Bike/Pedestrian Safety

Virginia Beach Police Department

Agency Size: 753 Sworn Officers
Location: Virginia Beach, VA
Community Size: 310 Square Miles
Community Population: 437,994

Responsible Riding

A holistic approach helped the Virginia Beach Police Department reverse a sudden spike in fatalities of bicyclists and pedestrians.

Virginia Beach has everything a typical medium-sized city has: convenient shopping, good schools, clean parks, and safe neighborhoods. However, it also has something that is entirely its own: 28 miles of public beaches that attract more than 2.5 million visitors per year. Because of the money they spend there, those visitors are a boon for Virginia Beach’s economy. For Virginia Beach’s roads, though, they can be a major liability, according to the Virginia Beach Police Department (VBPD), which faces an influx of people every summer who either do not know local traffic laws or do not pay attention to them. In 2015, reducing the traffic risks created for and by bicyclists and pedestrians along Virginia Beach’s oceanfront was a major priority for the VBPD, which was the recipient of the Bike/Pedestrian Safety Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

Virginia Beach’s warm weather, sandy beaches, lively boardwalk, and vibrant town center are enticing for tourists, who flock there in large numbers every year to enjoy both its city center and its oceanfront, according to Officer Eric Kolb.

“We swell in size during the summertime because people come here from all over the country and all over the world to enjoy our oceanfront,” explains Kolb, who says tourists and locals alike spend much of their summer on two wheels or two feet. “At the oceanfront, especially, pretty much everyone is on a bike or walking. Add to that the large number of people driving to and from their hotel — and mix in alcohol, because you’re on vacation — and you’ve got a pretty difficult situation.”

That situation escalated in 2014, when the VBPD observed a 90 percent increase in the number of fatal crashes involving a pedestrian or bicyclist. Fatal crashes involving a pedestrian or bicyclist rose from just 0.4 percent of all fatal crashes in 2013 to 5.2 percent in 2014.

“It’s a multi-faceted problem, so trying to determine a cause for the increase is difficult,” Kolb says. “Knowing that pedestrians and bicyclists are a population that’s susceptible to injury and death as a result of collisions, however, we obviously wanted to focus some efforts to try to increase their overall safety and well-being.”
Planning

Bicyclist and pedestrian fatalities in Virginia Beach seemed to spike overnight. However, the VBPD recognized that reducing them would take much longer. A key component of its bike and pedestrian safety strategy, therefore, was long-term planning with city partners — in particular, the City of Virginia Beach’s Department of Public Works, with which the VBPD has long had a close and collaborative relationship.

“What’s been ongoing for a couple of years now with the grand development plan for the city’s infrastructure is increasing the availability of sidewalks and multi-use bicycle paths for all the new roadways that are being built,” explains Kolb, who says the VBPD and Department of Public Works’ Traffic Engineering Division meet regularly to share traffic safety intelligence that subsequently influences the design of future developments in and around the city. “What that does, obviously, is it increases the number of safe areas where people can be on the roadways getting the exercise they want without interfering with vehicle traffic on the roads themselves.”

Recent projects that benefitted from the VBPD’s relationship with city engineers include an extension of Nimmo Parkway that was completed in late 2014, and a replacement of the Lesner Bridge, which was completed in late 2016. A large multi-use path was implemented on both to optimize pedestrian and bike safety, according to the VBPD, which has also advocated for speed limit reductions on roads with high pedestrian and bike traffic, as well as the installation of roadway signs at crosswalks to encourage drivers to stop for pedestrians on sidewalks.

Of course, officers were as important to the VBPD’s efforts as engineers. The other major component of the agency’s planning efforts, therefore, was police training, according to Kolb, who says 100 percent of VBPD officers received training on pedestrian laws and enforcement in 2015.

“A lot of times, the people who don’t know the laws are the police officers trying to enforce them,” Kolb reports. “So, we put out some training bulletins for officers to help them be more cognizant of what the laws are and make them aware that they need to be enforcing them just as much with pedestrians and bicyclists as with vehicles.”

Education

Because citizens are more familiar with vehicle safety than pedestrian and bike safety, public information and education were critical components of VBPD’s efforts, according to Kolb. Highlights included:

- **Bicycle Safety Task Force:** In 2012, Mayor William Sessoms established a Bicycle Safety Task Force to lead citywide efforts to improve bicycle safety and education in Virginia Beach. The task force remained active in 2015, according to Kolb, who cites its website as a particularly useful resource, thanks to its library of information on bike safety, local trails, etc.

- **City newsletter:** The large number of pedestrians around Virginia Beach’s municipal center inspired the VBPD to publish several columns in the City
of Virginia Beach’s employee newsletter, targeting those most likely to frequent the area with information about topics such as crosswalk safety.

- **Youth outreach:** VBPD officers conducted two bicycle rodeos with local youth, educating them about general bike safety, rules of the road, proper fitting of helmets, etc. The officers also met with foreign exchange students who are likely to travel on foot or by bicycle, but lack knowledge of U.S. traffic laws. Through these and other programs, the VBPD reached more than 300 youth in 2015.

**Enforcement**

Enforcement was a critical complement to education for the VBPD, which devoted 706 hours of enforcement time to pedestrian and bike safety during planned patrols in 2015. During those patrols, officers issued 275 traffic summonses and made 53 arrests. Special Operations officers likewise conducted 380.5 hours of saturation patrols, during which they issued 800 traffic summonses and made 30 arrests.

In addition to summonses and arrests, officers issued warning cards, particularly to juvenile offenders.

“An arrest or summons is a negative form of feedback,” Kolb explains. “The warning card is an opportunity to still address the violation and hopefully prevent it from happening again, but by offering someone education and the opportunity to learn and grow from what they did wrong.”

At the oceanfront, the VBPD’s 2nd Precinct Oceanfront Community Oriented Policing (OCOP) squad played a pivotal role by patrolling beach and resort areas by foot, bike, and ATV. In 2015, 32 dedicated officers were assigned to the OCOP.

“Merely the presence of police oftentimes is enough to deter negative behavior,” Kolb says. “If people see police enforcing the laws, they’re more likely to obey them, which is the whole point of having crosswalks and timed lights that can reduce the chance of collisions and injuries.”

**Outcomes**

Through a mix of education and enforcement, the VBPD successfully reduced deaths of pedestrians and bicyclists by 40 percent, from 10 in 2014 to six in 2015; all six, it was determined, were caused by the bicyclist or pedestrian disobeying pedestrian signals or improperly using the roadways. The VBPD also reduced bicycle and pedestrian crashes’ share of overall traffic fatalities. In 2015, pedestrian and bicycle crashes accounted for 18 percent of all fatalities, compared to 42 percent in 2014.

“We obviously like to think our efforts have been making a difference,” Kolb concludes. “Even just colloquially, our officers have observed more people on sidewalks and pathways, which means fewer people are in the roadways being a danger to traffic.”

**LESSONS LEARNED**

- **Community partners are key:** Pedestrian- and bike-related collisions are a community problem that demands a community solution. Multiple stakeholders, including law enforcement, schools, and city engineers, must work together to develop a comprehensive and multifaceted strategy.

- **Practice pays:** Pedestrian and bike safety requires behavioral change at the individual and social level. That takes time. Agencies must therefore make a long-term commitment and stay the course despite short-term fluctuations in statistics.

- **Holistic policing works:** Neither education nor enforcement are enough on their own; results hing on doing both equally and simultaneously.

The National Law Enforcement Challenge is a traffic safety recognition program, which is supported through a cooperative agreement between the International Association of Chiefs of Police and the National Highway Traffic Safety Administration. It is held in partnership with the National Sheriffs’ Association, the Governors Highway Safety Association, and the American Association of Motor Vehicle Administrators.
Commercial Collaboration

The Buffalo Grove Police Department reduced commercial motor vehicle crashes by focusing on partnerships instead of penalties.

