Maryland Highway Safety Office

2012 Annual Evaluation Report

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December 21, 2012

MVA
Motor Vehicle Administration

Maryland
Highway Safety Office

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December 28, 2012

Dear Fellow Marylanders,

On behalf of the Maryland Motor Vehicle Administration's Highway Safety Office (MHSO), I am pleased to present the FFY 2012 Highway Safety Annual Evaluation Report. This report reflects the accomplishments and our progress made towards the goals established in Maryland's Strategic Highway Safety Plan (SHSP) and Highway Safety Plan (HSP).

The strategies described in this report reflect a collaboration of numerous partners and stakeholders across the state representing all 4-E's of highway safety; all in support of our safety objectives, leveraged with state and federal highway safety dollars. While human behavior can be unpredictable at times, causational trends identified in traffic crash data are most certainly predictable, thus making traffic crashes preventable. Maryland's highway safety partners work tirelessly to ensure proven countermeasures are implemented in geographic areas of the state where crashes are most prevalent.

During the past year, Maryland made great strides in its march Toward Zero Deaths - a lofty goal of cutting fatalities and serious injuries in half by 2030, and ultimately eliminating traffic fatalities altogether. In 2011, the number of traffic related fatalities dropped to a 30 year low of 487.

Also during the past year the Maryland Highway Safety Office(MHSO) transitioned within the Department of Transportation to the Maryland Motor Vehicle Administration. The MHSO is now even better positioned to work more closely with MVA's Central Operations and Safety Programs to provide unique safety outreach directly to Maryland's drivers and highway users.

I am proud of the work done to decrease fatalities related to traffic crashes; each highway fatality prevented during the past year was one more family spared the awful tragedy of these horrible and untimely deaths. I look forward to continuing to build partnerships that allow even greater successes. The MHSO will continue to function in its role as a leader to all highway safety personnel throughout the state, and we stand ready to assist our partners in preventing and eliminating the carnage on our roadways. With the Maryland SHSP as our map, traffic officials and partners in Maryland will continue to strive toward the same progress as witnessed in 2011, ultimately driving Maryland Toward Zero Deaths.

In Safety,

Thomas J. Gianni
Chief, Maryland Highway Safety Office

Executive Summary

The Highway Safety Annual Evaluation Report for FFY 2012 (October 1, 2011 – September 30, 2012) documents the use of federal grant funding administered by the National Highway Traffic Safety Administration (NHSTA). As part of the state's administration of Federal Section 402 and incentive funds, Maryland submits a plan to NHTSA documenting how funding will be spent annually. This document, called Maryland's Highway Safety Plan (HSP), consists of performance goals that are set for the upcoming Federal Fiscal Year. The MHSO identifies and uses reliable sources of data (crash, travel, population, location) to help identify its leading highway safety challenges. Then key objectives, goals, proven countermeasures and outcomes are formulated for the grant year. The plan strives to ensure that funding is allocated to those projects and programs that will yield the greatest impact on reducing motor vehicle crashes, injuries and fatalities in Maryland. This evaluation report details the progress, accomplishments and challenges faced during Maryland's mission to decrease the number of traffic crashes, and the associated injuries and fatalities over the last fiscal year.

The goals and objectives, or benchmarks, are the "ideals" toward which we continue to strive. During FFY 2012, highway safety countermeasures were designed and implemented to enhance existing state, local, and non-government efforts to modify unsafe driving behaviors by promoting safe, responsible driving and innovative safety initiatives. While the benchmarks presented earlier in the year are quantifiable for evaluation and accountability purposes, it should be noted that final traffic safety statistics are heavily influenced by external factors such as legislation, enforcement capacity and the public's safe driving actions.

Maryland's SHSP is a data driven, multidisciplinary plan that provides a coordinated framework for reducing fatalities and serious injuries on Maryland's roads. The plan is owned by the state and involves many stakeholders. The SHSP is used to aid in the formulation of Maryland's HSP each year.

For FFY 2012, Maryland initiated or continued projects, countermeasures and programs to further improve highway safety. The majority of programming efforts are focused on the following traffic safety areas:

- Aggressive Driving and Speeding
- Distracted Driving
- Impaired Driving
- Motorcycle Safety
- Occupant Protection
- Pedestrian and Bicycle Safety
- Police Traffic Services
- Traffic Records
- Younger and Older Drivers

The MHSO works closely with numerous partners from its 24 jurisdictions and various municipalities. In addition, state and federal partners, as well as local, municipal, county and state law enforcement agencies from throughout the State, are heavily involved with the MHSO's projects and play a major role in traffic safety programs. Through dedication and increased efficiency, the MHSO and its partners have continued to make strides in eliminating traffic fatalities, ultimately bringing the number of deaths from traffic-related crashes to 30-year low in 2011.

Federal Fiscal Year 2012 Accomplishments:

- In 2011, the number of traffic-related fatalities dropped to a 30-year low of 487. The number of occupant and motorcycle fatalities, and pedalcyclist fatalities were all at, or very near, 10 year lows.

- By virtue of a Governors Proclamation, Maryland launched its Toward Zero Deaths campaign, and formally became a Toward Zero Deaths state, which focuses on three of the largest traffic safety crash causes in the state – impaired driving, speeding, and lack of seat belt use. A website was developed, www.towardzerodeathsmd.com, and a series of three minute videos was produced highlighting those focus areas of speed, impairment and belt use. The campaign is receiving overwhelmingly positive feedback from the MHSO's partners, and development of the campaign is continual.

- Maryland received a comprehensive overhaul of all seat belt observation sites, going from 78 sites in the former methodology, to 140 sites under the new method. In addition, Maryland standardized survey sites in 10 counties not associated with the official NHTSA survey sites, for a total of 170 statewide observation points. This distribution of sites is based upon fatalities and will give a more comprehensive cross-section of roadways than the previous method.

- Maryland was an active participant in numerous statewide and local traffic safety campaigns, including *Click it or Ticket*, *Smooth Operator, Checkpoint Strikeforce, Drive Sober or Get Pulled Over*, and *Street Smart.* In addition, the MHSO and its partners organized a large number of grassroots level media and community outreach events intended to raise the awareness of the State's traffic safety issues.

- The MHSO was a proud sponsor for this year's Artscape festival. One of the largest ("large" being the *operative term) components at Artscape was a 30 foot tall fiberglass crash test dummy that* towered *over the crow*ds, with accompanying story boards about the evolution and research regarding seat belts. Dubbed as the "most popular booth at Artscape" by the Baltimore Sun, the MHSO administered the Maryland Annual Driving Survey to over 2,000 respondents at its booth. Attendees waited in line for up to an hour to take the survey in exchange for a free t-shirt. The t-shirt depicted Natty Boh, a popular Baltimore beer icon, with an impaired drunk driving prevention message.

- In FFY 2012, Maryland law enforcement agencies issued the following numbers of citations and arrests on grant-funded overtime:
    - 13,506 seat belt citations;
    - 40,772 speed citations;
    - 2,088 DUI citations;
    - 38,088 other citations; and
    - 1,544 criminal arrests

The MHSO will continue to function in its role as a leader to all highway safety personnel throughout the State of Maryland. Many issues will continue to press the state, such as attempting to maintain its very high seat belt use rate, dealing with expensive paid media costs and competing messages, as well as challenges reaching target audiences with impactful messaging that will change behavior in a very socially and economically diverse population. The MHSO will continue to foster its existing partnerships and identify new stakeholders throughout the State to continue moving forward its quest to reduce traffic crashes.

Within the following pages the outcomes of the implemented strategies, financial investments, upcoming challenges, noteworthy achievements, and the overall status of the MHSO's progress for FFY 2012 are documented. With the Maryland HSP and SHSP as the maps, traffic safety officials and partners in Maryland will continue to strive toward the same progress as witnessed in FY 2012, ultimately driving Maryland *Toward Zero Deaths.*

Mission of the Maryland Highway Safety Office (MHSO)

The MHSO, recognized by the U.S. Department of Transportation Secretary and created per the U.S. Highway Safety Act of 1966, conducts the State's highway safety program, one that is designed to reduce traffic crashes and associated deaths, injuries and property damage. The mission of the MHSO is to save lives and prevent injuries within Maryland by reducing the number and severity of motor-vehicle crashes through the administration of a comprehensive and effective network of traffic safety programs.

Organizational Structure

The MHSO, a division within the Maryland Motor Vehicle Administration (MVA), serves as Maryland's designated State Highway Safety Office (SHSO). On October 1, 2011, the MHSO was transitioned to the MVA with the appointment of the MVA Administrator, Mr. John Kuo as Maryland Governor's Highway Safety Representative. Mr. Thomas J. Gianni, Chief of the MHSO, serves as Maryland's Highway Safety Coordinator and Ms. Dana Gigliotti serves as the Deputy Chief, overseeing daily operations.

The MHSO is divided into four areas of responsibility: Safety Programs Section; Regional Traffic Safety Programs Section; Finance Section and the Administrative Support Section.

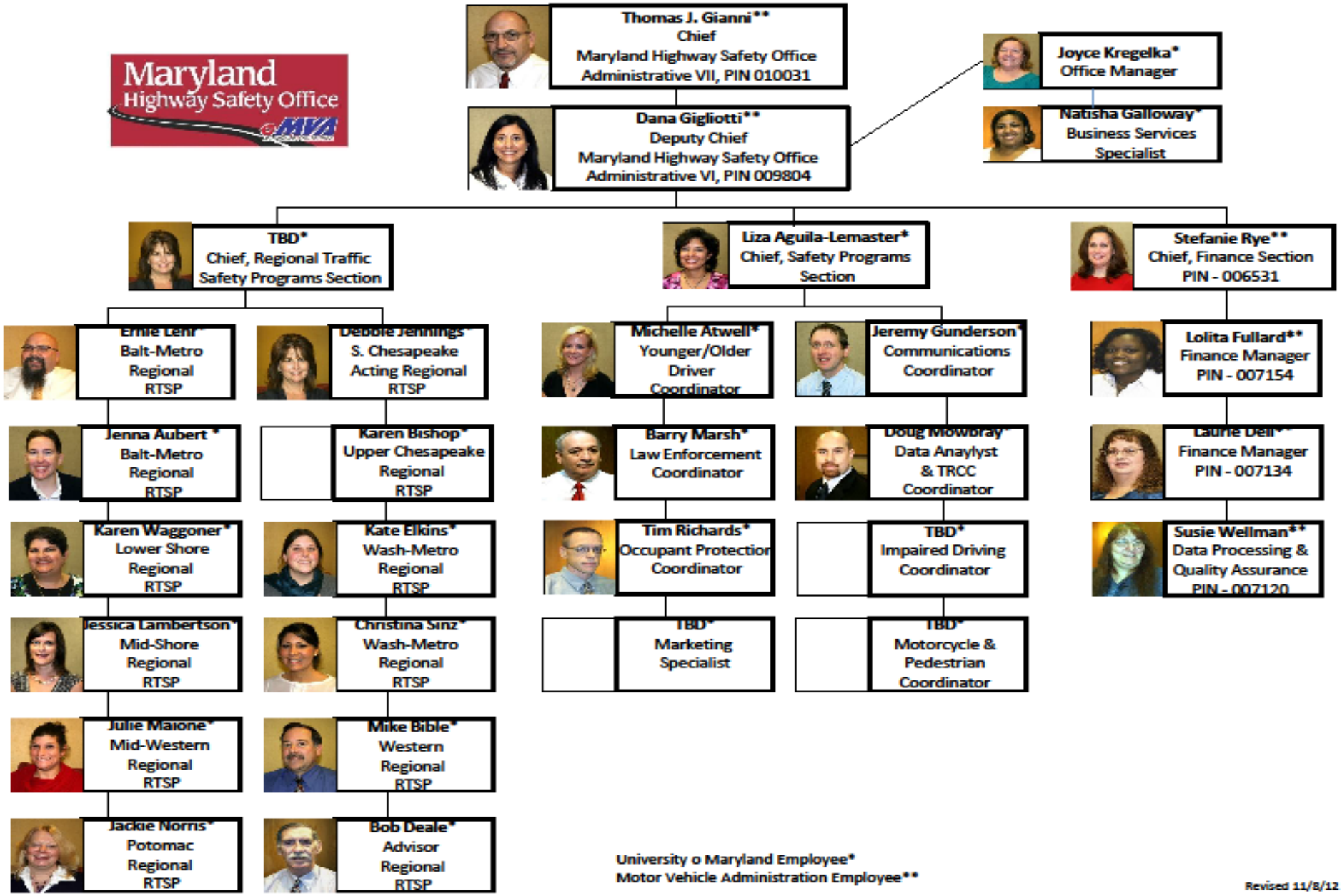
The Safety Programs Section consists of one Section Chief overseeing the planning, implementation and evaluation of the office's programming at the statewide level. This section houses eight Program Managers that provide leadership and focus for priority programming and administration. They function as statewide grant managers within their program areas and coordinate signature programs such as *Checkpoint Strikeforce, Smooth Operator, Click it or Ticket* and Traffic Records. They also implement data collection and analysis, marketing, media and public relations activities.

The Regional Traffic Safety Programs (RTSP) Section serves as the office's field operations staff and is managed by one Section Chief providing leadership for eleven Program Managers in Maryland's nine highway safety regions. The office's local outreach efforts are the responsibility of the RTSP managers, as well as, monitoring the majority of the office's highway safety grants. They are responsible for educating the public and promoting safety driving behaviors using a data driven approach.

The Finance Section consists of one Section Chief, two Finance Managers, and the Data Processing and Quality Assurance Coordinator. This section supports the budgeting, payment, reimbursement processing and accounting functions of the MHSO.

The Administrative Support Section consists of one Office Manager and a Business Service Specialist. This section provides human resource management, programmatic and administrative support for all the sections within the office.

A full organization chart is provided on the following page: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Mid-Western Regional RTSP
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Western Regional RTSP
Jackie Norris*
Potomac Regional RTSP
Bob Deale*
Advisor Regional RTSP
Michelle Atwell*
Younger/Older Driver Coordinator
Jeremy Gunderson*
Communications Coordinator
Barry Marsh*
Law Enforcement Coordinator
Doug Mowbray*
Data Anaylyst & TRCC Coordinator
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TBD*
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PIN - 007134
Susie Wellman**
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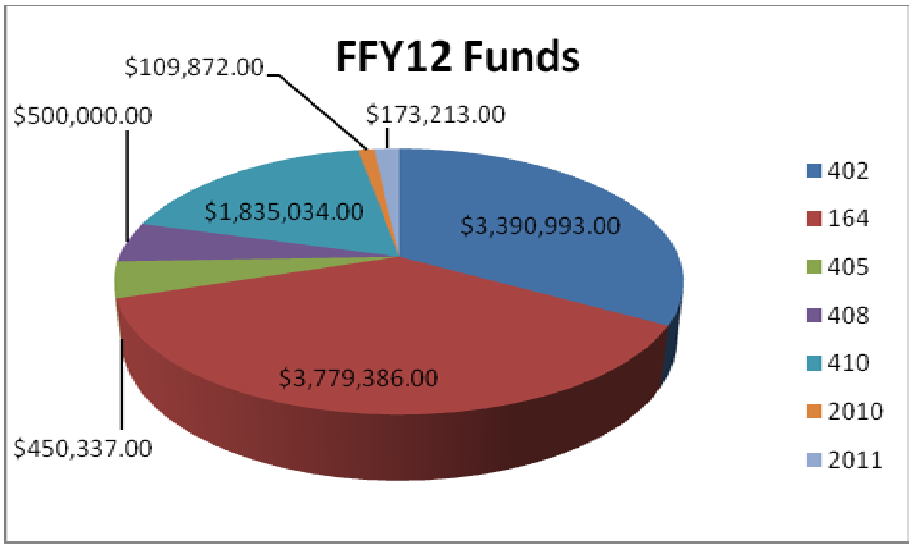
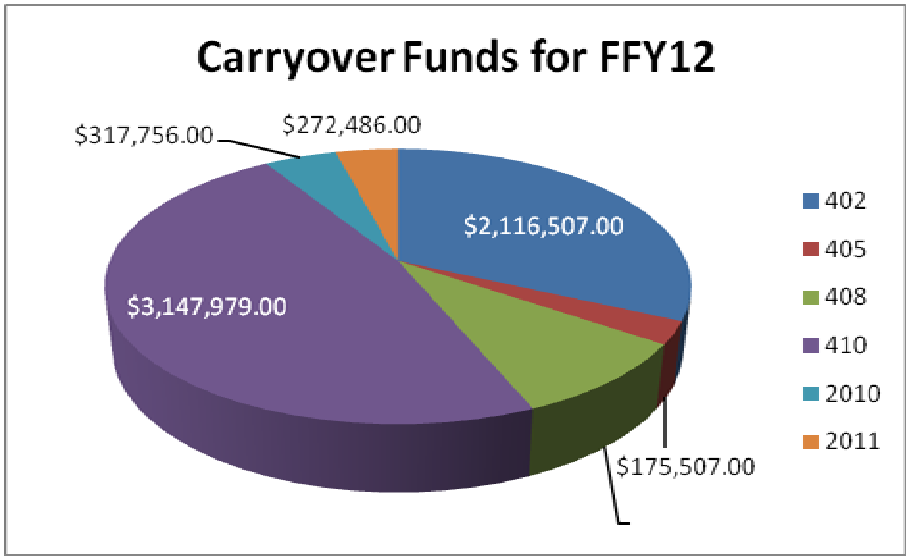
PIN - 007120
University o Maryland Employee*
Motor Vehicle Administration Employee**
Revised 11/8/12

Financial Summary

More than $12 million of federal highway safety formula and incentive grants were programmed during the Federal Fiscal Year 2012. These include:

- Section 402 Sate and Community Highway Safety Grant Funds
- Section 403 Nighttime Seat Belt Demonstration Funds
- Section 405 Occupant Protection Incentive Funds
- Section 406 Safety Belt Incentive Funds
- Section 408 Data and Traffic Record Funds
- Section 410 Alcohol Incentive Funds
- Section 2010 Motorcycle Safety Funds
- Section 2011 Child Passenger Safety Funds
- Section 164 Alcohol Sanction Funds





Functions of the MHSO

The MHSO has leadership and coordination responsibility for the state's overall highway safety program and the state's SHSP. To support many of Maryland's highway safety activities, the MHSO administers a highway safety grant program in which federal traffic safety funds provided by the National Highway Traffic Safety Administration (NHTSA) are provided to state agencies, local governments and other organizations to implement statewide and local programs. The major functions of the MHSO are:

- **Problem Identification:** Identifies the highway safety challenges driven by sound data analysis and the development of effective countermeasures.
- **Public Information and Education:** Development, coordination and implementation of numerous outreach efforts such as media events, public awareness activities and law enforcement details targeting specific priority areas.
- **Administration and Grants Management:** Management of the state's highway safety program, development and administration of federal and state plans (Highway Safety Plan and the Strategic Highway Safety Plan) and the distribution of federal and state grant funds to partners.

- **Program Monitoring and Evaluation:** Monitoring and evaluation of highway safety projects and grants, data analysis and public surveys to gauge knowledge, attitudes and beliefs about highway safety.

Maryland's Goal

Maryland's goal is to significantly reduce and ultimately eliminate all motor vehicle fatalities, serious injuries on Maryland roads and highways. To address this goal, Maryland has increased its emphasis on implementing a comprehensive, well-coordinated plan and approach to highway safety that combines the "Four Es" of Education, Enforcement, Engineering, and Emergency Medical Services (EMS). No other recent endeavor has been as monumental to Maryland's traffic safety initiatives as the mandate by Congress for states to implement a comprehensive State Strategic Highway Safety Plan (SHSP) as a requirement by the *Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) officially passed during Federal Fiscal Year FFY2006, and significantly enhanced and updated in FFY 2011.

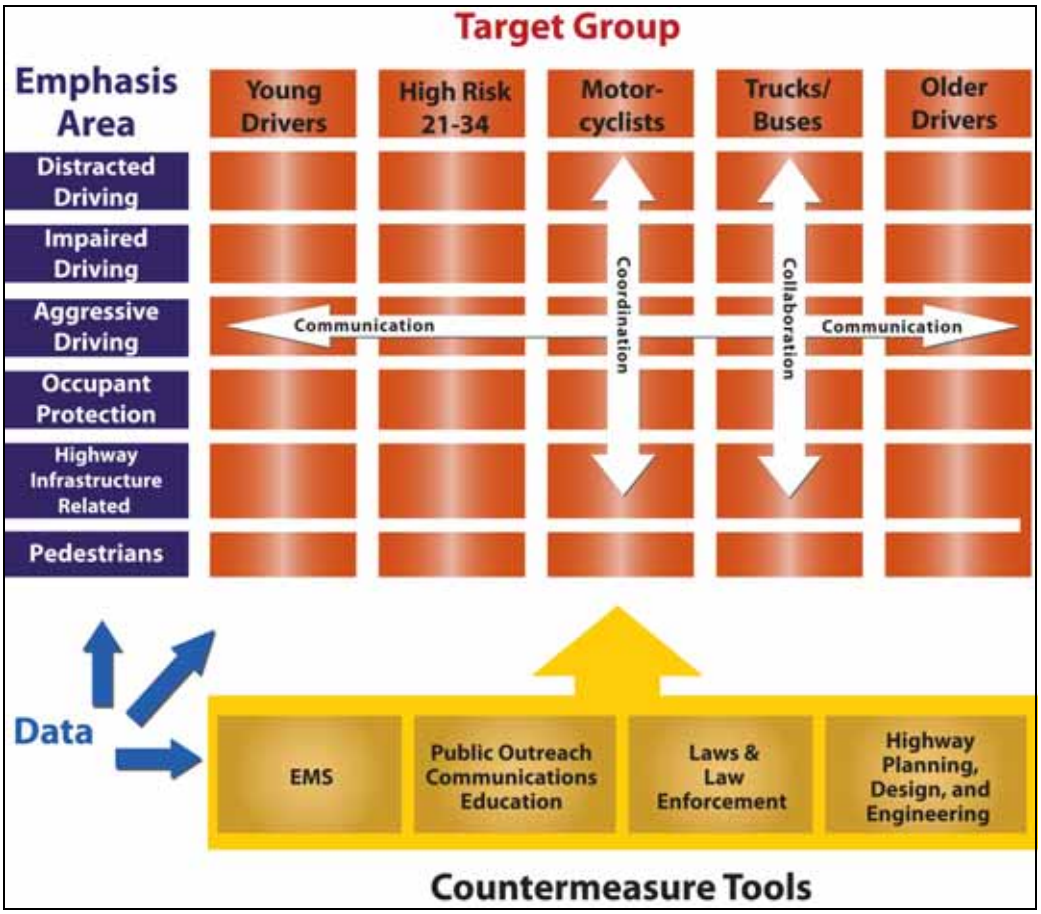
Rather than merely implementing the SHSP as a step toward securing highway safety funding, Maryland's leadership has utilized the framework of the plan and its implementation process as an opportunity to galvanize the State's traffic safety efforts by securing commitments from a multitude of partners, many of whom were not previously engaged in such programs. Maryland's SHSP provides a comprehensive framework for further reductions in highway safety fatalities and injuries on public roads through the establishment of a statewide goal, objectives, key emphasis areas, and strategies.

Maryland's Strategic Highway Safety Plan Summary

In the past twenty years, Maryland has developed four SHSPs, all with the goal of developing and maintaining focus on the state's top highway safety priorities. The 2003 Maryland SHSP, modeled after the American Association of State Transportation Officials (AASHTO) national plan, focused on the State's problems in 23 program areas and included multiple strategies to reduce fatalities and serious injuries on Maryland's roadways.

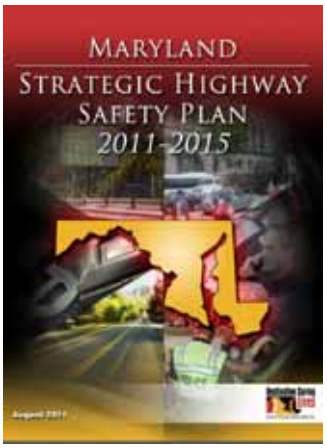
In 2006, Maryland updated the SHSP based on the process recommended by the 2005 Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU). The result was a statewide, comprehensive safety plan that provided a coordinated framework for reducing fatalities and serious injuries on all public roads. The 2006 SHSP established statewide goals, objectives, and 14 key emphasis areas developed in consultation with federal, state, local, and private sector safety stakeholders.

In 2011, Maryland adopted a new five-year SHSP to focus attention on the State's greatest highway safety problems and to set specific and measurable goals for reducing traffic-related injuries and fatalities. In so doing, the 2011-2015 Maryland SHSP contains six Emphasis Areas, 23 Strategies, and 88 Action Steps (the 2006 SHSP had 14 Emphasis Areas, 87 Strategies, and 281 Action Steps). As a part of the plan, Maryland joined other states and organizations in adopting the goal of the national initiative Toward Zero Deaths: A National Strategy on Highway Safety, to reduce traffic fatalities by half by 2030.



2011-2015 Maryland Strategic Highway Safety Plan Priorities and Process

Maryland supports the long-term goal of zero deaths and is committed to adopting strategies to achieve that purpose. To establish a benchmark for progress for the SHSP, Maryland approved annual and interim goals to reduce motor vehicle-related fatalities and injuries by half by 2030. This translates into an average annual decrease of 3.1 percent and 2.6 percent, respectively. Each Emphasis Area Team also adopted measurable fatality and injury objectives to reflect the interim goal. Implementation of the 2011-2015 SHSP takes a new approach by focusing not only on the issues that cause the greatest number of traffic safety problems, but on geographic areas where traffic crashes are most prevalent. Each Emphasis Area Team will focus on areas where their challenges are most concentrated; in addition, the Teams will work together to focus on high priority corridors to combat the combination of issues present in those locations. To ensure that MHSO is fully represented within the SHSP, at least one MHSO staff member is on each Emphasis Area Team and/or Target Group. Maryland's FFY13 HSP supports the SHSP by adopting its goals for injury and fatality reduction and by incorporating the key strategies and countermeasures into the HSP development process.



The overall strategies for the plan are as follows*:

- Reduce the annual number of traffic related fatalities on all roads in Maryland from 592 in 2008 to fewer than 475 by December 31, 2015 (19.8 percent reduction).
- Reduce the annual number of traffic related injuries on all roads in Maryland from 48, 149 in 2008 to fewer than 40,032 (16.8 percent reduction) by December 31, 2015.

- The measurable objectives and strategies for each MHSO program area are designed to accomplish these overall strategies. The objectives and strategies, in order in which they appear in Maryland's SHSP, are as follows:

Distracted Driving

- **Objectives:**
  - Reduce the annual number of distracted driving-related fatalities on all roads in Maryland from 290 in 2008 to fewer than 233 by December 31, 2015 (19.8 percent reduction); and
  - Reduce the annual number of distracted driving-related injuries on all roads in Maryland from 31,778 in 2008 to fewer than 26,426 by December 31, 2015 (16.8 percent reduction).
- **Strategies:**
  - Evaluate and recommend legislation and /or regulations that bans all cell phone use while driving;
  - Improve reporting of distracted driving incidents across multiple disciplines, i.e., citation and crash reports from law enforcement, surveys from the RTSPs, information from EMS personnel, etc.; and
  - Conduct an education campaign on distracted driving prevention.

