leadership/Policy, Education
4. Enhance the structure and activities of the TRC	4.1 Develop a meaningful and valid set of traffic records performance measures to gauge the timeliness, completeness, accuracy, and integration of traffic safety data. (R, DDACTS)	Leadership/Policy
	4.2 Support training opportunities to enhance traffic safety data analysis and research skills. (U)	Leadership/Policy

P = Proven

R = Recommended

U = Unknown

CODES = Crash Outcomes Data Evaluation System

DOH = Washington State Department of Health

NHTSA = National Highway Traffic Safety Administration

TRC = Traffic Records Committee

DDACTS = Data Driven Approaches to Crime and Traffic Safety

eTRIP GT = eTRIP Governance Team

NSDI EO12906 = National Spatial Data Infrastructure, Executive Order 12906

Additional Resources

Association of Transportation Safety Information Professionals Website, www.atsip.org

Fatal Analysis Reporting System (National Highway Traffic Safety Administration), <http://www.nhtsa.gov/FARS>

International Association of Chiefs of Police Technology Clearinghouse, www.iacptechnology.org

Model Minimum Uniform Crash Criteria (US Dept. of Transportation and Governors' Highway Safety Association), www.mmucc.us

National Emergency Medical Services Information System (NEMSIS) Website, www.nemsis.org

NHTSA Traffic Records Website (National Highway Traffic Safety Administration), <http://www.nhtsa-tsis.net/>

Traffic Records Assessment Program Advisory (National Highway Traffic Safety Administration), http://www.nhtsa-tsis.net/stateAssessments/docs/NHTSA_TRProgram_Assessment_Advisory_811644.pdf

Washington State Traffic Records Strategic Plan (Washington State Traffic Records Committee), http://trafficrecords.wa.gov/AboutTRC/Docs/wa_trs_an_overview.pdf

Washington State Traffic Records Website (Washington State Traffic Records Committee), <http://trafficrecords.wa.gov>

Washington Traffic Records Committee Resource Manual (Washington Traffic Safety Commission, 2004), www.trafficrecords.wa.gov/AboutTRC/Docs/trc_docs/traffic_records_resource_manual.pdf