Cars and trucks have a lot in common. They both need fuel to power their engines; drivers to point and steer their wheels in the right direction; and, of course, roads on which to drive. Despite all outward appearances, however, trucks are not just big cars. Because of their large size, heavy weight, and unique mechanics, they must be treated separately and uniquely, not only by motorists and drivers, but also by the law. That became abundantly clear to the Buffalo Grove Police Department (BGPD) in 2013, when it noticed a sudden spike in the number of crashes involving commercial motor vehicles (CMVs). Reversing that trend has subsequently become one of its main objectives, according to the agency, whose efforts earned the agency the Commercial Motor Vehicle Safety - Municipal/Sheriff Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

In 2013, an analysis of Buffalo Grove’s annual traffic safety statistics revealed a disturbing trend: the number of collisions involving large trucks and buses had ballooned approximately 800 percent, rising from just one crash in 2012 to nine crashes in 2013.

“We attributed these crashes primarily to trucks being overweight, and of course to driver error,” explains Sergeant Anthony Goldstein. “Any time there is driver error involved with a crash, that indicates an opportunity to prevent future crashes by changing driver behavior ... So, we looked at the data and decided to do whatever we could to improve those statistics and keep the motoring public safe.”

Planning

The BGPD responded to the sudden uptick in CMV crashes by making a public declaration to reverse it, according to Goldstein, who says the agency explicitly added CMV safety to its strategic planning report, as well as to the annual goals and objectives report of its traffic unit.

“Your strategic planning document is the platform you use to provide your vision to your patrol officers who are on the front lines so they know what your goals are,” Goldstein says. “Without that vision, they won’t know that [CMV safety] is important to the community, to the village, or to the police department.”
Your strategic plan and vision are what gets everybody to work together on the same page, which can be very difficult to do.”

The BGPD understands that it is not enough to have a vision. To actually execute that vision, agencies also need leaders who champion large truck and bus safety. For the BGPD, that leader was Buffalo Grove Police Officer James Harris, a founding board member of the Illinois Truck Enforcement Association (ITEA).

“It’s his personal goals and motivation that keep us moving in the right direction,” Goldstein says of Harris, who personally oversaw efforts to train BGPD officers in CMV safety in 2015. Special efforts included:

- **Formal training:** ITEA offers a 40-hour overweight truck enforcement certification class for officers interested in learning how to enforce overweight truck laws. Under Harris’s guidance, one officer attended the course in 2015, while four attended an eight-hour truck refresher training. In total, the BGPD now has 12 ITEA-certified officers.

- **Field training:** In 2015, Harris initiated a field training program for new truck enforcement officers, who learn about specific CMV violations and issues during a week of on-the-job training that included live large truck and bus enforcement demonstrations.

- **In-house training:** Every year, the BGPD conducts a special apportioned plate enforcement initiative in April, followed by an overweight truck blitz in July. In advance of these programs, Harris hosts an in-house training session offering large truck and bus education to officers who lack this specific training.

“CMV enforcement isn’t easy,” states Goldstein, who adds that large truck and bus jargon, procedures, and laws can be intimidating to the average police officer. “Jim [Harris] is committed to passing on his body of knowledge to fellow officers who don’t have as much experience in CMV enforcement as he does.”

**Education**

Officers are not the only ones who can benefit from CMV education. Large truck and bus drivers also need information and enrichment, according to Goldstein, who says industry outreach and education were paramount to the BGPD’s efforts in 2015.

“It’s not just about writing tickets,” explains Goldstein, adding that education helps the BGPD build good rapport with CMV drivers, who, because of their positive relationships with the police department, are better primed to receive and retain these safety messages. “Commercial motor vehicle safety needs to be a partnership between commercial motor vehicle drivers and the police department, so our goal is to work proactively with commercial motor vehicle drivers to educate them about different...
scenarios before violations happen.”

Education is both informal and formal. For instance, Goldstein says Harris is constantly communicating with individual drivers in order to offer spontaneous tips and answer off-the-cuff questions. Likewise, he regularly visits CMV businesses to mingle with drivers, providing causal education through these informal social interactions. Formal efforts, meanwhile, include attendance at large truck and bus industry events throughout the year. In 2015, such events included the Illinois Landscape Show, the Midwest Truck Show, and the Illinois Truck Association Expo, where BGPD officers spoke with CMV drivers about large truck and bus safety.

The BGPD hosts its own events, too. Among the most successful in 2015, for example, was “Día con la Policía de Camiones,” or “Day with the Truck Cops,” a bilingual training lunch organized for Spanish-speaking drivers who work for landscaping companies.

“This is a segment of drivers who don't really feel comfortable with police officers,” Goldstein says. “We bought pizzas for them and had a lunch with a Spanish-speaking officer at the local mulch center, just to socialize with them and try to make them feel a bit more comfortable about approaching us with questions while also teaching them in their own language [about CMV laws and safety].”

Enforcement

Although education is critical, enforcement is a necessary component, according to Goldstein, who says the core of the BGPD’s 2015 enforcement efforts were six ad hoc selective truck enforcement program (STEP) initiatives conducted in partnership with the Illinois State Police, other municipal law enforcement agencies, and various trucking companies. Each initiative utilized historical traffic data to determine the best days, times, and locations for saturation patrols targeting CMV violations, as well as intelligence from various STEP partners that allowed officers to pivot in real time in response to drivers trying to circumvent STEP initiatives. Collectively, the six initiatives originated 41 percent of the BGPD’s enforcement efforts and yielded 82 overweight citations. Although this was a 28 percent decrease from 115 in 2014, the citations were issued for more serious violations that resulted in an increase in bonds collected, according to Goldstein, who says the numbers reflect an effort to be more strategic in their traffic stops.

Outcomes

After peaking in 2013, the number of annual large truck and bus crashes in Buffalo Grove fell to four in 2014 and three in 2015, a two-year decline of 66.6 percent.

Concludes Goldstein, “We have more commercial motor vehicle enforcement officers than we’ve ever had in the past, and there's more interest than ever [among community and industry stakeholders] in incorporating this issue into their domain. Thanks to the relationships we’ve built with commercial motor vehicle drivers, things are definitely improving.”

LESSONS LEARNED

• **Progress starts at the top:** A clear vision and a strong leader to serve as its champion are the first steps toward success.

• **Knowledge is power:** Because officers must be familiar with CMV laws in order to enforce them, training that increases officers’ comfort and comprehension is critical.

• **Relationships are currency:** Officers who view CMV drivers not as targets, but as partners, are in the best position to effect behavioral change and prevent future large truck and bus crashes.

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Collision-Free Commerce

To reverse an increase in fatal commercial motor vehicle crashes, the California Highway Patrol embraced training, teaching, and technology.

California has the largest economy in the United States, and the sixth-largest in the world  — bigger, thanks to industries like technology, agriculture, aerospace, and entertainment. These industries are supported by the commercial motor vehicles (CMVs) transporting everything from microchips to movie sets among California businesses. Unfortunately, those CMVs represent not only a robust economy, but also an at-risk populace, as they are more likely than passenger vehicles to be involved in multi-vehicle collisions that result in severe injuries and fatalities. The California Highway Patrol’s (CHP) 2015 response to safety risks earned it the Commercial Motor Vehicle Safety - State Police Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

Over 78 percent of all California’s communities depend exclusively on trucks to move their products. According to the CHP, large trucks transport 88 percent of California’s total manufactured tonnage every year, or approximately 3.8 million tons per day. Along with numerous commercial transactions, the tonnage represents a lot of CMV traffic, says Sergeant Josh Clements of the CHP’s Commercial Vehicle Section.

“There is a ton of commercial traffic that either originates in or passes through California,” Clements explains. “Because of the large number of commercial vehicles that we see, we have a lot of collisions that occur, and that ultimately results in fatalities and injuries.”

The CHP’s Statewide Integrated Traffic Records System (SWITRS) showed there were 252 fatalities and 5,777 injuries related to large truck and bus collisions in California in 2014, and a 14.04 percent increase in the number of such collisions compared to the previous three-year average.

“We looked at those numbers and said, ‘How can we reduce them?’” Clements continues.

Planning

The foundation of the CHP’s large truck and bus safety efforts is the California Strategic Highway Safety Plan (SHSP), a collaborative document that
is implemented by more than 400 stakeholders from 170 public and private agencies and organizations. The SHSP uses real-time data and intelligence to identify specific, targeted actions for law enforcement and others to take across designated “Challenge Areas” with the goal of reducing serious injuries and fatalities on California roads. As the lead agency in the SHSP Commercial Vehicle Challenge Area, the CHP pledged to:

- Improve training and education of CMV safety stakeholders;
- Increase the use of effective enforcement strategies to improve CMV safety;
- Identify and implement engineering features that reduce CMV-related collisions;
- Improve CMV safety data; and
- Identify and promote the use of technology for improving CMV safety.

