



Demonstration of the *Trauma Nurses Talk Tough* Seat Belt Diversion Program in North Carolina Reaches High-Risk Drivers

Nationally, more than 8 of every 10 drivers wear seat belts, but individual State belt rates vary from as high as 98% to as low as 69%. Within individual States, rural areas often have lower rates. Strong seat belt laws and highly visible enforcement by State and local law enforcement remind drivers to buckle up on every trip, but some drivers still do not get the message.

NHTSA tested whether a special diversion program, a brief intervention class taught by highly respected trauma nurses in a hospital setting, coupled with dismissal of a belt citation would convince these hard to reach drivers to wear their seat belts. The immediate benefit to the driver was payment of a small class fee in lieu of a high citation fee, court costs, and possibly points on their driving or insurance records. The educational benefit to the driver was an improved understanding of seat belts, child safety seats, and preventable injury and rehabilitation consequences. The benefit to local law enforcement was offering offenders a one-time low cost alternative for the violation and a novel way to reinforce their message that seat belts save lives.

The *Trauma Nurses Talk Tough* (TNNT) program began at Legacy Emanuel Hospital in Portland, Oregon, in 1988 to teach risk avoidance behaviors. The target group was high-risk drivers who did not respond to seat belt laws even in a high-belt-use State such as Oregon. Trauma nurses teach the courses at hospitals and tell real-life stories about real people who sustained preventable injuries because they were not wearing seat belts. The nurses use highly graphic visuals to demonstrate the negative physical, medical, rehabilitation, emotional, legal, and financial consequences of not wearing seat belts from their medical point-of-view.

Robeson County Demonstration Program

Robeson County is located on the South Carolina border along Interstate 95 and is the largest county by land area in North Carolina. According to the U.S. Census Bureau, it is one of the Nation's most diverse counties, with the 9th largest Native American population, and similarly sized Black and White populations. The county has one large city, Lumberton, which is the county seat.

Because seat belt rates lagged far behind the rest of the State, Robeson County implemented the *Trauma Nurses Talk Tough* seat belt diversion program in 2010. Trauma and emergency room nurses taught weekly classes at Southeastern Regional Medical Center (SRMC) based on the Oregon model. The program received the full support of medical center management and staff, the Robeson County district attorney, the clerk of the court, and all the law enforcement agencies in the county (local, county sheriff, and high-

way patrol) for the duration the program. Drivers who received citations for not wearing seat belts during the 15-month program could attend the class at a cost of \$20 and have the \$126.50 citation dismissed one time, which also meant that their insurance companies were not notified of the violations.

Eligible Class Participants

From April 1, 2010 to June 30, 2011, participating law enforcement agencies issued 10,358 seat belt and child safety seat citations, a 29% increase compared to the five quarters before the TNNT program. SRMC's trauma and emergency room nurses conducted 62 weekly classes with a total attendance of 4,503. Half (50%) of the people who received citations and were eligible to attend the course did so, exceeding program expectations. Since violators paid \$20 to attend the evening class, the program was self-sufficient, and SRMC bought about 500 child safety seats for the local health department and Safe Kids chapter for distribution throughout the county.

Participants More Positive About Seat Belts

After the class, attendees were much more likely to have a positive outlook about seat belts. Participants rated the extent they agreed or disagreed with positively and negatively worded statements about seat belt use before and after the class. The majority (4 out of 5) agreed that it is important for police to enforce the seat belt laws (64% to 84%), that seat belts reduce the chance of injury or death (65% to 81%), and that it is important for rear-seat passengers to wear seat belts (60% to 82%). Many agreed that if everyone used seat belts, society would save a lot of money, increasing from 47% to 64%.

For the negatively worded questions, a "strongly disagree" response actually indicated a positive effect of the course. After the course, about 4 of 5 attendees disagreed with statements that you do not need to wear your seat belt if your car has air bags (74% to 84%) and that it is okay to put children in the front seat if they are in an approved safety seat (64% to 78%). Most disagreed that a good driver could avoid death or injury without a seat belt (66% to 77%); that they are the only ones who will get hurt if they do not wear

Setting up the diversion program required the participation of the highway safety office, a large medical center, trauma and ER nurses, the district attorney, the clerk of the court, procedures to dismiss the seat belt ticket, plus a pledge from law enforcement to step up seat belt enforcement during the pilot program. North Carolina has a primary belt law and high fines plus fees.

seat belts (64% to 76%); that choosing to wear a seat belt is their business, not the government's (46% to 64%). These results were statistically significant ($p < 0.05$).

