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# **A Guide for Traffic Safety Practitioners: Best Practices for Increasing Seat Belt Use In Rural Communities**

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<b>16. Abstract</b> Rural motor vehicle occupants are at an increased risk for crash-related deaths compared to their urban counterparts. One contributing factor is the lower use of seat belts in rural areas compared to urban areas. Seat belts are one of the most important strategies for reducing crash-related injuries and fatalities among road users. Preventing crash-related injuries and fatalities requires programs that promote seat belt use among rural drivers and passengers. Rural traffic safety practitioners can implement best practices, including evidence-based and promising programs, to increase seat belt use in rural areas. <i>The Best Practices Guide for Increasing Seat Belt Use in Rural Communities</i> is designed for rural traffic safety practitioners to plan, implement, and evaluate programs to increase seat belt use in rural communities. The guide describes evidence-based and promising seat belt programs, and shares lessons learned from traffic safety practitioners and experts. It also includes examples of seat belt programs that have been successfully adapted for use in different settings, including rural communities. The guide was informed by a literature review and environmental scan, and discussions with traffic safety practitioners and experts. It contains four modules to help traffic safety practitioners develop, implement, and evaluate rural seat belt programs: understanding seat belt use in rural communities; selecting evidence-based or promising rural seat belt program models; implementing a rural seat belt program; and evaluating a rural seat belt program.			
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## INTRODUCTION

Rural motor vehicle occupants are at an increased risk for crash-related deaths compared to their urban counterparts. One contributing factor is the lower use of seat belts in rural areas compared to urban areas. Seat belts are one of the most important strategies for reducing crash-related injuries and fatalities among road users. Preventing crash-related injuries and fatalities requires programs that promote seat belt use among rural drivers and passengers. Rural traffic safety practitioners can implement best practices, including evidence-based and promising programs, to increase seat belt use in rural areas.

The *Best Practices Guide for Increasing Seat Belt Use in Rural Communities* is designed for rural traffic safety practitioners to plan, implement, and evaluate programs to increase seat belt use in rural communities. The guide describes evidence-based and promising seat belt programs, and shares lessons learned from traffic safety practitioners and experts. The guide also includes examples of seat belt programs that have been successfully adapted for use in different settings, including rural communities. The guide was informed by a literature review and environmental scan, and discussions with traffic safety practitioners and experts.

The *Best Practices Guide for Increasing Seat Belt Use in Rural Communities* provides best practices, and compiles evidence-based and promising approaches, for implementing programs designed to increase seat belt use in rural communities. The goal of this *Best Practices Guide* is to connect traffic safety practitioners to information and resources that can help them to develop, implement, and evaluate a program to increase seat belt use in rural areas. This *Best Practices Guide* is comprised of four modules that provide information, resources, and best practices checklists for rural seat belt programs.

**Structure of the Guide.** The guide contains four modules to help traffic safety practitioners develop, implement, and evaluate a rural seat belt program.

- Module 1: Understanding seat belt use in rural communities
- Module 2: Selecting evidence-based or promising rural seat belt program models
- Module 3: Implementing a rural seat belt program
- Module 4: Evaluating a rural seat belt program

Each module provides guidance and resources to help rural traffic safety practitioners learn more and a checklist containing best practices.

**Where to Begin.** Rural traffic safety practitioners may review the modules in the guide sequentially or begin with any module. The guide is designed to be useful to practitioners at any stage of their work—from program design through implementation and evaluation—with the ultimate goal of providing best practices for promoting seat belt use in rural communities.

# MODULE 1: UNDERSTANDING SEAT BELT USE IN RURAL COMMUNITIES



**Objective: Understand the prevalence of seat belt use in rural communities and barriers to increasing use.**

Module 1 describes the issues surrounding seat belt use in rural communities and the need to promote seat belt use among rural drivers and passengers. This module also explains the factors that contribute to lower seat belt use on rural roads and describes specific populations that would benefit from programs designed to increase seat belt use in rural communities.

## In this Module:

- Traffic Safety and Seat Belt Use in Rural Communities
- The Costs of Not Using Seat Belts
- Barriers to Seat Belt Use in Rural Communities
- Populations of Focus for Rural Seat Belt Programs
- Best Practices Checklist

## Traffic Safety and Seat Belt Use in Rural Communities

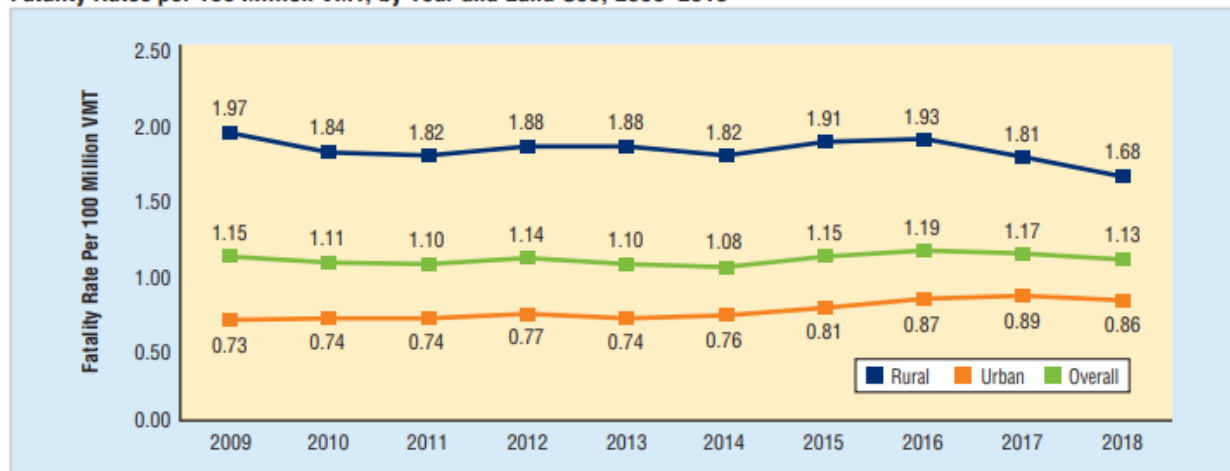
Roadways outside of urban areas with populations of 5,000 or fewer residents are defined as rural (Federal Highway Administration [FHWA], 2013). People traveling on rural roads or living in rural areas face increased risk for motor vehicle crash-related fatalities, and the risk increases as an area becomes more rural. Rural counties have shown passenger vehicle death rates per population that are 3 to 10 times higher than more urban counties in the same region (Table 1; Beck et al., 2017). In 2018 some 45 percent of all roadway fatalities occurred in rural areas even though these areas accounted for only 20 percent of the total number of vehicle miles traveled (VMT) (National Center for Statistics and Analysis [NCSA], 2020).

**Table 1. Passenger-Vehicle–Occupant Death Rates per 100,000 Population**

Census Region	Most Urban Counties	Most Rural Counties
Northeast	3.5	10.8
South	6.8	29.2
Midwest	5.3	25.8
West	3.9	40.0

Within each census region, age-adjusted passenger vehicle occupant death rates were significantly higher in rural counties than in urban counties (NCSA, 2020). Additionally, while rural traffic fatalities decreased from 2009 to 2018, the fatality rate per 100 million VMT was generally more than twice as high in rural areas than urban areas (Figure 1).

**Fatality Rates per 100 Million VMT, by Year and Land Use, 2009–2018**



Sources: FARS 2009-2017 Final File, 2018 ARF; VMT – FHWA

**Figure 1. Fatality Rates per 100 Million VMT, by Year and Land Use, 2009-2018**

Part of the increased fatality rate in rural communities is due to lower seat belt use in these areas compared to more urban settings. Nearly half of rural passenger vehicle occupants who were fatally injured in 2018 were unrestrained (NCSA, 2020). A study by Beck et al., (2017), found self-reported seat belt use to be lowest in the most rural counties (74.7%) compared to the most urban counties (88.8%). That study also found that in 2014 only 38.7 percent of drivers and passengers in the most rural counties were wearing seat belts at the time of fatal crashes compared to 55.6 percent of drivers or passengers in the most urban counties. Seat belt use also decreases in rural areas with smaller populations, as the people living in less populated rural areas are less likely to wear seat belts than people living in more populated rural areas (Strine et al., 2010).

According to NCSA (2021), daytime observed front seat belt use in rural areas has increased over time to a high of 90.4 percent in 2019 across the country, but other studies suggest that seat belt use in certain rural areas could be much lower than the observed rates being reported at the national or State level. One study in rural North Carolina selected its own observation sites to measure baseline seat belt use before program implementation (Thomas et al., 2014). The study found that seat belt use was 11 percentage points lower at these observation sites compared to the sites traditionally used in the county for annual statewide observations. Similarly, an evaluation of demonstration programs in Kansas and Missouri showed that certain rural counties had much lower observed seat belt use than other rural counties in the same States (Thomas et al., 2016). These low-use counties, however, may not be included in statewide or national seat belt use rate calculations because of their small populations, or because they are considered outliers due to the very low observed belt use rates. Likewise, very low traffic volume



observation sites are excluded from the National Occupant Protection Use Survey (NOPUS) (NHTSA, 2016).

## **The Costs of Not Using Seat Belts**

Several studies have examined the potential benefits to society associated with wearing seat belts, as well as the costs of not wearing them. Research has consistently shown that seat belts are one of the simplest, yet most important, safety features in vehicles because they restrain vehicle occupants during a crash which prevents injuries and saves lives (NHTSA, 2009a). Seat belt use saved an estimated 14,955 lives of occupants 5 years old and older in 2017 alone (NCSA, 2019). NCSA (2019) estimated that in 2017 an additional 2,549 lives would have been saved if all unrestrained occupants 5 and older involved in fatal crashes had worn their seat belts. For drivers and front-seat passengers in crashes, seat belts decrease the risk of death by 45 percent to 60 percent (Kahane, 2015), and reduce the risk of moderate to critical injury by 50 percent (NHTSA, n.d.-c).

People not wearing seat belts are 30 times more likely to be ejected from vehicles than those who are properly restrained (NHTSA, 2009b). This is problematic because more than 3 out of 4 people ejected from vehicles in fatal crashes died from their injuries. In 2019 alone, not wearing seat belts was estimated to have led to nearly 2,400 unnecessary fatalities, 46,000 serious injuries, and \$11 billion in preventable injury related costs (Blincoe et al., 2023). These costs are related to lost work productivity, property damage, medical bills, rehabilitation, traffic congestion, legal and court fees, emergency medical services response, insurance administration, and other costs to employers. Employees and their beneficiaries cost employers \$4.0 billion from unrestrained crashes off the job and employees not wearing seat belts while on the job cost employers about \$900 million in 2013 (NETS, 2016). The same study found that the costs per employee injured in a crash while working were nearly twice as high for an employee who was unrestrained compared to one who was properly restrained. Another study suggested properly wearing a seat belt can reduce medical costs up to 84.7 percent compared to not wearing a seat belt at all (Han et al., 2017).

The disproportionate number of fatal crashes happening on rural roadways suggests that these communities may be suffering greater losses in terms of human life and money than they should be because of low seat belt use. Other factors such as distance from medical care, long transport times, and trauma center inaccessibility make it even more important to prevent vehicle ejections and serious injury in rural areas (Melton et al., 2003).

## **Barriers to Seat Belt Use in Rural Communities**

A number of factors may contribute to lower seat belt use on rural roadways. The subsections that follow provide a brief overview of some of the factors that have been identified as potentially contributing to lower seat belt use in these areas.

## **Rural Traffic Safety Culture**

Rural communities often value individualism, independence, pride, and self-reliance (NORC, 2018). These values, which are assets in many ways, can also affect whether rural drivers and passengers wear seat belts. In rural communities there is a distinct “rural traffic safety culture” in which drivers have less favorable attitudes and beliefs toward seat belts than urban drivers (Rakauskas et al., 2009; Ward, 2007; Watson & Austin, 2021).

Compared to urban residents, rural residents reported that it was less dangerous to not wear seatbelts, Rakauskas’s group reports. Analyses of NHTSA’s 2016 Motor Vehicle Occupant Safety Survey (MVOSS) data found that drivers in rural areas were less likely to support primary seat belt enforcement, less likely to want to wear seat belts in crashes, and more likely to believe that fate makes wearing seat belts pointless (Watson & Austin, 2021). Another study found that rural cultural values such as fatalism may also explain seat belt non-use because of the belief that nothing, including wearing a seat belt, will change the destined outcome in the event of a crash (Nitzburg & Knoblauch, 2004; Watson & Austin, 2021).

There is a strong association between believing that seat belt use is important and seat belt use for passengers in the front and rear seats of vehicles (Beck et al., 2019). Behavior change is needed to address “non-compliance norms” in rural communities (Rakauskas et al., 2009). Behavior change, however, can be difficult to achieve and takes time. Evidence-based behavior change campaigns and social and behavioral theories can help promote seat belt use in rural communities and facilitate behavior change (Rakauskas et al., 2009). Examples of such campaigns and how to apply social and behavioral change theories are presented later in this guide.

## **Unfavorable Attitudes Towards Government Traffic Safety Interventions**

A large-scale survey identified lack of trust of government-sponsored traffic safety interventions and perceived uselessness of enforcement and engineering interventions as barriers to seat belt use in rural communities (Rakauskas et al., 2009). While rural populations may be supportive of law enforcement, they may not support seat belt use observations, increases in fines, or stronger seat belt laws because these interventions may be perceived as increased government oversight. Rural populations are less likely than their urban counterparts to believe that the government “should do more to solve problems” (Pew Research Center, 2018). A lack of trust in government interventions, in general, can also carry over to traffic safety interventions such as seat belt programs (Watson & Austin, 2021).

Buy-in for community programs, including campaigns to increase seat belt use, is important. Leaders of rural organizations can play a vital role in raising awareness of the importance of seat belt use. Rural communities may lack buy-in and support for seat belt use among local community leaders in law enforcement, schools, local businesses, and other organizations. Without buy-in, law enforcement will not want to increase their case load by writing additional seat belt citations (Solomon et al., 2001). Figuring out how to overcome these attitudes and change opinions about seat belt use is discussed later in this guide.

## **Misperceptions of the Dangers Associated With Not Wearing a Seat Belt**

Misperceptions about the risks of not wearing a seat belt are a problem everywhere but may be especially prevalent in rural communities. A lack of education and awareness about the risks of not wearing a seat belt affects seat belt use in rural communities (Birru et al., 2016).

Misperceptions about wearing a seat belt in a crash (NETS, 2015):

- “It is better to be thrown clear in the event of a crash.”
- “Seat belts can hurt you in a crash.”
- “I have an air bag to protect me—that’s good enough.”
- “Seat belts prevent your escape from a burning or submerged vehicle.”

Parents may also be unaware that child safety restraints, such as booster seats, reduce the risk of injuries compared to the use of an adult seat belt alone (Privette et al., 2018). In addition, rural drivers are more likely to perceive that not wearing a seat belt is less dangerous than their urban counterparts (Rakauskas et al., 2009). They also perceive that they are at a low risk for being seriously injured or killed during a crash (Rakauskas et al., 2009). Teen drivers, and pickup truck drivers in particular, have misperceptions about the dangers associated with not wearing seat belts (Monroe et al., 2017; Fell et al., 2005). Pickup truck occupants often mistakenly believe their larger vehicles will protect them in a crash (Monroe et al., 2017).

Educating a rural population can require several community partnerships in order to have a meaningful impact. This guide provides examples and guidance on how to overcome common misperceptions held by rural populations.

## **Lack of Primary Enforcement Seat Belt Laws**

The observed increase in seat belt use at the national and State levels is largely attributed to the adoption of primary enforcement seat belt laws (Beck, 2009), which allow law enforcement officers (LEOs) to pull over and ticket drivers or passengers solely for not wearing their seat belts. Secondary enforcement laws allow officers to issue tickets for failure to use seat belts only when another violation has occurred. Thirty-four States, the District of Columbia, and four U.S. Territories have primary seat belt laws (Governors Highway Safety Association [GHSA], 2022). However, as of 2022 more than half of States did not have primary enforcement laws covering all occupants of vehicles (GHSA, 2022). States, counties, and reservations or Tribal lands with primary seat belt laws were more likely to report higher seat belt use rates and lower fatality rates compared to those that did not have primary enforcement (Strine et al., 2010; Nichols et al., 2010). Seat belt use in rural areas was significantly higher in primary enforcement States than in secondary enforcement States (Beck et al., 2017).

When States switch from secondary to primary seat belt laws, there is an increase in the number of citations for non-use of seat belts (Tison et al., 2011). Even in States with

primary enforcement laws, there are challenges to enforcement in rural areas due to low numbers of traffic enforcement officers in these communities (Peek-Asa et al., 2004). LEOs may also be less likely to stop and ticket drivers who they know well in small, close-knit communities (Peek-Asa et al., 2004). Finding ways to support law enforcement in enforcing seat belt laws in these types of situations can be especially challenging, but a number of communities have found ways to address the problem, even when a State does not have a primary enforcement law.

## **Populations of Focus for Rural Seat Belt Programs**

While traffic safety practitioners aim to increase seat belt use among all drivers and passengers, several rural populations are less likely to use seat belts and may benefit from seat belt programs. These populations include teens, male drivers, pickup truck occupants, American Indian and Alaska Native populations, and rear-seat passengers (Nichols et al., 2016b; Thomas & Blomberg, 2016; NHTSA, 2020).

### **Teen Drivers**

Teen drivers 16 to 19 years old are about three times more likely than 20-year-old drivers to be involved in unrestrained fatal motor vehicle crashes (Centers for Disease Control and Prevention [CDC], 2021c). Seat belt use is lower among 16- to 24-year-olds than other age groups, according to the CDC, especially among young males (Nichols et al., 2016b). Additionally, low teen seat belt use is associated with small school size and rural county school locations (Kim et al., 2009). With this in mind, a number of teen-focused programs are discussed in this guide.

Reasons for seat belt non-use among teen drivers include forgetting, concerns about being trapped, and not believing that seat belts are effective (Monroe et al., 2017).

### **Male Drivers**

There are many different factors that can affect seat belt use, including being male. Motor vehicle crashes were the 9th leading cause of death among males in 2016 and 2017, compared to the 15th leading cause among females (Webb, 2020). Being male is also a factor associated with non-compliance (Marco et al., 2020). Increasing seat belt use among male drivers has been a focus of NHTSA seat belt demonstration programs in Mississippi (Blomberg et al., 2009), Virginia (Elliott et al., 2014), and Wyoming (Blomberg et al., 2009). In particular, seat belt programs have focused on increasing seat belt use among young male drivers (18 to 34 years old), Hispanic males, African American males, and pickup truck occupants (Tison et al., 2008; Nichols et al., 2016b). Rural demonstration programs increased seat belt use rates among male occupants in Missouri (Thomas & Blomberg, 2016) and Florida (Nichols et al., 2012). Lessons learned as to how to best influence males to buckle up are a focus later on in the guide.

## **Pickup Truck Occupants**

Pickup trucks are common in rural areas, and pickup truck occupants – especially young male drivers – have low rates of seat belt use (Nichols et al., 2009, 2016b). Pickup truck drivers report feeling skeptical about the personal benefits of seat belts, perceive that a truck is safer than a car because of its larger size, and fear that a seat belt could trap them during a crash (Nitzburg & Knoblauch, 2004). Further, interventions have shown greater increase in seat belt use of pickup truck occupants compared to occupants of other vehicles (Blomberg et al., 2009; Tison et al., 2008). Non-compliance among rural pickup truck drivers suggests the need to prioritize this population for seat belt programs (Rakauskas et al., 2009). Some efforts have worked well to increase belt use among pickup truck drivers while others have provided some important lessons about what does not work. Both are discussed later in this guide.