“The group that puts together the California Strategic Highway Safety Plan meets regularly and is constantly reviewing data to help us identify where there’s room for improvement,” explains Clements, who highlights officer training as one of the most significant CMV safety activities to emerge from the SHSP in 2015.

To that end, the CHP held four training classes in 2015, teaching a total of 92 officers how to conduct CMV safety inspections. The agency also trained 60 officers to inspect hazardous material shipments, 30 officers to conduct inspections of cargo tank motor vehicles, 28 officers to conduct bus inspections, 113 officers to inspect radioactive materials, and 12 officers to inspect farm labor vehicles.

“Education is really important, not only for the public, but also for our own people,” Clements says. “So, we traveled around to all our field divisions and did training for everyone who’s involved in our commercial enforcement program, which I think had a huge impact by emphasizing [CMV safety] and putting it in the forefront of everyone’s mind.”

Technology proved just as impactful as training, thanks to statewide implementation of software for CMV inspectors to electronically collect and transmit inspection data to state and federal databases.

“The software allows inspectors to check various databases through one interface to ensure that drivers and carriers are in compliance [with state and federal regulations],” Clements explains. “It’s one-stop shopping that ensures we’re checking all the appropriate boxes when we’re doing our inspections.”

**Education**

While the CHP focused internally on training and technology, it focused externally on public information and education, especially for industry. The CHP engaged the various businesses via its Commercial Industry Education Program (CIEP), an initiative through which it delivered 1,527 educational seminars to individual trucking companies interested in learning about large truck and bus safety and compliance.
“The nice part about CIEP is that we can tailor our presentation to a particular company’s needs,” Clements says. “If they’re concerned about pre-trip inspections, we can focus specifically on that. It’s not a one-size-fits-all program.”

A separate event, CHP’s biennial CMV Safety Summit, likewise engaged motor carriers in 2015 with practical knowledge for keeping CMV drivers safe.

“For our CMV Safety Summit, we invited carriers to come and learn, free of charge, about things like hours of service, the safe transportation of hazardous materials, and our on-highway commercial inspection program,” Clements says. “I don’t know of any other state that puts on an event like this to provide information to such a large group of industry stakeholders at the same time.”

Yet another successful education effort in 2015 was the Safety and Farm Labor Vehicle Education (SAFE) Program, which targets more than 500,000 farm workers who are employed annually in California’s Central Valley.

“There was a time when the vehicles that were transporting workers to and from their worksites were not very safe, so the SAFE program was established to inspect and certify those vehicles to make sure they’re in compliance with safety regulations,” explains Clements. The CHP performed 672 38-point inspections of farm labor vehicles and conducted 144 community outreach events to educate farm labor contractors about vehicle safety.

Because their interference with large trucks and buses can cause fatal collisions, drivers of passenger vehicles were also important education targets for the CHP in 2015. “We’re not doing our job if we only focus on commercial vehicles, because the concept of sharing the road is really important,” reports Clements, adding that social media, including Facebook and Twitter, was an especially effective tool for conducting public outreach. “Handouts, booklets, and websites are no longer the best way to connect with people, so we’re using social media more often to get information quickly to commercial drivers and the general public.”

Enforcement

CHP officers committed more than 50,124 hours of regular duty time to CMV enforcement in 2015, issuing 150,373 citations. Bolstering these enforcement efforts were two traffic safety grants:

- **Motor Carrier Safety Assistance Program (MCSAP) Grant**: Awarded by the Federal Motor Carrier Safety Administration (FMCSA), the MCSAP grant funded the aforementioned training and education efforts, as well as enforcement in targeted areas. “The MCSAP grant allows us to focus on resources on specific high-collision corridors,” Clements says. “We can look at the

"Moving the CMV needle requires agencies to inform officers internally and educate industry partners externally."
data, see where the collisions are occurring, and deploy people to those areas in greater numbers, all because of the MCSAP grant.”

- **Border Enforcement Grant (BEG):** The BEG seeks to improve CMV safety across California by focusing enforcement resources on cross-border commerce. “The Border Enforcement Grant allows us to staff a large number of personnel along the California-Mexico border and conduct inspections on vehicles that are involved in foreign commerce,” Clements says. “By inspecting vehicles that are coming in from Mexico, we can ensure that all vehicles, drivers, and carriers entering this country can safely operate in California.”

**Outcomes**

Although fatal and injury traffic collisions involving a CMV increased in 2014 by 14.04 percent and 4.37 percent, respectively, from the previous three-year average, the 2015 data were not available at the time of publication. Clements, however, is confident that the CHP is moving in the right direction. “We have seen improvement,” he says. “We have a better picture of what’s happening with commercial vehicles on our roads, and that’s allowed us to do a better job of addressing the issues and concerns that arise from that.”

**LESSONS LEARNED**

- **Data delivers:** Strategic planning that leverages real-time data and intelligence helps agencies set tangible goals and pivot on the spot in order to reach them.

- **Knowledge is power:** Moving the CMV needle requires agencies to inform officers internally and educate industry partners externally.

- **Tools matter:** Technology, such as large truck and bus inspection software, can be an effective complement to talent by facilitating consistent processes and uniform procedures that raise the bar on safety education and enforcement.

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Covert vehicles and electronic crash data helped the New York State Police hang up the phone on distracted driving.

In the U.S., nearly two-thirds (64 percent) of adults own a smartphone, according to the Pew Research Center, which says roughly half of Americans who have one (46 percent) view their smartphone as something they “could not live without.” People's attachment to their mobile devices allows them to stay perpetually connected to family, friends, and news. Unfortunately, mobile device attachment also makes them prone to distraction, especially when they’re driving. This results in drivers who are not always “smart,” even if their phones are. The New York State Police's (NYSP) efforts to curb distracted driving earned the agency the Distracted Driving Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

The ubiquity of personal electronic devices has caused an epidemic of distracted driving in New York, according to the NYSP, which says distracted driving was a contributing factor in an average of 14 percent of all fatal crashes in the state over the last four years.

“For law enforcement in general, distracted driving has been an evolving, moving target,” says Staff Sergeant Terrence McDonnell. “As more and more technology has entered the cockpit of the motor vehicle — we used to have radios, now we have ‘infotainment systems’ — drivers have faced a constant increase in distractions.”

It is in this context that the NYSP decided to make distracted driving a major priority in 2015.

“Distracted driving is quickly approaching the levels of gravity that impaired driving once had,” McDonnell continues. “We've been somewhat effective at addressing aggressive driving through enforcement and education strategies, but we have not yet had that kind of positive impact on distracted driving. So, we’re constantly looking for new ways to achieve that.”

Planning

The NYSP's focus on distracted driving came from the highest levels of state government. New York Governor Andrew Cuomo created 91 “Texting Zones” in 2013 along state highways, where drivers can safely pull over to answer text messages.

“After seeing some of the victims of these crashes, he decided that doing nothing about it was unacceptable
and took on distracted driving as a personal project,” McDonnell reports. “He also dedicated funding for us specifically to do distracted driving enforcement. Of course, when you have that type of executive support it’s extremely helpful; when something’s a priority for the governor, it becomes a priority for your superintendent, your field commander, and everybody else all the way down the chain.”

Executive buy-in was one important pillar on which the NYSP’s distracted driving activities were built in 2015. Data was another important component; specifically, time and location data pulled from electronic crash reports, which, using the agency’s geographic information system (GIS), are plotted out on “heat maps” that are saved as PDFs on the agency’s intranet for state troopers to access and use for planning their patrols.

“The majority of our enforcement comes from routine patrols,” McDonnell explains. “When members are armed with the knowledge of where people are being killed, when they’re being killed, and how they’re being killed, they’re better equipped to direct their own enforcement behavior.”

**Education**

Permanently changing driver behavior requires motorists to care as much about stopping distracted driving as the governor of New York does. With that in mind, public information and education was a key component of its efforts, according to the NYSP, which targeted youth, in particular, by working with schools and news reporters. The latter, for example, were invited on ride-alongs with troopers as they conducted distracted driving enforcements. The former, meanwhile, hosted NYSP troopers at numerous speaking events themed around distracted driving.

