Traffic Records Electronic Data System (TREDS) – Virginia’s Roadway to Problem Identification

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The Virginia Department of Motor Vehicles (DMV) collects, manages, analyzes and distributes data to a variety of consumers. Customers expect a high degree of accuracy, ease of access, and information that is provided in a timely manner. This information helps ensure unsafe drivers are not on the highways; identifies highway safety trends and needs; and provides critical information necessary to reduce traffic crashes, injuries and fatalities.

Virginia’s Traffic Records Electronic Data System (TREDS) has become recognized as the Commonwealth’s central repository of crash information. The system currently collects 98% of its 125,000 annual crash reports electronically from law enforcement across Virginia.

This electronic submission allows for enhanced, timely data analysis and provides enforcement and other highway safety partners with comprehensive highway safety information to include GPS mapping of crashes. This results in improved problem identification and resource allocation which is critical to efforts in reducing crashes, injuries and fatalities on Virginia’s roadways.

TREDS affords Virginia a "one-stop-shop" for accurate, timely and detailed highway safety information for analysis and reporting. TREDS currently has several, innovative features such as fourteen system-to-system interfaces and data integrations. One of these integrations allows the 36 motorcycle student training facilities located throughout Virginia to electronically submit training data on each student who takes a course. Additionally, TREDS offers an online, interactive database Crash Locations Map accessible to the public on the DMV’s website. The feature allows users to easily view information on crashes occurring locally – or anywhere across the state – and filter those crashes to street-level. The data can also be narrowed by year and by more than a dozen crash factors, such as motorcycle-involved, speed, alcohol or texting.

In addition to the Crash Locations Map, DMV also hosts interactive features that allow users to create a Crash Data Report or explore a map of High Crash Locations, called “clusters”, with no personal information being published.

By turning crash reports into proactive data, TREDS plays a critical role in Virginia’s mission to save lives on its roadways.
Taking Rider Training to the Street and Track

By: Ken Condon, Owner, Riding in the Zone Advanced Rider Training
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Parking lot courses are the current standard for training both new and experienced riders. Range-based courses make total sense; they are logistically easy to manage, minimize risk of serious mishaps and provide training to large numbers of students at an affordable cost. Unfortunately, speeds are too low and the classroom setting is not sufficient for applying many of the necessary survival strategies needed in the real world.

Street-based Training

Street-based training conducted on select public roads provides an alternative. Specific traffic management strategies and cornering skills are practiced including corner entry speed, cornering line options and visual skills for reading the road. The use of one-or two-way communication allows immediate, meaningful coaching in real time. What’s more, combining learning with fun roads is more appealing to riders not inclined to spend their day dodging cones on a sweltering parking lot.

While on-street training provides effective and meaningful skill development, there are challenges. First, the program must provide as safe an environment as possible to facilitate learning and minimize the potential for liability claims. One of the biggest stumbling blocks to early adopters of street training was the lack of available insurance. Today, more insurance companies are willing to underwrite street training programs.

Creating a safe learning environment means limiting the instructor-to-student ratio, carefully selecting skill-appropriate routes, adhering to strict standards for managing student safety and sticking to a curriculum that accommodates a wide range of student ability. A significant challenge is finding, recruiting and training premium coaches. Instructors must be exceptionally skilled at balancing the safety of the student (and themselves) in the street environment with the ability to communicate complex concepts in real time.

While the lower instructor-to-student ratio increases quality of instruction, this significantly increases the cost to the student, making on-street programs harder to fill and for-profit outfits to make money. My school, Riding in the Zone Advanced Motorcyclist Training, manages to draw enough riders who value lifelong learning to support my one-man on-street training outfit. But, it’s not easy finding enough lifelong learners willing to accept the higher costs of attending a private (one-on-one) or small group (one-on-three) street course.

Track-based Training

Another alternative to parking lot courses or on-street training is racetrack training. Closed course training allows students and instructors to concentrate on refining control skills, advance visual acuity, improve braking control and develop cornering strategies with little risk of mishaps involving other road users. Each of these skills is transferable to the street as long as the curriculum remains focused on skill development and not speed—a common misuse of racetrack training for street riders.

Cost ranges from a few hundred dollars to a few thousand depending on student-to-coach ratios, whether equipment is supplied, as well as the venue. While cost is not insignificant, an even greater challenge of racetrack training is convincing street riders that the event is not a race. Many riders cannot imagine taking their street bike on a racetrack, even when the day is presented as a “street rider training day”. The idea of riding on the racetrack triggers images of aggressive riding and the fear of an inevitable crash. While the possibility of crashing is present, the likelihood and severity is minimized, as long as everyone demonstrates self-control.

