FFY 2023 Massachusetts Highway Safety Plan

Submitted by:

Commonwealth of Massachusetts

Executive Office of Public Safety and Security

Office of Grants and Research

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Data Sources used throughout this report:

FARS (Fatality Analysis Reporting System) data located at https://www.nhtsa.gov/research- data/fatality-analysis-reporting-system-fars

MassDOT (Department of Transportation) data at https://apps.impact.dot.state.ma.us/cdp/home

FHWA (Federal Highway Administration) data at
https://www.fhwa.dot.gov/policyinformation/statistics.cfm

U.S. Census data at https://www.census.gov/quickfacts/

Merit Rating Board (MRB) provided data related to State and local police violations issued in Massachusetts. There is no online data location as the data is issued internally.

FARS data were used for all fatality-related data through 2020. MassDOT was used for any serious injury data and fatality data for 2021, and FHWA was primarily for Vehicle Miles Traveled (VMT), vehicle registration, and lane miles data. U.S. Census data was used for population figures.

The most recent Statewide Safety Belt Survey can be found here: https://www.mass.gov/service-details/public-documents-and-statistics

Table of Content

Introduction to the FFY 2023 Highway Safety Plan

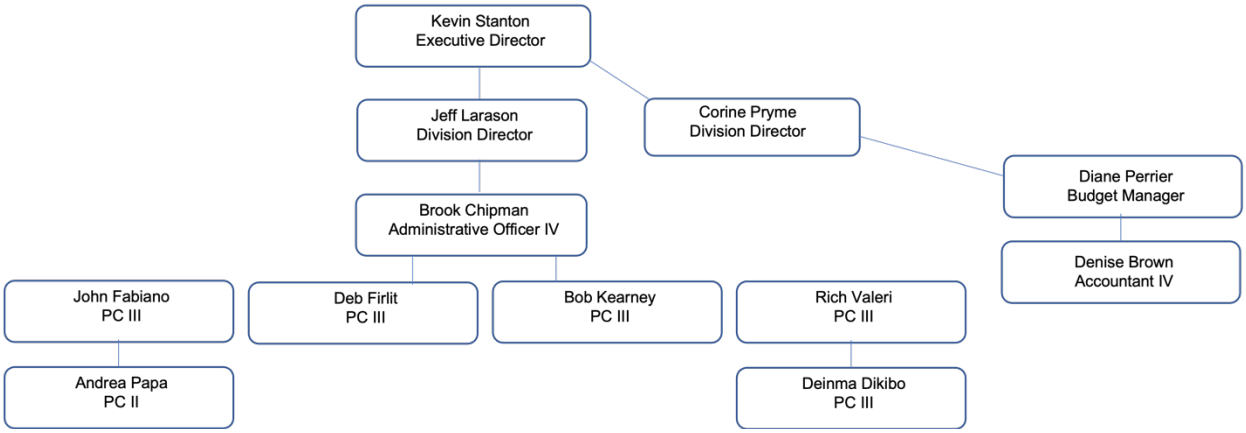
On behalf of the Commonwealth of Massachusetts, the Executive Office of Public Safety and Security's (EOPSS) Office of Grants and Research (OGR) is pleased to present our Federal Fiscal Year (FFY) 2023 Highway Safety Plan (HSP) for consideration of funding. This document outlines our program priority areas, identifies performance targets, and discusses proposed initiatives. This HSP serves as the framework for implementing countermeasures with highway safety partners across the Commonwealth.

Under the authority of the Executive Director, OGR's Highway Safety Division (HSD) is responsible for the development, implementation, coordination, and ongoing management of the Massachusetts highway safety program. This responsibility includes identifying traffic safety priorities and working with partners to develop programs and initiatives to address continuing and shifting highway safety needs.

Current OGR Organization

On behalf of EOPSS, OGR serves as the state administering agency for the National Highway Traffic Safety Administration, Department of Justice, and Federal Emergency Management Agency funds awarded to the Commonwealth. The Office of Grants and Research is divided into five divisions: Highway Safety, Justice and Prevention, Research Policy and Analysis, Homeland Security, and Fiscal. The structure provided below is current as of June 30, 2022; it reflects OGR leadership and only highlights the Highway Safety unit within OGR.

OGR's HSD structure as of June 30, 2022.



- In April 2022, Deinma Dikibo was hired for the vacant PCII position.
- In May 2022, Christina Hernandez left OGR/HSD for a new opportunity.
- In June 2022, Andrea Papa was hired for the vacant PCII position left by Christina.

Mission Statement

OGR's mission for traffic safety is to secure and disseminate grant funding and facilitate the development and implementation of policies, programs, and partnerships designed to reduce

fatalities, injuries, and economic losses resulting from motor vehicle crashes on the roadways of the Commonwealth of Massachusetts.

Highway Safety Program Overview

Within the Commonwealth of Massachusetts, OGR is responsible for planning, implementing, and evaluating highway safety projects with federal and non-federal funds. This agency also coordinates the efforts of federal, state, and local organizations involved with highway safety in Massachusetts.

Highway safety planning process

Staff began the planning process for developing the FFY 2023 HSP by gathering all relevant data related to performance targets and doing an in-depth analysis of the data to find trends within one-year, five-year, and (if feasible) ten-year periods. The data was analyzed across different fields, including county, municipality, month, day of the week, time of day, gender, and age. Furthermore, mapping software provided a visual tool to help analyze trends and hot spots throughout Massachusetts. This information helped identify high-risk locations and behavioral patterns among roadway users that require attention.

The data sources utilized in this analysis process are listed below:

- Fatality Analysis Reporting System (FARS) – fatalities and fatal crashes
- Massachusetts Crash Data System (CDS) – fatalities and injuries
- Massachusetts Injury Surveillance Program – injuries and hospitalizations
- Massachusetts Citation Data – roadway violations
- Massachusetts Safety Belt Usage Observation Survey – safety belt usage, occupant protection
- FHWA Highway Statistics – Vehicle Miles Traveled (VMT), licensed drivers, and road miles
- U.S. Census Bureau statistics – population, income levels
- FBI Crime Statistics – arrests for driving intoxicated and other vehicle-related crimes

The data results were coordinated and shared with the Massachusetts Department of Transportation. This coordination occurred to ensure that performance targets related to fatalities, serious injuries, and fatalities per 100 million VMT are identical to the Massachusetts Highway Safety Improvement Program (HSIP) and the Strategic Highway Safety Plan (SHSP). Other performance targets were determined through trend analysis and ongoing exchanges with critical federal, state, and local partners such as state and local police departments, the Massachusetts Department of Public Health, the Governors Highway Safety Association, and the Traffic Records Coordinating Committee.

OGR also relied on input from a wide range of statewide and community partners, including state and local police and non-profit organizations focused on road safety. These stakeholders provided valuable information and suggested solutions to traffic safety issues facing their communities and constituencies.

Specifically, staff members are in frequent contact with current and potential grant subrecipients to identify trends and possible adjustments to programs to better address anticipated future needs. Additionally, presentations were made to police associations, departments, and traffic safety organizations. These efforts were augmented with the Director's continuous phone outreach to individuals in law enforcement agencies and non-profit organizations.

Through data analysis and input from traffic safety stakeholders, OGR was able to determine where to focus funding for FFY 2023 to procure the most significant impact in reducing crashes, injuries, fatalities, and associated economic losses.

Partners in the Planning Process

To help determine problem areas to focus on, the staff engaged with many participants during the planning process, including but not limited to:

- Massachusetts Department of Transportation (MassDOT)
- Massachusetts Registry of Motor Vehicles (RMV)
- Massachusetts Department of Public Health
- Massachusetts Department of State Police (MSP)
- Governors Highway Safety Association
- Massachusetts District Attorneys Association (MDAA)
- Massachusetts Executive-Level Traffic Records Coordinating Committee (ETRCC)
- Massachusetts Working-Level Traffic Records Coordinating Committee (WTRCC)
- Municipal Police Training Committee (MPTC)
- Merit Rating Board
- University of Massachusetts Traffic Safety Research Program (UMassSafe)
- Local police departments
- Massachusetts Chiefs of Police Association
- SHSP Executive Leadership Committee
- Boston Emergency Medical Services (EMS)
- Massachusetts Alcoholic Beverages Control Commission (ABCC)
- Massachusetts Executive Office of Health and Human Services (EOHHS)
- Safe Roads Alliance
- Colleges and Universities
- In Control Family Foundation

Overview of Traffic Safety Trends in Massachusetts

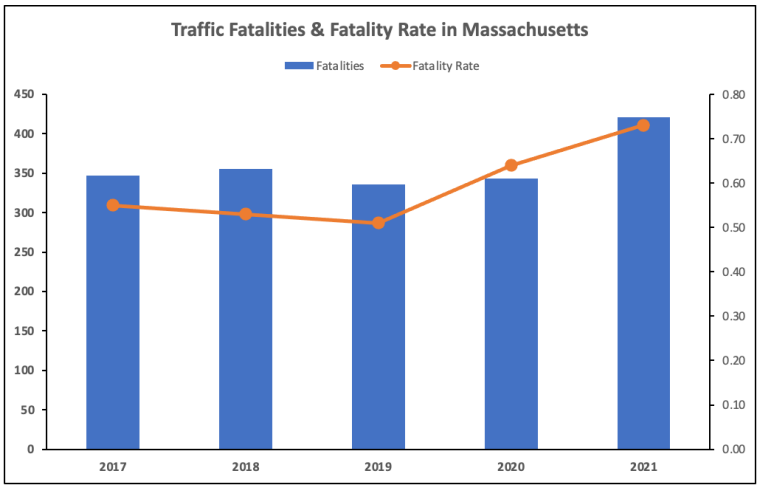
Identifying current traffic safety issues for the FFY 2023 HSP was possible through data analysis related to fatalities and fatal crashes over six years (2016 - 2021). The data was gathered from numerous factors, including, but not limited to, counties, cities, time of day, month, day of week,

road type, gender, and age. Data from available monthly and year-end reports from FFY 2022 grant-funded programs provided further insight into traffic safety trends. Lastly, input from traffic safety stakeholders added a third layer of analysis to determining traffic safety issues in Massachusetts.

All fatality data provided comes from the **FARS Query** system (Fatality Analysis Reporting System) and MassDOT's **IMPACT** data portal (https://apps.impact.dot.state.ma.us/cdp/home). The primary focus of data analysis will be 2016 – 2020, with reference to 2021 as needed. All data for 2020 and 2021 is considered preliminary and could change when Massachusetts submits the final data file for each year to FARS. Usage of 2021 data (from IMPACT) was primarily for setting FFY 2023 targets and analysis in this overview section. Still, for program area data analysis, 2016 to 2020 was used to ensure data consistency across each program area when looking at specific elements of fatalities.

The Massachusetts population (7,029,917 as of Census 2020) ranks 15th among the 50 states in the Union. The population per square mile is 896.90, an increase of 7.4% since 2010, when the last Census took place. In 2020, Massachusetts drivers tallied 53,700 million Vehicle Miles Traveled (VMT) - a 3% decline from the 64,889 million reported in 2019. By 2021, VMT increased 6% to 57,100 million due to COVID-19 restrictions put in place during 2020 being phased out.

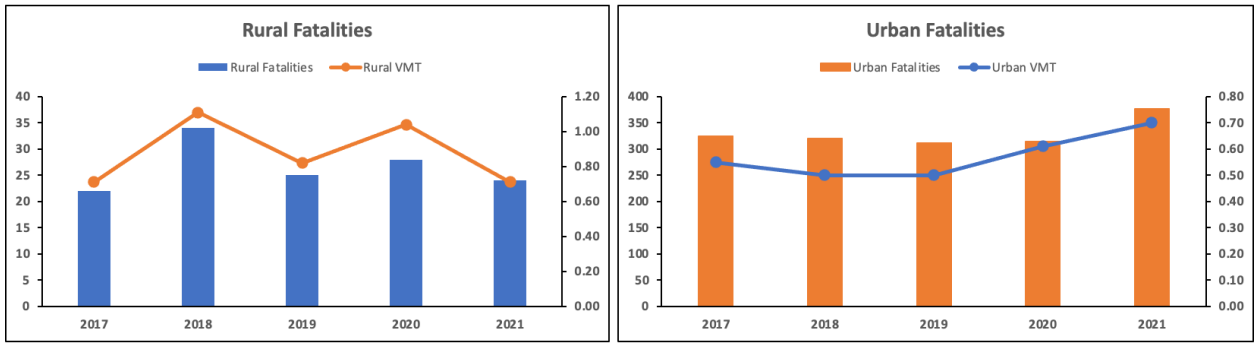
Before the COVID-19 pandemic, Massachusetts had its lowest traffic fatality count ever reported in 2019. 336 roadway deaths were recorded that year and represented a 30% decline from a historical high of 477 reported in 2001. Unfortunately, traffic fatalities and fatality rates have risen since 2019 despite lower VMT in 2020 and 2021 compared to 2019.



Source: FARS, MassDOT IMPACT

Based on preliminary data, 2021 would represent a 21% rise in fatalities since 2017 and a 23% jump from 2020. The increase in traffic fatalities from 2019 to 2021 in the face of travel restrictions implemented for a pandemic and drastically reduced vehicle miles traveled defies logic but appears to reflect less concern by roadway users to adhere to traffic rules and regulations when the volume of traffic is lower than usual.

In 2021, as it was in 2020, urban roadways accounted for most of the vehicle miles traveled reported in Massachusetts. Unsurprisingly, more than 90% of traffic fatalities have occurred along roads classified as 'urban' in Massachusetts since 2017. The five-year average for urban fatalities rose 0.4% in 2021 compared to 2020, while the five-year average of rural fatalities increased 5.6% during the same period.



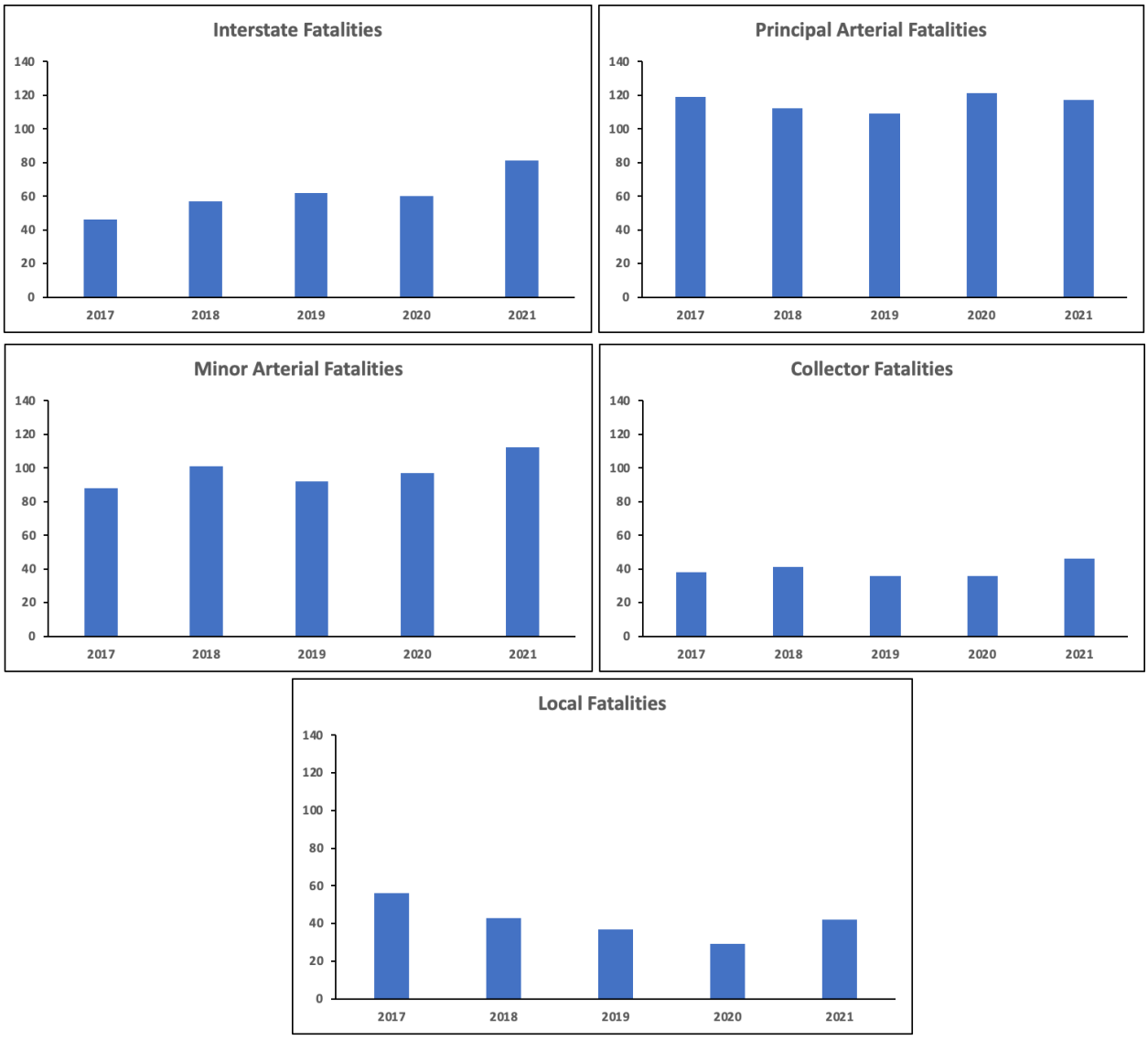
Source: FARS, MassDOT IMPACT

There are six Functional Roadway Classifications that Massachusetts uses to categorize crashes:

- **Interstate** – the highest level of mobility for drivers, the lowest level of access to land (i.e., requires exits to reach towns and city areas, and the highest posted speed limits (typically 55 to 75 mph). Roadway crosses multiple state lines usually. MassPike (I-90), I-91, and I-95 are examples.
- **Freeway/Highway** – typically state roads that operate similarly to the interstate. Route 24 runs from Canton to Fall River, and Route 128 'inner beltway' runs from Norwood to Gloucester.
- **Principal Arterial** – these are the main roads that run through major cities and towns; the speed limit can range between 30 to 50 mph and may have a barrier separating the traffic, allowing for better access to major commercial regions or thoroughfares. Route 60, running through Arlington, or Route 9, which runs from Boston to the Berkshire Region, are examples.
- **Minor Arterial** – Speeds are slightly lower (25 – 45 mph), connect high volume principal arterials, and have higher access to towns and cities. Route 202 segment that connects Route 9 in Belchertown to downtown Holyoke is an example of a minor arterial.
- **Collector** – these roadways connect principal and minor arterials to local roads. Speeds are typically in the 20 – 40 mph range. Littleton Road in Harvard, which runs from the town center and intersects Route 2 (a principal arterial), is an example of a collector.
- **Local** – these roads have the lowest posted speed limits, and limited mobility (no passing or two-lane roads in the same direction). They are the primary way to access residential areas, businesses, and farms.

Since 2017, nearly 60% of fatalities along Massachusetts roadways took place on either Principal or Minor Arterials. With the gradual lifting of COVID-19 travel restrictions in 2020, traffic fatalities rose on all road types - except Principal Arterials – in 2021. Interstate and local road

fatalities saw the most significant increases in 2021, with a 35% and 45% jump in fatalities from 2020.

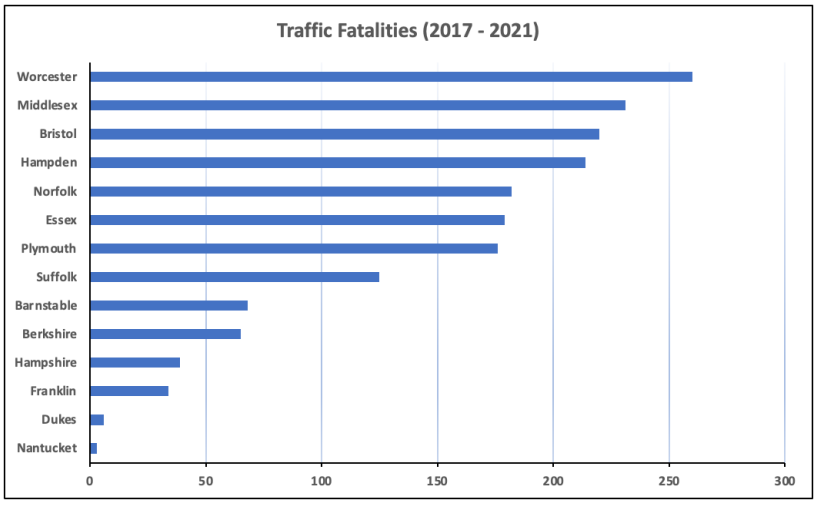


Source: FARS, MassDOT IMPACT

Massachusetts Counties and Major Roadways

There are fourteen counties across Massachusetts: Barnstable, Berkshire, Bristol, Dukes, Essex, Franklin, Hampden, Hampshire, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk, and Worcester. Over 70% of the population lives in the eastern part of the state in Essex, Middlesex, Suffolk, Norfolk, Bristol, and Plymouth counties. The east region of Massachusetts also encompasses most of the major roadways such as I-495, I-95, I-93, I-195, Rt. 128, Rt. 24, Rt. 9, Rt. 3, and Rt. 2. Boston, the capital, is in Suffolk County and is the largest city in the Commonwealth.

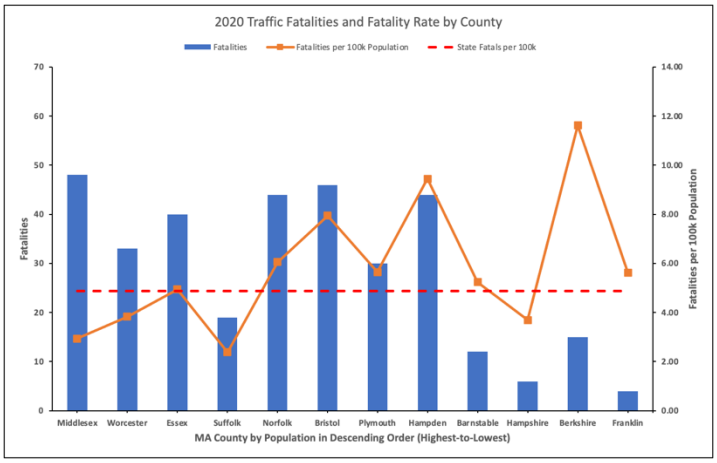
While the eastern part of the state has more roadways and people than central or western Massachusetts, it also has an extensive public transportation system that helps alleviate the traffic congestion with daily commutes into the Metro Boston area. The Massachusetts Bay Transportation Authority (MBTA) provides subway, bus, and commuter rail options for commuters and boat transportation from several coastal communities north and south of Boston. Having public transportation options available has resulted in Suffolk County accounting for only 6.9% of all traffic fatalities from 2017 to 2021 despite the heavy traffic volume into and out of Metro Boston every day. Worcester County, which has end terminals for the commuter rail and a robust local public bus transportation system, accounted for 14% of all traffic fatalities during the same time. Hampden County, which houses the Springfield metro area, has the interchange of the Mass Pike (I-90) and I-91 within it as well as I-291. From 2017 to 2021, 12% of traffic fatalities occurred in this county.

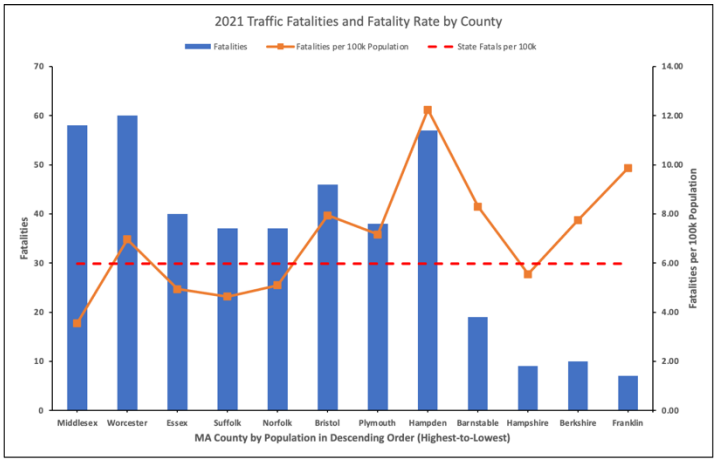


Source: FARS, MassDOT IMPACT

As the COVID-19 pandemic and subsequent travel restrictions were slowly pared back throughout 2021, the number of fatalities reported rose with increased roadway usage by travelers across the state. Eight of fourteen counties saw a rise in deaths from 2020 to 2021, with Worcester recording the highest increase (+27).

In comparing the fatalities and fatality rate per 100,000 population in 2020 and 2021, the jump in the statewide fatality rate stands out, rising from 4.88 to 5.97. (Note – Dukes and Nantucket County were not included in the chart due to minimal fatalities.) Six counties (Barnstable, Berkshire, Bristol, Franklin, Hampden, and Plymouth) had fatalities per 100k higher than the statewide rate in 2020 and 2021.





Source: FARS, MassDOT IMPACT

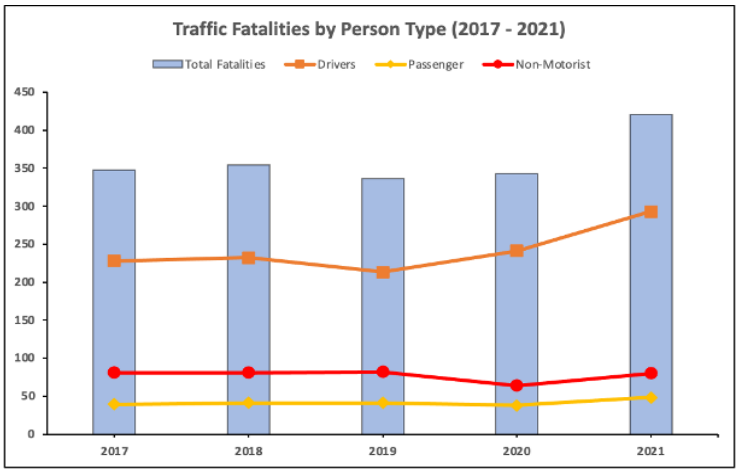
To get a clearer picture of traffic fatalities in Massachusetts, OGR looked at six key fatality measures covering the five years from 2017 to 2021 to provide further supporting data on where and when traffic fatalities are occurring. These measures are:

Fatalities by Person Type
Fatalities by Month
Fatalities by Day-of-Week
Fatalities by Time-of-Day
Fatalities by Age Range

Fatalities by Person Type

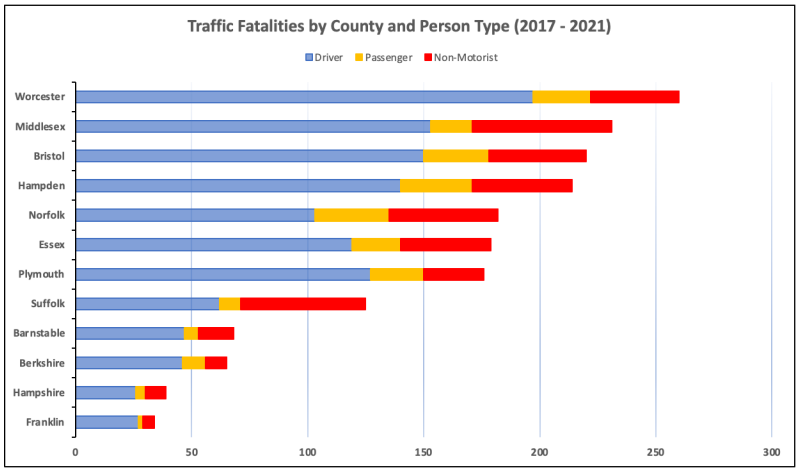
From 2017 to 2021, driver fatalities accounted for over two-thirds of all traffic fatalities in Massachusetts. Fatalities were fairly consistent for each person type for 2017, 2018, and 2019. Driver fatalities rose slightly in 2020 and more in 2021 – jumping 38% from 2019. After a slight dip in 2020, passengers rose in 2021 – up 17% from 2019.

Non-motorists declined the most in 2020 with a 22% drop yet saw fatalities in 2021 back at pre-COVID levels. The increase among all three person types from 2020 to 2021 can be attributed to the removal of many travel and social distancing restrictions that were in place during the height of the COVID-19 pandemic.



Source: FARS, MassDOT IMPACT

Driver fatalities accounted for 76% of the traffic fatalities recorded from 2017 to 2021, followed by non-motorist fatalities (22%) and passengers (12%). With its extensive public transportation infrastructure and high population density (12,415 residents per square mile), Suffolk County had nearly identical fatalities for drivers and non-motorists. In contrast, the county with the smallest population listed on the graph (Franklin) has almost 80% of its traffic fatalities represented by drivers. With only 102 residents per square mile, Franklin's citizens must rely heavily on motor vehicles to navigate the county's nearly 700 square miles.



Source: FARS, MassDOT IMPACT

From 2017 to 2021, Boston led all municipalities in Massachusetts with 111 traffic fatalities – accounting for nearly 90% of all fatalities in Suffolk County. (Note: there are only four municipalities in Suffolk County: Boston, Revere, Chelsea, and Winthrop). Springfield reported the second-highest fatality count with 84, equal to 39% of all traffic fatalities in Hampden County.

The chart below shows the top towns in each county (except Dukes and Nantucket) for fatalities, and the percentage of the top towns make of total fatalities with their respective county. The higher the percentage, the higher the concentration of traffic fatalities within the county.

Top Towns for Fatalities within Each County and
Percentage of All County Fatalities Top Towns Accounted for 2017-2021

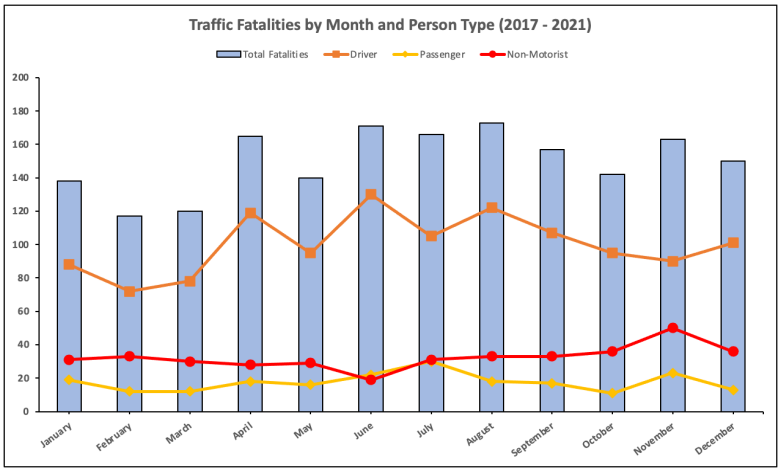
BARNSTABLE	Fatalities	County Total	Pct. Total	HAMPSHIRE	Fatalities	County Total	Pct. Total
Bourne	11	68	59%	Belchertown	8	36	58%
Falmouth	11			Amherst	5		
Barnstable	9			South Hadley	5		
Harwich	9			Northampton	3		
BERKSHIRE	**Fatalities**	**County Total**	**Pct. Total**	**MIDDLESEX**	**Fatalities**	**County Total**	**Pct. Total**
Pittsfield	11	64	44%	Lowell	22	230	26%
Lenox	6			Chelmsford	14		
North Adams	6			Marlborough	13		
Sheffield	5			Westford	10		
BRISTOL	**Fatalities**	**County Total**	**Pct. Total**	**NORFOLK**	**Fatalities**	**County Total**	**Pct. Total**
Fall River	29	219	43%	Quincy	25	181	38%
New Bedford	25			Weymouth	21		
Taunton	22			Braintree	12		
Dartmouth	19			Stoughton	10		
ESSEX	**Fatalities**	**County Total**	**Pct. Total**	**PLYMOUTH**	**Fatalities**	**County Total**	**Pct. Total**
Andover	21	180	37%	Brockton	42	176	49%
Haverhill	20			Middleborough	16		
Methuen	14			Wareham	16		
Lynn	12			Plymouth	13		
FRANKLIN	**Fatalities**	**County Total**	**Pct. Total**	**SUFFOLK**	**Fatalities**	**County Total**	**Pct. Total**
Greenfield	7	35	51%	Boston	111	126	88%
Shelburne	5						
Deerfield	3						
Orange	3						
HAMPDEN	**Fatalities**	**County Total**	**Pct. Total**	**WORCESTER**	**Fatalities**	**County Total**	**Pct. Total**
Springfield	84	217	68%	Worcester	45	261	32%
Chicopee	26			Leominster	15		
Holyoke	19			Sturbridge	13		
West Springfield	18			Westborough	10		

Source: FARS, MassDOT IMPACT

For Worcester County, the top four towns accounted for a third of all fatalities within the county. In contrast, Hampden County had nearly 70% of its traffic fatalities concentrated within four municipalities. This distinction helps OGR better understand where resources and outreach are needed most across each county in the state.

Fatalities by Month

From 2017 to 2021, traffic fatalities tended to happen more frequently during the latter half of the year. The average number of deaths reported from January to June was 28, whereas, from July to December, the average was 31.



