Effectiveness of Washington State Traffic Safety Commission’s Target Zero Program to Eliminate Traffic Fatalities by 2030*

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Traffic Safety programs in general have a mission and vision of eliminating highway fatalities and supporting programs through funding and collaboration that work to make American roadways safe for travelers. The National Highway Traffic Safety Administration (NHTSA) provides leadership to state and local agencies through research, setting safety agendas, and identifying emerging concerns (NHTSA, 2013). The Washington State Traffic Safety Commission takes this leadership and forms safety programs that are aimed at educating the motoring public and funding law enforcement activities that support the programs spearheaded by NHTSA.

In 2010, the Washington State Traffic Safety Commission updated the benchmarks and goals for its Target Zero program that was started in 2001. The updated Target Zero goal is to eliminate traffic deaths and serious injury collisions by 2030 on Washington State Highways. Some of the driver behaviors that the program has identified as activities that contribute to highway fatalities and serious injury collisions include impaired driving, speeding, unrestrained driver, and distracted drivers. The 2010 plan stresses “successful traffic safety education programs, tougher legislation, improved roadways, faster emergency response times, and strategically focused enforcement efforts have contributed greatly to the continuing decline in traffic deaths” (Target Zero, 2010).

Vision Zero is a program from Sweden that began in 1997 with a “policy goal that states that in the long run, no person should be killed or seriously injured as a consequence of road traffic” (Rosencrantz, Edvardsson, Hansson 2007). This is one of the first statewide programs to have a zero traffic related death goal. It’s not until 2000 that American states begin to adopt similar traffic safety goals and programs.
Effectiveness of Target Zero

Target Zero in Washington State has created strong inter-agency bonds with both county and city law enforcement agencies. The program provides annual grant allotments for supplemental policing efforts during high travel times and time of increased celebration, for example, extra patrols during Thanksgiving weekend, to include travel days and evening patrols, or extra patrols to work the evening of the 4th of July. They also fund seatbelt patrols that work in the evening hours. The Washington Traffic Safety Commission recently funded additional police positions within the Washington State Patrol and local law enforcement agencies in King, Snohomish and Pierce Counties.

Known as ‘Target Zero Teams” these traffic safety funded positions mission is to patrol for impaired drivers, speeding, distracted, and unbelted drivers which are among the priority groups outlined by Target Zero. These Target Zero demonstration project teams were initially funded for a twenty-four month period ending June 30, 2012. The Washington State Legislature funded an additional eighteen troopers and three sergeants to continue the program beyond the original project end date (Target Zero, 2010).

A recent study of Target Zero Death programs by Munnich Jr, Douma, Qin, Thorpe & Wang (2012), found that if state highway safety programs are to be successful they must include the following five characteristics: 1) an ambitious plan to eliminate traffic fatalities; 2) inter-agency partnerships with shared goals; 3) a strategy including the “Four E’s” (education, enforcement, engineering and emergency medical services); 4) a data driven system to guide resources and activities; and 5) effective policy leadership. While this study measured the effect of target zero plans in general for four states, it did not measure the effectiveness of individual programs, nor did it compare states with target zero plans to states without target zero plans.
Effectiveness of Target Zero

Evaluation of other highway safety programs, specifically deereence based strategies and education (Dickman 1988) and seat belt usage (Holuston, Richardson 2006) indicate effectiveness of education programs. Supplemental policing programs, like Target Zero have yet to be evaluated on their individual performance and inter-agency effectiveness.

HYPOTHESIS

Washington State Safety Commission’s Target Zero program has a goal of zero traffic related fatalities by the year 2030. Are the benchmarks, focused patrols, and supplemental policing efforts effectively meeting the program goals to eliminate traffic related fatalities?

METHODOLOGY

To conduct this research, data collection and statistical analysis will be the primary methods utilized. The type of data collected will include all reportable collision types: fatality, serious injury, injury, and non-injury reportable damage collisions with cause if known.

Data will be collected from the Washington State Department of Transportation (WSDOT) Collision Records Section to evaluate collisions that occurred on Interstates, state routes and county roads within Washington State from 2005 through 2012.

Once the data is collected it will be analyzed to look for year over year reduction in traffic fatalities along with any changes in the number of serious injury collisions. The data analysis will also control for vehicle safety improvements as well as public transportation availability. Vehicle safety reports from the Insurance Institute for Highway Safety (IIHS) and from the National Highway Traffic Safety Commission
Effectiveness of Target Zero

Vehicle Safety will also be collected to use as an element of analysis in the reduction of fatality collisions.

Collected collision data will be plotted on mapping software for location and to see if patterns emerge. These collision patterns will be compared against data driven saturation and emphasis patrols utilized by local agencies in conjunction with the Target Zero guidelines and supplemental funding. An evaluation of those same areas before saturation and emphasis patrols occurred to compare the effectiveness of patrols on reducing serious injury and fatality collisions.

Vancouver, WA and Spokane, WA which have similar demographics will be used as the focal cities of this research. Collision data from these cities will be used to evaluate how and where supplemental patrols are deployed and any impact they have on reducing fatality or serious injury collisions. Saturation, special emphasis patrols and data driven police activity data will be requested from city, county and state police agencies in comparative cities.