“We use victim impact a lot at those events,” McDonnell says. “We have some speakers who were victims of crashes who tell some pretty amazing stories about physical disabilities that were inflicted upon them by a teenager who was texting behind the wheel. When those speakers show up in person to show students their disabilities, that can be very moving.”

Technology can also be very moving. Another tool in the NYSP’s belt is a distracted driving simulator that the agency deployed at several large-scale events in 2015, including the New York International Auto Show.

“The simulator is an object that engages the public and gets people to have a discussion about tragedies and everything we see in crashes,” McDonnell says. “Anything we can do to stimulate that conversation is important.”

**Enforcement**

In 2015, NYSP troopers issued 40,847 citations for distracted driving violations, nearly 15,000 of which were for texting while driving. Although most of these citations were issued during routine patrols, the NYSP also organized 811 special enforcement details that specifically targeted distracted driving. During these details, which utilized 5,120 hours of federally funded grant overtime, officers issued 4,394 citations.

When victims of crashes show up in person to show students their disabilities, it can be very moving.
LESSONS LEARNED

- LEAD WITH LEADERSHIP: Addressing distracted driving effectively requires strategic support at the highest levels, both inside and outside agencies.
- STORIES SWAY: Victim-impact stories can help change driver behavior by highlighting the human cost of distracted driving.
- STEALTH DRIVES SUCCESS: Covert vehicles enjoy an advantage over marked patrol cars during distracted driving enforcement.

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for distracted driving violations.

“When we do large details, people all of a sudden will see a dozen [trooper] cars blanketing a highway with cars at the side of the road,” McDonnell says. “When we tell them why we’re out there and what we’re doing, that has a big impact.”

The enforcement strategy that had the biggest impact in 2015 was the use of 35 Concealed Identity Traffic Enforcement (CITE) vehicles, which are SUV-style patrol vehicles equipped with covert lighting and free of police markings. Their height and inconspicuousness relative to civilian vehicles make them ideal for observing distracted driving violations.

“We were part of a pilot project in Syracuse, New York, in 2009 that involved the Syracuse Police Department, the Onondaga Sheriff’s Department, and the New York State Police,” McDonnell reports. “We operated only marked patrol cars; everyone else had covert vehicles. What we learned from that is, when you are doing distracted driving enforcement, nobody is sitting there with their phone to their ear or their hands on their steering wheel texting in front of a marked patrol car, but when you use unmarked patrol cars, people will drive right up next to you and [use their phones].”

The NYSP subsequently began deploying CITE vehicles, which are found to be 10 times more effective at distracted driving enforcement than patrol cars.

Outcomes

After two subsequent years of decline — from 15 percent of fatal crashes in 2012 to 13 percent and 14 percent in 2013 and 2014, respectively — the percentage of fatal crashes related to distracted driving in New York State increased to 16 percent in 2015. The surge does not necessarily reflect a failed solution, however; rather, it indicates a growing problem, according to McDonnell.

“The number and variety of electronic devices just continue to grow,” he concludes. “I think what we’re seeing is a reflection of the increase in these devices and the number of distractions proliferating in vehicles.”

Traffic Safety Innovations 2016

Impaired Driving

Ontario Provincial Police

Analyzing Enforcement

Data analytics and community partnerships helped the Ontario Provincial Police identify and address its impaired driving problem.

A glass of wine with dinner. A couple of beers while watching the hockey game. A martini after a long day at work. A few shots to celebrate a loved one’s wedding. There is rarely a lack of occasions for people to consume alcohol, which could explain why almost 80 percent of Canadians do so, according to the Public Health Agency of Canada.

While Canadians drink less per capita than many other developed nations, Canada ranks first among 19 wealthy countries for percentage of alcohol-related traffic deaths, according to a study conducted by the U.S. Centers for Disease Control and Prevention. This problem extends across the country, but is especially evident in Canada’s second largest province, Ontario, where the Ontario Provincial Police (OPP) has been working around the clock to reduce injuries and fatalities caused by impaired driving. The OPP’s efforts in 2015 earned it the Impaired Driving Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

As one of the “Big Four” high-risk driving behaviors that contribute significantly to deaths and injuries on Ontario’s highways, impaired driving has long been a target for OPP officers. In spite of officers’ efforts, however, impaired driving in Ontario caused 52 fatal collisions in 2014 and 276 personal injury collisions. Although the former decreased nearly 30 percent from the previous year, the latter increased 45.2 percent.

These statistics were a catalyst for the OPP’s impaired driving efforts in 2015, according to Alison Jevons, Director of Operations and Support for the OPP’s Highway Safety Division, she says the OPP utilizes intelligence-led policing (ILP) as a business model and managerial philosophy, leveraging objective data as the basis on which all policing decisions are made.

Data came not only from the OPP’s internal records management system, but also from community surveys like the 2014 Provincial Community Satisfaction Survey (CSS). Although it showed that 89.5 percent of community members felt “very safe” or “safe” when traveling on Ontario’s provincial highways, and that the majority of Ontarians were “very satisfied” or “satisfied” with the OPP’s visibility on highways, the CSS also suggested there was room for improvement.
“Despite relatively high satisfaction with the OPP’s enforcement of aggressive and drunk driving laws, 47.5 percent of respondents said the OPP’s efforts at enforcing traffic laws should be increased,” Jevons says.

Planning

Fueling the OPP’s impaired driving efforts in 2015 was the OPP 2014-16 Action Plan, a strategic planning document that challenged the OPP to reduce impaired driving-related collisions by 1.7 percent in 2016. According to Jevons, the plan laid out a strategy consisting of three pillars: engagement, education, and enforcement. Each pillar was a component of the 12 Provincial Traffic Safety Campaigns (PTSC) that constituted the OPP’s 2015 Provincial Traffic Safety Program (PTSP) targeting the Big Four high-risk driving behaviors on Ontario’s highways.

A fourth pillar could have easily been training, as the OPP provided impaired driving training to 1,817 officers in 2015.

Education

The OPP’s 2015 PTSP included 12 days-long PTSCs, during which officers leveraged ILP to target impaired driving in geographic areas of greatest risk. Public education, information, and engagement played a starring role in each of them, according to Jevons.

“Throughout the campaigns, each OPP division [and] region issued media releases identifying the traffic campaign to alert the public to ongoing traffic issues with respect to impaired driving,” Jevons says, indicating that the OPP issued more than 12,000 media releases in 2015 to reach the public with traffic safety information.

Social media was also a useful tool, according to Jevons. “The OPP embraced social media and hired a team of social media operators dedicated to getting information out to the public on traffic safety issues,” she continues, citing Facebook, Twitter, YouTube, and Flickr as the OPP’s social networks of choice.

Offline, the OPP promoted sober driving with variable message signs programmed to display messages in English and French, and by leveraging partnerships with community organizations like Ontario Students Against Impaired Driving (OSAID), a registered charity that reaches more than 300,000 students annually through school events, campaigns, speakers, and community programs.

“The OPP partnered with Mothers Against Drunk Drivers, the Ontario Ministry of Transportation, Transport Canada, the Centre of Forensic Sciences, and local community groups to ensure that the public was alerted to the continuing issues surrounding impaired driving,” reports Jevons.

A highlight of the OPP’s collaborative education efforts is the Last Drink Program. Executed in partnership with the Alcohol and Gaming Commission (ACGO) of Ontario, it empowers officers making impaired driving arrests to ask offenders where they were served their last drink. The OPP then shares that
information with AGCO inspectors, who subsequently visit licensed establishments who may be over-serving their patrons in order to educate them about liquor laws.

Enforcement

Targeted enforcement was a central component of the OPP’s 12 PTSCs in 2015. According to Jevons, data helped officers maximize their impact for each campaign.

“Each detachment provided an operational plan that identified the target location or hotspot and the time of day when the problem was occurring,” she says, adding that the OPP’s Festive Reduce Impaired Driving Everywhere (RIDE) campaign was especially effective.

During their 2015 Festive RIDE, officers conducting impaired driving spot checks at designated checkpoints throughout the holiday season made 592 alcohol-impaired driving arrests and 24 drug-impaired driving arrests, constituting 10.6 percent of the 5,772 total impaired driving arrests made by the OPP in 2015.