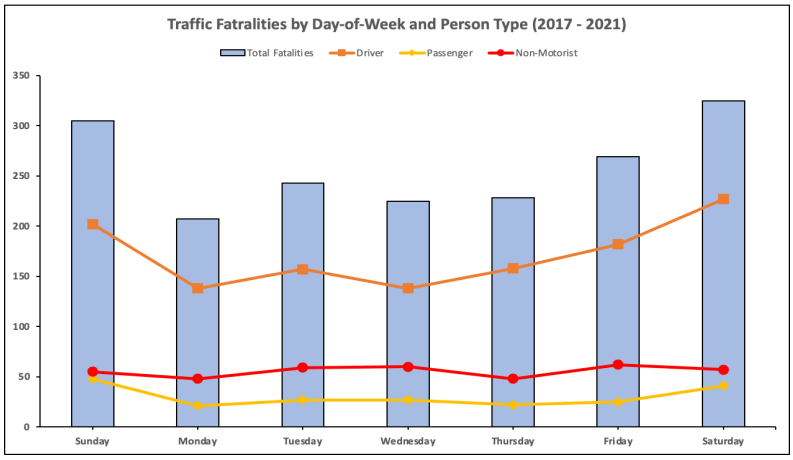
Source: FARS, MassDOT IMPACT

Nearly a third of all traffic fatalities from 2017 to 2021 took place during June, July, and August. These months typically involve high school graduations and subsequent graduation parties, the Fourth of July holiday period, and travel to the beaches or other vacation spots around Massachusetts (Cape Cod, Berkshires).

By person type, driver fatalities were more frequent between April and September, accounting for 56% of all driver fatalities from 2017 to 2021. Passengers were slightly higher during the summer months (June – August), with a third of passenger fatalities reported. Non-motorist deaths were most prevalent during the colder months (October – March) compared to warmer months (April – September). Cold months had an average of 36 fatalities per month; warm months averaged 29 deaths per month.

Fatalities by Day-of-Week

Fatalities have proven to be consistently higher during the weekend days (Saturday, Sunday) compared to any weekday over the past five years. From 2017 to 2021, Saturdays and Sundays have accounted for 35% of all traffic fatalities reported. If Fridays were included, the three-day period would be responsible for half of all fatalities.



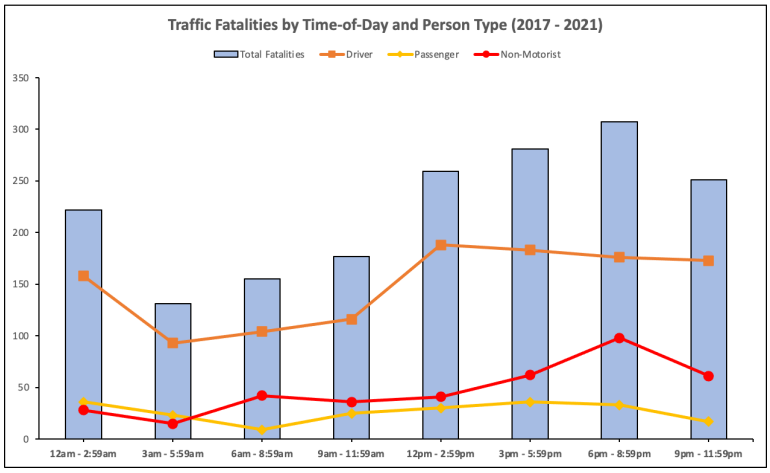
Source: FARS, MassDOT IMPACT

Over half of all driver and passenger fatalities occur during these three days (Friday – Sunday). Non-motorist fatalities were fairly consistent across all days of the week, with slight dips on Monday and Thursday.

Fatalities by Time-of-Day

From 2017 to 2021, nearly half of all traffic fatalities occurred during the eight hours from noon to 8:59 pm. This eight-hour period has the highest total fatalities for each person type: drivers (12 pm – 2:59 pm), passengers (3 pm – 5:59 pm), and non-motorists (6 pm – 8:59 pm).

For non-motorists, the early evening hours proved to be the deadliest time, accounting for over a quarter of all non-motorist fatalities. This is likely a result of this time range being popular for people to walk, run, and bike as the typical workday (9 am – 5 pm) comes to a close.

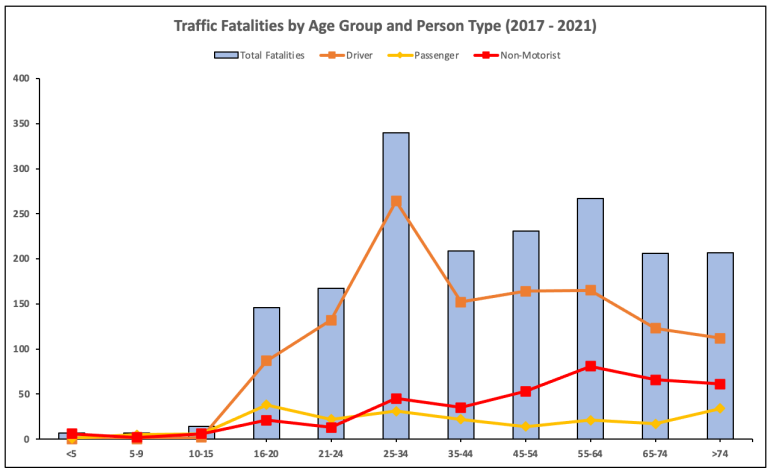


Source: FARS, MassDOT IMPACT

Of interest is the contrast between two time ranges: the 6 am-8:59 am and 3 pm-5:59 pm. Both involve heavy commuting (to/from work; dropping off/picking up children from school) as well as being time for exercising (walking, running, biking); yet, the difference in fatalities is quite substantial with the 3 pm-5:59 pm period recording nearly twice as many fatalities than the 6 am-8:59 am time frame.

Fatalities by Age Group

Fatalities among those aged 25 - 34 accounted for 19% of all traffic fatalities, followed by 15% for deaths among those aged 55 - 64. There was a distinctive difference in the breakdown of fatalities by person type for these two age groups. For the 25-34 age group, drivers accounted for 78% of fatalities; passengers, 9%; and pedestrians, 13%. In contrast, for the 55-64 age group, drivers made up 62% of fatalities; passengers, 8%; and pedestrians, 30%. The difference between the two age groups reflects changing driving behavior (i.e., maturity, experience) as well as an indication older population may be more prone to non-motorist fatalities (pedestrian, bicyclist) than younger non-motorists.



Source: FARS, MassDOT IMPACT

Since 2017, fatalities among those under 16 years of age accounted for only 2% of all traffic deaths in Massachusetts. Massachusetts' child passenger safety law has helped keep the number of deaths among the under 16 age groups remarkably low. Furthermore, the tireless efforts by OGR's partners, including local police departments, State Police barracks, hospitals, and non-profit traffic safety organizations in educating caregivers and families on the importance of properly installing child car seats have also contributed to the low mortality rate of passengers under the age of 15 in a crash.

Traffic fatalities are dominated by drivers for those under 35 years of age. With each successive age group, the number of non-motorists rises while driver deaths plateau, ultimately declining with the over 65 age group. Passengers remain relatively consistent between the ages of 35 and 74, increasing for those 75 or older.

What does all this mean regarding overall traffic fatality trends and frequency in Massachusetts? While analysis further on in this HSP will provide better details on trends for month, day, and time, the key takeaways from this brief overview of fatalities in Massachusetts are as follows:

- Friday, Saturday, and Sunday continue to be the prime days for police to conduct enforcement activities as half of all fatalities occur over these three days.
- Hours from 12 pm to 8 pm are when a large portion of driver, passenger, and non-motorist fatalities occur.
- The summer months – June, July, and August – had the highest frequency of fatalities from 2017 to 2021. Overall, traffic fatalities tended to occur more often in the latter part of the calendar year (July – December).
- While principal arterials are still the leading roadway on which fatalities occur, the recent rise in interstate and local road fatalities should be factored into any FY2023 enforcement activities.
- Drivers overwhelmingly account for most traffic fatalities, especially among those between the ages of 21 and 34.
- Non-motorist fatalities over 44 years of age accounted for 67% of all non-motorist fatalities, which indicates enforcement and media messaging related to pedestrians and bicyclists should be aimed at older Massachusettsians rather than younger ones.
- Besides Boston, which accounted for 88% of all fatalities in Suffolk County from 2017 to 2021, increased funding for local police should also be considered for Springfield and Brockton. Springfield represented 39% of all fatalities in Hampden County and Brockton, nearly a quarter of all fatalities in Plymouth County during the same time frame.
- With nearly 50% of its traffic fatalities involving non-motorists, increased pedestrian and bicyclist funding for more enforcement and education is needed for Boston.

The data presented so far provides a basic overview of the state of motor vehicle-related fatalities in Massachusetts. The FFY 2023 HSP program area sections will provide further data analysis related to fatalities involving impaired driving, occupant protection, speeding, distracted driving, motorcyclists, and non-motorists (pedestrians and bicyclists) within each respective program area.

The data will show that time-of-day, day-of-week, and age can differ from one program area to another. For example, non-motorist fatalities are most likely between 3 pm and 11:59 pm. In

contrast, unrestrained fatalities are most frequent between 9 pm, and 2:59 am. Recognizing this difference in time is crucial to planning enforcement activities and messaging when it comes to changing the behaviors of roadways users.

OGR will rely on a multifaceted approach to developing and selecting the projects for FFY 2023. The input used to develop the planned activities came from several sources, including:

- Data – Trends in fatalities, fatal crashes, serious injuries, seat belt usage, and traffic citations

- OGR staff – Provide extensive knowledge on current projects that may be renewed in FFY 2023, as well as critical insight into subrecipient concerns and suggestions

- Partners – State and local government, community groups, and non-profit organizations with a public safety mission.

- Subrecipients – Monthly activity reports and final reports provided excellent information on the impacts of current programs and what could be changed or improved to make the programs more effective. Program Coordinators within the HSD establish spreadsheets for every grant under their purview, covering all aspects, including funding, expenditures, and activities (i.e., number of stops, hours of patrol, types of violations issued). Since many projects are the same year-to-year, staff can compare projects across several years to see trends or where changes need to be made to improve the impact of the funds distributed.

- Open meetings – The HSD team conducted webinars in previous years to solicit feedback from partners about a wide range of traffic safety issues and will continue to do so.

By combining all the sources, OGR seeks to institute programs with the most significant positive impacts in reducing crashes, fatalities, injuries, and associated economic losses. Grant subrecipients will be selected for funding based on data-backed problem identification and how their proposed activities will address them.

When making funding available, an Availability of Grant Funding (AGF) is posted online through the state Mass.Gov online portal. Additionally, emails are sent out to prior and potential partners, including, but not limited to, MSP, local police, municipalities, state agencies, hospitals, and non-profit organizations, to ensure eligible recipients are aware of our funding opportunities. The emails provide a URL to the Mass.Gov portal where the AGFs and associated documents are posted, usually 4-6 weeks. OGR will continue to utilize a scoring process that results in all applications being rated along with several elements and then ranked from highest to lowest to determine grant awardees. The scoring process will involve convening a Review Team (RT) to read and rate all submitted applications. Scoring will be based on application completeness, problem identification, description of planned activities, and the potential for positive impacts on a community's traffic safety.

Due to the requirements of disseminating the NHTSA funds and specific eligible recipients, some of our NHTSA grant subrecipients who receive these funds or are expected to receive these funds

are not funded via a competitive review process. These subrecipients are sole source funded. A Notice of Intent is posted on the Mass.Gov portal for up to 30 days to inform the public and allow for comment. Regardless, if an award is competitive or sole-sourced, all subrecipients will be required to complete an Application Template, which will provide a full description of the program, need, goals/objectives/timeline, and detailed budget breakdown of all costs. All expected awards are vetted by the Executive Director, EOPSS leadership, and the Governor's Office for final approval.

List of Sources of Information used in 2023 HSP

- Fatality Analysis Reporting System (FARS)
- MassDOT IMPACT Crash Data System
- Massachusetts Injury Surveillance Program
- Massachusetts Citation and Violation Data
- Massachusetts Statewide Seat Belt Observational Survey
- Federal Highway Administration (FHWA)
- Federal Bureau of Investigation (FBI) Crime Statistics
- United States Census Bureau

Coordination with the Strategic Highway Safety Plan (SHSP)

The SHSP has statewide goals, objectives, and emphasis areas developed in consultation with federal, state, local, and private sector safety stakeholders using data-driven, multi-disciplinary approaches involving engineering, education, enforcement, and emergency response.

As a key contributor to the SHSP, OGR has worked with MassDOT (the lead agency) and other key stakeholders such as EOHHS, the Department of Public Health, regional transit authorities, insurance companies, WalkBoston, and hospitals to develop a tiered classification of emphasis areas. The emphasis areas are broken into three levels: Strategic, Proactive, and Emerging.

Strategic areas: Impaired Driving, Intersection Crash Prevention, Lane Departures, Occupant Protection, Speeding/Aggressive Driving, Young Drivers, Older Drivers, Pedestrians, and Motorcycle Riders.

Proactive areas: Bicycles, Truck, and Bus-Involved Crashes, At-Grade Crossing, and Traffic Incident Management Safety (formerly work zone safety). These areas represent less than 10% of annual fatalities or severe injuries but require attention to minimize potential increases.

Emerging areas: Data Systems, Drowsy Driving, and Driver Inattention (or Distracted Driving). These areas focus on improving the data system used to analyze traffic safety patterns and for safety topics where data is currently inconclusive.

The HSP targets many of the same emphasis areas as the SHSP, including impaired driving, occupant protection, speeding/aggressive driving, young and older drivers, pedestrians, motorcycles, bicycles, distracted and drowsy driving, and data systems (traffic record systems). Intersection Crash Prevention, lane departures, and at-grade crossings are not emphasis areas that are within the purview of the OGR mission. Through grant funding and media messaging, OGR

seeks to change driver, passenger, and non-occupant behaviors to reduce fatalities on the roadways of Massachusetts. At the same time, the SHSP looks to limit motor vehicle-related fatalities through infrastructure improvements such as better roadway design, improved crosswalks, and the upgraded installation of traffic lights. Improving the physical roadway and roadway user behaviors between OGR and MassDOT provides the best strategy for reducing fatalities.

Going forward, MassDOT will be adopting the Safe System Approach for the 2023 SHSP. This approach seeks to achieve zero deaths on the roadways through five complementary objectives: safer people (behavior), safer roads (civil engineering), safer vehicles (safety features), safer speeds (through combination of road design, targeted education campaigns, and enforcement), and post-crash care (enhance survivability).

OGR collaborates with MassDOT to establish yearly targets for three key core performance measures – fatalities, fatalities/VMT, and serious injuries. Per federal law (FAST Act), the State HSP performance targets for fatalities, serious injuries, and fatalities/VMT are identical to the same targets reported in the HSIP annual report and coordinated through the State SHSP. This collaboration ensures that both agencies are united in the same objectives and will help drive all programs run by both agencies towards the common goals of decreasing fatalities, fatalities/VMT, and serious injuries in the long term.

The performance targets identified in the following section were established as part of the problem identification process described above. Performance targets were set by reviewing data trends provided by sources such as FARS, MassDOT's Crash Portal, and NHTSA reports.

For FFY 2023, based on available data, OGR and MassDOT have adopted the following goals for the calendar base year 2019-2023 for fatalities, serious injuries, and fatalities/VMT.

- Five-year average for **fatalities** will drop 1.69% to 355 by December 31, 2023
- Five-year average for **serious injuries** will decrease 1.99% to 2,569 by December 31, 2023
- Five-year average for **fatalities/VMT** will drop 1.69% to 0.59 by December 31, 2023

Performance Review of FFY 2022 HSP Targets

In the FFY 2022 HSP, OGR provided performance targets for sixteen traffic safety performance measures. Most of the performance targets had an end date of December 31, 2022, so all targets are currently 'in progress.' The Traffic Records-related targets for FFY 2022 are provided after this section.

Performance Measures for FFY 2022	Progress
C-1) Number of traffic fatalities (FARS)	In Progress
C-2) Number of serious injuries in traffic crashes (State crash data files)	In Progress
C-3) Fatalities/VMT (FARS, FHWA)	In Progress
C-4) Number of unrestrained passenger vehicle occupant fatalities, all seat positions (FARS)	In Progress
C-5) Number of fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 and above (FARS)	In Progress
C-6) Number of speeding-related fatalities (FARS)	In Progress
C-7) Number of motorcyclist fatalities (FARS)	In Progress
C-8) Number of unhelmeted motorcyclist fatalities (FARS)	In Progress
C-9) Number of drivers age 20 or younger involved in fatal crashes (FARS)	In Progress
C-10) Number of pedestrian fatalities (FARS)	In Progress
C-11) Number of bicyclists fatalities (FARS)	In Progress
B-1) Observed seat belt use for passenger vehicles, front seat outboard occupants (survey)	In Progress
Number of distraction-affected fatal crashes	In Progress

C-1: Traffic Fatalities

In the FFY 2022 HSP, the performance target for fatalities was to decrease motor vehicle fatalities by 4% from the five-year average of 354 in 2020 to a five-year average of 340 by December 31, 2022.

From 2017 to 2021, the five-year average for fatalities rose 1.9%, from 354 to 360. With the COVID-19 restrictions slowly coming down in 2021, the number of vehicles on the roadways increased, evidenced by the rise in VMT from 2020 to 2021. Unfortunately, this rise was accompanied by an increase in fatalities. By 2021, traffic fatalities were 421 – up 21% from 343 deaths reported in 2020. To meet the 2022 target of 340, total fatalities in 2022 will need to be 245 or less.

For the first three months of 2022, there have been 83 fatalities reported in Massachusetts. During the same period in 2021, there were 73 fatalities reported. OGR is hopeful the increased level of state and local police enforcement activity in 2022 for Distracted Driving (April), CIOT (May), and Impaired Driving (Summer) should result in fewer fatal crashes compared to 2021.

C-2: Serious Injuries

For FFY 2022, the performance target for serious injuries was to decrease serious injuries by 5.2% from the five-year average of 2,641 in 2020 to a five-year average of 2,504 by December 31, 2022.

From 2017 to 2021, the five-year average for serious injuries has declined 1.3%, from 2,642 to 2,609. Progress is being made toward the December 31, 2022, five-year average of 2,504. For the first quarter of 2022, there have been 501 serious injuries reported in crashes along Massachusetts roadways. This is slightly higher than the 495 serious injuries recorded through the same period in 2021. To meet the 2022 target of 2,504, serious injuries will need to be 2,048 or less.

OGR is cautiously optimistic that the five-year average of 2,504 will be met or surpassed by the end of 2022, with the expected increase in state and local police enforcement activities planned throughout the year.

C-3: Fatality/VMT

In the FFY 2022 HSP, the performance target for fatalities/VMT was to decrease the fatality/VMT rate by 1.8% from the five-year average of 0.57 in 2020 to a five-year average of 0.56 by December 31, 2022.

The preliminary estimated VMT for 2021 was 57,103 million. This represents a 6% rise from the 53,700 million VMT reported in 2020. Based on this estimate, the fatality/VMT for 2021 was 0.74 – an increase of 15% from the 0.64 rate reported in 2020.

For 2022, MassDOT has projected an estimated VMT of 62,294 million, which would be a significant jump from 2021 but would be in line with expected increased roadway usage as COVID-19 restrictions are longer in effect. If fatalities continue at their current per month rate of 28 deaths [83/3 = 27.6], the projected yearly total for 2022 would be 332, resulting in a much lower

fatality/VMT rate (0.53) than in 2021. To meet the 2022 target of 0.56, the fatality rate would have to be 0.39 or lower.

C-4: Unrestrained Motor Vehicle Occupant Fatalities

For FFY 2022, the performance target was to decrease unrestrained passenger vehicle occupant fatalities by 4% from the five-year average of 106 in 2020 to a five-year average of 102 by December 31, 2022.

In 2021, the five-year average for unrestrained fatalities declined 4.2% to 105 from 109 in 2020. For the first quarter of 2021, there have been 16 unrestrained fatalities reported in Massachusetts - which is lower than the 22 reported during the same period in 2021.

OGR expects the five-year average to continue falling, surpassing the 102 target for December 31, 2022. To meet this target, unrestrained fatalities need to be 119 or less. Unrestrained fatalities have dropped 32% since recording 133 deaths in 2017. OGR is hopeful that with continued state and local police enforcement and a focus on public education and awareness outreach, the number of deaths will decline further.

C-5: Alcohol-Impaired Driving Fatalities (BAC = .08 or higher)

In the FFY 2022 HSP, the performance target was to decrease alcohol-impaired driving fatalities by 3% from the five-year average of 113 in 2020 to a five-year average of 110 by December 31, 2022.

The preliminary number for alcohol-impaired driving fatalities in 2021 was 106, slightly increasing from the 98 deaths reported in 2020. Despite this slight rise in fatalities, the five-year average for 2021 was 112, down from 120 in 2020. To meet the 2022 target of 110, total alcohol-impaired fatalities need to be 112 or lower at the conclusion of 2022.

For the first three months of 2022, 11 alcohol-impaired driving fatalities were reported. In the previous year (2021), the number of alcohol-impaired fatalities during the same period was 24. While nine months remain in 2022, this decline in first-quarter deaths compared to 2021 is a good sign that deaths will likely be lower in 2022 overall than in 2021. With the continued success of OGR's "Drive Sober or Get Pulled Over" mobilizations and media messaging throughout 2022, OGR is cautiously optimistic that the five-year average will hit the desired target of 110 in December 2022.

C-6: Speed-Related Fatalities

In the FFY 2022 HSP, the performance target was to decrease speed-related fatalities by 5% from the five-year average of 95 in 2020 to 90 by December 31, 2022.

The five-year average of speeding fatalities dropped from 101 in 2020 to 94 in 2021, slightly above the target set in the FFY 2022 HSP. This represents a decline of 7%. The number of speeding fatalities has remained under 100 since 2019. To meet the 2022 target of 90, total speeding fatalities need to be 114 or less at the conclusion of the year.

Through the first quarter of 2022, the number of speeding-related fatalities was the same as in 2021 – 16 deaths. OGR is confident the increased enforcement plans by local and state police throughout 2022 will lead to lower speeding fatalities than in 2021.

C-7: Motorcyclist Fatalities

In the FFY 2022 HSP, the performance target was to decrease motorcyclist fatalities by 4% from the five-year average of 52 in 2020 to a five-year average of 50 by December 31, 2022.

For 2021, the five-year average of motorcycle fatalities was 60, up 14.5% from 52 in 2020. Since 2019, motorcycle fatalities have jumped 71%, from 48 to 82. One possible contributing factor to this unfortunate increase in motorcycle fatalities is the COVID-19 pandemic, which may have spurred more riders to take to the roads to get out and about without dealing with people. To meet the 2022 target of 50, total motorcyclist fatalities have to be 12 or lower at the end of the year.

OGR is hopeful its partnership with RMV in FFY 2022 and onwards into FFY 2023 to increase the number of motorcycle rider training courses across the state will lead to a decline in motorcycle fatalities.

C-8: Unhelmeted Motorcyclist Fatalities

In the FFY 2022 HSP, the performance target was to decrease unhelmeted motorcycle fatalities by 25% from the five-year average of 4 in 2018 to a five-year average of 3 by December 31, 2022.

In 2021, there were six unhelmeted fatalities, up from 2 in 2020. Despite this unfortunate rise, the five-year average for unhelmeted fatalities was 2.8, which is lower than the target of three. Through the first quarter of 2022, no unhelmeted motorcyclist fatalities were reported. OGR is hopeful this portends a good year in which no unhelmeted fatalities occur. To meet the 2022 target of 3, total unhelmeted fatalities need to be 2 or less for the year.

C-9: Young Drivers (Age 20 or younger) Involved in a Fatal Crash

In the FFY 2022 HSP, the performance target was to decrease the number of young drivers (age 20 or under) involved in fatal crashes by 5%, from the five-year average of 36 in 2020 to a five-year average of 34 by December 31, 2022.

In 2021, the five-year average for young drivers involved in fatal crashes was 34, down 4% from 36 in 2020. Despite the decline in the five-year average, young driver involvement increased to 40 in 2021 from 35 in 2020. For the first quarter of 2022, seven drivers under 21 were involved in a fatal crash – one higher than the number of drivers involved through the first quarter of 2021. To meet the 2022 target of 34, total young drivers involved in a fatal crash should be 36 or lower.

OGR is hopeful that a return to effective, targeted, well-researched media messaging aimed at young drivers during critical mobilization periods will help reduce the number of young drivers involved in fatal crashes during 2022 and lower the five-year average for 2018-2022.

C-10: Pedestrian Fatalities

In the FFY 2022 HSP, the performance target was to decrease pedestrian fatalities by 3% from the five-year average of 71 in 2020 to a five-year average of 68 by December 31, 2022.

In 2021, the five-year average for pedestrian fatalities dropped slightly to 71 from 72 in 2020. After a 30% decline in deaths from 2019 to 2020, due to COVID-19 restrictions that reduced the number of vehicles on the roadways, pedestrian death jumped 39% in 2021 to 75. As the pandemic helped lower fatalities, the lifting of restrictions has led to increased pedestrian fatal injuries due to more vehicles traveling the roadways than in the previous year.

During the first quarter of 2022, there have been 22 pedestrian fatalities compared to 14 reported during the first quarter of 2020. To meet the 2022 target of 68, total pedestrian fatalities by year's end should be 57 or less. Though more pedestrian fatalities were expected in 2021 and 2022 due to the state moving on from pandemic safety measures, the jump in fatalities for the first quarter from 2021 to 2022 is very concerning. OGR plans to increase media messaging on pedestrian safety and work with State and local police to target enforcement in areas of high pedestrian traffic throughout 2022.

C-11: Bicyclist Fatalities

In the FFY 2022 HSP, the performance target was to decrease bicyclist fatalities by 10% from the five-year average of 8 in 2018 to a five-year average of 7 by December 31, 2022.

In 2021, the five-year average for bicyclist fatalities dropped to seven from eight in 2020. This decline was helped by a 50% decrease in fatalities from 10 in 2020 to five in 2021. For the first quarter of 2022, there were no reported bicycle fatalities in Massachusetts. It remains to be seen if the warmer months will see a spike in bicyclist fatalities. To meet the 2022 target of 7, total bicyclist fatalities need to be 11 or less for the year.

OGR hopes the increased interest in bicycle safety enforcement and education by local police in FFY 2022 and the first quarter of FFY 2023 will lead to even lower bicyclist fatalities by the end of 2022 compared to 2021.

B-1: Observed Seat Belt Usage

In the FFY 2022 HSP, the performance target was to increase the observed seat belt use rate by 4% from the five-year average of 78 in 2020 to a five-year average of 81 by December 31, 2022.

For 2021, the five-year average for the observed seat belt use rate was 79, the same as in 2020. The 2022 survey will be conducted in June, and a final report will be submitted to NHTSA by the end of August. To meet the 2022 target of 81, the 2022 Seat Belt Survey final weighted rate needs to be 82.7 or higher.

While the survey was waived in 2020 due to the pandemic, the seat belt rate reported for 2021 was 77.5, an unfortunate decline after two straight years of seat belt rates over 80%. OGR is hopeful the increased state and local police participation in May's CIOT mobilization will lead to a higher

seat belt usage rate for 2022. It should be noted that the three-year hiatus in conducting seat belt awareness efforts has coincided with the significant decline in the Massachusetts seat belt use rate.

NC-1: Distraction-Affected Fatal Crashes

In the FFY 2022 HSP, the performance target was to decrease distraction-affected fatal crashes by 6% from the five-year average of 31 in 2020 to 29 by December 31, 2022.

Over the past couple of years, this performance target has been widely unpredictable due to the lack of accuracy in counts for distracted driving fatal crashes during the production of the HSP. In the 2022 plan, the five-year average of 31 was based on the preliminary value of 14 for deadly crashes in 2020, derived from the IMPACT database. IMPACT currently shows 17 fatal crashes for 2020, while FARS reports 31 distraction-affected fatal crashes for the same year. For 2021, IMPACT is reporting 16 distraction-affected fatal crashes. FARS will not have 2021 numbers online until the latter part of 2022.

For consistency, the performance of distraction-affected fatal crashes will be done based on FARS values for 2015 – 2020. The five-year average from 2015-2019 was 42, while the five-year average for 2016-2020 was 36, a 15% decline.

While the decline is welcome news, it is far above the five-year average target of 29 set in the FFY 2022 HSP. At the same time, the target was set based on a preliminary 2020 value of 14. The final FARS number was 31 – the same number of fatal crashes reported in 2019.

Given this wide discrepancy in reported distraction-affected fatal crashes, it must be noted that distracted driving is notoriously hard to prove for police when reporting a motor vehicle crash. Unless a driver admits to it or a witness saw the driver be distracted at the time of impact, the number of actual distracted driving fatal crashes is likely much higher than what is available in the crash reporting data.

Looking forward, OGR expects the distraction-affected fatal crashes to rise as COVID-19 restrictions drop and more people – whether drivers or non-motorists – begin using the roadways more frequently.

Review of FFY 2022 Traffic Records-Related Performance Targets

TR-1 – Decrease the percentage of Massachusetts State Police- submitted crash reports with invalid or incomplete entries in Accepted with Warning (AWW) fields (utilizing criteria by RMV with Crash Data System data in UMassSafe Data Warehouse) from 3.7% as of 8/31/19 to 2.78% by 12/31/21.

Progress: Because of a reporting challenge with the UMassSafe Data Warehouse, the project was unable to report if it met its performance target. However, all project deliverables were completed.

TR-2: Exceed the January to December 2020 benchmarks for the RMV FARS Unit - for the timeliness, completeness, and quality - by 1% for January to December 2021

Progress: This project did not completely meet its performance target. The January to October 2020 benchmarks was 86.94% for Timeliness, 83.77% for Completeness, and 79.87% for Overall Case Quality. The January to October 2021 benchmarks were 86.11% for Timeliness, 86.33% for Completeness, and 75.34% for Overall Case Quality. Completeness was the only performance target met.

TR-3: By 6/30/22, DCJIS will install approximately 170 mobile printers for police vehicles and provide related training at an estimated 20 departments new to MACCS.

Progress: This project is still working towards its performance target, but as of April 2022, DCJIS reported it had installed 168 mobile printers at 18 police departments.

TR-4: Increase the number of Massachusetts driver records integrated with Massachusetts crash and injury surveillance (hospital case mix) data from 38,000 from 7/1/21 to 152,000 by 9/30/22.

Progress: This project is still working towards its performance target, but by March 2022, 153,024 Massachusetts driver records were integrated with FY 2016 – 2018 Massachusetts crash and injury surveillance (hospital case mix) data. The Massachusetts Department of Public Health (DPH) also reduced the project end date to June 30, 2022, from September 30, 2022.

TR-5: A completeness/validity measurement of the field 'cited' in CDS driver data will be improved by 20% from a baseline of 36.9% (64,241/173,957 drivers) for 1/1/20- 12/31/20 to 44.3% for 7/1/21-6/30/22.

Progress: This project did not meet its performance target due to an administrative challenge involving the hiring of a proposed clerk at the Massachusetts Registry of Motor Vehicles that resulted in the cancellation of the project before any activity began.

TR-6: Increase the number of ambulance trip records successfully transmitted to the NEMSIS national repository from the Massachusetts Ambulance Trip Record Information System (MATRIS) from 0 as of 3/31/21 to 800,000 by 3/31/22.

Progress: This project did not meet its performance goal because the project was canceled before any activity began.

TR-7: Increase the number of trauma centers and community hospitals submitting mandatory trauma reporting to the new trauma registry within 90 days of quarter closure from 0 as of 3/31/21 to 20 by 3/31/22.

Progress: This project did not meet its performance goal because the project was canceled before any activity began.

TR-8: Increase Boston Police Department (BPD) electronic crash reporting to the Massachusetts Crash Data System (CDS) from an estimated 7% rate as of July 1, 2020, to 70% or more by June 30, 2021.

Progress: This project did not meet its original performance target. After the project began, the target had to be revised to reflect that BPD had only been using paper reporting. The new goal was to increase the percentage of electronic crash reporting by the BPD to the CDS from 5.8% via paper reporting as of April 2021 to 70% via electronic reporting by December 31, 2021. As of November 2021, BPD had a 3.44% rate via paper reporting. In December 2021, BPD began electronic reporting, and the exact rate is still to be determined.

Grant-funded Activity for FFY 2021

Listed below are selected results from FFY 2021 (October 2020 – September 2021) grant-funded enforcement activities in Massachusetts. While not a requirement, NHTSA has requested the data points for longitudinal reference and to understand how effective enforcement is within Massachusetts during the course of a federal fiscal year. The numbers below are based on activity reported by both local and State Police while conducting grant-funded enforcement activities in FFY 2021.