Impaired Driving Prevention

- **Objectives:**
  - Reduce the annual number of impaired driving-related fatalities (BAC 0.08+) on all roads in Maryland from 145 in 2008 to fewer than 116 by December 31, 2015 (20% reduction).
  - Reduce the annual number of impaired driving-related injuries on all roads in Maryland from 4,291 in 2008 to fewer than 3,568 by December 31, 2015 (16.8% reduction).
- **Strategies:**
  - Increase enforcement of alcohol and drug impaired driving laws;
  - Enhance the prosecution and adjudication of alcohol and drug impaired driving cases;
  - Conduct public awareness initiatives including education and media programs to reduce alcohol and drug impaired driving;
  - Support implementation of programs to reduce underage drinking and driving; and
  - Integrate DUI data sources to ensure offender information is available to judges, prosecutors, and probation and parole.

Aggressive Driving Prevention

- **Objectives:**
  - Reduce the annual number of aggressive driving-related fatalities on all roads in Maryland from 63 in 2008 to fewer than 51 by December 31, 2015 (19.8 percent reduction).

- Reduce the annual number of aggressive driving-related injuries on all roads in Maryland from 4,203 in 2008 to fewer than 3,495 by December 31, 2015 (16.8 percent reduction).

- **Strategies:**
  - Identify behaviors and target audiences by corridor, based on crash, citation, and Severity Rating Index data to focus aggressive driving enforcement, education, and engineering strategies;
  - Continue Maryland's involvement in the regional aggressive driving initiative *Smooth Operator*;
  - Develop and implement year round, long-term public awareness and education campaigns identifying the dangers and consequences of aggressive driving behavior;
  - Develop and implement a statewide aggressive driving enforcement strategy that will be utilized throughout the year; and
  - Identify effective engineering solutions to eliminate or minimize aggressive driving in targeted corridors.

Occupant Protection

- **Objectives:**
  - Reduce the annual number of unrestrained fatalities on all roads in Maryland from 153 in 2008 to fewer than 123 by December 31, 2015 (19.8 percent reduction).
  - Reduce the annual number of unrestrained injuries on all roads in Maryland from 2,212 in 2008 to fewer than 1,839 by December 31, 2015 (16.8 percent reduction).

- **Strategies:**
  - Expand and refine *Click It or Ticket* and Law Enforcement Challenge;
  - Conduct a year round nighttime seatbelt enforcement and education program;
  - Increase the awareness of child passenger safety best practice recommendations for infants, children, and pre-drivers (up to age 16); and
  - Evaluate and recommend legislation and/or regulations that require the use of safety devices in all seating positions, with higher fines and points on the driver's license for noncompliance.

Highway Infrastructure

- **Objectives:**
  - Reduce the annual number of highway infrastructure fatalities on all roads in Maryland from 424 in 2008 to fewer than 340 by December 31, 2015 (19.8 percent reduction).
  - Reduce the annual number of highway infrastructure injuries on all roads in Maryland from 30,130 in 2008 to fewer than 25,056 by December 31, 2015 (16.8 percent reduction).

- **Strategies:**
  - Develop a corridor program that targets safety improvements where the severity index is high and that address roadway elements that contribute to crashes;

- Identify high crash locations (intersections and locations) and make safety improvements statewide; and
- Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes, e.g., run-off-the-road, sight distance issues, etc.

Pedestrian Crashes

- **Objectives:**
  - Reduce the annual number of pedestrian fatalities on all roads in Maryland from 115 in 2008 to fewer than 92 by December 31, 2015 (19.8 percent reduction).
  - Reduce the annual number of pedestrian injuries on all roads in Maryland from 2,469 in 2008 to fewer than 2,053 by December 31, 2015 (16.8 percent reduction).
- **Strategies:**
  - Develop model processes to identify and prioritize high-incident locations and system- wide pedestrian safety issues;
  - Develop and evaluate model approaches to engineering built environments that accommodate safe pedestrian travel;
  - Develop and evaluate model approaches to improving pedestrian and motorist awareness and behavior, including education and enforcement efforts; and
  - Create partnerships among state, regional, and local stakeholders to develop action plans that address high-priority locations and system wide issues using comprehensive approaches to pedestrian safety.

*A full list of Maryland's Standardized Performance Measures is available in the Appendix. Maryland uses these Standardized Performance Measures as a piece of its overall goal-setting process.

Crash Data & Trends

Traffic fatality and injury data trends play a significant role in identifying Maryland's overall highway safety concerns. Additional analysis utilizes vehicle miles traveled, citation, hospital and other relevant data sources in an effort to identify, understand and strategize on solutions for leading Maryland Toward Zero Deaths on its roadways. Enforcement, public education, outreach programs, and funding allocations are formulated using a data driven approach. In addition, this approach serves as an evaluative component for measuring performance, determining when programs need to be altered, and the overall impact of selected countermeasures. Currently, the MHSO's Traffic Records Manager and the Data Processing and Quality Assurance Specialist are responsible for the compilation of the aforementioned data from the following two systems:

1. The Maryland Automated Accident Records System (MAARS), a system that compiles data from crash reports submitted by Maryland's 144 law enforcement agencies, and
2. The Fatal Analysis Reporting System (FARS), a national fatality reporting system managed by the Maryland State Police (MSP) that collects statewide fatal crash data.

Once the data is compiled a complete analysis, trends and findings are prepared for the MHSO as previously mentioned, to determine needs, grant projects, develop statewide strategies, as well as to provide a wide range of analysis to State, local and municipal partners that carry out highway safety programs.

The data analysis process is one that requires continual observation in order to keep a pulse on traffic crash patterns throughout the state. The MHSO prepares a series of reports to ensure a regular forecast of traffic crash issues. These reports include the Maryland Statewide Accident Profiles, the Maryland Fatal Crash Trends Report, the Maryland Traffic Safety Facts, and the Maryland Research Notes. The data used in these reports can range from the past 10, 5, or 3 years or current crash data through 2011, the last full year of complete data available to the MHSO. In addition, this data is used to forecast future crash trends and set goals for reducing crashes and their associated fatalities and injuries. Outputs included in these reports include:

- Fatality Trends,
- Fatality Rate per 100M VMT,
- Injury Trends,
- Fatal and Serious Injury Rate per 100M VMT,
- Fatality Rate per 100K Population, Fatal and Serious Injury Rate per 100K Population,
- Alcohol-Related Fatalities,
- Alcohol-Related Fatalities as a Proportion of All Fatalities,
- Alcohol-Related Fatality Rate per 100M VMT, and
- Percent of Population Using Safety Belts.

Additional analysis is conducted in an effort to focus both educational and enforcement efforts. Ranking of program areas by their average annual number of crashes, fatalities and injuries, determining overrepresentation of person, time and location related factors, and considering the age and gender of offenders or victims is included in the data analysis process. Most of the remaining categories listed below are utilized to focus enforcement effort, and are also used to target paid media strategies and types of education programs:

- gender;
- illumination;
- time of day;
- day of week;
- location;
- weather;
- vehicle body type;
- crash type;
- route type; and
- Contributing circumstances.

The MHSO continues to work with the University of Maryland's Center for Traffic Safety Analysis (MCTSA), a unit within the National Study Center for Trauma and EMS, to improve the problem identification process used by the MHSO and its grantees. Another major data source provided by the MCTSA is the Comprehensive Crash Outcome Data Evaluation System (CODES). CODES data is utilized to provide a much broader range of information than MAARS, including injury severity data and hospitalization data.

All of this data provides a critical point of view for crashes in Maryland. The data allows state officials and enforcement partners to know where the crashes are happening, when the crashes are happening, and who is involved in the crashes themselves. The problem identification process is an essential tool used to carry out the work of the MHSO.

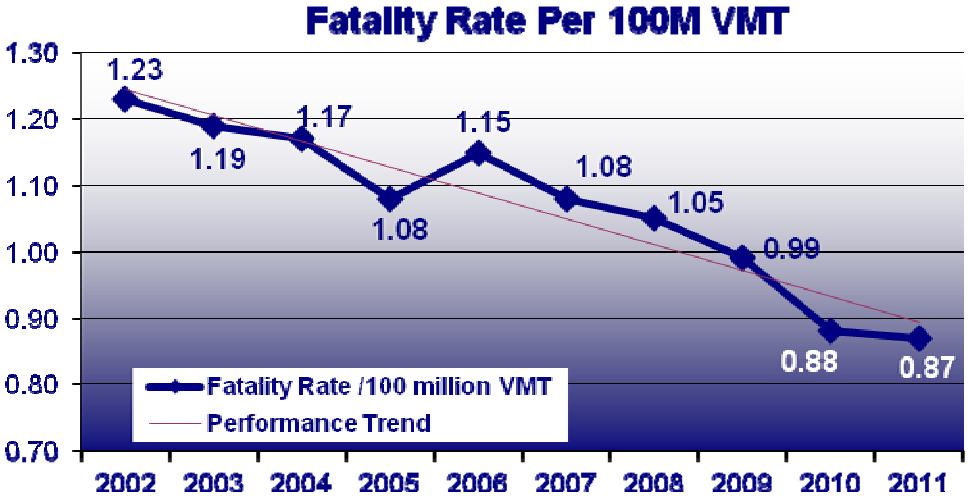
The following tables represent various traffic safety-related rates and trends in the State of Maryland, and were generated in conjunction with guidelines supplied by the Governors Highway Safety Association (GHSA). The tables were also designed to allow a comparison of statistics from state to state and to provide a measure of consistency and benchmarking. This is an example of data trend analysis used by the MHSO and its stakeholders.

Graph A – Fatality Trends

Fatality Trends

Until 2006, fatalities on roads in Maryland were on a steady decline of 7% over 4 years. In 2006 a spike occurred but did not dramatically affect the trend, as evidenced by 2010 and 2011 overall fatality numbers. The target of fewer than 550 fatalities by 2010 was accomplished.

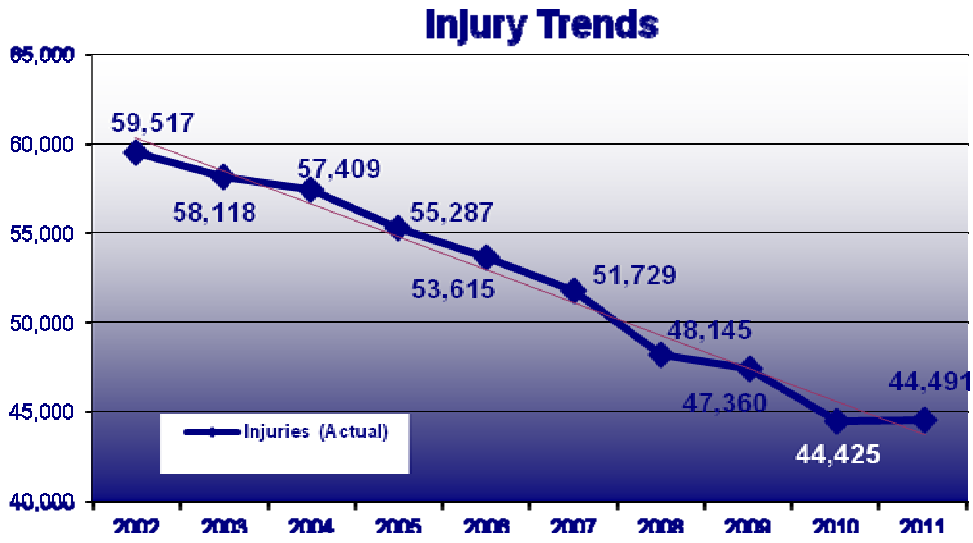
Graph B – Fatality Rate per 100MVMT



Fatality Rate

Based on the 2010 reduction in overall fatalities, the fatality rate was similarly impacted. The fatality rate for the last complete reporting period reflects a similar rate as 2010, at 0.87 per 100 million vehicle miles traveled.

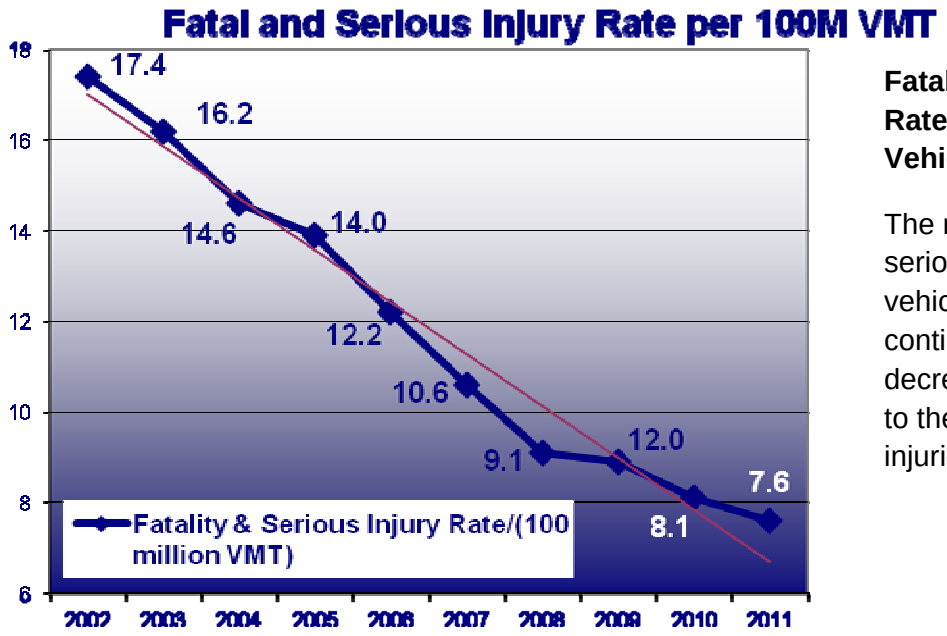
Graph C – Injury Trend



Injury Trends

Injuries due to crashes on all roads in Maryland have declined by 25% between 2002 and 2011. The challenging areas for injury can be attributed to crashes involving aggressive driving, motorcycles and impaired driving. The target remains to further reduce injuries to less than 41,000 by the year 2015.

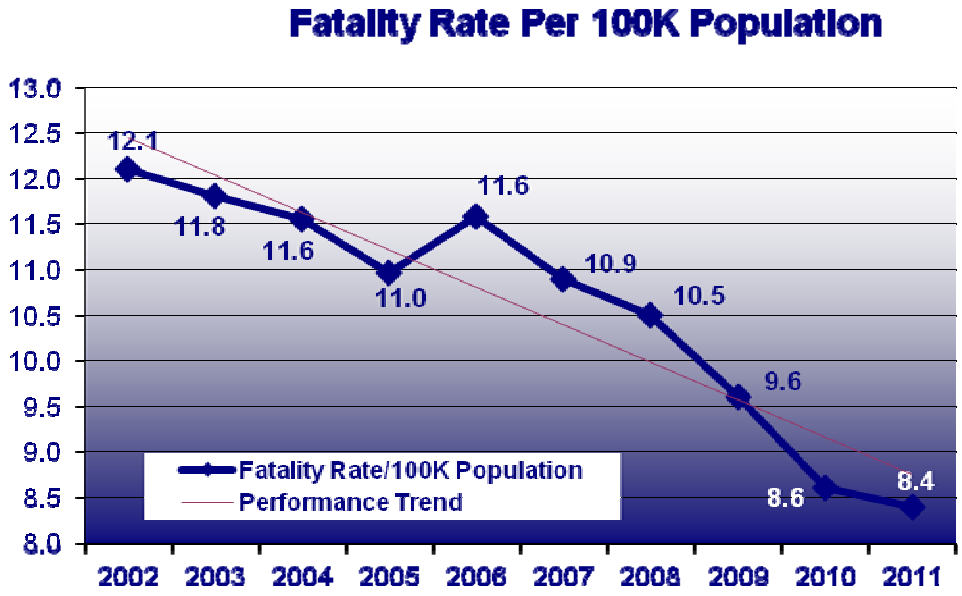
Graph D - Fatality & Serious Injury Rate per 100 Million Vehicle Miles Traveled



Fatality & Serious Injury Rate per 100 Million Vehicle Miles Traveled

The rate of fatality and serious injury related to vehicle miles traveled continued to demonstrate a decrease mainly attributed to the decrease in reported injuries during 2011.

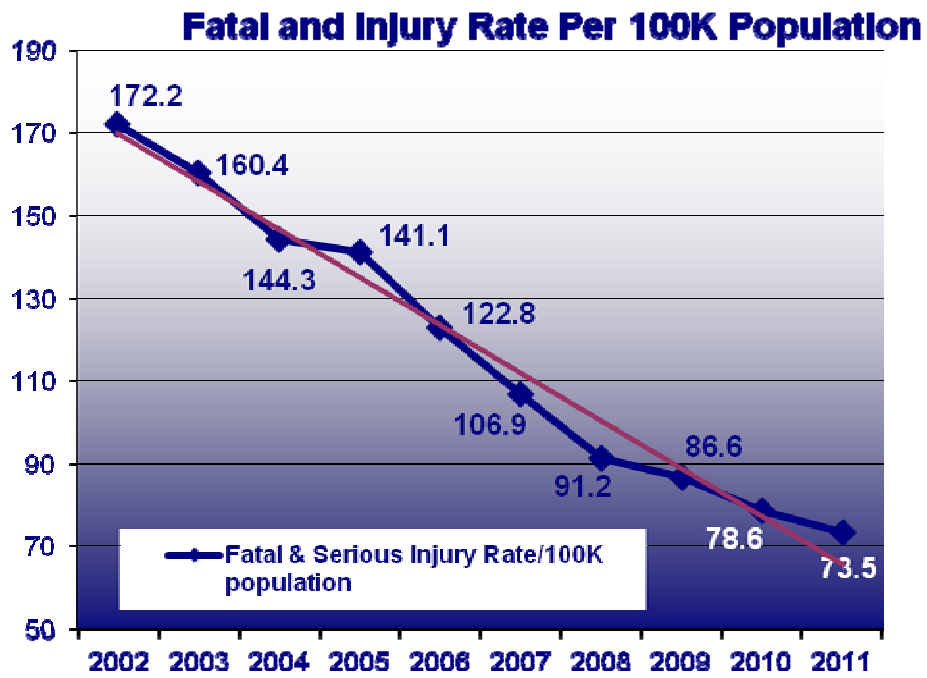
Graph E - Fatality Rate per 100,000 Population



Fatality Rate per 100,000 Population

The fatality rate in relation to population decreased to 8.4 for 2011 reflecting the physical decrease in fatalities. This is a 12% decrease from 2009.

Graph F - Fatal and Injury Rate per 100,000 Population



Fatal and Injury Rate per 100,000 Population

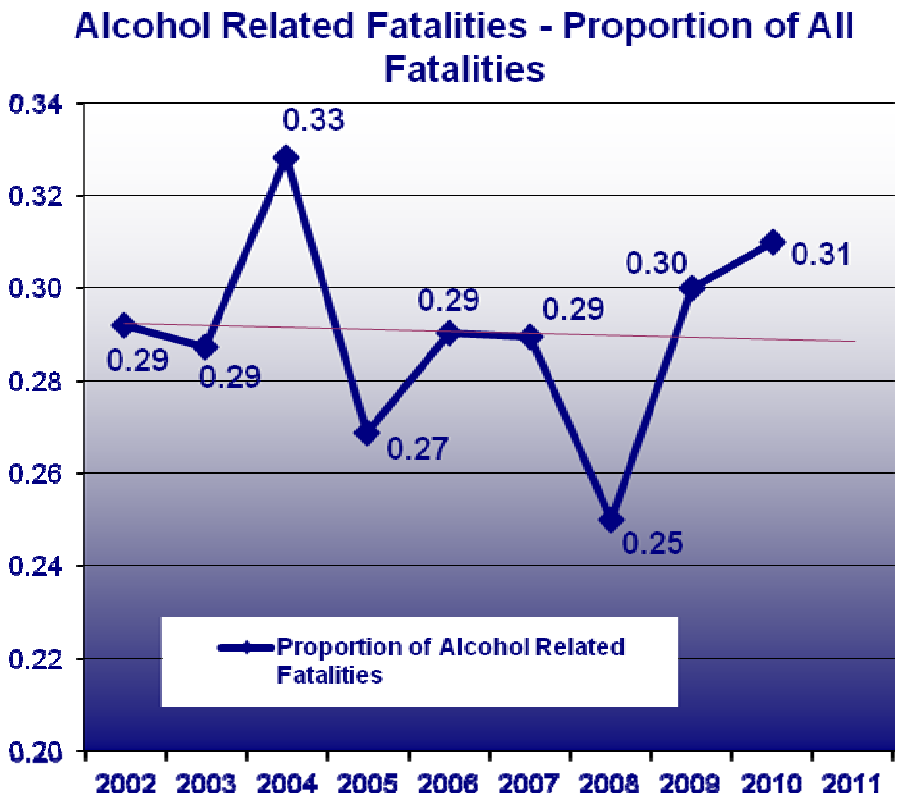
The fatality and injury rate in relation to population decreased to 73.5 for 2011 reflecting the physical decrease in injuries. This is a 15% decrease from 2009.

Graph G - Alcohol Related Fatalities

Alcohol Related Fatalities*

In general in 2011, fatalities experienced a decrease; however, as previously mentioned, impaired driving remains one of the major highway safety areas demonstrating a negative, increasing trend. The numbers reported in the chart to the left reflect the U.S. Department of Transportation's 2010 Preliminary Fatal Analysis Reporting System (FARS) statistics for Maryland. FARS reported data makes use of formula based methodology.

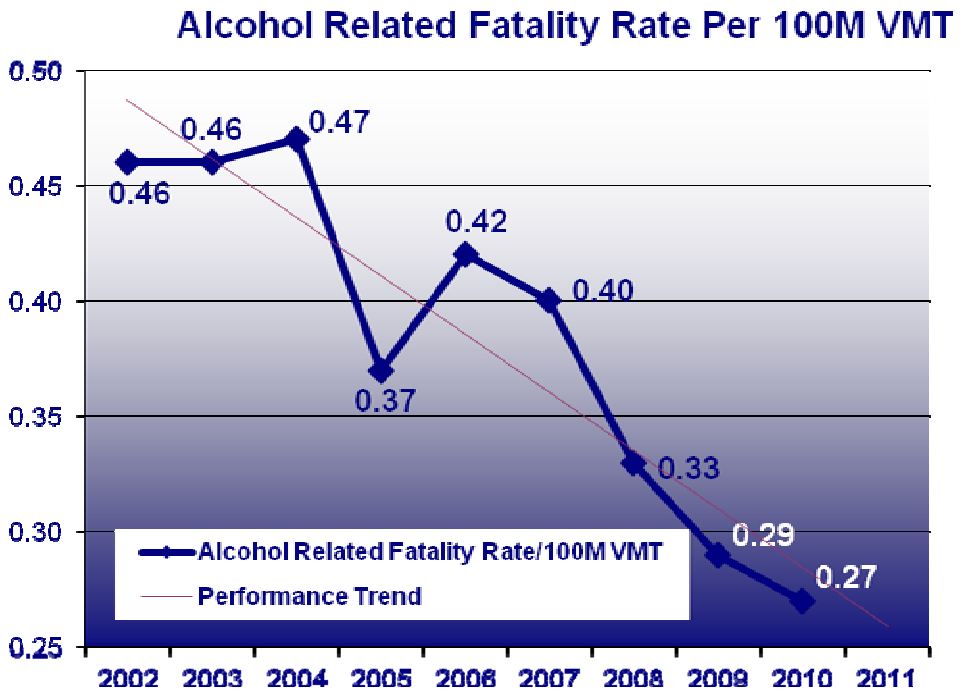
Graph H - Alcohol Related Fatalities as a Proportion of All Fatalities



Alcohol Related Fatalities as a Proportion of All Fatalities

Impaired driving represented a significant portion (31%) of the 496 fatalities preliminarily reported during 2010.

Graph I - Alcohol Related Fatality Rate

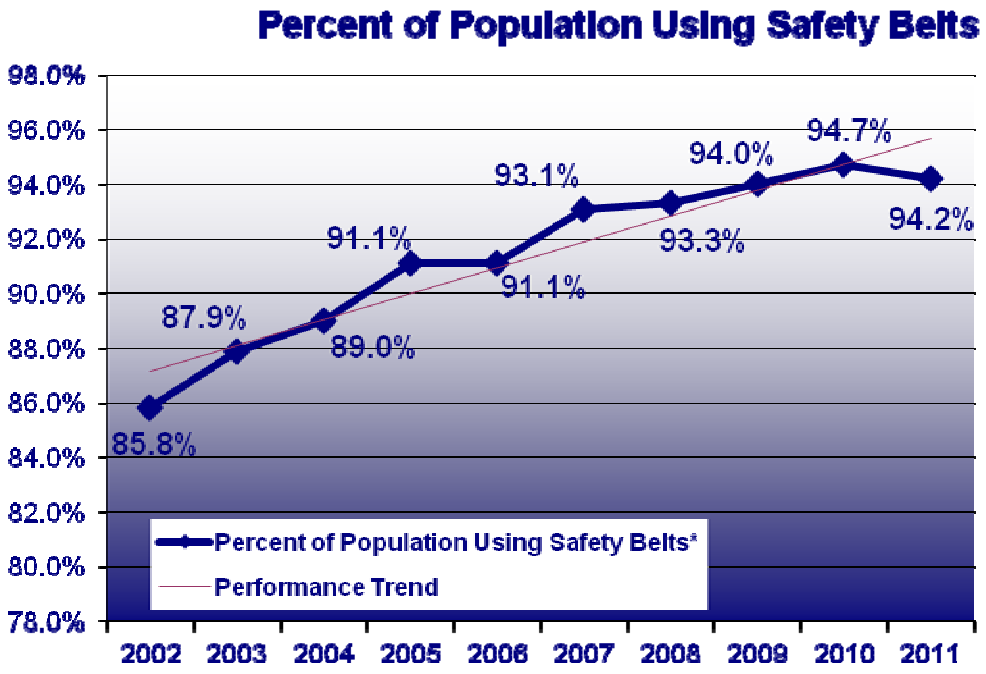


Alcohol Related Fatality Rate*

The alcohol related fatality rate in relation to vehicle miles traveled decreased to .27 for 2010 reflecting the physical decrease in fatalities. This is an 18% decrease over 2008.

(*0.01 BAC)

Graph J - Percent of Population Using Safety Belts



Percent of Population Using Safety Belts

Maryland's usage of seat belts continues to trend in a positive direction with a compliance percentage of 94.2% being reported for 2011. This is more than a 8.4 percentage point increase between 2002 and 2011.