## **Passengers in Rear Seats**

Seat belt use in rear seats of motor vehicles has been estimated to reduce the risk of death by 55 percent to 75 percent (Zhu et al., 2007). Despite the known benefits for rear-seat passengers, seat belt use among this group has not increased to the level observed for front-seat occupants (Enriquez, 2021). According to the NOPUS, in 2020 daytime observed rear-seat-belt use was 80.0 percent compared to 90.3 percent in front seats (Enriquez, 2021). Based on the 2016 MVOSS survey, self-reported rear-seat-belt use was low in rural areas at 62 percent (GHSA, 2019). In addition, a person with less than a college degree, and a passenger riding in a hired vehicle, such as a taxi or rideshare service, was significantly less likely to always wear a seat belt in the rear seat (Beck et al., 2019). Common reasons for non-use include forgetfulness, inconvenience of using a rear seat belt because of design issues, and misperceptions of the safety benefits of using a seat belt when riding in the back seat (Jermakian & Weast, 2018).

## **American Indian and Alaska Native Populations**

American Indian and Alaska Native populations are over-represented in motor vehicle crash fatalities, with adult fatality rates more than double those of non-Hispanic White or Black populations (CDC, 2020a). The national Indian Country rate of seat belt use was 77.7 percent in 2016 across 17 reservations, though seat belt use varied widely across reservations, according to the CDC. Additionally, from 2014 to 2018, 2 out of 3 passengers who died in motor vehicle crashes on reservations were not wearing their seat belts (NHTSA, 2020). A study of seat belt use in 2020 found that seat belt use rates continued to be lower among American Indian and Alaska Native populations (76%) (Chaffe et al., 2020) when compared to the general population in the United States. This guide discusses some success stories for increasing seat belt use among these populations.



## Module 1: Understanding Seat Belt Use in Rural Communities

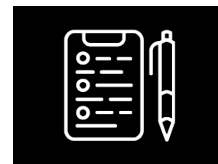
### Best Practices Checklist



#### Best Practices

- Start to think about why seat belt use may be low in your community by asking yourself these questions:
  - Do we have a traffic safety culture in our area that possibly leads people to be less likely to wear seat belts?
  - What is the local attitude towards government traffic safety interventions?
  - Is local law enforcement willing to write seat belt citations or warnings?
  - What are the common misperceptions in this area about the dangers of not wearing a seat belt in our area?
  - Does there appear to be a lack of education about the risks of not wearing a seat belt?
  - Can we likely get community buy-in for a seat belt program and, if so, where?
  - Are we able to get parents and teens to influence each other?
- Start thinking about who your target audience is and potential partners to help implement a program (select up to 3).
  - Teen drivers
  - Male drivers
  - Pickup truck occupants
  - American Indian and Alaska Native populations
  - Passengers in rear seats
  - Other

## MODULE 2: SELECTING EVIDENCE-BASED AND PROMISING SEAT BELT PROGRAM MODELS



**Objective: Identify evidence-based and promising program models to increase seat belt use**

Evidence-based and promising programs, based on evidence that they are likely effective at increasing seat belt use, can promote seat belt use among rural drivers and passengers. Rural traffic safety practitioners can identify, adapt, and implement programs to meet the unique needs of their community. Module 2 describes seven program models for increasing seat belt use in rural communities and the evidence supporting each model. This module also provides examples of rural seat belt programs and implementation considerations for practitioners.

### **In this Module:**

- Rural Seat Belt Program Models
  - Primary Enforcement Seat Belt Laws and Increased Fines
  - Enhanced Seat Belt Enforcement Programs
    - Short-term, High-Visibility Enforcement Programs
    - Integrated Nighttime Enforcement Programs
  - Media Campaigns Combined With Enforcement
  - Youth-Focused Programs
  - Educational Programs for the General Public and Violators
  - Incentive-Based Programs
  - Workplace Programs
- Resources for Identifying Evidence-Based Seat Belt Programs
- Best Practices Checklist

## Rural Seat Belt Program Models

The seven primary program models for increasing seat belt use:

1. Primary enforcement seat belt laws
2. Enhanced seat belt enforcement programs
3. Media campaigns in combination with enforcement
4. Youth-focused programs
5. Educational programs
6. Incentive-based programs
7. Work-based programs.

### Primary Enforcement Seat Belt Laws and Increased Fines

Primary enforcement seat belt laws and increased fine levels for seat belt law violations are evidence-based and recognized as effective approaches by NHTSA (Venkatraman et al., 2021) and the CDC (2020b).

**Primary versus secondary enforcement seat belt laws.** A primary enforcement seat belt law allows a LEO to stop a vehicle and issue a ticket if a driver or passenger is not wearing a seat belt. Primary enforcement does not require any other traffic violation to stop a vehicle (Venkatraman et al., 2021). A secondary enforcement seat belt law allows a LEO to ticket a driver or passenger for not wearing a seat belt only if the vehicle is pulled over for another reason, Venkatraman's group reports.

As of April 2022, 34 States and the District of Columbia have primary seat belt laws, and 15 States have secondary seat belt laws (GHSA, 2022). New Hampshire is the only State with neither a primary nor a secondary seat belt law; however, it does have a primary child passenger safety law that applies to passengers under age 18 (Venkatraman et al., 2021). Overall, primary enforcement laws have had a significant impact on increasing seat belt use. Rural counties in States with primary seat belt laws have higher seat belt use (79.1%) than rural counties in States with secondary laws (64.7%) (Beck et al., 2017).

States that transition from secondary to primary seat belt laws have increased rates of seat belt use once the primary laws go into effect (Dinh-Zarr et al., 2001). The nationwide rate of observed seat belt use has also increased as more States adopt primary seat belt laws (Peterman, 2019). From 1995 to 2018 the number of States with primary seat belt laws nearly quadrupled (Table 2) and the observed seat belt use rate increased from 60 percent to 90 percent (Peterman, 2019).



**Table 2. Primary Enforcement Seat Belt Laws**

States With Primary Enforcement Seat Belt Laws					States Without Primary Enforcement Seat Belt Laws	
1995	2023				2023	
CA	AK	HW	MI	RI	AZ	NV
CT	AL	IA	MN	SC	CO	OH
HI	AR	IL	MS	TN	ID	PA
IA	CA	IN	NC	TX	MA	SD
NC	CT	KS	NJ	UT	MO	VA
NM	DC	KY	NM	WA	MT	VT
NY	DE	LA	NY	WI	ND	WY
OR	FL	MD	OK	WV	NE	
TX	GA	ME	OR		NH	

Note: States with primary enforcement seat belt laws include primary enforcement laws for all occupants or primary front-seat belt laws with secondary rear-seat-belt law. States without primary enforcement seat belt laws include secondary enforcement law for all occupants, secondary front-seat-only belt law, or no seat belt law for adults.

Even in States with a secondary enforcement seat belt law, a local jurisdiction may be able to implement a primary seat belt enforcement ordinance. In Missouri, for example, 58 cities and counties have enacted primary seat belt enforcement ordinances that allow LEOs to stop and fine drivers and passengers for non-use of seat belts even though State law requires another offense be observed first (Hauswirth, 2018). A study in St. Louis County showed significant increases in awareness and seat belt use after an enforcement blitz after the ordinance was passed (Nichols et al., 2010).

**Increased penalties for seat belt law violations.** Fine levels vary from State to State, ranging from approximately \$10 to \$200. However, fine levels for violations in most States are under \$100. If fine levels for violations are too low, they may have little effect on increasing seat belt use (GHSA, 2018). Increasing fine levels can result in increased seat belt use (CDC, 2022b; Venkatraman et al., 2021). In one study, an increase in fine levels from \$25 to \$60 was associated with a 3- to 4-percentage point increase in seat belt use and increasing fines from \$25 to \$100 was associated with a 6- to 7-percentage point increase in seat belt use (Nichols et al., 2010).

Traffic safety practitioners should consider the extent to which there is public support for primary enforcement seat belt laws and increased fine levels in their areas. Traffic safety practitioners should also consider whether partners, such as local law enforcement, are supportive of the strategy. In some communities local LEOs may be hesitant to issue citations for seat belt violations if the fine is perceived to be too high. When implementing this model, practitioners may consider bringing in partners and collaborators, such as State-level law enforcement liaisons, who can help link local law enforcement to State Highway Safety Offices (GHSA, n.d.-a, n.d.-c) to help with the initiative (see [Module 3, Implement the Program](#)).

**Lessons Learned:**

- Having a statewide primary enforcement law can be highly effective, but in States with secondary laws, rural cities and counties may be able to enact their own primary enforcement ordinances to increase seat belt use.
- Increasing fines can increase seat belt use, but finding the right balance in fine level is important because
  - o fines that are too low may have little impact on seat belt use, and
  - o fines that are too high may deter law enforcement from issuing citations in rural or other lower income areas.

## Enhanced Enforcement Programs

Enhanced seat belt enforcement programs add publicity and additional enforcement to existing seat belt law enforcement approaches. Enhanced seat belt enforcement programs may include increased number of LEOs on patrol, increased number of citations during regular patrol, and increased checkpoints. According to NHTSA's *Countermeasures That Work* (Venkatraman et al., 2021), the two types of enhanced seat belt enforcement programs are short-term, high-visibility enforcement programs and integrated nighttime enforcement programs.

**Short-Term, High-Visibility Enforcement Programs.** These programs consist of a short period of increased police enforcement through methods such as checkpoints, enforcement zones, and saturation patrols. The programs typically last about two weeks and include highly publicized mass media campaigns. Media coverage consists of a mix of earned media and paid advertisements. This combination of increased enforcement and media coverage can be especially effective among populations with lower rates of seat belt use including males, teens, young adults, and rural drivers (Blomberg et al., 2009; Elliott et al., 2014; Tison et al., 2008; Nichols et al., 2016b; Thomas & Blomberg, 2016). The national *Click It or Ticket* (CIOT) campaign is a well-known short-term, high visibility enforcement program.

**Integrated Nighttime Enforcement Programs.** These are short-term, high-visibility programs, that focusing on nighttime enforcement, is important because a higher percentage of passenger vehicle occupants who were fatally injured at night were not wearing seat belts compared to daytime fatalities (NCSA, 2017). Traffic stops for non-use of seat belts at night many times also yields alcohol-impaired drivers (Fell et al., 2013; Solomon et al., 2009a). Nighttime seat belt operations may need to be different in areas with low traffic volumes in order to be effective (Thomas et al., 2017).

Based on the strong evidence of their effectiveness, enhanced seat belt enforcement programs are recommended by NHTSA (Venkatraman et al., 2021), CDC (2011 & 2020b), and County Health Rankings & Roadmaps (2016).

### Examples of Enhanced Enforcement Programs

- **Click It or Ticket:** The CIOT campaign was first introduced in May 2003 and is a multi-pronged approach to increasing seat belt use. The national program is mobilized

annually. Components of the program include high-visibility enforcement and media efforts including paid media and earned media (Nichols & Solomon, 2013; Hinch, et al., 2014). The campaign has resulted in higher seat belt use rates in rural and urban communities (Solomon et al., 2009b; Venkatraman et al., 2021). CIOT has also increased public awareness about the importance of seat belt use, a key factor in encouraging behavior change (Nichols & Solomon, 2013; Solomon et al., 2013). Traffic safety practitioners may choose to use CIOT in combination with other programs to boost seat belt use in their States. Evaluation data indicate that CIOT is effective in increasing seat belt use due to the combination of enforcement and media (Tison & Williams, 2010; Nichols et al., 2016a; NHTSA, 2021).

- ***Buckle Up in Your Truck (BUIYT)***: BUIYT is an ongoing program that primarily aims to increase seat belt use rates among male pickup truck drivers (Nichols et al., 2009). The initiative was implemented prior to the national CIOT mobilization and included both intensified enforcement and paid media. During two mobilization periods in 2006 and 2007, Iowa, Kansas, Missouri, and Nebraska experienced increases in seat belt use. Seat belt use among pickup truck drivers increased by 8 percentage points, on average (Nichols et al., 2009). BUIYT was also implemented in Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Arkansas, Louisiana, New Mexico, Oklahoma, and Texas in prior years (Nichols et al., 2009). BUIYT in Kentucky was recently coupled with a NASCAR Truck Series race, Buckle Up in Your Truck 225 (GHSA, n.d.-d), and continues in many locales throughout the country.
- ***Kentucky Local Heroes***: In 2017 the Kentucky Office of Highway Safety developed a new initiative, Kentucky Local Heroes, to complement CIOT and to further boost seat belt use across the State (Eggen, 2019). The initiative is community-centered and includes a media campaign that features local LEOs who are well known in the community (i.e., the “Local Hero”). The program, which is now statewide, first focused on the 10 counties in the State with the lowest observed seat belt use rates. Kentucky adapted the program from an approach used by other States that resulted in increased seat belt usage rates (Eggen, 2019). The program showed promise given the decreasing number of unbelted fatalities observed. Kentucky continues to implement Local Heroes, and Virginia has replicated the program in rural areas (Toward Zero Deaths Virginia, 2022).

Given the popularity, success, and annual mobilization of CIOT, rural traffic safety practitioners should consider pairing additional local enforcement activities with the national and State campaigns. High-visibility enforcement programs can be expensive to implement, so taking advantage of national and State media buys can be a good way to increase the power of a local program. Short-term programs are implemented for a limited period (typically 2 weeks), but it may take several months to plan the campaign, including the enforcement and media activities. Planning requires resources and support from program staff, LEOs, and partners. Law enforcement officers, particularly those people who are well-known by community members, are key to the success of enforcement programs.

**Lessons Learned:**

- Pairing local seat belt program activities with national and State programs can get more “bang for your buck.”
- Short-term programs that are repeated several times throughout the year can be highly effective.
- Picking the right target audience, such as pickup truck drivers, can be important depending on the population in a given rural area.
- Involving well-known personalities from law enforcement or other domains can improve program’s success.

## **Media Campaigns Combined With Enforcement**

Media campaigns consist of targeted strategies for delivering communication, education, and outreach in order to increase awareness and encourage behavior change. All high-visibility enforcement campaigns involve media outreach and communications. According to NHTSA, media outreach implemented in combination with enforcement is effective at increasing seat belt use. This type of program is particularly effective in reaching populations with low-use rates, such as male drivers, teenage drivers, and young adults (CDC, 2020b).

Media campaigns may integrate one or more types of media, including paid media, owned media, and earned media (see [Module 3, Implement the Program](#)). Examples of paid media include television or radio advertisements, billboards, and ads in publications. Paid media is obtained via payment to a third party that disseminates messaging (Thomas et al., 2016). Owned media refers to information and material owned and disseminated directly by the campaign (Thomas et al., 2016). This includes print items such as posters or brochures, as well as social media and other digital campaign-branded sources. Earned media includes press releases, news stories, or social media posts for which the campaign does not pay. Given how many people consume information today, targeted online advertising and embedded marketing have become more popular approaches for media activities (Thomas et al., 2016).

Targeted online advertising involves delivering messages, including internet advertising and social media, to people least likely to use seat belts. To be effective, messages, graphics, and content should be tailored to the population (e.g., young male pickup truck drivers). It is also important to understand the audience’s internet use so the content is delivered appropriately. The costs associated with targeted online advertising vary depending on the size of the audience and components of the advertisements. Targeted online advertising can be implemented in combination with other programs such as enhanced seat belt enforcement programs (Thomas et al., 2016).

Embedded marketing programs place messages within other media such as television shows, radio, video games, cellphone applications, magazines, movies, and internet content (Thomas et al., 2016). Practitioners should work with media partners such as product placement specialists, production companies, and other collaborators in these types of programs (Thomas et al., 2016).

Traffic safety practitioners should select media approaches based on what works best for the target audience and tailor the communication and outreach material appropriately. For example, if the target population does not use or have access to social media, practitioners should explore using paid media or owned media such as printed material. While some forms of paid media can be costly to implement (Bayne et al., 2020), traffic safety practitioners may be able to use existing, audience-tested material to minimize their costs. These are often available through State and local health departments, Federal agencies such as NHTSA (for example, CIOT and *Buckle Up*), or nonprofit organizations. When possible, media campaigns should be used in combination with enforcement strategies.

### **Examples of Media Campaigns Combined With Enforcement Programs**

- North Dakota’s traffic safety initiative, Vision Zero, began in 2018 with support from the governor, the North Dakota Department of Transportation, the North Dakota Highway Patrol, and the North Dakota Department of Health. The initiative’s goal is to encourage overall safety when traveling, including always wearing seat belts. Two strategies used as part of Vision Zero are the “Million Excuses” and “Do It For Love” campaigns (Vision Zero, 2023). These campaigns use public service announcements to promote seat belt use in the State.
- The Idaho Office of Highway Safety’s Buckle Up, Idaho campaign includes public service announcements featuring professional football player Leighton Vander Esch (SHIFT, 2021), who was born in Riggins, Idaho. In *Rules to LIVE By*, an education campaign that joins Vander Esch with the Idaho Transportation Department, Leighton lists some of the rules he lives by as part of coming from a small town, including wearing seat belts. Initial results suggest the program is promising.
- NHTSA developed the *Buckle Up Social Norming Campaign* (NHTSA, n.d.-a) that provides ready-to-use marketing tools for traffic safety practitioners, including the African American Toolkit, Hispanic Buckle Up Toolkit, and the Thanksgiving Holiday Travel Toolkit, all including sample eBlasts, infographics, PowerPoint presentations, and stickers (NHTSA, n.d.-a).

#### **Lessons Learned:**

- Focused media are key to making sure the target audience is aware of the seat belt campaign
- Messages should be tailored to the target population
- NHTSA and others have ready-to-use material available for a variety of target audiences
- Media campaigns combined with increased enforcement can generate general deterrence to increase seat belt use.

### **Youth-Focused Programs**

Data from the 2019 Youth Risk Behavior Survey indicated that 43 percent of U.S. high school students reported not always wearing seat belts during the previous month (Yellman, 2020). Teens living in States with secondary seat belt laws are less likely to report always wearing seat belts than teens residing in States with primary seat belt laws (Shults et al.,

2016). However, States with primary enforcement for minors included within their secondary seatbelt laws have comparable teen seat belt use rates to those of primary enforcement States. (Shults et al., 2016). Youth-focused programs may be implemented in a variety of settings, including at home or in schools, churches, local hospitals, and community organizations.

Schools offer controlled settings for implementing youth-focused programs. This makes it easier to tailor material to the schools and populations of interest. To encourage youth and teen interest in seat belt use, practitioners should involve teens in developing and implementing the programs. Youth-focused programs may also positively affect seat belt use among others, including parents, guardians, and other family members. Below are brief descriptions of the main types of youth-focused programs (Fischer, 2019).

**School-based programs.** These use education, communication, and outreach strategies to encourage and increase the use of seat belts among school-aged children and adolescents. NHTSA ranks school programs as promising, based on evidence that they are likely effective at increasing seat belt use among school-aged children (Venkatraman et al., 2021). School-based seat belt programs may involve student organizations, academic units, athletics departments, parents, and teachers.

**Peer-to-peer programs.** These are led, implemented, and evaluated by teens. Teenagers become peer educators, while adult sponsors help facilitate the programs and provide guidance as needed. Because these programs are youth-led, they allow teens to develop and implement programs that resonate with their peers. Programs that involve peers in delivering persuasive messaging and monitoring seat belt use have potential for increasing seat belt use among teens (Fell et al., 2005). NHTSA published the Peer-to-Peer Teen Traffic Safety Program Guide to provide traffic safety practitioners with information on the essential elements of a peer-to-peer safety program for teens (Fischer, 2019). The essential elements of the program are: led by teens, welcomes all teens, sustainable through adult support, ongoing training, clearly defines the problem and goals, positive messages, incentives and recognition, and evaluation, Fischer says.

**High school service-learning programs.** These programs use service-learning as a strategy to increase seat belt use among high school students. Service-learning for young people is defined as an educational strategy that involves the teens in meaningful community service activities, as well as study and reflection on their service (Thomas et al., 2016). A seat belt program that uses service-learning involves a peer-to-peer approach to encourage safe driving behaviors, and students apply the Investigate, Plan, Act, Reflect, and Demonstrate (IPARD) process. Thus, students would lead program research, planning, and implementation, reflect on what they learned, and share information with peers and the broader community. Service-learning programs are a promising strategy for increasing seat belt use, according to Thomas et al.