A-1) Number of seat belt citations issued during grant-funded enforcement activities

Seat belt citations: **3,032**

Fiscal Year: **2021**

A-2) Number of impaired driving arrests made during grant-funded enforcement activities

Impaired driving arrests: **103**

Fiscal Year: **2021**

A-3) Number of speeding citations issued during grant-funded enforcement activities

Speeding citations: **7,676**

Fiscal Year A-3: **2021**

Performance Targets for FFY 2023

The chart below provides the planned target value for a performance measure to achieve by December 31, 2023. Achieving the stated target value for each measure is the overarching goal of OGR.

	Performance Measure (Data Source	Value Used	Start Value (2021)	Pct. Change	Target Value (2023)
C-1	Number of traffic fatalities (FARS)	5-yr avg.	361	1.69%	355
C-2	Number of serious injuries in traffic crashes (IMPACT)	5-yr avg.	2,620	1.69%	2,569
C-3	Fatalities/VMT (FARS, FHWA)	5-yr avg.	0.60	1.99%	0.59
C-4	Number of unrestrained passenger vehicle occupant fatalities, all seat positions (FARS)	5-yr avg.	105	4%	100
C-5	Number of fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 and above (FARS)	5-yr avg.	112	3%	108
C-6	Number of speed-related fatalities (FARS)	5-yr avg.	94	5%	90
C-7	Number of motorcycle fatalities (FARS)	5-yr avg.	60	2%	58
C-8	Number of unhelmeted motorcyclist fatalities (FARS)	5-yr avg.	3	33%	2
C-9	Number of drivers age 20 or younger involved in fatal crashes (FARS)	5-yr avg.	34	5%	32
C-10	Number of pedestrian fatalities	5-yr avg.	71	3%	69
C-11	Number of bicyclists fatalities	5-yr avg.	7	10%	6
B-1	Observed seat belt use for passenger vehicles, front seat outboard occupants (Survey)	5-yr avg.	79	4%	82
NC-1	Number of distraction-affected fatal crashes	5-yr avg.	30	5%	28

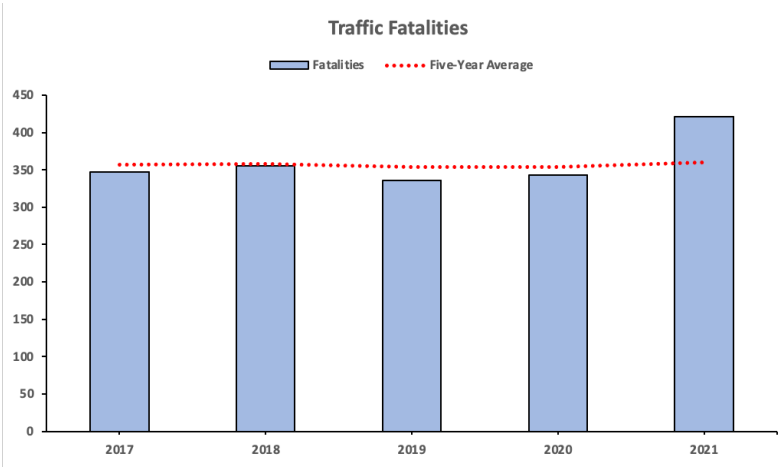
Disclaimer: *The first three performance measures and projected targets listed in this section include Traffic Fatalities, Serious Injuries, and Fatalities/VMT. NHTSA and FHWA require these targets to be* ***identical*** *to MassDOT projects in its annual Highway Safety Improvement Program (HSIP) report.*

C-1 Traffic Fatalities

FFY 2023 Target: 1.69% drop in the five-year average from 361 in 2021 to 355 by December 31, 2023.

Since 2017, traffic fatalities have averaged 345 per year, and it looked like fatalities were heading downward and on track to meet the FFY 2022 target of 340. Unfortunately, in 2021, traffic fatalities broke the 400 level for the first time since the mid-2000s, with 421 deaths. Despite the upswing in fatalities for 2021, the five-year average for 2017-2021 was 361, only 1.9% higher than the five-year average for 2016-2020.

Note: the dotted line in the graph below and each subsequent graph in this section represents the five-year average for the performance measure



Source: FARS, MassDOT IMPACT

OGR is cautiously optimistic that fatalities will be lower in 2022 and 2023 than the 421 reported in 2021. One major factor for this optimism is the loosening of COVID-19 restrictions, allowing state and local police to fully embrace the overtime enforcement activities to improve roadway safety curtailed in 2020 and 2021.

For example, during FFY 2021 and 2022, MSP conducted 12 and 14 sobriety checkpoints, respectively. In pre-COVID years, MSP would conduct upwards of 70 to 80 checkpoints. For FFY 2023, OGR is confident the loosening of restrictions will lead to pre-COVID activity levels by subgrantees.

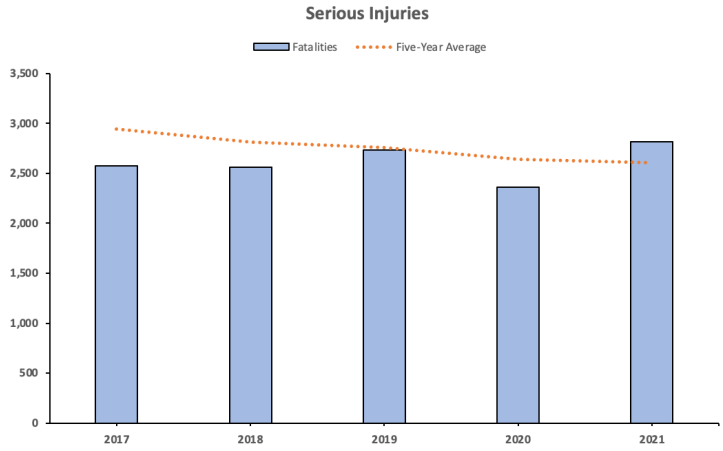
Another historic consideration is that the last high point for traffic fatalities was in 2016, when there were 387 deaths on the roadways. The following three years (2017 – 2019) had an average of 346 fatalities.

OGR is also hopeful that the slate of planned activities for FFY 2023 will help further reduce traffic fatalities as the integrated approach of enforcement, education, and funding on media messaging to impact roadway user behaviors across the state.

C-2 Serious Injuries

FFY 2023 Target: 1.99% decrease in the five-year average from 2,620 in 2020 to 2,569 by December 31, 2023.

After declining 22% since 2014, serious injuries jumped in 2021 – up 19% from 2020. The increase has been attributed to the rise in fatal crashes. With more people involved in deadly crashes, passengers and non-motorists are more likely to be seriously injured in the crashes.



Source: FARS, MassDOT IMPACT

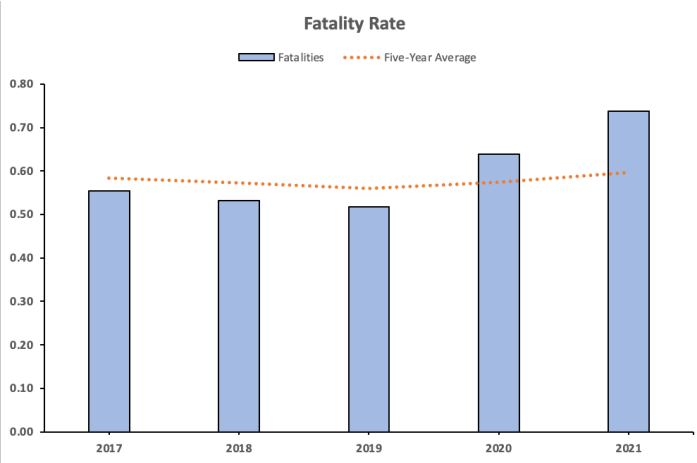
OGR is optimistic that continued advances in motor vehicle safety features such as collision alerts and automatic braking will help decrease the incidence of serious or fatal crashes. Also, the successful implementation of the 2020 Hands-Free law has put drivers on notice about the dangers (and financial penalties) involved in using a smartphone while driving.

OGR expects its FFY 2023 planned activities to positively impact serious injuries with enforcement, education, and media campaigns to increase safety awareness, especially regarding wearing seat belts, distractions, impairment, and maintaining legal speeds. Each person who wears a seat belt drives attentively, soberly, and under control, increasing their chance of surviving a crash with minimal or no injuries.

C-3 Fatality/VMT Rate

FFY 2023 Target: 1.69% decline in the five-year average from 0.60 in 2020 to 0.59 by December 31, 2022.

In 2021, the vehicle miles traveled reported for Massachusetts was 57,103 million - a 6% increase from the 53,695 million reported in 2020. This rise in VMT is the further loosening or flat-out removal of COVID-19 pandemic social and travel restrictions, which has led to more and more people using the roadways of Massachusetts.



Source: FARS, MassDOT IMPACT

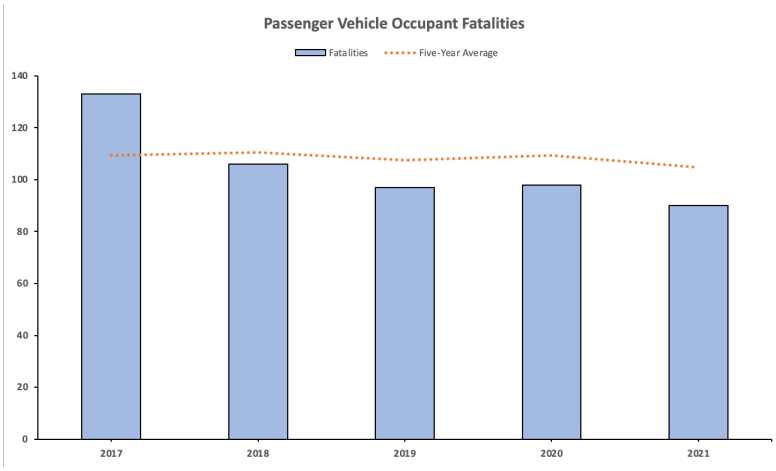
While the increase in VMT is a welcome sign of life, hopefully returning to the pre-pandemic level of activities, the drastic rise in traffic fatalities in 2021 has resulted in a fatality rate of 0.73. This was the highest fatality rate since 2007 when it was 0.79.

The Massachusetts Department of Transportation (DOT) projects VMT to continue rising in the coming years. DOT has estimated 2022 VMT at 62,000 million, a 9% jump from 2021. This expected increase in VMT, even if traffic fatalities remained higher than in 2020, would result in a lower fatality rate in 2022.

OGR believes the fatality count in 2021 is an aberration, an outlier, and fatalities should fall closer to its 2016-2020 average of 354 in 2022 and 2023, coupled with rising VMT would further reduce the fatality rate.

C-4 Unrestrained MV Occupant Fatalities

FFY 2023 Target: 4% decline in the five-year average from 105 in 2021 to 100 by December 31, 2023.



Source: FARS, MassDOT IMPACT

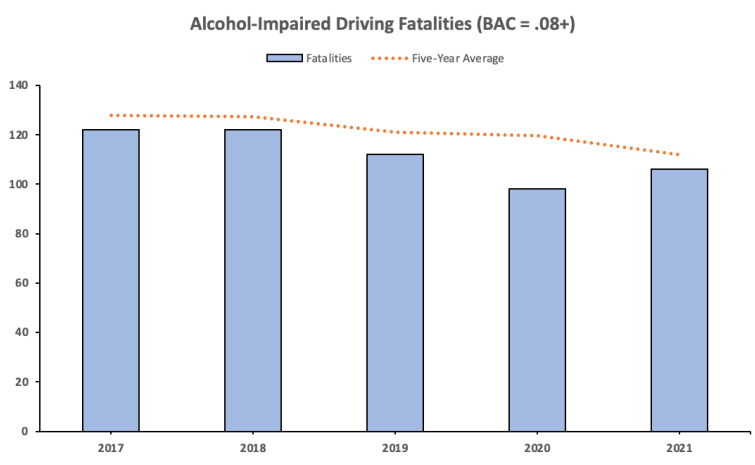
Unrestrained fatalities have declined 32% since 2017. The 90 unrestrained fatalities for 2021 is 8% lower than the 98 fatalities reported in 2020 and is also a year removed from pandemic restrictions that curtailed vehicle miles traveled.

OGR will utilize unrestrained motor vehicle fatalities data to focus messaging for seat belt awareness campaigns in high-incidence counties in Massachusetts. From 2016 to 2020, Worcester, Bristol, Hampden, and Plymouth were the top four counties for unrestrained motor vehicle occupants – accounting for over half of all unrestrained fatalities reported. A 4% decline in the five-year average by December 31, 2023, is reasonable, with unrestrained fatalities trending downward. Particular focus will be on overtime enforcement and media messaging during nighttime hours (6 pm – 5:59 am), of which nearly 60% of 282 unrestrained fatalities were reported in these four counties.

Planned activities in FFY 2023, such as the May Click It or Ticket mobilization and MSP Sustained Traffic Enforcement Program (STEP), will involve dedicated overtime enforcement by state and local law enforcement. This activity reduces the number of unbelted drivers and passengers on the roadways.

C-5 Alcohol-Impaired Driving Fatalities (BAC = 0.08 or higher)

FFY 2023 Target: 3% decline in the five-year average from 112 in 2021 to 108 by December 31, 2023.



Source: FARS, MassDOT IMPACT

Alcohol-impaired fatalities have declined 13% since 2017; during the same period, the five-year average fell 12%. After a significant drop in fatalities from 2019 to 2020 – primarily due to the pandemic travel and social restrictions put in place – impaired driving fatalities rose slightly in 2021. This increase can be attributed to the phasing out of COVID-19 restrictions and the rise of social gatherings. In short, people were enjoying nights out on the town again.

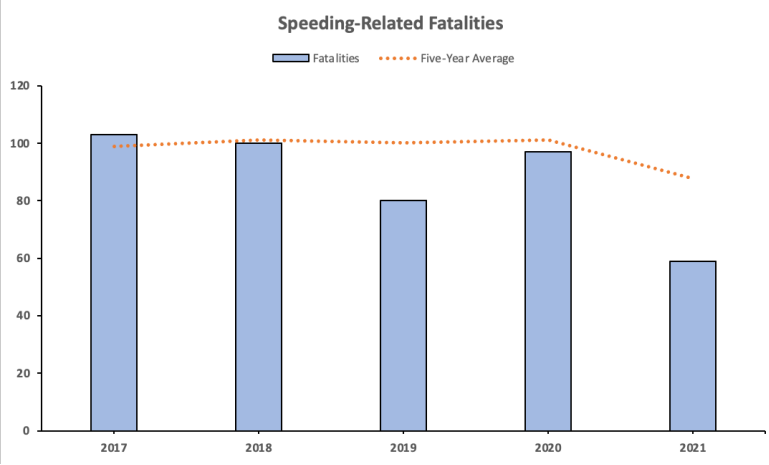
From 2016 to 2020, three-quarters of alcohol-impaired fatalities were drivers, 15% were passengers, and 12% were non-motorists. Male drivers accounted for 70% of all driver fatalities. Nearly 80% of all alcohol-impaired fatalities occurred during nighttime (6 pm – 5:59 am) and tended to happen with far more frequency over the weekend (Friday 6 pm to Monday 5:59 am) than on weekdays. In terms of age, seven out of every ten alcohol-impaired drivers involved in fatal crashes were between 21 and 34.

For FFY 2023, OGR has a slate of planned activities to lower the incidence of alcohol-impaired drivers on the roadways. There are currently ten projects to be funded, including media messaging to support Winter and Summer Impaired Driving mobilizations, MPTC training on sobriety testing, drug recognition, impaired driving enforcement, and compliance checks conducted by ABCC. These activities and others will help decrease alcohol-impaired driving fatalities in 2022 and 2023.

C-6 Speed-Related Fatalities

FFY 2023 Target: 5% decline in the five-year average from 94 in 2021 to 90 by December 31, 2023.

With the loosening of COVID-19 travel restrictions, the jump in traffic volume has seemed to help reduce the desire of drivers to speed along roadways as more vehicles are out on the road compared to 2020, when speeding fatalities were 21% higher than in 2019. Speeding fatalities have dropped 43% from 103 in 2017 to 59 in 2021. The five-year average has also declined from 99 in 2017 to 88 in 2021, an 11% drop. Given the historical average for speeding fatalities – 97 deaths (2013 – 2020) – there is a high likelihood that the final number of deaths for 2021 will be higher than the 59 reported above.



Source: FARS, MassDOT IMPACT

From 2016 to 2020, male drivers accounted for nearly 80% of all drivers involved in a speed-related fatal crash, with 58% between 21 and 44. Over 30% of speed-related fatalities occurred in one of two counties: Hampden and Worcester. OGR plans to utilize media messaging aimed at male drivers under 45, focusing primarily on these two counties.

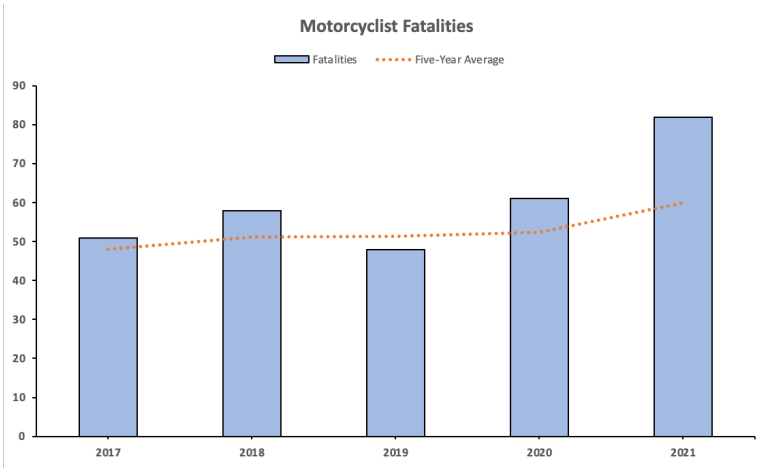
With aggressive media messaging through traditional and non-traditional mediums, OGR has two planned activities that encompass speeding enforcement and education in FFY 2023. One is MSP's Speed Enforcement program, which will include planned enforcement from July to early September called "100 Deadliest Days of Summer" and the purchase of new radar units to help monitor driver speeds while conducting enforcement. The other is the Municipal Road Safety program which, among its many activities for grantees, involves participation in LiDAR certification and outreach to high school students to educate them on the dangers of speeding.

The combined impact of media messaging, law enforcement patrols and educational outreach will help lower speed-related fatal crashes in 2022 and 2023, reducing the five-year average of fatalities.

C-7 Motorcyclists Fatalities

FFY 2023 Target: 2% decline in the five-year average from 60 in 2021 to 58 by December 31, 2023.

Motorcyclist fatalities rose in consecutive years, from 48 to 61 in 2020 and then to 82 in 2021. This 71% jump in deaths occurred despite motorcycle training (virtual and in-person) increasing 15% from 2019 to 2020, and 23% from 2020 to 2021.



Source: FARS, MassDOT IMPACT

From 2016 to 2020, more than half of motorcycle fatalities occurred in four counties: Bristol, Hampden, Middlesex, and Plymouth. The top communities for fatalities were Springfield (15), Boston (14), and Fall River (9).

Motorcycle fatalities occurred more frequently during warmer months (April – October), with June and July accounting for almost 40% of the fatalities. Over half of motorcycle fatalities involved a collision with another motor vehicle, with the highest total (19 crashes) occurring in three different counties – Bristol, Hampden, and Middlesex.

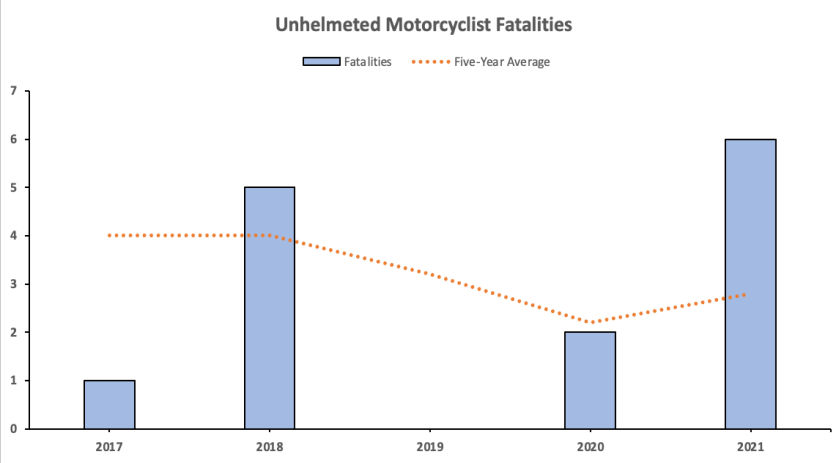
For FFY 2023, OGR plans to increase motorcycle operator awareness in collaboration with our partners MassDOT, RMV, MREP, and the Traffic Safety Division. The focus will be on motorcycle rider safety and driver awareness and promote upcoming ride training classes available through RMV.

OGR is hopeful that this initiative and the continued success of training motorcycle riders across the state will lead to a decline in motorcycle fatalities in 2022 and 2023.

C-8 Unhelmeted Motorcyclists Fatalities

FFY 2023 Target: 33% decline in the five-year average from 3 in 2021 to 2 by December 31, 2023.

The five-year average of unhelmeted motorcyclist fatalities rose slightly in 2021 from two to three due to six deaths reported in 2021 – up from two in 2020.



Source: FARS, MassDOT IMPACT

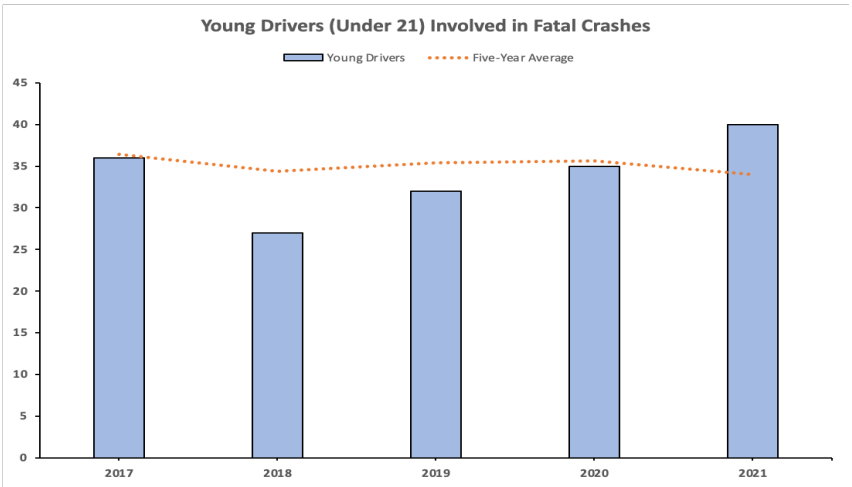
For FFY 2023, OGR, in partnership with our stakeholders, plans to focus on effective media messaging about motorcycle safety, with attention paid to proper gear, including the importance of wearing helmets and the legal requirement (Massachusetts has a primary motorcycle helmet law, MGL 90§7). Our traffic safety partners, MassDOT, RMV, MREP, and the Traffic Safety Division, will collaborate to develop a campaign raising awareness for motorcyclists, including helmet usage and safety content.

Massachusetts requires all motorcyclists to wear helmets when riding, regardless of age. This law has been critical in keeping the number of unhelmeted deaths low. OGR is hopeful that unhelmeted fatalities will decline in 2022 and 2023 on the strength of this law combined with compelling messaging and increased motorcycle rider training participants.

C-9 Young Drivers (Age 20 or younger) Involved in a Fatal Crash

FFY 2023 Target: 5% decline in the five-year average from 34 in 2021 to 32 by December 31, 2023.

The five-year average for young drivers declined slightly from 36 in 2020 to 34 in 2021. At the same time, 2021 was the third consecutive year since 2018 that young driver involvement in a fatal crash increased. In the past four years, the number of young drivers has increased by nearly 50%. While this may be cause for concern, the number of young drivers involved in a fatal crash to date in 2022 is lower than the number reported at the same time in 2021.



Source: FARS, MassDOT IMPACT

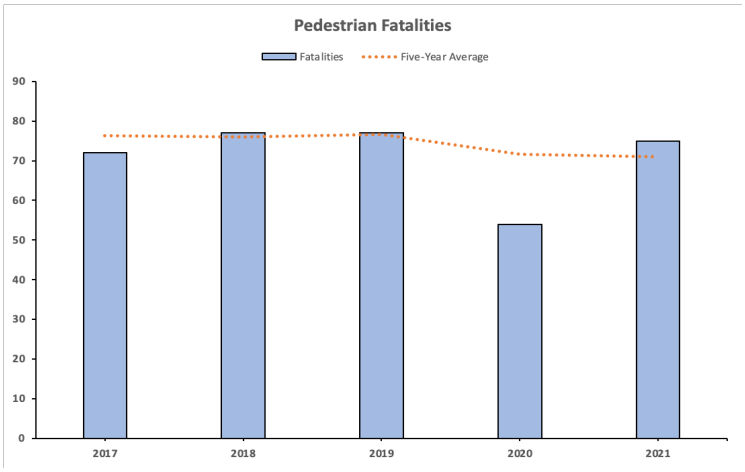
OGR is hopeful that the resumption of pre-pandemic overtime enforcement activities and messaging will help decline the number of young drivers involved in fatal crashes.

FFY 2023 outreach and messaging to young drivers will focus on critical periods in which young drivers are likely to be involved in a crash, such as the summer. One planned activity, MSP Speed Enforcement, is targeted at young drivers during its "100 Deadliest Days of Summer." Enforcement activity will run from July to early September. OGR is hopeful that MSP's enforcement patrols will lead to fewer young drivers involved in fatal crashes, as speeding is a factor in nearly 40% of all crashes from 2016 to 2020.

C-10 Pedestrian Fatalities

FFY 2023 Target: 3% decline in the five-year average from 71 in 2021 to 69 by December 31, 2023.

With more vehicles back on the roads, the danger to pedestrians has risen. After a significant decline in 2020 – a result of COVID-19 restrictions on travel which severely reduced the vehicle miles traveled on Massachusetts roadways – pedestrian fatalities rose to their pre-pandemic level in 2021. Despite the uptick in deaths, the five-year average dropped to 71 in 2021, down from 72 in 2020.



Source: FARS, MassDOT IMPACT

Unlike most other fatality targets in this section, where fatalities are highest among 35 or younger, pedestrian fatalities were most frequent among older adults. From 2016 to 2020, a third of all pedestrian fatalities were 65 or older, while those 20 or younger accounted for only 12% of deaths. Also, in contrast to other fatality targets, pedestrian fatalities occurred more often during colder months (October – March) than in warmer months (April – September). Over 60% of pedestrian deaths occurred from October to March, with December as the high-water mark with 45 pedestrian fatalities.

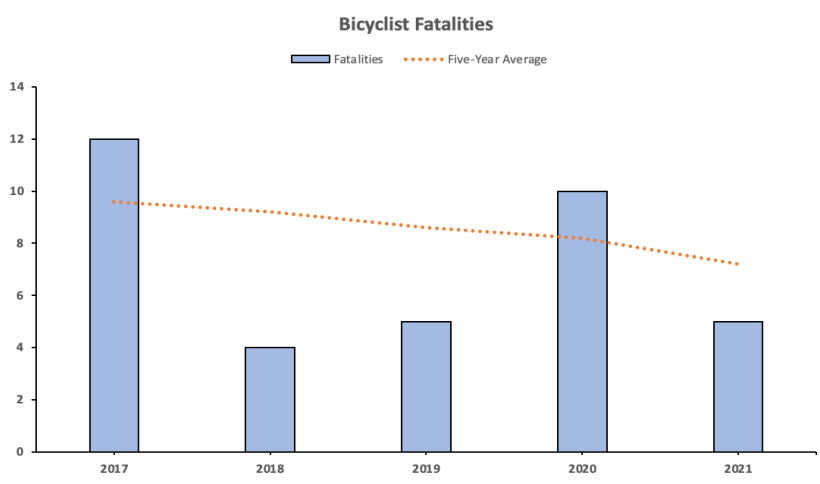
In FFY 2023, OGR will seek to expand the pool of potential applicants for the MRS program, allowing grantees to purchase safety equipment (from an approved list). Among the items approved are pedestrian safety products such as crosswalk reflectors and crosswalk signage. The increase in grantees in FFY 2023 will lead to more police departments purchasing equipment to improve the safety of pedestrians in their respective communities.

OGR is hopeful that an increase in pedestrian safety equipment and pedestrian messaging through social media (Twitter, Facebook, Instagram) will raise more awareness for pedestrian safety leading to a decline in fatalities during 2022 and 2023.

C-11 Bicyclist Fatalities

FFY 2023 Target: 10% decline in the five-year average from 7 in 2021 to 6 by December 31, 2023.

After doubling in fatalities from 2019 to 2020, bicyclist fatalities dropped by half in 2021, falling from 10 to five. The five-year average also declined from eight to seven in the same period. To date, in 2022, there has been one reported bicyclist fatalities. In the same period of 2021, there were five bicyclist fatalities.



Source: FARS, MassDOT IMPACT

Bicyclist fatalities are most frequent during warmer weather, with approximately 60% of deaths from 2016 to 2020 occurring between April and September. As with pedestrians, bicyclist fatalities were highest among older adults. More than half of the 41 bicyclist deaths from 2016 to 2020 were aged 45 or older.

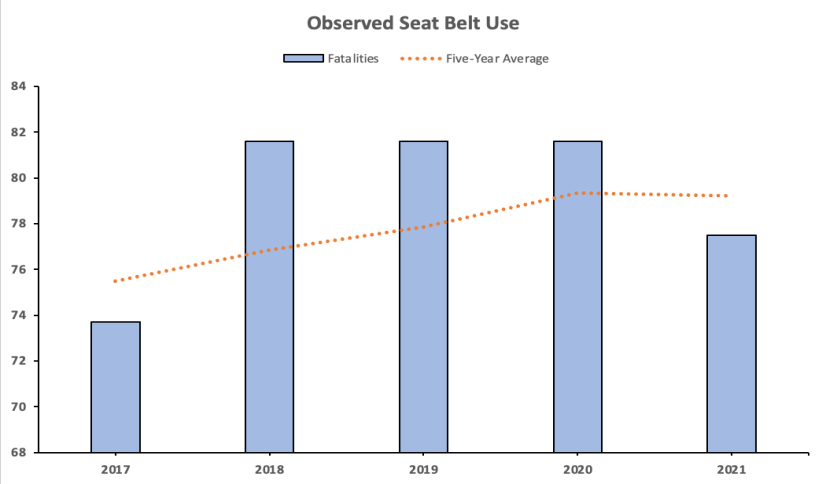
In FFY 2023, OGR will seek to expand the pool of potential applicants for the MRS program, allowing grantees to purchase safety equipment (from an approved list). Among the items approved are bicycle helmets. The increase in grantees in FFY 2023 will lead to more police departments purchasing equipment to improve the safety of bicyclists in their respective communities.

OGR is confident that an increase in bicycle safety equipment distributed by local police and pedestrian messaging through social media (Twitter, Facebook, Instagram) will raise more awareness, leading to a decline in fatalities during 2022 and 2023.

B-1 Observed Seat Belt Usage Rate

FFY 2023 Target: 4% increase in the five-year average from 79 in 2021 to 82 by December 31, 2023.

In 2021, the seat belt usage rate dropped to 78 from 82 in 2021. The decline in the seat belt rate was surprising given the downward trend of unrestrained fatalities. Motor vehicle occupants are using seat belts – evidenced by the declining unrestrained fatalities from 98 in 2020 to 90 in 2021 – but this positive development did not translate into increased seat belt usage during the June 2021 observation period.



Source: Annual Statewide Seat Belt Survey

In 2021, the Seat Belt Usage Observational Survey declined to 78% from 82% in 2019 (*No survey was conducted in 2020 due to COVID-19*). Essex County and southeastern Massachusetts (Plymouth/Barnstable) experienced the most significant decrease in belt usage rate from 2019, with a nearly 6% drop in front seat occupant belt usage. Drivers without passengers were more likely not to wear a seat belt than when drivers had another occupant in the vehicle (76% vs. 83%).

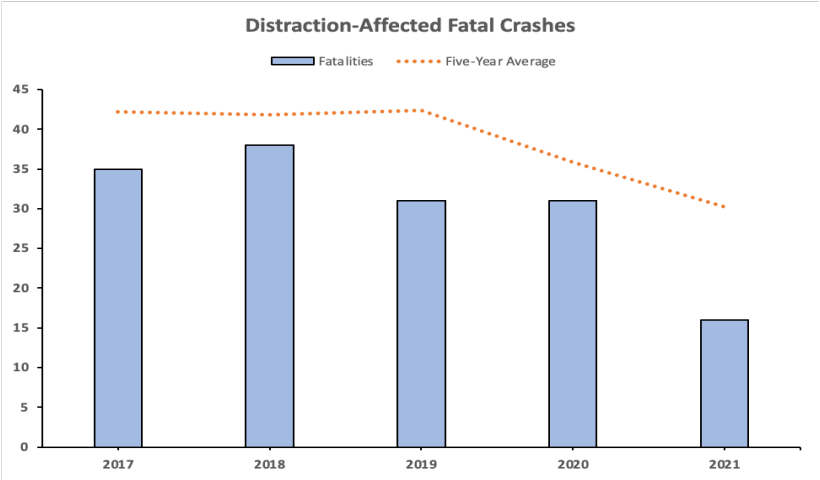
From 2016 to 2020, Barnstable and Plymouth County had the highest traffic fatalities attributed to unrestrained motor vehicle occupants. Out of 67 traffic fatalities in Barnstable County, 39% were unrestrained. For Plymouth County, there were 177 fatalities, with 35% unrestrained. Essex County had 29% of traffic fatalities unrestrained. Drivers accounted for over 80% of all unrestrained motor vehicle occupant fatalities during the same time frame.