The organization I work with, Tony’s Track Days, caters to average street riders wanting to advance their skills in this fun, yet controlled environment. We are one of few organizations offering “Non-Sportbike” track training days to encourage riders of all types to join in on the fun and learning.

Many experienced riders opt out of advanced training when the only options are parking lot courses. The challenges of providing street and track-based training options are daunting, but these alternatives not only provide meaningful and fun learning opportunities, but also promote lifelong learning.

The views and opinions of the articles and authors in the SMSA Spotlight Magazine do not necessarily reflect the views and opinions of the SMSA or their members.
Safe2Sturgis — Keeping Motorcyclists Safe

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Between 2014 and 2015, motorcycle fatalities accounted for the largest increase in motor vehicle deaths within the National Highway Traffic Safety Administration’s (NHTSA) Region 8 states of Colorado, Nevada, North Dakota, South Dakota, Utah and Wyoming. Upon further review of the statistics, the Region 8 staff discovered that sixteen percent of these fatal crashes involving a motorcycle occurred during the three-week period surrounding the world-famous Sturgis Motorcycle Rally. More than 750,000 motorcycle enthusiasts from around the country attend the Rally annually, and traffic volume in this region increases by 30% during the three weeks leading up to, and following, the rally.

As part of NHTSA’s mission to “save lives, prevent injuries, and reduce vehicle-related crashes,” the NHTSA regional office partnered with Denver-based communications contractor Heinrich Marketing, Inc. in 2016 to develop a comprehensive messaging campaign to increase awareness among both motorcyclists and motorists of the increased presence of bikes on the road, with a reminder to operate their vehicles safely throughout this peak travel season.

In the first year of the campaign (2016), a variety of tactics were utilized, including:

- Border-to-Border public information strategies
  - Heavy focus in CO, WY and SD
  - Leveraged state Public Information Officer resources within state Departments of Transportation
  - Press Events with the CO/WY and WY/SD Highway Patrols
- Banners and posters displayed at state rest areas and strategically-located Harley-Davidson dealerships
- Variable Message Signs (VMS) on highways
- Social Media for partners’ use on websites, Twitter, Facebook
  - Developed and promoted hashtag “#Safe2Sturgis”
- Partnered with the National Park Service; developed branded messaging materials for Mount Rushmore National Monument (SD).

These collaborative efforts resulted in over 680,000 earned media impressions, and a 42% decrease in motorcyclist fatalities (compared to 2015). The Region received positive feedback from safety partners and the motorcycling community.

In year two (2017), Heinrich and the Region developed new Safe2Sturgis materials to ensure maximum relevance to a variety of audiences. In addition to the tactics used successfully in 2016, the Region expanded the National Park Service partnership and outreach to Devils Tower National Monument (WY) as well as the Mount Rushmore National Monument.

An early analysis of the crash data reveals that motorcycle fatalities during the August rally period are down (23 in 2017 compared to 26 in 2016). State motorcycle advisory boards, motorcycle and safety advocates, local/national Harley-Davidson dealerships, and the Motorcycle Safety Foundation have expressed interest in partnering on future campaign efforts.

The NHTSA Safe2Sturgis messaging is an outstanding fit with SMSA’s mission to “…achieve a significant reduction in motorcycle operator traffic crashes, fatalities and injuries.” Safe2Sturgis planning for 2018 will begin in January and NHTSA Region 8 is eager to expand the campaign among SMSA members! For more information, contact NHTSA Regional Administrator, Gina Espinosa-Salcedo.

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In our careers in motorcycle safety (and otherwise), most of us have been on the receiving and the delivering end of ineffective and even hurtful communications. I believe that in the vast majority of instances, the intent was good, but the execution and the results were not. We presented 5 tips for successful communication and provided a very brief summary of each below.

1. Accept Reality
2. Respect
3. Say YES
4. To Tell the Truth
5. How do you Measure Up?

(Note: A version of this presentation was presented as a webinar that was broadcast in November. A recording of that broadcast can be found here: [http://bit.ly/WebinarVersion](http://bit.ly/WebinarVersion))

**Accept Reality**

**Human Nature:** It is human nature for people to want to be heard, understood and validated as individuals. We want to be right (and to avoid being wrong). We want to “look good” in the eyes of others (and avoid looking bad).

**Power:** There is often a power dynamic involved between people. For example, in rider training, the RiderCoach/Instructor has the power to give students a passing or a failing score on their test, meaning what we say determines whether or not they get a license. No matter how nice we try to be or how much we say, “Don’t think of me as the boss, I’m really just like you,” or “Don’t think of me as your instructor, I learn as much as you do in these classes so let’s learn together,” there is no escaping the reality that we have that power. If not acknowledged and managed, the reality of this authority and power can stifle honest and productive communication.