In youth-focused programs, traffic safety practitioners may focus on reaching parents as well. Parents are a key factor in teen seat belt use. Parents Are the Key, a CDC campaign

designed to help parents and other community members keep drivers safe, has created a variety of tools to help parents encourage safe behaviors (CDC, 2021a). Campaign material include information on teen driving safety and State laws, and a Parent-Teen Driving Agreement to encourage safe driving behaviors such as seat belt use.

### Examples of Youth-Focused Programs

- **Seatbelts Are For Everyone (SAFE):** The SAFE program was developed in Kansas to help increase seat belt use among teen drivers (DCCA, n.d.). The program was developed by the Crawford County Sheriff along with safety advocates, high school students, and teachers. The program includes four components: seat belt surveys conducted by the students, public education/messaging (e.g., students develop public safety announcements), prizes for signing pledge cards, and enforcement. The program is student-led, and participating schools have a program framework that they can modify and adapt as necessary. Certain components such as the seat belt observations are required. Program implementers continuously evaluate the program to ensure that participating schools meet the goal of the program. In 2017, SAFE was evaluated to determine the effectiveness of the program and identify areas for improvement. The results showed schools participating in the SAFE program observed gains in seat belt use from Fall to Spring compared to schools that did not participate in the program (Freund et al., 2019).
- **Maple Valley High School Seat Belt Project (MVHS):** The MVHS seat belt project was a month-long, peer-to-peer educational campaign in a rural North Dakota high school. In the program's first week of implementation, the school's Students Against Destructive Decisions (SADD) organization created posters promoting seat belt use (Lofgren, 2009). This was followed by daily announcements about seat belt safety, reminders to use seat belts, and student seat belt pledges. Efforts also included presentations by experts and police officers, followed by a school-wide seat belt observation study in the school parking lot. Overall, seat belt use increased during the campaign, and the positive benefits of the program were maintained a month after the campaign ended.
- **4-H CARTEENS:** Head, Heart, Hands and Health (4-H) CARTEENS is a peer-led traffic safety program in Ohio designed for teen traffic offenders. CARTEENS stands for "Caution and Responsibility" and "Teens," who lead the program (Huseth & VanWechel, 2010). The program, a collaboration between the Ohio State University Extension, the Ohio Highway Patrol, and county juvenile courts, was first implemented in Brown County in 1987 and has since expanded throughout Ohio and into several other States. Participants in the 4-H CARTEENS program showed increased seat belt use and a reduction in second-time traffic offenses.
- **Rock the Belt:** Rock the Belt was created by the Mississippi chapter of SADD in coordination with the Mississippi Office of Highway Safety. It has been implemented in Indiana and Illinois, and in 2015, the SADD national office named it a core national program. Other States including Louisiana, Ohio, and Tennessee implemented the program and adapted its components to create Rock the Belt for middle school

audiences (SADD, 2016, 2019). Rock the Belt uses peer-to-peer strategies to engage students, schools, parents, and communities to deliver educational outreach and promote the use of seat belts. Components of the program include activities for students to implement, information on how to advocate for seat belt safety, sample social media messaging, guidelines for conducting seat belt surveys, and sample tools and checklists. A NHTSA-funded evaluation found the program increased seat belt use among teens.

- Other examples of youth-focused programs can be found under **Incentive-Based Programs**.

**Lessons Learned:**

- Youth programs are often school-based and involve
  - some form of peer-to-peer engagement;
  - messages tailored to teen drivers and passengers; and
  - parent engagement whenever possible.
- A number of guides and material are readily available to support youth programs including
  - *Peer-to-Peer Teen Traffic Safety Program Guide*; and
  - *Parents Are the Key*.

## **Educational Programs for the General Public and Violators**

Educational programs are most effective when combined with other strategies, such as enforcement to increase seat belt use (Venkatraman et al., 2021). Education may be designed for entire communities through mass media campaigns or may focus on specific groups in the community such as new drivers, males, teenagers, or racial and ethnic minorities, among others. These programs can take place in a variety of settings.

**Coalitions to Educate Communities.** Coalitions allow stakeholders to work together on the common goal and objective of increasing seat belt use from different perspectives. These programs use education in the community to improve seat belt use through messaging that is often localized and personalized to populations who are unlikely to wear seat belts, newly licensed drivers, and people who have received multiple seat belt violations. Education may include collaborating with schools or local doctors' offices and using media to spread the message.

**Seat Belt Diversion Program.** These programs involve waiving a seat belt citation if the violator completes an educational course designed to inform and motivate seat belt use. These programs can take the form of online courses or in-person training. In one approach, the diversion course for seat belt violators is provided in a hospital setting (e.g., Thomas et al., 2014). These programs involve hospital staff describing the effects of non-seat belt use with real-life examples and stories they have experienced in their local communities.



## Examples of Educational Programs

- **Montana's Vehicle Occupation Protection Program - Buckle Up Montana (BUMT).** BUMT created county coalitions to increase seat belt usage. Coalition members wrote letters to the editors of local newspapers, coordinated community events, and attended local events to educate residents about the use of seat belts. An evaluation of the program found that counties with active BUMT coalitions had a significant increase in seat belt compliance (Stanley et al., 2015).
- **Sacred Cargo Coalition.** Motor vehicle crashes were the leading cause of death from severe injuries on the Pine Ridge Indian Reservation (PRIR), averaging 16 deaths per year from 2002 to 2011. The Sacred Cargo Coalition was established in PRIR in 2007 to implement intervention strategies to increase seat belt usage and reduce fatalities, including seat belt law enforcement, creating a traffic court system, and educational campaigns on crash prevention. Seat belt usage rates increased notably from 2007 to 2012 and crash fatalities decreased by 46.7 percent (Amiotte et al., 2016).
- **Trauma Nurses Talk Tough (TNNT) Seat Belt Diversion Program.** TNNT began in Portland, Oregon, in the late 1980s to teach behaviors for risk avoidance to high-risk drivers. Robeson County, North Carolina, implemented the program in 2010 to assess whether such a program could work in a more rural area. Drivers who were ticketed for being unbelted were given the chance to attend the class for a fee of \$20. Attendance allowed for dismissal of the \$126.50 citation. The class was taught by trauma and emergency room nurses in a hospital setting. After completing the class, attendees reported a more positive outlook about seat belts. Seat belt observations showed increases in seat belt use across the county (Thomas et al., 2014).

### Lessons Learned:

- Educational programs can serve an important role, but often need to be part of a bigger program that includes enforcement or the perception of supervision in places such as work settings or schools.
- A program is most effective when it delivers the educational material in a way the target population can comprehend in order to get the point across about the risks associated with not wearing a seat belt.
  - Focusing on statistics and risk calculations should not be the main points of an educational program unless you think the target audience will be influenced by this information.
  - Educational programs should provide real-world examples the target audience can relate to in order to produce behavior change.
  - Using local stories and examples delivered by respected members of the local community can be effective.

## Incentive-Based Programs

Traffic safety practitioners may reward positive behaviors by including incentives in rural seat belt programs. Incentives and rewards can motivate behavior change among certain populations of interest, and they are most frequently included in youth-focused programs (Thomas et al., 2016). For example, some programs have rewarded seat belt use among teenagers through cash prizes, gift cards to restaurants and shops, and raffle tickets. High school rewards programs and insurance incentives have been shown to increase use of seat belts among teenagers (Fell et al., 2005). It is important the incentive has real value to the target population. An incentive that has little value will likely not have the desired impact.

Funding for incentives can come from a variety of sources including local businesses who are willing to provide monetary support or prizes as part of their advertising strategy or to create good will in the community. Other funds may be available through State grants or traffic safety organizations that provide support for such programs.

### Examples of Incentive-Based Programs

- **Battle of the Belt.** The Battle of the Belt program began in 2004 in Missouri and uses a peer-to-peer approach to raise awareness and increase seat belt use in high schools (Goslar et al., 2009). The school-based program encourages community-wide partnerships with local hospitals and businesses. Schools implement educational activities, hospitals act as program coordinators, and businesses donate items and monetary awards to reward drivers found to be wearing seat belts during random checks. An evaluation of a Battle of the Belt program found an overall significant increase in seat belt use for drivers, front passengers, and rear passengers. Battle of the Belt has expanded beyond Missouri. The Tennessee Department of Health sponsors a statewide Battle of the Belt TN competition for Tennessee high schools. The Battle of the Belt TN website provides free resources to implement similar programs, including a Battle of the Belt Tennessee Resource Kit (Tennessee Department of Health, 2021).
- **Drive Alive Pilot Program (DAPP).** DAPP was first implemented as a pilot program in a rural high school in Georgia in 2006. DAPP is a month-long intervention, beginning with an observational seat belt survey conducted in the high school parking lot by volunteer students. DAPP used \$10 gift cards as incentives to promote seat belt use. The program also increased police patrols around the school and changed school parking policies so that students would lose parking privileges if they were caught not wearing a seat belt. Last, DAPP implemented an educational program and media coverage of the program. Educational activities included a safety day, videos about highway safety, and frequent school-wide announcements. A review of the pilot program indicated that seat belt use at the high school increased 23.3 percent after the program (Burkett et al., 2010).
- **High School Traffic Safety Challenge.** This challenge is a program of Drive Smart Colorado, a grass-roots community traffic safety program. It is a peer-to-peer campaign aiming to increase seat belt use among teens. The campaign encourages schools to compete against each other to achieve the highest seat belt usage rate in a seven-

week period. The challenge consists of educational activities, incentives, and a grand prize at the end of the campaign. An evaluation of the Teen Traffic Safety Challenge program implemented in Colorado in 2007 found a 20 percent increase in seat belt usage among teen drivers and their passengers, from baseline to post-intervention (Houston et al., 2010). An evaluation in Minnesota documented a 15 percent increase in seat belt use (Philbrook & Franke-Wilson, 2009).

- **Prevention (VIP) program.** The VIP program is an education campaign implemented in Houston, Texas, in three public elementary schools and two community health centers. One component of the program was to offer economic incentives for seat belt use. The Houston Police Department surveyed specific areas in the community determine if motorists were restrained. If the driver was properly restrained, they received an incentive, such as being entered in a drawing for a \$500 cash prize, a chance to win a TV, gift certificates for local grocery stores and jewelry stores, and a VIP key chain. If the vehicle occupants were not restrained, the police issued a citation. This program resulted in significantly improved seat belt use within the community (Hanfling et al., 2000).

#### **Lessons Learned:**

- An incentive must be meaningful (i.e., have enough value) to a person to promote behavior change.
  - Items with actual monetary value or opportunities to win bigger prizes appear to work well.
  - Avoid giving out trinkets and knickknacks.
- Local businesses may provide monetary support or prizes these types of programs as part of their advertising.
- Grants may be available from a variety of sources to help fund incentive programs.
- including increased enforcement can enhance incentive programs, and
- including disincentives such as taking away parking privileges for students may also be effective.

## **Work-Based Programs**

Traffic safety and seat belt use affects all areas of life, including work. Even non-transportation occupations and industries can benefit from their employees using seat belts on every trip. Most work-based programs require working with employers, unions, or company insurance providers. Within organizations, traffic safety practitioners can work with key company employees including risk managers, safety leaders, and HR professionals to build a company-wide traffic safety program.

It is important for work-based programs to focus on how seat belt use can affect both employees and the company. Crashes and injuries can impact productivity and work, and encouraging seat belt use can have cost savings for employers. A successful program relies on everyone having a shared mission, the right attitude, and willingness to work together. It is also important to be flexible and creative (e.g., adapt to the audience, look for

continual improvement, and incorporate practices such as games). Innovative practices can help with retention and engagement. Programs can include incorporating games into trainings, new marketing approaches, regularly updating posters, or displaying looping videos in common areas.

All levels of a company should understand the importance of seat belt use. Employees need to be given the appropriate tools and information, so they are empowered to speak up to leadership if they have concerns. Additionally, supervisors and managers should operate as examples for their employees, as employees naturally follow their lead. Buy-in is needed across all levels. The language used in the program should be simple and align with the language used by the employer and/or industry.

When determining the effectiveness of a program, it is useful to look beyond knowledge retention. Evaluate what employers are doing with the information from the program, such as implementing new practices (e.g., seat belt observations) or sharing what they learn outside of the organizations (e.g., with family/friends, libraries, schools, DMV).

### Examples of Work-Based Programs

- **2 Seconds 2 Click.** 2seconds2click.org provides a step-by-step, online toolkit developed by the Network of Employers for Traffic Safety (NETS) in partnership with NHTSA. The toolkit allows practitioners to create a 4-week seat belt campaign in the workplace (NETS, n.d.). The program is low cost, requires minimal time and effort to run, and includes educational material, plans, and optional evaluation.
- **Our Driving Concern.** This is a program from the National Safety Council (NSC) and the Texas Department of Transportation that is also implemented in Nebraska. The program works with employers to promote safe driving practices among employees. The program provides employers with material like window clings, posters, webinars, e-learning with quizzes, and templates that can be adapted to workplace sites. Program material focus on safety behaviors, including distracted driving, impaired driving, speeding, and seat belt use (NSC, 2019).

#### Lessons Learned:

- Increasing seat belt use while on the job, and in general, benefits employers regardless of the type of business by decreasing time lost due to injuries sustained during crashes.
- Creating a positive safety culture that promotes seat belt use for the benefit of the person and the company is key.
  - All levels of the organization need to buy in to the idea that seat belt use is important.
  - Requirements and expectations should be clearly defined so all employees understand the benefits of seat belt use as well as any consequences of not wearing a seat belt while on the job.

## Other Resources for Evidence-Based Seat Belt Programs

A variety of resources were provided in the sections above, but even more information is available for evidence-based and effective seat belt programs as shown in Table 3.

**Table 3. Sources for Evidence-Based and Promising Seat Belt Programs**

- *The Guide to Community Preventive Services* (2021) reviews programs and interventions to increase safety belt use. The community guide summarizes evidence-based interventions, such as primary compared to secondary enforcement laws and approaches for increasing use of seat belt, car seat, and booster seat use.
- *What Works? Strategies to Improve Rural Health (County Health Rankings & Roadmaps, 2016)* summarizes scientifically supported strategies such as primary seat belt enforcement laws that have been shown to improve rural health.
- NHTSA's *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices*, 10th edition (Venkatraman et al., 2021) reviews effective, evidence-based countermeasures including seat belts. This NHTSA guide describes countermeasures for addressing risk factors in traffic safety, including seat belts and child restraints. Practitioners are encouraged to use countermeasures that are effective or promising.
- *What Works: Strategies to Increase Restraint Use* (CDC, 2020b) summarizes strategies that are effective in increasing seat belt use.
- *Expanding the Seat Belt Program Strategies Toolbox: A Starter Kit for Trying New Program Ideas* (Thomas et al., 2016) provides promising strategies to increase seat belt use.
- *Selected Evidence-Based Strategies for Preventing Injuries* is a collection of interventions and strategies recommended by the Indian Health Service (IHS) Injury Prevention Program and includes strategies to increase seat belt use in American Indian and Alaska Native communities (IHS, 2021).
- *The Motor Vehicle Prioritizing Interventions and Cost Calculator for States* (CDC, 2022b) is an online calculator from CDC that helps decision makers consider resources, costs, and outcomes for motor vehicle injury prevention interventions.



## Module 2: Evidence-Based and Promising Program Models

### Best Practices Checklist

#### ✓ Best Practices

- Investigate any seat belt programs that were used in your area previously.
  - Explore possible resources that may be available.
  - Identify what has been successful in the past and lessons learned.
- Pick an evidence-based program model that best fits your resources and the needs of the area.
  - Clearly define your target audience and scope of your program.
  - Determine if material have already been developed that you can use, or if you need to develop new material.
  - Start thinking about other stakeholders you need to involve to develop an effective program.
  - Start outlining a program plan that will serve as the starting point as you move towards implementation.
- Make sure you understand the type of seat belt laws in your area and the actions law enforcement can take to enforce those laws.
  - Tailor your media program to fit what is allowed in your area.
  - If primary enforcement is not allowed, see if you can work with local leaders to develop an ordinance that allows for primary enforcement of seat belt laws or increase fine levels if supported by local politicians and law enforcement agencies.

## MODULE 3: IMPLEMENTING RURAL SEAT BELT PROGRAMS



**Objective: Learn the steps and important considerations for implementation**

Module 3 presents seven steps for implementing a seat belt program in a rural community. These steps are informed and adapted from existing public health program planning and implementation frameworks, including the Mobilize, Assess, Plan, Implement, Track (MAP-IT) framework (Office of Disease Prevention and Health Promotion, 2022) and Exploration, Preparation, Implementation, Sustainment (EPIS) (Moullin et al., 2019) framework. The steps are described as a sequence, although some may be implemented concurrently.

### In this Module:

- Steps to Implement Rural Seat Belt Programs
  - Step 1: Identify Community Needs
  - Step 2: Determine the Program Goal and Select a Strategy
  - Step 3: Assess Resources and Costs
  - Step 4: Engage Partners and Champions
  - Step 5: Develop an Implementation Plan
  - Step 6: Implement the Program
  - Step 7: Sustain the Program
- Best Practices Checklist

## Steps to Implement Rural Seat Belt Programs

### Step 1. Identify Community Needs

Rural traffic safety practitioners should first assess the scope of the problem (i.e., determine how low the seat belt use rate really is) in their area with a focus on identifying target populations for the program. This involves investigating the underlying factors that are potentially contributing to the problem, and identifying the population groups and geographic areas most affected.

A “community health needs assessment” is a good way to start the process because it involves using data to identify key health issues in a given location (CDC, 2022c). A needs assessment combines existing data collected by others when it is available with new, more current information to assess the problem and population groups most affected. Much of what is needed to identify community needs may be available from government agencies at the national, State, or local level. Many agencies already collect data on road users such as seat belt observations, citations, and crashes. The agencies may have information that is highly relevant to the rural area of concern. State highway safety offices, public health

departments, local medical systems, and local universities may have relevant information available from previous highway safety campaigns or other public health efforts.

If existing (secondary) data do not sufficiently describe the problem, it may be necessary to collect new (primary) data on the specific target population in the rural area. Primary data may be collected through interviews, focus groups, observations, or surveys with the population of interest. Table 3 provides a brief description of the methods for collecting information on community needs. The information collected can also be used to evaluate the efficacy of the program. (See **Module 4: Evaluation, Step 4: Gather Credible Evidence**). Primary and secondary data will help assess the community's needs and assist in identifying the best strategy to increase seat belt use. Based on the data from the community health needs assessment, rural traffic safety practitioners may want to focus the seat belt program on a specific population—for example, teenagers or people who drive pickup trucks.

**Table 3. Approaches to identifying community needs**

- **Interviews.** Interviews are generally one-on-one conversations that provide information on individual experiences related to an issue. The conversations can be conducted in-person, via telephone, or virtually. The interview may be structured with a series of questions that go in order, or it can be more unstructured and free-flowing so long as the target topics are addressed.
- **Focus groups.** Focus groups can take many forms, but the most common approach involves a moderator (the focus group leader) using open-ended questions to stimulate discussion among a group of people recruited from the target population. The goal is to use the group discussion to gather insights from the participants that may not come out in other one-on-one types of data collection.
- **Observations.** Observations involve watching and recording information about behaviors to determine what people actually do in a given situation. A variety of observational techniques are possible, often taking place in a natural setting without any interference from the observer, or they can be conducted in a more controlled experimental setting. The observations can involve a person watching the focus behavior live, or recording behaviors (e.g., using video) for later review.
- **Surveys.** Surveys use questionnaires to gather information from a group of people. Surveys can be conducted in-person, online, or via telephone. The questions can be in a variety of forms including true/false, multiple-choice, rating scale, ranking, or open-ended depending on the information sought. Surveys can be a good option to gather information from a large number of people in the target population.

Primary data can also provide insights into the target population's beliefs, and the barriers to and facilitators of seat belt use. Practitioners can use these insights to frame messages so they appeal to the values of the community and population of interest. For programs involving enforcement, it is essential to understand whether the community has favorable opinions of law enforcement and their reactions to similar traffic safety initiatives in the past. Rural communities may be less interested in government oversight, although beliefs regarding enforcement and related topics will differ across communities. Understanding how the community will likely respond to a given program approach is essential.