For FFY 2023, OGR will increase outreach to local police in Essex, Plymouth, and Barnstable County to increase interest in applying for MRS grant funding which would provide funding to conduct additional enforcement patrols in support of the Click It or Ticket mobilization. An increase in police enforcement will help drive motor vehicle occupant awareness of the life-saving necessity of wearing a seat belt.

NC-1 Distraction-Affected Fatal Crashes

FFY 2023 Target: 5% decline in the five-year average from 30 in 2021 to 28 by December 31, 2023.

In 2020, the number of distraction-affected fatal crashes was the same as reported in 2019 – 31 crashes. In the FFY 2022 HSP, the number of crashes reported for 2020 was 14. This figure is far lower than the final number reported in FARS, 31. Based on this change, OGR expects the 2021 number for distraction-affected fatal crashes to be higher than the current (16) once the FARS data is finalized. Due to this fluctuation in value, the target for 2023 is conservative despite the seemingly significant decline in distraction-affected fatal crashes between 2020 and 2021.



Source: FARS, MassDOT IMPACT

While there are many possible distractions for drivers, it is hard for police to prove that a distraction was a factor in a fatal crash. The lack of eyewitnesses hinders police when trying to obtain evidence of distraction. Surviving drivers are commonly either dishonest or fail to mention having been distracted. The number of distraction-affected fatal crashes in Massachusetts is likely much higher than shown above.

Data has shown that distracted driving is more prevalent among male drivers than female drivers. From 2016 to 2020, male drivers accounted for 72% of all distracted drivers involved in a fatal crash. Young drivers, those aged 20 or younger, accounted for 14% of distracted drivers involved, while the most involved were drivers aged 25-34 (21% of drivers).

For FFY 2023, OGR has one planned activity – MSP Distracted Driving Enforcement – targeting distracting driving. MSP will conduct overtime enforcement patrols throughout April 2023, focusing on drivers using handheld devices while driving. MSP's campaign will coincide with OGR's planned distracted driving mobilization involving local police as part of the MRS program.

OGR is hopeful that distraction-affected driving fatal crashes will continue declining in 2022 and 2023 as local and state police conduct successful distracted driving enforcement campaigns. Coupled with effective messaging via social media and traditional mediums on the importance of keeping one's focus on the road ahead, OGR expects a decline in the numbers.

Traffic Records-Related Performance Targets for FFY 2023

Traffic Record Performance Target #1 - Decrease the rate at which occupant coded fields (protective system, sex, transported by, injury severity, ejected) are left empty in police crash reports queried within MassDOT's crash data portal, IMPACT, by 20% (2.23 relative percentage points) from 11.15% (62369/621595) in January-June 2021 to 8.92% in April-June 2023

Performance Target Justification – To enhance the accessibility, accuracy, completeness, timeliness, and uniformity of the crash data system of Massachusetts, UMass-Amherst/UMassSafe needs to decrease the rate in which occupant coded fields (protective system, sex, transported by, injury severity, ejected) are left empty in police crash reports queried within MassDOT's crash data portal, IMPACT, by 20% (2.23 relative percentage points) from 11.15% (62369/621595) in January-June 2021 to 8.92% in April-June 2023.

Traffic Record Performance Target #2 – Between 7/1/22 and 6/30/23, DCJIS will install approximately 400 mobile printers for police vehicles and provide associated training for 36 departments new to MACCS.

Performance Target Justification - To enhance the accuracy, completeness, integration, timeliness, and uniformity of the citation/adjudication and crash data system of Massachusetts, DCJIS needs between 7/1/22 and 6/30/23 to install approximately 400 mobile printers for police vehicles and provide associated training for an estimated 36 departments new to MACCS.

Traffic Record Performance Target #3 – Increase the number of linked crash-acute hospital case mix records held by the MA Crash-related Injury Surveillance System (MA CRISS). The injury severity field is assessed for accuracy, completeness, and uniformity from 0 as of 8/1/22 to 40,000 by 6/30/23.

Performance Target Justification - To improve accuracy, completeness, and uniformity of the crash, driver, and injury surveillance/EMS data systems of Massachusetts, MDPH's MA CRISS needs to increase the number of linked crash-acute hospital case mix records held by MA CRISS in which the injury severity field is assessed for accuracy, completeness, and uniformity from 0 as of 8/1/22 to 40,000 by 6/30/23.

Program Area: Impaired Driving

By law, in Massachusetts and almost all other states, drivers are considered alcohol-impaired when their blood alcohol concentrations (BACs) are .08 grams per deciliter (g/dL) or higher. Any fatal crash that involves a driver with a BAC of .08 or higher is reported as an alcohol-impaired driving crash, and the resulting fatalities are alcohol-impaired driving fatalities. A 'driver' is the operator of a motor vehicle or motorcycle. The term 'alcohol-impaired' means that an alcohol-impaired driver was involved in the fatal crash.

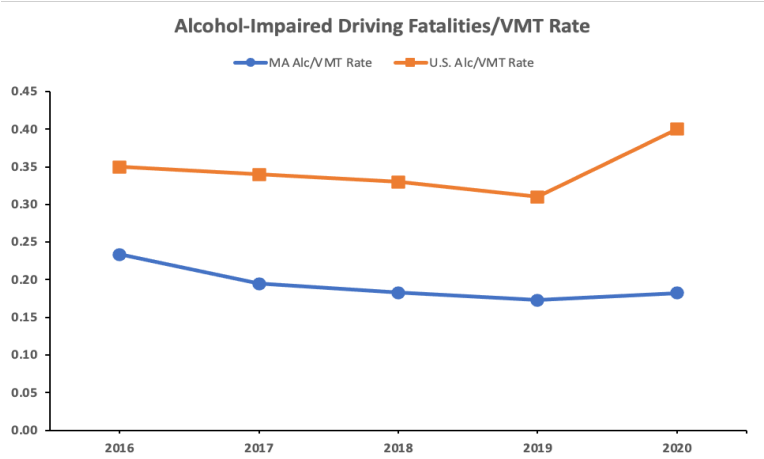
Eliminating alcohol-impaired driving remains a top priority for the state of Massachusetts. To achieve this, across the Commonwealth, OGR has and continues to fund projects such as:

- Drive Sober or Get Pulled Over mobilizations with local police
- Educational Outreach to Young Drivers (aimed at high school students)
- Sobriety Checkpoints and Saturation Patrols
- Standardized Field Sobriety Test training
- Advanced Roadside Impaired Driving Enforcement (ARIDE) training
- MSP Sustained Traffic Enforcement Program (STEP)
- Traditional and social media campaigns
- Underage Drinking Compliance Checks at retailers, bars, and restaurants
- Undercover surveillance and educational programs in bars, restaurants, and large event venues to reduce over-serving of alcohol to patrons
- Community-based programs

Reducing alcohol-impaired driving crashes will save lives and reduce the economic damage from these crashes. According to NHTSA, the estimated financial cost of all alcohol-impaired crashes in the United States is $44 billion, 18% of the estimated $242 billion associated with all motor vehicle crashes. Losses include lost wages, medical expenses, property damage, and other factors. By reducing alcohol-impaired driving by Massachusetts drivers, OGR seeks to lower the number of crashes, injuries, lives lost, and financial impact on communities.

From 2016 to 2020, there were 172,480 fatal crashes in the United States, of which 49,436 involved an alcohol-impaired driver, a rate of 28.7%. During the same period, Massachusetts reported 1,677 fatal crashes, with alcohol-impaired drivers involved in 554 collisions, a rate of 33%. The 54,406 alcohol-impaired driving fatalities reported nationally were 29% of all traffic fatalities from 2016 to 2020; for Massachusetts, the 597 alcohol-impaired driving fatalities were 34% of all traffic fatalities during the same period.

Despite the higher percentage of alcohol-impaired fatalities in total traffic fatalities compared to the national rate, Massachusetts has maintained a low alcohol-impaired fatality rate per VMT over the past five years compared to the national rate.



Source: FARS

The five-year average alcohol fatalities/VMT rate for the nation was 0.35, whereas Massachusetts' five-year average was 0.19. Most importantly, as the national rate rose dramatically in 2020, Massachusetts did not experience the same increase. Within New England, Massachusetts had the highest VMT for 2020 yet the lowest alcohol-impaired driving fatalities/VMT rate.

- Connecticut – 29,845 VMT / 118 Alcohol-Impaired Fatalities = 0.40
- **Massachusetts** – 53,695 VMT / 98 Alcohol-Impaired Fatalities = **0.18**
- Maine – 13,086 VMT / 64 Alcohol-Impaired Fatalities = 0.49
- New Hampshire – 11,956 VMT / 37 Alcohol-Impaired Fatalities = 0.31
- Rhode Island – 6,864 VMT / 28 Alcohol-Impaired Fatalities = 0.41
- Vermont – 6,007 VMT / 18 Alcohol-Impaired Fatalities = 0.30

This low fatality rate is a testament to the hard work and effort by OGR and its partners in enforcing and educating roadway users on the dangers of impaired driving over the years.

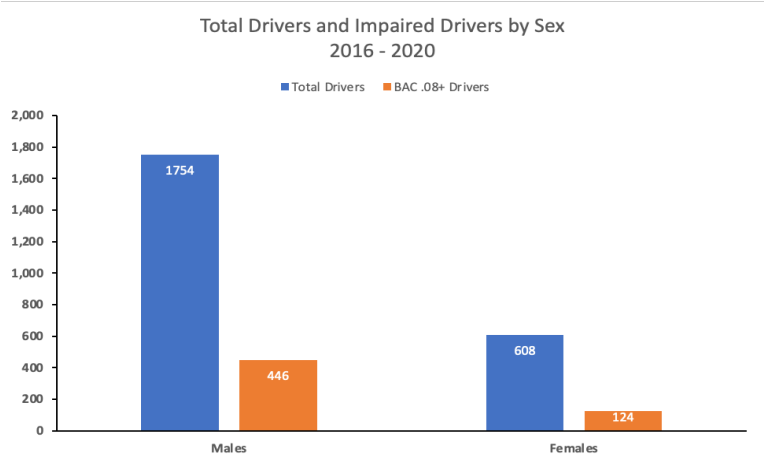
Who were the Alcohol-Impaired Drivers in Massachusetts?

From 2016 to 2020, there were 2,383 drivers involved in fatal crashes (1,754 males, 608 females, 21 unknown). Of 2,383 drivers, 574 were impaired (BAC 0.08 or er), accounting for 24% of all drivers involved in a fatal crash. This is slightly lower than the 25% reported for 2015-2019 (2,357 drivers, 582 impaired).

By sex, males made up 74% of all drivers in a fatal crash and accounted for 78% of alcohol-impaired drivers involved in a deadly crash from 2016 to 2020. Females represented 26% of all drivers in a deadly crash, accounting for 22% of alcohol-impaired drivers.

The highest percentage of alcohol-impaired drivers occurred for those aged between 21 and 34 of both sexes. For males, 36% of all male drivers in this age range were impaired (BAC .08 or higher); 30% of all female drivers were impaired for females. For both sexes, the percentage of impaired

drivers of all drivers peaked in the 21-24 age group and declined with each subsequent age group. This indicates that age and maturity play a factor in driving under the influence.



Source: FARS

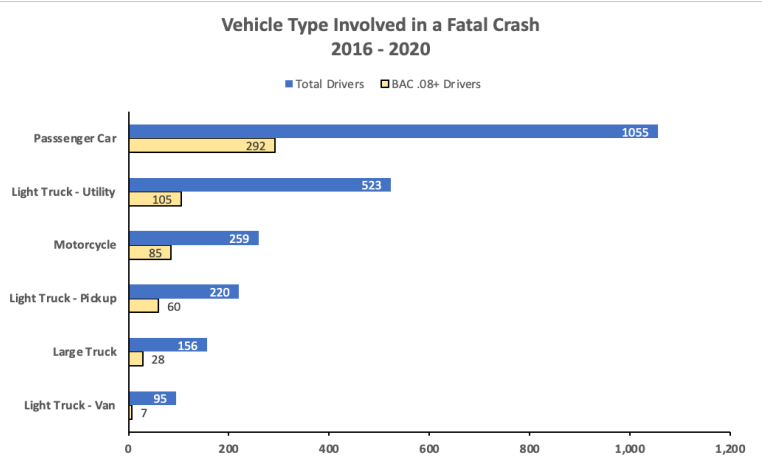
Age	Total Drivers	BAC .08+	Percent
16 - 20	128	34	26.6%
21 - 24	181	67	37.0%
25 - 34	400	145	36.3%
35 - 44	257	67	26.1%
45 - 54	255	63	24.7%
55 - 64	252	41	16.3%
65+	277	28	10.1%

FEMALE			
Age	Total Drivers	BAC .08+	Percent
16 - 20	48	8	16.7%
21 - 24	69	21	30.4%
25 - 34	120	36	30.0%
35 - 44	97	24	24.7%
45 - 54	83	14	16.9%
55 - 64	86	12	14.0%
65+	104	8	7.7%

Source: FARS

The most common vehicle used by impaired drivers involved in a fatal crash was the passenger car. Of the 574 impaired drivers involved in a deadly collision from 2016 to 2020, 292 were driving a passenger car- accounting for nearly half of all impaired drivers. Sport Utility Vehicles and motorcycles rounded out the top three vehicle types. These three vehicle types accounted for 84% of the vehicles driven by an alcohol-impaired driver in a fatal crash.

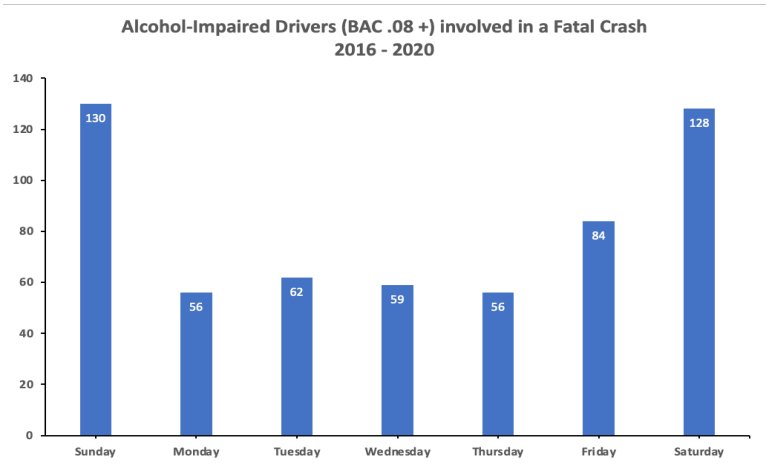
While motorcycles had the third-highest total for BAC .08 or higher drivers (85), representing 15% of the 574 impaired drivers from 2016 to 2020, this vehicle type had the highest percentage of impaired drivers out of all drivers of motorcycles involved in a fatal crash with 33% (85 of 259). As the mode of transportation with the least amount of protection, it is not surprising that impaired motorcyclists are at higher risk of death when they get in a crash. This will be further discussed in the Motorcyclist Safety program area.



Source: FARS

When are impaired drivers getting into fatal crashes?

From 2016 to 2020, impaired drivers were more likely to be involved in a fatal crash over the three days of Friday, Saturday, and Sunday. During this period, 60% of alcohol-impaired drivers were involved in a deadly crash.



Source: FARS

NHTSA defines the 'weekday' as the period from Monday at 6:00 am to 5:59 pm Friday, and the 'weekend' is from 6 pm Friday to 5:59 am Monday. The following chart breaks down the number of drivers and impaired drivers by age group, showing how frequently impaired driving occurs over the weekend than on weekdays.

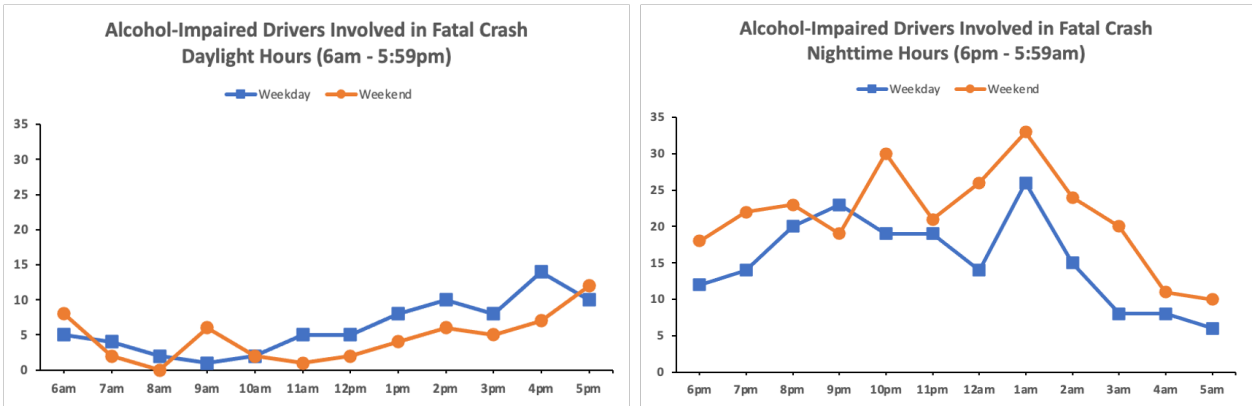
Weekday			
Age	Total Drivers	BAC .08+	Percent
16 - 20	105	21	20.0%
21 - 24	129	39	30.2%
25 - 34	266	76	28.6%
35 - 44	215	46	21.4%
45 - 54	209	35	16.7%
55 - 64	207	20	9.7%
65+	269	20	7.4%
Weekend			
Age	Total Drivers	BAC .08+	Percent
16 - 20	70	22	31.4%
21 - 24	122	50	41.0%
25 - 34	253	104	41.1%
35 - 44	138	45	32.6%
45 - 54	129	42	32.6%
55 - 64	131	34	26.0%
65+	109	14	12.8%

Source: FARS

While the number of drivers involved in a fatal crash is far higher for weekdays, weekends have a much higher rate of impaired drivers involved in a deadly crash. From 2016 to 2020, the rate of impaired driver crashes per hour on weekdays was 0.48 [108 hours * 5 years = 540 hours, 258/540]. In contrast, the rate per hour for impaired drivers on weekends was 1.04 [60 hours * 5 years = 300 hours, 313/300].

Not only are impaired drivers involved in fatal crashes more frequent over the weekend, but they also happen at a higher rate among drivers ages 21 to 34 during this period. Over 40% of all drivers aged 21 to 34 involved in a fatal crash over the weekend were impaired (154 of 375) compared to 29% for weekdays (115 of 395).

A closer look at time-of-day shows the difference between daylight hours (6 am to 5:59 pm) and nighttime hours (6 pm to 5:59 am). Impaired drivers involved in a fatal crash, whether on a weekday or weekend, tended to be relatively low through morning hours and slowly rise over the afternoon. Once evening comes around, the numbers continue upwards with occasional spikes and then fall off after 1 am.



Source: FARS

Whether weekday or weekend, nighttime hours accounted for over three-fourths of the alcohol-impaired drivers involved in a fatal crash. On weekdays, 71% of impaired driving involved crashes during nighttime. For weekends, 82% of impaired driving involved crashes occurred at night.

Where are alcohol-impaired drivers getting into fatal crashes?

In terms of driver count, Worcester County reported the highest total of alcohol-impaired drivers involved in a fatal crash from 2016 to 2020, with 91 drivers or 16% of all alcohol-impaired drivers. Bristol County was second with 77 drivers. Together, these two counties represented nearly 30% of the 574 impaired drivers involved in a fatal crashes over the five years.

While using total impaired drivers as a measure of how much an issue alcohol-impaired driving is an excellent place to start, the real question is how pervasive alcohol-impaired driving is within a county. By dividing the total drivers involved in a fatal crash by the number of alcohol-impaired drivers involved in a deadly crash, the resulting percentage reveals that alcohol-impaired driving is pervasive in a county.

County	Total Drivers	BAC .08+	Percent
Barnstable	87	27	31.0%
Hampden	261	70	26.8%
Plymouth	228	61	26.8%
Worcester	344	91	26.5%
Bristol	303	77	25.4%
Suffolk	142	34	23.9%
Norfolk	247	55	22.3%
Franklin	42	9	21.4%
Middlesex	328	70	21.3%
Essex	244	52	21.3%
Hampshire	51	9	17.6%
Berkshire	98	16	16.3%

Source: FARS

(Note: Dukes & Nantucket Counties were not included due to little or no impaired driving data.)

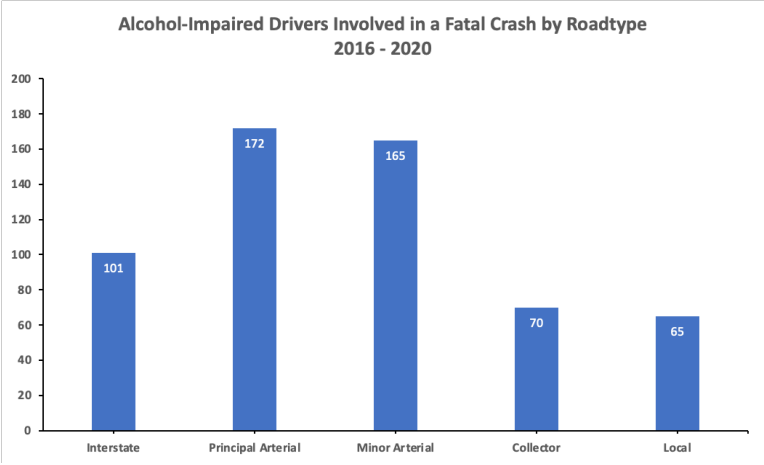
Barnstable County encompasses Cape Cod, a famous vacation region of Massachusetts. Despite accounting for only five percent of all alcohol-impaired drivers from 2016 to 2020, Barnstable had 31% of drivers involved in a fatal crash while under the influence at the time of impact. The most likely reason for this high percentage in Barnstable is the seasonal influx of drivers during the late spring/summer months. Data revealed that 37% of alcohol-impaired drivers (10 of 27) in Barnstable were involved in a fatal crash between May and September, which is considered the primary tourist season for Cape Cod.

The top municipalities for alcohol-impaired drivers involved in a fatal crash accounted for a quarter of all alcohol-impaired drivers in a fatal crash from 2016 to 2020. The nine communities in the following chart accounted for a third of the 574 alcohol-impaired drivers involved in a deadly crash. Boston led all municipalities with 28 impaired drivers, with nearly a quarter of its drivers involved in a fatal crash.

Top Municipalities for Impaired Drivers Involved in a Fatal Crash (2016 - 2020)				
Town	County	BAC .08+ Drivers	Total Drivers	Percent BAC .08+ Drivers
Boston	Suffolk	28	124	23%
Springfield	Hampden	22	83	27%
Worcester	Worcester	18	60	30%
Fall River	Bristol	11	47	23%
Brockton	Plymouth	10	52	19%
Quincy	Norfolk	9	38	24%
Middleboro	Plymouth	8	29	28%
Dighton	Bristol	8	22	36%
Westfield	Hampden	8	18	44%

Source: FARS

The type of road on which a fatal crash took place is the final aspect of alcohol-impaired drivers to examine. Of the 574 alcohol-impaired drivers involved in a deadly collision from 2016 to 2020, 30% were on principal arterials. With minor arterials accounting for 29%, over half of all alcohol-impaired drivers involved in a fatal crash were either on a principal or minor arterial.



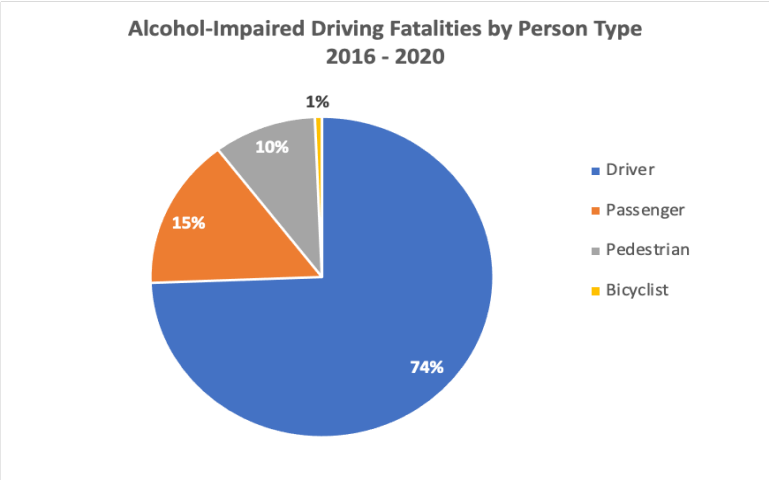
Source: FARS

Based on the data provided, alcohol-impaired drivers are more likely to be involved in a fatal crash during nighttime hours (6 pm to 5:59 am), over the weekend (Friday – Sunday), and on either principal or minor arterial roadways. As for driver characteristics, they will probably be between 21 and 34 and male.

Who are the alcohol-impaired fatal crash fatalities?

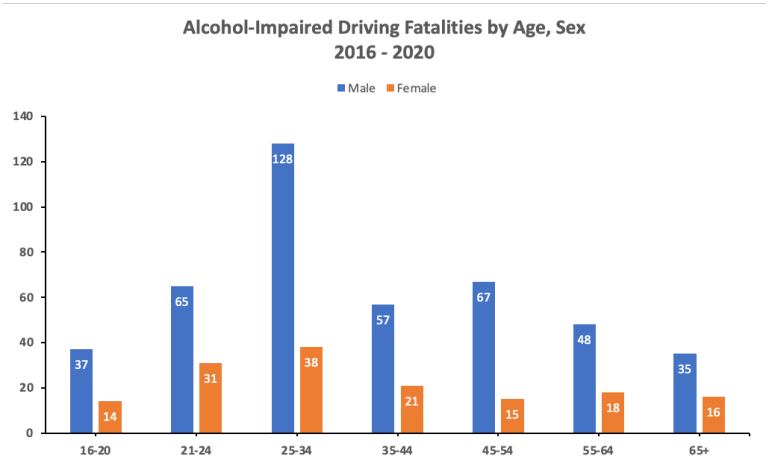
In this section, the fatalities that resulted from an impaired driver's decision to get behind the wheel of a motor vehicle are examined.

From 2016 to 2020, there were 574 alcohol-impaired drivers involved in a fatal crash resulting in 598 fatalities. Motor vehicle occupants accounted for 89% of deaths, with drivers representing most of those deaths. Of the 445 driver fatalities, 338 (or 87%) were alcohol-impaired drivers.



Source: FARS

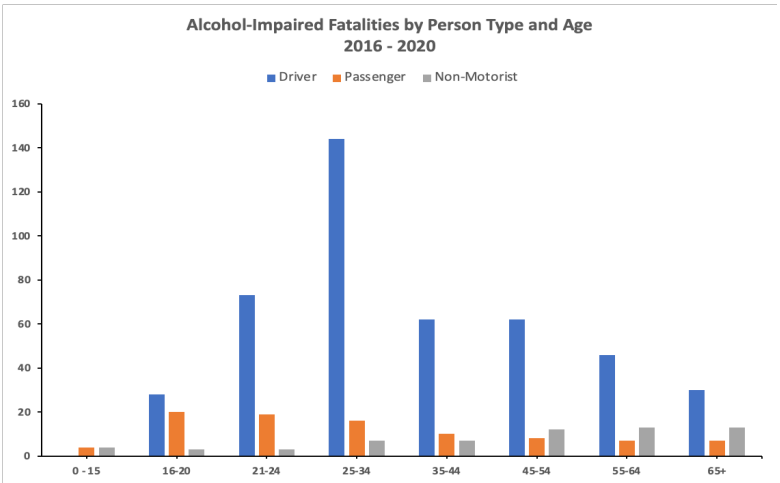
Males accounted for 74% of all alcohol-impaired driving fatalities; females, 26%. For both sexes, 25-34 represented the most significant percentage of deaths of all age groups. For males, 29% of alcohol-impaired driving fatalities were 25-34; the rate was slightly lower at 24% for females. Overall, 28% of all fatalities were between 25 and 34.



Source: FARS

(*Note: Fatalities for age 15 or younger were excluded from the graph as this age group had only eight fatalities involving impaired drivers from 2016 to 2020, and the low values would have skewed the chart.*)

Combining age and person type, the unfortunate domination of driver fatalities among motor vehicle occupants between 21 and 34 stands out. This age group accounted for nearly half of all driver fatalities from 2016 to 2020.

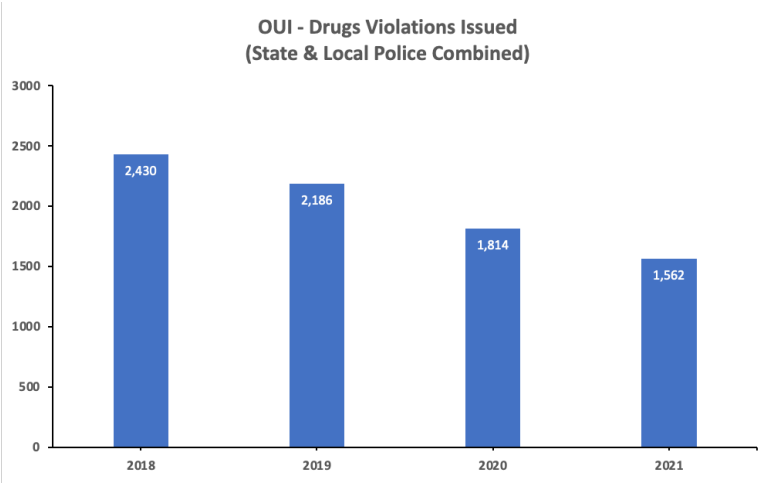


Source: FARS

The chart also shows the decline of passenger fatalities in each age group after peaking at 16-20. While passengers slowly dropped as age increased, non-motorists deaths became more frequent among the older population.

Drug-Impaired Driving

From 2018 to 2021, State and local police have issued nearly 8,000 violations for drug-impaired driving on the roadways of Massachusetts. Fortunately, these violations accounted for only a tiny fraction of the hundreds of thousand violations issued by law enforcement each year. Drugged driving violations have declined each consecutive year since 2018 – an overall drop of 36%.



Source: FARS

Local police issued nearly two-thirds of drugged driving violations. New Bedford, Lynn, Weymouth, Bourne, and Holyoke were the top locations for drugged driving violations. Male drivers accounted for approximately 74% of all drugged driving violations, and the average age of the driver (male or female) was 36. The top locations for drugged driving violations were New Bedford, Lynn, Weymouth, Bourne, and Holyoke.

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The decrease in violations can be attributed to several factors, COVID-19 pandemic restrictions, the efficacy of roadside drugged driving testing and its admission in court, and the lingering fallout from recent high-profile traffic stops, not to mention the legalization of marijuana.

For FFY 2023, impaired driving is a significant focus of OGR as it collaborates with traffic safety partners through funding, outreach, training, and enforcement. Key takeaways from the analysis of impaired driving fatal crashes and fatalities that will be considered or implemented:

- Focus on alcohol-impaired enforcement efforts over weekends (Friday 6 am to Monday 5:59 am), targeting principal and minor arterials.
- Increase outreach to attract more potential applicants from counties with a high percentage of all fatal crashes that involve alcohol, such as Barnstable, Bristol, and Hampden.
- Encourage ABCC to focus the majority of compliance checks in top communities for alcohol-impaired driving – Boston, Springfield, Worcester, Fall River, and Brockton.
- Media messaging aimed at motor vehicle occupants should target drivers and passengers less than 35 years of age, emphasizing male drivers.
- Regarding Sundays during football season (August – February), law enforcement should target some patrols along minor arterials or local roads between 3 pm and 9 pm.
- Encourage outreach by MPTC to generate more interest in DRE classes among the top drug driving violation communities.

Performance Measure for Impaired Driving

Number of fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 and above

FFY 2023 Target: 3% decline in the five-year average from 112 in 2021 to 108 by December 31, 2023

Planned Activities for FFY 2023

Impaired Driving Media

ID: AL-23-01

Primary Countermeasure Strategy: Communication and Outreach

Description of Planned Activity:

In collaboration with our stakeholders, messaging will support impaired driving efforts during the Drive Sober or Get Pulled Over mobilizations (December 2022 and August 2023). Messaging will focus on alcohol, marijuana, and other drugs. Based on state data, OGR will target communication efforts to drivers under 34 years of age from the following counties: Bristol, Hampden, Plymouth, and Worcester. When using NHTSA funds, OGR will consider national media buy recommendations when planning paid media, including targeting a secondary Spanish audience. OGR will contract with a marketing and advertising agency to execute these paid impaired driving media campaigns. OGR will lead social media and press outreach efforts to garner earned media; both will be done in conjunction with paid media and the enforcement mobilization. Crash and citation data will be used for planning enforcement activities and determining the target audiences and media channels used to reach those audiences. NHTSA's guidelines will be followed for messaging, demographics, best practices, and target groups for each media campaign.

