

The Relationship Between Speed and Alcohol Washington State Patrol, 2011

	Daytime Speed Stops	Nighttime Speed Stops
Speeding original violation	225,607	94,509
Resulted in a DUI arrest	238	2,451
Percentage	0.1	2.5

Initial DUI Violations Washington State Patrol, 2011

Weighted Rank	Violation	% Chance of DUI	DUI Arrests
1	Lane Travel	9	2,348
2	Speed	3	2,432
3	Centerline	11	205
4	Shoulder	9	228
5	Turning	8	207

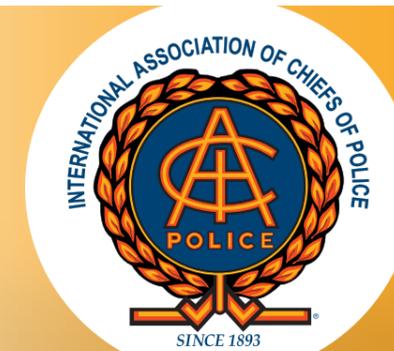
Initial DUI Violations WSP TZT Teams, 2011

Weighted Rank	Violation	% Chance of DUI	DUI Arrests
1	Lane Travel	22	334
2	Speed	12	408
3	Other Violations	25	45
4	Turning	22	35
5	Light Violations	7	98



Washington State Patrol

Speed and Alcohol In Brief



Analyzing Success

The Washington State Patrol (WSP) uses data-driven deployment to advance its goal of reducing traffic fatalities from speed and alcohol.

“The bread and butter of our organization is traffic safety,” says Lt. E.J. Swainson of the WSP. “The reason for that is that [motor vehicle collisions] kill more of our citizens than almost anything other than cancer and heart attacks.”

The National Highway Traffic Safety Administration ranks motor vehicle collisions among the top 10 causes of death for all Americans under age 65, and the 11th leading cause of death across all age groups.

Especially lethal are speed and alcohol, which combined caused 91 percent of all traffic fatalities in Washington State between 2006 and 2010. Of the 2,677 traffic fatalities during that period, 1,333 were caused by impaired driving and 1,079 percent by speeding.

“Impaired driving was responsible for 50 percent and speed was responsible for 41 percent,” explains Swainson, who notes a significant overlap in the data. “Seven hundred and thirty-two traffic fatalities, or 27 percent, involved both impaired driving and speed.”

The overlap convinced WSP that reducing traffic fatalities in the Evergreen State would require a dual focus

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on speed and DUI enforcement. “There was no doubt that impaired driving and speed were major problems, not just for us, but nationwide,” Swainson continues. “The question we were asking was, How do we address these problems?”

As it turns out, the correct question wasn’t how, but rather when. “An overwhelming majority of our speed enforcement program is during the day,” Swainson explains, “but the speed that’s most likely to cause a death is speed that’s mixed with alcohol at night.” Because data so clearly illustrated the problem, WSP hypothesized that data also could hold the solution.

Deployment Based on Analysis

Long before they could do it electronically, law enforcement agencies were charting crimes manually with pins on maps in order to isolate trends and visualize targets.

In pursuit of more effective DUI enforcement, WSP’s District 7 decided to evolve that concept from a tactical exercise to a strategic one. In 2008, therefore, it launched the WSP Nighttime Emphasis Enforcement Team (NEET), a nighttime DUI squad that not only tracked data, but also used it, deploying troopers at specific times and to specific locations based on DUI fatalities and arrests. The goal of NEET, which was modeled after the New York City Police Department’s

successful CompStat system, was to concentrate DUI enforcement in the areas with the most DUI incidents in order to stop fatal collisions before they happened. “Troopers collected the information by hand, without the assistance of an analyst and without any special training,” Swainson says. “And yet, they were able to find enough information to reduce the fatality rate in their area by 40 percent [over 18 months].”

Based on District 7’s success, WSP partnered with the Washington Traffic Safety Commission to establish its Target Zero Trooper (TZT) program in July 2010 as part of Target Zero, Washington State’s strategic highway safety plan, which sets forth a vision to reduce traffic fatalities and serious injuries to zero by the year 2030. Supported by a federal grant for an initial two-year pilot period, the program included three TZT teams—each consisting of one sergeant and six troopers—in Washington State’s three most populous counties: King, Pierce and Snohomish.

“TZT teams have a dedicated mission and dedicated hours,” explains Swainson, who says TZT teams focus exclusively on DUI enforcement—including common traffic violations that lead to DUI arrests, such as speeding—and work only nighttime shifts, when impaired driving is most prevalent. This differs from standard troopers, who rotate between day and nighttime shifts and share in a variety of duties, ranging from traffic control to search and rescue. “Their sole mission in life is to get impaired drivers off the road.”

Like its predecessor, NEET, TZT’s guiding principle is what WSP calls “deployment based on analysis.”