Outcomes

In 2015, impaired driving in the OPP’s jurisdiction caused 45 fatal collisions and 397 personal injury collisions. Although the former represents a 13.4 percent decline from 2014 and a 40 percent decline from 2012, the latter increased 43.8 percent and 68.9 percent compared to 2014 and 2012, respectively.

“Additional education, engagement, and enforcement initiatives are required to address the significant increase,” concluded Jevons.


LESSONS LEARNED

› **Strategies breed success:** A strategic planning document outlining measurable goals and a clear plan for achieving them is a critical first step.

› **Follow the data:** Intelligence-led policing can help agencies amplify the impact of their resources by concentrating them where they are needed most.

› **Partnerships produce results:** Impaired driving is a community-based problem that demands a community-based solution. Campaigns executed with community partners across diverse stakeholder groups are therefore best positioned to succeed.
Motorcycle Safety

New York State Police

Shifting Safety Gears

*Treating motorcycles like commercial motor vehicles has helped the New York State Police reduce reckless driving.*

Because of its diverse Northeast climate, New York is not the most hospitable state in the nation for motorcycles. Known for its harsh winters, the annual arrival of frost, snow, and ice means that New York highways are typically unsuitable for motorcycle riding for at least a third of the year. However, the Empire State continues to experience an abundance of fatal crashes involving motorcycles, which, despite the short riding season, are consistently overrepresented in fatal vehicle collisions across the state. The New York State Police’s (NYSP) approach to reducing motorcycle collisions and fatalities earned it the Motorcycle Safety Special Award in the 2016 National Law Enforcement Challenge (NLEC).

**Problem Identification**

Although motorcycles represent just over 3 percent of vehicle registrations on average in New York State, they account for approximately 15 percent of fatal traffic crashes every year.

“We have seen a proliferation in motorcycles across the country in the last 15 years,” observes Staff Sergeant Terrence McDonnell. “Unfortunately, we’ve also seen an increase in motorcycle crashes and fatalities.”

The NYSP attributes the large number of motorcycle fatalities in its state to a number of factors, including the popularity of novelty helmets, also known as “brain buckets,” that do not meet federal standards for crash protection, as well as uneducated and unlicensed riders who operate motorcycles that are in disrepair or that lack mandated safety equipment.

**Planning**

Colonel Patricia Groeber, deputy superintendent of the NYSP, codified motorcycle safety as a priority in the NYSP’s annual Traffic Safety Detail Orders (TSDO) document, which specifies the agency’s priority programs. In it, Groeber stated that each of the NYSP’s 10 divisions, or “troops,” should conduct a minimum of one motorcycle enforcement detail each month during May, June, July, and August, when motorcycle ridership in New York State is at its highest.

The TSDO set the tone for the year. However, the NYSP’s motorcycle safety strategy dates back to about 2009, according to McDonnell.

“We had a motorcycle safety program manager who was an avid motorcyclist himself,” he recalls. “At that
time, he said, ‘We have a vehicle that’s fundamentally different than any other motor vehicle on the road, yet we hold it to the same standards as we do every other vehicle. Why?”

Like commercial motor vehicles (CMV), the program manager argued, motorcycles require a unique and special skillset to operate; like CMV drivers, he said, the NYSP should therefore hold motorcyclists to a higher standard of training and compliance.

Subsequently, the NYSP developed a motorcycle safety checkpoint program that was the keystone of its motorcycle enforcement strategy in 2015. “We make tractor trailers pull over every day to be inspected by our Commercial Vehicle Enforcement Unit members, so we decided to try the same thing with motorcycles,” explains McDonnell, who says officers at motorcycle safety checkpoints check riders’ licenses, helmets, and equipment; the latter is inspected not only for safety compliance, but also for noise-ordinance compliance due to a large number of citizen complaints about loud, illegal muffler systems. “It allows us to make a direct impact on motorcyclists by having personal interactions with them, just like we do with commercial vehicle drivers.”

Another parallel between CMV and motorcycle enforcement is officer education and experience, or lack thereof. When it comes to both CMVs and motorcycles, officers are sometimes reluctant to pull vehicles over because they lack confidence in their understanding of the vehicles and the specialized laws that apply to them. Training was therefore a critical objective for the NYSP in 2015 as it sought to make officers more comfortable and confident with motorcycle enforcement.

“You don’t have to be a motorcycle buff to do good enforcement; you just need to know a few basic things,” McDonnell says. “So, we started training our own troopers, then extended that to local agencies and sheriff’s departments through a partnership with the New York State Association of Chiefs of Police and our Governor’s Traffic Safety Committee. Through that partnership, we were able to educate police officers on some of the fairly simple things they can enforce and discuss roadside with motorcycle operators. That’s been hugely successful.”

Education

Because public information and education is paramount to the NYSP’s motorcycle safety efforts, the agency distributes educational materials on motorcycle safety and compliance through the aforementioned motorcycle safety checkpoints.

Education does not stop at the side of the road, however. It continues at public events throughout the year and across the state, according to McDonnell. For example, the NYSP staffs an exhibit every year at the New York International Motorcycle Show, where its troopers engage and educate motorcycle enthusiasts with a specifically constructed display that depicts a variety of illegal equipment commonly found during
enforcement checkpoints, such as straight pipes, “ape hanger” handlebars, bald tires, improperly mounted license plates, unapproved eye protection, etc. In 2015, the three-day show attracted 60,000 attendees.

“The bikers who come through are motorcycle enthusiasts who have heard myths and legends about illegal equipment and why it shouldn’t be a violation,” McDonnell says. “We’re able to show them what these violations are and why they’re unsafe.”

**Enforcement**

The TSDO called on the NYSP to conduct at least 40 motorcycle details in 2015; instead, the agency ended up conducting 73. Collectively, officers staffing these details inspected 33,892 motorcycles at motorcycle safety checkpoints and issued 1,808 citations, an increase of 25 percent and 35 percent, respectively, since 2012, which the NYSP attributes in large part to its aforementioned officer training efforts.

**Outcomes**

Although more people are riding motorcycles in New York State, fewer people are dying on them, thanks to the NYSP, which has observed a 6.7 percent decline in fatal motorcycle crashes, down from 164 in 2012 to 153 in 2015.

Citations for safety violations have increased by 32 percent since 2012, and citations for exhaust, helmet, and license violations have declined by 25 percent, 45 percent, and 35 percent, respectively. This further suggests that the NYSP’s education and enforcement efforts are successfully influencing rider behaviors.

Concludes McDonnell, “If you look at the numbers, we’ve done better than just holding steady; we’ve actually dropped the number of fatalities in the state since we began these programs. I think what’s even more telling, though, is when you compare our state to other states across the country that are having a really horrible time with motorcycle safety. Nationally, fatalities and crashes are way up; we’re not having that experience, and I think that speaks to the fact that we’ve made motorcycle safety a priority and are doing it differently.”

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**LESSONS LEARNED**

- **Motorcycles are not cars:** Like CMVs, operating motorcycles requires special training and experience. Motorcycle enforcement should therefore align more closely with CMV enforcement than with passenger vehicle enforcement.

- **You do not have to be a motorcyclist to enforce motorcycle laws:** With basic training on motorcycle equipment and regulations, officers who are not motorcycle operators themselves can still be effective enforcers of motorcycle traffic laws.

- **Motorcyclists love to learn:** Motorcycle operators love motorcycles. Safety efforts that offer practical education and information about their equipment can therefore be especially effective.

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Better Buckling

Seat belt surveys and positive role modeling help the Peachtree City Police Department maintain a superior track record in occupant protection.

The Atlanta suburb of Peachtree City, Georgia, is famous for its extensive network of multi-use paths, which connect residential neighborhoods, shopping centers, schools, and parks across 100 miles of scenic wooded backchannels. Although they are tremendously popular among pedestrians and bicyclists, the paths are best known for the many citizens who travel them in golf carts, which do not have seat belts. Because so many of Peachtree City’s citizens travel around town unsecured in golf carts, one might assume locals would be equally lax about buckling up in their vehicles. This is not the case, in spite of its pervasive golf-cart culture, Peachtree City consistently achieves over 98 percent voluntary seat belt compliance from its citizens. The activities it used to maintain its superior performance in 2015 earned the Peachtree City Police Department (PCPD) the Occupant Protection Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

Average seat belt compliance in Peachtree City has been near 98 percent every year for each of the last five years, increasing from 97.2 percent in 2011 to 98.29 percent in 2015. For the PCPD, however, the challenge is not achieving high seat belt compliance; rather, it is maintaining it.