Crash Profiles By Involvement Type

Occupant Protection (Belt Usage)	% Change	2008	2011	2015 Goal
Statewide Belt Usage (Combined)	▲ 2.1%	92.3	94.2	96.7
Statewide Belt Usage (Automobiles)	▲ 2.0%	93.3	95.2	
Statewide Belt Usage (Pick-Ups)	▲ 0.5%	86.8	87.2	

Fatalities by Program Area	% Change	2008	2011	2015 Goal
Statewide	▼ 17.7%	592	487	475
Aggressive Driving	▼30.2%	63	44	51
Bicycles	▼ 28.6%	7	5	6
Distracted Driving	▼ 20.3%	290	231	233
Impaired Driving (BAC 0.08+) **	**	145	**	116
Motorcycles	▼ 15.7%	83	70	67
New Drivers (ages 16-20)	▼ 37.7%	106	66	85
Occupant Protection (Unbelted)	▼14.5%	186	159	123
Older Drivers	▼ 7.1%	85	79	68
Pedestrians	▼ 10.4%	115	103	92

Injuries by Program Area	% Change	2008	2011	2015 Goal
Statewide	▼ 7.6%	48,149	44,491	40,032
Aggressive Driving	▼ 7.5%	4,203	3,888	3,495
Bicycles	▼ 9.8%	652	588	542
Distracted Driving	▼ 8.6%	31,778	29,050	26,426
Impaired Driving	▼ 6.1%	4,291	4,028	3,568
Motorcycles	▼ 3.6%	1,568	1,512	1,304
New Drivers (ages 16-20)	▼ 25.9%	10,309	7,644	8,573
Occupant Protection (Unbelted)	▼24.6%	6,141	4,628	1,839
Older Drivers	▼ 1.0%	6,546	6,480	5,444
Pedestrians	▼ 7.1%	2,469	2,293	2,053

Fatal Crashes by Program Area	% Change	2008	2011	2015 Goal
Statewide	▼ 15.2%	539	457	432
Aggressive Driving	▼ 30.4%	56	39	45
Bicycles	▼ 28.6%	7	5	6
Distracted Driving	▼12.6%	246	215	197
Impaired Driving*	**	132	**	106
Motorcycles	▼ 12.8%	78	68	63
New Drivers (ages 16-20)	▼ 32.2%	90	61	72
Older Drivers	▼7.7%	78	72	63
Pedestrians	▼ 4.7%	106	101	85

*** 2011 FARS not available at this time*

Crash Profiles By Involvement Type (continued)

Injury Crashes by Program Area	% Change	2008	2011	2015 Goal
Statewide	▼ 7.2%	32,773	30,399	27,254
Aggressive Driving	▼ 7.4%	2,580	2,389	2,146
Bicycles	▼ 10.3%	629	564	523
Distracted Driving	▼ 6.7%	20,878	19,483	17,362
Impaired Driving	▼ 5.6%	2,834	2,675	2,357
Motorcycles	▼ 4.4%	1,367	1,307	1,137
New Drivers (ages 16-20)	▼ 25.3%	6,580	4,917	5,472
Older Drivers	▼ 0.6%	4,279	4,254	3,558
Pedestrians	▼ 11.9%	2,385	2,100	1,983

2015 Goals coincide with Strategic Highway Safety Plan

* While some goals have already been met, MHSO continues to benchmark against the original goal to avoid moving targets

** Fatality Analysis Reporting System data – 2011 Unavailable

Safety Programs

Maryland Annual Driving Survey Outcomes

In accordance with data collection strategies outlined by the Governor's Highway Safety Association (GHSA), the Maryland Highway Safety Office once again conducted its Maryland Annual Driving Survey (MADS) 2012. During July, a total of 6,900 surveys collected from across the state with 47% of those being submitted electronically through Survey Monkey. The distribution of respondents across the state was highly correlated with population distributions from the Census Bureau, meaning that results of the 2012 MADS are representative of the Maryland population.

MADS – July 2012

- Over 6,900 surveys collected
  - 5,300 surveys collected in 2010 & 2011 combined
- 47% compiled electronically
  - 18% in 2010 & 30% in 2011
- Good use of motor vehicle offices and summer festivals
  - Over 1,800 surveys collected at local MVA
  - Over 1,200 surveys collected at Artscape

Maryland has had a primary seat belt law for front seat occupants for many years and the MADS asked about support for expanding that mandatory law to passengers riding in the back seat of vehicles. Women (73%) and older (60+ - 73%) respondents were more likely to support that law.

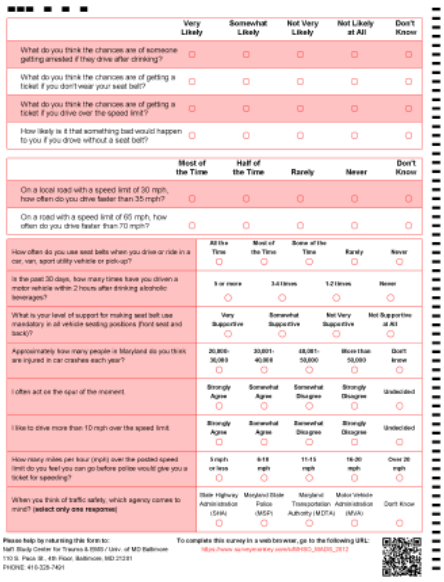
A Maryland resident takes a survey at the Artscape festival

Arrested for Drinking & Driving

- *Question 11* – What do you think the chances are of someone getting arrested if they drive after drinking?

	Age Group		
	Under 30	30-59	60 & over
Very likely	35%	31%	28%
Somewhat likely	44%	40%	36%
Not very likely	14%	20%	25%
Not likely at all	5%	6%	7%
Don't know	2%	3%	3%

Reported behaviors differed between those respondents who identified as heavier drinkers (driven within 2 hours after drinking alcohol 3 or more times in the last 30 days) and the lighter/non-drinkers. A higher proportion of heavier drinkers believed there was little chance of arrest when drinking and driving (30% v 25%). They were also less likely to report wearing their seat belt *always* (66% v 86%).



	Very Likely	Somewhat Likely	Not Very Likely	Not Likely at All	Don't Know
What do you think the chances are of someone getting arrested if they drive after drinking?	○	○	○	○	○
What do you think the chances are of getting a ticket if you don't wear your seat belt?	○	○	○	○	○
What do you think the chances are of getting a ticket if you drive over the speed limit?	○	○	○	○	○
How likely is it that something bad would happen to you if you drove without a seat belt?	○	○	○	○	○

	Most of the Time	Half of the Time	Rarely	Never	Don't Know
On a local road with a speed limit of 30 mph, how often do you drive faster than 35 mph?	○	○	○	○	○
On a road with a speed limit of 65 mph, how often do you drive faster than 70 mph?	○	○	○	○	○

How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle or pick-up?	All the Time ○	Most of the Time ○	Some of the Time ○	Rarely ○	Never ○
In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?	3 or more ○	3-6 times ○	1-2 times ○	Never ○	
What is your level of support for making seat belt use mandatory in all vehicle seating positions (front seat and back)?	Very Supportive ○	Somewhat Supportive ○	Not Very Supportive ○	Not Supportive at All ○	
Approximately how many people in Maryland do you think are injured in car crashes each year?	20,000-30,000 ○	30,001-40,000 ○	40,001-50,000 ○	More than 50,000 ○	Don't know ○
I often act on the spur of the moment	Strongly Agree ○	Somewhat Agree ○	Somewhat Disagree ○	Strongly Disagree ○	Undecided ○
I like to drive more than 10 mph over the speed limit	Strongly Agree ○	Somewhat Agree ○	Somewhat Disagree ○	Strongly Disagree ○	Undecided ○
How many miles per hour (mph) over the posted speed limit do you feel you can go before police would give you a ticket for speeding?	5 mph or less ○	6-10 mph ○	11-15 mph ○	16-20 mph ○	Over 20 mph ○
When you think of traffic safety, which agency comes to mind? (select only one response)	State Highway Administration (SHA) ○	Maryland State Police (MSP) ○	Maryland Transportation Authority (MDTA) ○	Motor Vehicle Administration (MVA) ○	Don't Know ○

Please help by returning this form to:
Natl. Study Center for Trauma & EMS / Univ. of MD Baltimore
110 S. Paca St., 4th Floor, Baltimore, MD 21201
PHONE 410-328-7491

To complete this survey in a web browser, go to the following URL:
https://www.surveymonkey.com/s/MADS_SMCDS_2012

MADS 2012 Scantron

Of all respondents, more reported noticing speed enforcement (75%) than impaired driving (69%) or seat belt use (59%) enforcement in the last 30 days.

Maryland has continued to make progress towards reducing motor vehicle fatalities and injuries despite increases in population and vehicle miles of travel. However, while Maryland's total number of traffic fatalities has dropped (651 in 2006 to 496 in 2010), the frequency of alcohol and/or drug impaired fatal crashes has not (171 in 2008, 173 in

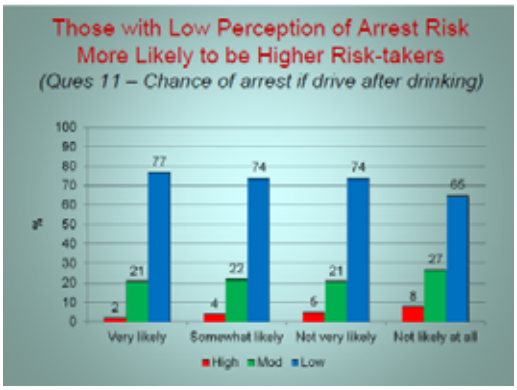
2009 and 177 in 2010). In addition, Maryland's seatbelt usage rate has remained fairly constant at a level of higher than 90% for several years. Despite these changes, Maryland would like to continue making a difference. The theory is that the some of the roadway crashes are being caused by individuals who engage in risky driving behaviors. Through the 2012 MADS, researchers sought to identify those risky individuals through the inclusion of behaviorally defined questions. The aim is to examine the association between how individuals respond to risk-taking behavioral questions and the other traffic-related behavioral questions. The survey also aims to determine if there is a difference between those identified as high, moderate, and low risk.

Support for Mandatory Seatbelt Law

- *Question 15* – What is your level of support for making seatbelt use mandatory in all vehicle seating positions?

	Age Group		
	Under 30	30-59	60 & over
Very supportive	63%	68%	73%
Somewhat supportive	20%	17%	15%
Not very supportive	8%	6%	5%
Not supportive at all	6%	7%	5%
Undecided	3%	2%	2%

The results of the survey were compiled and stratified into three groups, based on whether surveyed individuals responded to the three risk-taking questions in a risky manner, thus identifying them as high, moderate or low risk respondents. Those that indicated risk-taking in all three behavioral questions (high risk) represented 4% of respondents and those who answered two of the three questions were identified as the moderate risk takers (26% of all respondents). Higher proportions of risk-takers were identified on the Eastern Shore, as compared to the Southern or Western Maryland counties. Young males scored higher on the risk-taking questions. Regardless of gender, risk-taking declines with age.



The findings contained in this report provide more detail about these different classifications of individuals. Overall, high and moderate risk respondents were more likely to report 'riskier' behavior for all questions. This information will be helpful for the Maryland Highway Safety Office to develop programs and direct activities towards risk-taking individuals. The full report is attached in the appendix.

Impaired Driving Prevention

INTERIM IMPAIRED DRIVING PREVENTION GOALS:

	2011	**2012**	**2013**	**2014**	**2015**
Fatalities (BAC 0.01+)	166	160	155	151	146
Fatalities (BAC 0.08+)	132	128	124	120	116
Serious Injuries	592	580	569	557	546
Total Injuries	3,965	3,862	3,761	3,664	3,568

Impaired driving is a serious crime that kills every 30 minutes nationally. In Maryland, there are 15 deaths a month or a death every 49 hours. The total number of fatalities in 2011 was 4 more than in 2010, but the overall number of impaired driving crashes decreased by 260 from 2010 levels. While Maryland's total number of traffic fatalities has dropped significantly over the past few years, nearly one of every three people killed in traffic crashes in Maryland in 2010 were involved in a crash with a drunk driver. Data confirms that males between the ages of 21 – 34 are among those most represented in impaired driving fatalities, and the data is also indicative that the highest percentage of impaired driving fatalities are occurring on the weekends, at nighttime between 6:00 p.m. to 5:59 a.m.

Impaired Driving	2007	2008	2009	2010	2011	5-Year Average	5-year % Change
Fatal Crashes	192	155	161	163	164	167	-14.6
Injury Crashes	3,151	2,834	3,019	2,729	2,675	2,882	-15.1
Property Damage Only	5,267	5,156	5,625	4,993	4,786	5,165	-9.1
Total Crashes	8,610	8,145	8,805	7,885	7,625	8,214	-11.4
Total of All Fatalities	221	171	173	177	181	185	-18.1

The MHSO's statewide campaign to combat impaired driving has primarily been focused on enforcement and public awareness; however, the MHSO's grantees and Impaired Driving Coalition members, in coordination with local task forces, enforcement agencies and grantees, reach far and wide to keep impaired driving prevention messages in the forefront of all communities around Maryland.

During Maryland's 2012 General Assembly, the Impaired Driving Coalition's Legislative Committee decided to follow and support recommended legislation rather than introduce and seek sponsorship for impaired driving laws primarily because new legislation was just enacted October 1. Only six months prior, the Drunk Driving Reduction Act, effective as of October 1, 2011, expanded Maryland's ignition interlock program by requiring more drivers to participate. HB1276 made it mandatory for all Hi-BAC, repeat-offenders to be enrolled in the ignition interlock program. Currently, Maryland has the highest per-capita participation in ignition interlock on the East Coast and over the last three years, Maryland's ignition interlock program enrollment has increased 66 percent. In November 2008, there were 5,500 participants in the program. One year later, there were 7,971 participants. Currently, in Maryland there are almost 10,700 participants in the MVA's ignition interlock program, and it is expected to grow even larger given this new law.

In accordance with Fund 164 transfer funding, a strategic programmatic and spending plan was developed by the MHSO/MVA, submitted to and approved by the NHTSA Region III Office and generally included the following projects:

- Targeted Enforcement projects and a dedicated DUI Detachment with Maryland State Police (MSP)
- Training (law enforcement, judicial)
- Public Information, Education and Media Initiatives
- Judicial Program Support
- Governor's Task Force Recommendations: MIDRIS Program Development

The impaired driving program continues to combat impaired driving using a multi-faceted approach that is data driven. Among the countermeasures implemented by this comprehensive program is high-visibility enforcement coupled with an intense paid, earned and guerilla marketing effort. The regional marketing campaign specifically designed to target high-risk corridors during highly visible enforcement periods, and launched during the National Drunk Driving Mobilization, "*Drive Sober or Get Pulled Over.*" campaign, and in Maryland known as *Checkpoint Strikeforce*.

During the 2012 initiative, two-week waves of enforcement and media outreach were planned each month from August through December around these specific holidays:

- August - September, Labor Day,
- October, Halloween,
- November, Thanksgiving,
- Early December, Holiday Period, and
- Late December - January, New Year's Eve

The target audience was directed to the following website to learn more about the CPSF campaign: www.checkpointstrikeforce.net . A significant effort was put toward a geographically and demographically targeted ad campaign. The regional planning partners agreed to resurrect past creative ads that resonated well with the targeted 21-35 year old male audience. The Baltimore and Salisbury demographic area spent $298,571.00 on a radio, television, billboards and internet advertising campaign. An additional $233,281.00 in added-value spots were negotiated, yielding some 47,500,000 million impressions for the target audience, with a reach of 72 percent and a frequency of 11.

This campaign was complemented by the social media project *DUI is For Losers* during the sustained enforcement periods from February - July; however, this initiative was hindered this year due to the MHSO's transition to the MVA. Efforts included distribution of the remaining collateral pieces (coasters) to approximately 15 establishments throughout Baltimore County and in Ocean City.

During this six month high-visibility awareness period, Maryland launches several other projects, the DUI Law Enforcement Awards, Project SOLO, 3D Months: Report Drunk Drivers. Dial 911. Tree Tags and Wine Bag awareness project, and finally Maryland Remembers.

Low Manpower Sobriety Checkpoint with Sheriff's Office and MSP in Calvert County at the end of July

A new pilot enforcement initiative, titled Project Saving Our Loved Ones (Project SOLO), was launched in Anne Arundel, Baltimore, and Prince George's Counties. The premise of this enforcement initiative was to saturate high-risk corridors with law enforcement conducting impaired driving police patrols in concert with earned media to create awareness of this mass enforcement project aimed at drunk drivers. While slow to catch on among the majority of the participating agencies, Baltimore County was extremely successful, providing SFST and other law enforcement refresher training prior to the enforcement briefing and bringing together a multi-jurisdictional effort with neighboring MSP barracks, Havre de Grace Police, and Harford County Sheriff's Office. Between Baltimore and Prince George's Counties, a total of 10 events were conducted with approximately 127 officers, including the MSP, yielding 162 DUI arrests, 207 speed citations, and 824 vehicles stopped.

The initiative spawned tremendous support and with law enforcement participation was further expanded to Howard, Montgomery, Frederick, and Wicomico Counties and the City of Baltimore in FFY 2012, with all operation supported with Section 164 funds. Marylanders were also once again encouraged to "Report Drunk Drivers. Dial 9-1-1" through overhead message boards and other outreach efforts.

In December 2011, an end-of-the-year memorial event, called Maryland Remembers, was held in Annapolis, MD. In its 8th year, Maryland Remembers brings together victim families, friends, advocates, law enforcement, the impaired driving coalition members and dignitaries to honor the lives of those lost to the crime of impaired driving. This memorial is enhanced by a press event where Lt. Governor Anthony Brown, Maryland State Police Superintendent Marcus Brown and victim speaker, Casey Brooks (Father – Cpl. Courtney Brooks was killed by a drunk driver on December 31, 2007) addressed the media about the importance of awareness with regards to impaired driving enforcement, education and outreach.

Objective

- Reduce the annual number of impaired driving-related fatalities (BAC 0.08+) on all roads in Maryland from 145 in 2008 to fewer than 116 by December 31, 2015 (20% reduction).

- Reduce the annual number of impaired driving-related injuries on all roads in Maryland from 4,291 in 2008 to fewer than 3,568 by December 31, 2015 (16.8% reduction).

Accomplishments

- More than 14,000 motorists were stopped by law enforcement officers conducting *Checkpoint Strikeforce* operations during the FFY 2012.

- A total of 236 impaired driving enforcement operations were conducted between October 1, 2011 and September 30, 2012. According to Checkpoint Strikeforce Enforcement reporting forms, twenty-eight of these operations were sobriety checkpoints and the remaining 208 were saturation patrols, yielding approximately 306 DUI/DWI arrests, over 14,000 vehicle contacts, 4,896 vehicles stopped by a conservative 294 officers. However, it should be noted that a total of 2,088 DUI citations were issued during MHSO grant-funded overtime.

- Throughout this grant year, a total of 97 agencies have participated in the CPSF campaign, during high-visibility and sustained enforcement periods. All 23 counties and the City of Baltimore have all reported some type of independent or joint operation targeted at removing impaired drivers from Maryland roadways. According to Checkpoint Strikeforce Enforcement reporting forms, approximately 6,061 overtime hours were logged by participating law enforcement agencies.

- While enforcement oriented, *Maryland's CPSF Program* includes the use of television broadcast, radio, outdoor advertising such as billboards and online presence via the web. In FFY 2012, the campaign featured 2,773 television spots and 2,373 radio spots, and achieved more than 47,500,000 media impressions across the state.

- On October 23, 2011, 107 police officers, in the presence of their family and friends, were recognized for having made the most DUI arrests in their respective police agencies.

- In FFY 2012, the WRAP, with its three person staff, continued to report great strides in removing drunk drivers from the roadways via WRAP's free cab ride service, *SoberRide*. The campaign runs during the following holidays and provided a total of 3,318 rides to would-be drunk drivers.

    - 465 – Halloween 2011
    - 2,032 – Holiday 2012
    - 606 – St, Patrick's Day – March 2012
    - 215 – Independence Day – July 2012

  The *SoberRide* campaign has *been* operational since 1993 and has provided over 53,000 free cab rides. Media coverage has always been a strong point for all free cab ride campaigns. Although no dollars have ever been spent on media buys, earned media for this grant year included:

	Media Hits	Reach Contacts	Press Releases
Halloween	5	117,074	1
New Year's	23	4,291,126	1
St. Patty's	21	910,345	1
Cinco de Mayo	45	3,101,837	2

- More than 4,352 students in DC area high schools were reached during WRAP's 93 multi-media outreach presentation, Alcohol Awareness for Students during the FFY 2012. Of the students reached, a total of 2,997 were in Maryland.

- Maryland continues to support the DUI Court Program, providing funding to three DUI Courts in Anne Arundel, Howard and Harford Counties. Each court averages 25 active participants, graduating on average 12 participants, and through monitoring, having demonstrated a zero – 17 percent recidivism rate among graduates who have been tracked for anywhere from 12 to 18 months after graduation. Of the two programs featuring graduations, 27 participants completed the program and have been reunited with family and either working or in school, and remain sober.

- In FFY 2012 MADD Maryland was able to conduct 17 Parent Workshops for its *Power of Parents, It's Your Influence* project. Through these workshops, more than 400 parents were provided with materials to talk to their children about underage drinking prevention. The response to these parent workshops was so great that the number of training materials and parent workbooks was increased partway through the grant year to accommodate the demand for the class and its materials.

- A total of 3 *Power of Parents, It's Your Influence* Facilitator Trainings were also conducted. Forty-eight prevention professionals went through the Facilitator Trainings and19 became fully certified facilitators through MADD National. This was a major accomplishment for MADD Maryland as it will build a foundation of volunteers who can continue to provide the program around the state; hence increasing outreach to parents in MD.

Challenges

- A challenge to the Impaired Driving Program continues to be outreach to the Judiciary. Maryland has invested in the implementation of a Traffic Safety Resource Prosecutor position and is coming closer to securing a grant with the Maryland State's Attorney Association for this position. Currently, the region is benefiting from the knowledge and guidance of the Honorable Judge Neil Axel, a national spokesperson for the DUI Courts, and who formerly presided over the Howard County DUI Court. His proximity and affinity for Maryland and its highway safety issues will be of great value to the MHSO.

- There were only 28 checkpoints conducted out of a total 236 DUI enforcement operations. The threat to the overall program is a persistent perception that enforcement is not occurring and the potential for arrest is simply not convincing enough to deter drunk driving. While law enforcement is supportive of impaired driving enforcement, the commitment to the sobriety checkpoint program is very weak. Again, only 12 percent of overall DUI operations were checkpoints during the 2012 FFY with a total of 175 DUI arrests made during these operations.

- The *DUI is For Losers* campaign was met with some challenges during FFY 2012. The response to some of the materials was met with some resistance and the MVA Executive Team was concerned that the name is too negative. The IDC members agreed to revisit the name but that the overall look and purpose of the project to highlight the consequences of impaired driving are solid. MHSO was waiting to secure a new media contract before re-evaluating the campaign. The contract was executed in late July 2012 which delayed any movement on this project.

- Tipsy?Taxi!, a free cab ride service in the Baltimore metropolitan region has been a MHSO-sponsored service that is administered by AAA and Yellow Cab. Over the past two years, the program has lost ridership and the brand has slowly developed concerns among riders. As a result the AAA and Yellow Cab, in coordination with the MHSO chose to re-evaluate the program's approach, seek new partners and revamp the campaign. In order to develop a new approach the team agreed to take a year off to research approaches and a new plan for the project.

Occupant Protection

INTERIM OCCUPANT PROTECTION GOALS:

	2011	**2012**	**2013**	**2014**	**2015**
Fatalities	150	145	141	137	132
Serious Injuries	520	509	499	489	479
Total Injuries	2,915	2,839	2,766	2,694	2,624

Throughout the past 10 years, the MHSO's Occupant Protection (OP) program has enjoyed an enormous amount of success, seeing the statewide use rate soar to all-time highs of 94.72 percent in 2010 and then just slightly less in 2011 at

94.17 percent. Media and law enforcement partners have been integral in the success of this program and the heights to which the statewide seat belt use rate has climbed.

Despite the success in the actual rate itself, there remains some concern that the state has not seen a corresponding decrease in the number of unbelted fatalities and injuries. Of the 269 front seat drivers and occupants killed during 2011, 42 percent (113) were listed as being unbelted at the time of the crash. By contrast, 37 percent were listed as being unbelted in 2010, and 36 percent in 2009. The following data shows the 5-year trends in crashes, specifically driver and front-seat occupant fatalities and injuries:

Safety Equipment	2007	2008	2009	2010	2011	5-Year Average	5-year % Change
Wearing - Lap and/or Shoulder Belt(s)	188	180	186	150	131	167	43.51%
Wearing - Child/Youth Restraint	1	0	0	0	0	0	0.00%
Not Wearing - None and/or Air Bag Only	140	137	119	99	113	122	23.89%
Unknown	28	23	26	19	25	24	12.00%
Total	357	340	331	268	269	313	32.71%
Wearing - Lap and/or Shoulder Belt(s)	188	180	186	150	131	167	43.51%

Clearly, increasing the use among all passengers is a major concern, and will be addressed in future endeavors; however, there was also some concern that the seat belt methodology that had been employed for more than 20 years in Maryland was outdated and perhaps giving somewhat misleading results. In FFY 2012 the MHSO embarked on a project to reevaluate the placement of its seat belt observation sites, partially to comply with a new NHTSA guideline but mostly to present a more accurate picture of seat belt use in Maryland. As a part of this overhaul, Maryland increased the number of survey sites from 78 to 140, and also increased the number of counties/jurisdictions involved to 14, up from 11.

Statisticians and epidemiologists at the Maryland Center for Traffic Safety Analysis (MCTSA) used model concepts as a guide to develop a comprehensive training program complete with PowerPoint presentation, training manual, fillable observation forms, and data submission practices. In an effort to assure that all methodologies were implemented accurately across the state, MCTSA personnel also developed a complete quality control package, featuring an additional training for use in assuring that all quality control monitors were properly trained in the observation techniques and could accurately observe and correct observers conducting the actual counts if the need should arise. A database was developed to include person level data findings as well as summary information meant to serve as a check and balance or an additional quality control feature affirming that the data reporting and entry was completed accurately as well.

While the new methodology was being developed, the MHSO also undertook a standardization of seat belt sites in those counties not included in the official NHTSA rate, and now every county in Maryland has no fewer than three standardized sites, and no more than ten sites. The new sites are more heavily focused on secondary roadways and the site selection also includes more local roadways.

There were delays in the finalization of the contract with a vendor to conduct the observations. Consequently, the observations were started in late FFY 2012 and the official use rate has not yet been verified. Like many other states, officials in Maryland expect that the use rate will fall but will also no doubt give a much more accurate overall picture of seat belt use throughout the State.

Approximately $340,000 in media was placed on cable television, radio, and electronic media outlets in support of the FFY 2012 *Click it or Ticket* campaigns for November 2011 and May 2012. Continued emphasis was placed on reaching out to the African American and Hispanic populations in FFY 2012 and the overall media demographic continued to be males aged 18-44. The highlight of the media effort in May was a press conference held on the line between Baltimore County and Baltimore City. Both departments participated in a joint, night time seat belt enforcement zone and results of the operation included more than 100 seat belt citations and citations for other offenses such as registration and title violations.