Involving community members in the community health needs assessment can increase buy-in for the program and encourage engagement among local stakeholders if they feel as though they are part of the problem identification efforts. For example, involving local law enforcement in seat belt observations may encourage them to participate once they realize the actual extent of the problem that is now “officially” documented with a seat belt use rate they helped produce. Similarly, involving local schools in the needs assessment, especially if the program is a teen-focused program, can potentially help increase buy-in from the community.

## Step 2. Determine the Program Goal and Select a Strategy

Creating goals and objectives for the seat belt program is an important step in the process. Goals are achievable outcomes that are generally broad and longer term. Objectives are short-term, measurable actions taken toward reaching a goal. Both are important for the success of a program. Any objective or goal set should be specific, measurable, achievable, relevant, and time-bound (SMART) (SAMHSA, n.d.).

### Real-World Example:

*Buckle Up Owensboro* had a goal of increasing seat belt use in the city through data-driven seat belt enforcement, strategic communications, education and outreach and outlined the program objectives in order to achieve the goal. The Owensboro Police Department (OPD) included 30 minutes of seat belt enforcement in daily patrols, monthly spotter and chaser seat belt details, and led *Buckle Up for a Buck* events. OPD selected seat belt enforcement zones based on the lowest observed seat belt use rates and highest unrestrained fatality rates. OPD’s objective was to present seat belt enforcement to officers every two weeks during roll call briefings. Officers were also recognized for seat belt education and enforcements during the roll calls. OPD officers completed training covering benefits of seat belt use for the public, at-risk groups, and LEOs. Material included information from NHTSA, the *Below 100* program, Kentucky’s seat belt use law, seat belt enforcement strategies, and the link between traffic enforcement and crime prevention. The OPD objectives were SMART.

Additionally, the program was promoted through existing and new relationships with the local media and community through social media, press releases, newspaper, radio, and television reporting. The program was launched when the OPD announced the program with a media advisory, press release, and *Buckle Up for a Buck* event at a local fast-food restaurant. Drivers wearing their seat belt received a dollar and a coupon for a free sandwich, and unbelted drivers were reminded of the State law and why seat belt use is important. OPD distributed informational cards to drivers and passengers at these events and traffic stops. The *Buckle Up Owensboro* logo was created to represent the locale and included the seal of Owensboro, a 3-point seat belt, and message “Buckle Up Owensboro – Seat Belts Save Lives!” Aluminum traffic signs were posted around the city, electronic message boards were programmed with the message and used on roads with common speeding issues, banners were used at community events, magnetic decals were placed on marked patrol cars, and vinyl window decals were distributed for display on entries to local businesses. OPD and seat belt coalition partners used social media, community events, high school events (e.g., *Battle of the Belts*), and press conferences to aid community outreach and education.

Source (Retting et al., 2020)

When selecting a program strategy, traffic safety practitioners should consider the evidence needed to support the program model and whether the strategy is applicable to the target population in their area. In addition, it is important to consider other ongoing health and safety programs occurring in the rural community. This includes other initiatives to address traffic safety such as distracted driving and impaired driving, as well as other public health efforts. These ongoing efforts may involve similar partners such as community organizations, local businesses, and law enforcement which can create opportunities for synergy. Pairing a seat belt program with other traffic safety or public health programs may allow practitioners to reach a wider audience with the same or less funding.

**Adapting an Evidence-Based or Promising Seat Belt Program.** In rural communities, it is essential to adapt the program to the specific community. The process of adaptation requires changing a program so that it meets the unique needs of a particular population, or will work in a different setting, without fundamentally changing or removing the program's core components (see the U.S. Department of Health and Human Services' "Making Adaptations Tip Sheet," n.d.). When adapting an evidence-based program, it is important to consider how any changes may affect the program, and ultimately, its outcomes. Some programs, such as Kentucky Local Heroes, were designed so that another State could use the same approach and personalize the featured heroes (e.g., Virginia Local Heroes). School-based programs can adapt material to reflect the specific mascot or town and create friendly rivalries for improving seat belt use.

### **Step 3. Assess Resources and Costs**

Step 3 involves assessing available resources to support implementation of the rural seat belt program. Assessing resources helps determine priorities and set realistic expectations for the program given the available budget. Traffic safety practitioners can use information from the community health needs assessment to understand available resources. In particular, preliminary discussions with possible stakeholders in the community can help practitioners understand what community assets are available and make the best use of resources. Practitioners should assess resources and assets across several levels, including the implementing organization, partners, and the community (NORC, 2018). To assess available resources and anticipated costs, practitioners can ask the following questions:

- Does my organization have staff, partners, and collaborators with the necessary expertise to implement a seat belt program?
- Does my organization have the necessary equipment, material, and funding to support implementation? If not, which partners can offer these resources?
- What are the strengths and assets within the rural community? How can these assets be leveraged to support the rural seat belt program?
- Which potential partners, such as law enforcement, State Highway Safety Offices, community associations, institutions, agencies, and others, have similar interests and are available to support the program?

Rural communities have unique assets—capacities found in the community that can be leveraged for positive change. When developing a rural seat belt program, it is important to consider four different types of rural assets as shown in Table 4

**Table 4. Rural Assets That Can Be Leveraged for Rural Seat Belt Programs**

**Individual assets** are the knowledge, skills, attributes, abilities, and actions of people living in rural areas, which includes community engagement, entrepreneurship, and the adaptive capabilities of rural residents.

**Organizational assets** in the local community include faith-based organizations, community-based organizations, schools, and local businesses. These anchor institutions are important because they are trusted organizations grounded in the community.

**Community assets** are physically located within a rural community but often not controlled locally. These include health care system-owned hospitals, corporate-owned businesses, and branched financial institutions.

**Cultural assets** shape core values in rural communities, such as “a close-knit sense of community; strong family support systems and neighborly social ties; religious affiliation; pride in self and family; self-reliance and independence; the importance of justice, loyalty, and faith; and a strong work ethic.”

Source: NORC, 2018.

It is also important to assess program costs. Implementation costs include the development of program material, incentives and rewards, media activities, and supporting partners’ implementation efforts if they are to be built into a shared budget. There are labor costs associated with engaging the population of interest (e.g., recruiting schools or teens to participate in a seat belt program). Developing tailored material can be expensive and also requires labor, but many times templates are available to reduce costs and general material may already be available at little to no cost. Some programs use incentives to encourage participation which add to program costs.

#### **Step 4. Engage Partners and Champions**

Traffic safety practitioners should identify and engage partners and “champions” who have a shared mission to improve traffic safety. Partners support program implementation by providing necessary resources such as material, personnel, and funding. Partners also help increase awareness and build community support for the program. Champions are people who are well-known and well-liked within the community who support the program by promoting it among the population.

**Partners.** Support from partners is key to a successful program. Partners may include people or organizations that are invested in the program’s success (see Table 5). Partners may include community organizations and local government agencies. In youth programs, students and school administrators are important partners.

**Table 5. Partners for Rural Seat Belt Programs**

- **Local businesses and community organizations.** Trusted organizations in the community can be valuable partners on seat belt programs. Examples include local businesses, national businesses with a local community presence like banks and retail stores, community-based organizations, faith-based organizations, philanthropic organizations, and non-profits, among others.
- **Community members.** Engagement from the population of interest can increase awareness of seat belt programs. For example, community members and activists, such as parents, teens, and youth (for school-based programs) may support rural seat belt programs. They may also participate in evaluations of seat belt programs.
- **Schools.** Public high schools or colleges may be involved in seat belt programs, particularly when programs are focused on seat belt use among teenagers or young adults.
- **Emergency medical services.** EMS staff such as emergency medical technicians, trauma nurses, paramedics, fire departments, and other first responders who interact with people in the community are important partners for seat belt use programs.
- **Tribal councils.** Tribal councils can support seat belt programs designed to increase seat belt use among tribal populations.
- **Transportation organizations.** Public and private transportation agencies, insurance companies, car rental agencies, and local car and truck dealerships can help by providing messaging and educational material in the community.
- **Media outlets.** Local media partners include the newspapers, radio stations, television stations, and others active in the community on social media that can help convey messages about the program. Media vendors may also serve as partners to develop and promote resources and material as part of the public service announcements.
- **Law enforcement liaisons.** Law enforcement liaisons (LELs) promote safety programs and initiatives by linking law enforcement with State Highway Safety Offices. LELs can facilitate engagement in rural seat belt programs. They can often coordinate several local and State law enforcement agencies to improve the quality of an enforcement program when local law enforcement resources alone are not likely to be sufficient.
- **Law enforcement.** Local and State law enforcement, including police departments, sheriff's offices, and State patrol/police are essential partners for rural seat belt programs involving an enforcement component.
- **Government agencies and offices.** National, State, and local government agencies can support rural seat belt programs. State and local public health agencies, health and human services agencies, and other agencies focused on public safety, aging, employment, education, and housing are also important partners.

**Champions.** Program champions are highly visible and trusted members of the community. A champion can support a rural seat belt program by promoting it among community members. Programs may have one or more champions. A champion may be a person, an organization, or both. For a school-based program, the champion may be a teacher or advisor, student resource officer, or career counselor. In the Kentucky Local Heroes program, local LEOs delivered compassionate enforcement messages using radio, print, social media, and television (Eggen, 2019). The Rules to LIVE By program features Leighton Vander Esch, a former Boise State football player and current Dallas Cowboy, and

a native of Idaho (SHIFT, 2021). Vander Esch recorded seat belt-focused PSAs and will tour local schools to talk with kids about the importance of buckling up.

**Roles for Partners and Champions.** After identifying partners and program champions, practitioners should mobilize them by assigning roles and responsibilities, and discussing expected contributions and time commitment. Potential roles for partners and champions include fundraising, convening with community members, facilitating meetings, developing material, and providing program support.

When assigning roles, rural traffic safety practitioners should consider the strengths, resources, and capacity of the partner or champion. For example, law enforcement agencies in rural communities may have fewer staff, limited time and resources, or other important priorities. However, support from law enforcement can make a big difference in the success of a rural seat belt program—and is essential for programs involving an enforcement component.

It is helpful to meet with personnel from the State Highway Safety Office. They can help in several ways, including by providing funding for some aspect of the seat belt program; providing expertise, experience and advice concerning the program; and helping to bring law enforcement on-board if there is an enforcement component.

## **Step 5. Develop an Implementation Plan**

Step 5 involves developing an implementation plan that describes the approach for implementing the rural seat belt program. The plan needs to be well-documented so that it can be distributed to any partners. It needs to be clear and concise to ensure everyone understands their role in the program and the actions they need to take. At a minimum, the implementation plan should describe the information gathered as part of Steps 1 to 4 regarding

- the community's needs,
- program goals and strategy,
- resources and costs, and
- roles and responsibilities of partners and champions.

The plan needs to also have details on

- training needs,
- communications plan, including media messages and material,
- timeline for all program activities, and
- plans for monitoring program progress and any evaluations.

**Training Needs.** The plan should define the training needs and plans for staff and partners. Practitioners should determine whether training is necessary and who will participate in the training. Resources for training material include organizations such as NHTSA and the IHS, conference workshops such as those available through the Lifesavers Conference, the State Departments of Transportation, and the State Highway Safety Offices. Not all rural seat belt programs require training as it depends on the components of the program. Programs involving seat belt observations will likely require training to ensure

the observers know how to properly conduct the observations. Staff and partner training and preparations should be complete before implementing the program.

**Communications Plan.** Rural traffic safety practitioners should develop communications plans that clearly detail the communication strategies to be implemented and the steps that will be taken to get the program messages to the target audiences. A component of the communications plan is a media plan, which focuses on the strategies that will be used to engage paid or earned media through print (newspapers, newsletters), broadcast (TV, radio ads), and social media. NHTSA has a website (NHTSA, n.d.-d) dedicated to marketing material, earned media tools, and marketing strategies prepared to fit the needs and objectives of your local community. The CDC's (2014) *Media Plan Guidance: How to Create and Implement an Effective Media Plan* explains how to develop a media plan and the components of a good plan including audience, message, settings and channels, activities, partners, tasks, timeline, budget, and evaluation. For examples of communication channels, settings, and activities related to traffic safety behavior change campaigns, see the AAA Foundation for Traffic Safety's toolkit (Bayne et al., 2020) included in the Evidence-Based Behavior Change Campaigns to Improve Traffic Safety document.

Seat belt programs require well thought out messages and creative material to catch the target audience's attention and deliver the message in a meaningful way that can change behavior. Messages should use plain language that is easy to understand and appropriate for the population of interest (CDC, 2021b). To tailor messages to the community, practitioners can consider using local phrases. Messages may also include personal stories from people in the community. Material can include written content, visual resources such as posters, and social media content. For example, Figure 2. Seat Belt Campaign Material displays the logo for NHTSA's Buckle Up Social Norming Campaign (NHTSA, n.d.-a), a year-round campaign that promotes seat belt use.

To ensure the program resonates with and is responsive to the population of interest, it is essential to tailor the program, material, and messages to the local culture. What works in one community may not work, or be appropriate, for a different community or culture as local beliefs and preferences may differ. For guidance on message development and message framing, consult *Adding Power to Our Voices: A Framing Guide for Communicating about Injury* (CDC, 2008).



**Figure 2. Seat Belt Campaign Material**

The communications plan should describe the process for adapting messages and material to ensure they are localized, culturally appropriate, and relevant to the population of interest. This will increase program effectiveness. For example, the Kentucky Local Heroes

*Click It or Ticket* program was adapted from a successful existing campaign in another State (Eggen, 2019). Campaign material and messages were tailored to each county, using images of local law enforcement, roads, and geography. Tailoring the material reflected the differences across the regions of the State (Eggen, 2019).

NHTSA offers marketing tools to promote seat belt campaigns, which can be used to reach different populations and address local needs (see Table 6). Two prominent campaigns focused on increasing seat belt use are CIOT and Buckle Up.

**Table 6. Seat Belt Campaign Material**

- **Click It or Ticket Campaign Material.** CIOT is an annual national high-visibility enforcement campaign to ensure motor vehicle occupants wear their seat belts as they travel to their destinations. The *Click It or Ticket* Campaign material focus on providing seat belt safety education and information about enforcement in order to save lives. Campaign material are available for National Enforcement Mobilization and Thanksgiving Weekend Seat Belt Enforcement (NHTSA, n.d.,-b). Resources include campaign dates, timelines, a media buy summary, and television advertisements including an ad focused on rural drivers. The 2023 *Click It or Ticket* Social Media Playbook includes content and assets for social media in English and Spanish (NHTSA, n.d.,-b).

Find the NHTSA CIOT material at

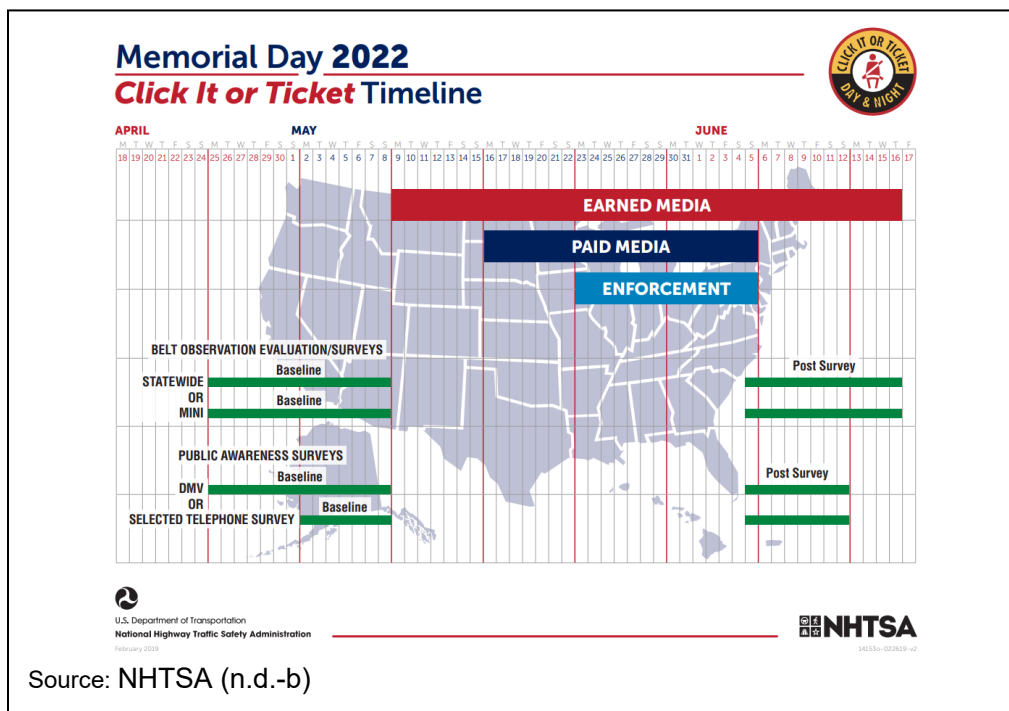
[www.trafficsafetymarketing.gov/get-material/seat-belts/click-it-or-ticket](http://www.trafficsafetymarketing.gov/get-material/seat-belts/click-it-or-ticket) .

- **Buckle Up Campaign Material.** The *Buckle Up Social Norming Campaign* is a year-round campaign that promotes seat belt use. Traffic safety practitioners can use these marketing material for a seat belt program. Toolkits with content and assets are available for reaching African American populations and Hispanic populations. Additionally, the *Thanksgiving Weekend Social Norming Campaign* is available in English and Spanish (NHTSA, n.d.,-a).

Find the NHTSA Buckle Up material at

[www.trafficsafetymarketing.gov/get-material/seat-belts/buckle](http://www.trafficsafetymarketing.gov/get-material/seat-belts/buckle) .

**Timeline.** The timeline for a rural seat belt program can be weeks, months, or years depending on the goal of the program and its resources. Figure 3 provides an example timeline from the 2022 *Click It or Ticket* campaign (NHTSA, n.d.-b). This example shows the timeline for the campaign, strategies used (earned media, paid media, and enforcement), and data collection activities for the evaluation of the impact of the campaign. Every program should document its planned timeline and attempt to stay on schedule.



**Figure 3. Timeline Example: Memorial Day 2022 Click It or Ticket**

**Plans for Evaluation and Monitoring.** Rural traffic safety practitioners should also plan to monitor program processes and evaluate program outcomes to understand whether the program is having an effect. Monitoring and evaluating do not have to be onerous activities. Practitioners can decide how much to monitor or evaluate their programs. It ultimately depends on how much information practitioners determine is necessary to measure the effectiveness of the program and its impact on the target population’s behaviors. The steps involved in appropriately evaluating a seat belt program are described in **Module 4**. Importantly, planning for quality monitoring and evaluation activities should begin before the implementation of the program rather than being an afterthought.

### Step 6. Implement the Program

With a clear and specific plan in place, it is time to implement the program. Depending on the type of strategy being implemented, there may be a kick-off or launch event. Other activities, events, and meetings can also be held to increase awareness of the program. All program material should be developed and in place prior to implementation. The timing of advertisements, press releases, op-eds, or social media posts should be coordinated to reach the target audience once the program is initiated. For example, enforcement and social norming strategies should begin concurrently.



During implementation, it is important to stay actively engaged with the partners and the community so that the program does not lose momentum. Staying engaged helps build relationships and ensure ongoing support for the program after the initial “rush” of getting a new program launched. Practitioners should periodically check-in with partners, as well as with the community. Setting reminders on the study calendar/timeline and sharing results on a set schedule can keep partners engaged. Community feedback signs (Figure 4) displaying seat belt use can be updated based on observed use (NHTSA, 2001). Feedback signs that show observed seat belt use rates and are updated routinely (e.g., weekly based on observed seat belt use) have been shown to increase seat belt use (Malenfant et al., 1996). This is one example of why evaluating and monitoring activities, and documentation of meaningful change can be vital to ensuring continued support for the program.