**Attitude Shows Through:** What our attitudes and motivations are will show through in our body language, facial expressions, and voice quality – regardless of the words we are saying. Knowing this, when we take a few moments to clarify our goals to ourselves and establish our attitude and motivation, we can exert some control over what shows through.

**Respect**

Respect is like air. If we don’t have it, nothing else matters. We can show respect in a number of ways. Courtesy (please, thank you, you’re welcome, I’m sorry-I’ll try to do better, etc.), making eye contact and really listening to the other person are all simple (if not easy) ways to show respect.

**Say YES**

Look for reasons to say yes and generate agreement (but they should be REAL reasons). Caution: being overly positive can be perceived as condescending and disrespectful.

**To Tell the Truth**

Have the courage to tell the truth, to be honest and direct without sugarcoating, softening, downplaying or being subtle. At the same time, maintain consideration for the feelings and emotional well-being of the individual. Recognize that we are going to make mistakes in our communication. It is up to us to own it, apologize and do our best to clarify our intent.

**How do you Measure Up?**

If we want to improve or change something in our lives (diet, exercise, spending, saving or communication behaviors), measuring it is key. Whether using self-accountability or accountability to another person, setting up a system for regular measurement boosts our odds of successfully making the change.

Our riding skills don’t improve much without focused practice. Our communication skills are the same. I encourage all of us to continue to develop and improve our skills not only as riders and coaches but as successful communicators.

Turning this presentation into a webinar (link included above) is one example of Be Crash Free’s broader efforts to use technology to augment the work we are all doing in motorcycle safety. These efforts range from webinars to online instructor/trainer/QA resources, to tools to prepare students for class as well
as for the street, to our mobile app using virtual reality, and beyond. It is our goal to use this technology to serve programs and providers through lower costs, customized content, improved consistency, applying distributed and self-paced learning principles and reducing conflicts within programs. (Note: Be Crash Free products and services have been identified as eligible uses for Section 405-F.)

All of our efforts are directed toward the end goal of inspiring and empowering the riders of America to prevent and survive crashes.

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**NTSB Motorcycle Safety**

By Michael S. Fox, Highway Accident Investigator, National Transportation Safety Board
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[The following is a summary of our presentation at the 2017 SMSA National Training Summit]

The National Transportation Safety Board (NTSB) is an independent Federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in the other modes of transportation - marine, rail, pipeline, and highway. Our mission is to determine the probable cause of the crash and issue safety recommendations aimed at preventing such tragedies from reoccurring.

In 2015, there were 36,918 fatalities in transportation across all modes. That equated to 35,092 in highway, 716 in rail, 415 in aviation and 683 in marine. Motorcycles were over represented at 14% of all highway fatalities. See Figure 1 for additional details.

As a Highway Accident Investigator, my specialty is investigating heavy truck and bus crashes. Trucks and buses move freight, products and people 24/7, 365 days a year, in all weather conditions. For the most part, they do so in a safe manner.

However, commercial motor vehicles (or CMVs) can be very dangerous especially if the driver is fatigued, impaired or distracted. As a countermeasure to these factors, CMV drivers are subject to state and federal regulations. For example, commercial drivers require a commercial driver’s license, must pass a DOT physical, are subject to drug testing and must comply with hours of service rules.

Because of their size, weight and length, CMVs require longer distances to stop and have difficulty seeing vehicles (especially motorcycles) beside and behind them. The US Department of Transportation website offers free help aids that can be downloaded for your classes that highlight these blind spots or “No-Zones.” See Figure 2 for additional details.

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Because of their size, weight and length, CMVs require longer distances to stop and have difficulty seeing vehicles (especially motorcycles) beside and behind them. The US Department of Transportation website offers free help aids that can be downloaded for your classes that highlight these blind spots or “No-Zones.” See Figure 2 for additional details.

In fact, CMV crashes have been declining for the past 20 years. Accident countermeasure technologies such as electronic stability control are now standard on new CMVs. Collision avoidance systems, active braking, GPS tracking, and inward / outward facing cameras are helping safety professionals reduce crashes and
mitigate risk. Such systems can generate a score card that documents speeding, hard braking or stability control events to help companies coach risky drivers.

As of December 18, 2017, most late model CMVs will be required to be equipped with electronic logging devices in an effort to ensure drivers are in compliance with the hours-of-service rules.