Financial data will be collected from Washington State Traffic Safety Commission to evaluate program costs against the return of investment in lives saved and serious injuries reduced. The National Safety Council estimates that each fatality costs approximately 1.4 million dollars (in 2010) to the community in lost wages and revenue, yet the cost of serious injury collision can be as much as four times more because of continued care, lost wages to both the family and injured person.

This data will be used to compare reductions in fatality and serious injury collision prior to the updated 2010 Target Zero plan and benchmarks and after those benchmarks were put into place to evaluate the effectiveness of the Target Zero Program.
Effectiveness of Target Zero

POTENTIAL CONCLUSION

The Target Zero program effectively communicates and educates the public about the hazards of drunk driving, distracted driving, speeding and other fatality and serious injury collision causes. Saturation and emphasis patrols do not alone account for the reduction of fatality collisions in Washington State, and while there is a reduction in fatality collisions there may be a rise in serious injury collisions. Improved vehicle safety standards and alternative transportation are also factors that must be considered in the reduction of fatalities and serious injury collisions in Washington State.

TIMELINE

April 18, 2013: Proposal completed

July 2013: Begin literature Review

August 2013: Data Collection - Begin records requests from WSDOT Collision Records, Clark County Records, Spokane County Records, Vancouver City Records, Spokane city records, Vehicle safety reports from Insurance Institute for Highway safety

September 2013: Begin compiling collision data and analysis

October 2013: Break data by region, road and collision type, begin mapping

November 2013: Begin summarizing data, formulating results, and working on draft

January 15, 2014: Complete preliminary draft research report

February 20, 2014: Begin creating presentation materials

March 15, 2014: Complete revision

The department of Transportation collision data will be used for analytical analysis to determine if the Target Zero plan is effective on Washington interstates and state routes from 2005-2012.


This article discusses the value of deterrence based strategies and education of the motor public, included are the Mothers Against Drunk Driving Program, changes in Kansas state laws regarding drunk driving, and methods for evaluating traffic safety programs.


Updating seat belt laws to allow law enforcement to take primary enforcement helped law enforcement gain better compliance for seat belt usage. Evaluation of changes in driver behavior is measured from 1990-2002. Also noted is the impact on serious injury collisions and fatality collisions during the same period. The conclusion is that primary enforcement of seat belt laws is more effective in saving lives than secondary enforcement.


Argues that there is no proven correlation between seat belt laws and decrease in traffic fatalities; based on 1983-93 US data. This is a major point of Target Zero, the reduction of fatality and serious injury collisions.


Study that evaluated the commonalities of target zero death programs in the US and found elements that make them successful in reducing highway fatalities and serious injury collisions.

Mission, vision, and leadership provided to state and local agencies with regards to highway traffic safety programs, grants and emergent issues in traffic safety. Data analysis and research on highway safety trends and challenges.


Efficacy of road traffic safety programs, with particular emphasis on high risk user groups and vehicles, education, information, and regulatory actions. Additional evaluation of safety programs with measurable benchmarks.


Evaluation of the Swedish program, Vision Zero, which states that in “the long run, no person should be killed or seriously injured as a consequence of road traffic”. The program was started in 1997 and was first evaluated on its performance in 2007 to see if it met any of its targets, and new targets were set. Many US highway safety programs are based off of this model.


Discusses efforts to prevent traffic accidents, focusing on drivers, roads, vehicles, and transportation planning; some focus on the "Vision Zero" program in Sweden, the goal of which is that no person be killed or seriously injured in a road traffic accident


The Click it or Ticket campaign that began in May 2002, enactment of a primary enforcement seat belt law in June 2002, and focused enforcement of the primary seat belt law by the Washington State Patrol and local agencies resulted in an unprecedented 95% seat belt use rate in 2003. Media campaigns and highway signs concentrated on educating the public about the new law and enforcement efforts were highly visible to the traveling public.


Grant programs give local agencies the ability to add and supplement policing efforts to reduce serious injury and fatality collisions. The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) included authorizations of
nearly 2.2 billion dollars for safety incentive grant programs administered by the Department of Transportation's (DOT) National Highway Traffic Safety Administration (NHTSA) to assist states in reducing traffic fatalities. Information is provided on awarding and overseeing states’ use of grants, activities and issues that states have face in applying and implementing grants funds, and how NHTSA will evaluate the results of grant programs.


These accountability management techniques give an overview of state programs like Washington State Traffic Safety Target Zero and make them accountable for their outputs and distribution of grant funds received. While congress authorized grant programs overseen by the National Highway Traffic Safety Administration (NHTSA), the Government Accountability Office is tasked with assessing who those funds are used, NHTSA progress with management reviews, usefulness of reviews and approaches to safety improvements.


Programs like Target Zero must be Transparent and report on performance when federal funds are used to supplement policing efforts to meet program benchmarks. Evaluation of the High-Visibility Enforcement (HVE) program initiated in 2005, which includes seat belt usage and impaired driving campaigns. Discussion of how the National Highway Traffic Safety Administration has implemented this program and the impact of these campaigns and the challenges in conducting campaigns regarding seat belt usage and impaired driving.


The points and benchmarks of this plan will be evaluated by the outputs and outcomes of city, county and state police agencies. The goal of Washington State’s Strategic Highway Safety Plan 2010 is Zero Deaths, Zero Serious Injuries by 2030. Is it a reasonable goal and is the program effectively utilizing state and federal resources to meet the goals laid out?