In FFY 2011, Maryland entered into a three-year, $900,000 cooperative agreement with NHTSA to conduct a night time seat belt enforcement (NTSBE) demonstration grant project with a goal of determining characteristics of unbelted nighttime drivers. The November 2012 enforcement wave was cancelled at NHTSA's request due to problems securing a media contractor but the May 2012 enforcement and media wave saw a significant improvement in terms of performance from May 2011. The extra year and development of more effective seat belt enforcement models resulted in more than 1,500 seat belt citations and roughly 600 other citations being issued in the three week enforcement period. The number of seat belt citation written in May 2012 was roughly a ten percent improvement from a similar period in May 2011.

The Maryland Law Enforcement Challenge (MLEC) continues to be facilitated by the MHSO's Occupant Protection Program Coordinator, in collaboration the Maryland Chiefs of Police Association. In May 2012, the award winners in the numerous categories were announced to a collection of roughly 250 assembled police chiefs, sheriffs and other law enforcement. During FFY 2012, significant improvements to the program were explored, such as online enrollment and data entry, for introduction in FFY 2013 and greater marketing was coordinated on behalf of the LEC as well.

Objectives

- To increase statewide observed seat belt use of front seat outboard occupants in passenger vehicles 0.4 percentage point(s) from the 2010 calendar base year average usage rate of 94.7 percent to 96.7 percent by December 31, 2015.

Accomplishments

- One press event was held for *Click it or Ticket* in May 2012, reaching more than 605,000 people across the Baltimore metro region, specifically :
    - Four online articles reaching nearly 167,500 readers; and
    - 17 television stories reaching at least 437,692 viewers

  The total estimated publicity value of $26,188.32 included print and online coverage of $4,017.06 and broadcast television coverage of $ 22,171.26.

- More than 20 million total impressions were achieved on media purchases. For radio, the campaign provided an average 82% reach at a 9+ frequency and delivered at least 210 average weekly GRPs over the 3.5 week flight period. The cable television flight period provided at least a 78% reach at a 3+ frequency level and delivered 124+ average weekly GRPs.

- Maryland achieved a complete redesign of its seat belt survey methodology, the first such redesign in more than 20 years. Through this effort, roughly 15 qualified observers were trained and a further 5 people were trained as quality control experts. The initial observations were completed in late September and the MHSO is simply awaiting the verification on results from the MCTSA.

- More than 1,500 seat belt citations and roughly 600 other citations were issued in the three week enforcement period for Maryland's NTSB enforcement project, equating to a roughly ten percent improvement from a similar period in May 2011.

- A seat belt oriented video was produced for Maryland's Toward Zero Deaths project, and was highlighted through publicity on YouTube and the Toward Zero Deaths website.

- KISS provided 76,744 CPS messages to caregivers and provided, or assisted with, the training of 253 safety advocates/certified technicians;

- In addition, 559 car seats were loaned to families throughout the state.

Challenges

- Seat belt use in fatal crashes, as reported to the MAARS, is likely under-reported or reported incorrectly, as noted in various CIREN cases examined by the MCTSA. Continuing to train officers in correctly identifying and reporting belt use will give a better overall picture of the instances of unbelted drivers and occupants involved in motor vehicle crashes.

- Reaching Maryland's diverse population is often challenging given the vast number of different media outlets and the limited funding for the program is problematic, given the expense of purchasing media in the Baltimore and Washington Metropolitan media markets.

- Continuing to increase performance of agencies involved in the NTSBE project will be a priority as many agencies are experiencing some difficulty in securing manpower and adequate numbers of enforceable locations based on lighting, traffic volume, and impact to highway safety. All agencies have been directly interviewed and provided with various strategies but emphasis in this area must be consistent and frequent.

- Maryland has a law enforcement base that is committed to enforcing the State's belt laws but future competing priorities or a lack of sufficient resources could have a detrimental effect on belt enforcement activities. Additionally, focus needs to increase during late nighttime hours, posing other challenges to officers.

Aggressive Driving Prevention

INTERIM SPEED PREVENTION GOALS:

	2011	2012	2013	2014	2015
Fatalities	148	144	139	135	131
Serious Injuries	943	924	906	888	870
Total Injuries	9,269	9,028	8,793	8,564	8,342

Polling and research conducted by AAA Mid-Atlantic through the years revealed a continued growing concern with the problem of aggressive driving (i.e., traffic signal violation, improper passing, failure to drive in a single or proper lane, following too closely, failure to stop/yield right of way, or exceeding the speed limit). In an effort to combat aggressive driving, a major effort by the MHSO in FFY 2012 was to fund and partner with law enforcement, government officials, and others to conduct the *Smooth Operator Program*. Developed more than 12 years ago, the *Smooth Operator Program* is a multi-jurisdictional public safety initiative to provide education, information and solutions for the problem of aggressive driving.

Aggressive Driving	2007	2008	2009	2010	2011	5-Year Average	5-year % Change
Fatal Crashes	65	56	48	42	***39***	50	-40
Injury Crashes	2,582	2,580	2,546	2,376	2,389	2,495	-7.5
Property Damage Only	3,558	3,476	3,555	3,290	3,342	3,444	-6.1
Total Crashes	6,205	6,112	6,149	5,708	5,770	5,989	-7
Total of All Fatalities	76	62	54	47	***44***	57	-42.1
Total Number Injured	4,242	4,184	4,053	3,791	3,888	4,032	-8.3

Based upon objectives for the Aggressive Driving Prevention Program, the MHSO was able to meet and exceed the program's fatal crash and total fatality objectives. While the total number of aggressive driving crashes increased slightly, there were 39 fatal crashes involving aggressive drivers in 2011, a decline of 3 from 2010. In turn, the total number of aggressive driving fatalities declined to below the stated level in the MHSO's objectives.

One area of concern was the slight increase in the number of aggressive driving-related injuries, up from 3,791 in 2010 to 3,888 in 2011. Despite this increase, the overall trend over the past five years has been greater than an eight percent decrease in aggressive driving-related injuries.

Objectives

- To decrease speeding-related fatalities 19.4 percent from the 2008 calendar base year average of 191 to 154 by December 31, 2015.
- To decrease the total number of aggressive driving-related crashes on all roads in Maryland from 6,111 in 2008 to fewer than 4,938 by December 31, 2015.
- To decrease the total number of aggressive driving-related fatal crashes on all roads in Maryland from 56 in 2008 to fewer than 45 by December 31, 2015.
- To decrease the total number of aggressive driving-related injury crashes on all roads in Maryland from 2,580 in 2008 to fewer than 2,146 by December 31, 2015.
- To decrease the total number of aggressive driving-related fatalities on all roads in Maryland from 62 in 2008 to fewer than 50 by December 31, 2015.
- To decrease the total number of aggressive driving-related injuries on all roads in Maryland from 4,183 in 2008 to fewer than 3,380 by December 31, 2015.

Accomplishments

- The MHSO oversaw the involvement of more than 60 law enforcement agencies across the region, including 55 in Maryland, and coordinated their efforts to target aggressive drivers by conducting enforcement "waves" over a four month period. In 2012, these agencies issued more than 305,000 citations and warnings for aggressive driving behaviors.

- The MVA coordinated the State's massive education and awareness campaign by overseeing the highway safety grant funds used to purchase media and educational items, with programmatic expenditures totaling $250,000 in FFY 2012.

- The MHSO coordinated the selection and placement of $147,000 of outdoor media including billboards and bus backs in targeted corridors.

- Over the course of the 4 *Smooth Operator* media waves, more than 8.5 million impressions were achieved by the campaign's radio spots alone. A total of 36.5 million impressions were realized through cable television, social media and earned media.

- A Statewide *Smooth Operator* Law Enforcement Training Meeting was held in April, 2012, providing the more than 100 police officers in attendance with vital information about upcoming media events and enforcement waves.

- In September, 2012 a Smooth Operator Awards luncheon was held at which over 115 officers were recognized for their participation in the *Smooth Operator Program*.

- For the second straight year, the MHSO partnered with Grand Prix Racing of Baltimore for a major media event. This event, which featured a mock police pursuit of a Grand Prix race car, attracted all three major television news outlets, as well as many of the MHSO's law enforcement partners. This highly visible media messages captured the attention of thousands of drivers throughout the Baltimore city area and the live media event added an estimated $125,000 to the campaign's earned media value.

Indy driver Ryan Hunter-Ray at the Smooth Operator Baltimore Grand Prix Press Event

Challenges

- Providing fresh 'media hooks' to attract news crews to *Smooth Operator* events will remain a challenge. New and innovative ideas played well in FFY 2012 but a strong effort will be needed to continue to attract media at these events.
- A more coordinated effort and training of officers to focus on other aggressive driving violations will be pursued for next year.

Bicycle & Pedestrian Safety

INTERIM PEDESTRIAN SAFETY GOALS:

	2011	2012	2013	2014	2015
Fatalities	105	101	98	95	92
Serious Injuries	419	410	402	394	386
Total Injuries	2,281	2,222	2,164	2,108	2,053

Over the past five years an average of 2,746 pedestrian and 764 pedalcyclist crashes have occurred each year on Maryland's roadways. On average, 110 pedestrians and 7 pedalcyclists have lost their lives each year, representing nearly 24% of Maryland's traffic fatalities. In addition, an average of 2,514 pedestrians and 618 pedalcyclists has been injured annually, representing 7% of all Maryland's traffic injuries.

Maryland's highway safety program includes a comprehensive pedestrian and bicycle safety program that promotes safe pedestrian and bicycle practices, educates drivers to share the road safely with other road users, and encourages safe facilities for pedestrians and bicyclists through a combination of education and engineering strategies. In the Washington, D.C. and Baltimore metropolitan areas, the *StreetSmart* campaign continues to address pedestrian safety issues through coordinated education and enforcement activities. Broader statewide efforts include support for the Maryland Safe Routes to School program, and outreach to adult and youth bicyclists.

PGPD Chief Magaw speaking at a DC Street Smart press event

The number of pedalcyclist crashes increased from a five-year low of 686 in 2009 to 700 in 2011; the 2010 goal for pedalcyclist crashes is 733. The number of pedalcyclists injured increased from 578 in 2009 to 588 in 2011; the 2010 goal for pedalcyclist injuries is 552. Pedalcyclist fatalities decreased from a high of 10 in 2009 to 7 pedalcyclists killed in 2011; the 2010 goal for pedalcyclist fatalities is 10. Pedestrian crashes decreased slightly from 2,715 in 2009 to 2,541 in 2011; the 2010 goal for pedestrian-related crashes is 2,528. Pedestrian related injuries decreased from 2,505 in 2009 to 2,293 in 2011; the 2010 goal for pedestrian related injuries is 2,237, Pedestrian fatalities decreased from 112 in 2009 to 103 in 2011; the 2010 goal for pedestrian fatalities is 96. While the decrease from 2009 to 2011 is an improvement, pedestrian fatalities have not declined on the same trend line as all traffic fatalities statewide.

Objectives

- To reduce pedestrian fatalities 19.0 percent from the 2008 calendar base year average of 116 to 94 by December 31, 2015.

Accomplishments

- The *StreetSmart DC* campaign, developed in partnership with the Washington Council of Governments, reached millions of people in the Washington, D.C. metropolitan area with pedestrian safety messages directed at both motorists and pedestrians.

Pedestrian Pavement Marking Pilot Project in Ocean City

- The Fall 2011 launch event was very successful in gaining media attention and informing the public about stepped-up law enforcement activities throughout the DC Metropolitan area. Stories were seen and heard on numerous outlets, including WUSA 9 News, TBD, WAMU radio, and The Washington Post, reaching more than 900,000 readers

- The Fall 2011 media campaign was comprised of radio, television and outdoor advertising: a total of 639 radio spots were aired, achieving 5,999,000 total impressions (total reach was 53.4% and frequency was 4.8); transit shelter and bus and rail transit advertisements resulted in an estimated 40,197,769 impressions during the campaign period.

- The Spring 2012 launch event achieved estimated 2.4 million media impressions, including numerous print and online articles, radio, and television coverage.

- The Spring 2012 media campaign, focused on the consequences of driver and pedestrian behavior. More than 650 English-language radio spots were aired achieving 6,625,000 total impressions (total reach was 70.7% and frequency was 4.0); and transit advertisements resulted in 40,750,909 impressions for the campaign.

- The StreetSmart Baltimore campaign, operated in collaboration with the Baltimore Metropolitan Council (BMC), focused on a data-driven approach to identifying high priority areas for media, outreach and enforcement activities.

- The 2012 launch began in May in Baltimore City with enforcement activities combined with billboard placements, street banners and participation in a Bike to the Ballpark event at Camden Yards.

- The paid media campaign included radio, television, outdoor media, print media and internet advertising: 390 radio spots aired, achieving 833,080 impressions; 97 television spots aired, achieving 870,000 impressions; 9 billboards were placed, achieving an estimated 3,443,076 impressions; gas pump toppers were geo-targeted at 60 locations throughout the region, generating 10,570,500 impressions; static and animated web banners were placed, achieving 1,319,340 impressions.

- BikeMaryland, formerly known as One Less Car, successfully launched the Bicycle Ambassadors program, targeting outreach to young bicyclists in and around Baltimore City. BikeMaryland established a partnership with Port Discovery in downtown Baltimore to reach at-risk Baltimore City school children by participating in Port Discovery's youth education program. In FY 2012, 17 youth bicycle rodeos were conducted, reaching 1,070 youth.

- Maryland Department of Transportation (MDOT), continues to work in partnership with Maryland State Police to complete a training video for law enforcement officers on effective enforcement for bicycle safety, adapted material from the NHTSA national curriculum and tailoring to address Maryland-specific laws and issues. The video, which will addresses risk behaviors on the part of bicyclists and motorists, will be promoted to state and local law enforcement agencies to improve the consistency of traffic law enforcement for bicycle safety.

- MHSO continued to provide coordination and support for bicycle and pedestrian safety initiatives statewide. SHA led the development of a Priority Pedestrian Location project, which identified the 24 top locations for pedestrian crashes on the state highway system, and began the development of action plans to address the issues identified at these locations. MHSO worked in tandem with SHA in adding the 3 E's of Highway Safety at many of these locations.

- MHSO and its partners distributed more than 40,000 pieces of educational material, including StreetSmart-branded materials, school system electronic pedestrian safety alerts, pedestrian safety law cards, booklets for school aged children, copies of the Bicycling in Maryland booklet and the DVD Competence and Confidence: an Adults Guide to Safe Cycling, and other materials.

Challenges

- The longstanding DC StreetSmart media outreach and enforcement program has had only limited effectiveness in changing awareness and attitudes, particularly when more than one message is being conveyed as a part of the campaign. In August, 2012, the StreetSmart steering committee awarded a contract to a new media vendor to help rejuvenate the program.

- Transportation infrastructure, land use patterns and transit have important effects on pedestrian mobility and safety. This interrelatedness makes developing a comprehensive pedestrian safety a complex effort. The traditional "E" of engineering needs to be expanded to mean "Environment" to recognize the influence of many environmental factors, and to attract the involvement of nontraditional partners for traffic safety.

- Pedestrian safety enforcement is a relatively low priority activity for most law enforcement agencies. Very few officers have received formal training on pedestrian laws and law enforcement operations and techniques.

- Impaired pedestrians make up a significant proportion of fatalities in some high pedestrian crash areas. These are difficult crashes to countermeasure, as they are often related to substance abuse issues which go beyond the scope of traditional traffic safety strategies.

Motorcycle Safety

INTERIM MOTORCYCLE SAFETY GOALS:

	2011	2012	2013	2014	2015
Fatalities	83	79	75	71	67
Serious Injuries	1,568	1,502	1,436	1,370	1,304
Total Injuries	83	79	75	71	67

Motorcycle safety continues to be a significant concern in Maryland. Ridership increased dramatically in recent years and the numbers of crashes, injuries, and fatalities involving motorcyclists has increased correspondingly. Excessive speed on the part of the motorcycle rider is a predominant factor in fatal motorcycle crashes. Motorist failure to yield right of way continues to be a significant problem in motorist-motorcyclist crashes.

The motorcycle safety program continues to focus on two major areas: rider responsibility and driver awareness. Rider responsibility includes proper licensing and skill training, the use of protective equipment, and responsible riding behavior. Riders are reached through outreach at public events and by involving leaders of the motorcycle community in the development of safety campaigns. Driver awareness includes recognition of motorcycles as part of the traffic mix and proper scanning for motorcycles before initiating traffic movements, notably left turns across oncoming traffic. Driver awareness is achieved through paid and earned media campaigns.

While there are positive trends in motorcycle crashes, Maryland did not meet its end targets for crash, injury and fatality reduction by 2010; the final targets were calculated in 2004, before the tremendous increase in motorcycle ridership in 2005 and 2006.

Motorcycle Safety	2007	2008	2009	2010	2011	5-Year Average	5-year % Change
Fatal Crashes	91	78	67	72	68	75	-25.3
Injury Crashes	1,428	1,367	1,332	1,322	1,307	1,351	-8.5
Property Damage Only	322	358	487	533	505	441	56.8
Total Crashes	1,841	1,803	1,886	1,927	1,880	1,867	2.1
Total of All Fatalities	96	83	67	73	***70***	78	-27.1
Total Number Injured	1,661	1,568	1,596	1,558	1,512	1,579	-9

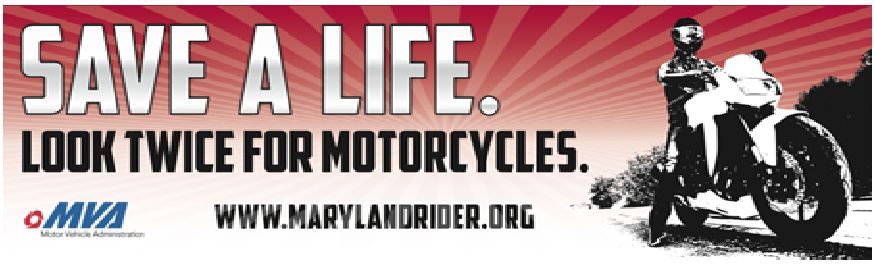
Motorcycle crashes decreased slightly from 1,886 in 2009 to 1,880 in 2011; the 2010 target was 1,508. Motorcyclist injuries decreased from 1,596 in 2009 to 1,512 in 2011; the 2010 target was 1,333. Fatalities decreased from a five year high of 97 in 2007 to 70 in 2011; the 2010 target was 65.

Objectives

- To decrease motorcyclist fatalities 18.7 percent from the 2008 calendar base year average of 91 to 74 by December 31, 2015.

- To decrease un-helmeted motorcyclist fatalities 20.0 percent from the 2008 calendar base year average of 10 to 8 by December 31, 2015.

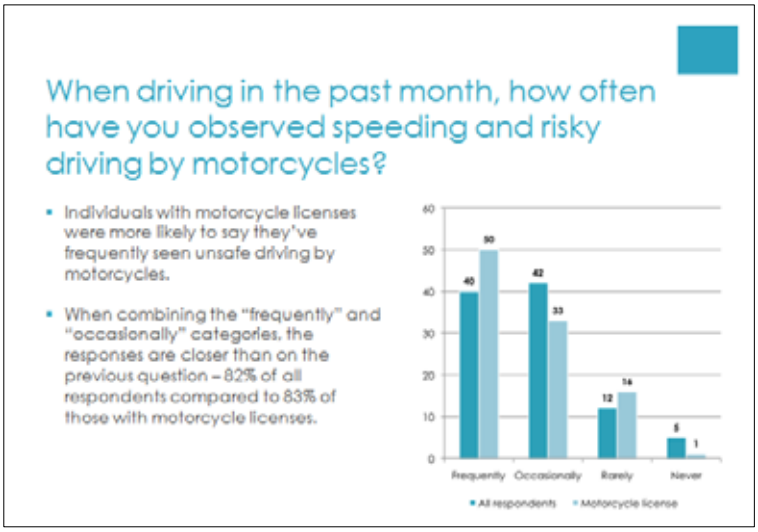
Accomplishments



- To kick off Motorcycle Safety Month, representatives of MVA, MHSO and riders from across the state participated in a successful press event at MVA headquarters on May 7th highlighting the need for both drivers and riders to share the road safely. Media outlets from Fox 45, WBAL, WJZ, WNEW-FM, and the Washington Post helped to create some significant earned media value and increased awareness about MVA's Motorcycle Safety Program.

- The MHSO delivered the Motorcycle Safety campaign between April 29 and September 29, targeting both Maryland motorcycle riders and motorists. The campaign utilized nearly $200,000 of NHTSA grant funding to procure billboards, cable television Public Service Announcements (PSAs), web banners, and direct outreach materials, including banners at each MVA location, and yard signs that were distributed by MHSO partners and stakeholders.

- The billboards were geo-targeted on roadways that are highly traveled by motorcycle riders around the State in Baltimore City, Frederick County, Prince George's County, Dorchester County and Queen Anne's County, and garnered over 38 million media impressions. Of those surveyed following the campaign, 24% of all respondents had seen at least one of the campaign billboards. By comparison, 76% of those with motorcycle licenses had seen at least one of the billboards.



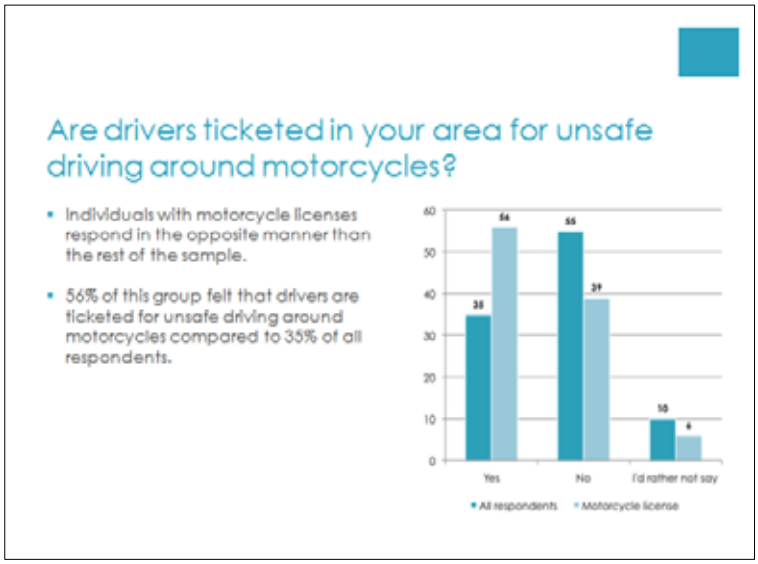
- Billboards remained in place after the paid media portion concluded for an added value of $31,357.00 and an additional 7,010,966 media impressions.

- Over 1,000 cable television spots aired throughout the state between May and October, and garnered nearly 4 million media impressions.

- An additional 1,585 free TV spots ran for an added value of $10,821.00 and an additional 6,007,150 media impressions.

- Display ads were placed on websites promoting motorcycles/riders and were geo-targeted through ISP addresses to residents of Maryland. Over 4 million media impressions were garnered through the digital investments.

- Post-campaign survey results provided rich, albeit interesting and ironic, information for use in preparing for FY13 efforts (see sidebars)



- During May, motorcycle safety month, MVA also conducted outreach at the *Dick Gelfman Ride Across Maryland* charity motorcycle ride. MVA participated as vendors to reach out to participants and to distribute motorcycle safety campaign materials. MVA staffed the event, and distributed safety promotional items and educational material.

- Maryland's overhead highway dynamic messaging signs (DMS) across the state displayed a "SHARE THE ROAD WITH MOTORCYCLES LOOK TWICE FOR BIKES" message at the beginning of Motorcycle Safety Month, in late May to promote motorist awareness of increased presence of motorcycles during the Rolling Thunder Rally in May and DelMarVa bike week in mid-September. Hundreds of thousands of motorists across the state were exposed to these important safety messages. Surveys reveal that roadway signs are a primary way in which Marylanders receive traffic safety messages.

MVA Administrator Kuo speaking at the Motorcycle Safety Rally and campaign kickoff in Glen Burnie.

- The MVA expanded its "Fast Track Licensing" events during the riding season. Riders who already did not have the required "M" endorsement were invited to take both knowledge and skills tests at an on-site mobile MVA training facility. This expedites the process for application and testing, and brings unlicensed riders into compliance. In 2012, the MCSP conducted eight *FAST-TRACK* licensing events at selected MVA branch offices. Two hundred and forty-five appointments were scheduled and the MCSP tested 176 applicants. One hundred and nineteen received a Class M license; fifteen received a Class M Learner's permit; and 42 failed the knowledge test or skill test.

- As a part of its rider training outreach program, the Motorcycle Safety Program participated in motorcycle events across the state to promote lifelong learning and skill training, incorporating the Honda *SmartTrainer* to draw

attention to the need for continuing rider education.

- The MHSO grant funded programs participated in 27 motorcycle safety outreach events, reaching more than 8,000 participants, and distributing more than 18,000 pieces of motorcycle safety material.

- As part of the initial rollout of media for May's Motorcycle Safety Month, several rider-to-rider PSAs were developed and distributed to motorcycle clubs and riders. These video vignettes probed riders about their experience on Maryland roadways, important messages to motorists, and the importance of protective gear. These initiatives helped garner buy-in with the riding community.

- The Red Knights Motorcycle Club held a rally on April 15, 2012 at the Hollywood Volunteer Fire Department, with rider to rider education and conducted outreach. The event provided three courses for basic skills for MVA testing, more advance knowledge practice and Ride Like a Pro - which included modules on passengers, tight circles, leading with eyes, and single lift of motorcycles. Three Ride Like a Pro educators and 3 motorcycle educators provided hands on guidance. A mechanical maintenance location was provided to check all bikes for a quick T-CLOCK inspection for participants. The MVA mobile unit was in place to assist and encourage participation in programs such as basic, and advance rider courses, and general information on obtaining motorcycle licenses. Leading up to the event, 7 press releases were issues, several radio stations aired announcer read promotions, informational flyers were placed on websites, 9 banners were donated and used to promote the Rally. In addition, a Facebook page was established. These combined efforts reached over 30,000 people in the target audience, Facebook along garnered 5,000 views in a 6 week period.

Challenges

- Developing effective and efficient law enforcement strategies for motorcycle safety continues to be a challenge. High visibility enforcement is possible around the state's larger motorcycle events; however, routine enforcement of traffic laws for motorcyclists and motorists using standard targeting techniques has not proven effective.

- Motorcycling continues to be a popular activity in warmer months and while fatalities have decreased from historic high levels, the number of crashes overall has not decreased. This leaves the potential for an increase in injuries and fatalities in the future.

Young Driver Safety

INTERIM YOUNGER DRIVER SAFETY GOALS:

	2011	**2012**	**2013**	**2014**	**2015**
Fatalities	106	101	96	90	85
Serious Injuries	10,309	9,875	9,441	9,007	8,573
Total Injuries	106	101	96	90	85

The leading cause of death for teenagers aged 15 to 20 years old in America is traffic crashes. Teens are involved in three times as many fatal crashes as all other drivers. Research shows that the major contributing factors to teen-related crashes are inexperience and immaturity, combined with speed, non-seat belt use, distracted driving, drowsy driving and impaired driving from alcohol or drugs.