**Figure 4. Community Feedback Signs (NHTSA, 2001)**

When implementing the program, it is also useful to monitor the program’s process and manage its resources. Traffic safety practitioners should validate that the program is:

- meeting the community’s needs;
- following the planned strategy;
- reaching program goals and milestones;
- working within the allocated resources and budgets;
- reallocating resources as needed;
- using partners and champions;
- continuing to monitor staff and retraining, if required;
- redistributing responsibilities among staff and volunteers as necessary;
- reaching the targeted audience with media messages and material;
- fulfilling planned enforcement activities (e.g., checkpoints);
- following the established timeline and adjusting, if required;
- monitoring progress; and
- evaluating and recording programmatic efforts.

## **Step 7. Sustain the Program**

Sustaining program activities for an extended period is one of the most difficult parts of any rural seat belt program. Often, the program’s scope, scale, and timeline is determined by the amount of available funding and personnel. Ongoing funding and support can be a

challenge in rural communities. Traffic safety practitioners can seek continuation grants if a program is showing real promise for increasing seat belt use. Often, this type of funding requires seat belt observations and surveys to demonstrate effectiveness. State or local entities can provide matching funds for grants to effective programs.

Funding sources for sustainability may also be available from State agencies such as the State Department of Health or State Highway Safety Office. NHTSA makes funding available through the Section 402 State and Community Highway Safety Grant Program (GHSA, n.d.-b). Other local associations or companies may also provide funds as part of community support or if there is a perceived benefit for the organization to increase seat belt use of employees or members. Programs can sometimes be started with minimal resources, but over time garner support and funding if the program looks promising.

Sustainability also involves ongoing monitoring and evaluation (see **Module 4, Evaluation**). Data from the evaluation can be used to inform changes to the program. While it is important to follow the implementation plan, being flexible and seeking opportunities to improve the program will help ensure success. Practitioners can also share data with partners, the population of interest, and the broader community. This can help maintain enthusiasm for the program. Rural seat belt programs can also emphasize a sense of community over individuality to mobilize the community and promote sustainability. Community involvement will ensure a program is successful. Several programs including High Five (Tinker, 2022), Battle of the Belts (Tennessee Department of Health, 2021), and Seatbelts Are for Everyone (SAFE) have successfully continued programmatic activities and even expanded to new areas. Sharing information on program successes with State legislators may also help secure funding for the program. Funding is key for sustaining or expanding any seat belt program.



## Module 3: Implementing Rural Seat Belt Programs Best Practices Checklist

### ✓ Best Practices

- Identify Community Needs.
  - Assess the scope of the problem (seat belt use) in the community.
  - Determine the factors affecting the problem.
  - Identify the population groups or geographic areas most affected.
- Determine the Program Goal/Objectives and Select a Strategy.
  - Select an evidence-based or promising rural seat belt program model.
  - Consider the evidence available to support the program model.
  - Adapt the program or strategy to the needs of the rural community.
- Assess Resources and Costs.
  - Identify sources of funding or support.
  - Set realistic expectations for the program given the available resources.
- Engage Partners and Champions.
  - Identify partners with a vested interest in community health.
  - Build partnerships.
- Develop an Implementation Plan.
  - Define stakeholder roles and provide training/guidance to partners.
  - Create a timeline and plans for monitoring and evaluation.
- Implement and Sustain the Program.
  - Ensure all program parties are executing their activities as planned.
  - Gather information to determine if the program is having an effect.
  - Continue to build community support to sustain the program.

## MODULE 4: EVALUATING A RURAL SEAT BELT PROGRAM



### Module 4 Objective: Design and implement an evaluation of a rural seat belt program

Module 4 covers the benefits of evaluating rural seat belt programs and describes six steps for evaluating a rural seat belt program. The six steps are informed by NHTSA's *The Art of Appropriate Evaluation: A Guide for Safety Highway Program Managers* (Pullen-Seufert & Hall, 2008) and follow the model of the CDC's (2017) *A Framework for Program Evaluation*. The module covers best practices from prior rural seat belt program evaluations and challenges the practitioner may face.

#### In this Module:

- Why Evaluation Matters
- Steps for Evaluating a Rural Seat Belt Program
- Evaluation Challenges
- Best Practices Checklist

### Why Evaluation Matters

Evaluation is an important aspect of any program. It helps rural traffic safety practitioners to monitor progress, demonstrate the seat belt program's effectiveness, and secure funding. It also provides accountability and transparency to partners such as law enforcement, media, and the public. Table 8 lists toolkits that provide guidance for practitioners.

**Table 8. Evaluation Resources**

- *The Art of Appropriate Evaluation: A Guide for Highway Safety Program Managers* (Pullen-Seufert & Hall, 2008).
- *The 2010 User-Friendly Handbook for Project Evaluation* (Frechtling et al., 2010).
- Rural Community Health Toolkit (Rural Health Information Hub, 2022)
- *Evaluating the Initiative* (Center for Community Health and Development, n.d.-c).
- *Seat-belts and Child Restraints: A Road Safety Manual* (FIA Foundation for the Automobile and Society, 2009)
- *Evidence-Based Behavior Change Campaigns to Improve Traffic Safety* (Bayne et al., 2020).

Evaluation helps determine what is working, what can be improved, and contributes to the larger body of knowledge on what makes rural seat belt programs effective. The results can help focus limited program resources on the most critical problems in the community. Program evaluation does not need to be complex. A simple and straightforward evaluation consistent with the seat belt program's size and objectives can yield useful information.

## Steps for Evaluating a Rural Seat Belt Program

This section describes the six steps, adapted from the CDC's (2017) *A Framework for Program Evaluation*, for conducting an evaluation of a seat belt program.

1. Engage Stakeholders
2. Describe the Program
3. Focus Evaluation Design
4. Gather Credible Evidence
5. Justify Conclusions
6. Ensure Use and Share Lessons Learned

### Step 1: Engage Stakeholders

Stakeholders are the people and organizations invested in the rural seat belt program and have an interest in seeing it succeed. This usually includes law enforcement, traffic safety practitioners, schools, community partners, and funders. To promote buy-in for the program and its evaluation, practitioners should engage stakeholders at all stages of the work, beginning with the planning phase (see **Module 3, Implementation**).

It is great if one of the stakeholders has evaluation expertise, but often times it helps to bring in an outside party to assist with getting things set up. Evaluation specialists can be identified through transportation institutes at local colleges and universities, NHTSA Regional Offices, State Highway Safety Offices, or through private companies. An evaluation specialist can help design the evaluation, oversee data collection, analyze data, deliver interim feedback on the program, present findings, and provide input as practitioners draw conclusions about the program (Pullen-Seufert & Hall, 2008). Whether you need, or want, outside help depends on your objectives for the evaluation and how you intend to use the information gathered.

### Step 2: Describe the Program

To identify the appropriate questions to guide the program evaluation, traffic safety practitioners should create a detailed description of the objectives of the program, and the procedures that will be used to achieve the intended outcomes. **Module 3, Implementation**, describes how to explore community needs by identifying data to describe traffic safety problems. This may involve reviewing existing data to better understand the times, situations, communities, or demographics associated with the highest risk of injury or death related to non-use of seat belts. It may also involve gathering new data from community members and partners. All this information feeds into the description of the program intentions and expectations. With these details, it is then possible to design an evaluation that can gather the information needed to determine whether the program affected knowledge, opinions, and behaviors of the target audience. Knowing the timeline for the program is also important to guide the scheduling of any surveys, observations, or other data collection activities.

### Step 3: Focus Evaluation Design

Practitioners should consider the purpose of the evaluation, focusing on who will use the results and the questions that will guide the evaluation. There are two basic evaluation questions that can guide most rural traffic safety programs (Pullen-Seufert & Hall, 2008).

- Did you implement the program as planned? (Process Evaluation)
- Did your program have the desired impact? (Outcome/Impact Evaluation)

Examples of evaluation types and questions that may be appropriate for a rural seat belt program are presented in Table 7. When selecting the evaluation design practitioners should also consider factors such as study timeline, budget, staffing, and any requirements of funding sources.

**Table 7. Sample Evaluation Designs and Questions**

Type of Evaluation	Definition	Sample Evaluation Questions
Process Evaluation	Assesses whether the program was implemented as planned (Pullen-Seufert & Hall, 2008)	<ul style="list-style-type: none"> <li>■ Was the program implemented as planned?</li> <li>■ How many partners were engaged?</li> <li>■ What was the potential reach of media messages and material?</li> <li>■ How much more enforcement took place than usual?</li> <li>■ Were there changes in the number of seat belt citations or warnings associated with the program?</li> </ul>
Outcome/Impact Evaluation	Measures progress towards the outcomes the program intends to address (Pullen-Seufert & Hall, 2008)	<ul style="list-style-type: none"> <li>■ How was seat belt use in the target area affected?</li> <li>■ Were there changes in knowledge and attitudes among the target population?</li> <li>■ How were injuries and fatalities affected?</li> </ul>

Practitioners or funders may also want to evaluate the cost effectiveness of the program. Two questions can lead the determination of the relative benefit of the program by comparing program costs to program outcomes (Pullen-Seufert & Hall, 2008).

- What was the cost of implementing the program relative to the change in the targeted outcome?
- What were the estimated cost savings measured in terms of reduced injuries/deaths?

Costs associated with the design, implementation, and evaluation of the program can be compared to the goals and outcomes. Program costs include labor associated with implementing the program (education development, enforcement, evaluation, etc.), media, advertisements, incentives, travel, and material.

## Step 4: Gather Credible Evidence

### Select Measures

After determining the questions of interest and selecting an appropriate evaluation design, practitioners should determine what needs to be measured and how to measure it (Pullen-Seufert & Hall, 2008). The concept of data collection was introduced in **Module 1, Step 1: Identify Community Needs** during the planning phase of a seat belt program. This section describes how this data and data that is subsequently collected contribute to an appropriate evaluation of the program.

Data for both process evaluation and outcome evaluation should focus on program activities and measurable outcomes that can be quantified (Table 8). Evaluations of these types of programs are usually looking for some type of change in behaviors (observed or self-reported), knowledge, and/or opinions among the target audience. As such, the data that are collected and the subsequent measures created should be reflective of the program activities and have the potential for showing change relative to those activities.

**Table 8. Sample Evaluation Measures**

Type of Evaluation	Sample Measures
Process Evaluation	<ul style="list-style-type: none"> <li>■ Program expenditures in terms of dollars or labor</li> <li>■ Reach and frequency by type of media during the program</li> <li>■ Number and types of citations or warnings issued by law enforcement</li> <li>■ Overtime enforcement hours or patrols worked</li> <li>■ Counts of educational material provided (signs, window clings, hand-out cards)</li> <li>■ Number of views of media material</li> <li>■ Number of attendees at meetings</li> </ul>
Outcome/Impact Evaluation	<ul style="list-style-type: none"> <li>■ Observed seat belt use</li> <li>■ Self-reported seat belt use</li> <li>■ Self-reported opinions of target population regarding seat belt use</li> <li>■ Target audience knowledge of risks associated with not wearing seat belts</li> <li>■ Crash-related injuries and fatalities</li> </ul>

### Determine methods

Several methods can be used to measure seat belt program effects including observational or self-report surveys of seat belt use, surveys of knowledge, attitudes, or program awareness, and analyses of crash data (Pullen-Seufert & Hall, 2008). It is sometimes difficult to attribute changes in crashes or crash outcomes (e.g., belt use during fatal crashes) because crashes are relatively rare events. Unless the program is expected to have a large effect (e.g., substantial increase in seat belt use) or the program takes place over an extended period of time, crashes may not be the best measure of program success.

**Primary Data Collection Methods.** Seat belt program evaluations may involve primary data collection. Rural traffic safety practitioners will need to provide training to all staff who

will be involved in data collection and ensure consistency in data collection approaches (Pullen-Seufert & Hall, 2008).

### **Surveys/Questionnaires**

Surveys can be a cost-effective way to gather information from many people. If a survey will be used, practitioners should consider the best way to reach the intended audience (e.g., telephone, internet, in-person, mail, etc.), whether incentives are needed, and the timing of the survey relative to the program start and end dates.

For example, the Trauma Nurses TalkTough program gave attendees paper surveys before and after the program (Thomas et al., 2014). The Rock the Belt program has SADD Chapter Advisors and student leaders provide feedback on their experience with the program, and students complete seat belt knowledge and opinion surveys using the SADD online portal (SADD, 2016). Our Driving Concern uses micro e-learning with embedded quizzes to engage drivers in driving safety content (NSC, 2019). As part of a rural seat belt demonstration program, the Florida Department of Highway Safety and Motor Vehicles conducted public awareness surveys immediately after the State's new primary enforcement law went into effect, and one year after the law was implemented (Nichols et al., 2012). For additional guidance on conducting a survey and analyzing the results, see the CCHD's website (n.d.-b).

A number of issues need to be considered when developing and implementing a survey as shown below (American Association for Public Opinion Research [AAPOR], 2022).

#### Survey Method (AAPOR, 2022)

- Self-administered online surveys are least expensive to administer given the easy-to-use platforms that are available, but they may not work well in communities with limited access to the internet or lack of comfort with using technology.
- Self-administered paper surveys work well when using a straightforward questionnaire and can be mailed or completed in-person.
- Telephone surveys tend to be more expensive, but interviewers can help respondents understand difficult questions and reduce attrition.
- In-person surveys with an interviewer and/or recruiter administering an online or paper-based survey at selected locations work well because the interviewer can develop a rapport with the respondent and address any concerns.
- An evaluation may want to use various methods to make sure as many people in an area respond as possible to reduce non-response bias.

#### Selecting Who to Survey (AAPOR, 2022)

- Select a sampling approach that will allow you to best capture information from the population you are interested in and answer your questions within budget.
- In-person recruiting may be used for a convenience sample in a community to obtain responses quickly during a specified time frame (e.g., directly before an intervention begins).
- Phone-based surveys should use a combination of cellphone and landline numbers for a random sample in an area.



- Mail-based surveys work best when sampling a community in a specific geographic area using randomly selected addresses.
- Work-based surveys could use online surveys for office- or field-based employees with access to the internet or paper surveys for those without.
- School-based samples could use paper surveys for students to bring home to parents or guardians.

#### Questionnaire Design (AAPOR, 2022)

- There are many existing survey items that may be used or adapted. Use existing items if possible and modify them as needed to fit your specific evaluation needs.
- When writing new questions, keep the topic specific and only ask about one concept at a time.
- Use neutral language that does not prompt the respondent to answer one way or another.
- Put the survey items in an order that is logical for the respondent and place the more personal or sensitive questions at the end of the survey.
- Carefully consider the response format that is most appropriate for the question. Some questions can be answered as multiple-choice items but may need a “don’t know” or “not applicable option.” In other cases, an open-ended response may give better qualitative information to answer your question.
- Once you have developed and finalized your survey, evaluate the population and translate into other languages as appropriate. It is a best practice to provide English and Spanish versions of surveys and bilingual interviewers if an in-person survey is being used in an area with many non-English speakers.
- Keep the questions and survey methods the same in order to measure change over time. Otherwise, it is difficult to determine if changes in responses are due to your program or changes in the survey items.

#### Conducting the Survey (AAPOR, 2022)

- Questionnaires should be tested using respondents similar to those who will be recruited.
- If interviewers are being used, they should be trained on how to recruit respondents and administer the survey.
- Survey data collection and responses should be monitored and evaluated to identify and address any issues immediately.
- It is important to maximize the number of respondents so you do not miss any types of respondents and avoid bias in your sample. To encourage participation, you can use monetary and non-monetary incentives, contact respondents at different times of day or different days of the week via different modes, or use different persuasive messages.

#### **Focus Groups**

The purpose of a focus group is to conduct in-depth, qualitative discussions with a small number of carefully selected people who best represent the target audience (CCHD, n.d.-a).

Focus groups can be used to test media ideas to see how people react to the developed messages. Seat belt program evaluations could involve focus groups to gather feedback on the program by gathering opinions from the target audience about the media that was used and how they may have changed behaviors or opinions as a result of the program. Focus groups can also be used to gather information from program partners (e.g., law enforcement) to learn more about how they implemented various activities and how they would suggest changing things to improve the program. A number of issues need to be considered when developing and implementing focus groups as shown below (CCHD, n.d.-a).

#### Focus group members (CCHD, n.d.-a)

- People with similar or dissimilar characteristics (e.g., demographics or attitudes) can be included in the same or separate focus group to represent potentially different perspectives around the issues discussed.
- The group should be comprised of people that will feel comfortable speaking openly and honestly about the topics.
- The focus group should consist of between 6 to 12 people. Small groups can have one or two dominant people who take over and large groups are difficult to manage.

#### Moderation (CCHD, n.d.-a)

- A skilled and trained moderator should be used to guide the discussion and manage group dynamics to keep the conversation productive.
- The moderator should understand the objectives of the discussion and keep conversations targeted toward those objectives.
- The moderator may need to tailor the approach based on the focus group members (e.g., personalities, outspoken or quiet people, law enforcement or general public).

#### Questions (CCHD, n.d.-a)

- Questions should be open-ended, clearly written, and easily understood by the participants.
- A question should be neutral in tone to allow the group to discuss without bias.
- Items should be discussed in order of easiest to most complex.
- All questions should be presented to the group for discussion amongst themselves.

#### Conducting Focus Groups (CCHD, n.d.-a)

- The moderator should explain the purpose of the group, outline basic rules, and make introductions at the beginning.
- Video recording, audio recording, notetaking, or a combination of methods may be used to keep track of information from focus groups. A video camera could be placed in the corner of the room to reduce intrusiveness or a camera operator may be used to better capture nonverbal expressions and responses. Audio recordings

will allow you to collect verbal responses verbatim but will lose observational data. Manual notetaking is slower and will likely capture information selectively. However, it can be used to highlight or supplement other information gathering techniques and aid the moderator when reviewing discussion progress.

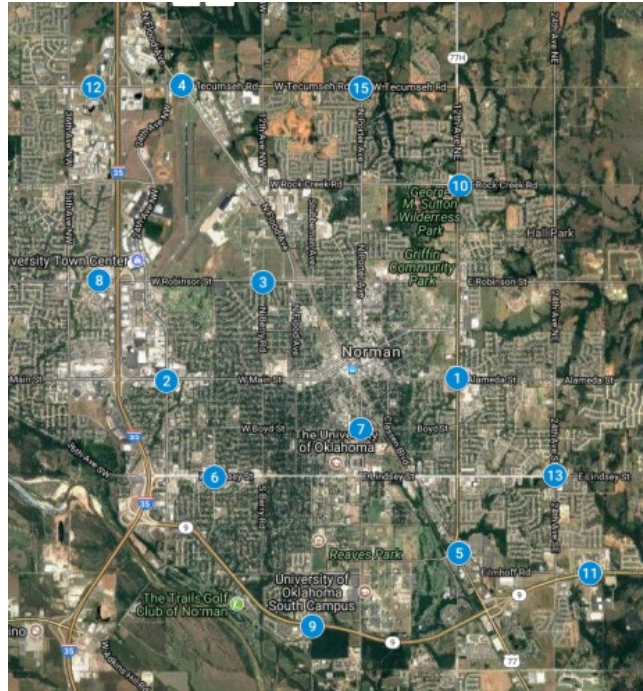
### **Observations of Seat Belt Use**

It is always best to observe seat belt use before, during, and after an intervention if possible. Having two or more waves of observations before your program begins (e.g., six months before and two weeks before) is ideal, but may not be possible depending on your staffing situation and budget. Having another set of observations midway through the intervention allows you to get some immediate feedback and possibly alter the program if it looks like seat belt use is unchanged. Post-intervention observations can take place immediately after the program concludes, and again in the future if you want to see if any gains persisted after the program ended. The overall budget and goals of the project will ultimately determine the number of seat belt observation locations and number of waves of observations.

How, when, and where the observations are conducted can greatly impact the observation results. NHTSA has uniform criteria for statewide observations to get a representative sample of seat belt use annually for each State (23 CFR 1340.4 et seq.). The uniform criteria provide detailed guidance on how to select locations, times, and other information important to obtain a random sample of seat belt use across an entire State. For a local program, however, it may not be reasonable to go through all the steps for a statewide study. Local studies are usually most concerned with whether their program affected seat belt use in a relatively small area over a short period. Below are some issues to consider when conducting seat belt observations to make sure your results are as valid as possible, even when resources for conducting the observations may be limited.