Countermeasure Strategy Justification: *Communication and Outreach*

FFY 2023 media-oriented campaigns aim to reduce the frequency of drunk or drugged driving on the roadways of Massachusetts. As Drive Sober is a high-visibility enforcement campaign, media is needed to augment enforcement and maximize deterrence efforts. OGR will provide all law enforcement partners access to earned media resources, including a local press release template, social media graphics, and PSAs. This will ensure that the messaging about the dangers of impaired driving is consistent and far-reaching.

Media messaging will appeal to drivers, especially males under age 35. The southeastern Massachusetts region will be one of the primary areas of emphasis through television and radio spots.

AL-23-01 Impaired Driving Media Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving Low	405d Low (Paid & Earned Media)	$6,566,545	$0	$0

MSP Sobriety Checkpoints & Saturation Patrols

ID: AL-23-02

Primary Countermeasure Strategy: High Visibility Saturation Patrols

Description of Planned Activity:

Provide funds for overtime to conduct sobriety checkpoints and saturation patrols for the Massachusetts State Police (MSP) with support from the two Blood Alcohol Testing (BAT) mobile units whenever operationally possible. MSP will also use funds to subcontract with local police departments to ensure sufficient staffing levels during checkpoints and saturation patrols. The most crucial goal of the program will be to reduce the number of impaired drivers in Massachusetts by providing maximum visibility for deterrent purposes and to take immediate and appropriate action on all motor vehicle offenses observed. MSP has plans to conduct upwards to 80 saturation patrols/checkpoints during FFY 2023.

A portion of the funds will be used to conduct instructor checkpoint training utilizing the BAT mobiles and purchase approximately 55 PBTs and other related checkpoint supplies.

Countermeasure Strategy Justification: *High-Visibility Saturation Patrols*

High visibility enforcement and saturation patrols are highly effective as a deterrent to motorists from driving while impaired. While the five-year average for alcohol-impaired fatalities has declined 12% since 2017, there is still a need to continue this downward trend. This project will occur throughout the year in hot spot locations around the state as determined by ongoing data analysis. Enforcement and patrols will primarily target Friday through Sunday, focusing on the hours between 6 pm and 5:59 am. The South Shore and Cape region (Bristol, Plymouth, and Barnstable), as well as Hampden County, are areas that should have increased emphasis by MSP during FFY 2023.

AL-23-02 MSP Sobriety Checkpoints and Saturation Patrols Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving Low	405d Low HVE	$1,431,992	$7,277,564	$0

MA Trial Court – Judicial Training and Awareness

ID: AL-23-03

Primary Countermeasure Strategy: Drug-Impaired Laws

Description of Planned Activity:

Funding will be provided to the Massachusetts Executive Office of the Trial Court to provide funding for Trial Court judges to attend training on issues related to impaired driving. This training will include Drug Recognition Experts (DRE), court-monitored pre-trial DUI release protocols, ignition interlock supervision, pre-and post-conviction sanction options, and sentencing options at local and national training on these topics.

It is anticipated that this funding will allow five (5) Trial Court judges to attend the New England Association of Recovery Court Professionals (NEARCP) annual conference in the fall of 2022. Funding will also allow the selected five judges to attend the National Judicial College four-day conference on "Drugged Driving Essentials" in Reno, NV, at a yet-to-be-determined date during FFY 2023.

In recent years, drug-impaired driving has been a growing concern in Massachusetts as police departments have reported increasing arrests for drug-impaired driving. With the legalization of marijuana, there is a heightened awareness that Trial Court judges who oversee drug and alcohol-impaired court cases need the latest, most up-to-date information on drugged driving.

Countermeasure Strategy Justification: *Drug-Impaired Driving Laws*

Trial Court judges are responsible for enforcing drug-impaired driving laws if a violator is found guilty of a drugged driving offense. If a judge has little or no familiarity with the science and technicalities behind drug detection methods and evidentiary issues previously raised in courts across the country, it will seriously hinder a judge from fully understanding all aspects of the case before the court. Furthermore, with the anticipated increase in prosecutions for impaired driving in the coming years, Trial Court judges will benefit from training on DRE, pre-trial DUI release protocols, and post-conviction options, including alternative sentencing. With training, judges will

be able to hand down more equitable sentences to uphold current drugged driving laws and give the defendant a fair and reasonable sentence.

With the drug OUIs rising in Massachusetts, especially in Essex County, better-informed judges will better serve the communities, thereby handing down sentences aimed at helping the defendant's drug issues rather than punishing them outright.

AL-23-03 MA Trial Court Judicial Training and Awareness Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving	405 Low Drugs	$18,135	$4,550	$0

MSP-Office of Alcohol Testing (OAT) Breath Test Operator (BTO) Training

ID: AL-23-04

Primary Countermeasure Strategy: Breath Test Devices

Description of Planned Activity:

Provide funds to the MSP Office of Alcohol Testing (OAT) to help certify approximately 800 Breath Test Operators (BTO) through classroom instruction to detect impaired drivers better. Training will take place throughout the year at the MPTC and other facilities. Funds will also be provided to purchase related program equipment, including Preliminary Breath Test (PBT) units and OUI Toxicology Kits. Equipment will be distributed to local police officers and MSP troopers, including those who complete a DRE class conducted by the MPTC. OAT will determine how the equipment is divided among agencies based on problem identification and greatest need.
For the past years, OAT has purchased OUI Toxicology Kits instead of PBTs, and before those years, PBTs were bought. Through analysis of the current inventory and needs of the state and local police, OAT will determine what should be purchased in FFY 2023. Whether it will be OUI Toxicology Kits, PBTs, or both, the amount expected to be spent will be no more than $50,000.

Funds will be utilized to maintain an online BTO course that has successfully trained hundreds of officers in the past year and purchase five (5) new Alcotest 9510 Breathalyzers to replace older breathalyzers currently in possession of MSP. OGR will submit to NHTSA all inventory purchases that are $5,000 or more for approval.

Countermeasure Strategy Justification: *Breath Test Devices*

State and local police utilize breath test devices (typically called PBTs or preliminary breath tests) to help establish evidence for a possible DWI arrest. At the current time, Massachusetts and 32 other states use PBTs regularly. PBTs allow officers to remove drunk drivers from the road while providing factual evidence of intoxication in the courts, resulting in license suspension. In Massachusetts, the first DWI conviction leads to a one-year license suspension; the second DWI, two-year suspensions, and an ignition interlock device installed. The combination of the loss of driving privileges and the threat of losing those privileges will provide deterrence for drivers.

Having more officers certified to use breath test devices and having access to more PBTs will result in more drivers being pulled off the road for impaired operation. Breath test devices help officers gauge the possible impairment of a driver, and if more impaired drivers are removed from the roadways, the number of impaired driving fatalities should decrease. With the high prevalence of younger drivers (under 35 years of age) under the influence in a fatal crash, increasing the number of certified Breath Test Operators from 8,800 (as of March 2022) to ensure no drivers involved in a crash aren't administered a breathalyzer test promptly.

AL-23-04 MSP OAT BTO Training Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving Low	405d Low Drug and Alcohol Training	$169,222	$0	$0

MSP Drug Recognition Expert (DRE) Training

ID: AL-23-05

Primary Countermeasure Strategy: Enforcement of Drug-Impaired Driving

Description of Planned Activity:

Funding will be provided to the MSP to expand their Drug Recognition Expert (DRE) program. The MSP plans to train fifteen (15) additional officers to assist troopers on the roadways. One of the MSP's Traffic Programs Section five-year plans is to have DREs permanently assigned to sole DRE functions within a troop. A portion of the funds will be used to hold an on-site DRE Training class, purchase tablets, PBTs, and accuracy check equipment for the DREs, and conduct at least twelve (12) educational campaigns at highly populated events throughout the funding period.

Additionally, a small portion of the funds will send current DREs to the national IACP Drugs and Impaired Driving (DAID) Conference in 2023.

Countermeasure Strategy Justification: *Enforcement of Drug-Impaired Driving*

There is a perception by some people that consuming marijuana while driving is safe and legal. With the legalization of recreational marijuana and the expansion of the utilization of marijuana for medicinal purposes, state police troopers are seeing a marked increase in people driving under the influence of this drug. Other states that have passed similar legislation have experienced a growth in instances of drug-impaired driving.

Without DREs, it would be much more challenging for officers to determine whether a driver is under the influence of drugs or otherwise. The need for more DREs is even more pressing with the legalization of adult-use marijuana in Massachusetts. MSP is looking to add at least 15 more DREs in FFY 2023, increasing the number of DREs in Essex County. Based on the data presented above, Essex County had numerous communities - Beverly, Salem, and Lynn - among the top locations for OUI Drug violations. MSP's long-term goal is to have 5% of the department certified.

AL-23-05 MSP DRE Training Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving Low	405d Low Drug and Alcohol Training	$150,222	$0	$0

MPTC – Alcohol-Impaired Driving Enforcement Training

ID: AL-23-06

Primary Countermeasure Strategy: Standardized Field Sobriety Training (SFST)

Description of Planned Activity:

OGR will provide funds to the MPTC to conduct up to 30 training courses throughout the year focused on Standardized Field Sobriety Testing (SFST) to retain existing instructors and train new instructors to accommodate demand from basic recruit academies. SFST Update courses will also be delivered to officers who have completed the 24-hour SFST Certification Training but could benefit from learning the most current information and procedures that will withstand challenges

in the courtroom. Costs will include instructor and Statewide SFST Coordinator fees and new Drager Alcotest Instruments for instructors to replace older models. Training will take place at various police departments across the Commonwealth.
Countermeasure Strategy Justification: *Enforcement of Alcohol-Impaired Driving*

Standardized Field Sobriety Training classes help law enforcement better detect impaired drivers during sobriety checkpoints, traffic stops, and at the scene of motor vehicle crashes. Increased awareness of driver impairment by officers will lead to safer roads as drivers are arrested and eventually have their license suspended for anywhere from one year to a lifetime.

Through the MPTC, SFST classes will be offered at various locations across the state throughout FFY 2023. With an emphasis on attracting more officers from central and western Massachusetts. As more officers are trained in SFST and those receiving DRE designation, more impaired drivers will be removed from the roads, making the roadways safer and less dangerous.

AL-23-06 MPTC Alcohol Impaired Driving Enforcement Training Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving Low	405d Low Drug and Alcohol Training	$77,321	$0	$0

MPTC – Drug Evaluation and Classification (DEC) Training

ID: AL-23-07

Primary Countermeasure Strategy: *Enforcement of Drug-Impaired Driving*

Description of Planned Activity:

OGR will provide funds to the MPTC to conduct 2 Drug Recognition Expert (DRE) classes and 40 Advanced Roadside Impaired Driving Enforcement (ARIDE) courses to add 30 new DREs and train 700 officers on ARIDE. Funds will cover instructor fees, travel to North Carolina for DRE field training, PBTs for instructors, tablets for new DREs, and licenses to utilize Institute for Traffic Safety Management and Research (ITSMR) DRE Evaluation Software, and training supplies. Funds will also allow Statewide DRE Coordinators to attend IACP conferences during FFY 2023.

The DRE Coordinator will be required to submit an annual report that details all of the program's activities.

For any equipment/software over $5000, a request letter will be sent to NHTSA to approve the purchase.

Countermeasure Strategy Justification: *Enforcement of Drug-Impaired Driving*

The impairing effects of alcohol and the dangers of drinking and driving are well-documented. By contrast, very little research is available examining the potential risks of drugged driving. Some of the challenges in determining a drug's effect include the constantly changing list of legal and illegal drugs, the ambiguous relationship between blood levels of drugs and driving impairment, and the intrusive nature of measuring drug levels compared to the most reliable breath tests for alcohol. To counter the unknown surrounding drugged driving, OGR has four planned activities to increase awareness and expertise among law enforcement when dealing with a possible drugged driver. By participating in SFST training, Massachusetts law enforcement will be better prepared to assess the level of impairment of a suspected drugged driver.

AL-23-07 MPTC DEC Training Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving Low	405d Low Drug and Alcohol Training	$748,859	$0	$0

ABCC – Underage Drinking Compliance Checks Program

ID: AL-23-08

Primary Countermeasure Strategy: *Alcohol Vendor Compliance Checks*

Description of Planned Activity:

This program will provide funds to the ABCC for overtime pay to conduct enhanced liquor enforcement compliance checks in approximately 200 communities to reduce underage drinking and impaired driving. A compliance check consists of an underage individual, under the supervision of ABCC investigators, entering a licensed establishment and attempting to purchase alcoholic beverages. If an alcoholic beverage is sold, the ABCC files charges against the licensee

who attends a hearing. The ABCC will also complete concert and special event enforcement operations consisting of enforcement at liquor stores surrounding large venues (Xfinity Center, Gillette Stadium, Blue Hills Pavilion, and Fenway Park) and venue parking lots before the event.

The Compliance Check program is designed to achieve broad geographical coverage throughout the Commonwealth to develop a deterrence impact created through more comprehensive knowledge among the industry retailers that their establishment could be subject to a compliance check. The overarching goal of this program is to prevent the sale of alcohol to individuals under 21 years of age and to prevent young drivers from drinking and driving.

Countermeasure Strategy Justification: *Alcohol Vendor Compliance Checks*

To reduce the sale of alcohol to minors, which lowers the chance of underage drivers navigating the roads under the influence, the ABCC will utilize funding to focus on restricting access to alcohol by minors through compliance checks. This planned activity will involve monitoring local vendors of alcoholic beverages to ensure that a) they aren't selling alcohol to minors by checking identification and b) they aren't providing alcohol to persons that are drunk or inebriated. Fewer minors drinking leads to fewer minors being impaired on the roadways and lower the number of young drivers ending up in a fatal crash due to alcohol impairment. This will lead to lower incidences of alcohol-related fatal crashes across Massachusetts.

The impact of compliance checks will restrict underage ability to obtain alcohol, preventing them from drinking and driving. The enforcement of intoxicated persons is intended to send a message to establishments (bars, restaurants, pubs) that serving a legally drunk person will result in violations, fines, and possibly criminal charges.

AL-23-08 ABCC Underage Drinking Compliance Checks Program Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving Low	405d Low Youth Alcohol	$159,562	$39,891	$0

ABCC – Enforcement Program to Prevent the Sale of Alcohol to Intoxicated Persons

ID: AL-23-09

Primary Countermeasure Strategy: Alcohol Vendor Compliance Checks

Description of Planned Activity:

This program will provide overtime funds to the ABCC for investigators to participate in undercover operations at licensed establishments throughout the Commonwealth to determine if the licensee serves intoxicated individuals. The ABCC will use data analysis to determine municipalities with the highest concentration of establishments that have been identified as the source of last drink for a convicted drunk driver. The ABCC will also outreach local police departments to ask if they can identify specific establishments that should be monitored. The program's goal is to reduce impaired driving by enforcing overserving laws and providing punishment and education to offender establishments and staff.

The operations will be scheduled in coordination with the holiday Drive Sober mobilization and during times of the year where impaired driving is likely to result, including the night before Thanksgiving, St. Patrick's Day, and Memorial Day weekend.

ABCC projects to investigate over 2,000 licensed establishments via this program in FFY 2023.

Countermeasure Strategy Justification: *Alcohol Vendor Compliance Checks*

To reduce the sale of alcohol to minors, which lowers the chance of underage drivers driving drunk, the ABCC will utilize funding to focus on restricting access to alcohol by intoxicated individuals. This planned activity will ensure targeted bars and restaurants comply with directives to cut off alcohol to any patron deemed too drunk to drive. This activity is done by monitoring establishments known to provide the last drink to an impaired driver before being pulled over or involved in a crash.

By punishing (suspending alcohol license) or even warning establishments for being the place of last drink, ABCC is helping reduce the incidence of impaired driving across Massachusetts. As businesses find themselves under investigation or losing their liquor license, other alcohol-serving establishments will make an effort to ensure they are in compliance and prevent patrons from becoming too intoxicated while drinking at their respective businesses.

With OGR's support and funding, ABCC's efforts have helped Massachusetts lower the alcohol-impaired fatalities/VMT rate from 0.25 in 2016 to 0.18 in 2020.

AL-23-09 ABCC Enforcement to Prevent Sale of Alcohol to Intoxicated Persons Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d Impaired Driving Low	405d Low Alcohol	$163,863	$40,966	$0

Program Management – Impaired Driving

ID: AL-23-10

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Provide sufficient staff to manage programming described in this plan and cover travel, professional development expenses, conference fees, and postage and office supplies. All funding intended for supporting staff will not be sub-awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the impaired driving safety program properly. Lack of oversight due to reduced or no funding could lead to increased impaired driving-related fatalities and injuries on the roadways of Massachusetts.

AL-23-10 Program Management – Impaired Driving Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Impaired Driving	$170,000	$0	$0

Program Area: Occupant Protection

Occupant protection refers to seat belts, booster seats, and child passenger safety (CPS) seats by motor vehicle operators and occupants. Research has found that when used, lap/shoulder seat belts reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent.

Despite the known lifesaving and injury-prevention benefits of using seat belts, Massachusetts has yet to implement a *primary enforcement law* that would allow law enforcement officers to stop drivers for not wearing a seatbelt. Currently, Massachusetts has a weaker, *secondary enforcement seat belt law* under which police can issue seat-belt citations only if pulling over the driver was for another offense (i.e., speeding, going through a red light). As a result of this enforcement handicap, Massachusetts has consistently ranked among the worst-performing states year after year in the annual Statewide Observational Seat Belt Survey – a requirement for occupant protection grant funding by NHTSA.

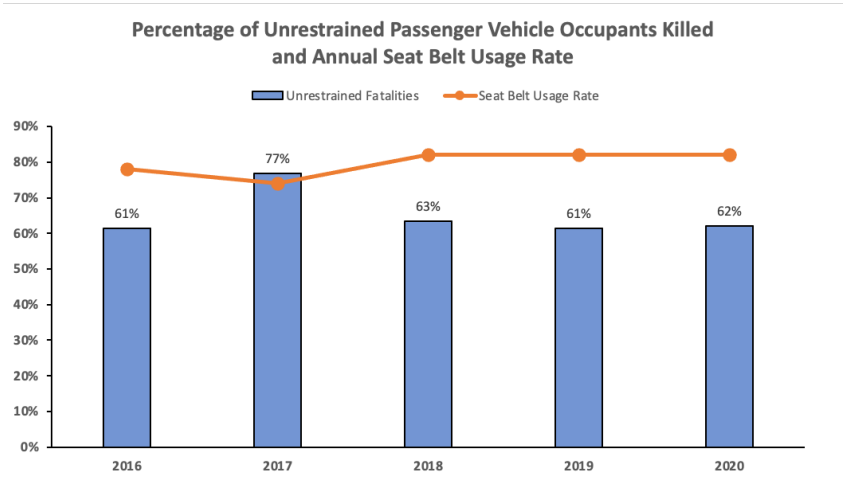
Having a primary seat belt law is critical. Without one, drivers and passengers will not reap any consequences for riding in a motor vehicle unrestrained unless pulled over by police for a reason not related to wearing a belt. By 2021, Massachusetts' seat belt usage rate declined significantly to 78% from 82% in 2020. With the national seat belt usage rate at 90.4%, Massachusetts is among the lower tier of states for belt rate. Nationally, primary states had an average belt usage rate of 91% in 2021 compared to 88% for secondary states. It should be recognized that Massachusetts ranks low in our seat belt use rate even among states with secondary enforcement laws.

This difference in belt usage between primary and secondary states becomes clear when examining the percentage of unrestrained fatalities of all fatalities reported from 2016 to 2020. For these five years, primary states (35 states) had 49,911 unrestrained fatalities out of 118,911 traffic fatalities for a rate of 41%. Secondary states (15 states) had 16,064 unrestrained fatalities out of 31,458 traffic deaths for 51%.

As the data shows, having a primary belt law will save more lives than a secondary belt law. Massachusetts would benefit significantly from the passage of a primary belt law; not only would the seat belt usage rate increase, but a tremendous reduction in the unnecessary loss of life in traffic fatalities would be realized.

From 2016 to 2020, there were 840 passenger vehicle (passenger car/light truck) occupant fatalities in which the restraint status was known out of 1,065 occupant fatalities. Of the 840 fatalities, 547 were unrestrained, and 293 were restrained at the time of the crash. Unrestrained fatalities accounted for 65% of all known restraint fatalities.

Since 2016, unrestrained passenger vehicle occupant deaths have not dropped below 60%. Interestingly, plotting the seat belt usage rate over the unrestrained ratio shows that a decline or rise in rate somewhat correlates to the percentage level of unrestrained occupants. In 2017, the seat belt rate fell to 74 from 78, and the percentage of unrestrained occupant deaths rose.

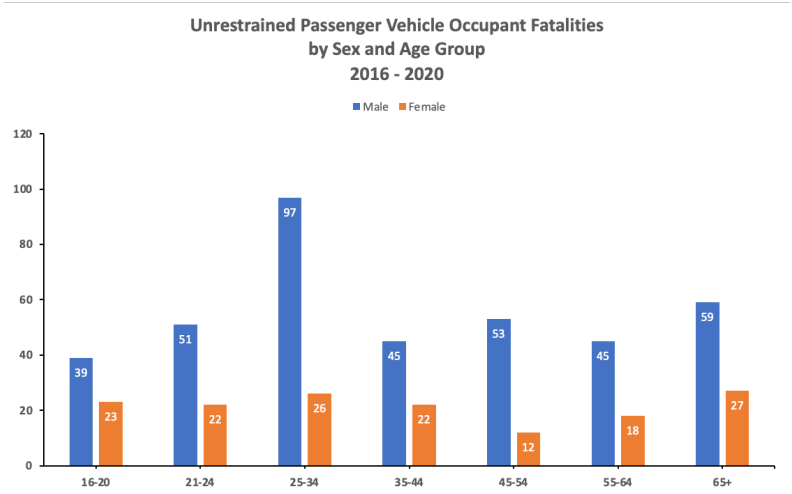


Source: FARS, Annual Statewide Seat Belt Survey

A primary belt law would undoubtedly increase Massachusetts' seat belt usage rate and, consequently, reduce the level of unrestrained fatalities among occupants in a motor vehicle crash.

Who are the unrestrained motor vehicle occupants in Massachusetts?

As mentioned previously, there were 547 unrestrained passenger vehicle occupant fatalities from 2016 to 2020. Males accounted for over 70% of all fatalities reported. For both sexes, the age group 25-34 had the highest number of unrestrained fatalities. The 123 deaths of men and women within this age range accounted for 22% of all fatalities. The most significant disparity in the sexes was among 45-54 age occupants, with 82% male and 18% female.



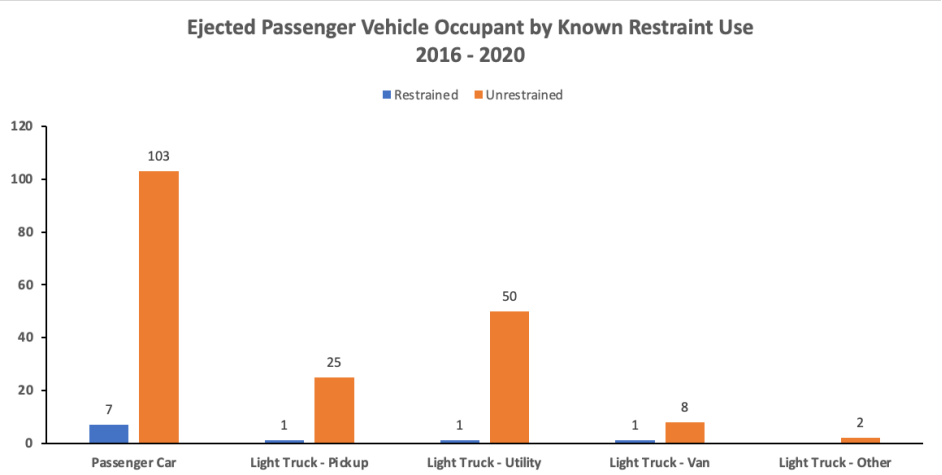
Source: FARS

The passenger car (typical two- or four-door car) was involved in 62% of unrestrained occupant fatalities by passenger vehicle body type. SUVs, also known as 'sports utility vehicles' were second with 23% of deaths. Drivers, which accounted for 82% of unrestrained fatalities, had two-thirds of its fatalities, with 'known restraint use' attributed to no belt usage. For passengers, the rate of unrestrained fatalities among 'know restraint use' was slightly lower at 61%.

Person Type	Passenger Vehicle Type	Restraint Use				Known Restraint Use	Percent Unrestrained
		Restrained	Unrestrained	Unknown	Total		
Driver	Passenger Car	154	286	112	552	440	65%
	Light Truck - Pickup	22	50	16	88	72	69%
	Light Truck - Utility	47	101	38	186	148	68%
	Light Truck - Van	9	12	7	28	21	57%
	Light Truck - Other	1	3	2	6	4	75%
	Total	**233**	**452**	**175**	**860**	**685**	**66%**
Occupant	Passenger Car	39	51	41	131	90	57%
	Light Truck - Pickup	1	11	1	13	12	92%
	Light Truck - Utility	15	25	7	47	40	63%
	Light Truck - Van	3	7	1	11	10	70%
	Light Truck - Other	2	1	0	3	3	33%
	Total	**60**	**95**	**50**	**205**	**155**	**61%**
Total	Passenger Car	193	337	153	683	530	64%
	Light Truck - Pickup	23	61	17	101	84	73%
	Light Truck - Utility	62	126	45	233	188	67%
	Light Truck - Van	12	19	8	39	31	61%
	Light Truck - Other	3	4	2	9	7	57%
	Total	**293**	**547**	**225**	**1,065**	**840**	**65%**

Source: FARS

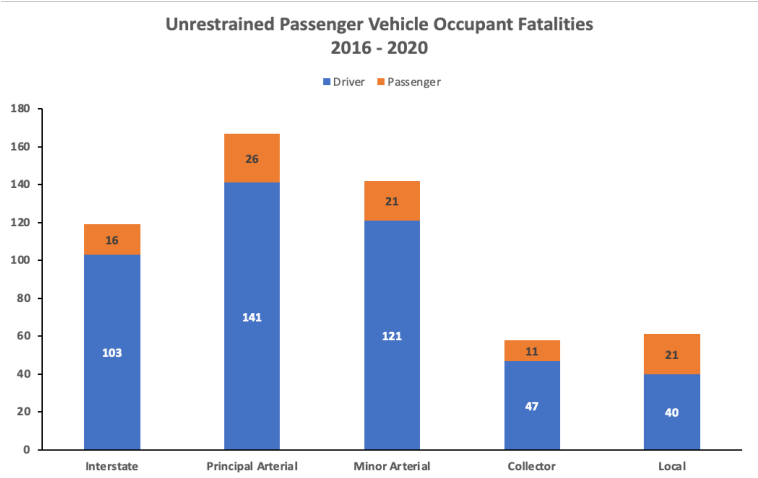
Over the years, it has been well-documented how effective safety belts are at preventing a motor vehicle occupant from being ejected, whether fully or partially, during a crash. From 2016 to 2020, there were 198 fatalities where an occupant was ejected. The occupant was unrestrained 95% of the time. Only 12 of the 198 fatalities involved a passenger in the backseat of a vehicle; all other fatalities were front-seat riders (either driver or passenger).



Source: FARS

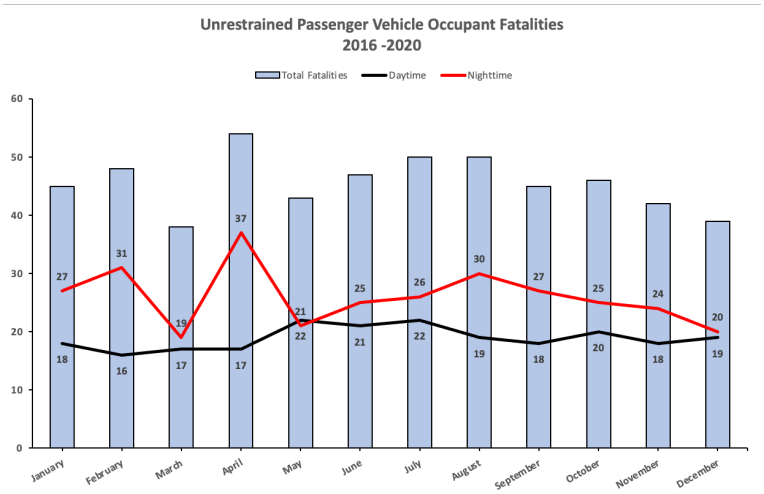
Where and when are unrestrained fatalities happening?

Nearly 80% of unrestrained passenger vehicle occupant fatalities occurred along with three roadway types: Interstate, Principal Arterial, and Minor Arterial. Drivers accounted for at least eight out of every ten fatalities on each roadway type, except local roads. On these roads, drivers drop down to six out of every ten. Passengers are more likely to be in the car with drivers along local roads – to school, to the store, and after school activities.



Source: FARS

From 2016 to 2020, unrestrained fatalities averaged 46 fatalities per month. April reported the highest number of fatalities (54), while March had the lowest (38). From May to December, fatalities trended upwards through August and then downwards – a likely result of increased traveling during the summer months (June – August).

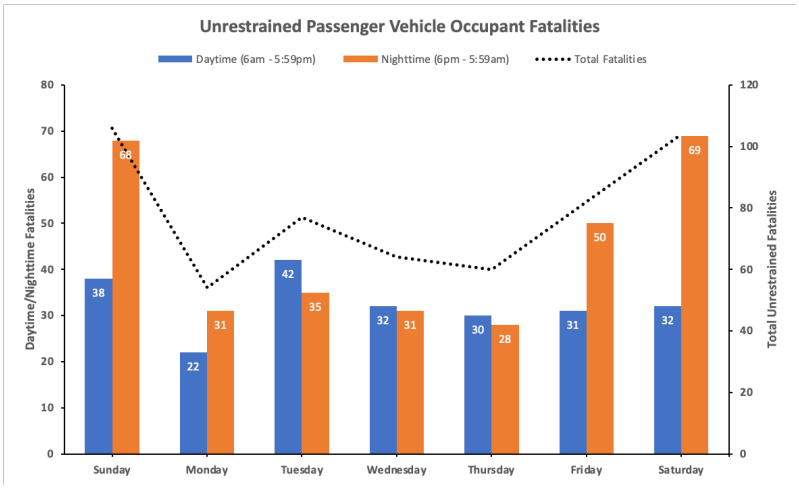


Source: FARS

When including time of day (daytime/nighttime) by month, it is clear unrestrained fatalities are more likely to occur at nighttime (6 pm to 5:59 am). In the past five years, 57% of unrestrained passenger vehicle fatalities took place during nighttime. Interestingly, May was the only month where daytime fatalities exceeded nighttime fatalities. A possible reason for this is the annual CIOT mobilization that takes place during the month. It is a very popular enforcement effort that many local towns and State police participate in. Many of the enforcements are conducted at nighttime – far more than in daytime – which could explain the drop in nighttime fatalities.

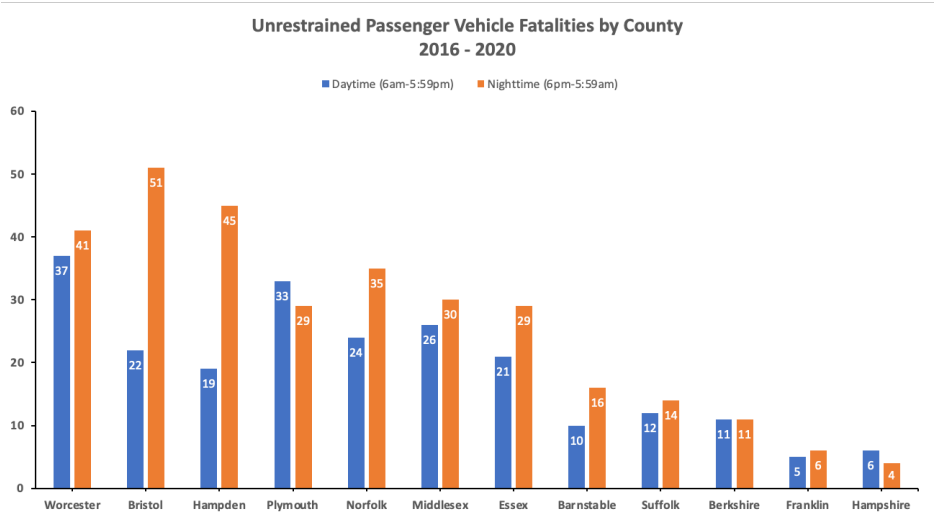
By day of week, over half of all unrestrained fatalities occurred during the weekend period (Friday to Sunday) with both Saturday and Sunday with triple-digit fatality totals. Daytime fatalities were

more frequent from Tuesday to Thursday, accounting for 53% of all fatalities reported over the three days. On Friday, nighttime fatalities would surge, continuing throughout the weekend.