The commercial transportation segment continues to make safety improvements by supporting well-equipped vehicles and safe, compliant drivers. The motorcycle community, where there is a much higher rate of fatalities, could learn from some of these improvements. Motorcycle drivers are also at risk of being impaired, distracted and fatigued. At the NTSB, we look at issuing safety improvements that prevent tragedies from recurring. With over 5,000 lives lost each year, there is much room for improvement in motorcycle safety.

1 Federal Motor Carrier Safety Administration “No-Zone” campaign materials: www.fmcsa.dot.gov

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U-Hauls Safety Trailering Program

By: Marco Garcia, Director of Engineering Services, U-Haul International marco_garcia@uhaul.com

[The following is a summary of our presentation at the 2017 SMSA National Training Summit]

Trailers remain one of the most popular and cost-effective ways for individuals, families and businesses to move their belongings (and motorcycles). The towing activities of North Americans are becoming increasingly broad, and the need for safe towing education has increased accordingly. While serving the DIY moving public for over 70 years, U-Haul and its team of experts have developed a Safe Trailering program to provide practical driving, trailering and towing guidelines for any type of towing experience behind a personally owned vehicle.

The primary objective of the Safe Trailering initiative is providing education to the North American public to prevent injuries, hazards and fatalities on our roadways. While few organizations offer formal “safe towing” education, the Safe Trailering program is filling the void, delivering this important education and preventing the preventable. In partnership with the American Driver and Traffic Safety Education Association (ADTSEA), U-Haul developed the Safe Trailering curriculum, which can be adapted and distributed to a wide variety of audiences.

In September 2017, U-Haul presented the Safe Trailering program at SMSA’s National Training Summit. U-Haul International engineers, Marco Garcia and Mike Mikhailov, ran a workshop encompassing a systems overview of the driver, tow vehicle, hitch mechanism and trailer. Additionally, they educated on proper loading practices (“Load Heavier in Front”) and car-trailer operation guidelines. To supplement this material, the U-Haul Safe Trailering team ran a hands-on range activity in the parking lot, where participants had the opportunity to hook up a trailer-tow vehicle combination, load and secure a motorcycle on the trailer and even practice backing up and maneuvering through an obstacle course.

For those who were not able to attend the indoor workshop or the outdoor range activity, U-Haul Safe Trailering had its Trailer Demonstrator on display at an exhibitor booth for attendees to check out over the course of the event. The Trailer Demonstrator remains one of the most effective tools for safe towing education, conveying the importance of cargo loading and the relation of speed & stability—doing so in a visual manner that sticks with the viewer. As evidenced by the Trailer Demonstrator, a properly loaded trailer (60% of cargo weight in front, 40% in back), remains stable despite steering inputs and trailer disturbances. Conversely, an improperly loaded trailer with more cargo weight placed in the rear of the trailer, is much more susceptible to sway, whipping and catastrophic loss of control. The “load heavier in front” message is especially relevant to the rider education community, given the high likelihood that at some point an owner will need to transport their motorcycle. If using a trailer, REMEMBER—load heavier in front for a safer, stable towing condition.

U-Haul Safe Trailering furnishes their Safe Trailering materials and Trailer Demonstrator to government, education and industry groups as a public service. To inquire how U-Haul Safe Trailering can be your safe towing resource, please contact trailerdemonstrator@uhaul.com.

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Federal Highway Administration’s Motorcycle Safety Activities

By: Carol Tan, Ph.D., Federal Highway Administration / For more information, please contact: Ms. Guan Xu Guan.Xu@dot.gov

The number of motorcycle crash-related fatalities has nearly doubled during the past 21 years, from 2,304 fatalities in 1994 to 5,010 in 2015. Recently released data from 2016 shows an estimated 5 percent increase in motorcyclist fatalities to 5,286. The FARS database shows that in stark contrast to the 34% decline in non-motorcycle crash-related fatalities, motorcyclist fatalities were up 86% and with only three, year-to-year declines in fatalities since 1997, while non-motorcycle crash-related fatalities declined year-to-year thirteen times since 1997. In order to address this issue, the Federal Highway Administration has the following activities regarding motorcycle safety.

Motorcycle Crash Causation Study

Under SAFETEA-LU, Congress mandated the Motorcycle Crash Causation Study (MCCS) which was completed in 2014. The output of the study consists of a Final Report and 14 volumes consisting of description of the collected variables and derived results. The Federal Highway Administration (FHWA) and National Highway Transportation Safety Administration (NHTSA) developed the data collection program and collected data on 351 motorcycle crashes and 702 control non-crash motorcycle cases through on-scene crash investigations and interviews conducted. Three experienced crash investigators were on call 24/7 and collected data in Orange County, CA. As mandated by SAFETEA-LU, the crash investigators used the Organization of Economic Co-operative Development (OECD) methodology consisting of on-scene investigation, vehicle investigation, rider interviews, injury data and control rider interviews to collect 1,600+ data elements.