“We have a very good compliance rate that stays in the 98th percentile,” says Lieutenant Bradley Williams. “Our problem is keeping it there, so every year we look for new ways to get that message out, and keep getting it out to where it makes a positive impact.”

Maintaining such a high compliance rate requires the PCPD to constantly evaluate what is working and what is not, and fine-tune its activities in response. The linchpin of this process, according to Williams, is a seat belt usage survey that the PCPD conducts every month at a variety of intersections throughout the city. Each survey lasts an hour and encompasses an average of 952 automobiles, each of which is observed for seat belt compliance. The results are then paired on a monthly basis with a superficial analysis of collision data, and on a quarterly basis with an in-depth analysis.

In 2015, these surveys revealed a number of trends that informed the PCPD’s occupant protection initiatives:
• 45 percent of unbelted occupants in crashes were between 20 to 30 years old.
• Half of the collisions with unbelted occupants led to an occupant being injured, compared to 22 percent for all crashes.
• 64 percent of unrestrained collisions occurred between 11:00 a.m. and 7:00 p.m., and none occurred between 7:00 p.m. and 1:00 a.m.
• 68 percent of unbelted crashes occurred on Fridays and Saturdays.
• 41 percent of unrestrained crashes occurred on residential roads.

“We had less than two unbelted collisions a month [in 2015], and with that little data, it can be hard to draw conclusions,” William says. “But if you conduct seat belt surveys every month and keep that data for years, you can begin to identify some trends.”

Planning

For the PCPD, promoting occupant protection starts at the top. Pro-seat belt policies are therefore the foundation of all planning. For instance, the PCPD’s 2015 “Goals and Objectives” document specifically called on the agency to reduce the number of collisions involving unrestrained occupants, setting a measurable reduction target of five percent and outlining tangible objectives for getting there.

“At a lot of agencies, officers have the mentality of, ‘Oh, it’s just a seat belt violation; I’m not going to bother with that,’” Williams says. “So, you need to make it a priority for your officers by having a policy that sets the right tone.”

Personnel policies can be just as important for setting the right tone as policing policies, according to Williams, who notes that 100 percent of PCPD officers completed a comprehensive occupant protection course in 2015.

Furthermore, all PCPD officers are expected to wear seat belts as an example for citizens. “Everybody here wears a seat belt, and it’s checked,” continues Williams, who says the PCPD actively educates its officers on both the financial and human costs of seat belt noncompliance. “If you’re found not wearing a seat belt, you get sent home, or worse. It’s hard to get your officers to go out and enforce seat belt violations if they don’t personally buy into its importance.”

Education

The PCPD attributes much of its seat belt success to public information and education. Among its 2015 efforts were:

• Complimentary car seat inspections: The PCPD has 13 certified Child Passenger Safety Technician officers who coordinated and conducted 14 car seat inspection events across the city in 2015. The average event lasts two hours and attracts 10 to 20 parents, according to Williams, who says participation is greatest when inspections are offered onsite at daycare centers and elementary schools.

• Teen Driver Safety Week: The PCPD observed Teen Driver Safety Week by teaching classes on the importance of seat belt use to more than 1,300 local high school students. Officers placed a Participation in car seat inspection events is greatest when inspections are offered onsite at daycare centers and elementary schools.
rollover simulator at the high school football game at the end of the week, as well as a wrecked car at the front of the school, the occupants of which had been saved by their seat belts. Finally, students also signed a buckle-up pledge. Seat belt surveys conducted at the school showed 95.8 percent seat belt compliance before Teen Driver Safety Week and 99.2 percent seat belt compliance afterwards.

- **Signage:** The PCPD raised social awareness about seat belt usage by displaying various “Buckle Up” and “Click It or Ticket” messages on its mobile message trailers, and by advertising on two permanent highway signs the prior month’s seat belt compliance rate alongside the record high, 99 percent, achieved in April 2015. “It’s a social norming tool,” Williams says. “If you’re the 1 percent that isn’t buckling up, you see that sign and think, ‘Everybody else is doing it; I guess I should do it, too.’”

- **Video:** The PCPD produced a “Click It or Ticket” video with officers, paramedics, school principals, and other community personalities who spoke about injury risk and enforcement efforts. The PCPD shared this video on its Facebook page, which has more than 15,500 likes.

**Enforcement**

Despite its already high seat belt compliance, the PCPD successfully increased its occupant protection enforcement in 2015 by aligning enforcement with the aforementioned trends with regards to the days, times, and locations that are most vulnerable to unbelted collisions. In total, the PCPD issued 22 percent more citations than it did the prior year, and in high-risk locations, it issued 71 percent more citations.

Enforcement was especially strong during the nation’s two annual “Click It or Ticket” campaigns in May and November, thanks in part to recognition offered by the PCPD to high-performing officers. At the end of every “Click It or Ticket” period, the officers with the most citations issued receive an award that includes a certificate of achievement, as well as a free meal with the chief of police.

“We try to motivate officers by incentivizing them to go out and enforce [seat belt laws],” Williams says. “That’s worked pretty well for us.”

**Outcomes**

The total number of unbelted collisions rose from 7 in 2014 to 22 in 2015, half of which resulted in an injury. “Seven is such a low number that it’s hard to maintain that, but we did keep the number low,” Williams says.

Furthermore, the combination of education, enforcement, and example-setting helped the PCPD maintain its superior seat belt compliance rate, which rose to 98.29 percent in 2015, up from 98.23 percent in 2014.

“That, to me, is the biggest benchmark,” Williams concludes, “because if you’re increasing seat belt usage, the number of unbelted collisions will go down over time.”

**LESSONS LEARNED**

- **Surveys Inspire Success:** Seat belt surveys are an important tool for collecting data that can help law enforcement agencies assess occupant protection problems and develop effective solutions.
- **Officers Are Role Models:** Officers who do not wear their seat belt will not feel empowered to enforce seat belt laws; therefore, officer compliance is just as important as citizen compliance.
- **Peer Pressure Can Be Positive:** Law enforcement agencies can use signage, social media, and other communication tools to establish seat belt usage as a social norm, which will influence social outliers to conform.

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Federal grants helped the California Highway Patrol reduce speed-related crashes with extra training, education, and enforcement.

California is well-known for its pleasant weather, its diverse population, and its thriving industries, including entertainment, technology, and agriculture. From San Francisco to Los Angeles to San Diego, however, it is also well-known for its traffic jams, which are consistently ranked as among the nation’s worst. In fact, many Californians are so afraid of congestion that they perpetually rush from point A to point B in a desperate attempt to circumvent it. The result, unfortunately, is a preponderance of speeding and aggressive driving that rules California roadways with an iron fist. To loosen speeding’s grip on Golden State motorists, the California Highway Patrol (CHP) leveraged grant funding that allowed it to increase its investment in strategic anti-speeding solutions in 2015. How the CHP utilized these grants earned the agency the Speed Awareness Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

A 2013 survey, conducted by the National Highway Traffic Safety Administration (NHTSA), found that nearly half of American drivers think speeding is a problem on U.S. roadways, and that an overwhelming majority of drivers (91 percent) think everyone should obey speed limits. However, one in five drivers admits, “I try to get where I am going as fast as I can,” and more than a quarter say “speeding I do without thinking” and “I enjoy the feeling of driving fast.”

According to the CHP, these contradictions are lethal in California. In 2014, it reported 267 fatal traffic collisions and 27,556 injury traffic collisions in which speed was the primary collision factor, making “unsafe speed for roadway conditions” the leading cause of California car crashes.

“Speeding is the number one contributor to collisions in California,” says Sergeant Scott Taylor. “That makes it our prime target.”

Planning

Although speeding is the CHP’s prime target at any time of day, the agency’s resources pale in comparison to the problem’s size. To build more muscle with which to match speeding’s strength, the CHP sought and received several federal traffic safety grants that...
allowed it to successfully scale its efforts in 2015.