Source: FARS

From 2016 to 2020, Worcester led all counties with 15% of all unrestrained passenger vehicle fatalities, followed by Bristol (13%) and Hampden County (12%). Together, these three counties accounted for nearly a third of all unrestrained fatalities reported. (Note: Dukes and Nantucket were not included in the chart due to low unrestrained fatalities.)



Source: FARS

Bristol had the largest percentage of fatalities occurring during the nighttime with 70%, followed by Hampden, 67%, and Barnstable, 62%. The total nighttime fatalities of these three counties (112) accounted for a third of the 312 nighttime unrestrained fatalities reported from 2016 to 2020. Plymouth and Hampshire were the only counties to have higher daytime fatalities than nighttime.

In terms of the percentage of total fatalities within a county, Barnstable saw nearly 40% of its traffic fatalities accounted for by unrestrained passenger vehicle occupants. At the other end of the spectrum, Suffolk County had 21% of its fatalities due to unrestrained occupants.

2016 - 2020			
County	Unrestrained Fatalities	Total Traffic Fatalities	Percent Unrestrained
Barnstable	26	67	39%
Plymouth	62	177	35%
Franklin	11	32	34%
Berkshire	23	67	34%
Norfolk	60	176	34%
Hampden	67	197	34%
Bristol	73	224	33%
Worcester	80	249	32%
Essex	50	172	29%
Hampshire	11	41	27%
Middlesex	56	237	24%
Suffolk	26	122	21%

Source: FARS

Three of the top four counties by percentage – Barnstable, Franklin, and Berkshire – are among the counties with the lowest population per square mile in Massachusetts. With less population comes less heavy traffic (with exception of Barnstable during summer months) and possibly more willing to forgo wearing a seat belt while driving or riding in a passenger vehicle.

Top 5 - Unrestrained Passenger Vehicle Fatalities (2016 - 2020)				
Town	County	Daytime	Nighttime	Total
Boston	Suffolk	10	13	23
Springfield	Hampden	3	17	20
Brockton	Plymouth	5	9	14
Fall River	Bristol	3	6	9
Wareham	Plymouth	6	3	9

Source: FARS

Boston led all municipalities with 23 unrestrained fatalities. The top five communities for unrestrained deaths accounted for 14% of the 547 unrestrained passenger vehicle fatalities reported from 2016 to 2020. Springfield, with 20 fatalities, represented 30% of all unrestrained fatalities in Hampden County. The combination of Brockton/Wareham accounted for 37% of Plymouth County's 62 unrestrained fatalities.

Additional factors contributed to unrestrained fatalities:

Speeding

- 33% of unrestrained passenger vehicle fatalities involved speeding (183 of 547 fatalities).
- 39% of unrestrained fatalities involving speeding were ejected or partially ejected from the vehicle (71 of 183 fatalities)
- Hampden County had the highest percentage of unrestrained fatalities involving speeding, 45% (30 of 37 fatalities), among all counties. Berkshire was second with 39% (9 of 14 fatalities). Franklin had the lowest with 18% (2 of 9 fatalities).

Alcohol-Impaired

- Drivers with a BAC of .08 or higher accounted for 41% of unrestrained driver fatalities from 2016 to 2020 (186 of 452 fatalities).
- 82% of alcohol-impaired driver unrestrained fatalities (153 of 186 fatalities) took place during nighttime (6 pm to 5:59 am).

For FFY 2023, OGR will continue funding important occupant protection programs and activities such as the Annual Statewide Seat Belt Survey, the CIOT mobilization campaign, and messaging in conjunction with our partners such as DOT and/or through various mediums such as television, radio, and social media platforms. The overarching message to be conveyed to Massachusetts motor vehicle occupants is the plain and simple fact that failure to wear seat belts will significantly increase one's chances of dying.

Some key trends to consider in FFY 2023:

- Messaging should target occupants between the ages of 25 and 34, with a focus on drivers
- April should be a month for MRS grantees as well as MSP to conduct additional enforcement patrols, especially during nighttime (6 pm to 5:59 am). This month recorded the highest total occupant fatalities from 2016 to 2020.
- Police enforcement activities should primarily occur over the three-day period of Friday, Saturday, and Sunday – over 50% of occupant fatalities took place during this stretch.
- Worcester, Bristol, and Hampden County are the leading counties for unrestrained fatalities and OGR plans to make a concerted effort of outreach to police departments within these counties to encourage them to apply for funding.

Performance Measure for Occupant Protection

Number of Unrestrained MV Occupant Fatalities

FFY 2023 Target: 4% decline in the five-year average from 105 in 2021 to 100 by December 31, 2023.

Observed Seat Belt Usage Rate

FFY 2023 Target: 4% increase in the five-year average from 79 in 2021 to 82 by December 31, 2023.

Planned Activities for FFY 2023

Occupant Protection Media

ID: OP-23-01

Primary Countermeasure Strategy: Communication and Outreach

Description of Planned Activity:

OGR will support the development of a statewide media campaign to address occupant protection efforts during the May 2022 Click it or Ticket mobilization and into early summer. The target audiences will be based on state unrestrained crash data and the lowest use populations identified in the 2022 seat belt observation study: males under 34 years of age, commercial and pickup truck drivers, and Hispanic and African American males. Any paid media buy will skew central and western Massachusetts as well as Bristol County, the three areas that represent the lowest belt usage rates.

When using NHTSA funds, OGR will contract with an advertising agency to execute a paid media campaign. OGR will lead social media and press outreach efforts to garner earned media; both will be done in conjunction with paid media and the enforcement mobilization. OGR will also work with such vendor to develop a child passenger safety (CPS) campaign in the lead-up to national CPS Week in September 2023. The messaging and target audience will be based on state data submitted to the National Digital Car Seat Check Form (NDCF). Crash and study data will be used not only for planning enforcement activities, but also for determining the target audiences and media channels used to reach those audiences. OGR will take into consideration NHTSA's media buy recommendations for each campaign.

Countermeasure Strategy Justification: *Communication and Outreach*

Public outreach, whether by billboards, radio, television, or social media, is necessary to continually remind Massachusetts motor vehicle occupants of the dangers involved in not wearing a seatbelt.

FFY 2023 OP media campaigns are aimed at increasing proper occupant restraint usage on the roadways of Massachusetts. As Click It or Ticket is a high-visibility enforcement campaign, media is needed to augment enforcement and maximize awareness efforts. When using NHTSA funds for media, OGR will provide all law enforcement partners access to earned media resources including a local press release template, social media graphics, and any PSAs. This will ensure the messaging about the importance of buckling up is consistent and far-reaching.

Furthermore, with the high percentage of unrestrained fatalities accounting for all traffic fatalities in the southeastern region of Massachusetts, media messaging through radio, television, and/or outdoor signage needs to target communities such as Fall River, Brockton, and Wareham.

As OGR helps roll-out the NDCF in Massachusetts and more seat check data is entered into the system, trends will be identified which will lead to educational opportunities. OGR will analyze these trends and work with our media vendor to properly message and reach families.

OP-23-01 Occupant Protection Media Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405b Occupant Protection	Occupant Protection	$1,183,342	$	$0

MSP Occupant Protection Enforcement

ID: OP-23-02

Primary Countermeasure Strategy: Short-term, High-Visibility Seat Belt Law Enforcement

Description of Planned Activity:

OGR will provide funds to the Massachusetts State Police (MSP) for overtime occupant protection focused enforcement during the 2022 holiday season and the May 2023 Click It or Ticket (CIOT) campaign.

Enforcement efforts will increase compliance with occupant protection laws during the day and night and occur at times and locations shown to have high incidences of motor vehicle crashes based on the most current state and local crash data. Other violations, such as speeding and texting, may also be secondarily targeted during these mobilizations. OGR will also provide media support for the CIOT mobilization.

Countermeasure Strategy Justification: Short-term, High-Visibility Seat Belt Law Enforcement

The Massachusetts seat belt usage rate is one of the lowest in the nation. The Click It or Ticket (CIOT) mobilization, conducted concurrently with the national campaign allows the MSP to conduct highly publicized periods of seat belt enforcement patrols and checkpoints. OGR expects that extensive communications and targeted enforcement during crucial times will lead to higher seat belt usage and lower unrestrained fatalities.

OGR expects that extensive communications and targeted enforcement during crucial times (Friday through Saturday, afternoon/evening, with a focus on principal and minor arterial roadways) will lead to higher seat belt usage and lower unrestrained fatalities.

OP-23-02 MSP Occupant Protection Enforcement Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405b OP Low	405b Low HVE	$250,000	$0	$0

Car Seat Distribution Program

ID: OP-23-03

Primary Countermeasure Strategy: Child Restraint System Inspection Stations

Description of Planned Activity:

OGR will provide car seats to municipal and state agencies and nonprofit organizations via a competitive solicitation. The primary goal of this program will be to provide seats and child passenger safety education to low-income families. Providing these seats will also enhance fitting stations and seat check events where technicians may encounter expired, misused, or damaged seats.

Grant subrecipients will be selected based on the quality of their CPS program, their demonstrated need for seats, their community partnerships, and their outreach plan to low-income families. Any seat check involving the issuance of a grant-funded seat will be entered into the National Digital Car Seat Check Form as recommended in the 2020 Occupant Protection Assessment.

Countermeasure Strategy Justification: *Child Restraint System Inspection Stations*

Car seats decrease the risk of fatal injury by 71% among infants and 54% among toddlers. Booster seats reduce the risk of nonfatal injuries by 45% among 4-to-8-year-old motor vehicle occupants compared to the seat belt alone. Car and booster seats need to be installed and used correctly for them to prevent injuries and fatalities, yet misuse is abundant, and more than half of all seats are installed incorrectly. This grant removes any financial barrier for low-income families to obtain a car seat and helps connect families in need with certified technicians who can ensure their seats are installed and used correctly.

Even with the financial barrier removed, OGR is working hard to ensure low-income communities in Massachusetts have access to new seats through their respective police departments. Communities such as Boston, Springfield, Chicopee, Lynn, Fall River, New Bedford, and Worcester, all with concentrated low-income areas, will be a primary focus of OGR with outreach to inform of the grant's availability.

OP-23-03 Car Seat Distribution Program Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Occupant Protection	$500,000	$0	$500,000

Child Passenger Safety Training Program

ID: OP-23-04

Primary Countermeasure Strategy: Child Restraint System Inspection Stations

Description of Planned Activity:

OGR will hire an experienced contractor to recruit, train, and maintain a sufficient number of certified child passenger safety (CPS) technicians and instructors in Massachusetts. The contractor will plan and conduct technician, renewal, update, special needs, school bus, and ambulance classes across the state, and continue providing monthly awareness courses to social workers at the Department of Children and Families.

The contractor will lead the state's effort in recertifying technicians by ensuring instructors and technician- proxies are available for sign-offs at events or appointments.

Program funds will also be used to purchase training seats, dolls, and iPads with protective cases to ensure each inspection site in the state has at least one portable device to utilize during seat checks to enter data into the National Digital Car Seat Check Form.

Countermeasure Strategy Justification: *Child Restraint System Inspection Stations*

The misuse and/or incorrect installation of a child restraint seat has been a concern of OGR, medical professionals, and law enforcement for many years. An incorrectly installed car seat or an outdated child restraint could result in serious or fatal injuries to the child in a motor vehicle crash. Maintaining a sufficient number of technicians will ensure the continued operation of inspection stations. Child passenger safety (CPS) inspection stations, or 'fitting stations,' are events, where parents and caregivers can receive instruction from certified CPS technicians on proper installation methods as well as have current car seats examined for usability and safety.

This program ensures there is a sufficient number of active and certified CPS technicians in Massachusetts. Technicians are needed to assist caregivers with properly installing their child's car seat and to educate them on their proper usage to prevent serious injuries and fatalities. With more

certified CPS technicians available, OGR hopes to get the unrestrained fatality number among children age 10 or younger to zero each and every year going forward.

OP-23-04 Child Passenger Safety Training Program Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405b Occupant Protection Low	405b Low	$425,000	$0	$0

Statewide Seat Belt Observation Survey

ID: OP-23-05

Primary Countermeasure Strategy: Data Collection

Description of Planned Activity:

Provide funding for a competitively selected vendor to conduct the statewide seat belt observation survey utilizing NHTSA methodology. This survey is required of all states by NHTSA and will take place following the May Click It or Ticket (CIOT) Mobilization. This survey will capture demographic data to assist in measuring performance and targeting future occupant protection programs. A final report will be submitted to OGR for review and dissemination.

The selected vendor will also be tasked with developing the sampling plan to reselect the roadways for observation. This is a requirement every five years by NHTSA. The reselection process should take place in the fall/winter of FFY 2023.

Countermeasure Strategy Justification: *Data Collection*

Taking place after the May CIOT mobilization, the statewide seat belt survey is, in a way, a measure of the impact of OGR's media messaging and enforcement grant activity by state and local police. In 2021, the seat belt usage rate was 78%, down from the prior high-point of 82%. The data collected in each survey helps reveal to OGR areas across the state the need for increased media messaging and funding. For FFY 2023, the survey will again be a sounding board on occupant protection messaging and targeted enforcement areas.

OP-23-05 Statewide Seat Belt Observation Survey Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405b Occupant Protection Low	405b Low	$150,000	$	$0

MSP Child Passenger Safety (CPS) Program

ID: OP-23-06

Primary Countermeasure Strategy: Child Restraint System Inspection Stations

Description of Planned Activity:

Massachusetts State Police (MSP) will run monthly seat check events at five different barracks and five larger-scale check events from May to September of 2023. These events will be publicized broadly on social media and via direct contact with community organizations. MSP will continue to partner with the Department of Children and Families, YMCA, and Boys and Girls Clubs to ensure low-income families are aware of these events.

Funds will be used to cover overtime expenses for troopers to staff these events, purchase car seats for distribution during them, and send MSP's lead technicians to the Kidz in Motion Conference during FFY 2023 (Location and date yet to be determined).

Countermeasure Strategy Justification: *Child Restraint System Inspection Stations*

This program will help connect local families with certified technicians who can ensure their seats are installed and used correctly. It will also ensure that MSP's technicians, many of whom are newly certified, maintain their skills and certification.

Coupled with the CPS Equipment and CPS Training programs, Massachusetts will gain even further reach and impact in car seat safety as more law enforcement officers become certified in inspecting and installing car seats. With a larger pool of certified and knowledgeable technicians, parents and caregivers can have peace of mind knowing the car seat used by their child is properly and securely placed in the vehicle.

OP-23-06 MSP CPS Program Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405b FAST Act	Occupant Protection	$96,516	$0	$0

Program Management – Occupant Protection

ID: OP-23-07

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Provide sufficient staff to manage programming described in this plan and cover travel, professional development expenses, conference fees, and postage and office supplies. All funding intended for supporting staff will not be sub-awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the occupant protection safety program properly. Lack of oversight due to reduced or no funding could lead to increased unrestrained fatalities and injuries on the roadways of Massachusetts.

OP-23-07 Program Management – Occupant Protection Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Occupant Protection	$176,300	$	$0

Program Area: Speed Management

Speeding increases the chances of a vehicle driver (or motorcycle operator) causing a crash that involves a serious or fatal injury. According to FARS, speeding involves one of three behaviors: (1) driving too fast for conditions; (2) operating over the posted speed limit; and (3) racing in the street. When engaging in these types of behaviors behind the wheel, drivers run the risk of:

- Losing control of the vehicle, especially during inclement weather (snow, sleet, rain)
- Reducing the effectiveness of the vehicle's occupant protection features (for example, airbags are considered most effective at preventing injuries or death at 25 mph or lower)
- Increasing the amount of distance needed to safely stop the vehicle (for a car traveling 60 mph, 240 feet is required to stop; at 80 mph, 400 feet)
- Reducing the driver's ability to react quickly to sudden changes on the road
- Increasing the severity of a crash as well as the resulting damage and injuries

Why do drivers engage in speeding? Reasons vary from driver to driver. The most common reasons are running late, being distracted, thrill-seeking, alcohol or drug impairment, and the driver's age, as younger drivers tend to be more prone to speeding.

From 2016 to 2020, there were 50,667 speeding fatalities in the United States. Speed-related deaths accounted for 27% of the 187,293 traffic fatalities reported. There were 506 speed-related fatalities in Massachusetts, representing 29% of the 1,768 traffic fatalities across the Commonwealth during the same period.

During the five years of 2016 to 2020, Massachusetts averaged 101 speeding fatalities per year – the highest among the six New England states. Despite having the highest speeding fatalities per year, Massachusetts had the lowest percentage of traffic fatalities involving speeding.

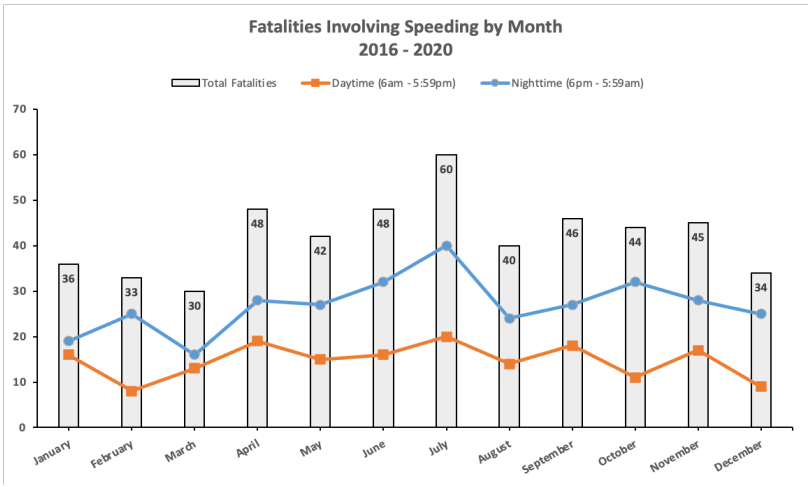
State	2016 - 2020 Total Traffic Fatalities	2016 - 2020 Speeding Fatalities	Average Yearly Speeding Fatalities	Percent Speeding Fatalities
Connecticut	1,422	432	86.4	30%
Massachusetts	**1,768**	**506**	**101.2**	**29%**
Maine	790	244	48.8	31%
New Hampshire	590	278	55.6	47%
Rhode Island	318	150	30.0	47%
Vermont	308	124	24.8	40%

Source: FARS

Despite being the most populous state, having the lowest percentage of speeding fatalities is a testament to the hard work that law enforcement professionals do every day to ensure drivers are adhering to the posted speed limits.

When are speeding fatalities taking place in Massachusetts?

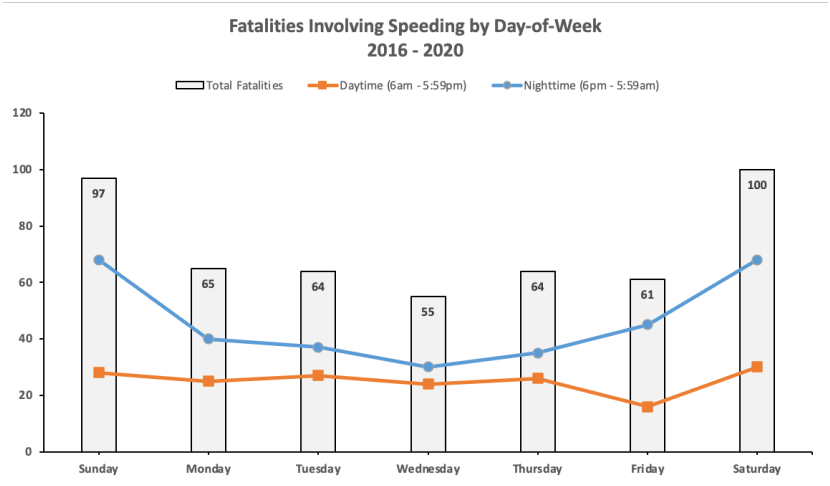
From 2016 to 2020, speed-related fatalities took place most frequently in July. The 60 deaths reported this month accounted for 12% of all speed-related fatalities. Warmer weather months, typically stretching from April through September, were responsible for over half of speed-related fatalities.



Source: FARS

By the time of day, nighttime fatalities accounted for two-thirds of all speed-related fatalities. Each month of the calendar year had higher nighttime deaths than daytime. While July had the highest total for nighttime fatalities (40), February had the most significant gap between day and nighttime fatalities. In February, 76% of speed-related fatalities took place during nighttime hours. Interestingly, January and March had the smallest gap, with just over half of the fatalities occurring at nighttime.

By the day of the week, the weekend (Saturday and Sunday) accounted for nearly 40% of all speed-related fatalities from 2016 to 2020. Daytime fatalities were reasonably consistent throughout the week, averaging 25 deaths per day, whereas nighttime fatalities spiked on Friday, Saturday, and Sunday. This three-day period (181) accounted for 56% of all nighttime speed-related fatalities.

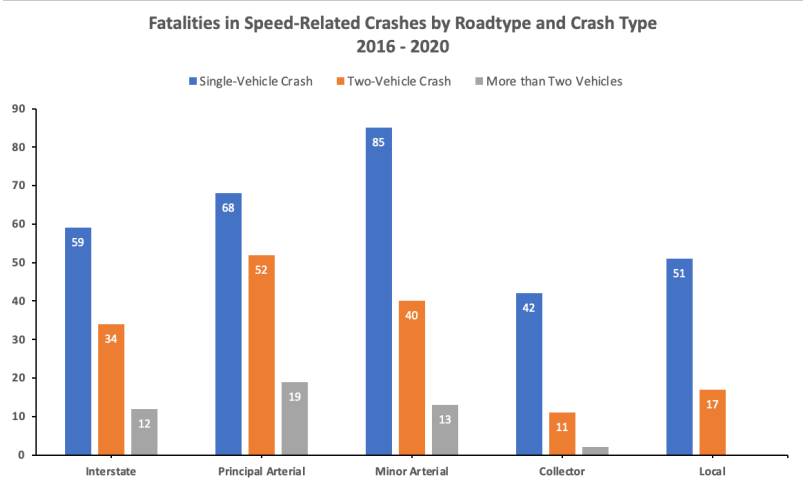


Source: FARS

Where are speeding fatalities occurring?

From 2016 to 2020, over half of speed-related fatalities occurred along either principal or minor arterials. Interstates accounted for 21%; local roads, 13%; and collectors, 11%. The faster a vehicle

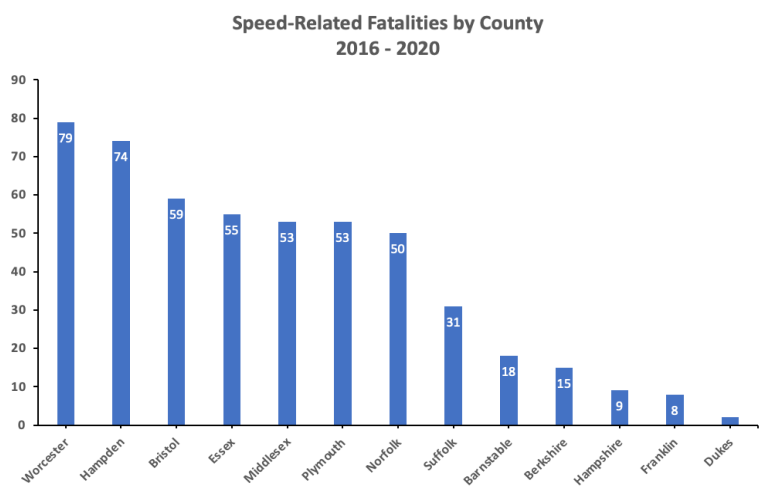
goes, the greater the impact of the crash and the higher the likelihood of death or serious injuries. It is not surprising that roadways with average speeds over 40 mph would be where most speed-related fatalities occur.



Source: FARS

By crash type, single-vehicle crashes were involved in 61% of speed-related fatalities, nearly 30% occurring along minor arterial roadways. A third of fatalities in two-vehicle crashes took place on principal arterials, and 41% of all fatalities in crashes with more than two vehicles. Local roads had 75% of their fatalities occurring in single-vehicle crashes.

By county, Worcester led all counties with 79 speed-related fatalities reported from 2016 to 2020. Hampden and Bristol were second and third, respectively. These three counties accounted for 42% of all speed-related fatalities reported across the state.



Source: FARS

By city, Boston led all communities in Massachusetts with 29 speed-related fatalities reported from 2016 to 2020. The capital city accounted for 94% of all speed-related fatalities in Suffolk County. Springfield was second with 36% of the speed-related fatalities in Hampden County. Combined

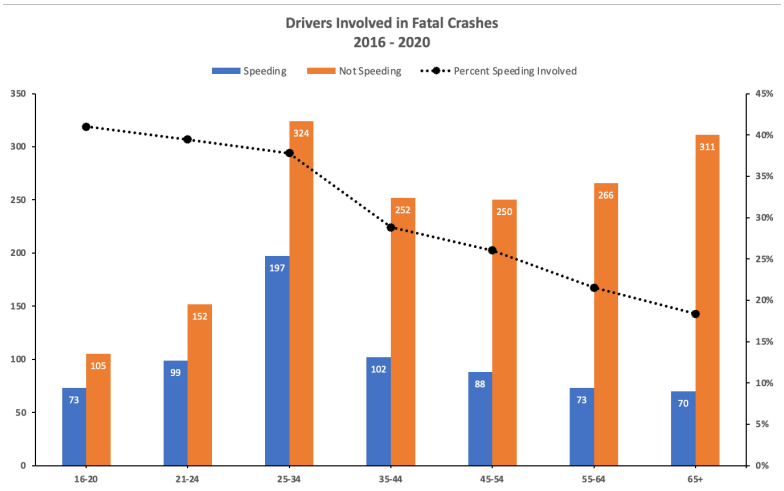
with Chicopee, the two cities accounted for half of all speed-related fatalities in the county. The top cities listed below represented over a quarter of the 506 speed-related fatalities along Massachusetts roadways from 2016 to 2020.

City	County	Speed-Related Fatalities in City	Total Speed-Related Fatalities for County	Percent of County's Fatalities
Boston	Suffolk	29	31	94%
Springfield	Hampden	27	74	36%
Worcester	Worcester	15	79	19%
Fall River	Bristol	12	59	20%
Brockton	Plymouth	11	53	21%
Chicopee	Hampden	10	74	14%
Middleboro	Plymouth	10	53	19%
Dartmouth	Bristol	9	59	15%
Leominster	Worcester	8	79	10%

Source: FARS

Who are the drivers involved in speed-related fatalities?

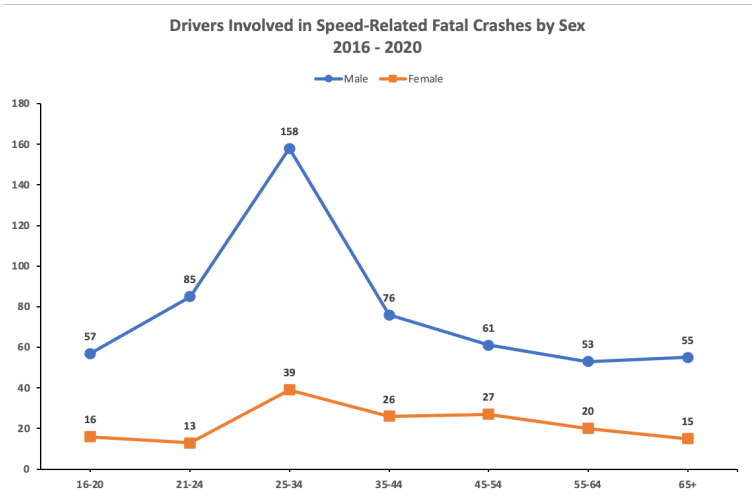
From 2016 to 2020, there were 2,383 drivers involved in fatal crashes. Of these drivers, 703 were speeding at the time of the crash – nearly a third of all drivers involved in a deadly crash. Drivers aged 25-34 accounted for 28% of all drivers involved in a speed-related fatal crash. The next age group – 35 to 44 – represented 15% of all drivers, a distant second from the 25-34 age group.



Source: FARS

Interestingly, the percentage of speeding-involved drivers in all fatal crashes declined as the drivers got older. Of 16 to -20-year-old drivers, over 40% were speeding at the time of the fatal crash. At the other end of the spectrum, drivers 65 or older only had 18% speeding. As drivers gain experience and maturity, there seems to be less appetite for speeding and reckless driving behaviors.

Male drivers accounted for 78% of all drivers (703) involved in a speed-related fatal crash. Among all male drivers involved in a fatal crash (1,209), 31% were speeding at the time of the crash. For females, the percentage of drivers speeding was slightly lower at 26% (156 of 608 female drivers).



Source: FARS

As mentioned, males accounted for most drivers involved in speed-related fatal crashes. Across all age groups, males were at least 7 of every 10 drivers involved. The biggest gap between male and female drivers occurred among those under 35 years of age, where male drivers account for 82% of all drivers involved in a speed-related fatal crash. From age 35 onward, males represented 74% of all drivers involved.

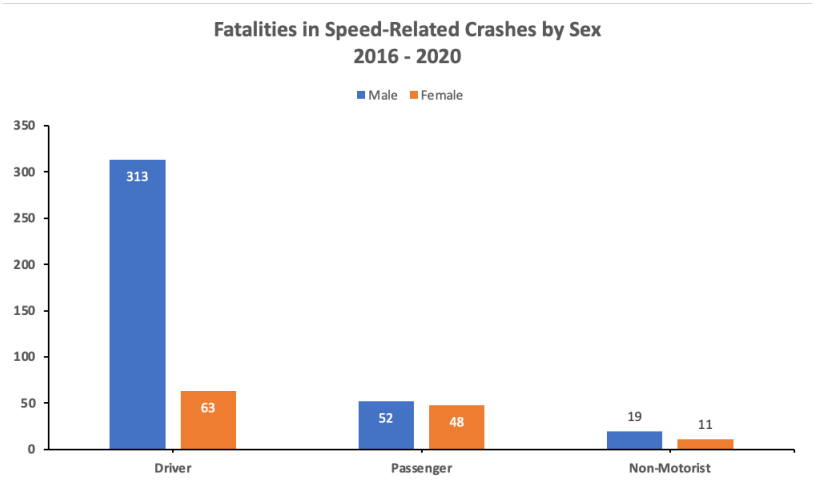
In terms of vehicles driven by the speeding driver in a fatal crash, passenger cars were involved in over half of all speed-related fatal crashes. Sports-utility vehicles (SUVs) were next with 20% of crashes, followed by motorcycles, which accounted for 13% of vehicles in speed-related fatal crashes. As a percentage of all crashes involving specific vehicle types, motorcycles led all vehicle types, with 35% of the 259 motorcycles involved in a fatal crash found to be speeding at the time of the crash. Passenger cars were second, with 34% of all passenger cars involved.

Vehicle Body Type	Involving Speeding			
	Yes	No	Total	Pct.
Passenger Car	359	696	1,055	34%
Light Truck - Pickup	53	167	220	24%
Light Truck - Utility	140	383	523	27%
Light Truck - Van	16	79	95	17%
Light Truck - Other	1	13	14	7%
Large Truck	34	122	156	22%
Motorcycle	90	169	259	35%
Bus	0	13	13	0%
Other/Unknown	10	38	48	21%
Total	**703**	**1,680**	**2,383**	

Source: FARS

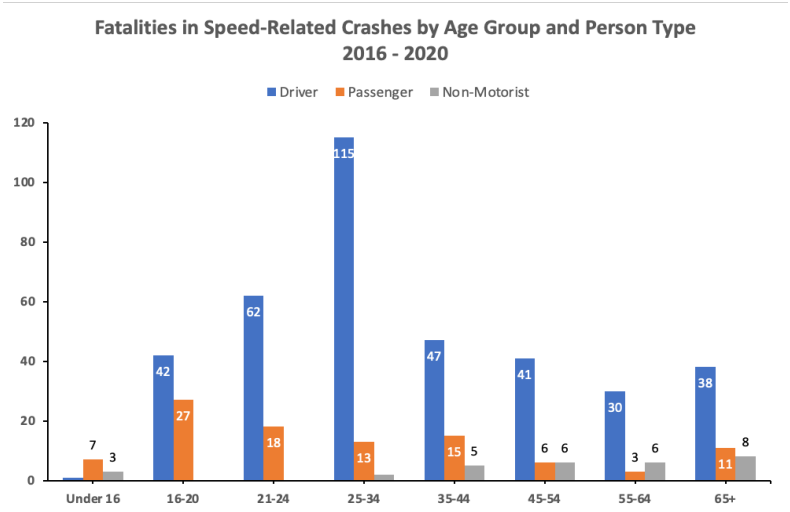
Who are the fatalities in a speed-related fatal crash?

In speed-related crashes, drivers accounted for almost three-quarters of all fatalities. Passengers were 20% and non-motorist 6%. Drivers were dominated by males, while passengers and non-motorists were close to even between the sexes.