#### Observation Location Selection

- Try to pick observation locations to ensure results are representative of seat belt use in the entire community to the extent possible.
  - Determine which locations best represent the populations targeted by the seat belt program. Figure 5 shows observations locations in Norman, Oklahoma, where a citywide enforcement effort took place (Decina & Alonge, 2023). The focus here was on getting as many observations as possible from a variety of locations across the city where all the major populations of drivers would be traveling. Locations included a combination of interstate exits, highways, and local roadways at various speed limits and traffic volumes. The locations were not randomly selected, but because the same locations were used in each wave of observation it was possible to draw conclusions about the effectiveness of the seat belt program for impacting seat belt use (at least as measured at these locations).
  - Experts may be available at little to no cost at local colleges, universities, or at the State level if you want help developing a location selection plan.



**Figure 5. Seat Belt Observation Map Example**

- Consider traffic type, volume, direction, and the safety and visibility of observer locations.
  - Identify controlled intersections (stoplight, stop sign) or other locations where it is feasible to see into vehicles and observe seat belt use while keeping observers safe.
  - Observations can occur on surface streets and at the ends of highway exit ramps where there are stoplights or stop signs.
  - Traffic volume maps can find assorted locations that could be high, medium, or low volume depending on the goals of the evaluation. Very low-volume roads are usually excluded unless there is a good reason to include them.
  - Observers should have safe places to park near the selected locations.
  - Observers should be able to stay safe distances from the roadside while maintaining visibility of the drivers and front-right-seat passengers (i.e., must be able to see the shoulder belt across the front of the body). Figure 6 shows an example marked by the number “8” where an observer was instructed to stand while observing traffic at an intersection (Decina & Alonge, 2023).



**Figure 6. Single Observation Location Example**

- Observers should stay on sidewalks or other areas not too close to the roadway for their safety.
- If you are conducting several waves of observations, the same locations should be used during each wave of observations. This is even better if you are tracking changes over time.
- Select alternate observation locations in case conditions require adjustments to maintain quality observations (e.g., construction or temporary changes in traffic patterns).
- Distribute observations by time of day and day of week to minimize bias associated with time of observation.
  - Observations should occur during daylight between 7 a.m. and 6 p.m. unless there is a specific interest in nighttime observations. Nighttime observations, however, require special considerations as detailed in NHTSA's *Guidelines to Observe and Estimate Statewide Seat Belt Use at Night* (Chaudhary et al., 2010).
  - Observers can be positioned on the same roadway or intersection conducting observations of opposite traffic directions at the same time.
  - Avoid scheduling observations during events with atypical traffic patterns (e.g., sporting events or concerts).
  - If you are conducting several waves of data collection observations at each location, these should be conducted on the same day of week at the same time whenever possible.
- Creating a detailed map of observation sites for observers to use and including the address, the direction of travel to be observed, and the specified time window for the observation (e.g., one-hour window from 7 a.m. to 8 a.m.) makes it easier for observers to know where to go. It also ensures the exact locations and times of data collection are documented so you can go back for another wave of observations at

the same places in the future. One observer can observe several locations in a single day.

- Create a seat belt survey collection form (either paper or electronic) that contains all variables of interest that can be observed (e.g., vehicle type, driver/passenger sex, estimated age group, etc.). Appendix B contains some example forms that studies have used.
- Inform local law enforcement of your observation plans and make sure they are okay with the observations taking place.

### Train Observers

People conducting seat belt observations need to be trained on the observation protocol to make sure they understand how you want the observations conducted. While observations are generally easy to conduct, things can become overwhelming if an observer has not practiced, especially when traffic volumes are high. During training, observers should be able to ask questions and receive feedback. The procedures should be clearly outlined in training and copies of the procedures, electronic or paper, should be provided as a reference if an observer wants to review something. Safety guidelines such as wearing retroreflective vests and not getting too close to the road, should be followed throughout data collection. Observers should also be advised on how to handle inquiries from drivers on the roadway or pedestrians.

- Familiarize observers with the data collection forms (either paper or electronic with a paper back up) and review how to code seat belt use as well as other items such as vehicle type, driver/passenger sex, age group, and other characteristics of interest.
- Going over NHTSA's daytime seat belt observation guidelines from the National Occupant Protection Use Survey (NOPUS) document (Boyle, 2022) can be very useful, although you can alter the procedures as needed depending on your evaluation goals (e.g., only observe drivers). The NOPUS guidelines instruct observers to:
  - Position yourself at the traffic signal or stop sign, facing oncoming traffic from the side of the road.
  - Walk in the direction of oncoming traffic, away from the intersection, to make observations.
  - Observe vehicles in the lane closest to your observational position, even if the closest lane is an exclusive turn lane. When possible and if visibility allows, also observe the other lanes of traffic.
  - Collect seat belt use data on the driver, right-front passenger, and up to two passengers in the second row of seats.
  - Record the first behavior of the driver that you observe (data collection can also include subjective assessments of vehicle occupants' age, race, and gender).
  - Do not interview vehicle occupants.
  - When the traffic light turns green or observations are complete, return to the intersection to wait for the next traffic light cycle or next vehicle.

- Reviewing safety guidelines with observers is very important and can include topics such as:
  - Park in a safe location near the intersection.
  - Stay a safe distance from the roadside.
  - Use sidewalks where possible.
  - Wear personal protective equipment (PPE) (e.g., high-visibility gear).
  - Bring water and appropriate attire for conditions (sunglasses, hats, jackets, etc.)
- Going to a controlled intersection to review the observation method and conduct practice observations will be important.
  - Conduct seat belt observations together to make sure observers understand the task.
  - Answer any questions about the procedures.
  - Have observers conduct seat belt observations independently and compare results.
  - Provide feedback to the observers and conduct more observations until you are satisfied the observers are able to conduct accurate observations.
  - Troubleshoot potential issues with visibility (e.g., positioning relative to the intersection or moving to a slightly higher elevation if available).
- Discuss how to handle inclement weather or construction.
  - Delay observations if it is raining or snowing (observations can be moved to another day if necessary).
  - Move to an alternate site if there is construction at the designated observation site.
- Randomly assign observation sites to observers.
  - Review the map and schedule with observers.
  - Use the same sites and have the same observers collect data during subsequent seat belt observations for consistency.

**Observational Seat Belt Use Survey Protocol Resources:**

- *Occupant restraint use in 2021: Results from the NOPUS Controlled Intersection Study* (Boyle, 2022).
- *Observational seatbelt usage survey protocol* (Indian Health Service, 2019).
- *Guidelines to observe and estimate statewide seat belt use at night* (Chaudhary, et al., 2010),
- *Uniform criteria for State observational surveys of seat belt use* (23 CFR 1340.4 et seq.).

## **Collect and Analyze the Data**

Once the data collection procedures have been decided, it is important to clearly document the timeline of data collection activities so all people participating in the evaluation know when data collection needs to take place.

To really know if a program had the desired effect, it is helpful to build the collection of baseline data into the program design. Consider the timing of data collection to make sure that before-, during-, and after-program data are collected under similar conditions. For example, if the rural seat belt program includes a major enforcement campaign (see **Module 2**), seat belt use data should be collected immediately before and following the campaign, as well as at future scheduled intervals if desired to measure longer-term effects of the enforcement (Pullen-Seufert & Hall, 2008).

Upon collecting data, traffic safety practitioners can analyze and interpret the data to identify findings and draw conclusions. If the evaluation includes quantitative data, the analysis may include entering the data into a database for organization and analysis, checking data for errors (e.g., data entry errors), tabulating the data, showing data by demographic variables of interest (sex, age, etc.), and making comparisons. Cross-tabulated results showing the counts or percentages of responses for each survey question are useful for presenting the data in a clear and understandable format. Likewise, line charts showing seat belt use over time are useful for displaying the data. Depending on how sophisticated you want to get, a statistician can be brought in to assist with weighting of data and analyses. Most of the time, however, sophisticated statistics are not needed for relatively small evaluations.

If the evaluation includes qualitative data, such as interview or focus group findings, it is important to determine how far you want to go with analyses. Reviewing, organizing, labeling, and analyzing qualitative data can be conducted manually or using computer software. Content analysis and identifying themes may be used to show changes over time as well.

Regardless of the methods used, there should be complete transparency in reporting the method of data collection and findings. There are many ways to collect and analyze data that can lead to differences in interpretations and conclusions. As part of best practices, the sample size (e.g., number of participants responding to questionnaires or number of people observed), full text questions and response options, survey method, population sampled, how the sample was created, recruitment, dates of data collection, data quality procedures, analysis methods, and funding sources and sponsors should be reported.

## **Step 5: Justify Conclusions**

It is important to review all the evaluation results collectively to determine whether the program was implemented as designed and had any measurable impacts on the target populations. Having good documentation is important to support claims about the success of a rural seat belt program. It is equally important to determine if any other outside factors (e.g., other health promotion programs or enforcement) could have affected your findings. The most important thing is to make sure the data you collected allows you to determine whether the program achieved its objectives that were defined early on.



Programs using extensive media or educational approaches should report measures that demonstrate whether messaging reached the target audience. This can be reported by reach and frequency metrics (e.g., views, clicks, subscribers, self-reported awareness, etc.) to confirm that the message reached the target audience. Similarly, enforcement activities should be well documented to demonstrate some increased level of contacts with non-users of seat belts (e.g., stops, warnings and citations issued). Without these process measures to demonstrate that people read/heard/saw the messages or had contact with law enforcement, it is not possible to conclude whether the program could be responsible for any changes in observed seat belt use.

If your plan involves conducting statistical analyses, it is important to make sure the data collected and the results you report are valid. Many evaluations do not employ sampling plans (i.e., random samples) that really allow for valid statistical inferences to be made. That does not mean the results are useless, only that the findings are limited to the population being studied, which is perfectly fine given the goals of most programs of this type. Descriptive comparisons can always be made, however, and some simple statistics can be used to compare things such as observed seat belt use rate changes over time at the locations selected for the program evaluation.

Understanding what the results mean helps with identifying next steps or programmatic changes for things such as in media messages, enforcement locations, or the timing of activities. Practitioners should also document limitations of the evaluation in this step. Limitations will be situation-dependent but can include high rates of unknown seat belt use during observations, low numbers of observations, or adjustments made between baseline and final data collection that could alter the findings (e.g., different observation sites or inclement weather).

When drawing conclusions about observed outcomes and their relationship to the countermeasure(s) that were implemented as part of the seat belt program, it is important to distinguish between causation (program A caused outcome B) and correlation/association (program A was implemented and outcome B happened, and they appear to be connected) (Pullen-Seufert & Hall, 2008). Practitioners should choose language carefully when describing results to ensure findings can be supported by the data available.

## **Step 6: Provide Feedback and Share Lessons Learned**

Evaluation results can be used as feedback to inform programmatic decisions including modifications to an ongoing program, securing additional funding, engaging new partners, and generating support for the program among the public, other organizations involved in traffic safety, and the media (Pullen-Seufert & Hall, 2008). Therefore, practitioners should present data in a clear and understandable format, including key findings, contextual information about the program, and the strengths and limitations of the approach.

Evaluation results may need to be presented in different formats to different audiences. Practitioners should consider the appropriate reading levels of an audience when creating messages from the evaluation. An evaluation report may be required by the funding source to describe the programmatic activities, program timeline, and seat belt use before, during, and after the intervention. Specific requirements for the report are typically outlined by the

funding source. Dissemination of results to the media and the public may take a different format. For example, a press release can describe the program, its results, and its impact on the public (Pullen-Seufert & Hall, 2008). Other dissemination strategies include using websites, social media, newsletters, videos, television, podcasts, public service announcements, and posters (see **Module 3, Step 5**). Practitioners can present findings at relevant conferences and professional meetings and publish in academic journals.

## Evaluation Challenges and Mitigation Strategies

Challenges or barriers may arise when conducting an evaluation of a rural seat belt program. Table 9 summarizes examples of challenges that practitioners may encounter during the evaluation and mitigation strategies.

**Table 9. Evaluation Challenges and Mitigation Strategies**

<b>Evaluation Challenge</b>	<b>Mitigation Strategy</b>
<b>Limited expertise with evaluation.</b>	Seek external support through sources such as the State Highway Safety Office or through a local college/university.
<b>Difficulty obtaining data</b>	Bring partners to the table well before you want to begin the program to build relationships and prioritize the evaluation's focus based on the need to promote engagement (Rural Health Information Hub, 2021).
<b>Budget/Resource constraints</b>	Engage partners to assist with data collection at no cost to the program, if possible. For example, ask law enforcement to assist with seat belt observations. Use local schools or nonprofit organizations to assist in survey administration as part of a community service activity.



## Module 4: Evaluating a Rural Seat Belt Program Best Practices Checklist

### Best Practices

- Engage Stakeholders.
  - Identify local resources to help to conduct the evaluation.
  - Work with stakeholders to gather evaluation data.
- Focus the evaluation design.
  - Determine what needs to be measured and how to measure it.
  - Develop evaluation measures focused on behaviors, knowledge, awareness, perceptions, opinions, and attitudes, among others.
- Gather and analyze data to create credible evidence of program effectiveness.
  - Follow best practices for collecting the various types of data needed.
  - Analyze the data and make comparisons based on pre/post-program results and groups of interest.
- Justify Conclusions.
  - Interpret data to identify findings and draw conclusions.
  - Be careful to make conclusions based only on the data available.
  - Document limitations of the evaluation.
- Share Lessons Learned.
  - Present results clearly and concisely to different audiences.
  - Provide interim feedback throughout the program.
  - Use different formats to convey messages in ways that will resonate with the intended audience.

## APPENDIX A: REFERENCES

76 FR 18056, April 1, 2011, Part 1340—Uniform Criteria for State Observational Surveys Of Seat Belt Use.

American Association for Public Opinion Research. (2022, March). *Best practices for survey research*. <https://aapor.org/standards-and-ethics/best-practices/>

Amiotte, J., Balanay, J. A., & Humphrey, C. (2016). Seat belt usage interventions for motor vehicle crash prevention on the Pine Ridge Indian Reservation, South Dakota. *Journal of Environmental Health*, 78(6), 46.

Bayne, A., Siegfried, A., La Rose, C., & Price, J. (2020, March). *Evidence-based behavior change campaigns to improve traffic safety toolkit*. AAA Foundation for Traffic Safety. <https://aaafoundation.org/wp-content/uploads/2020/03/Toolkit-Evidence-Based-Behavior-Change-Campaigns-to-Improve-Traffic-Safety.pdf>

Beck, L. F., Downs, J., Stevens, M. R., & Sauber-Schatz, E. K. (2017, September 22). Rural and urban differences in passenger-vehicle-occupant deaths and seat belt use among adults - United States, 2014. *Morbidity and mortality weekly report. Surveillance summaries (Washington, D.C.: 2002)*, 66(17), 1–13. <https://doi.org/10.15585/mmwr.ss6617a1>

Beck, L. F., Kresnow, M., & Bergen, G. (2019, February). Belief about seat belt use and seat belt wearing behavior among front and rear seat passengers in the United States. *Journal of Safety Research*, 68, 81–88. <https://doi-org.proxy.uchicago.edu/10.1016/j.jsr.2018.12.007>

Beck, L. F., & Shults, R. A. (2009, October 17). Seat belt use in States and Territories with primary and secondary laws -- United States, 2006. *Journal of Safety Research*, 40(6), 469–472. <https://doi-org.proxy.uchicago.edu/10.1016/j.jsr.2009.09.004>

Birru, H., Rudisill, T. M., Fabio, A., & Zhu, M. (2016, March). A comparison of self-reported seat belt usage among the Appalachian and non-Appalachian United States. *Annals of Epidemiology*, 3, 227. <https://doi.org/10.1016/j.annepidem.2016.02.001>

Blincoe, L., Miller, T., Wang, J.-S., Swedler, D., Coughlin, T., Lawrence, B., Guo, F., Klauer, S., & Dingus, T. (2023, February). *The economic and societal impact of motor vehicle crashes, 2019 (Revised)* (Report No. DOT HS 813 403). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813403>

Blomberg, R. D., Thomas, F. D., & Clevon, A. M. (2009, March). *Innovative seat belt demonstration programs in Kentucky, Mississippi, North Dakota, and Wyoming* (Report No. DOT HS 811 080) National Highway Traffic Safety Administration. [www.nhtsa.gov/sites/nhtsa.gov/files/documents/811080\\_0.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/documents/811080_0.pdf)

Boyle, L. L. (2022, August). *Occupant restraint use in 2021: Results from the NOPUS controlled intersection study* (Report No. DOT HS 813 344). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813344>

- Burkett, K. M., Davidson, S., Cotton, C., Barlament, J., Loftin, L., Stephens, J. & Butterfield, R. (2010, August). Drive alive: Teen seat belt survey program. *The Western Journal of Emergency Medicine*. 11, 279-82.  
[www.ncbi.nlm.nih.gov/pmc/articles/PMC2941367/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2941367/)
- Center for Community Health and Development. (n.d.-a). *Conducting focus groups*. University of Kansas. <https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-focus-groups/main>
- CCHD. (n.d.-b). *Conducting surveys*. University of Kansas.  
<https://ctb.ku.edu/en/table-of-contents/assessment/assessing-community-needs-and-resources/conduct-surveys/main>
- CCHD. (n.d.-c). *Evaluating the initiative*. University of Kansas.  
<https://ctb.ku.edu/en/evaluating-initiative>
- Centers for Disease Control and Prevention. (2008). Adding power to our voices: A framing guide for communicating about injury.  
[https://stacks.cdc.gov/view/cdc/5487/cdc\\_5487\\_DS1.pdf](https://stacks.cdc.gov/view/cdc/5487/cdc_5487_DS1.pdf)
- CDC. (2011, January). *Policy impacts: Seat belts*.  
[www.cdc.gov/transportationsafety/seatbeltbrief/index.html](http://www.cdc.gov/transportationsafety/seatbeltbrief/index.html)
- CDC. (2014, July). *Media plan guidance: How to create and implement an effective media plan*.  
<https://smhs.gwu.edu/cancercontroldtap/sites/cancercontroldtap/files/Media%20Plan%20Guidance%20%20%2007%2008%202014.pdf>
- CDC. (2017, May 15). *A framework for program evaluation*.  
[www.cdc.gov/eval/framework/index.htm](http://www.cdc.gov/eval/framework/index.htm)
- CDC. (2020a, March). *Tribal road safety: Get the facts*.  
[www.cdc.gov/transportationsafety/native/index.html](http://www.cdc.gov/transportationsafety/native/index.html)
- CDC. (2020b, October 7). *What works: Strategies to increase restraint use*.  
[www.cdc.gov/transportationsafety/seatbelts/strategies.html](http://www.cdc.gov/transportationsafety/seatbelts/strategies.html)
- CDC. (2021a, May 14). *Parents are the key to safe teen drivers*.  
[www.cdc.gov/parentsarethekey/index.html](http://www.cdc.gov/parentsarethekey/index.html)
- CDC (2021b). *Plain language check list*. [www.cdc.gov/healthliteracy/pdf/checklist-H.pdf](http://www.cdc.gov/healthliteracy/pdf/checklist-H.pdf)
- CDC. (2021c, May) *Teen drivers: get the facts*.  
[www.cdc.gov/transportationsafety/teen\\_drivers/index.html](http://www.cdc.gov/transportationsafety/teen_drivers/index.html)
- CDC. (2022a, February 28). *Increased seat belt fines*.  
[www.cdc.gov/transportationsafety/calculator/factsheet/increasedfines.html](http://www.cdc.gov/transportationsafety/calculator/factsheet/increasedfines.html)
- CDC. (2022b, February 28). *The motor vehicle prioritizing interventions and cost calculator for States*. [www.cdc.gov/transportationsafety/calculator/index.html](http://www.cdc.gov/transportationsafety/calculator/index.html)
- CDC. (2022c, November 25). *Community health assessments & health improvement*. Plans  
[www.cdc.gov/publichealthgateway/cha/plan.html](http://www.cdc.gov/publichealthgateway/cha/plan.html)
- Chaffe, R. H. B., Leaf, W. A., Solomon, M. G. (2020). *2020 safety belt use estimate for the Indian Nations*. Bureau of Indian Affairs, Indian Highway Safety Program Office.