The MCCS data files are available upon request from FHWA. The draft copies of the Final Report, Volume 1 (the coding manual) and Volume 2 (variable description) are also available upon request. Volumes 3 to 14 provide high level analyses of the data collected during the study. Each of these volumes provides tabulations of the crash data that was gathered on one or more of the data forms completed during the study. While most volumes provide overall tabulation, fatal vs. non-fatal tables, and single vs. multiple vehicle data tables and analysis of the crash data, Volumes 6 through 8 provide crash vs. control data analysis and feature side-by-side comparisons of crash and control observations. Volume 13 provides analysis of helmets gathered from the small number of crashed riders who voluntarily donated their helmets post-crash and, where reasonable, similar exemplar helmets.

The preliminary results indicate the following regarding the rider:

- 95% of crashed riders were male
- 99% of crashed riders were wearing a helmet
- 19% of crashed riders did not have a motorcycle license
- 11% of crashes resulted in fatality of the rider
- 77% were coded as multi-vehicle crashes
- 10% of crashes occurred between 10 pm to 6 am

In terms of roadway condition,

- 67% occurred at intersections
- 34% occurred on curves
- 74% crashes occurred on principal or minor arterials.

For more information, please contact: Mr. Yusuf Mohamedshah (Yusuf.Mohamedshah@dot.gov) or Dr. Carol H. Tan (Carol.Tan@dot.gov).

Identifying Infrastructure-Based Motorcycle Crash Countermeasures – Phase I

In order to analyze the MCCS data comprehensively, the FHWA has begun a one year phase 1 project to Identify Infrastructure-Based Motorcycle Crash Countermeasures. There are three tasks under this project. The first task involves analyzing the MCCS data and conducting a comprehensive literature review to identify countermeasures that can be implemented to decrease motorcycle crashes on our nations highway. The second task is to conduct a workshop of major stakeholders to discuss the findings of first task and identify three to five potential high priority countermeasures. Finally, the third task is to develop a comprehensive phase 2 plan to implement these countermeasures and evaluate them for their effectiveness on reducing motorcycle crashes. This effort is expected to be completed in December, 2018.

For more information, please contact: Mr. Yusuf Mohamedshah (Yusuf.Mohamedshah@dot.gov).

The Motorcycle Advisory Council (MAC)

Section 1426 of the FAST Act, Public Law 114-94 required the FHWA Administrator, on behalf of the Secretary, to establish a Motorcycle Advisory Council...
The MAC is responsible for providing advice and making recommendations concerning infrastructure issues related to motorcyclist safety including barrier design; road design, construction and maintenance practices; and the architecture and implementation of intelligent transportation system technologies. On July 28, 2017, the Secretary of Transportation appointed 10 members to the MAC. The MAC will hold committee meetings approximately twice a year. Notice of each meeting will be published in the Federal Register at least 15 calendar days prior to the date of the meeting. The MAC meeting agenda and all relevant meeting information will be posted in advance of each meeting on the Web (http://safety.fhwa.dot.gov/motorcycles). An electronic copy of the minutes from all meetings will be available for download within 60 days of the conclusion of each MAC meeting.

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Have your article featured in the next edition of Spotlight Magazine. Please submit articles to the SMSA office at office@smsa.org. Articles can showcase your state safety campaigns, state programs, best practices, teaching techniques, new motorcycles; anything motorcycle safety related.

For a copy of the SMSA Guidelines for submitting Spotlight Magazine articles, please visit www.smsa.org.

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SAVE THE DATE!
2018 SMSA National Training Summit in Sacramento, California

The 2018 SMSA National Training Summit will be held September 12-16, 2018 at the Holiday Inn Sacramento Downtown, Sacramento, California (adjacent to Old Town Sacramento).

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Advertising and sponsoring are great ways to get your company message heard; they provide your company with the opportunity to introduce its services, technology and products to leaders in the motorcycle safety and education industry. To learn more, please contact the SMSA Office at 724-801-8075 or by email at office@smsa.org.

Welcome New SMSA Members!

SMSA welcomes our newest Supporting Member – Bay Area Riders Forum. Please visit their website to learn more: http://www.bayarearidersforum.com. If you are interested in joining SMSA, please visit our website at www.SMSA.org for more information.

Thank You SMSA Supporting Members