Young Driver Safety	2007	2008	2009	2010	2011	5-Year Average	5-year % Change
Fatal Crashes	98	90	83	59	***61***	78	-37.8
Injury Crashes	7,357	6,581	6,266	5,346	***4,917***	6,093	-33.2
Property Damage Only	11,538	10,674	10,040	8,372	***7,524***	9,630	-34.8
Total Crashes	18,993	17,345	16,389	13,777	***12,502***	15,801	-34.2
Total of All Fatalities	112	106	88	64	***66***	87	-41.1
Total Number Injured	11,666	10,311	9,800	8,309	***7,644***	9,546	-34.5

Based upon objectives for the Younger Driver Safety program, the MHSO was able to meet and exceed the program objectives. Total young driver crashes declined, down from 16,389 in 2009 to 12,502 in 2011, the fewest number of young driver crashes since before 1998. The total number of injuries decreased from 9,800 in 2009 to 7,744 in 2011, reaching the 2015 goal for total injuries. The number of young driver involved fatal crashes decreased drastically from 83 in 2009 to 61 in 2011, with the number of fatalities once again surpassing the 2015 goal for fatal crashes. The total number of all fatalities decreased from 88 in 2009 to 64 in 2010.

Despite the fact that young driver crashes, injuries, and fatalities are on a generally declining trend in Maryland, young driver issues remain a concern in many communities across the state. The focus of traffic safety programs goes well beyond traditional driver education to involve young people and their parents, law enforcement, and schools in addressing this persistent traffic safety issue.

About 1,500 skills are necessary to operate a motor vehicle, many linked to observation, perception, interpretation, and anticipation, all occurring in the brain which American Medical Association studies show does not reach full maturity until mid-to-late 20's. Young drivers are often at risk of being in crashes due to driver inexperience and immaturity but, there are other contributing factors as well such as: not paying attention or distractions, failed to drive in single lane, failed to yield right of way. Secondary contributing factors for young driver crashes in Maryland include: driving too fast for conditions, failed to drive in a single lane.

Young driver safety programs in Maryland primarily focus on behaviors, laws and skill development. There are several other areas and topics of concentration. Some of those areas include driving skill and decision-making, occupant protection, impaired driving, speed and aggressive and distracted driving prevention, parental involvement and the Maryland graduated driver licensing (GDL) system. GDL has been directly linked to the reduction of young driver crashes and fatalities and research suggests that compliance with restrictions, although generally quite good, is far from universal.

A wide variety of community and high school-based programs have been implemented to address impaired driving, occupant protection and distracted driving including but, not limited to; mock crashes, impaired driving simulators, Fatal Vision goggles simulation exercises, Crash Dynamics, alcohol free post-prom educational outreach events, Teen Driving Agreements and Young Driver Parking Permit Programs. High schools across Maryland also participate in the Make it Click Program in partnership with local law enforcement and traffic safety educators to promote safety belt use.

Objectives

- Reduce annual fatalities involving young drivers from 106 in 2008 to 86 in 2015.

- Reduce annual injuries involving young drivers from 10,309 in 2008 to 8,573 in 2015.

Accomplishments

- The Every 15 Minutes Program, a two-day program that shows juniors and seniors the effects of distracted and impaired driving, was funded by a grant through the MHSO and implemented in the Mid-Western Region at South Carroll High School in the spring of 2012. The event includes a mock crash, mock trial, victim speaker panels, a mock memorial service and an educational assembly including a video chronicling recapping the events. Approximately, 600 students attended the educational assembly and 70 individuals were directly involved in the entire program process. As result from the program, new partnerships were developed by the program manager and an outpouring of support from local business will assist in future program expansion.

- The Baltimore Metro Region continued its involvement and support for Traffic Safety Week at Owings Mills High School in Baltimore County. The week included different elements such as: Safe Teen Driving Pledge and an educational presentation on crash dynamics. Approximately 350 students participated in the week long initiative increasing the awareness of the importance of safe driving behaviors as well as an enhanced understanding of the science of a crash.

- The Courtesy on the Road Program is an educational awareness program that focuses on the importance of young driver safety. More than 1,500 high school juniors and seniors who are licensed drivers in Howard County were exposed to the program and received educational materials. The program continued to keep the young drivers involved through constant follow-up through encouraging teen responses, weekly reminders. Due to graduation of teen the program does suffer from quick turnover in participants; however this could present an opportunity to offer the program at colleges in the area to continue to educate young drivers past high school graduation.

- The Make it Click Program initiative is a program targeting increased safety restraint use in young drivers and their peers and an increase awareness of the dangers of non-seatbelt use. This program is implemented in select high schools within Maryland. More than 14,000 individuals participated in the program this past year.

- The MADD: Power of Parents, It's Your Influence® Program is a parent initiative that includes two components:

    - An interactive Parent Website (madd.org/powerofparents) where parents can find tips to help keep their teens and community safe, and have the opportunity to submit questions to research experts in the alcohol prevention field; and

- A Community-Based Program (Parent Handbook). The goals of MADD's parent initiative was to influence parenting behavior to prevent underage drinking, maintain the 21 minimum drinking age law in all 50 states, and engage new supporters to carry on MADD's life-saving work. Through joint efforts with community partners, such as school officials, law enforcement, PTA, and coalitions, this community-based program provides ongoing opportunity to fulfill MADD's mission and prevent underage drinking by educating and equipping parents to talk with their teens about alcohol with the research-based parent handbook. The program involved over 5,000 participants and distributed more then 4,000 Action Measure Tool Surveys.

Lt. Woodward speaking at Boonsboro High School during the Stay Alive Don't Text And Drive Event

- MHSO convened three statewide meetings of the Young Driver Task Force to promote promising practices and programs and to ensure linkage and coordination among local programs and partners who share the same mission and organizational goals. The Young Driver Task Force is comprised of different individuals from: state and local law enforcement agencies, State Health Department, engineers and several other private and public sector organizations. On average, 35 individuals from around the state attended.

- Approximately 20,000 pieces of educational material were distributed to young drivers, parents and guardians, law enforcement officers, and community organizations.

- The MHSO continued outreach to establish new partnerships as well as the strengthening of current partnerships with external organizations to support young driver safety and ensure linkage between key stakeholders. Some of the partnerships include:
  - **Maryland Strategic Prevention Framework Group (MSPF):** The goal of this group is to bring awareness to the issues surrounding the underage drinking epidemic through strategic planning and outreach initiatives. The group has formed smaller county specific sub-groups around the state to focus on key problem areas.
  - **National Safety Council & AllState Teen Driving Coalition**: The Coalitions main goal is to focus on GDL and young driver safety issues such as distracted driving. Since the partnership was established, the Coalition has raised awareness of key young driver safety issues such as distracted driving through outreach and public education.
  - **State Farm® & Celebrate My Drive:** The focus of the Celebrate My Drive initiative was as an opportunity for communities to rally around teens as they start the learning to drive experience and advocate for safe driving behaviors. The MHSO assisted in the event coordination and logistics as well as the assistance in linking key stakeholders together on the local level.

- **Partnership for a Safer Maryland:** The main goal of this group is to increase prevention programs throughout local communities across the state. Through a collaborative partnership with this group educational material was distributed focusing on driver safety with a particular focus on distracted driving.

Challenges

- There is no accurate way to measure whether the information and collateral materials disseminated made an impact on behaviors.

- Budgetary constraints prevented the reproduction of a revised version of the younger driver informational booklet developed in 2010.

- A grant was provided to the Maryland MVA in FFY 2012 in relation to the Driver Improvement Program. The purpose of this project was to update and enhance driving instruction and education through the creation and implementation of a new Driver Improvement Program. The Driver Improvement Program (DIP) is currently used as a rehabilitative educational tool for novice drivers with a moving violation, and experienced drivers who accrue 5 or more points on their record. The project experienced set-backs in the original timeline due to contractor delays and product quality assurance. The revised curriculum was recently completed and received by the MVA and is currently in the review and approval process.

- In FFY 2012, a second grant was provided to the Maryland Motor Vehicle Administration focusing on Parent Education & Involvement in Teen Driving. The goal of this project was to focus on educating parents and teens about the risks associated with teen driving by developing a web-based "road map" application to guide parents and teens through the driver licensing process. This grant was terminated due to set-backs and delays in the original timeline attributed from internal MVA staff changes.

Older Driver Safety

INTERIM OLDER DRIVER SAFETY GOALS:

	2011	**2012**	**2013**	**2014**	**2015**
Fatalities	85	81	77	72	68
Serious Injuries	6,546	6,271	5,995	5,720	5,444
Total Injuries	85	81	77	72	68

According, to the US Census Bureau by 2030, one in five drivers will be aged 65 or older. By the same year, the percentage of residents aged 65 years or older in Maryland is expected to be roughly 25 percent of Maryland's projected population of 6.7 million, presenting serious concerns in relation to the safety of the state's older drivers.

Older Driver Safety	2007	2008	2009	2010	2011	5-Year Average	5-year % Change
Fatal Crashes	71	78	94	78	72	79	1.4
Injury Crashes	4,448	4,279	4,294	4,196	4,254	4,294	-4.4
Property Damage Only	5,647	5,528	5,737	5,778	5,881	5,714	4.1
Total Crashes	10,166	9,885	10,125	10,052	10,207	10,087	0.4
Total of All Fatalities	79	85	101	80	79	85	0
Total Number Injured	6,822	6,546	6,645	6,464	6,480	6,591	-5

Total injuries decreased from 6,645 in 2009 to 6,480 in 2011, total older driver-related fatalities also decreased from 101 in 2009 to 79 in 2011. The number of older driver-involved crashes increased slightly from 10,125 in 2009 to 10,207 in 2011, but remains the lowest level in the last ten years and below the statewide goal for fatalities.

Although, older driver injuries, and fatalities declined slightly, older driver safety remains a concern in many communities across the state. Crash levels have continued to fluctuate over recent years, and efforts to educate older drivers and their families and to enforce traffic laws for the safety of older driver are still considered necessary and even more important as traffic volume and speed increases, larger vehicles are manufactured.

The need to continue prevention and outreach efforts focused on this age group are even more important in times of variableness. The MHSO Older Driver Program includes five major areas of focus: driver self-awareness and assessment, driving skills and strategies, occupant protection, alcohol and drug impairment as well as the importance of medication management in relation to older drivers.

Objectives

- Reduce annual fatalities involving drivers 65 years or older from 85 fatalities in 2008 to 69 in 2015.

- Reduce annual injuries involving drivers 65 years or older from 6,546 in 2008 to 5,444 in 2015.

Accomplishments

- New partnerships were developed and existing ones strengthened with key stakeholders across the state:
    - **AARP Older Driver Representatives:** AARP local chapters were identified as a valuable network for future initiatives such as: leverage and distribution of Action Measure Tools (AMTs) Surveys.
    - **AAA Foundation:** Collaborative efforts with AAA on an educational session to bring awareness of older driver safety issues to more then 20 individuals in Dorchester County. Over 50 educational collateral materials (AAA Older Driver Brochure, MVA Older Driver Brochure) were distributed.

- The Older Driver Safety Symposium grant was provided to the Maryland Motor Vehicle Administration in 2011 to hold a one day educational and interactive forum on older driver safety with the purpose of engaging and educating policy makers, highway safety professionals and organizations as well as service providers. The Older Driver Safety Symposium provided over 200 attendees with an opportunity to hear the latest research and best practices, facilitate knowledge discussion on older driver safety issues and their relevance to Maryland.

- Through a grant administered by the Carroll County Department of Bureau and Aging, classes were offered in four Carroll County Senior Centers in April and May. A total of 58 mature drivers attended the classes with AARP course evaluations being completed at the end of each class. Evaluations produced excellent ratings in all categories, and the program was tied into the AMTs with attendees completing 58 Older Driver Action Measure Tool Surveys measuring knowledge, attitudes, and behaviors were completed.

- In a collaborative partnership between the Lower Shore RTSP and the Shorebirds Silver Sluggers Program, more than 800 educational materials were distributed at three separate Shorebirds baseball games.

- The MHSO's Older Driver Program Manager appeared on Contemporary Retirement Television and Radio programs to promote awareness of older driver safety as well as promotion of statewide older driver programs and initiatives.

- An estimated 2,000 pieces of educational material were distributed in correlation and support with the Older Driver program. Materials include but, are not limited to: Driving Safely While Aging Gracefully booklets and Family Conversations magazines produced by The Hartford, as well as the Mature Driver brochure developed by the Motor Vehicle Administration, and Roadwise Review Videos.

Challenges

- Providing education to the family members and caregivers of the older driver to help assist in identifying when a driver is at increased risk continues to be a challenge.

- Educating the medical community on the importance of medication management and potential effects on the driving ability of the older driver.

- Due to a lack of resources, the recruitment of law enforcement involvement in older driver improvement programs has been a barrier or obstacle.

- Due to the specialized area of expertise there is a continued need to educate the law enforcement community on:
    - The importance of medication management and potential effects on the driving ability of the older driver.
    - The importance of identification and documentation of older driver issues in relation to driving and the resources available at their disposal.
    - The purpose and functioning authority of the Medical Advisory Board (MAB) of Maryland.

Employer Involvement

Employers incur costs for injuries caused by traffic crashes through medical care, lost productivity, property damage, motor vehicle liability, and wage premiums. While employers bear the costs of injuries that occur both on and off the job, it is very important to implement workplace traffic safety programs to reduce motor vehicle crashes.

The Maryland Traffic Safety Awareness for Employers Project (T-SAFE) assisted Maryland employers in developing traffic safety programs to reduce costs associated with crashes. Prevention through a combination of employer support plus employee awareness and education increases general knowledge about traffic safety. The MHSO is dedicated to

partnering with many agencies and businesses to spread one common goal which is reduce fatalities, decrease injuries and drive down the economic cost of motor vehicle crashes.

Due to personnel changes in FY 2012, the T-SAFE project was placed on indefinite hold, and will eventually become a component of the Regional Traffic Safety Program and treated at the local level.

Distracted Driving

INTERIM DISTRACTED DRIVING PREVENTION GOALS:

	2011	**2012**	**2013**	**2014**	**2015**
Fatalities	264	256	248	240	233
Serious Injuries	2,768	2,713	2,658	2,605	2,553
Total Injuries	29,363	28,600	27,856	27,132	26,426

Over the past five years, an average of 55,633 inattentive or distracted driving crashes has occurred on Maryland roadways. On average, 257 people lost their lives each year due to distraction, representing 47% of all of Maryland's traffic fatalities. In addition, an average of 30,730 people has been injured annually, representing 65% of all of Maryland's traffic injuries.

Distracted Driving	**2007**	**2008**	**2009**	**2010**	**2011**	**5-year % Change**
Fatal Crashes	257	246	238	230	215	-16.3
Injury Crashes	22,580	20,879	20,140	19,236	19,483	-13.7
Property Damage Only	38,165	35,812	34,794	32,819	33,071	-13.3
Total Crashes	61,002	56,937	55,172	52,285	52,769	-13.5
Total of All Fatalities	284	270	252	249	***231***	-18.7
Total Number Injured	34,224	31,325	30,182	28,871	29,050	-15.1

Objectives

- Reduce annual fatalities involving distracted drivers from 290 fatalities in 2008 to 233 in 2015.
- Reduce annual injuries involving distracted drivers from 29,050 in 2008 to 26,426 in 2015.

Accomplishments

- Numerous partners procured media to support the "One Wreck or Call Could End it All" anti-texting campaign.
- The Maryland Motor Vehicle Administration supported AT&T's "It Can Wait" anti-texting campaign with press releases, digital media, and digital billboards within MVA branch locations. In support of this national initiative, Governor Martin O'Malley also proclaimed September 19, 2012, as No Text On Board Pledge Day in Maryland.
- With changes in Maryland's texting-while-driving ban in early 2011, approximately 4,000 revised law cards were distributed at numerous events by the RTSPs.

- Anne Arundel County Police Department, Calvert County Sheriffs Office, and Maryland State Police conducted distracted driving enforcement with a focus on texting on Anne Arundel County roadways. Eight different initiatives occurred during the summer and fall of 2012. The methods used included high-profile SUVs, motorcycle drive-bys, and officer stop teams.

Challenges

- For most of FY 2012, MHSO's Distracted Driving Program Manager position was vacant, significantly limiting the amount of resources dedicated to anticipated internal projects such as Drive Safely Work Week, and National Sleep Awareness Week.

- As MHSO shifts to handling just 4 core program areas in-house, with Distraction being one of them, MHSO will need to seek guidance from NHTSA on benchmark programs and best practices from other states. MHSO looks forward to the distracted enforcement results from the Delaware and California pilot projects.

Traffic Records Improvement Program

The Traffic Records Improvement Program's goal is to develop a comprehensive statewide traffic records system that provides traffic safety professionals with reliable, accurate, and timely data to inform decisions about traffic safety problems, implement proven countermeasures, and manage and evaluate safety programs. The traffic records system encompasses the hardware, software, personnel, and procedures that capture, store, transmit, analyze, and interpret traffic safety data. The data that are managed by this system include the crash, driver licensing and history, vehicle registration and titling, commercial motor vehicle, roadway, injury control, citation/adjudication, and EMS/trauma registry data.

The MHSO relies on many partner agencies to make data accessible for highway safety planning and employs a number of systems and programs, with the help of state agencies and grantees, to collect, maintain, and analyze its internal datasets, including the SHARP performance measures, and driver knowledge, attitude, and behavior data collected on the AMTs and MADS.

Coordination and cooperation among agencies is facilitated through the Traffic Records Coordinating Committee (TRCC), through Memoranda of Understanding between state agencies, through formal and informal working groups, and through project agreements for grant-funded programs and activities.

Each of the projects in FFY 2012 targeted one or more components of the traffic records system to make measurable improvements to one or more of the quality measures for these systems.

Objectives

- To decrease traffic fatalities (19.1 percent) from the 2008 calendar base year average of 591 to 478 by December 31, 2015.

- To decrease serious traffic injuries (19.2 percent) from the 2008 calendar base year average of 4,544 to 3,671 by December 31, 2015.

Accomplishments

- Maryland's Traffic Records Coordinating Committee (TRCC) Technical Council met six times and the TRCC Executive Council met three times. Results of these meetings included updates to the Traffic Records Strategic

Plan (TRSP) throughout the year, including the adoption of improved performance measures.

- Through the efforts of the MHSO and its data partners, the average number of days, statewide, between date of crash and availability in the SHA's crash database decreased from 276 days to 151 days. The reduction of the backlog at the Maryland State Police Central Records Division had a reverberating effect: processing of previous year's crash reports was accomplished sooner than in the previous year.

- In FFY 2012, the MCTSA staff successfully fulfilled 54 data requests through the Safety Transportation Knowledge Online (STKO) system, and increase from 44 data requests in FFY 2011.

- RTSP Managers throughout the state as well as MHSO Program Managers collected 6,900 surveys with 47 percent collected through electronic means. These surveys were analyzed by the MCTSA and there was a 94% correlation between the demographic survey outputs and the state's census profiles, matching on age, gender, and ethnicity.

- Content of the former STKO website was transitioned to other platforms due to the transition of the MHSO from SHA to MVA. The key components of the STKO framework, and the objectives of the project, will live on in the web pages of the MVA and MCTSA, as well as the website for the MCPA.

- Towson University was instrumental in assisting the Traffic Records Program in updating the strategic plan for FFY 2012.

- Towson developed a website titles the Quality Control Reporting Center (QCRC), which is a part of the State Highway Administration's Maryland Safety and Crash Analysis Network (MSCAN) that permitted highway safety personnel to run standard reports that analyzed crash data timeliness and provided the Traffic Record Program Manager information needed to make highway safety data decisions.

- Overall, the state experienced increases in the documentation of 911 Call Time (72.3% to 74.3%); documentation of Scene Arrival Time (94.1% to 94.6%); and most notably in the documentation of X/Y coordinates (0.6% to 31.6%). These measures indicate that the initial implementation at least maintained existing levels of reporting priority data and significantly improved location data which has been integrated into the eMEDS reporting tools for mapping queried data and results.

- The MHSO increased the total number of Emergency Medical Services Outcomes Project (EMSOP) participating directly with Electronic Maryland EMS Data System (eMEDS) and utilizing CAD connectivity. All but 3 EMSOPs (Anne Arundel County, Annapolis City, and BWI) out of the 18 active eMEDS users have implemented, or are in the process of implementing, the CAD interface. Those three are all tied to a single 911 dispatch center, which is in the process of changing CAD software vendor. Of the remaining 11 EMSOPS that have not implemented eMEDS or the CAD interface, 10 have committed to eMEDS implementation before the end of FFY 2013 end.

- In FFY 2012, the MIEMSS submitted (for the first time ever) 359,521 eMEDS records to NHTSA (through the NEMSIS processing agent in Utah) for the Calendar Year 2012 to date. All records submitted by MIEMSS passed validation rules for acceptance.

- A unique application was developed which programmatically searches the eMEDS database and creates a data dictionary. Among the many features this application offers is the identification of NEMSIS 2.2.1 national and non-national data elements, their Maryland specific definitions, validation rules, and a robust set of formatting and search options.

Challenges

- The roles and responsibilities related to the traffic crash records system in Maryland are not clearly defined. Functions which are interdependent are distributed among three state agencies—MSP, SHA and MVA and issues of data ownership, access rights and protocols, data timeliness and quality assurance, and data release remain significant concerns.

- There have been significant delays in and development of ACRS. Any delays in the development and release of the new electronic crash report result in the burden of manual data entry remains for all crashes reported to MSP, which means a perpetual backlog and outdated mode of processing crash reports.

- Consensus was reached in February, 2011 by the TRCC Executive Committee for agencies that are both stakeholders in Maryland's Model Impaired Driving Records Information System (MIDRIS) and data owners, to pursue the potential development of a MIDRIS in Maryland. The first step in pursuing such a development required a data inventory, or gap analysis, of the records information systems in Maryland that would comprise, or contribute to, a MIDRIS. A grant proposal with a one-year project plan to complete a data inventory, as recommended by NHTSA, was completed by the University of Maryland Institute for Governmental Service and Research (UMD IGSR). However, negotiations on grant costs delayed the approval and execution of the grant. Ultimately, the priority of this project was reduced significantly with the imposition of the following: the breakdown of the grant proposal negotiations, the reassignment and reprioritization of key TRCC members and stakeholder agency staff, and the transition of the MHSO from the SHA to the MVA. Interest in a MIDRIS was renewed at the November 16, 2011 TRCC Executive Council meeting where the MVA agreed to lead the efforts toward a MIDRIS starting in 2012. The MHSO's management counseled MVA Administrators on the scope and importance of such a project, and, subsequently, the MVA Project Managers were assigned to the MIDRIS project in July, 2012. Subsequently, the MCTSA's FFY 2013 grant proposal includes an objective to support the data needed for a MIDRIS.

Police Traffic Services

The MHSO administers a variety of federally funded highway safety programs and projects and almost every program includes a law enforcement component. Many of these programs cross over into multiple enforcement agencies across Maryland on the state, county and local levels, and successful deployment of these programs require skillful coordination of efforts.

The MHSO has developed many unique activities and programs that are specifically targeted towards aiding in the coordination and successful deployment of law enforcement activities that support MHSO objectives, and includes a close partnership with both the Maryland Chiefs of Police Association (MCPA) and the Maryland Sheriff's Association (MSA).

Objectives

- Reduce the annual number of traffic-related fatalities on all roads in Maryland from 592 in 2008 to fewer than 475 by December 31, 2015 (19.8 percent reduction).
- Reduce the annual number of traffic-related injuries on all roads in Maryland from 48,149 in 2008 to fewer than 40,032 (16.8 percent reduction) by December 31, 2015.

Accomplishments

- In conjunction with the MCPA and the Maryland Police & Correctional Training Commission (MPCTC) a ten week advanced supervisor's school for traffic unit and/or patrol commanders, including an entire week of Traffic Management, was held at the Public Safety Educational Training Center. This nationally recognized course developed by the Northwestern Traffic Institute, provided 400hrs of in-depth training on the importance of developing those skills necessary to become a future leader of a law enforcement agency. Thirty law enforcement officers successfully completed the training and student critiques were overwhelmingly positive.

- The Traffic Safety Specialist (TSS) designation program was initiated in a multi-agency partnership between the MPCTC, the MCPA, the MSA, and the MHSO to recognize those officers across Maryland that have attained a high level of training and expertise in traffic enforcement. To date there are more than 500 officers enrolled in the TSS Program. During FFY 2012, 63 officers obtained the TSS Level 1, 8 completed the requirements for TSS II, and 1 officer completed the requirements for the TSS III. An awards presentation ceremony was held in September 2012 recognizing recipients receiving this distinction.

- The MCRC met approximately every month to refine the training curriculum, schedule classes, assign students to classes, resolve training issues, and discuss pressing issues with crash reporting in the field. This group, comprised solely of Crash Reconstructionists, continues to function at a high level of sophistication, dedication, and professionalism while tackling tough training and reporting issues such as acquiring and properly reporting BAC on drivers involved in fatal crashes. New this year, the MCRC and the MHSO sponsored four motor vehicle case studies to law enforcement and highway safety advocates. These case studies allow for peer-reviewed critiques of crash reconstruction reports and help advance the knowledge base for new reconstructionists.

- There were a total of eight advanced Crash Reconstruction topics offered by the MCRC across the state including a Crash Scene Photography classes; one Crash Data Retrieval course; one Human Factors in Traffic Crash Reconstruction class; one Crush Determination for Crash Reconstruction class; and one Reconstruction Instructor Development course. Approximately 179 student officers were trained as a result of these course offerings, an increase of over 69 percent of officers receiving training as compared to FY 2011.

- In conjunction with the MCPA, the MHSO launched its *Toward Zero Deaths* program across the state. Resolutions were adopted by both the MCPA and MSA in support of this goal which is to reach a point of zero deaths. This initiative is supported by the MCPA and MSA organizations and their respective traffic safety committees.

- The MCPA/MSA dedicated a day of its annual training seminar to provide instruction on traffic safety issues. There were roughly 245 registered attendees and the participation of the MHSO in the annual Chief's and Sheriffs' Training Seminar continues to grow.

- Thirty LE Officers attended the Institute for Advanced Law Enforcement Studies (DUI Institute) in FFY 2012 and this program continues to have a high demand amongst the law enforcement community. Coordinated by the MHSO in conjunction with the University of Maryland, this nationally known police course provides an intensive, advanced instructional program for Law Enforcement officers who desire a more comprehensive understanding of impaired driving issues and are committed to taking a leadership role in DUI enforcement.

Challenges

- Given the unpredictability of the work/court schedules of police officers, attendance and filling available seats in law enforcement training sessions is problematic. Attending non-mandatory outside training is a secondary priority for law enforcement and unforeseen circumstances frequently prevents full rosters in all training classes, even those that involve costly instruction.

- Changing the police culture, especially as it relates to changing ambivalent attitudes regarding highway safety requires top-down support as well as sufficient credibility to be accepted by mid-level supervisors and line officers. Recruiting active participation requires officer incentives, recognition and diligent personal relationship management at all levels, with partnerships taking time to build.

- Frequent turnover in law enforcement agencies disrupts continuity of planning. Highway safety "champions" are frequently promoted, reassigned or retired. New personnel must be constantly groomed and indoctrinated.