The most significant of these grants, according to Taylor, was the statewide Reduce Aggressive Driving Incidents and Tactically Enforce Speed III (RADIATES III) grant. Awarded by the California Office of Traffic Safety (OTS) with funding through NHTSA, RADIATES III provided resources that CHP divided amongst three strategic objectives: targeted statewide enforcement on state and federal roadway segments within the CHP’s jurisdiction, division-selected roadway enforcement on state highways and county roads, and traffic safety presentations.

The grant also facilitated officer training and technology; specifically, the agency used RADIATES III funds to train 218 officers in radar-based enforcement and 236 officers in lidar-based enforcement, as well as purchase 390 radar devices to replace aging equipment.

“That’s training our officers don’t get at the police academy,” explains Taylor, who says radar and lidar training give officers an opportunity to mature and refine their speed enforcement skills by learning how to use the latest speed enforcement technology and techniques.

The CHP also applied for and received two area-wide regional traffic safety grants, again awarded by OTS with funding through NHTSA. Targeting two areas with higher-than-average fatality and injury rates from speed-related traffic collisions, Crescent City and El Cajon, the grants helped the CHP direct extra resources towards education and enforcement in communities statistically shown to need them.

**Education**

Public education and information was a key component of both the RADIATES III and area-wide regional traffic safety grants. For the former, efforts included press releases to local and statewide media outlets, a freeway billboard, and educational materials and banners distributed at various community events statewide, all of which contained anti-speeding messages. Additionally, the CHP conducted 695 traffic safety presentations highlighting the dangers of speeding and aggressive driving. Delivered at high schools, state fairs, and even baseball games, these presentations reached more than 83,000 people across California.

The CHP utilized the same public education strategies in its Crescent City and El Cajon Area offices as part of its area-wide regional traffic safety grants, but tailored them for local populations with the help of multi-jurisdictional task forces consisting of diverse community stakeholders, including the CHP, California Department of Transportation, legislature, courts, probation departments, health departments, public interest associations, and other organizations and individuals interested in improving traffic safety. The El Cajon Area office, for instance, gave traffic safety presentations and distributed grant-funded educational materials at public events, high school and college fairs, senior centers, town hall meetings, municipal advisory council meetings, motorcycle groups, safety fairs, neighborhood watch groups, local businesses, and teen driving training classes, among others.
other venues. At the same types of venues, meanwhile, the Crescent City Area office distributed pocket-sized emergency reference cards in both English and Spanish in order to reach its community’s sizable Hispanic population.

“The nice thing about the regional approach is the task forces we assemble, which typically stay together and continue to meet [about traffic safety] after the grant term is over,” Taylor says. “It gets all the important players in a community together and gets them thinking about what they can do to fix the speeding problem in their community.”

Enforcement

Enforcement was a cornerstone of the CHP’s grant-funded activities in 2015. In addition to devoting more than 313,665 hours of regular duty time, during which officers issued 866,320 citations to speeding drivers, the RADIATES III grant allowed officers to dedicate nearly 16,900 grant-funded overtime hours to speed enforcement. During the aforementioned overtime, officers cited 10,087 drivers, 7,102 of which were for maximum speed violations and 484 for unsafe speed violations.

“Like all law enforcement agencies, we are short on people,” notes Taylor, who says the CHP maximized the grants’ effectiveness by deploying officers to locations at times that were determined to be statistically more vulnerable to speed-related collisions. “With overtime hours, the grant gave us the ability to augment our regular road people with officers specifically focused on stopping speeding drivers.”

Additionally, officers gave 2,294 verbal warnings to speeding motorists.

“Warnings are designed to let the officer interact with the violator and educate them,” Taylor continues. “It opens up a dialogue where the officer can explain why their speeding is an issue and, through that, hopefully change their behavior.”

Enforcement was also part of its area-wide regional traffic safety grants, according to the CHP. The Crescent City and El Cajon Area offices conducted 169 and 177 roving patrols, respectively, during which officers issued 1,249 and 4,205 unsafe speed citations.

Outcomes

The extra attention that the CHP gave to speeding through its grant-funded activities yielded positive results. According to the CHP, there were 249 speed-related fatal collisions and 25,853 speed-related injury collisions in 2015, a decrease from 267 and 27,556, respectively, in 2014.

“We’ve reduced the number of [speed-related] crashes, which is a positive in and of itself,” Taylor concludes. “More importantly, though, I think we’ve broadened the level of understanding for the motoring public about the dangers of speeding.”

LESSONS LEARNED

▸ LARGE PROBLEMS DEMAND EXTRA RESOURCES: Traffic safety grants can help law enforcement agencies scale up in order to confront their communities’ biggest challenges.

▸ STATE AND REGIONAL APPROACHES CAN WORK IN CONCERT: Broad statewide approaches have advantages; so do narrow regional approaches. Using them in concert allows agencies to exploit the best of both.

▸ EVERY INTERACTION IS AN OPPORTUNITY: Whether officers issue a citation or merely a warning, every interaction with a speeding motorist is a chance to educate them about the consequences of speeding. A citation can impact their wallet; education can impact their behavior.

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Technology

Tennessee Highway Patrol

Fighting Fatalities with Foresight

The Tennessee Highway Patrol’s Predictive Analytics program helps the agency turn information into action.

Protecting the motoring public from unsafe drivers and roads would be a lot easier with a crystal ball. In it, law enforcement could see exactly where, when, and why traffic violations were going to occur, then act appropriately to prevent them. Unfortunately, there is no such thing as a crystal ball. There is, however, something that is almost as effective: data analytics, which the Tennessee Highway Patrol (THP) leveraged in 2014 to establish its Predictive Analytics program. The program, which uses historical crash data to help officers predict and reduce traffic collisions, earned the THP the Technology Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

In 2013, Tennessee drivers were involved in 173,510 car crashes, 26.8 percent of which were either fatal or injurious, despite the THP’s unyielding efforts at enforcing traffic laws and educating citizens about why it is important to comply with them.

“Starting around 2004, we saw a decrease in traffic fatalities that lasted until 2010,” explains THP Statistics Office Manager J. Patrick Dolan III. “Then, from 2010 to 2013, that trend leveled out.”

Indeed, while education and enforcement have successfully reduced traffic injuries and fatalities in Tennessee, fatal and serious injury crashes continue to occur in large numbers across the Volunteer State. One reason for this, according to Dolan, is manpower. “The number of troopers we had assigned to road duty in 2013 was about the same as the number of troopers we had on the road in 1978,” he says. “What that means is that while the number of vehicle miles in our state has increased quite rapidly over the past 30 years, we haven’t seen an increase in our force to help deal with that.”

Exploring innovative policing practices that can improve traffic safety without increasing resources is a major priority for the THP, which implemented one such innovation in 2014: the Predictive Analytics program.

“To combat our reduction in manpower versus vehicle miles, as well as our flattening fatality trend, we needed to come up with a more efficient way to deploy our resources,” Dolan explains. “That’s what led us to our Predictive Analytics program.”
Planning

The THP laid the groundwork for its Predictive Analytics program nearly a decade ago, when it moved from paper-based crash and incident reporting to electronic data capture.

“In 2008, we implemented a new electronic crash reporting system that we made available for free to all other law enforcement agencies in the state,” explains Dolan, who says geo-coded crash reports contain the crashes’ latitude, longitude, severity, date, and time, among other things. “Having 100 percent of our crash reports coming in electronically means we have timely and pertinent data that we can use to make decisions, whereas before, we maybe had data that was old or not relevant to the situation on the ground. Also, it gives us more accurate location data so we can locate crashes on the ground, and more complete crash data so we can get a better understanding of what factors contributed to crashes.”

The THP’s electronic crash data, which is stored in its Tennessee Integrated Traffic Analysis Network (TITAN) database, forms the foundation of its Predictive Analytics program, through which the THP uses SPSS software to apply statistical models to historical crash data with the goal of predicting where and when certain kinds of crashes are going to occur.

Specifically, THP utilizes three statistical models, the first two of which were built in 2014 and the third established in 2015:

- **Crash Reduction Analyzing Statistical History (CRASH):** The CRASH model calculates the risk of a fatal or incapacitating injury crash for every four-hour period of each day over a one-week period. The results are viewed on interactive maps that illustrate the risk of serious crashes across the state.