Source: FARS

By age group, the 25-34 group accounted for 26% of all speed-related crash fatalities, of which drivers represented nearly 90% of the fatalities – the highest of any age group. Young drivers, those under 21 years of age, were 16% of all fatalities. Non-motorist (18 passengers, 1 person in/on building) became more frequent with older (35+) fatalities. More than 80% of non-motorist fatalities were over 34 years of age. Passenger fatalities were highest among 16 to-20-year-old groups, accounting for 27% of all passenger fatalities.



Source: FARS

By vehicle body type, drivers and passengers on motorcycles were the most likely to have a fatal injury when involved in a speed-related crash. Of 96 motorcycle riders (90 drivers, 6 passengers) in a speed-related crash from 2016 to 2020, 88 perished in the crash – a rate of 92%.

Drivers				Passengers			
Vehicle Type	Fatals	Total Inv.	Pct.	Vehicle Type	Fatals	Total Inv.	Pct.
Passenger Car	204	359	57%	Passenger Car	66	188	35%
Light Truck - Pickup	21	53	40%	Light Truck - Pickup	7	20	35%
Light Truck - Utility	54	140	39%	Light Truck - Utility	16	70	23%
Light Truck - Van	2	16	13%	Light Truck - Van	3	12	25%
Light Truck - Other	1	1	100%	Light Truck - Other	0	0	0%
Large Truck	5	34	15%	Large Truck	2	7	29%
Motorcycle	85	90	94%	Motorcycle	3	6	50%

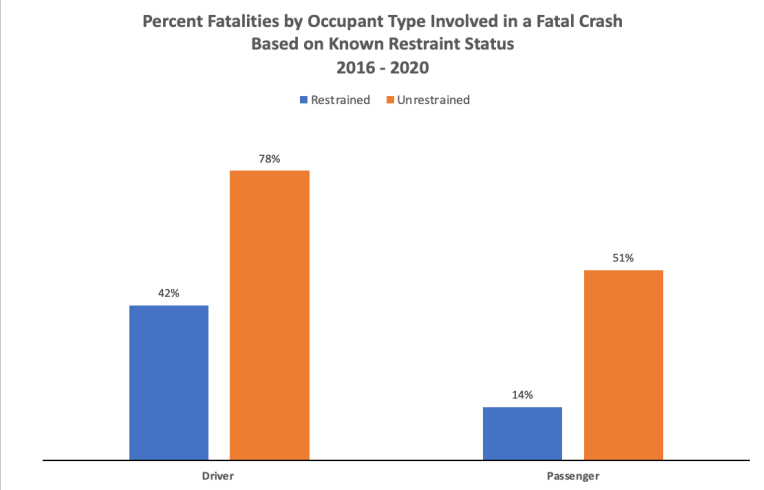
Source: FARS

Among light trucks, pickups had the worst survival rate for drivers and passengers. This is likely due to pickup trucks having only front-seat passengers, whereas SUVs and vans tend to have second-row seating, which tends to provide some protection in the event of a crash – especially head-on. Overall, 54% of drivers involved in a speed-related crash and 32% of passengers involved in a speed-related crash had a fatal injury.

Other factors in speed-related fatalities:

Restraint Usage

From 2016 to 2020, 802 drivers and passengers with known restraint usage status were involved in speed-related crashes. Occupants that were unrestrained at the point of impact had a higher chance of fatal injury compared to occupants that were restrained.



Source: FARS

For drivers, being unrestrained ends up being a death sentence for over three-quarters of unrestrained drivers involved in a fatal crash (174 of 223 drivers); whereas, for restrained drivers, the survival rate was much better (139 of 333 drivers). Overall, 56% of drivers with known restraint status had a fatal injury in a speed-related crash from 2016 to 2020.

Passengers had a much better chance of survival compared to drivers, with 26% of passengers with known restraint use dying in a speed-related crash. For a restrained passenger, only 14% of 162 perished, while for unrestrained passengers, a little over half (43 of 84 passengers) had a fatal injury.

Wearing a seat belt makes a huge difference in whether a driver or passenger survives a high-speed crash.

Alcohol Impairment of Driver

Another factor that increases the likelihood of fatal injury in a speed-related crash for drivers is the presence of alcohol. Of the 139 restrained driver fatalities in a speed-related crash, 38% had a BAC of 0.08 or higher. For unrestrained driver fatalities, 44% of 174 fatalities were alcohol-impaired at the time of the crash. It is known alcohol impairment affects decision-making, and one can only wonder if that 44% of unrestrained drivers had been sober when getting behind the wheel, they would have (a) put on their seat belts and (b) not engaged in high-risk behavior (speeding) instead of the opposite.

For FFY 2023, OGR will work with traffic safety partners to reduce speed-related fatalities and fatal crashes by targeting the following trends when implementing grant-funded activities:

- Key demographic for any media messaging should be drivers under age 35, with a focus on male drivers as they account for a majority of speeding fatalities.
- Overtime enforcement activity by law enforcement should focus on the weekend (Friday 6 pm to Monday 5:59 am) and nighttime (6 pm to 5:59 am).
- The period from April to September had higher fatalities per month from 2016 to 2020, and any overtime enforcement or media messaging should key in on these six months for maximum impact.
- Outreach to law enforcement in top counties for speed-related fatal crashes and fatalities – Worcester, Hampden, Bristol – will be a top priority for OGR to increase applicants for grant-funded programs from these counties to reduce speeding deaths.

Performance Measure for Speed Management

Number of Speed-Related Fatalities

FFY 2023 Target: 5% decline in the five-year average from 94 in 2021 to 90 by December 31, 2023

Planned Activities for FFY 2023

Speed and Aggressive Driving Media

ID: SC-23-01

Primary Countermeasure Strategy: Communication and Outreach

Description of Planned Activity:

OGR will support the development of a statewide media campaign that supports the summer 2023 speed enforcement mobilizations by Massachusetts State Police and local departments involved in the Municipal Road Safety Program. When using NHTSA funds, OGR will contract with an advertising agency to execute any paid media campaign. Based on state data, OGR will target communication efforts to male drivers under 35 years of age in the following counties: Worcester, Hampden, and Bristol. OGR will lead social media and press outreach efforts to garner earned media; both will be done in conjunction with paid media and the enforcement mobilizations. Crash and citation data will be used not only for planning enforcement activities but also for determining the target audiences and media channels used to reach those audiences. OGR will take into consideration NHTSA's media buy recommendations.

Countermeasure Strategy Justification: *Communication and Outreach*

Stopping drivers exceeding the posted speed limit or driving too fast for current conditions is a part of the overall objectives for high-visibility Speed safety media campaigns will support the speed and traffic enforcement mobilizations conducted by both State and local police during FFY 2023. Messaging will target a key demographic: occupants under age 34, which accounted for over half of all fatalities in a speed-related crash. OGR will recommend increased enforcement activities by grant recipients during nighttime (6 pm to 5:59 am) and over weekends (Friday night to Monday morning). By prioritizing messaging and overtime enforcement in these key areas, OGR is confident speeding fatalities will decline in FFY 2023.

SC-23-01 Speed and Aggressive Driving Media Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Speed and Aggressive Driving (Paid Advertising)	$562,340	$0	$0

MSP Speed Enforcement

ID: SC-23-02

Primary Countermeasure Strategy: High-Visibility Enforcement

Description of Planned Activity:

Funds will be provided to the MSP to conduct speed-related enforcement activities to decrease the incidence of speeding violations and reduce the rate of speed-related motor vehicle crashes along the Commonwealth's major highways. A planned speed enforcement mobilization will run concurrently with enforcement efforts conducted by local police departments participating in the Municipal Road Safety program in June 2023. MSP will also conduct a speed enforcement campaign from July 1 through September 5, 2023, known as the 100 Deadliest Days of Summer. Additionally, MSP will conduct speed hotspot high-visibility patrols throughout the year. A supporting media campaign is planned to augment these enforcement efforts.

A portion of this program's funding will be provided to the MSP for equipment purchases that include approximately 180 LiDAR and 75 RADAR units, three data recorders, and five speed board trailers. The LiDAR units will be assigned to troopers once they graduate from the academy and are assigned to the road. The RADAR units will replace aging equipment that was 20 years old. They will be assigned to troopers in rural Western Massachusetts and are needed due to their ability to operate while moving. Both speed measuring units will serve to enhance enforcement efforts towards the overall performance of the program.

Countermeasure Strategy Justification: *High-Visibility Enforcement*

High-visibility enforcement campaigns have been shown in the past to be effective in helping deter speeding and aggressive driving. Based on data analysis, OGR will work with selected subrecipients to target high incidence periods of speeding and aggressive driving in Massachusetts. For example, enforcement patrols should be more frequent during nighttime (6 pm to 5:59 am), with a focus over the weekend period: Friday, Saturday, and Sunday. Through this data-driven targeted approach, high-visibility enforcement will lead to lower speeding and aggressive driving behavior in 2023 and beyond.

SC-23-02 Speed Enforcement Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Speed Enforcement	$837,660	$0	$0

Program Management – Speed Management

ID: SC-23-03

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Provide enough staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, and postage and office supplies. All funding intended for supporting staff will not be sub awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the speed management safety program properly. Lack of oversight due to reduced or no funding could lead to increased speed-related fatalities and injuries on the roadways of Massachusetts.

SC-23-03 Program Management – Speed Management Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Speed Management	$60,000	$0	$0

Program Area: Motorcyclist Safety

From 2016 to 2020, there were 26,694 motorcyclist fatalities across the United States out of the 187,293 traffic fatalities reported. Motorcyclist deaths represented 14% of all traffic fatalities in the country. In Massachusetts, motorcyclist fatalities were also 14% of all traffic deaths during the same period.

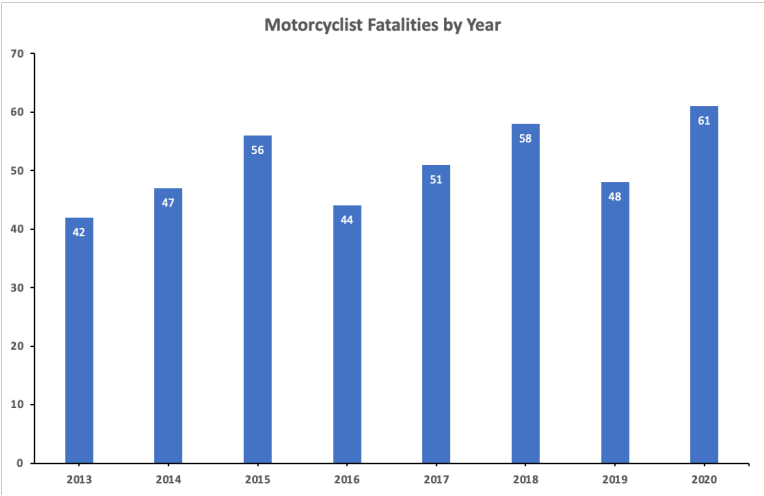
Since 1967, Massachusetts has required motorcycle riders to wear helmets, one of sixteen states across the country with an 'all riders' helmet law. Fatalities among unhelmeted riders accounted for only 5% of motorcyclist fatalities in Massachusetts from 2016 to 2020 compared to the U.S. rate of 39%.

Motorcyclist Killed in Fatal Crashes (2016 - 2020)							
U.S.	Helmeted	Not Helmeted	Unknown	Total Fatalities	Total Known Helmet Usage	% Helmeted	% No Helmet
Driver	14810	9135	746	24691	23945	62%	38%
Passenger	686	796	51	1533	1482	46%	54%
Total	15496	9931	797	26224	25427	61%	39%
Massachusetts	Helmeted	Not Helmeted	Unknown	Total Fatalities	Total Known Helmet Usage	% Helmeted	% No Helmet
Driver	207	11	24	242	218	95%	5%
Passenger	7	0	2	9	7	100%	0%
Total	214	11	26	251	225	95%	5%

Source: FARS

Within New England, New Hampshire is the only one with no helmet law of any kind. From 2016 to 2020, the state reported nearly 60% of its motorcycle fatalities with known helmet usage were unhelmeted. For Vermont, the only other New England state with an 'all riders' helmet law, the unhelmeted fatality percentage of fatalities with known usage was 11%.

Despite the low unhelmeted fatalities, motorcyclist fatalities in Massachusetts have been slowly creeping higher in recent years. Since 2015, the three-year average for fatalities has risen from 48 to 52. The highest number of fatalities was reported most recently – 61 deaths in 2020.

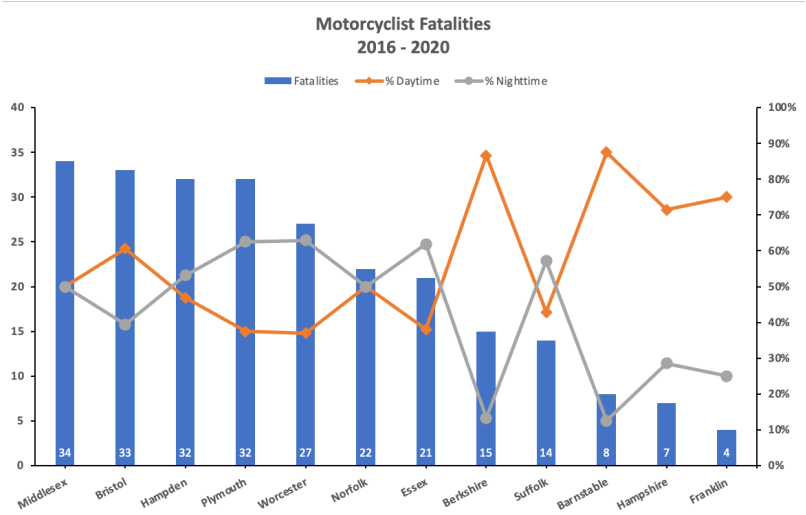


Source: FARS

The spike in fatalities during 2020 is of concern to OGR as this occurred during the height of the pandemic with the travel and social distancing restrictions in effect. This increase happened even with a 15% growth in the number of riders taking motorcycle safety classes from 2019 to 2020 as well as a 15% increase in the number of motorcycle safety classes being offered through the Registry of Motor Vehicles. To lower motorcyclist fatalities in FFY 2023, OGR will be working with RMV and other traffic safety partners to vigorously promote motorcycle safety messaging and information related to all available training opportunities for new and current riders.

Where are motorcyclist fatalities happening?

Over half of all motorcyclist fatalities (131 of 251) from 2016 to 2020 occurred across four counties: Bristol, Hampden, Middlesex, and Plymouth. By the time of day, motorcyclist fatalities were nearly equal between daytime (128 deaths) and nighttime (123 fatalities). Interestingly, counties with less population and more rural roadways (Berkshire, Barnstable, Hampshire, Franklin) had far more daytime fatalities than nighttime.



Source: FARS

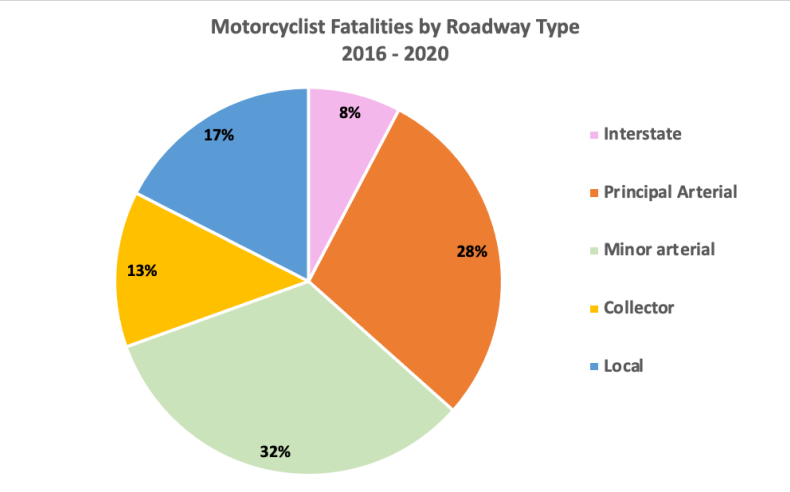
Springfield led all communities with 15 motorcyclist fatalities, followed by Boston with 14. The top five communities accounted for 21% of the 251 motorcyclist fatalities reported from 2016 to 2020.

Motorcyclist Fatalities (2016 - 2020)				
City	County	Daytime	Nighttime	Total
Springfield	Hampden	9	6	15
Boston	Suffolk	6	8	14
Fall River	Bristol	4	5	9
Worcester	Worcester	3	5	8
Middleboro	Plymouth	3	3	6

Source: FARS

By roadway type, most motorcyclist fatalities occurred along either principal or minor arterials. Minor arterials accounted for 81 fatalities, while principal arterials were the location for 71

fatalities. The two roadway types represented 60% of motorcyclist fatalities from 2016 to 2020. Surprisingly, given the high travel speeds inherent on interstates, only 8% of fatalities took place there.



Source: FARS

Along these roadways, four 'first harmful events' accounted for over 75% of motorcyclist fatalities – collision with a motor vehicle in transport, collision with a curb, collision with a guardrail, and collision with a tree. Collisions with a motor vehicle in transport accounted for over half of all motorcyclist fatalities.

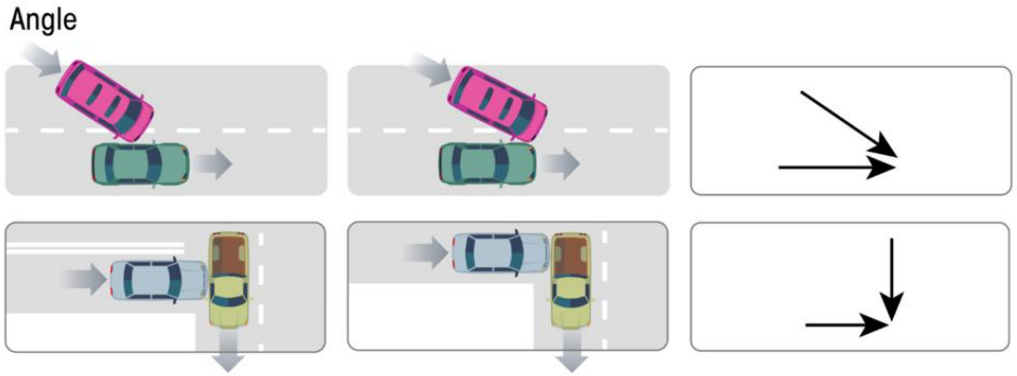
Motorcyclists were more likely to be in a collision with another vehicle in Barnstable and Hampshire; much less likely in Plymouth and Worcester. For FFY 2023, the Commonwealth should have more driver awareness messaging regarding motorcyclist awareness in the counties with high motor vehicle collision percentages.

First Harmful Event (Top Four) - 2016 to 2020						
County	Collision with Motor Vehicle	Collision with Curb	Collision with Guardrail	Collision with Tree	Total MC Fatalities	% Collision with MV
Barnstable	7	0	0	0	8	88%
Hampshire	5	0	0	1	7	71%
Norfolk	15	1	1	1	22	68%
Hampden	19	5	4	0	32	59%
Bristol	19	4	2	2	33	58%
Middlesex	19	1	1	3	34	56%
Berkshire	8	0	4	0	15	53%
Franklin	2	1	1	0	4	50%
Essex	10	3	2	1	21	48%
Plymouth	15	2	2	3	32	47%
Worcester	12	2	2	3	27	44%
Suffolk	6	1	0	0	14	43%
Total	**137**	**20**	**19**	**14**	**249**	**55%**

Source: FARS

Of the 137 motorcyclist fatalities involving a collision with a motor vehicle, the predominant manner of the collision was angle, with 61% of fatalities. The next highest form of collision, head-

on, accounted for 20% of deaths. According to the Massachusetts Law Enforcement Crash Report e-Manual, an angle collision is a crash where two motor vehicles impact at an angle. For example, the front of one motor vehicle impacts the side of another motor vehicle.



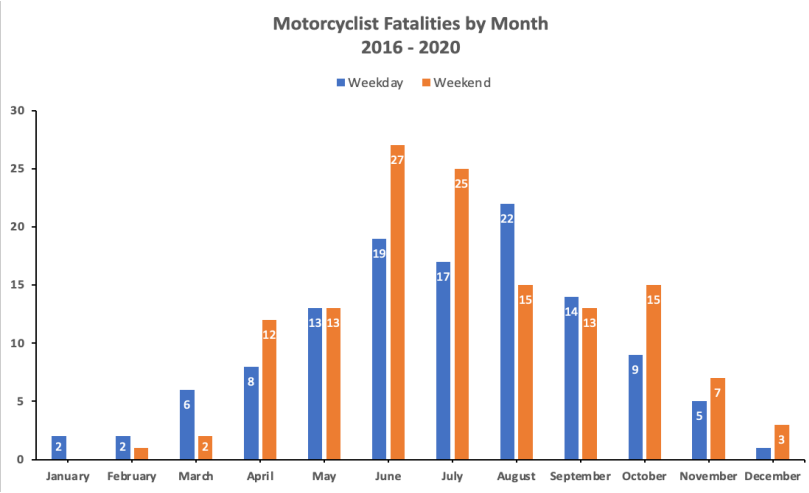
Worcester led all counties with 92% of its motorcyclist fatalities in a crash involving angle as manner of collision with a motor vehicle. Berkshire had the lowest percentage of angle collisions (38%) but the highest head-on collisions (50%).

	Manner Of Collision							
County	Rear-End	Head-On	Angle	Sideswipe	Unknown	Total	% Angle	% Head-on
Worcester	0	1	11	0	0	12	92%	8%
Hampshire	0	1	4	0	0	5	80%	20%
Bristol	2	2	14	0	1	19	74%	11%
Essex	1	1	7	1	0	10	70%	10%
Norfolk	3	2	9	1	0	15	60%	13%
Hampden	2	6	11	0	0	19	58%	32%
Middlesex	3	5	11	0	0	19	58%	26%
Barnstable	1	2	4	0	0	7	57%	29%
Franklin	0	0	1	1	0	2	50%	0%
Suffolk	2	0	3	1	0	6	50%	0%
Plymouth	3	3	6	2	1	15	40%	20%
Berkshire	1	4	3	0	0	8	38%	50%
Total	**18**	**27**	**84**	**6**	**2**	**137**	**61%**	**20%**

Source: FARS

When are motorcyclist fatalities occurring?

With no protection from the elements, motorcycling has typically been considered a warmer weather activity. From 2016 to 2020, the bulk of motorcyclist fatalities took place between April and October. This seven-month period accounted for 88% of all motorcyclist fatalities.



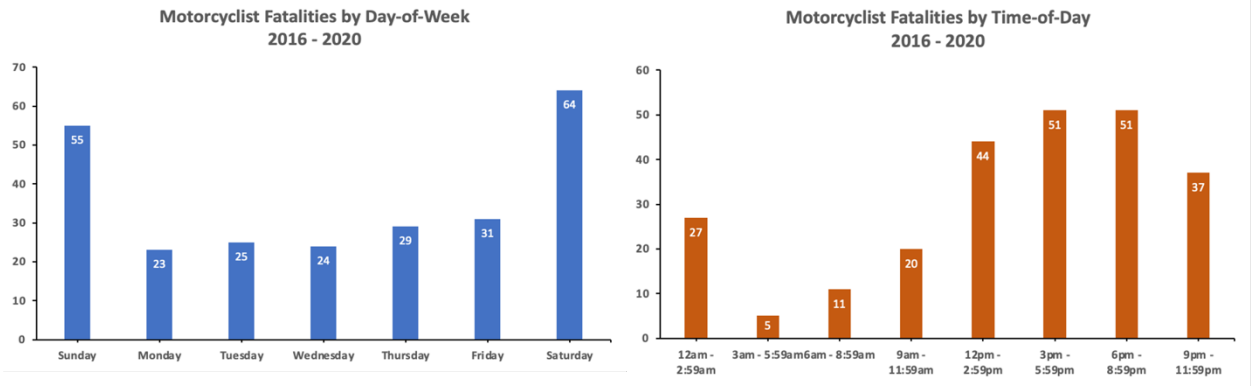
Source: FARS

More motorcyclist fatalities occurred during the weekend (133 fatalities) compared to weekdays (118 fatalities). With nearly 40% of all weekend motorcycle fatalities, the months of June and July were the most dangerous for riders hitting the road between Friday evening and Monday morning.

(*Note: Weekend period is Friday 6 pm to Monday 5:59 am; Weekday period is Monday 6 am to Friday 5:59 pm*)

By the day of the week, the stark difference in fatality counts between the weekend and weekday comes into clear view. The combined fatalities for Saturday and Sunday accounted for 47% of all motorcyclist fatalities. Motorcyclist fatalities start creeping upward on Thursday and Friday before surging over the weekend. Over 70% of motorcyclist deaths occur between Thursday and Sunday.

By the time of day, motorcyclist fatalities peak between 3 pm and 9 pm accounting for 41% of fatalities from 2016 to 2020. The number of deaths rise through the morning, peak over afternoon hours, and slowly decline through the evening and early morning hours. From noon to midnight, nearly three-quarters of all motorcyclist fatalities take place.



Source: FARS

Combining the day-of-week and time-of-day counts into a 'heat' table with darker colors representing higher fatality numbers, the worst period for motorcyclist fatalities is between noon

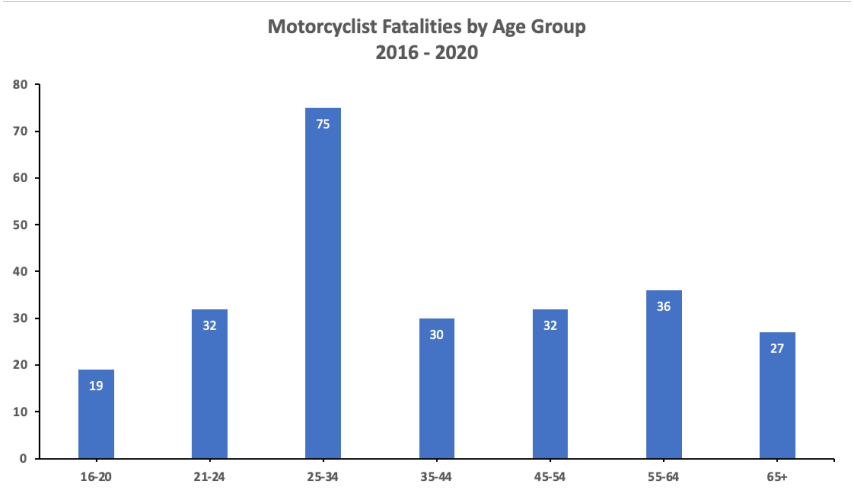
and 3 pm on Saturdays. The hours between 3 pm to 9 pm on Saturday come in a close second and solidifies Saturday afternoon/evening as the key time/day frame to target any motorcyclist-focused enforcement or messaging activity.

Hot/Cold Table of Motorcycle Fatalities (2016 - 2020)							
Time Frame	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12am - 2:59am							
3am - 5:59am							
6am - 8:59am							
9am - 11:59am							
12pm - 2:59pm							
3pm - 5:59pm							
6pm - 8:59pm							
9pm - 11:59pm							

Who are the motorcyclist fatalities?

Motorcyclist fatalities are overwhelmingly male, with 234 of the 251 deaths, and are usually the motorcycle's driver. Of 242 driver fatalities reported, only eight were female. All nine passengers killed were female.

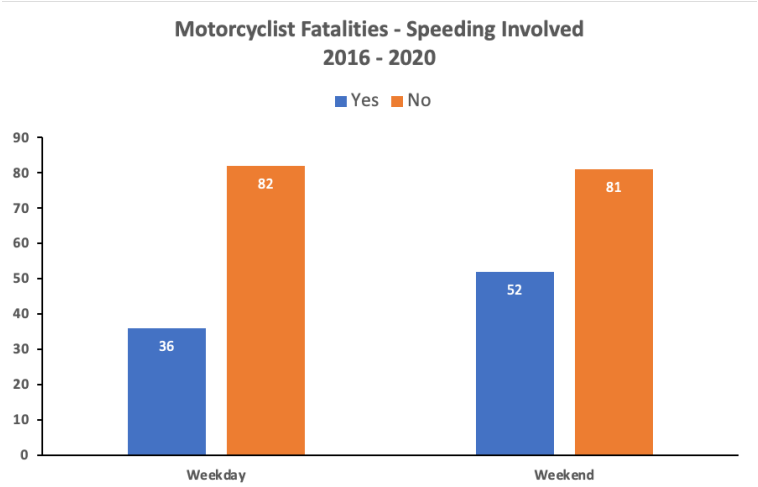
Motorcyclist riders aged 25 to 34 led all age groups with 30% of fatalities. Riders age 24 or younger accounted for over 20% of motorcyclist deaths. The combined total of under 35 deaths represented 50% of motorcyclist fatalities, clearly showing it is a fatality that attracts a younger crowd.



Source: FARS

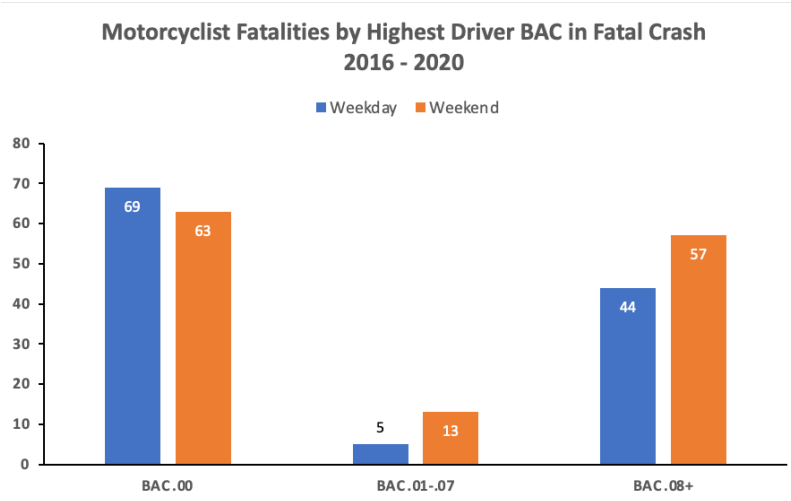
Other factors involved in motorcyclist fatalities:

Speeding was a factor in motorcyclist fatalities for 35% of the 251 deaths reported from 2016 to 2020. It was more frequent over the weekend, resulting in 39% of fatalities.



Source: FARS

Alcohol impairment, as measured by the highest driver BAC in the fatal crash, was a factor in 40% of the 251 motorcycle fatalities from 2016 to 2020. Weekend fatalities had a higher percentage of fatalities involving alcohol, 43% (57 of 133), compared to weekday fatalities, 37% (44 of 118).



Source: FARS

Some final data points on motorcyclist fatalities:

- Of the 101 alcohol-impaired driver involved fatalities, 38% involved a collision with another motor vehicle.
- Of the 101 alcohol-impaired driver involved fatalities, 42% involved speeding.
- Of the 42 alcohol-impaired driver involved fatalities with speeding, only two were not helmeted at the time of the crash.

For FFY 2023, OGR plans to focus on enforcement and messaging based upon key takeaways regarding motorcycle fatal crashes and fatalities.

- For motorcycle safety outreach and messaging, males under 35 are the target demographic.
- Any messaging or enforcement activity related to motorcyclist safety should occur during warmer months (April – October) and primarily over Saturday/Sunday between 12 pm – 8 pm.
- For messaging raising driver awareness about motorcycles sharing the roadway with them, the counties of Bristol, Middlesex, Hampden, and Plymouth - the top counties with motorcycle crashes involving another motor vehicle - would be the primary focus.
- Media messaging should incorporate safety information on the dangers of speeding and driving impaired as both factors occur often with motorcycle drivers in fatal crashes.

Performance Measures for Motorcyclists

Number of Motorcyclists Fatalities

FFY 2023 Target: 2% decline in the five-year average from 60 in 2021 to 58 by December 31, 2023

Unhelmeted Motorcyclist Fatalities

FFY 2023 Target: 33% decline in the five-year average from 3 in 2021 to 2 by December 31, 2023

Planned Activities for FFY 2023

Motorcycle Safety Media

ID: MC-23-01

Primary Countermeasure Strategy: Communication and Outreach

Description of Planned Activity:

Support two media campaigns in partnership with the RMV's Motorcycle Rider Education Program (MREP). The first will educate motorcyclists about rider safety and the dangers of speeding and impaired riding. This campaign will target, at a minimum, male riders between ages 25-34. The second campaign will message to drivers about sharing the road safely with motorcyclists and will be implemented from April to October when 89% of all motorcyclist fatalities occurred from 2016 to 2020. When using NHTSA funds, OGR will contract with an advertising agency to execute any paid media messaging. Crash and citation data will be used for planning enforcement activities and determining the target audiences and media channels used to reach those audiences. NHTSA's guidelines will be followed for messaging, demographics, best practices, and target groups for any paid media campaign.

Countermeasure Strategy Justification: *Communication and Outreach*

In 2020, motorcycle fatalities accounted for 17% of all motor vehicle-related deaths in Massachusetts, up from 14% in 2019. When using NHTSA funds, OGR will contract with a media vendor to develop and promote an awareness campaign about motorcycle safety. The media for

the campaign – online, radio, television, and outdoor billboards and electronic signs, will take place during the warmer months (April to October) to take advantage of the peak riding season in Massachusetts. This period of the year is when nearly 90% of motorcyclist fatalities occur. Any associated media buy(s) will target the counties of Bristol, Hampden, Middlesex and Plymouth.