Seat Belt Use Increases in Robeson County

There was a statistically significant 5-percentage-point increase in observed driver seat belt use at the 8 county observations sites from 81% to a high of 86% in August 2011 (Figure 1). These 8 sites are in North Carolina's annual seat belt survey. There was a larger increase in driver seat belt use at the 2 sites near the hospital, increasing from 69% to a high of 82% in May 2011 before dropping back to 78% in August 2011, for an overall gain of 9 percentage points (Figure 2).

Figure 1. Robeson County Seat Belt Use at 8 Annual Sites

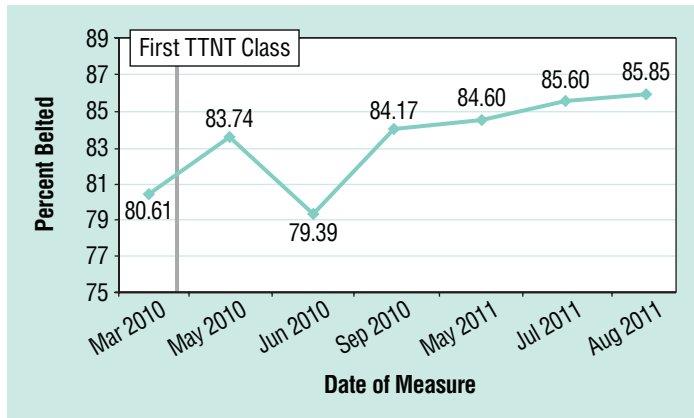
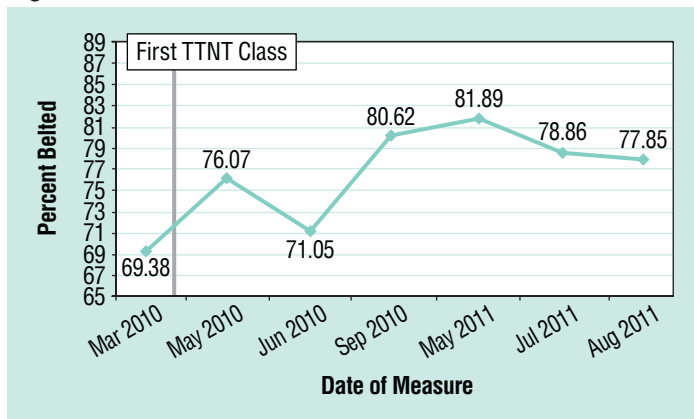


Figure 2. Seat Belt Use at 2 Additional Sites Near SRMC



Conclusions

The evaluation showed that the TNTT seat belt course had a notable impact on class attendees' opinions about seat belt use, enforcement of the seat belt law, and knowledge of basic highway safety information. Law enforcement agencies issued sufficient

seat belt citations that 4,442 people completed the diversion program. Observed seat belt use, which had been stagnant in Robeson County for some time, increased.

It is not possible to determine the relative contribution attributable to the TNTT program or to the increased enforcement at this time. A follow-up study to examine the violation and crash rates of those who completed the program versus those who received tickets and chose to pay the fines will determine long-term effects.

A TNTT diversion course might be less attractive in a State with a low fine (plus fees), or one that does not notify insurance companies of seat belt citations, as in North Carolina. The Oregon TNTT program continues to operate after more than 20 years in a high-belt-use State.

Table 1. Attitudes of Attendees Before and After Class

Positive Seat Belt Statements	Before Class Group	After Class Group
It is important for the police to enforce seat belt laws	64.3%	83.6%*
It is important for rear-seat passengers to wear seat belts	60.0%	81.7%*
Seat belts are a way to reduce the chance of injury or death	65.0%	80.7%*
If everyone used seat belts, society would save a lot of money	46.6%	64.2%*
Negative Seat Belt Statements		
You don't need to wear your seat belt if your car has air bags	74.0%	83.9 %*
It is okay to put a child in the front seat if in an approved safety seat	63.8%	77.9%*
I'm the only one who will get hurt if I don't wear a seat belt	64.2%	75.5%*
Choosing to wear a seat belt is my business, not the government's	46.1%	63.6%*
It is really only necessary to wear seat belts on the highway	43.1%	57.9%*
A good driver can avoid death or injury without a seat belt	66.0%	76.5%*

*Significantly ($p < 0.05$) higher than Pre-TNTT group by chi-square test

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