Management Details

Financial Management

FFY 2012 brought many challenges for the MHSO, specifically the agency's Financial Management Section (FMS). Bearing responsibility for overseeing the management of state and federal highway safety funds, the FMS is the primary resource for reimbursing the MHSO's grant-funded partners as well as maintaining the proper flow of internal programmatic funding.

Throughout at least half of FFY2012 there were two vacant positions within the MHSO's FMS. In addition, the MHSO itself was relocated from the Maryland SHA to the Maryland MVA, creating tremendously complex budgetary issues that needed to be managed throughout the transition.

After the transition was made, SHA retained possession of the responsibility for the funds until the beginning of the state fiscal year on July 1. After the budget was transitioned fully to MVA, both the MHSO and the MVA faced a steep learning curve to understand each area's processes. That transition will continue through FFY 2013.

Representatives from the MHSO's Grants Management Team worked closely with personnel from the NHTSA Region III Office to create a complete listing of the required documents that grantees need to upload into SHARP for quarterly reports, other documents to have available for a site visit, and match documentation. Training for grantees will be conducted in early 2013 to review the requirements.

During FFY 2012, the MHSO was responsible for initiating the input of project data into the Federal Funding Accountability and Transparency Act Sub-award Reporting website (fsrs.gov). This is a new process, and will take time to learn all of the details but the MHSO's FMS successfully began the entry of the agency's projects and will continue this process into FFY 2013 and beyond.

Accomplishments

- Two finance managers were hired in FFY 2012 to fill open positions.

- The FMS oversaw the creation and release of the FFY 2013 grants application in SHARP.

- The FMS created a listing to guide grantees on required backup documents.

- The Grants Management and SHARP teams have held regular meetings to address reporting elements and to make improvement in future grants processes.

Challenges

- Throughout FFY 2013, the MHSO's FMS will face ongoing transition issues pertaining to the integration of the MHSO's budget into MVA's budget, and the full comprehension of various aspects of each agency's financial processes.

- Transitions in personnel have brought changes to the membership on the MHSO's Grants Management and SHARP teams. Achieving a greater level of consistency on those teams will benefit the MHSO by more effectively addressing the needs of the areas of grants management and the SHARP application.

Office Management

The Office Management Section (OMS) currently consists of an Office Manager, one Business Services Specialist, and during the summer at least two Interns from the Maryland Department of Transportation Fellows Internship Program. The OMS has the overall responsibility to provide administrative support to MHSO's management team, specifically the Chief, the Deputy Chief, the Safety Programs Section Chief, the Finance Section Chief, as well as programmatic and human resource support to the MHSO's Program Area Managers.

The OMS continues to provide support to the expanding program areas and the division as a whole, including coordinating events, bids for site locations, resources, and determining necessary resource materials. In addition, the OMS has a lead role in training the new staff on the current policies and procedures, location of files, electronic forms, and implementation of new policies and/or training as necessary. Throughout FFY 2012, the OMS has been responsible for various preparing various reports to GHSA, NHTSA, and MVA.

An important part of the Office Manager's duties center around grants management, and thus, the OM sits on the GMT. The Office Manager establishes an annual grantee monitoring schedule that conforms to the monitoring policy. Site visits will continue to be coordinated as required by MHSO policy.

Accomplishments

- The MHSO relocated from the Maryland SHA to the Maryland MVA in FFY 2012. The MHSO's Office Manager was the constant representative in the discussions regarding the move of personnel and equipment. Numerous challenges to this move were present from the start of the concept, including a physical move of more than 20 staff members and associated equipment, the realignment of agency policies and procedures to mirror those at the MVA, and a myriad of details made the transition extremely challenging, including:

    - The merge of MHSO's policies and procedures into existing MVA policies and procedures began to take place almost immediately;
    - The negotiation equipment and shared resources with the SHA to move with MHSO;

- The development of a complete inventory list and plan for the physical move of all MHSO equipment, including copiers, equipment and furniture, and of particular note, there was no data or work time lost by the MHSO's employees;
- Material and resources were inventoried and brought and are being catalogued into the MVA's warehouse facility by the BSS; and
- All elements of the transition were in place ahead of projected schedule.

- The MVA and the MHSO hosted the 2012 GHSA Annual meeting in Baltimore. Direct responsibility for the bulk of the preparations and on-site responsibilities fell to the OMS. The preparation for the Annual Meeting began in 2010 with the Office Manager attending the Annual Meeting in Kansas City, MO to gain knowledge of how the event was run. The following year the site location in Baltimore was secured and the planning began. In 2012 the preplanning work began, while MHSO was moving to MVA. Both the MHSO staff and MVA Staff worked diligently to make this event highly successful.

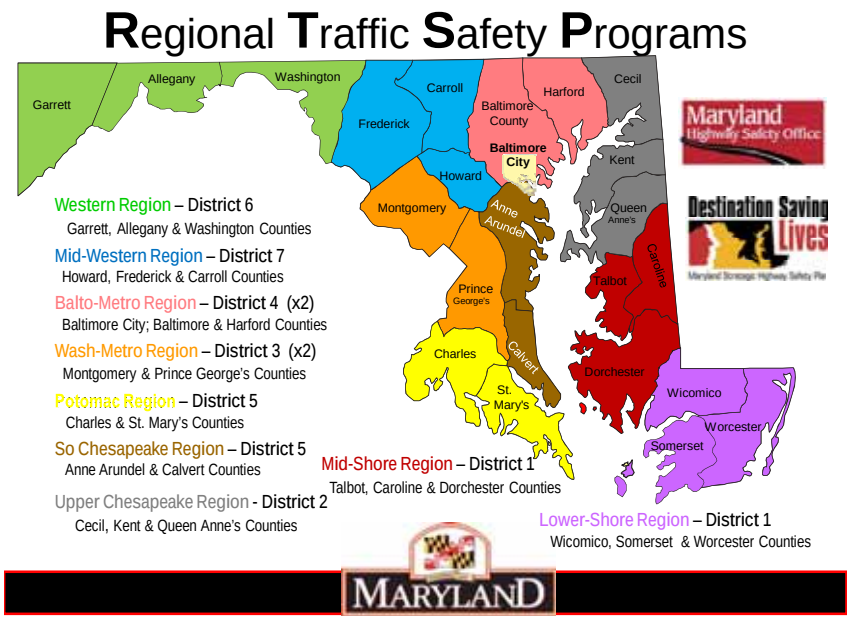
Challenges

- During FFY 2011, the OMS role expanded to include functioning as the Human Resource contact between the university personnel on staff with the MHSO and the University of Maryland Baltimore (UMB). Continuing to bear responsibility for personnel issues such as benefits, time certifications, travel requests and approvals, expenses, training, and leave requests takes away from the ability of the OMS to support the MHSO's Managers from a programmatic and grants management standpoint.

- The Office Manager is responsible for the negotiation and recruiting of new staff members. The hiring process at UMB is a long process and salary negotiations between the MHSO's Management and UMB requires weeks of back and forth and often hobbles MHSO for a lengthy period from being able to hire for the job immediately.

Regional Traffic Safety Program Section

The Regional Traffic Safety Program is comprised of 11 program managers in 9 regions that represent Maryland's 23 counties and Baltimore City. The team is responsible for the MHSO's outreach efforts by acting as a catalyst to market programs, messages and campaigns at the local level. Additionally, the RTSP managers provide grant funding by identifying and quantifying traffic safety problems to local stakeholders and monitoring those projects to ensure compliance. The RTSP team serves as MHSO's field operations staff that is committed to ensuring coordination, collaboration and cooperation with both traditional and on traditional highway safety partners.



The RTSP Program was fully functional in FY2012 for the first time since the program's

reorganization from a community traffic safety program to a regional model. The MHSO management team was busy hiring program managers for each of the 9 regions. Five member interview panels were formed for each of the regions and were made up of the highway safety's three E's model. Key personnel from law enforcement, engineering and the education community were represented on the interview panels for each of the regional programs. Additionally, the Deputy Chief and the RTSP Section Chief from MHSO also served on the interview teams. A total of 42 candidates were interviewed for 11 vacant positions. The hiring process resulted in staffing the regions with managers. Personnel movement within two regions left the Upper Chesapeake Region vacant for the later portion of FY 2012.

With new staff, the MHSO recognized the need for team members to enroll in four critical highway safety trainings. Therefore, the MHSO hosted the National Highway Traffic Safety Administration's (NHTSA) Program Management course, Financial Management training, Instructor Facilitator class and the Impaired Driving course selection. These trainings ranged from three to five days of classroom work. They were spread over a 4 month period and were mandatory for the RTSP team. The MHSO also welcomed other state highway safety offices to enroll in the Maryland sponsored classes.

In addition to the RTSP team embarking on an intense training schedule, they also spent an 8 hour day, learning how to strategically plan and allocate funding to their local partners. The day long process involved problem identification through the explanation and delivery of crash and injury data for each of Maryland's 24 jurisdictions. GIS maps were developed for each program area and used for determining high risk roadways. These maps helped to not only identify specific location targeting, but aided in the identification of law enforcement partners having patrol responsibilities in the identified corridors. Border to border patrols were encouraged where problem roadways connected with other jurisdictions. Once the problem identification process was complete, the RTSP team worked with the rest of the MHSO team and the National Study Center for Trauma and EMS to determine proven countermeasure strategies, evaluation measures and lastly, to identify partners for the programming. The training armed the RTSP team with the skills and tools necessary to develop local strategic plans for each of Maryland's 24 jurisdictions.

Management worked to build and cohesively gel the team by offering trainings, holding monthly update calls and meeting quarterly with the RTSP team. Additionally, management matched individual skills and abilities with office needs. Collateral responsibilities were given to managers and included inventorying equipment, developing and maintaining an enforcement productivity database, coordinating a grants management policy and procedure manual, planning MHSO's annual training meeting, serving on the grants management team and conducting a single audit and indirect cost inventory.

The RTSP program managers remained busy throughout the year building multi-jurisdictional task forces, formulating strategic action plans that were locally owned and operated, managed the majority of grants for the MHSO and aligned and leveraged resources from MHSO and its safety partners to collectively address safety challenges and discover opportunities.

The impact of the overall performance of the RTSP managers on MHSO has been outstanding. As the office continues to grow, the RTSP managers will continue to build relationships, share best practices, improve coordination and strengthen networks between partners for future cooperation.

Accomplishments

- Ten program managers were hired in FFY 2012 to fill open positions, and one RTSP Section Chief was hired to manage the section.

- Of the 175 highway safety grants awarded in FFY 2012, approximately 135 were monitored and tracked through the RTSP Program.

- The RTSP managers diligently surveyed over 6,000 respondents for the Maryland Annual Driver's survey. This was the first time in MHSO history that the office successfully surveyed respondents that matched the state's demographic census profiles, making the surveys truly representative of Maryland residents. Valuable knowledge, attitudes and belief impact evaluation measures were obtained through this survey program.

- In FFY 2012, 24 local strategic plans (one for every county plus Baltimore City) based on a sound problem identification process were created by the RTSP Managers. These plans provided a conceptual framework and blueprint for establishing priorities at the local level. The plans positioned the MHSO and its partners to play an influential role in current and emerging prevention initiatives.

- Eighteen multi-disciplinary task forces were formed at the RTSP level and guided the overall planning, implementation and evaluation of the local highway safety programs.

- A database was developed to track law enforcement grantee productivity as an evaluation measure for programming. FY 2012 marks the first year for this formal evaluation program of grant funded law enforcement efforts.

- An indirect cost inventory was conducted to determine Cost Allocation Plans on file and determine certification of these plans by grantees receiving indirect costs.

- The Toward Zero Deaths (TZD) ideology was supported by the RTSP through assisting in the creation of three safety videos and the sponsoring of two area media events in the Mid Shore and Washington Metro RTSP Regions.

Challenges

- The RTSP managers receive most of MHSO's grantee customer service feedback. Administrative tasks continue to burden grantees resulting in several grantees pulling out of the MHSO grant program.

- Due to vacant positions and internal promotions, the RTSP team has not benefited from a fully staffed program since its inception. This has resulted in RTSP managers helping other jurisdictions with programming, grant administration and oversight.

- Since the RTSP team serves as the office's field staff, daily contact is not achieved with the home office, leaving managers sometimes out of the loop on office happenings. The office will continue to strive for greater communication amongst all staff.

Safety Programs Section

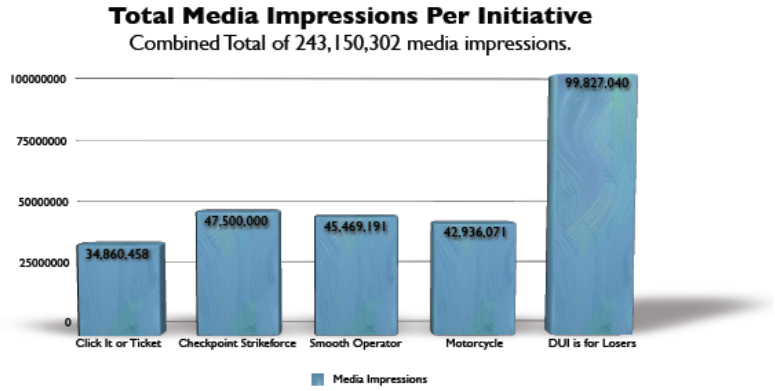
The MHSO is the state's leading voice for highway safety and its mission is to work "Toward Zero Deaths" on its highways and is the guiding force behind the development and implementation of statewide marquee traffic safety programs, including Occupant Protection, Impaired Driving Prevention and Aggressive Driving Prevention. Supplemental highway safety programs include Distracted Driving Prevention, Pedestrian Safety, Younger Driver Safety, Older Driver Safety, Bicycle Safety, Motorcycle Safety, and Traffic Records Improvement. On average, the MHSO is responsible for the annual management of between 150 and 200 highway safety grants.

During FFY 2012, the MHSO experienced a physical transition from the SHA to the MVA and this transition presented an array of administrative and business operation opportunities, as well as challenges.

Accomplishments

- One significant reorganizational issue was the official assimilation of the former MHSO Safety Support Section, which included the Traffic Records manager and the Data Specialist, by the Safety Programs Section. The MHSO management team determined that the Safety Programs Section would benefit greatly from this transition and would develop more efficient and strategic program plans, via a structure that relies on cross training, understanding every program area and its countermeasures, co-messaging, and leveraging education and media efforts.

- In order to manage the challenge of these changes, the Safety Section implemented monthly team meetings and individual issues meetings with the Section Chief to maintain consistent communication among the State managers. These meetings provided an opportunity to:
  - delegate work among the team for annual or special projects;
  - present a regular means for discussing grants' management issues;
  - provide managers with an opportunity to take on collateral projects and/or be more involved in business operations committees such as the Grant Management Team, SHARP management and development team, and the Annual Training Meeting Team;
  - develop a strategic planning calendar for more coordination statewide among the regional managers and their local grantees; and
  - coordinate the first internal program agreement work session among the state managers in order to leverage State and Regional program needs.



- To further manage capacity within the Safety Program Section, management decided to rely more on its partners for the implementation of the Distracted, Pedestrian and Bicycle, Younger and Older, and Motorcycle safety programs. For example, MVA has been the recipient of highway safety grant funding for the Motorcycle Safety Program and has successfully developed and implemented programs in that area. Rather than rely and duplicate efforts, this will remain the practice with an MHSO manager shepherding the objectives and goals of this program via a highway safety grant. Similarly, the objectives and goals of the Distracted, Bicycle, Younger and Older Safety Programs, will be

delegated to a partner agency. The SHA has agreed to apply for a highway safety grant to manage a statewide Pedestrian safety campaign in coordination with the Baltimore and DC Streets Smart projects. This approach is an efficient means for managing the capacity of the Safety Program Staff and continuing to meet the needs of the state. A new position is being developed within the MHSO that will be responsible for identifying and managing partner agencies to carry out these programs.

- Another shift for the Safety Programs Section is the management decision to hold combined Statewide Task Force and Coalition meetings bi-annually (Spring and early Fall) for all program areas. To further galvanize the activities of the Strategic Highway Safety Plan Emphasis Area teams and to ensure those activities are congruent with statewide coalition meetings, it was decided by MHSO management to combine those program-specific teams and statewide coalitions. It is hoped that this new practice will ensure capacity management and ensure efficient business practices; this new approach will be implemented during FFY 2013.

Challenges

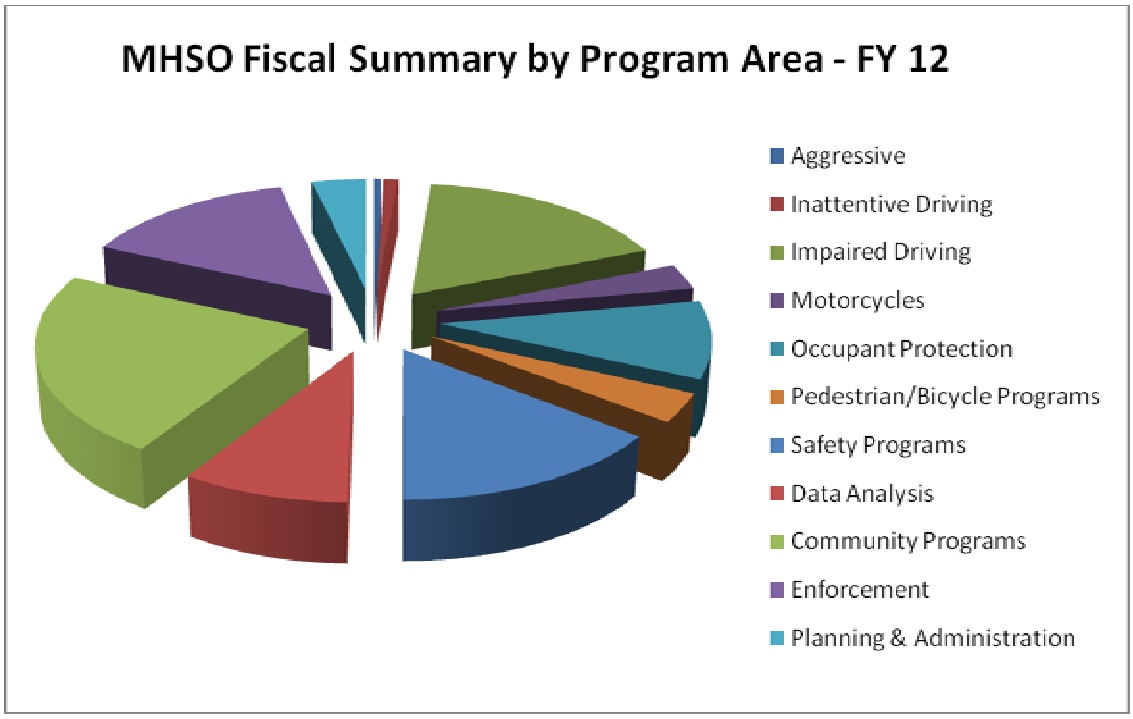
- The assimilation of program divisions left the Support Section Chief with oversight responsibilities of the Strategic Highway Safety Plan, and providing support to the MVA's legislative and StateStat reporting tasks. Through attrition, this position was left vacant and subsequently the Support Section Chief position was eliminated leaving all program management and support needs under one Section Chief.

- In addition, the Pedestrian and Motorcycle Safety Program management position was left vacant, as was the Distracted Driving program when the respective former program managers successfully interviewed for other positions within the MVA and the MHSO.

More change is inevitable for the MHSO, the key is to manage change positively and to see change as an opportunity. The Safety Programs Section has proven that it is working consistently toward finding solutions to the constantly changing environment and meeting the needs of its partners.

Financial Details

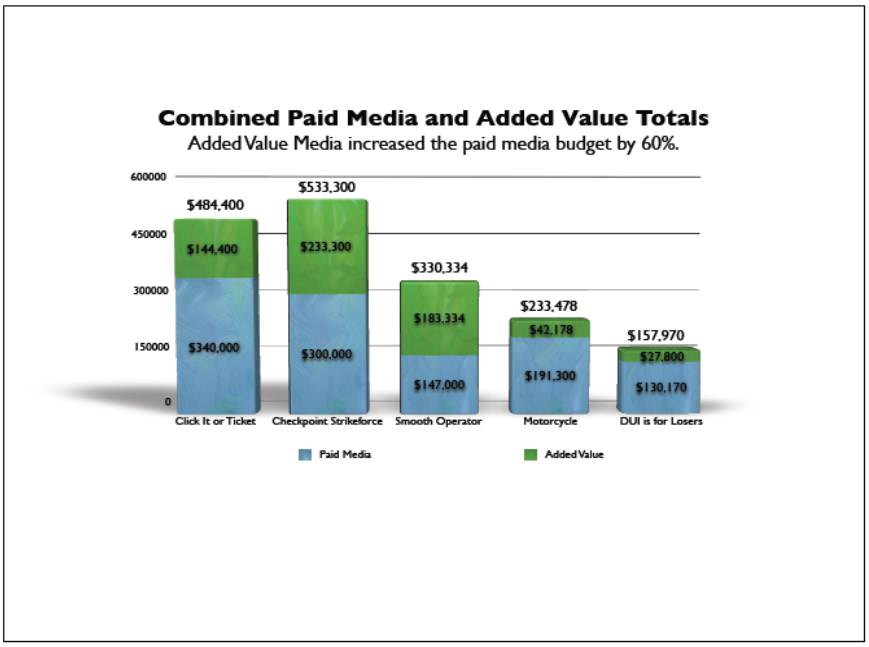
The following pie chart and spreadsheet represents a visual accounting of how MHSO expended its allowable funds in FFY 2012. Each program area includes initiatives such as training, overtime enforcement funding, public education and outreach, and data analysis, to name a few.



Fiscal Summary - FFY2012

Program	402	405	406	408	410	2010	2011	164	Totals	% of Total
Aggressive	$0	$0	$29,960	$0	$0	$0	$0	$0	$29,960	0.46%
Inattentive Driving	$65,680	$0	$0	$0	$0	$0	$0	$0	$65,680	1.01%
Impaired Driving	$0	$0	$0	$0	$1,128,782	$0	$0	$0	$1,128,782	17.39%
Motorcycles	$38,005	$0	$0	$0	$0	$171,992	$0	$0	$209,997	3.24%
Occupant Protection	$0	$376,549	$0	$0	$0	$0	$253,579	$0	$630,128	9.71%
Pedestrian/Bicycle Programs	$233,479	$0	$1,118	$0	$0	$0	$0	$0	$234,597	3.62%
Safety Programs	$809,804	$0	$148,175	$0	$0	$0	$0	$0	$957,979	14.76%
Data Analysis	$143,404	$0	$0	$428,861	$0	$0	$0	$0	$572,265	8.82%
Community Programs	$1,478,493	$0	$0	$0	$0	$0	$0	$0	$1,478,493	22.78%
Enforcement	$138,209	$0	$0	$0	$804,749	$0	$0	$0	$942,958	14.53%
Planning & Administration	$238,280	$0	$0	$0	$0	$0	$0	$0	$238,280	3.67%
									$0	
TOTALS	$3,145,354	$376,549	$179,253	$428,861	$1,933,531	$171,992	$253,579	$0	$6,489,119	100.00%

MHSO strives to leverage as much reciprocity and added value with each of its investments and initiatives, including matching funds and in-kind services from its numerous partners. MHSO's longstanding relationships with media outlets allow for significant amounts of added value when placing media buys. Below is a chart outlining the amounts of added value for MHSO's marquis programs for FFY 2012.



Graph: Programmatic Media Breakdown for Marquis MHSO Programs – FY 12

Conclusion – A Look To The Future

Maryland's highway safety community has had a lot to hang its collective hat on in the past few years. A supportive legislature has allowed Maryland to have one of the most comprehensive Graduated Driver Licensing programs and Ignition Interlock programs in the country. A forward-thinking law enforcement culture that recognizes the immediate and long-term benefits of integrating their highway safety efforts into their public safety ethos has resulted in comprehensive and savvy deployment of front line officers throughout the state. A public health community that has embraced the need for improved data collection and dissemination has helped move the highway safety community into the 21st century.

But the fight is far from over.

In FY 2012 the MHSO helped develop its own brand of Toward Zero Deaths, an initiative spawned by the American Association of State Highway Transportation Officials. With its intent of unifying multiple segments of the highway safety community, the MHSO hopes to develop the program and mantra of maximizing limited highway safety resources into tangible and consistent reductions in highway crashes and associated injuries and fatalities. Not just another brand, but a recognition and proclamation of Maryland's intent, Toward Zero Deaths represents the next evolution of how MHSO moves forward. The MHSO's largest programs will be targeted for a significant boost in focus and resources, as they represent the greatest opportunity for reductions in crashes and fatalities. Even within those marquee programs, segmentation will occur to ensure that the public knows that we are speaking to them, not at them. Technology will help support and facilitate to those agencies and partners that need it. The MHSO has some lofty goals for the future, but we wouldn't have it any other way.

Appendix A – Overall Impact Objectives

- To decrease traffic fatalities 19.8 percent from the 2008 calendar base year of 591 to 474 by December 31, 2015.
  - FARS data indicate that Maryland has progressed towards the 2015 goal, reaching 485 total fatalities in 2011.
- To decrease serious traffic injuries 13.2 percent from the 2008 calendar base year of 4,544 to 3,945 by December 31, 2015.
  - Maryland state crash data indicate that the 2015 goal was met, with 3,798 total serious injuries in 2011 (KABCO=4).
- To decrease fatalities/100 MVMT 19.8 percent from the 2008 calendar base year of 1.07 to 0.86 by December 31, 2015.
  - FARS data indicate that Maryland has progressed towards the 2015 goal, reaching 0.88 total fatalities/100M VMT in 2010 (2011 FARS rates unavailable at this time).
- To decrease rural fatalities/100 MVMT 19.8 percent from the 2008 calendar base year of 1.59 to 1.28 by December 31, 2015.
  - FARS data indicate that Maryland has reached the 2015 goal, reaching 1.27 rural fatalities/100M VMT in 2010 (2011 FARS rates unavailable at this time).
- To decrease urban fatalities/100 MVMT 19.8 percent from the 2008 calendar base year of 0.90 to 0.72 by December 31, 2015.
  - FARS data indicate that Maryland has progressed towards the 2015 goal, reaching 0.74 urban fatalities/100M VMT in 2010 (2011 FARS rates unavailable at this time).
- To decrease unrestrained passenger vehicle occupant fatalities in all seating positions 19.8 percent from the 2008 calendar base year of 142 to 114 by December 31, 2015.
  - FARS data indicate that Maryland is progressing toward the 2015 goal, reaching 139 total unrestrained passenger vehicle occupant fatalities in all seating positions in 2011.
- To decrease alcohol-impaired driving fatalities 19.8 percent from the 2008 calendar base year of 145 to 116 by December 31, 2015.
  - *Note: Alcohol-Impaired driving fatalities are all fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 or greater.*
  - FARS data indicate that Maryland reached 162 alcohol-impaired fatalities in 2011, not progressing towards the 2015 goal.
- To decrease speeding-related fatalities 19.8 percent from the 2008 calendar base year of 192 to 154 by December 31, 2015.
  - FARS crash data indicate that the 2015 goal was met, with 142 speeding-related fatalities in 2011.
- To decrease motorcyclist fatalities 19.8 percent from the 2008 calendar base year of 91 to 73 by December 31, 2015.
  - FARS data indicate that Maryland is progressing towards the 2015 goal, reaching 76 motorcyclist fatalities in 2011.
- To decrease unhelmeted motorcyclist fatalities 19.8 percent from the 2008 calendar base year of 10 to 8 by December 31, 2015.
  - FARS data indicate that Maryland reached 11 unhelmeted motorcyclist fatalities in 2011, not progressing towards the 2015 goal.