“We took information and produced a report every 42 days for each of these teams focused on their geographical area,” Swainson says. “These reports geographically plotted where people had called in about a possible drunk driver, at what hour of the day and on what night of the week. When you plot that data over 42 days—along with where you made DUI arrests, once again with the locations, hours and days of the week—troopers can see where and when the problem exists.”

Naturally, troopers who know where and when the problem exists are better equipped to solve it.



“The goal of our TZT teams during their initial two-year pilot was to reduce the number of traffic fatalities in three counties by 80,” Swainson says. “At the conclusion of the pilot we were able to show that we actually saved 109 lives as a result of TZT teams’ deployment.”

Success Factors

From July 2010 to April 2012, TZT teams removed 5,529 impaired drivers from the roadways. This activity, combined with efforts from other WSP enforcement programs, resulted in a dramatic reduction in traffic fatalities: As of April 2012, total fatality collisions investigated by WSP were down 17 percent year to date while DUI-related fatalities were down 60 percent year to date.

“This has been a great success story for us,” says Swainson. In addition to deployment based on analysis—putting troopers in the right place at the right time—he attributes TZT’s results to several critical success factors, including

- **Dedicated mission:** Most WSP troopers rotate between day and nighttime shifts during which they have wide and varied responsibilities ranging from traffic control and collision investigation to disaster relief, search and rescue, and criminal apprehension. TZT teams, on the other hand, have just one responsibility—arresting impaired drivers—which allows them to develop expertise, increase enforcement and systematically target trends.

- **High visibility:** WSP’s standard police vehicle is a fully marked white patrol car. TZT teams, however, drive gray patrol cars. Although they’re also fully marked, they have internal lighting instead of external light bars. The result—a signature vehicle that motorists know and recognize—creates high-visibility enforcement that deters impaired driving, not to mention other crimes.

- **Zero-tolerance enforcement:** Contributing to high-visibility enforcement is TZT teams’ policy of stopping all violations observed—not just those with “classic” DUI symptoms such as lane travel and crossing the center line. This includes speed violations, which produce more DUI arrests for WSP troopers than any other initial violation and have the second highest probability of producing a DUI arrest in Washington State, behind only lane travel.

- **Elite troopers:** TZT troopers are “Jedi Knights” of DUI enforcement, according to Swainson, who says TZT troopers are hand-picked by district captains based on their demonstrated aptitude for identifying and apprehending impaired drivers. In 2011, their aptitude meant TZT troopers were more likely than normal WSP troopers to stop violations that resulted in a DUI arrest. Among normal troopers, for instance, lane travel, speed and turning violations had a nine percent, three percent and four percent chance, respectively, of resulting in a DUI arrest. Among TZT troopers, the probabilities were 22 percent, 12 percent and 22 percent, respectively.

- **Trained analysts:** Supporting TZT teams are two full-time analysts—a crime analyst and a geographic information systems (GIS) analyst—who are employed by WSP for the purpose of analyzing, interpreting and mapping collisions, fatalities and arrests, among other data points. Their expertise provides more accurate and complete intelligence, which, in turn, leads to more efficient and effective DUI enforcement.

- **Partnerships:** The Target Zero initiative includes four Es, of which “enforcement” is only one. The other three Es—“engineering,” “education” and “emergency medical services”—rely on partnerships with government agencies, schools, media and emergency personnel to change dangerous driving behaviors.

Key Achievements

TZT’s two-year pilot ended on June 30, 2012. Based on its success, the Washington State Legislature made the initial three TZT teams in King, Pierce and Snohomish counties permanent.

“The legislators were so impressed that they’ve made those teams part of our formal budget,” states Swainson, who says the Washington Traffic Safety Commission is currently applying for a federal grant that will fund an additional two-year pilot for TZT teams in two more counties—Spokane and Yakima—where the TZT model will be tested in the extreme weather and rural geography that’s common to eastern Washington. “Our hope is that the concept will prove itself yet again in those areas.”

Meanwhile, District 7 has begun tackling speed-related collisions and fatalities using the same approach that’s worked so well with impairment. Hoping to reduce speed-related fatality collisions, which increased by 100 percent in District 7 between 2010 and 2011, it launched a yearlong pilot project in April 2012 to deploy speed-related squads in previously identified hot zones based on analysis of traffic stops and radically driven vehicle reports.

“The problems that happen at 10 a.m. are different from the problems that happen at 10 p.m.,” explains Swainson, who says WSP plans to expand data-driven deployment across its mission as funding allows. “However, we believe many of the solutions are the same.”

Washington State Traffic Fatalities: 2006 – 2010

- **Total fatalities: 2,677**
- **Speed-related fatalities: 1,079 (41 percent)**
- **Impaired driving-related fatalities: 1,333 (50 percent)**
- **Fatalities involving both speed and impairment: 732 (27 percent)**