



TRAFFIC TECH

Technology Transfer Series

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Evaluation of the Washington State Target Zero Teams Project

Background

In late 2006, the Washington State Patrol (WSP) assembled a full-time, high-visibility saturation patrol called the Night Emphasis Enforcement Team (NEET). This pilot program, based in Snohomish County and funded by the Washington Traffic Safety Commission (WTSC), employed a detachment of troopers who focused their efforts almost exclusively on the enforcement of impaired driving and related traffic offenses (e.g., speeding and nonuse of seat belts). A 2012 NHTSA Research Note (Cicchino, 2012) indicated that traffic fatalities decreased by 40.3 percent in Snohomish County from 2005 (before the NEET program began) to 2008. In Washington State counties without NEET patrols, traffic fatalities decreased by 17.7 percent during that time.

Washington State expanded the NEET program by establishing three detachments of WSP troopers to focus on nighttime impaired-driving offenses. WTSC and the WSP named these detachments *Target Zero Teams* (TZT) since they supported Washington's "Target Zero" strategic highway safety plan, which includes the goal of reducing traffic fatalities in Washington State to zero by 2030. From July 2010 to June 2012, Washington deployed one detachment (one sergeant and six troopers) in each of the three largest counties in the State—King, Pierce, and Snohomish. The WTSC also provided TZT grant funding to local law enforcement to conduct overtime enforcement focused on driving under the influence (DUI) offenses. For research purposes, three other counties (Clark, Spokane, and Yakima) were chosen to serve as comparison sites. These counties did not have any formal WTSC-funded TZT activities taking place.

The evaluation focused on (a) the program's effectiveness in increasing DUI enforcement; (b) whether TZT resulted in decreased alcohol-involved driving, crashes, and fatalities in the intervention counties, in relation to the comparison counties and statewide; (c) public awareness and media coverage of the project; and (d) the cost/benefit of TZT to the State of Washington.

Method

This study assessed:

- Citation and law enforcement activities (e.g., contacts, arrests, hours worked);
- special prosecution activities;
- paid and earned media;
- public awareness;
- driver blood alcohol concentration (BAC) data;
- the number of BAC tests conducted;
- crash data;
- driver alcohol involvement in fatal crashes; and
- lives saved and likely cost/benefit to the State.

Results

The results of the evaluation of the TZT approach are summarized below:

Objective (a) Increasing DUI Enforcement.

- The TZT program led to increased DUI enforcement activities by the WSP and participating local agencies in the TZT counties. The Snohomish increase is noteworthy since it represents a net gain above and beyond that achieved by the NEET program. The TZT troopers had substantially higher percentages of contacts resulting in DUI arrests than did their non-TZT counterparts in the same and in other counties.

Objective (b) Decreasing Crash Involvement and Alcohol-Involved Driving.

- TZT was related to reductions of non-fatal crashes of all types in Pierce County and certain types of crashes in King County. Most notably, the time series analyses indicated that after TZT began, total crashes decreased 7.1 percent in King County, 7.0 percent in Pierce County and 3.8 percent across the three TZT counties combined, as compared to comparison counties. Nighttime crashes

decreased 3.8 percent in King County, 8.7 percent in Pierce County, and 6.0 percent across the three TZT counties combined, as compared to comparison counties.

- In Snohomish, the operation of the NEET program in the prior years may have mitigated the impact of TZT during the study period.
- Single-vehicle nighttime crashes decreased 8.7 percent in Pierce County, but did not significantly change in King County or Snohomish County.
- The TZT counties showed virtually no change in the ratio of drivers in fatal crashes with positive BACs ($> .01$), but the rate in the comparison counties and the rest of the State increased. This represented a relative reduction of 24.8 percent for driver alcohol involvement (BAC $> .01$) in fatal crashes for the TZT counties. The ratio of driver alcohol-involved crashes with high BACs ($> .15$) increased in the TZT counties, but at a rate less than that of the comparison counties and the rest of the State. This represented a 22.4 percent relative reduction in high-BAC driver alcohol involvement in fatal crashes.

Objective (c) Increasing Public Awareness and Media Coverage of the Program.

- Many of the WTSC/DOL public awareness measures showed very little change. However, the intervention and comparison sites both showed statistically significant increases in recognition of "Over the Limit; Under Arrest" by July 2012. The intervention sites also showed a significant increase in recognition of "Target Zero Teams," but the highest rate achieved was only 5.1 percent. The design of TZT did not include the extensive media efforts characteristic of traditional high visibility enforcement programs.

Objective (d) Calculating the Costs/Benefits of the Program to the State of Washington.

- Analyses compared the projected number of alcohol-involved fatal crashes based on the period before TZT with the data for the TZT operational period in the intervention counties, using the comparison counties as a covariate. The analyses estimated that TZT saved 11 lives that would have been lost in driver alcohol-involved fatal crashes in King, Pierce, and Snohomish counties.
- Using the National Safety Council's intermediate estimate of \$4,459,000 as the cost of a fatality, the avoidance

of the 11 fatal crashes in the TZT counties saved an estimated \$49,049,000. WTSC reported direct expenditures of \$6,038,363 on TZT. Thus, based on savings in just fatalities alone, TZT had a benefit:cost ratio of 8:1.

Summary and Discussion

Measures involving TZT enforcement activity (e.g., citations, increased numbers of BAC tests, TZT hours logged) were significant and positive, demonstrating support for the TZT program. Estimates of lives saved and cost/benefit also showed positive results. The study results suggested that TZT led to reduced non-fatal crashes of all types in Pierce County, reduced crashes of some types in King County, but limited crash reductions in Snohomish County, where the NEET program had already achieved significant reductions as reported previously by WTSC. While TZT does not appear to be associated with absolute reductions in the ratios of alcohol-involved drivers in fatal crashes, it was associated with relative reductions, since the comparison counties and the rest of the State showed greater increases during the same time period. The intervention and comparison sites both showed statistically significant increases in recognition of "Over the Limit; Under Arrest" and the intervention sites also showed a significant increase in recognition of "Target Zero Teams," but the highest rate achieved was only 5.1 percent.

Overall, the study results suggest the TZT approach markedly increased the DUI enforcement productivity of law enforcement in intervention counties that led to safety gains in at least two of the three TZT counties during the study period. For Snohomish, the operation of the NEET program in the prior years may have mitigated the impact of TZT. Given that WTSC plans to continue the TZT program, future research may wish to study whether the benefits achieved in the TZT counties continue to increase, plateau or recede.

References

Cicchino, J. (2012). *Washington's Target Zero Teams Project: Reductions in fatalities during year one*. (Research Note, DOT HS 811 687). Washington, DC: National Highway Traffic Safety Administration.

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U.S. Department of Transportation
**National Highway Traffic Safety
Administration**

1200 New Jersey Avenue SE., NTI-132
Washington, DC 20590

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