- **Driving Under the Influence (DUI):** The DUI model calculates the risk of DUI-related crashes and arrests for the 12-hour period extending from 4:00 p.m. to 4:00 a.m. each day, the time period during which most DUI-related activities occur, over a one-week period.

- **Commercial Motor Vehicle (CMV):** The CMV model calculates the risk of a crash involving a CMV over a three-month period.

“These models use machine learning and special algorithms that can learn from new data as we get it and revise their predictions accordingly,” explains Dolan, who says the models also take into account external data, such as weather forecasts, special event schedules, and the locations of bars and liquor stores to further improve the accuracy of predictions in the form of color-coded crash risk maps to our officers so they can self-deploy to those areas that have the highest chance of a crash during their shift. “That allows us to more efficiently deploy our resources to the times and places were our visibility and enforcement can have the largest impact on driver behavior and, hopefully,
mitigate the severity of a crash or prevent it entirely. Plus, when a crash does occur, it helps us to be closer to the event so we can respond more quickly.”

The THP hired a consultant to help it build its first model, then appointed internal staff to build and manage all future models. It also provided training to ensure the tool was used to its full effect.

“For our pilot phase, we brought in a couple of supervisors, taught them how to use the predictive analytics maps, then sent them into the field to train their troopers and use these tools in their day-to-day enforcement,” Dolan says. “Six months later, we made the tools available to all our troopers and did a training tour around the state where we engaged with supervisors and captains in each district and gave them hands-on training on how to use the models and interpret their outputs. That on-the-ground engagement was really important because it led us to make several changes in the models to improve them based on feedback from troopers in the field.”

**Outcomes**

The number of fatal crashes in Tennessee decreased from 911 in 2013 to 886 in 2015, according to the THP, which says fatalities and the average crash response time likewise fell during the same period, from 995 to 960 and from 28 minutes to 22 minutes, respectively. Although improvements cannot be attributed directly to the Predictive Analytics program, Dolan is confident it played a role.

“Marrying targeted enforcement with the information coming from our Predictive Analytics program has allowed us to deploy our resources more effectively to execute our mission successfully,” he concludes.

**LESSONS LEARNED**

- **Infrastructure precedes intelligence:** Agencies must have technology infrastructure (e.g., an electronic crash reporting system) in place before they can leverage predictive analytics.
- **Dedicated resources make a difference:** A predictive analytics program requires dedicated staff resources that can build, manage, and maintain it.
- **Unite behind users:** The officers who will use the technology must be involved in building and improving the tools; without their engagement, feedback, and general buy-in, the tools will sit idle and unused.

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Practice Makes Perfect

The Tennessee Highway Patrol’s new traffic incident management facility is saving time — and lives.

In 2015 alone, Americans spent 8 billion hours stuck in traffic, according to transportation analytics firm INRIX. Tennesseans were certainly among them. A separate analysis by TomTom International ranked the state’s largest cities, Nashville, Memphis, and Knoxville, as the country’s 19th, 41st, and 71st most congested cities, respectively. Some of that traffic can be blamed on the sheer volume of cars on the road at any given time of day. Much of it, however, is the result of collisions, stalled and overheated vehicles, and similar incidents that slow and obstruct the flow of traffic, especially on highways. To reduce the impact of such incidents, the Tennessee Highway Patrol (THP) unveiled a new traffic incident management system (TIMS) training facility in 2014, the success of which earned the agency the Traffic Incident Management (TIM) Special Award in the 2016 National Law Enforcement Challenge (NLEC).

Problem Identification

In Tennessee and elsewhere, even a minor traffic incident can have a major impact. For every one minute that a lane is blocked on a major highway, for instance, there is a four-mile traffic delay, according to the THP. There will also be an average of three injury crashes in the United States during that same minute. Up to nine first responders may arrive at each incident; this means that up to 27 responders arrive at a new incident every minute, 1,620 responders work at traffic incidents every hour, and up to 38,880 responders work at traffic incidents every day. The result: miles upon miles of congestion, and headaches to match.

It is not just time that is lost to traffic delays, however; lives are lost as well. In fact, cars passing a traffic incident strike and kill approximately five firefighters every year, one law enforcement officer every month, and one tow operator every week, according to the THP. Motorists are also at risk; every one minute a lane is closed increases the likelihood of a secondary collision by 2.8 percent, and secondary collisions, which constitute approximately 20 percent of all incidents, are often more severe than the primary ones.

Faced with these sobering statistics, the THP decided it needed to do more to not only prevent traffic incidents from happening, but also reduce the...
impact of incident management on responders and motorists.

“When lanes are blocked, it increases the likelihood of more problems,” says Sergeant Kyrstal Thaxter. “Our goal is to get those lanes cleared as quickly and as safely as possible.”

Planning

For the THP, improving TIM in Tennessee began with strengthening its policies and procedures. To that end, the agency revised its Towing Service Standards Manual, Traffic Crash Investigation Manual, and Standard Operating Procedures for Dispatches Manual in order to reflect its commitment to TIM training. Each of those stakeholder groups, including tow operators, crash site investigators, and dispatchers, received updated guidance on TIM requirements and protocols.

The most significant step the THP took to improve TIM was building its new TIMS training facility, the goal of which is to provide enhanced training to traffic incident responders, including fire departments, emergency medical services (EMS), tow and recovery companies and drivers, Tennessee Department of Transportation (TDOT) personnel, and other law enforcement agencies so they are better equipped to do their jobs safely and efficiently.

The brainchild of THP Colonel Tracy Trott, the $912,025 facility, which is the first TIMS track in the nation, was funded by a Highway Safety Improvement Project federal grant that covered 90 percent of the cost. It opened in 2014 and features a section of interstate-like roadway with two to six lanes, guardrails, a two-way interchange, and cable and steel barrier rail, as well as a section of two-lane highway and a full four-way intersection. Together, these features provide a safe, effective, and efficient environment in which emergency response entities can learn and practice their craft.

“Basically, this TIMS track allows us to simulate actual traffic movement,” Thaxter explains. “It gives us a safe environment where we are able to teach and recreate incidents we’ve seen on our roadways, and figure out how to manage them better.”

Of course, the most effective aspect of the TIMS track is the inter-agency, multi-disciplinary training that takes place there, which encompasses topics such as scene safety, responder safety, incident notification and response, arrival at the scene, initial size-up of the scene, command responsibility, traffic management, quick clearance, and situational awareness. During the training, participants engage in classroom learning, which is followed by hands-on exercises on the TIMS track. The result, according to Thaxter, is increased collaboration, partnership, and communication among first responders representing different agencies and disciplines, which in turn results in safer and more effective incident management on Tennessee highways.

The TIMS track is not the only tool promoting collaboration among first responders. In 2015, the TDOT and THP opened a new co-location center from which their respective dispatchers can work
side-by-side to coordinate incident response.

“When something happens on an interstate, we no longer experience lag time while information gets passed from one agency to the other,” Thaxter says. “Everybody is getting the same information at the same time and literally working together, which helps us clear lanes faster.

Outcomes

In 2015 alone, the THP trained 4,643 responders from law enforcement, fire and EMS, transportation, and towing and recovery at no cost to responder agencies. The fruits of that training have been obvious to motorists and responders alike, according to Thaxter.

“We’ve reduced the number of secondary crashes due to a traffic incident, we’ve reduced the length of time that lanes are closed, and we’ve been able to successfully redirect traffic so nobody is sitting idle for a really long time in our state,” she concludes. “That, to us, is a good thing.”

LESSONS LEARNED

➤ **Leaders lead the way:** Traffic incident management requires a culture change, and culture change is most effective when it’s driven from the top.

➤ **Collaboration is crucial:** Collaboration across jurisdictions and disciplines is a prerequisite for successful traffic incident management.

➤ **Training works:** Traffic incident management is science, not art; officers and deputies who learn proper tools, tactics, and techniques are best equipped to drive results.

The National Law Enforcement Challenge is a traffic safety recognition program supported by a cooperative agreement between the International Association of Chiefs of Police and the National Highway Traffic Safety Administration. It is held in partnership with the National Sheriffs’ Association, the Governors Highway Safety Association, and the American Association of Motor Vehicle Administrators.

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