- To decrease drivers age 20 or younger involved in fatal crashes 19.8 percent from the 2008 calendar base year of 93 to 74 by December 31, 2015.
    - FARS crash data indicate that the 2015 goal was met, with 63 drivers age 20 or younger involved in fatal crashes in 2011.
- To reduce pedestrian fatalities 19.8 percent from the 2008 calendar base year of 116 to 93 by December 31, 2015.
    - FARS data indicate that Maryland is progressing towards the 2015 goal, reaching 102 pedestrian fatalities in 2011.
- The seat belt observation methodology was revised in 2012. These revisions resulted in a seat belt use rate of 91.1%. Future goals will be based upon this rate.

Appendix B – Maryland Annual Driving Survey Report

2012

Maryland Annual Driving Survey

Final Report

Prepared by

The National Study Center for Trauma and EMS, University of Maryland, Baltimore

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Executive Summary

In accordance with data collection strategies outlined by the Governor's Highway Safety Association (GHSA), the Maryland Highway Safety Office once again conducted its Maryland Annual Driving Survey (MADS) 2012. During July, a total of 6,900 surveys collected from across the state with 47% of those being submitted electronically through Survey Monkey. The distribution of respondents across the state was highly correlated with population distributions from the Census Bureau, meaning that results of the 2012 MADS are representative of the Maryland population.

Maryland has had a primary seat belt law for front seat occupants for many years and the MADS asked about support for expanding that mandatory law to passengers riding in the back seat of vehicles. Women and older respondents were more likely to support that law.

Reported behaviors differed between those respondents who identified as heavier drinkers (driven within 2 hours after drinking alcohol 3 or more times in the last 30 days) and the lighter/non-drinkers. A higher proportion of heavier drinkers believed there was little chance of arrest when drinking and driving (30% v 25%). They were also less likely to report wearing their seat belt *always* (66% v 86%).

Of all respondents, more reported noticing speed enforcement (75%) than impaired driving (69%) or seat belt use (59%) enforcement in the last 30 days.

Maryland has continued to make progress towards reducing motor vehicle fatalities and injuries despite increases in population and vehicle miles of travel. However, while Maryland's total number of traffic fatalities has dropped (651 in 2006 to 496 in 2010), the frequency of alcohol and/or drug impaired fatal crashes has not (171 in 2008, 173 in 2009 and 177 in 2010). In addition, Maryland's seatbelt usage rate has remained fairly constant at a level of higher than 90% for several years. Despite these changes, Maryland would like to continue making a difference. The theory is that the some of the roadway crashes are being caused by individuals who engage in risky driving behaviors. Through the 2012 MADS, researchers sought to identify those risky individuals through the inclusion of behaviorally defined questions. The aim is to examine the association between how individuals respond to risk-taking behavioral questions and the other traffic-related behavioral questions. The survey also aims to determine if there is a difference between those identified as high, moderate, and low risk.

The results of the survey were compiled and stratified into three groups, based on whether surveyed individuals responded to the three risk-taking questions in a risky manner, thus identifying them as high, moderate or low risk respondents. Those that indicated risk-taking in all three behavioral questions (high risk) represented 4% of respondents and those who answered two of the three questions were identified as the moderate risk takers (26% of all respondents). Higher proportions of risk-takers were identified on the Eastern Shore, as compared to the Southern or Western Maryland counties. Young males scored higher on the risk-taking questions. Regardless of gender, risk-taking declines with age.

The findings contained in this report provide more detail about these different classifications of individuals. Overall, high and moderate risk respondents were more likely to report 'riskier' behavior for all questions. This information will be helpful for the Maryland Highway Safety Office to develop programs and direct activities towards risk-taking individuals.

Background

Risk-taking, impulsivity and sensation seeking behaviors have been studied in an effort to better understand human behavior. In the past, researchers have found that those types of behaviors were common among individuals who engaged in risky activities such as skiing, mountaineering, parachuting, and deep sea diving (Kusyszyn et al, 1973; Hybaugh and Garrett, 1974; Connolly, 1981). Cherpitel explored things further in an effort to understand the conjoined effects of such personality traits on alcohol consumption and the influence on injury occurrence (1993, 1999). In her work she concluded that perceptions of risk and impulsiveness may be even more important predictors of injury in a motor vehicle crash than even alcohol use: "The injured were less likely to score high on risk perception and more likely to score high on risk-taking/impulsivity and sensation seeking than those with no injuries". Others have continued to validate the theory that survey responses could identify certain risk behavior characteristics and the association of risk perception in regards to risk-taking behaviors (Ryb et al, 2006, Soderstrom et al, 2001). The 2012 MADS explored these phenomena to see if it would be possible to identify risky respondents.

Research has defined risk- taking through the use of survey questions that would better define an individual's risk perception (i.e. likelihood of something bad happening), impulsivity (i.e. doing something at the spur of the moment), and sensation-seeking (i.e. I like to...experiences) behaviors. The 2012 MADS included three questions as a means of indentifying a risky sub- population of respondents:

a) How likely is it that something bad would happen to you if you drove without a seat belt? (measure of risk perception)
b) I often act on the spur of the moment. (measure of impulsivity)
c) I like to drive more than 10 mph over the speed limit. (measure of sensation seeking)

Findings

UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE
SHOCK, TRAUMA AND ANESTHESIOLOGY
RESEARCH CENTER

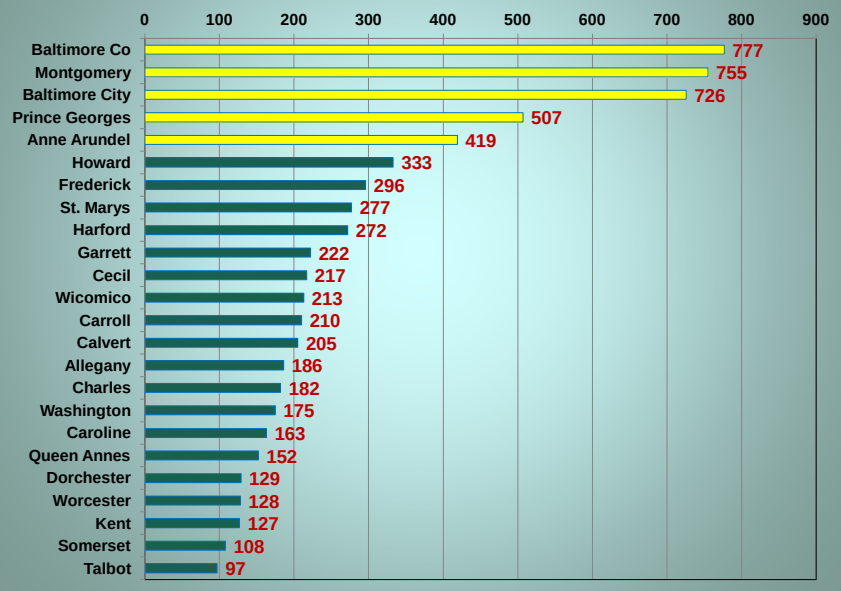
The *Risky Business* of MADS

Final Report for July 2012 Maryland Annual Driving Survey

MADS – July 2012

- Over 6,900 surveys collected
  - 5,300 surveys collected in 2010 & 2011 combined
- 47% compiled electronically
  - 18% in 2010 & 30% in 2011
- Good use of motor vehicle offices and summer festivals
  - Over 1,800 surveys collected at local MVA
  - Over 1,200 surveys collected at Artscape

MADS Collection by Jurisdiction



MADS vs. Maryland Census

Correlation = 94% -- Survey represents MD very well!

JURISDICTION	# OF SURVEYS	SURVEY PROPORTION	MD CENSUS PROPORTION
Baltimore Co	777	11.3	13.9
Montgomery	755	11.0	16.8
Baltimore City	726	10.6	10.8
Prince Georges	507	7.4	15.0
Anne Arundel	419	6.1	9.3
Howard	333	4.8	5.0
Frederick	296	4.3	4.0
St. Marys	277	4.0	1.8
Harford	272	4.0	4.2
Garrett	222	3.2	0.5
Cecil	217	3.2	1.8
Wicomico	213	3.1	1.7
Carroll	210	3.1	2.9
Calvert	205	3.0	1.5
Allegany	186	2.7	1.3
Charles	182	2.6	2.5
Washington	175	2.5	2.6
Caroline	163	2.4	0.6
Queen Annes	152	2.2	0.8
Dorchester	129	1.9	0.6
Worcester	128	1.9	0.9
Kent	127	1.8	0.3
Somerset	108	1.6	0.5
Talbot	97	1.4	0.7

MADS Demographic Profile

Age

- Under 30 25%
- 30-39 18%
- 40-49 23%
- 50-59 22%
- 60 & over 12%

Gender

- Male 48%
- Female 52%

Race/Ethnicity

- White 73%
- African American 21%
- Latino/Hispanic 6%

MADS vs. Maryland

Demographics

	MADS 2012	2010 MD Census
Age		
Under 30	25%	26%
30-39	18%	16%
40-49	23%	19%
50-59	22%	18%
60 and over	12%	22%
Gender		
Male	48%	48%
Female	52%	52%
Race/ethnicity		
White	73%	60%
African American	21%	31%
Hispanic	6%	8%

New Questions
Non-behavioral

Marylanders Injured in Car Crashes

- *Question 8* – Approximately how many people in Maryland do you think are injured in car crashes each year?

20-30,000	19%
30,001-40,000	22%
40,001-50,000	16%
More than 50,000	19%
Don't know	24%

Traffic Safety Organizations

- *Question 24* – When you think of traffic safety, which agency comes to mind? *(circle only 1 response)*

SHA	20%
MSP	62%
MDTA	4%
MVA	7%
Don't know	7%

New Question

Seat Belt Use

Support for Mandatory Seatbelt Law

- *Question 15* – What is your level of support for making seatbelt use mandatory in all vehicle seating positions?

Very supportive	68%
Somewhat supportive	17%
Not very supportive	6%
Not supportive at all	6%
Undecided	2%

Support for Mandatory Seatbelt Law

- *Question 15* – What is your level of support for making seatbelt use mandatory in all vehicle seating positions?

	Males	Females
Very supportive	62%	73%
Somewhat supportive	19%	16%
Not very supportive	8%	5%
Not supportive at all	9%	4%
Undecided	2%	2%

Support for Mandatory Seatbelt Law

- *Question 15* – What is your level of support for making seatbelt use mandatory in all vehicle seating positions?

	Age Group		
	Under 30	30-59	60 & over
Very supportive	63%	68%	73%
Somewhat supportive	20%	17%	15%
Not very supportive	8%	6%	5%
Not supportive at all	6%	7%	5%
Undecided	3%	2%	2%

New Question

Speeding

MPH Above Limit Before Ticketed for Speeding

- *Question 18* – How many mph over the posted speed limit do you feel you can go before police would give you a ticket for speeding?

5 mph or less	26%
6-10 mph	46%
11-15 mph	21%
16-20 mph	4%
Over 20 mph	2%

MPH Above Limit Before Ticketed for Speeding

- *Question 18* – How many mph over the posted speed limit do you feel you can go before police would give you a ticket for speeding?

	Males	Females
5mph or less	22%	31%
6-10 mph	47%	46%
11-15 mph	24%	18%
16-20 mph	5%	3%
Over 20 mph	3%	2%

MPH Above Limit Before Ticketed for Speeding

- *Question 18* – How many mph over the posted speed limit do you feel you can go before police would give you a ticket for speeding?

	Age Group		
	Under 30	30-59	60 & over
5mph or less	22%	27%	33%
6-10 mph	47%	46%	49%
11-15 mph	24%	21%	15%
16-20 mph	5%	4%	2%
Over 20 mph	3%	2%	1%

Alcohol Use

Drunk Driving Enforcement

- *Question 9* – In the past 30 days, have you read, seen, or heard anything about alcohol impaired driving (or drunk driving) enforcement by police?

Yes	69%
No	27%
Don't know	4%

Driving After Drinking

- *Question 10* – In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?

	MD	NHTSA (2008)*
5 or more times	3%	
3-4 times	4%	
1-2 times	15%	13% (1 or more times)
Never	78%	87%

** The next National Roadside Survey is slated for 2013.*

Driving After Drinking

- *Question 10* – In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?

	Males	Females
5 or more times	4%	2%
3-4 times	5%	3%
1-2 times	17%	12%
Never	74%	83%

Driving After Drinking

- *Question 10* – In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?

	Age Group		
	Under 30	30-59	60 & over
5 or more times	4%	2%	1%
3-4 times	6%	3%	3%
1-2 times	18%	15%	9%
Never	72%	79%	87%

Arrested for Drinking & Driving

- *Question 11* – What do you think the chances are of someone getting arrested if they drive after drinking?

Very likely	32%
Somewhat likely	40%
Not very likely	19%
Not likely at all	6%
Don't know	3%

Arrested for Drinking & Driving

- *Question 11* – What do you think the chances are of someone getting arrested if they drive after drinking?

	Males	Females
Very likely	31%	33%
Somewhat likely	39%	42%
Not very likely	21%	18%
Not likely at all	7%	5%
Don't know	3%	2%

Arrested for Drinking & Driving

- *Question 11* – What do you think the chances are of someone getting arrested if they drive after drinking?

	Age Group		
	Under 30	30-59	60 & over
Very likely	35%	31%	28%
Somewhat likely	44%	40%	36%
Not very likely	14%	20%	25%
Not likely at all	5%	6%	7%
Don't know	2%	3%	3%

Arrested for Drinking & Driving

- *Question 11* – What do you think the chances are of someone getting arrested if they drive after drinking?

Ques 10 (Driving After Drinking)

	3+ times	2 or fewer times
Very likely	30%	32%
Somewhat likely	39%	41%
Not very likely	21%	19%
Not likely at all	9%	6%
Don't know	2%	3%

Seat Belt Use

Seat Belt Enforcement

- *Question 12* – In the past 30 days, have you read, seen, or heard anything about seat belt enforcement by police?

Yes	59%
No	36%
Don't know	4%

Using Seat Belts

- *Question 13* – How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle, or pick-up?

All of the time	84%
Most of the time	9%
Some of the time	4%
Rarely	2%
Never	1%

Using Seat Belts

- *Question 13* – How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle, or pick-up?

	Males	Females
All of the time	80%	88%
Most of the time	11%	7%
Some of the time	5%	3%
Rarely	3%	1%
Never	1%	1%

Using Seat Belts

- *Question 13* – How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle, or pick-up?

	Age Group		
	Under 30	30-59	60 & over
All of the time	79%	86%	90%
Most of the time	12%	8%	6%
Some of the time	5%	3%	2%
Rarely	2%	2%	1%
Never	2%	1%	1%

Using Seat Belts

- *Question 13* – How often do you use safety belts when you drive or ride in a car, van, sport utility vehicle, or pick-up?

Ques 19 (Driving After Drinking)

	3+ times	2 or fewer times
All of the time	66%	86%
Most of the time	17%	8%
Some of the time	11%	3%
Rarely	4%	2%
Never	2%	1%

Ticket for No Seat Belt

- *Question 14* – What do you think the chances are of getting a ticket if you don't wear your safety belt?

Very likely	29%
Somewhat likely	36%
Not very likely	24%
Not likely at all	9%
Don't know	2%

Ticket for No Seat Belt

- *Question 14* – What do you think the chances are of getting a ticket if you don't wear your safety belt?

	Males	Females
Very likely	27%	30%
Somewhat likely	35%	36%
Not very likely	25%	23%
Not likely at all	11%	8%
Don't know	2%	2%

Ticket for No Seat Belt

- *Question 14* – What do you think the chances are of getting a ticket if you don't wear your safety belt?

	Age Group		
	Under 30	30-59	60 & over
Very likely	28%	28%	26%
Somewhat likely	34%	37%	34%
Not very likely	26%	23%	27%
Not likely at all	9%	10%	10%
Don't know	2%	2%	2%

Ticket for No Seat Belt

Question 14 – What do you think the chances are of getting a ticket if you don't wear your safety belt?

	Ques 13 (Belt use)	
	All/Most of time	Sometimes/Never
Very likely	30%	15%
Somewhat likely	36%	29%
Not very likely	24%	29%
Not likely at all	9%	15%
Don't know	2%	11%

Speeding

Speed Enforcement

- *Question 16* – In the past 30 days, have you read, seen, or heard anything about speed enforcement by police?

Yes	75%
No	21%
Don't know	4%

Ticket for Speeding

- *Question 17* – What do you think the chances are of getting a ticket if you drive over the speed limit?

Very likely	37%
Somewhat likely	46%
Not very likely	12%
Not likely at all	3%
Don't know	2%

Ticket for Speeding

- *Question 17* – What do you think the chances are of getting a ticket if you drive over the speed limit?

	Males	Females
Very likely	32%	41%
Somewhat likely	46%	46%
Not very likely	15%	10%
Not likely at all	5%	2%
Don't know	2%	1%

Ticket for Speeding

- *Question 17* – What do you think the chances are of getting a ticket if you drive over the speed limit?

	Age Group		
	Under 30	30-59	60 & over
Very likely	38%	36%	33%
Somewhat likely	45%	47%	46%
Not very likely	11%	12%	16%
Not likely at all	4%	4%	3%
Don't know	2%	1%	2%

Driving Over 35 mph

- *Question 19* – On a road with a speed limit of 30 mph, how often do you drive faster than 35 mph?

Most of the time	18%
Half of the time	34%
Rarely	37%
Never	9%
Don't Know	2%

Driving Over 35 mph

- *Question 19* – On a road with a speed limit of 30 mph, how often do you drive faster than 35 mph?

	Males	Females
Most of the time	19%	17%
Half of the time	35%	33%
Rarely	35%	39%
Never	9%	9%
Don't Know	2%	2%

Driving Over 35 mph

- *Question 19* – On a road with a speed limit of 30 mph, how often do you drive faster than 35 mph?

	Age Group		
	Under 30	30-59	60 & over
Most of the time	26%	17%	10%
Half of the time	36%	34%	30%
Rarely	27%	39%	46%
Never	7%	9%	12%
Don't know	3%	2%	2%

Driving Over 70 mph

- *Question 23* – On a road with a speed limit of 65 mph, how often do you drive faster than 70 mph?

Most of the time	23%
Half of the time	29%
Rarely	33%
Never	13%
Don't Know	2%

Driving Over 70 mph

- *Question 23* – On a road with a speed limit of 65 mph, how often do you drive faster than 70 mph?

	Males	Females
Most of the time	28%	19%
Half of the time	30%	28%
Rarely	30%	36%
Never	10%	15%
Don't Know	2%	2%

Driving Over 70 mph

- *Question 23* – On a road with a speed limit of 65 mph, how often do you drive faster than 70 mph?

	Age Group		
	Under 30	30-59	60 & over
Most of the time	35%	22%	10%
Half of the time	31%	30%	23%
Rarely	22%	35%	45%
Never	9%	12%	20%
Don't know	3%	1%	2%

Ticket for Speeding

- *Question 17* – What do you think the chances are of getting a ticket if you drive over the speed limit?

	Ques 23 (Driving over 70 mph)	
	Most/Half of time	Rarely/Never
Very likely	31%	42%
Somewhat likely	49%	43%
Not very likely	15%	10%
Not likely at all	4%	3%
Don't know	1%	1%

Risk-taking Behavior

3 Items on MADS Screen for Risk-taking Behavior

- Ques 20 & 21 are direct quotes and Ques 22 a paraphrase of risk-taking dispositions analyzed by Cheryl Cherpitel (1993, 1999)
  - *Question 20* (*Risk perception*) – How likely is it that something bad would happen to you if you drove without a seat belt?
  - *Question 21 (Impulsivity)* – I often act on the spur of the moment.
  - *Question 22 (Sensation-seeking)* – I like to drive more than 10 mph over the speed limit.

Rationale for Including Risk-taking Questions in MADS

- To differentiate between drivers with high-risk behaviors as opposed to lower risk behaviors
- To identify subgroups for whom the MHSO can better direct activities, enforcement and education

Risk Perception

- *Question 20* – How likely is it that something bad would happen to you if you drove without a seat belt?

Very likely	38%
Somewhat likely	40%
Not very likely	15%
Not likely at all	4%
Don't know	3%

Only 83 (1.2%) of all respondents did not answer.

Impulsivity

- *Question 21* – I often act on the spur of the moment.

Strongly agree	9%
Somewhat agree	27%
Somewhat disagree	29%
Strongly disagree	27%
Undecided	7%

Only 104 (1.5%) of all respondents did not respond.

Sensation-seeking

- *Question 22* – I like to drive more than 10 mph over the speed limit.

Strongly agree	11%
Somewhat agree	25%
Somewhat disagree	26%
Strongly disagree	34%
Undecided	4%

Only 78 (1.1%) of all respondents did not respond.

Measuring Risk-taking Behavior

- Cherpitel's work linked alcohol use, males, young people and *risk-taking behavior* with injury
- She concluded that *perceptions of risk and impulsiveness* may be *even more important predictors of injury in a MVC* than alcohol use
- Others have validated the association of risk perceptions with risk-taking behaviors, injury and substance use (Ryb, Soderstrom)

Measuring Risk-taking Behavior in MADS

- High Risk Group: Those who indicated risk-taking behavior in all 3 questions (4%)
  - Ques 20 – "Not Likely" that something bad would happen if drove without a seat belt
  - Ques 21 – "Agree" that often act on spur of the moment
  - Ques 22 – "Agree" that like to drive 10 mph or more over speed limit
- Moderate Risk Group: Those who indicated risk-taking behavior in only 2 questions (21%)
- Low Risk Group: Those who indicated risk-taking behavior in 0 or 1 question (75%)

Risky Behavior by Age & by Gender

Age Group	High Risk	Mod Risk	Low Risk
15-20	7%	26%	67%
21-29	6%	32%	62%
30-39	4%	24%	72%
40-49	3%	23%	74%
50-59	3%	14%	83%
60+	2%	12%	86%

Gender	High Risk	Mod Risk	Low Risk
Males	5%	26%	69%
Females	2%	18%	80%

Young Males More Likely to Score High on Risk-taking Behaviors

	Males		Females	
Age Group	High Risk	Mod Risk	High Risk	Mod Risk
15-20	10%	28%	5%	24%
21-29	8%	38%	4%	27%
30-39	6%	27%	3%	20%
40-49	5%	28%	2%	17%
50-59	4%	17%	2%	11%
60+	3%	14%	1%	10%

In general, risk-taking scores reduce as people age.

Risky Behavior by Jurisdiction

- Eastern Shore counties account for 4 of 5 jurisdictions with largest proportion of high risk-takers
  - Dorchester (8%)
  - Kent (8%)
  - Talbot (7%)
  - Queen Annes (6%)
  - Calvert (6%)
- Southern MD and western counties account for 4 of 5 jurisdictions with lowest proportion of high risk-takers
  - Garrett (1%)
  - St. Marys (1%)
  - Allegany (2%)
  - Worcester (2%)
  - Charles (3%)

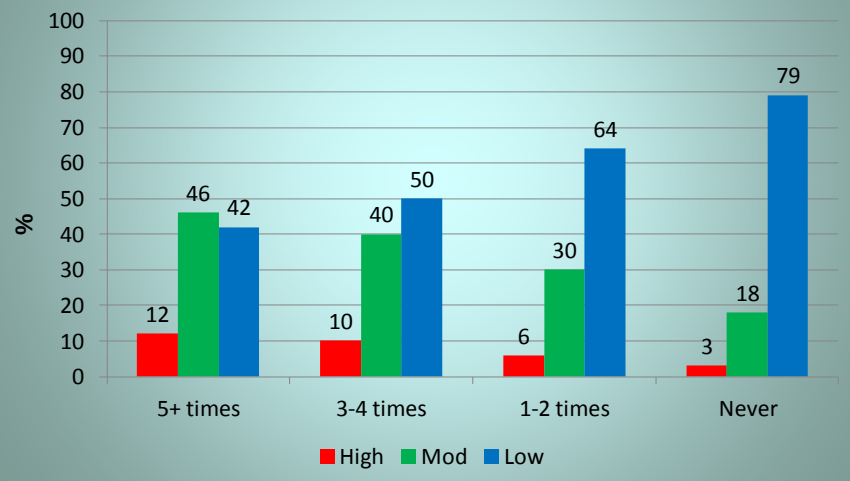
Driving After Drinking

- *Question 10* – In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?

	N	High Risk	Mod Risk	Low Risk
5+ times	180	12%	46%	42%
3-4 times	269	10%	40%	50%
1-2 times	1007	6%	30%	64%
Never	5354	3%	18%	79%

Those Admitting to Driving After Drinking More Likely to be Higher Risk-takers

(Ques 10 – How often driving 2 hrs after drinking)



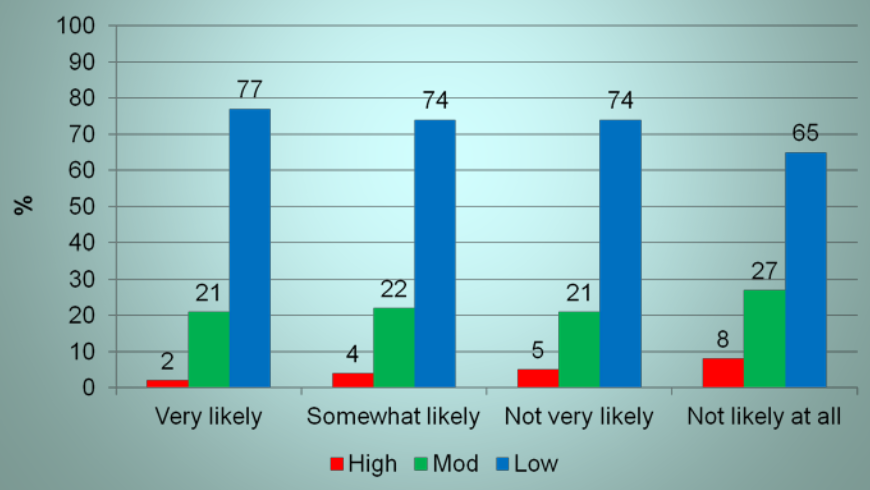
Arrested for Drinking & Driving

- *Question 11* – What do you think the chances are of someone getting arrested if they drive after drinking?