- Chaffe, R. H. B., Leaf, W. A. & Solomon, M. G. (2017, June). *Safety belt use in Florida*. Florida Department of Transportation. <https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/info/co/news/newsreleases/2017-florida-statewide-belt-use-final-report.pdf>
- Chaudhary, N., Leaf, W., Preusser, D., & Cassanova, T. (2010, March 1). *Guidelines to observe and estimate statewide seat belt use at night*. (Report No. DOT HS 811 288). National Highway Traffic Safety Administration. <https://rosap.nhtl.bts.gov/view/dot/17651>
- County Health Rankings & Roadmaps (2016). *What works? Strategies to improve rural health*. [www.countyhealthrankings.org/reports/what-works-strategies-improve-rural-health](http://www.countyhealthrankings.org/reports/what-works-strategies-improve-rural-health)
- DCCCA, Inc. (n.d.) *Seatbelts are for everyone – Resources* [Web page and portal]. <https://seatbeltsareforeveryone.org/safe-resources/>
- DCCA, Inc.. (2022a, August) *Seatbelt survey analysis form*. <https://seatbeltsareforeveryone.org/seatbelt-survey-analysis-form/>
- DCCA, Inc.. (2022b, August) *Seatbelts are for everyone (SAFE) data sheet*. <https://seatbeltsareforeveryone.org/wp-content/uploads/2021/07/SAFE-Datasheet.pdf>
- Decina, L. E., & Alonge, M. (2023, February). *Evaluation of community-oriented enforcement demonstration projects* (Report No. DOT HS 813 291). National Highway Traffic Safety Administration. <https://rosap.nhtl.bts.gov/view/dot/66444>
- Dinh-Zarr, T. B., Sleet, D. A., Shults, R. A., Zaza, S., Elder, R. W., Nichols, J. L., Thompson, R. S., & Sosin, D. M., & Task Force on Community Preventive Services (2001). Reviews of evidence regarding interventions to increase the use of safety belts. *American Journal of Preventive Medicine*, Nov;21(4 Suppl), 48-65. <https://pubmed.ncbi.nlm.nih.gov/11691561/>
- Eggen, E. (2019, March 8). *Innovative campaigns: Kentucky local heroes*. Lifesavers Conference 2019, Louisville, KY.
- Elliott, K. R., Solomon, M. G., & Preusser, D. F. (2014, November). *Evaluation of a high-visibility enforcement seat belt program on the Blue Ridge Parkway*. (Report No. DOT HS 812 085). National Highway Traffic Safety Administration. [www.nhtsa.gov/sites/nhtsa.gov/files/documents/812085\\_hve-blueridgepkwy.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/documents/812085_hve-blueridgepkwy.pdf)
- Enriquez, J. (2021, September). *Occupant restraint use in 2020: Results from the NOPUS controlled intersection study* (Report No. DOT HS 813 186). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813186>
- Federal Highway Administration. (2013). *Highway functional classification concepts, criteria, and procedures*. [www.fhwa.dot.gov/planning/processes/statewide/related/-highway\\_functional\\_classifications/fcauab.pdf](http://www.fhwa.dot.gov/planning/processes/statewide/related/-highway_functional_classifications/fcauab.pdf)

- Fell, J. C., Kelley-Baker, T., McKnight, A. S., Brainard, K., Langston, E., Rider, R., Levy, D., & Grube, J. (2005, September). *Increasing teen safety belt use: A program and literature review*. (Report No. DOT HS 809 899). National Highway Traffic Safety Administration. [www.nhtsa.gov/sites/nhtsa.gov/files/documents/809899.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/documents/809899.pdf)
- Fell, J. C., McKnight, A.S., & Auld-Owens, A. (2013, February). *Increasing impaired-driving enforcement visibility: Six case studies*. (Report No. DOT HS 811 716). National Highway Traffic Safety Administration. [www.nhtsa.gov/sites/nhtsa.gov/files/811716.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/811716.pdf)
- FIA Foundation for the Automobile and Society (2009, September 19) *Seat-belts and child restraints: a road safety manual for decision-makers and practitioners*. [www.who.int/publications/m/item/seat-belts-and-child-restraints--a-road-safety-manual-for-decision-makers-and-practitioners](http://www.who.int/publications/m/item/seat-belts-and-child-restraints--a-road-safety-manual-for-decision-makers-and-practitioners)
- Fischer, P. (2019, March). *Peer-to-peer teen traffic safety program guide*. (Report No. DOT HS 812 631). National Highway Traffic Safety Administration. [www.nhtsa.gov/sites/nhtsa.gov/files/documents/13905\\_peer2peerbrochure\\_-\\_031519\\_v4-blankpages-tag.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/documents/13905_peer2peerbrochure_-_031519_v4-blankpages-tag.pdf)
- Frechtling, J., Mark, M. M., Rog, D. J., Thomas, V., Frierson, H, Hood, S., & Hughes, G. (2010, December). *The 2010 user-friendly handbook for project evaluation*. National Science Foundation, Division of Research and Learning in Formal and Informal Settings. [www.purdue.edu/research/docs/pdf/2010NSFuser-friendlyhandbookforprojectevaluation.pdf](http://www.purdue.edu/research/docs/pdf/2010NSFuser-friendlyhandbookforprojectevaluation.pdf)
- Freund, N. M., Turosak, A., Dean, A., & White, H. (2019, October 3). Are we SAFE now? An evaluation of the Seatbelts Are for Everyone teen traffic safety program in Kansas. *Traffic Injury Prevention, 20*(8):783-788.
- Goslar, P. W., Silvers, M., Strever, T., Judkins, D., Segebarth, P., & Lerma, C. (2009, July). Lessons from a statewide pilot of “The Battle of the Belts Project” in a state without a primary seat belt law. *Journal of Trauma: Injury, Infection and Critical Care, 67*(1), S62–S66.
- Governors Highway Safety Association. (2018, May). *Seat belt laws by state*. [www.ghsa.org/sites/default/files/2018-05/SeatBeltLaws\\_May18.pdf](http://www.ghsa.org/sites/default/files/2018-05/SeatBeltLaws_May18.pdf)
- GHSA. (2019, November). *Rear seat belt use: Little change in four years, much more to do*. [www.ghsa.org/sites/default/files/2019-11/SpotlightSeatbelts2019H2.pdf](http://www.ghsa.org/sites/default/files/2019-11/SpotlightSeatbelts2019H2.pdf)
- GHSA. (2022, April). *Seat belt laws by state*. [www.ghsa.org/sites/default/files/2022-04/SeatBeltLaws\\_April22.pdf](http://www.ghsa.org/sites/default/files/2022-04/SeatBeltLaws_April22.pdf)
- GHSA. (n.d.-a). *National law enforcement liaison program*. [www.ghsa.org/resources/law-enforcement](http://www.ghsa.org/resources/law-enforcement)
- GHSA. (n.d.-b). *Section 402 state and community highway safety grant program*. [www.ghsa.org/about/Federal-grant-programs/402](http://www.ghsa.org/about/Federal-grant-programs/402)
- GHSA. (n.d.-c). *State highway safety offices*. [www.ghsa.org/about/shsos](http://www.ghsa.org/about/shsos)
- GHSA. (n.d.-d). *Kentucky "Buckle Up in Your Truck 225" race & campaign*. [www.ghsa.org/resources/KY-NASCAR17](http://www.ghsa.org/resources/KY-NASCAR17)

- Guide to Community Preventive Services. (2021, November 4). *Motor vehicle injury – safety belts: Primary (vs. secondary) enforcement laws*. [www.thecommunityguide.org/findings/motor-vehicle-injury-safety-belts-primary-vs-secondary-enforcement-laws](http://www.thecommunityguide.org/findings/motor-vehicle-injury-safety-belts-primary-vs-secondary-enforcement-laws)
- Han, G. M., Newmyer, A., & Qu, M. (2017, March). Seatbelt use to save money: Impact on hospital costs of occupants who are involved in motor vehicle crashes. *International emergency nursing*, 31, 2–8. <https://doi.org/10.1016/j.ienj.2016.04.004>
- Hanfling, M. J., Mangus, L. G., Gill, A. C., & Bailey, R. (2000, June 1). A multifaceted approach to improving motor vehicle restraint compliance. *Injury Prevention*, 6, 125–129. <https://injuryprevention.bmj.com/content/6/2/125>
- Hauswirth, B. (2018, February 19). *Springfield mayor pushes for Missouri primary seat belt law*. MissouriNet. [www.missourinet.com/2018/02/19/springfield-mayor-pushes-for-missouri-primary-seat-belt-law/](http://www.missourinet.com/2018/02/19/springfield-mayor-pushes-for-missouri-primary-seat-belt-law/)
- Hinch, M., Solomon, M., & Tison, J. (2014, March). *Traffic safety facts research note: The Click It or Ticket evaluation, 2012*. (Report No. DOT HS 811 989). National Highway Traffic Safety Administration. <https://rosap.nhtl.bts.gov/view/dot/2005>
- Houston, M., Cassabaum, V., Matzick, S., Rapstine, T., Terry, S., Uribe, P., Harwood, J., Moulton, S., & Mile-High Regional Emergency Medical and Trauma Advisory Council. (2010, March). Teen traffic safety campaign: competition is the key. *Journal of Trauma and Acute Care Surgery*, 68(3), 511–4. doi: 10.1097/TA.0b013e3181cc8c96. PMID: 20220411.
- Hoye, P. (2017). *High Five rural traffic safety project* [Unpublished manuscript]. Iowa Department of Public Safety.
- Huseth, A., & VanWechel, T. (2010, October 1). *Pilot project to develop and implement a rural youth occupant protection education platform*, MPC-10-230. North Dakota State University. <https://rosap.nhtl.bts.gov/view/dot/18389>
- Indian Health Service. (2019). *Observational seatbelt usage survey protocol*. U.S. Department of Health & Human Services, Public Health Service, & Indian Health Service.. [www.ihs.gov/sites/injuryprevention/themes/responsive2017/display-objects/documents/motor-safety/Seatbelt-Survey-Protocol.pdf](http://www.ihs.gov/sites/injuryprevention/themes/responsive2017/display-objects/documents/motor-safety/Seatbelt-Survey-Protocol.pdf)
- Indian Health Service (2021, January). *Selected evidence-based strategies for preventing injuries*. Department of Health & Human Services, Public Health Service, & Indian Health Service.. [www.ihs.gov/sites/injuryprevention/themes/responsive2017/-display-objects/documents/motor-safety/Seatbelt-Survey-Protocol.pdf](http://www.ihs.gov/sites/injuryprevention/themes/responsive2017/-display-objects/documents/motor-safety/Seatbelt-Survey-Protocol.pdf)
- Jermakian, J. S., & Weast, R. A. (2018, February). Passenger use of and attitudes toward rear seat belts. *Journal of Safety Research*, 64, 113–119. <https://doi.org/10.1016/j.jsr.2017.12.006>



- Kahane, C. J. (2015, January). *Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards, 1960 to 2012 – Passenger cars and LTVs – With reviews of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes* (Report No. DOT HS 812 069). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812069>
- Kim, S., Depue, L., Spence, L., & Reine, J. (2009, August 6) Analysis of teenage seat belt use: from the 2007 Missouri high school seat belt survey. *Journal of Safety Research*, 40(4), 311-6. doi: 10.1016/j.jsr.2009.07.001.
- Lofgren, M., Benson, L., & Vachal, K. (2009). *Seat belt use: Maple Valley High School case study*. [www.ugpti.org/resources/reports/details.php?id=801](http://www.ugpti.org/resources/reports/details.php?id=801)
- Malenfant, L., Wells, J. K., Van Houten, R., & Williams, A. F. (1996, November). The use of feedback signs to increase observed daytime seat belt use in two cities in North Carolina. *Accident Analysis & Prevention*, 28, 771-777.
- Marco, C. A., Ekeh, A. P., Hardman, C., Lovell, M., Brent, A., & Akamune, J. (2020, June). Seat belt use among patients in motor vehicle collisions: Clinical and demographic factors. *American Journal of Preventive Medicine*, 38(6), 1069–1071.
- Melton, S. M., McGwin, G., Jr., Abernathy, J. H., 3rd, MacLennan, P., Cross, J. M., & Rue, L. W., 3rd (2003, February). Motor vehicle crash-related mortality is associated with prehospital and hospital-based resource availability. *The Journal of Trauma*, 54(2), 273–279. <https://pubmed.ncbi.nlm.nih.gov/12579051/>
- Monroe, K., Hardwick, W., Lawson, V., Nichols, E., Nichols, M., & King, W. D. (2017, May). Risky teen driving in a rural southern state. *Southern Medical Journal*, 5, 343-346.
- Moullin, J. C., Dickson, K. S., Stadnick, N. A., Rabin, B., & Aarons, G. A. (2019, January 5) Systematic review of the Exploration, Preparation, Implementation, Sustainment (EPIS) framework. *Implementation Science* (14)1. <https://doi.org/10.1186/s13012-018-0842-6>
- National Center for Statistics and Analysis. (2017, February). *Occupant protection in passenger vehicles: 2015 data* (Traffic Safety Facts. Report No. DOT HS 812 374). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812374>
- NCSA. (2019, March). *Traffic safety facts crash stats: Lives saved in 2017 by restraint use and minimum-drinking-age laws* (Report No. DOT HS 812 683). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812683>
- NCSA. (2020, May). *Traffic safety facts: Rural/urban comparison of traffic fatalities: 2018 data* (Report No. DOT HS 812 957). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812957>
- NCSA. (2021, February). *Traffic safety facts research note: Seat belt use in 2020 – Overall results* (Report No. DOT HS 813 072). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813072>

- National Highway Traffic Safety Administration. (2001, April). *Achieving a high seat belt use rate: A guide for selective traffic enforcement programs* (Report No. DOT HS 809 244). <https://doi.org/10.21949/1525487>
- NHTSA. (2009a). *Traffic safety facts: A compilation of motor vehicle crash data from the Fatality Analysis Reporting System and the General Estimates System* (Report No. DOT HS 811 402). <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811402>
- NHTSA. (2009b). *Traffic safety facts: Occupant protection* (Report No. DOT HS 811 160). <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811160>
- NHTSA. (2016, September). *Occupant restraint use in 2015: results from the NOPUS controlled intersection study* (Report No. DOT HS 812 330). <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812330>
- NHTSA. (2020). *Native American traffic safety facts FARS 2014-2018: Identifying fatal crashes involving Native Americans/Alaskan Natives: Methodology overview*. [https://cdan.nhtsa.gov/NA\\_report/NA\\_Report.htm](https://cdan.nhtsa.gov/NA_report/NA_Report.htm)
- NHTSA. (2021, March). *High-visibility enforcement and seat belt use*. (Traffic Tech Technology Transfer Series: Report No. DOT HS 813 070). [https://rosap.ntl.bts.gov/view/dot/54871/dot\\_54871\\_DS1.pdf](https://rosap.ntl.bts.gov/view/dot/54871/dot_54871_DS1.pdf)
- NHTSA. (n.d.-a). *Buckle Up*. [www.trafficsafetymarketing.gov/get-materials/seat-belts/buckle](http://www.trafficsafetymarketing.gov/get-materials/seat-belts/buckle)
- NHTSA. (n.d.-b). *Click It or Ticket*. [www.trafficsafetymarketing.gov/get-materials/seat-belts/click-it-or-ticket](http://www.trafficsafetymarketing.gov/get-materials/seat-belts/click-it-or-ticket)
- NHTSA. (n.d.-c). *Traffic safety facts: Children* (Report No. DOT HS 811 387). <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811387>
- NHTSA. (n.d.-d). *Traffic safety marketing*. [www.trafficsafetymarketing.gov/get-materials/seat-belts/click-it-or-ticket](http://www.trafficsafetymarketing.gov/get-materials/seat-belts/click-it-or-ticket)
- National Safety Council. (2019). *Employer based transportation safety*. <https://txdrivingconcern.org/wp-content/uploads/2019/04/Our-Driving-Concern-White-Paper.pdf>
- Network of Employers for Traffic Safety. (n.d.) *2Seconds2Click – Are your employees buckling up?* <https://2seconds2click.org/>
- NETS. (2016) *Cost of motor vehicle crashes to employers—2015*. <https://trafficsafety.org/wp-content/uploads/2016/03/NETS-CostOfCrashes-Report-2015.pdf>
- NETS. (2015) *Myths and facts about seat belt use*. <https://flatheadhealth.org/wp-content/uploads/2015/01/engage-seatbeltmythsfacts.pdf>
- Nichols, J. L., Chaffe, R., & Solomon, M. G. (2012, August). *Impact of implementing a primary enforcement seat belt law in Florida: A case study*. (Report No. DOT HS 811 656). National Highway Traffic Safety Administration. [www.nhtsa.gov/sites/nhtsa.gov/files/811656.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/811656.pdf)

- Nichols, J. L., Chaffe, R., Solomon, M. G., & Tison, J. (2016a, January). *The Click It or Ticket evaluation, 2013* (Traffic Safety Facts Research Note. Report No. DOT HS 812 238). National Highway Traffic Safety Administration.  
<https://rosap.ntl.bts.gov/view/dot/34988>
- Nichols, J. L., Chaffe, R., Solomon, M. G. & Tison, J. (2016b, September). *Evaluation of a rural seat belt demonstration program in Florida, Georgia, and Tennessee*. (Report No. DOT HS 812 328). National Highway Traffic Safety Administration.  
<https://rosap.ntl.bts.gov/view/dot/1975>
- Nichols, J. L., & Solomon, M. G. (2013, May). *Click It or Ticket Evaluation, 2010*. (Report No. DOT HS 811 778). National Highway Traffic Safety Administration.  
<https://rosap.ntl.bts.gov/view/dot/34997>
- Nichols, J. L., Tippetts, A.S., Fell, J. C., Auld-Owens, A., Wiliszowski, C. H., Haseltine, P. W., & Eichelberger, A. (2010, November) *Strategies to increase seat belt use: An analysis of levels of fines and the type of law*. (Report No. DOT HS 811 403). National Highway Traffic Safety Administration.  
[www.nhtsa.gov/sites/nhtsa.gov/files/811413.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/811413.pdf)
- Nichols, J. L., Tison, M. G., Solomon, K. A., Ledingham, K. A., Preusser, D. F., & Siegler, J. N. (2009, June). *Evaluation of Buckle Up in Your Truck programs*. DOT HS 811 131. National Highway Traffic Safety Administration.  
<https://rosap.ntl.bts.gov/view/dot/1879>
- Nitzburg, M., & Knoblauch, R. L. (2004, May). *Rural pickup truck drivers and safety belt use: Focus group report*. National Highway Traffic Safety Administration.
- NORC Walsh Center for Rural Health Analysis. (2018, February). *Exploring strategies to improve health and equity in rural communities*. NORC at the University of Chicago.  
[www.norc.org/PDFs/Walsh%20Center/Final%20Reports/Rural%20Assets%20Final%20Report%20Feb%202018.pdf](http://www.norc.org/PDFs/Walsh%20Center/Final%20Reports/Rural%20Assets%20Final%20Report%20Feb%202018.pdf)
- Office of Disease Prevention and Health Promotion. (2022, February 6). *Program planning: MAP-IT: A guide to using Healthy People 2020 in your community*. U.S. Department of Health and Human Services.  
[www.healthypeople.gov/2020/tools-and-resources/Program-Planning](http://www.healthypeople.gov/2020/tools-and-resources/Program-Planning)
- Peek-Asa, C., Zwerling, C., & Stallones, L. (2004, October). Acute traumatic injuries in rural populations. *American Journal of Public Health*, 94(10), 1689–1693.  
[www.ncbi.nlm.nih.gov/pmc/articles/PMC1448517/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1448517/)
- Peterman, D. R. (2019, July). *Federal highway traffic safety policies: Impacts and opportunities*. Congressional Research Service.  
<https://crsreports.congress.gov/product/pdf/R/R44394>
- Pew Research Center. (2018, May 22). *What unites and divides urban, suburban and rural communities*. [www.pewsocialtrends.org/2018/05/22/what-unites-and-divides-urban-suburban-and-rural-communities/](http://www.pewsocialtrends.org/2018/05/22/what-unites-and-divides-urban-suburban-and-rural-communities/)
- Philbrook, J. K., & Franke-Wilson, N. A. (2009, July). The effectiveness of a peer lead smart driving campaign on high school students' driving habits. *The Journal of Trauma: Injury, Infection, and Critical Care*, (67)1, 67-69.