	N	High Risk	Mod Risk	Low Risk
Very likely	2165	2%	21%	77%
Somewhat likely	2765	4%	22%	74%
Not very likely	1313	5%	21%	74%
Not likely at all	397	8%	27%	65%

Those with Low Perception of Arrest Risk More Likely to be Higher Risk-takers

(Ques 11 – Chance of arrest if drive after drinking)



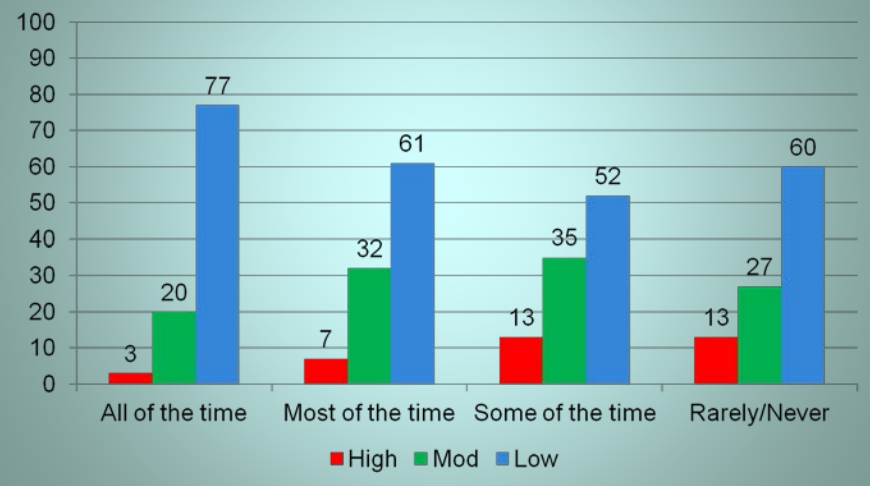
Using Seat Belts

- *Question 13* – How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle, or pick-up?

	N	High Risk	Mod Risk	Low Risk
All of the time	5782	3%	20%	77%
Most of the time	609	7%	32%	61%
Some of the time	247	13%	35%	52%
Rarely/Never	198	13%	27%	60%

Those Admitting to Low Seat Belt Usage More Likely to be Higher Risk-takers

(Ques 13 – How often use a seat belt)



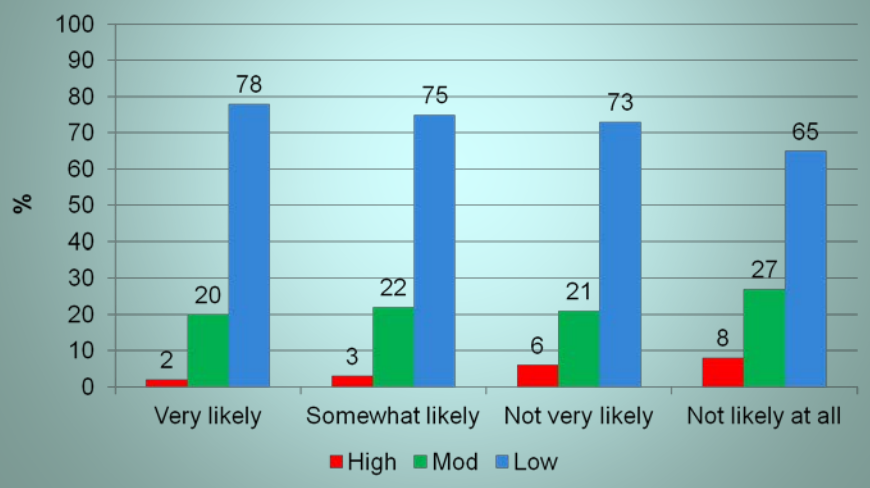
Ticket for No Seat Belt

- *Question 14* – What do you think the chances are of getting a ticket if you don't wear your safety belt?

	N	High Risk	Mod Risk	Low Risk
Very likely	1948	2%	20%	78%
Somewhat likely	2443	3%	22%	75%
Not very likely	1650	6%	21%	73%
Not likely at all	646	8%	27%	65%

Those with Low Perception of Belt Ticket Risk More Likely to be Higher Risk-takers

(Ques 14 – Chance of ticket for not wearing belt)



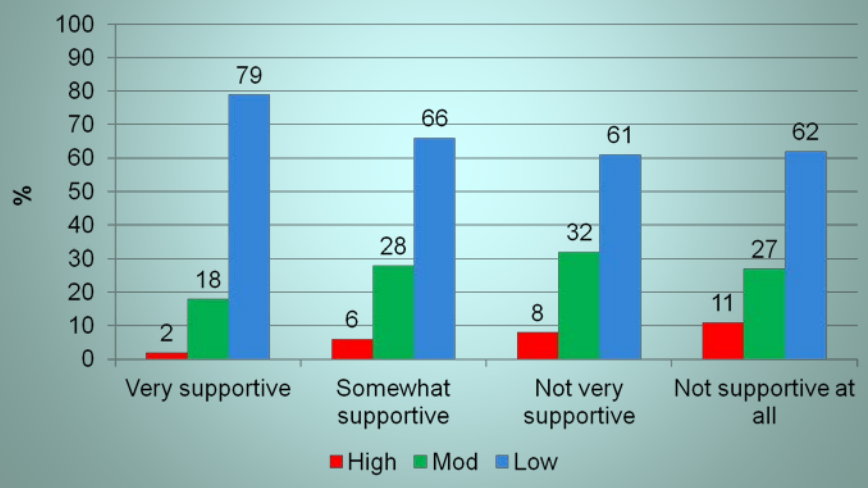
Support for Mandatory Seat Belt Law

- *Question 15* – What is your level of support for making seatbelt use mandatory in all vehicle seating positions?

	N	High Risk	Mod Risk	Low Risk
Very supportive	1948	2%	18%	79%
Somewhat supportive	2443	6%	28%	66%
Not very supportive	1650	8%	31%	61%
Not supportive at all	646	11%	27%	62%

Those Not Supportive of All-Belt Law More Likely to be Higher Risk-takers

(Ques 15 – Support for mandatory belt law)



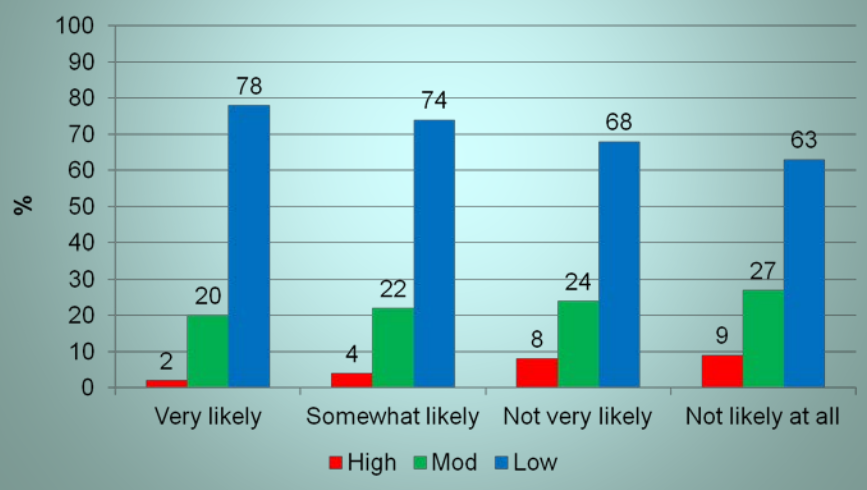
Ticket for Speeding

- *Question 17* – What do you think the chances are of getting a ticket if you drive over the speed limit?

	N	High Risk	Mod Risk	Low Risk
Very likely	2496	2%	20%	78%
Somewhat likely	3141	4%	22%	74%
Not very likely	842	8%	24%	68%
Not likely at all	237	9%	27%	63%

Those with Low Perception of Speed Ticket Risk More Likely to be Higher Risk-takers

(*Ques 17 – Chance of ticket for speeding)*



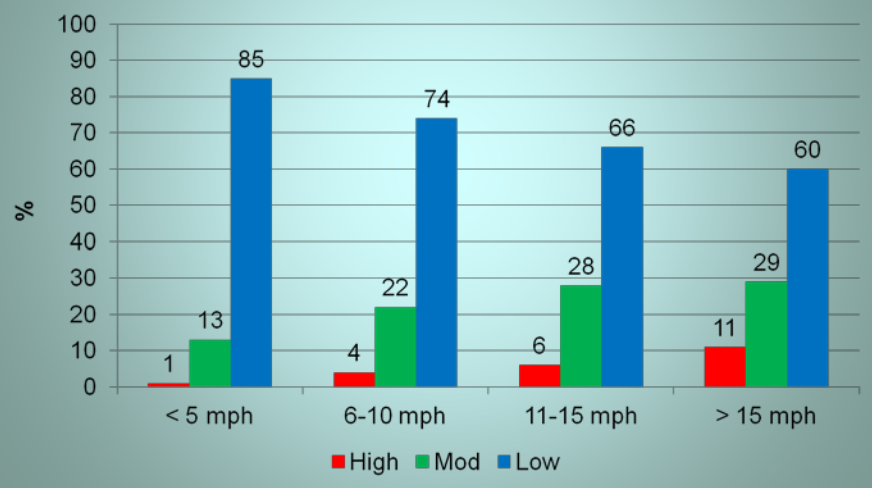
MPH Above Limit Before Ticketed for Speeding

- *Question 18* – How many mph over the posted speed limit do you feel you can go before police would give you a ticket for speeding?

	N	High Risk	Mod Risk	Low Risk
5 mph or less	1802	1%	13%	85%
6-10 mph	3175	4%	22%	74%
11-15 mph	1425	6%	28%	66%
Over 15 mph	432	11%	29%	60%

Those Believing Can Drive at High Speeds More Likely to be Higher Risk-takers

(Ques 18 – MPH over speed limit before ticket)



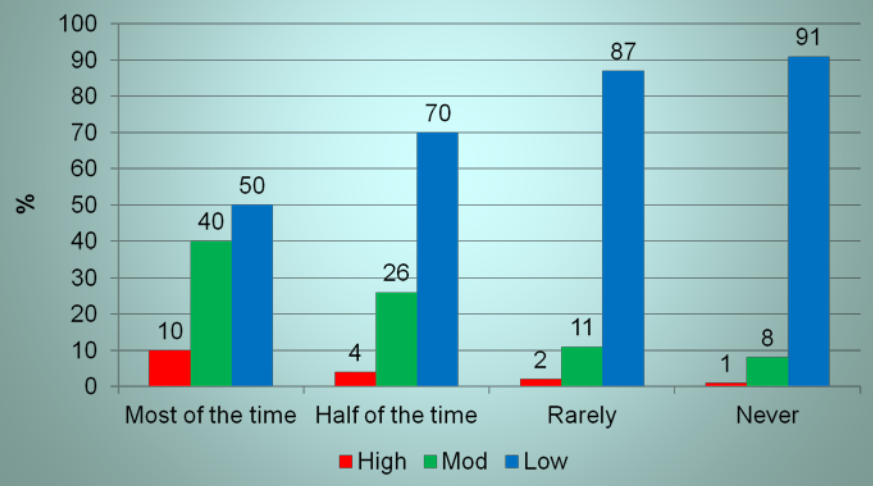
Driving Over 35 mph

- *Question 19* – On a road with a speed limit of 30 mph, how often do you drive faster than 35 mph?

	N	High Risk	Mod Risk	Low Risk
Most of the time	1240	10%	40%	50%
Half of the time	2310	4%	26%	70%
Rarely	2507	2%	11%	87%
Never	606	1%	8%	91%

Those Who Admit to Driving Over 35 mph More Likely to be Higher Risk-takers

(Ques 19 – How often drive over 35 mph)



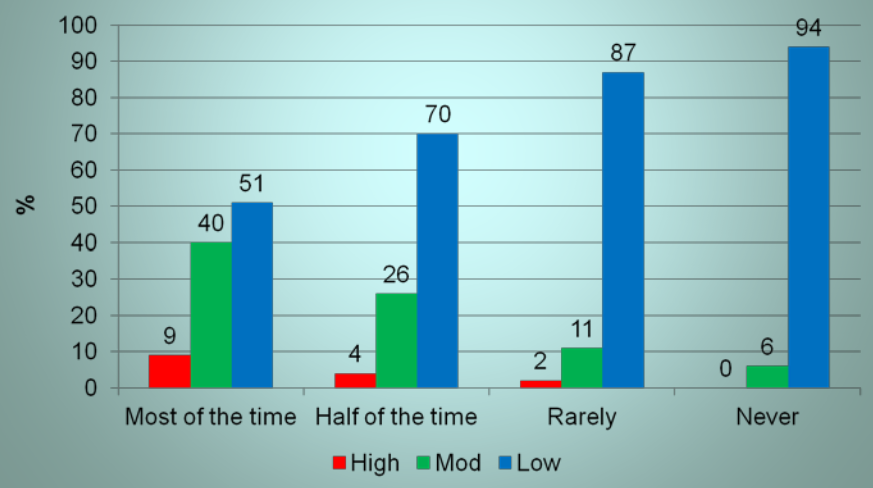
Driving Over 70 mph

- *Question 23* – On a road with a speed limit of 65 mph, how often do you drive faster than 70 mph?

	N	High Risk	Mod Risk	Low Risk
Most of the time	1587	9%	40%	51%
Half of the time	1977	4%	26%	70%
Rarely	2258	2%	11%	87%
Never	862	<1%	6%	94%

Those Who Admit to Driving Over 70 mph More Likely to be Higher Risk-takers

(Ques 23 – How often drive over 70 mph)



MADS Analysis Summary

- 6,900 surveys reflects census profiles well!!
  - Large vs. small jurisdictions
  - Age < 40
  - Males & females
- *Even better* survey collection still possible
  - More from top 5 jurisdictions, older people, minorities
- 62% associate MSP with traffic safety
- Females and older respondents more likely to acknowledge support for mandatory seat belt law
- Older respondents less likely to believe in chance of arrest for driving after drinking

MADS Analysis Summary

- Heavier drinkers (3+ times) have slightly different views and behaviors than lighter/non-drinkers
  - Believe little chance of arrest when driving after drinking (30% vs. 25%)
  - Not as likely to *always* wear seat belt (66% vs. 86%)
- Seat belt users believe in higher likelihood of ticket for not wearing belt than non-users (66% vs. 44%)
- Respondents more likely to notice enforcement for speeding (75%) than impaired driving (69%) or seat belt use (59%)

MADS Analysis Summary

- Males more likely than females to drive faster than 70 mph in a 65 mph zone
- Respondents under age 30 are twice as likely as those age 60 or older to drive faster than 70 mph in a 65 mph zone (66% vs. 33%)
- *Young males* score higher on risk-taking questions
  - Risky behavior declines as people age, regardless of gender
- High risk-takers more likely to be found on Eastern Shore than in Southern MD or western counties

MADS Analysis Summary

- *High and Moderate Risk respondents* more likely to admit to “riskier” behavior for all questions
  - Number of times having driven after drinking
  - Perception of arrest following drinking, no belt use or speeding
  - Use of seat belts
  - Support for mandatory seat belt law
  - Driving over the speed limit
- Risk-taking analysis can help MHSO better direct activities, enforcement and education towards younger drivers, particularly males

Appendices

Appendix A – Overview

The Maryland Annual Driving Survey (MADS) tool was developed specifically for the MHSO and adheres to guidelines provided by the Governors Highway Safety Administration (GHSA) and National Highway Traffic Safety Administration (NHTSA) (Preusser, 2009). In 2009, a GHSA/NHTSA working group outlined a set of recommended questions for states to use as a model in drafting their own survey plans. Following those recommendations, researchers from the National Study Center for Trauma & EMS (NSC) developed a set of questions that followed the model standards.

The survey is currently being used by the MHSO and its grantees as a means to assess community knowledge, attitudes, and behaviors on an annual basis. The survey has a specific focus on three priority program areas: aggressive driving, speeding, and impaired driving. Maryland has also continued to use their Annual Driving Survey to ascertain information from respondents regarding legislative opinions/priorities and familiarity with media efforts that are conducted statewide. Results from the survey can be used to prioritize follow-up actions, implement sound data-driven decisions, and address important issues immediately rather than relying on subjective, instinctual feelings. Results in this format serve as a snapshot in time of the surveyed population, reflecting on its understanding of traffic safety-related issues/laws as well as attitudes and behaviors surrounding traffic safety and driving. The findings from this initial work are to be used as a baseline from which the target population's responses can be compared with future survey results, thus analyzing change over time.

Appendix B – Methodology

The MADS survey was administered during the month of July. Maryland's survey was administered at the community level and relies on self-report survey tools being distributed through convenience sampling both in-person and electronically online through Survey Monkey. These survey methods were selected for their ease in administration and cost-effectiveness.

Survey participants were selected, in part or in whole, at the convenience of the research team and specifically the RTSPs in the field and other affiliated MHSO staff members who administered the survey. Those administering the survey made use of census profiles that were prepared by NSC researchers. Census profiles were introduced to enhance the sampling processes. Surveyors were directed to target their efforts using the census profiles in a process similar to quota sampling whereupon populations are first segmented into mutually exclusive sub-groups and then judgment is used to select the subjects from each segment based on a predetermined specified proportion.

During the survey period surveys were advertised and made available in several different formats; pen/paper, electronic response through Survey Monkey, QR Code a smart phone application allowing a barcode to be scanned and the electronic copy of the survey be made available, and through Facebook. During this cycle pen/paper collection included two survey formats, standard question response (Appendix A) and Scantron (Appendix B) response formats All RTSPs and MHSO Program Area Coordinators were provided with training and supporting materials necessary for consistent administration across the state. Goals were set encouraging each of the 24 jurisdictions to obtain a minimum of 100 pen/paper surveys. Surveys were advertised throughout the month of July through MHSO Media Relations, the Maryland MVA website as well as the Safety Transportation Knowledge

Online (STKO) website. The MHSO encouraged administration of the survey by using the multiple formats and through the convenience sampling method. Traffic Safety experts from within each jurisdiction worked collaboratively with the MHSO to develop strategic plans for administering the surveys. These individuals were able to collect surveys at fairs, trainings, and at other times during the month where the public was gathering. More than 2,000 surveys were collected at Baltimore City's Artscape July 20-22, 2012.

In an effort to collect more responses and to address survey shortcomings from previous years, Maryland opted to follow administration recommendations outlined by GHSA in working with Maryland's Motor Vehicle Administration (MVA). By administering surveys in MVA offices surveys there is the potential of reaching all licensed drivers. Some drivers must visit the MVA more frequently than others. In particular, young drivers usually obtain their intermediate license and then return within a year or two for their full license while older drivers may have many years between MVA visits. Researchers worked closely with MVA representative to prepare a strategic process that would address all of the following:

- Short survey forms would be handed out to and collected from persons standing in line in a MVA offices
- Surveys were to be delivered and collected by hand and not "left in a pile."
- Surveys can be distributed and collected by Highway Safety Office staff, researchers, grad students, or other non-DMV staff. DMV staff should not hand out and collect the surveys because this would interfere with their regular duties.
- The locations and times for DMV surveys must be chosen carefully so no important driver group is missed. For example, DMV offices in both rural and urban locations should be included. DMV surveys typically have low refusal rates of 10-30% or even less. States generally spend $5,000 - $10,000 for a DMV survey of 500-1,000 persons.
    - Cover page to coincide with each outing to an MVA office to assist in documenting all necessary information
    - 2-4 days of handing out MADS surveys in July at an MVA location
    - date and time of day administered: to include 2-4 different weekdays & 2-4 different times of day
    - Location of MVA office
    - Individuals collecting surveys that day
    - Number of refusals

Appendix C – Standard Pen/Paper Survey Format

MARYLAND HIGHWAY SAFETY OFFICE
MARYLAND ANNUAL DRIVING SURVEY

Please answer all of the questions below giving only ONE response for each question.

What is today's date? ☐

What was the name of the program you attended or where did you get this survey? ☐

Check one answer in each section below.

1. Select location where you reside.

☐ Allegany	☐ Calvert	☐ Charles	☐ Harford	☐ Prince George's	☐ Talbot
☐ Anne Arundel	☐ Caroline	☐ Dorchester	☐ Howard	☐ Queen Anne's	☐ Washington
☐ Baltimore Co	☐ Carroll	☐ Frederick	☐ Kent	☐ St. Mary's	☐ Wicomico
☐ Baltimore City	☐ Cecil	☐ Garrett	☐ Montgomery	☐ Somerset	☐ Worcester

2. What is your HOME zip code? ☐	3. Are you Hispanic or Latino? ☐ Yes ☐ No Select one or more of the following: ☐ American Indian/Alaskan Native ☐ Asian ☐ Native Hawaiian/Pacific Islander ☐ African American/Black ☐ White ☐ Other, please specify:_____	4. What is your gender? ☐ Male ☐ Female
5. What is your age? Indicate age in number of years. ☐	6. What is the primary vehicle you drive? ☐ Passenger Car ☐ SUV ☐ Bicycle ☐ Large Truck/Tractor Trailer ☐ Pick-up Truck ☐ Van ☐ Motorcycle ☐ Don't Drive	7. Driving experience? Indicate number of years throughout your lifespan you've had a driver's license. If you have never driven, enter "0". ☐

Circle all answers that apply for each:

8. Approximately how many people in Maryland do you think are injured in car crashes each year?	20,000-30,000	30,001-40,000	40,001-50,000	More than 50,000	Don't know
9. In the past 30 days, have you read, seen, or heard anything about alcohol impaired driving (or drunk driving) enforcement by police?	Yes	No	Don't know	___	___
10. In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?	5 or more	3-4 times	1-2 times	Never	___
11. What do you think the chances are of someone getting arrested if they drive after drinking?	Very likely	Somewhat likely	Not very likely	Not likely at all	Don't know
12. In the past 30 days, have you read, seen, or heard anything about seat belt enforcement by police?	Yes	No	Don't know	___	___
13. How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle or pick-up?	All of the time	Most of the time	Some of the time	Rarely	Never
14. What do you think the chances are of getting a ticket if you don't wear your seat belt?	Very likely	Somewhat likely	Not very likely	Not likely at all	Don't know
15. What is your level of support for making seat belt use mandatory in all vehicle seating positions (front seat and back seat)?	Very supportive	Somewhat supportive	Not very supportive	Not supportive at all	Undecided
16. In the past 30 days, have you read, seen, or heard anything about speed enforcement by police?	Yes	No	Don't know	___	___
17. What do you think the chances are of getting a ticket if you drive over the speed limit?	Very likely	Somewhat likely	Not very likely	Not likely at all	Don't know
18. How many miles per hour (mph) over the posted speed limit do you feel you can go before police would give you a ticket for speeding?	5 mph or less	6 – 10 mph	11- 15 mph	16 - 20 mph	Over 20 mph
19. On a local road with a speed limit of **30 mph**, how often do you drive faster than **35 mph**?	Most of the time	Half of the time	Rarely	Never	Don't know
20. How likely is it that something bad would happen to you if you drove without a seat belt?	Very likely	Somewhat likely	Not very likely	Not likely at all	Don't know
21. I often act on the spur of the moment.	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Undecided
22. I like to drive more than 10 mph over the speed limit.	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Undecided
23. On a road with a speed limit of **65 mph**, how often do you drive faster than **70 mph**?	Most of the time	Half of the time	Rarely	Never	Don't know
24. When you think of traffic safety, which agency comes to mind? (circle only 1 response)	State Highway Administration (SHA)	Maryland State Police (MSP)	Maryland Transportation Authority (MDTA)	Motor Vehicle Administration (MVA)	Don't know

National Study Center for Trauma and EMS / University of MD Baltimore
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Appendix D – Scantron Pen/Paper Survey Format

MARYLAND HIGHWAY SAFETY OFFICE: Annual Driving Survey

Using pencil, please answer all of the questions below giving only **ONE** response for each question, unless otherwise noted.
Fill each bubble completely.
Please only complete this survey one time during July.

TODAY'S Date

What was the name of the program you attended or where did you get this survey?

Select the location where you reside: (**select only one**)

Allegany	Calvert	Charles	Harford	Prince George's	Talbot
Anne Arundel	Caroline	Dorchester	Howard	Queen Anne's	Washington
Baltimore Co	Carroll	Frederick	Kent	St. Mary's	Wicomico
Balt. City	Cecil	Garrett	Montgomery	Somerset	Worcester

HOME Zip Code

AGE

What is your gender?

- Male
- Female

Are you Hispanic or Latino?

- Yes
- No

Race/Ethnicity: (**select only one**)

- American Indian or Alaskan Native
- African American / Black
- Native Hawaiian/ Pacific Islander
- Asian
- White
- Other, please specify: _____

Driving Experience? Indicate the number of years throughout your lifespan that you have had a driver's license. If you have never driven, enter "00".

Yrs.

What is the PRIMARY vehicle you drive? (**select only one**)

Passenger Car	Bicycle
Pick-Up Truck	Motorcycle
SUV	Large Truck/ Tractor Trailer
Van	Don't Drive

	Yes	No	Don't Know
In the past 30 days, have you read, seen, or heard anything about **alcohol impaired driving** (or drunk driving) enforcement by police?			
In the past 30 days, have you read, seen, or heard anything about **seat belt** enforcement by police?			
In the past 30 days, have you read, seen, or heard anything about **speed** enforcement by police?			

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Please continue on other side.....

	Very Likely	Somewhat Likely	Not Very Likely	Not Likely at All	Don't Know
What do you think the chances are of someone getting arrested if they drive after drinking?	○	○	○	○	○
What do you think the chances are of getting a ticket if you don't wear your seat belt?	○	○	○	○	○
What do you think the chances are of getting a ticket if you drive over the speed limit?	○	○	○	○	○
How likely is it that something bad would happen to you if you drove without a seat belt?	○	○	○	○	○

	Most of the Time	Half of the Time	Rarely	Never	Don't Know
On a local road with a speed limit of 30 mph, how often do you drive faster than 35 mph?	○	○	○	○	○
On a road with a speed limit of 65 mph, how often do you drive faster than 70 mph?	○	○	○	○	○

How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle or pick-up?	All the Time ○	Most of the Time ○	Some of the Time ○	Rarely ○	Never ○
In the past 30 days, how many times have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?	5 or more ○	3-4 times ○	1-2 times ○	Never ○	
What is your level of support for making seat belt use mandatory in all vehicle seating positions (front seat and back)?	Very Supportive ○	Somewhat Supportive ○	Not Very Supportive ○	Not Supportive at All ○	
Approximately how many people in Maryland do you think are injured in car crashes each year?	20,000-30,000 ○	30,001-40,000 ○	40,001-50,000 ○	More than 50,000 ○	Don't know ○
I often act on the spur of the moment.	Strongly Agree ○	Somewhat Agree ○	Somewhat Disagree ○	Strongly Disagree ○	Undecided ○
I like to drive more than 10 mph over the speed limit.	Strongly Agree ○	Somewhat Agree ○	Somewhat Disagree ○	Strongly Disagree ○	Undecided ○
How many miles per hour (mph) over the posted speed limit do you feel you can go before police would give you a ticket for speeding?	5 mph or less ○	6-10 mph ○	11-15 mph ○	16-20 mph ○	Over 20 mph ○
When you think of traffic safety, which agency comes to mind? (**select only one response**)	State Highway Administration (SHA) ○	Maryland State Police (MSP) ○	Maryland Transportation Authority (MDTA) ○	Motor Vehicle Administration (MVA) ○	Don't Know ○

Please help by returning this form to:
Nat'l Study Center for Trauma & EMS / Univ. of MD Baltimore
110 S. Paca St., 4th Floor, Baltimore, MD 21201
PHONE: 410-328-7491

To complete this survey in a web browser, go to the following URL:
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Appendix E – References

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