- Privette, F., Yang, J., Zhu, M., Nwosu, A., Pope, C. N., & Pressley, J. C. (2018, October). Factors associated with child restraint use in motor vehicle crashes. *Clinical Pediatrics*, 57(12), 1423–1431. <https://doi-org.proxy.uchicago.edu/10.1177/0009922818786002>
- Pullen-Seufert, N. C., & Hall, W. L. (2008, December). *The art of appropriate evaluation: A guide for highway safety program managers* (Report No. DOT HS 811 061) National Highway Traffic Safety Administration. <https://one.nhtsa.gov/people/injury/research/ArtofAppEvWeb/index.htm>
- Rakauskas, M. E., Ward, N. J., & Gerberich, S. G. (2009, September). Identification of differences between rural and urban safety cultures. *Accident Analysis and Prevention*, 41(5), 931–937. <https://doi.org/10.1016/j.aap.2009.05.008>
- Retting, R., Carrick, G., & Gillen, C.; Decina, L. E., Alonge, M. A., Fischer, P. S., Bieski, A., & Lococo, K. H. (2020, November). *Buckle Up Owensboro: Implementation and evaluation of the 2015-2016 seat belt campaign in Owensboro, Kentucky* (Report No. DOT HS 812 978). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/53887>
- Rural Health Information Hub. (2021, December 14). *Conducting rural health research, needs assessment, and program evaluation*. [www.ruralhealthinfo.org/topics/rural-health-research-assessment-evaluation#program-evaluation](http://www.ruralhealthinfo.org/topics/rural-health-research-assessment-evaluation#program-evaluation)
- RHIH. (2022, June 16). *Rural community health toolkit - Module 4: Evaluating rural programs*. [www.ruralhealthinfo.org/toolkits/rural-toolkit/4/program-evaluation](http://www.ruralhealthinfo.org/toolkits/rural-toolkit/4/program-evaluation)
- SAMHSA Native Connections. (n.d.) *Setting goals and developing specific, measurable, achievable, relevant, and time-bound objectives*. Substance Abuse and Mental Health Services Administration. [www.samhsa.gov/sites/default/files/nc-smart-goals-fact-sheet.pdf](http://www.samhsa.gov/sites/default/files/nc-smart-goals-fact-sheet.pdf)
- Shift. (2021) *Seat belt safety: Buckle Up Idaho* [Web page]. Idaho Office of Highway Safety. <https://shift-idaho.org/seatbelt-safety/>
- Shults, R. A., Haegerich, T. M., Bhat, G., & Zhang, X. (2016, June). Teens and seat belt use: What makes them click? *Journal of Safety Research*, 57, 19–25. <https://doi.org/10.1016/j.jsr.2016.03.003>
- Solomon, M. G., Chaffe, R. H., & Preusser, D. F. (2009a). *Nighttime enforcement of seat belt laws: An evaluation of three community programs* (Report No. DOT HS 811 189). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/16741>
- Solomon, M. G., Preusser, D. F. & Nissen, W. J. (2001, March). *Evaluation of Maryland, Oklahoma and the District of Columbia's seat belt law change to primary enforcement* (Report No. DOT HS 809 213). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/1701>
- Solomon, M. G., Preusser, D. F., Tison, J., & Chaudhary, N. K. (2009b). *Evaluation of the May 2007: Click It or Ticket mobilization* (Report No. DOT HS 811 239). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/1891>

- Solomon, M., Tison, J., and Cosgrove, L. (2013, June). *Click It or Ticket Evaluation, 2008-2009* (Report No. DOT HS 811 536). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/1947>
- Stanley, L., Manlove, K., & Peck, A. (2015, February). *Assessing the effectiveness of Montana's vehicle occupant protection programs* (Report No. FHWA/MT-15-001/8221-001). Montana Department of Transportation. [www.mdt.mt.gov/other/webdata/external/research/docs/research\\_proj/mt\\_seatbelt/Final\\_Report\\_15.pdf](http://www.mdt.mt.gov/other/webdata/external/research/docs/research_proj/mt_seatbelt/Final_Report_15.pdf)
- Strine, T. W., Beck, L. F., Bolen, J., Okoro, C., Dhingra, S., & Balluz, L. (2010, July). Geographic and sociodemographic variation in self-reported seat belt use in the United States. *Accident Analysis and Prevention*, 42(4), 1066–1071. <https://doi-org.proxy.uchicago.edu/10.1016/j.aap.2009.12.014>
- Students Against Destructive Decisions. (2016). *Rock the belt. SADD strong*. <http://www.nlsadd.com/files/pdf/sadd-rockthebelt2016.pdf>
- SADD. (n.d.) *Rock the belt*. [www.sadd.org/files/ugd/84f7d1\\_59d08cbe5f7145ec8832bcc146b2b142.pdf](http://www.sadd.org/files/ugd/84f7d1_59d08cbe5f7145ec8832bcc146b2b142.pdf)
- Tennessee Department of Health. (2021). *Battle of the belt Tennessee resource kit*. [www.tn.gov/content/dam/tn/health/program-areas/vipp/battle-of-the-belt/Battle\\_of\\_the-Belt\\_guidelines.pdf](http://www.tn.gov/content/dam/tn/health/program-areas/vipp/battle-of-the-belt/Battle_of_the-Belt_guidelines.pdf)
- Thomas, F. D., & Blomberg, R. D. (2016, April). *Evaluation of Kansas and Missouri rural seat belt demonstrations* (Report No. DOT HS 812 268). National Highway Traffic Safety Administration. [www.nhtsa.gov/sites/nhtsa.gov/files/812268-evaluationkansasmissouridemo.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/812268-evaluationkansasmissouridemo.pdf)
- Thomas, F. D., Blomberg, R. D., Korbela, K. T., & Fauchier, C. M. (2016, October). *Expanding the seat belt program strategies toolbox: A starter kit for trying new program ideas* (Report No. DOT HS 812 341). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/2083>
- Thomas, F. D., Blomberg, R. D., Fairchild, J., & Cosgrove, L. (2014, March). *Demonstration of the Trauma Nurses Talk Tough seat belt diversion program in North Carolina* (Report No. DOT HS 811 873). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/2004>
- Tinker, J. (2022). *High Five rural traffic safety project*. 2022 Lifesavers Conference. Chicago, IL. <https://lifesaversconference.org/wp-content/uploads/2022/03/OP-05-Tinker.pdf>
- Tison, J., Solomon, M. G., Nichols, J., Gilbert, S. H., Siegler, J. N., & Cosgrove, L. A. (2008, June). *May 2006 Click It or Ticket seat belt mobilization* (Report No. DOT HS 810 979). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/1842>
- Tison, J., & Williams, A. F. (2010, January). *Analyzing the first years of the Click It or Ticket mobilizations* (Report No. DOT HS 811 232). National Highway Traffic Safety Administration. <https://rosap.ntl.bts.gov/view/dot/1896>

- Tison, J., Williams, A. F., Chaudhary, N. K., & Nichols, J. L. (2011, September). *Determining the relationship of primary seat belt laws to minority ticketing* (Report No. DOT HS 811 535). National Highway Traffic Safety Administration. <https://rosap.nhtl.bts.gov/view/dot/1931>
- Toward Zero Deaths Virginia. (n.d.). *Local heroes*.
- U.S. Department of Health and Human Services. (n.d.) *Making adaptations tip sheet*. [https://portal.ct.gov/-/media/SDE/Health-Education/Exemplary-SHE/Curriculum-Materials/making\\_adaptations\\_to\\_evidence\\_based\\_programs.pdf](https://portal.ct.gov/-/media/SDE/Health-Education/Exemplary-SHE/Curriculum-Materials/making_adaptations_to_evidence_based_programs.pdf)
- Venkatraman, V., Richard, C. M., Magee, K., & Johnson, K. (2021, July). *Countermeasures that work: A highway safety countermeasures guide for State Highway Safety Offices*, 10th edition (Report No. DOT HS 813 097). National Highway Traffic Safety Administration. [www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th\\_080621\\_v5\\_tag.pdf](http://www.nhtsa.gov/sites/nhtsa.gov/files/2021-09/Countermeasures-10th_080621_v5_tag.pdf)
- Vision Zero. (2023). *Vision Zero North Dakota*. <https://visionzero.nd.gov/>
- Ward, N. J. (2007). *The culture of traffic safety in rural America*. AAA Foundation for Traffic Safety. [www.semanticscholar.org/paper/The-culture-of-traffic-safety-in-rural-America-Ward/6d0650b35823382a9b195afc34acd9cddeb4d638](http://www.semanticscholar.org/paper/The-culture-of-traffic-safety-in-rural-America-Ward/6d0650b35823382a9b195afc34acd9cddeb4d638)
- Watson, C. E., & Austin, R. A. (2021, March). Differences in rural and urban drivers' attitudes and beliefs about seat belts. *Accident; Analysis and Prevention*, 151, 105976. <https://doi.org/10.1016/j.aap.2021.105976>
- Webb, C. N. (2020, July). *Motor vehicle traffic crashes as a leading cause of death in the United States, 2016 and 2017* (Traffic Safety Facts Research Note. Report No. DOT HS 812 927). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/Publication/812927>
- Yellman, M. A., Bryan, L., Sauber-Schatz, E. K., & Brener, N. (2020, August 21). Transportation risk behaviors among high school students — Youth Risk Behavior Survey, United States, 2019. *MMWR*, 69, 77–83. [www.cdc.gov/mmwr/volumes/69/su/su6901a9.htm](http://www.cdc.gov/mmwr/volumes/69/su/su6901a9.htm)
- Zhu, M., Cummings, P., Chu, H., & Cook, L. J. (2007, June). Association of rear seat safety belt use with death in a traffic crash: a matched cohort study. *Injury Prevention*, 13(3):183-185. 10.1136/ip.2006.012153

# APPENDIX B: EXAMPLE DATA COLLECTION FORMS

## Statewide Seat Belt Observation Form

### Appendix B. Florida Safety Belt Observation Form

SITE NUMBER: \_\_\_\_\_ SITE: \_\_\_\_\_

NOTES: \_\_\_\_\_

DATE: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ DAY OF WEEK: \_\_\_\_\_

**WEATHER CONDITIONS**  
 1 Clear / Sunny      4 Fog  
 2 Light Rain        5 Wet But Not  
 3 Cloudy              Raining

DIRECTION OF TRAFFIC FLOW (Circle one): N S E W

START TIME: \_\_\_\_\_ (Observation period will last exactly 60 minutes)

Veh. #	VEHICLE			DRIVER			PASSENGER		
	Vehicle C = car T = truck S = suv V = van	Sex M = male F = female J = unsure	Age Y = 16-34 M = 35-59 O = 60 or older U = unknown	Race W = White B = Black H = Hispanic O = Other J = unsure	Use Y = yes N = no U = unsure	Sex M = male F = female J = unsure	Age C = 6-15 Y = 16-34 M = 35-59 O = 60 or older U = unknown	Race W = White B = Black H = Hispanic O = Other U = unsure	Use Y = yes N = no U = unsure
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Chaffe, R.H.B., Leaf, W.A. & Solomon, M.G. (2017, June). *Safety Belt Use in Florida*. Florida Department of Transportation.

<https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/info/co/news/newsreleases/2017-florida-statewide-belt-use-final-report.pdf>

**Seat Belt Observation Form for School-Based Intervention**

Seatbelts Are For Everyone (SAFE) Data Sheet							
<i>Complete the following information on every sheet, every time!</i>							
Write in your school's name: _____							
Write in your name: _____							
What time did you start observing? _____							
What time did you stop observing? _____							
What is today's date (the date of the observation): _____							
Are you the primary observer? (Circle one): Yes No							
If you are the primary observer, who is your reliability partner? _____							
Add up the totals at the bottom of each page.							
	Driver Belted	Driver Distraction	Passenger Belted		Driver Belted	Driver Distraction	Passenger Belted
1	Y N	P T O N	Y N	26	Y N	P T O N	Y N
2	Y N	P T O N	Y N	27	Y N	P T O N	Y N
3	Y N	P T O N	Y N	28	Y N	P T O N	Y N
4	Y N	P T O N	Y N	29	Y N	P T O N	Y N
5	Y N	P T O N	Y N	30	Y N	P T O N	Y N
6	Y N	P T O N	Y N	31	Y N	P T O N	Y N
7	Y N	P T O N	Y N	32	Y N	P T O N	Y N
8	Y N	P T O N	Y N	33	Y N	P T O N	Y N
9	Y N	P T O N	Y N	34	Y N	P T O N	Y N
10	Y N	P T O N	Y N	35	Y N	P T O N	Y N
11	Y N	P T O N	Y N	36	Y N	P T O N	Y N
12	Y N	P T O N	Y N	37	Y N	P T O N	Y N
13	Y N	P T O N	Y N	38	Y N	P T O N	Y N
14	Y N	P T O N	Y N	39	Y N	P T O N	Y N
15	Y N	P T O N	Y N	40	Y N	P T O N	Y N
16	Y N	P T O N	Y N	41	Y N	P T O N	Y N
17	Y N	P T O N	Y N	42	Y N	P T O N	Y N
18	Y N	P T O N	Y N	43	Y N	P T O N	Y N
19	Y N	P T O N	Y N	44	Y N	P T O N	Y N
20	Y N	P T O N	Y N	45	Y N	P T O N	Y N
21	Y N	P T O N	Y N	46	Y N	P T O N	Y N
22	Y N	P T O N	Y N	47	Y N	P T O N	Y N
23	Y N	P T O N	Y N	48	Y N	P T O N	Y N
24	Y N	P T O N	Y N	49	Y N	P T O N	Y N
25	Y N	P T O N	Y N	50	Y N	P T O N	Y N
Total Number of Drivers Belted (Y) this page							
Total Number of Drivers Not Belted (N) this page							
Total Number of Drivers on a Phone (P) this page							
Total Number of Drivers Texting (T) this page							
Total Number of Drivers Otherwise Distracted (O) this page							
Total Number of Drivers with No Distractions (N) this page							
Total Number of Passengers Belted (Y) this page							
Total Number of Passengers Not Belted (N) this page					Page #		

Seatbelts are For Everyone (2022b, August) *Seatbelts Are for Everyone (SAFE) Data Sheet*. <https://seatbeltsareforeveryone.org/wp-content/uploads/2021/07/SAFE-Datasheet.pdf>



## School-Based Observational Seat Belt Data Entry

### Day 1 Data Collection

Date Of Collection: *(Required)*

Month  Day  Year

Page 1

Total Number Of Drivers Belted (Y) *(Required)*

Total Number Of Drivers Not Belted (N) *(Required)*

Total Number Of Drivers On A Phone (P) *(Required)*

Total Number Of Drivers Texting (T) *(Required)*

Total Number Of Drivers Otherwise Distracted (O) *(Required)*

Total Number Of Drivers With No Distractions (N) *(Required)*

Total Number Of Passengers Belted (Y) *(Required)*

Total Number Of Passengers Not Belted (N) *(Required)*

Do you have a 2nd page of entries? *(Required)*

Select one

Day 1 Totals

Total Drivers Belted (Y)

Total Drivers Not Belted (N)

Total Drivers On A Phone (P)

Total Drivers Texting (T)

Total Drivers Otherwise Distracted (O)

Total Drivers With No Distractions (N)

Total Passengers Belted (Y)

Total Passengers Not Belted (N)

Seatbelts are For Everyone (2022a, August) *Seatbelt Survey Analysis Form*.

<https://seatbeltsareforeveryone.org/seatbelt-survey-analysis-form/>

## Example Teen Seat Belt Data Collection Forms

### SEAT BELT QUICK QUIZ

This survey is about health behavior. It has been developed so you can tell us what you do that may affect your health. The information you give will be used to improve health education for young people like yourself.

DO NOT write your name on this survey. The answers you give will be kept private. No one will know what you write. Answer the questions based on what you really do.

Completing the survey is voluntary. Whether or not you answer the questions will not affect your grade in this class. If you are not comfortable answering a question, just leave it blank.

- In the past month, have you seen or heard messages about young people wearing seat belts?  
 Yes     No
- If yes, where were you when you saw or heard these seat belt messages? (Check all that apply)  
 Home     Driving on a roadway  
 School     Using media (such as TV, magazine, or radio)  
 Social or community area (such as a mall or house of worship)     Online
- Seat belts are only important for passengers in the front seat of a vehicle.  
 True     False
- In a severe accident, you have a better chance of surviving if you are not wearing a seat belt.  
 True     False
- Seat belts are necessary only for long-distance driving or for traveling at fast speeds.  
 True     False
- Car crashes are the leading cause of death among teens today.  
 True     False
- Seat belts reduce serious crash-related injuries and deaths by about 50 percent.  
 True     False
- What motivates you to wear your seat belt? (Check all that apply)  
 I see my parents/guardians buckle up     I am worried about the driver getting a ticket  
 My parents/guardians buckle up     I am concerned about my safety  
 Putting on a seat belt is an automatic habit when I get into a vehicle     Other:

### MONDAY: SEAT BELT SURVEY DATA COLLECTION FORM

School Name:			Total People	
Recorder:			Total People Belted	
Front Seat Observer:			Total People NOT Belted	
Back Seat Observer:			Total People Unknown	
Date of Check:	Time Started:	Time Ended:		

For each vehicle observed, circle the driver belt use (yes [belted]/no [not belted]/unknown). If there are front or rear passengers, circle belt use, otherwise leave the seat unmarked.




Y = Yes (Belted)    N = No (Not Belted)    ? = Unknown

	Driver			Front Passenger			Rear Passenger			Rear Passenger			Rear Passenger		
	Y	N	?	Y	N	?	Y	N	?	Y	N	?	Y	N	?
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Students Against Destructive Decisions. (n.d.) *Rock the Belt.*

[www.sadd.org/files/ugd/84f7d1\\_59d08cbe5f7145ec8832bcc146b2b142.pdf](http://www.sadd.org/files/ugd/84f7d1_59d08cbe5f7145ec8832bcc146b2b142.pdf)

### Rural Traffic Enforcement Data Collection Form

		<b>High Five</b>						
		<b>Rural Traffic Enforcement Report</b>						
		Department: _____						
		Month/Year _____						
	<b>Citations/Warnings</b>		<b>Additional Information:</b>					
OWI*			<b>Media Contacts</b>					
Seat belts			TV: _____					
Child Restraints			Radio: _____					
Speed			Print: _____					
Improper Passing			<b>Total # of Officers Worked:</b> _____					
Stop sign/light violation			<b>Pre &amp; Post Seat Belt Surveys</b>					
Driving without license			# Observed Pre-survey: _____					
Suspended or revoked			# Belted Pre-survey: _____					
Registration			# Observed Post-survey: _____					
Open container			# Belted Post-survey: _____					
.02 violation			% Pre: _____	% Post: _____				
Dark windows								
Felony arrest								
Narcotics arrest								
Other traffic violation								
Equipment								
No Proof of Insurance								
Move over violation								
<b>Other Contacts</b>	PD	PI				F	<b>Comments</b>	
Accidents investigated								
Motorist Assist								
Interdiction/Canine search								
MCSAP inspections								
Comm Veh out-of-service								
Comm Driver out-of-service								
Arrest Warrants served								
DNR violations								
*OWI: Citations = arrests; Warnings = test given, no arrest								
Hi 5 GTSB Coordinator Randy Hunefeld 515-725-6124 / 515-447-8051				GTSB Fax # 515-725-6133				

Hoye, P. (2017). *High Five Rural Traffic Safety Project* [Unpublished manuscript]. Iowa Department of Public Safety.

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**National Highway  
Traffic Safety  
Administration**