Emphasis on younger motorcyclists (under 35 and male) will be a primary target for media messaging. By targeting these counties and demographics, OGR hopes to meet its stated FFY 2023 HSP motorcycle performance targets by December 31, 2023.

MC-23-01 Motorcycle Media Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405f 402	Motorcycle Safety	$331,328 (405f) $150,000 (402)	$0	$0

Program Management – Motorcycle Safety

ID: MC-23-02

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Provide sufficient staff to manage programming described in this plan and cover travel, professional development expenses, conference fees, and postage and office supplies. All funding is intended for supporting staff and will not be sub-awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the motorcycle safety program properly. Lack of oversight due to reduced or no funding could lead to increased motorcycle-related fatalities and injuries on the roadways of Massachusetts.

MC-23-02 Program Management – Motorcycle Safety Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Motorcycle Safety	$10,000	$0	$0

Program Area: Non-Motorists (Pedestrians and Bicyclists)

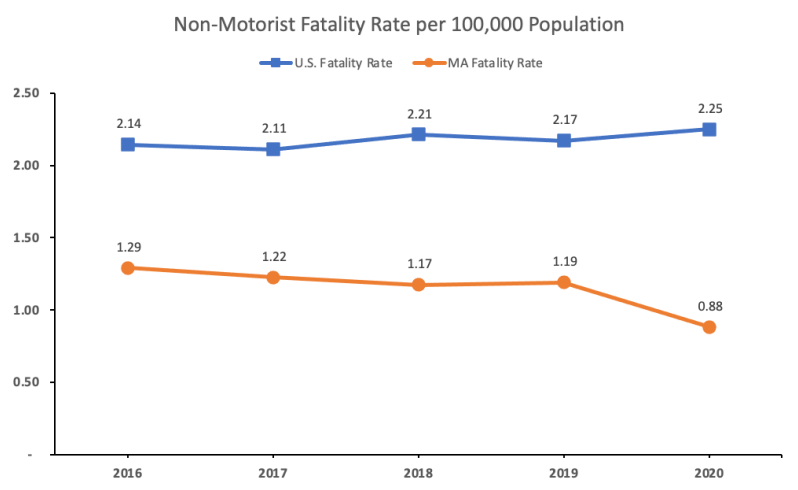
In the United States, non-motorist fatalities accounted for 19% of all traffic fatalities from 2016 to 2020. Pedestrian fatalities were 31,317 (16.7%), and bicyclist fatalities were 4,305 (2.3%) of the 187,293 traffic fatalities reported during these five years. Massachusetts had 397 non-motorists' fatalities out of 1,768 traffic fatalities in the same time frame - representing 22.5% of all fatalities. Pedestrian deaths were 356 (20%), and bicyclist deaths were 41 (2.3%).

From 2016 to 2020, the population in the United States and Massachusetts rose three percent. At the same time, non-motorist fatalities rose 8% across the country, while Massachusetts saw a decline of 30%.

	2016	2017	2018	2019	2020
U.S. Non-Motorist Fatalities	6929	6875	7242	7128	7454
MA Non-Motorist Fatalities	88	84	81	82	62

Source: FARS

Despite Massachusetts' non-motorist fatalities accounting for a more significant percentage of total traffic fatalities than the entire country (22.5% v 19%) from 2016 to 2020, its fatality rate per 100,000 population has been substantially lower each year. Massachusetts' fatality rate for non-motorists has declined 32% since 2016 compared to a five percent increase in the United States.



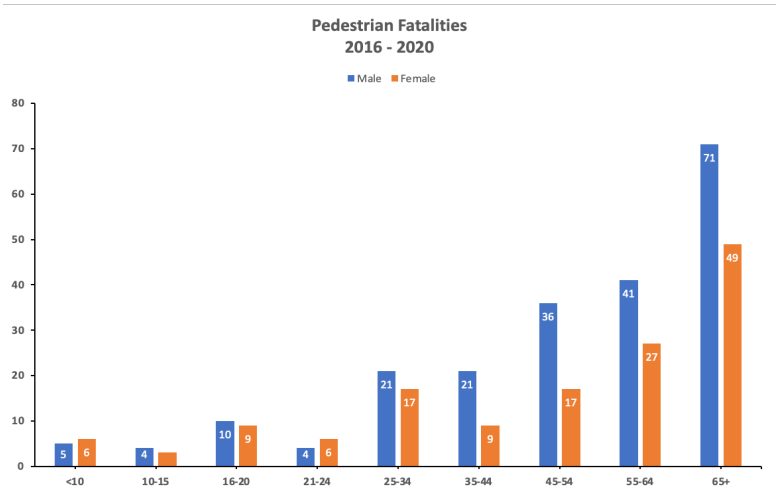
Source: FARS

While this shows Massachusetts has made the roadways safer for pedestrians and bicyclists over the past five years, there remains much work further to reduce the fatality rate in the coming years.

Who are the non-motorist fatalities in Massachusetts?

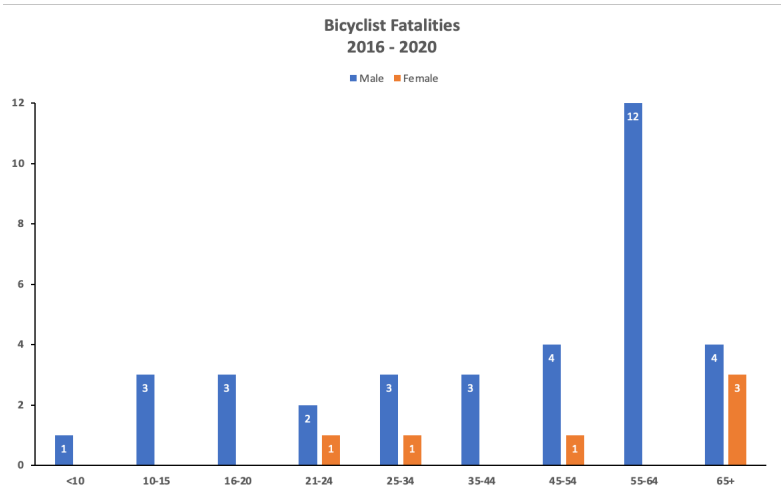
From 2016 to 2020, non-motorist fatalities were 90% pedestrian and 10% bicyclist, with those aged 65 or older accounting for nearly a third of all fatalities. Males represented 62% of non-motorist deaths. Surprisingly, younger non-motorists (under 16) fatalities were only 6% of all fatalities considering this age group cannot drive yet, so walking or biking should be a preferred option to get from point A to point B.

There were 356 pedestrian fatalities reported from 2016 to 2020, of which 60% were males. More than two-thirds of pedestrian fatalities were aged 45 or older. The number of male fatalities significantly outpaced female fatalities from age 35 onwards. Young pedestrians (under 16) accounted for only 5% of all pedestrian fatalities.



Source: FARS

With only 41 bicyclist fatalities from 2016 to 2020, recent Massachusetts bicycle safety efforts such as assigned bicyclist lanes and creating designated bicycle paths across various communities have made a positive impact. Overall, 85% of the 41 bicyclist fatalities were male, and nearly 60% of all bicyclist fatalities were aged 45 or older. Young bicyclists (under 16) accounted for 10% of fatalities.

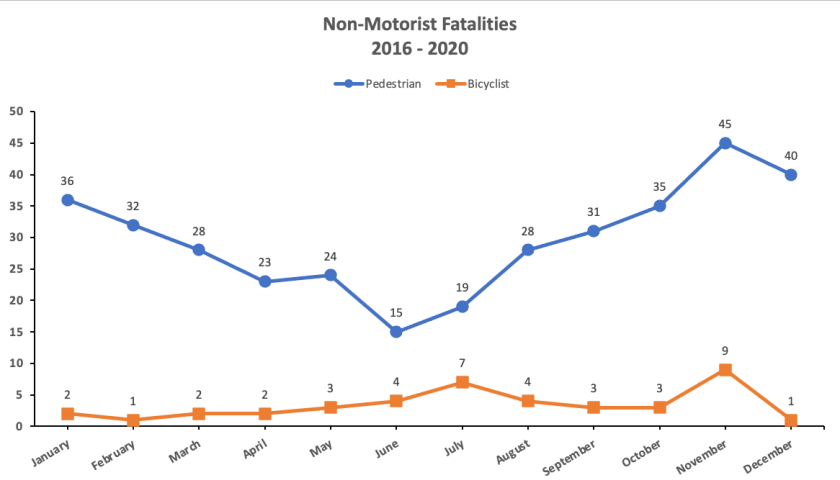


Source: FARS

For Massachusetts, the last five years (2016 – 2020) have shown non-motorist fatalities to be predominantly male and skew towards older adults, especially those 45 years or older.

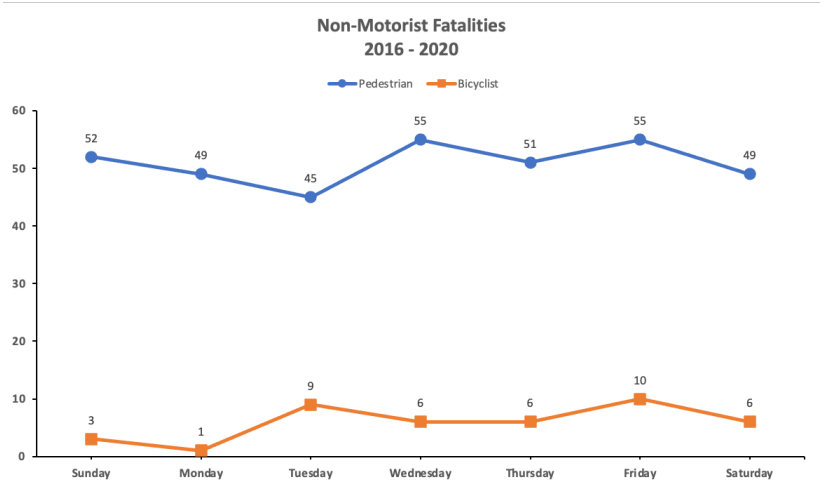
When are non-motorist fatalities occurring?

Overall, non-motorist fatalities were more frequent during colder months than warmer ones. From 2016 to 2020, the four highest months (October, November, December, and January) accounted for over 40% of all non-motorist fatalities. In contrast, the four lowest months for fatalities were April through July. These four months represented 24% of fatalities. The increase in deaths over the colder months is likely due to reduced daylight, making it hard for drivers of motor vehicles to see pedestrians or bicyclists along the roadways.



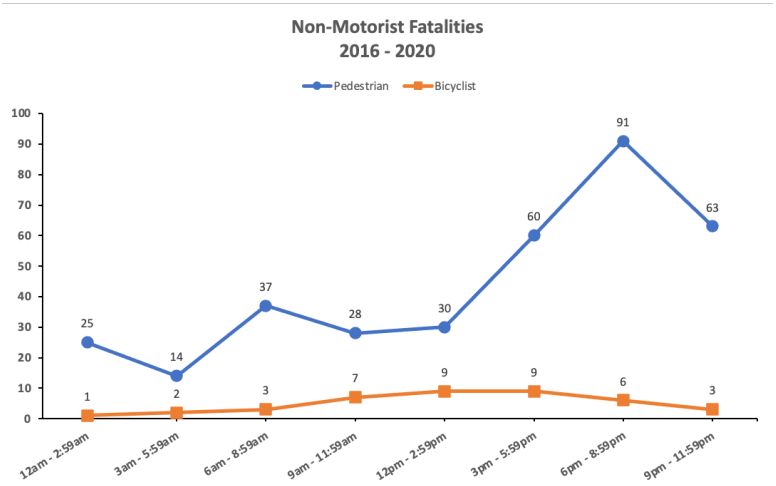
Source: FARS

By day of the week, non-motorist fatalities were fairly consistent, with Friday having the highest percentage (16%) of all fatalities. Fatalities trended upwards from Wednesday to Friday and then dropped somewhat over the weekend and further down Monday and Tuesday.



Source: FARS

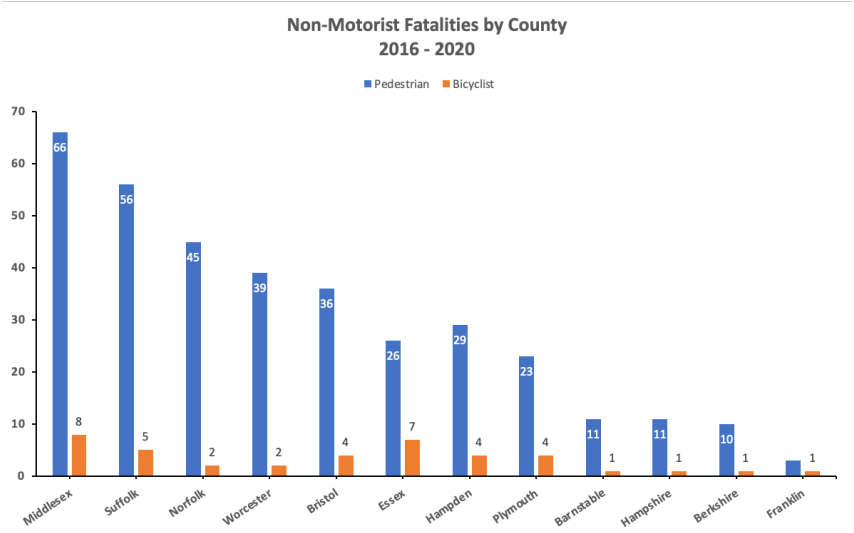
By time of day, nearly 60% of all non-motorist fatalities took place between 3 pm and 11:59 pm. Of these 232 fatalities, pedestrians accounted for 92%. Bicyclist fatalities tended to be more frequent between 9 am and 9 pm. During these 12 hours, over 75% of bicyclist fatalities occurred.



Source: FARS

Where are non-motorist fatalities taking place?

In terms of total non-motorist fatalities, Middlesex led all counties in Massachusetts with 74 fatalities from 2016 to 2020, representing 19% of all non-motorist fatalities. The top two counties – Middlesex and Suffolk – accounted for over a third of non-motorist fatalities.



Source: FARS

As a percentage of all traffic fatalities, Suffolk led all counties, with half of its traffic fatalities accounted for by non-motorists. On the other end of the spectrum, Franklin had only 13% of its fatalities attributed to non-motorist. It is not surprising having Suffolk, home of the state capital, is at the top of the list as it is a popular urban center for walking and riding, especially for people commuting from their residence to their place of work, as well as a hub for entertainment venues such as the TD Garden (Celtics, Bruins, concerts), Faneuil Hall, and Fenway Park.

County	Total Fatalities 2016-2020	Non-Motorist Fatalities 2016-2020	% Non-Motorist Fatalities
Worcester	249	41	16%
Middlesex	237	74	31%
Bristol	224	40	18%
Hampden	197	33	17%
Plymouth	177	27	15%
Norfolk	176	47	27%
Essex	172	33	19%
Suffolk	122	61	50%
Barnstable	67	12	18%
Berkshire	67	11	16%
Hampshire	41	12	29%
Franklin	32	4	13%

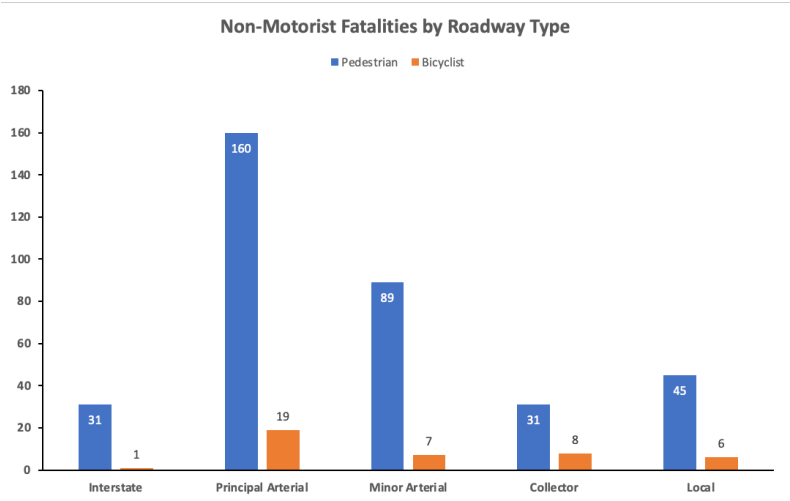
Source: FARS

Boston led all communities with 50 non-motorist fatalities from 2016 to 2020. The city's non-motorist fatalities accounted for nearly half of all traffic fatalities (105) reported. Of the top five communities for non-motorist fatalities, Quincy is the only one with over 50% of traffic fatalities attributed to pedestrians and bicyclists. The top five accounted for 28% of non-motorist fatalities across the state.

City	County	Pedestrian Fatalities	Bicyclist Fatalities	Total Non-Motorist Fatalities	Total Traffic Fatalities	% Non-Motorist Fatalities
Boston	Suffolk	45	5	50	105	48%
Springfield	Hampden	15	2	17	68	25%
Worcester	Worcester	17	0	17	44	39%
Brockton	Plymouth	12	3	15	40	38%
Quincy	Norfolk	14	0	14	27	52%

Source: FARS

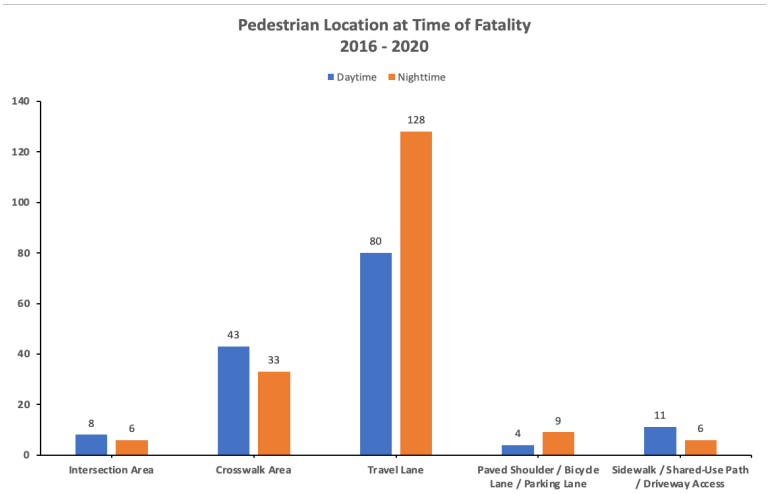
By roadway type, 45% of non-motorist fatalities occurred along principal arterials and 24% along minor arterials. Combined, arterials accounted for 69% of deaths. Local roads accounted for only 13% of fatalities.



Source: FARS

What were pedestrians doing prior to the fatal crash?

From 2016 to 2020, 60% of pedestrian fatalities occurred along the roadway or travel lane, with nearly two-thirds occurring at nighttime. The chart below shows the pedestrian locations that accounted for 95% of pedestrian locations at the time of their demise.



Source: FARS

Pedestrians walking along travel lanes may not have had the option of utilizing a sidewalk at the time of fatal injury. Unfortunately, the data for 2016 to 2020 revealed that in 208 fatalities where time-of-day is noted, 113 pedestrian deaths (54%) occurred along a roadway with a sidewalk.

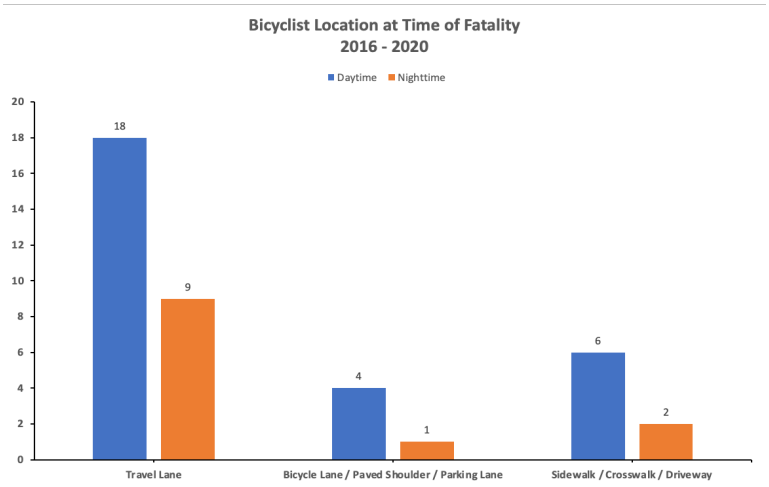
Sidewalk Present?	Daytime	Nighttime	Total
None Noted	29	64	93
Yes	49	64	113
Unknown	2	0	2
Total	**80**	**128**	**208**

Source: FARS

This begs the question, "Why are pedestrians choosing to walk in the roadway rather than on a sidewalk, if available?" While this is a subject for further analysis at another time, reasons could include the state of the sidewalk (broken up, no defining curb) or the size (real narrow, especially if more than one person is walking along) or could be under construction/access blocked.

What were bicyclists doing prior to the fatal crash?

Much like pedestrians, nearly 70% of bicyclist fatalities from 2016 to 2020 took place along the travel lane or roadway, which bicyclists and motorists have to share. Unlike pedestrians, bicyclists had a majority of their travel lane fatalities occur during daytime.



Source: FARS

A closer look at travel lane bicyclist fatalities revealed that 50% of deaths occurred at, or were related to an intersection. During the nighttime, non-intersection fatalities were more prevalent.

Bicyclist Crash Location	Daytime	Nighttime	Unknown	Total
At Intersection	8	2	1	11
Intersection-Related	2	1	0	3
Not At Intersection	8	6	0	14
Total	**18**	**9**	**1**	**28**

Source: FARS

As for helmet usage, there were only 12 fatalities in which the use of helmets was determined. Eight fatalities were wearing a helmet, and four were not. There were many instances where the helmet usage was not reported, and this is an issue OGR will need to take up with RMV to ensure police complete crash reports accurately.

What were drivers doing before a fatal crash involving a non-motorist?

For drivers, three primary factors could play in a non-motorist fatality: being distracted, speeding, or being under the influence of alcohol. Of the three, a driver with a BAC of .08 or higher was the most prevalent, with involvement in 16% of non-motorist fatalities. Distracted drivers were involved in 14% of fatalities, and only 7% of deaths were speeding.

Involving a Distracted Driver	Daytime	Nighttime	Unknown	Total
Yes	35	20	0	55
No	148	185	9	342
Total	183	205	9	397
Involving Speeding	**Daytime**	**Nighttime**	**Unknown**	**Total**
Yes	11	15	2	28
No	172	190	7	369
Total	183	205	9	397
Involving BAC .08 Driver	**Daytime**	**Nighttime**	**Unknown**	**Total**
Yes	20	41	1	62
No	163	164	8	335
Total	183	205	9	397

Source: FARS

Impaired drivers were twice as likely to be involved in a non-motorist fatality during nighttime than daytime. Driver distraction was more likely in the day.

For FFY 2023, OGR will incorporate the following key takeaways from the non-motorist fatality data presented in this section:

- Suffolk County, with half of its fatalities from 2016 to 2020 attributed to non-motorists, should be a key focus of messaging and enforcement activities. OGR will reach out to Boston Police about applying for grant funding to help reduce pedestrian and bicyclist fatalities in the capital. Boston accounted for 50 of 61 non-motorist fatalities in Suffolk County.
- Any media messaging should be taking two angles: (1) Appealing to drivers to be aware of non-motorists sharing the road, especially when approaching a crosswalk; and (2) Appealing to older non-motorists (55+) to be vigilant when using the roadways, especially when using a crosswalk.
- Encourage police to conduct any non-motorist safety enforcement campaign during cooler/colder months (October to March) and focus on a time frame between 3 pm and midnight.

Performance Measures for Pedestrian and Bicyclist Safety

Number of Pedestrian Fatalities

FFY 2023 Target: 3% decline in the five-year average from 71 in 2021 to 69 by December 31, 2023

Number of Bicyclist Fatalities

FFY 2023 Target: 10% decline in the five-year average from 7 in 2021 to 6 by December 31, 2023

Planned Activities for FFY 2023

Pedestrian and Bicyclist Safety Media

ID: PS-23-01

Primary Countermeasure Strategy: Communication and Outreach

Description of Planned Activity:

OGR and its partners such as DOT will work collaboratively to support a pedestrian and bicyclist safety media campaign. It will encourage all road users to share the road safely, educate the public on related traffic laws and safe practices, and promote the enforcement efforts of local police departments participating in the MRS Program. The campaign will occur throughout the year and will focus on adults age 45 or older within major cities with the highest pedestrian fatalities, including Boston, Worcester, Springfield, Quincy, and Brockton.

When using NHTSA funds, OGR will contract with an advertising agency to execute a paid media campaign. OGR will lead social media and press outreach efforts to garner earned media; both will be done in conjunction with paid media and the MRS enforcement periods. Crash, and citation data will be used for planning enforcement activities and determining the target audiences and media channels used to reach those audiences. OGR will consider NHTSA's paid media buy recommendations.

Countermeasure Strategy Justification: *Communication and Outreach*

Public outreach, whether by radio, television, outdoor displays, or social media, will spread the message to pay attention to the road ahead while behind the wheel. This will support messaging during Pedestrian Safety month (August) and Bicycle Safety month (May) and continue reminding Massachusetts drivers of the importance of being aware of their surroundings as pedestrians and bicyclists can appear suddenly without warning.

OGR is expanding pedestrian and bicyclist safety efforts by incorporating enforcement of laws protecting these vulnerable road users into the MRS Program. Media is used to augment enforcement during the MRS periods and promote pedestrian safety among adults aged 45+ in big cities across the Commonwealth. Media outreach through various mediums (social media, television, print, billboards, and radio) will reach a broad audience across all demographics.

PS-23-01 Pedestrian and Bicycle Safety Media Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405h	Non-Motorist Safety	$392,923	$0	$0

Program Management – Pedestrian and Bicyclist Safety

ID: PS-23-02

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Provide sufficient staff to manage programming described in this plan and cover travel, professional development expenses, conference fees, and postage and office supplies. All funding intended for supporting staff and will not be sub awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the pedestrian and bicyclist safety program properly. Lack of oversight due to reduced or no funding could lead to increased pedestrian and bicyclist fatalities and injuries on the roadways of Massachusetts.

PS-23-02 Program Management – Pedestrian and Bicyclists Safety Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Non-Motorist Safety	$12,000	$0	$0

Program Area: Distracted Driving

Distracted motor vehicle operation occurs when a driver fails to pay full attention to the task of driving or operating a motorcycle and instead diverts his/her attention from the roadway. The use of hand-held and built-in electronic devices such as phones, tablets, infotainment systems, laptop computers, and GPS continues to be a significant risk to the safety and health of all road users. Compounding this problem is the continued exponential growth and use of Smartphone apps.

The attributes NHTSA includes as part of 'driver distraction' in crash reporting:

- By other occupant
- By a moving object in the vehicle
- While talking or listening or manipulating a cell phone
- Adjusting audio or climate controls or other controls central to the vehicle
- While using or reaching for a device or object
- Distracted by an outside person, object, or event
- Eating or drinking
- Smoking-related
- Inattention/Carelessness
- Lost in thought/daydreaming

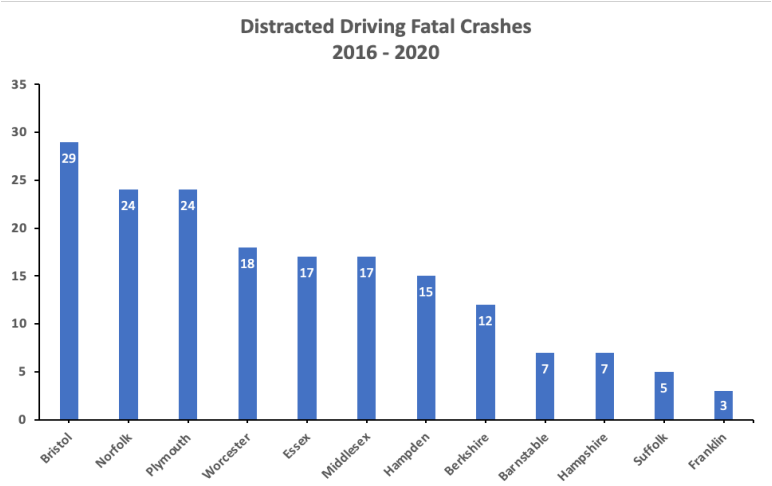
Despite the vast array of driver distraction options to report, underreporting is an ongoing issue. Unless a driver, passenger, or witness to the crash confirms the distracted behavior, law enforcement must get access to cell phone records to verify usage at the point of impact or before a collision occurred, and that does not always happen. The number of distracted drivers involved in fatal motor vehicle crashes will likely never be known.

According to research on distracted driving, simply taking one's eyes off the road for two seconds double the odds of being involved in a crash. Two seconds could be the difference between colliding with the car in front of the driver and braking to avoid a collision. In past years, Massachusetts has worked hard to educate drivers on the dangers of distracted driving through media messaging and enforcement campaigns by local and state police. The recent passage of a Hands-Free driving law, has helped increase awareness by issuing citations and subsequent fines for violating the law.

From 2016 to 2020, Massachusetts had 179 fatal crashes involving a distracted driver, resulting in 189 fatalities. Distracted driving-related fatalities accounted for 10.6% of all traffic fatalities during the five years. In contrast, from 2014 to 2018, 209 distracted driver-involved fatal crashes were led to 223 fatalities, which accounted for 12% of all fatalities across the state. The efforts by OGR and its partners and current legislation have made a positive impact on the level of distracted driving-involved fatal crashes on the roadways of Massachusetts.

Where are the fatal distracted driving crashes in Massachusetts?

From 2016 to 2020, over 40% of the 179 fatal crashes involving a distracted driver occurred in three counties – Bristol, Norfolk, and Plymouth. These three counties are all located south of Boston.



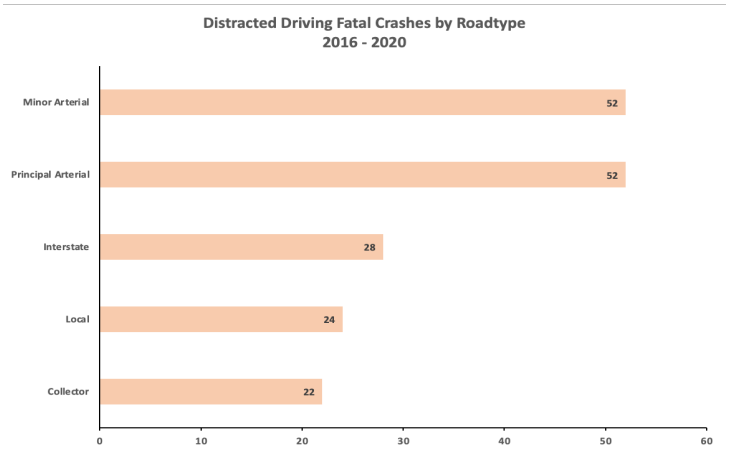
Source: FARS

Seven communities across Massachusetts accounted for 20% of the distracted driver fatal crashes reported from 2016 to 2020. Three of the seven are in Bristol County.

Top Cities for Distracted Driving Fatal Crashes 2016-2020		
City	**County**	**Fatal Crashes**
Fall River	Bristol	8
Brockton	Plymouth	5
Dartmouth	Bristol	5
Taunton	Bristol	5
Quincy	Norfolk	4
Methuen	Essex	4
Springfield	Hampden	4

Source: FARS

By roadway type, nearly 60% of fatal crashes involving a distracted driver occurred along either a principal arterial or minor arterial road. Interstate accounted for 16%; collector, 12%; and local roads, 13%.



Source: FARS

What type of collision was involved in a distracted driving fatal crash?

Of the 179 distracted driving fatal crashes reported from 2016 to 2020, 56% did not involve a collision with another motor vehicle. Angle collision was the most frequent manner of collision when another motor vehicle was involved in the fatal crash, followed by head-on and rear-end.

Roadway Type	Manner Of Collision						
	No Collision with Motor Vehicle	Rear-End	Head-On	Angle	Sideswipe	Unknown	Total
Principal Arterial	28	8	3	10	2	1	52
Minor Arterial	30	2	9	10	1	0	52
Interstate	13	9	3	1	2	0	28
Local	15	0	3	6	0	0	24
Collector	14	0	5	3	0	0	22
Unknown	1	0	0	0	0	0	1
Total	**101**	**19**	**23**	**30**	**5**	**1**	**179**

Source: FARS

Interestingly, the roadway with the lowest average speeds (local) had the highest percentage of non-motor vehicle collisions of the five roadway types. With nearly two-thirds of its driver distracted fatal crashes involving a single vehicle, local roads seem to lull drivers into a sense of false security because of low traffic volumes leading to more willingness to take their eyes off the roads.

For crashes not involving another motor vehicle, pedestrians were the 'first harmful event' (FHE) reported in 45% of fatal distracted driving crashes. Three-quarters of all non-motor vehicle crashes involved one of five 'first harmful events'(FHE): pedestrian, tree, curb, parked motor vehicle, or utility pole. Pedestrians accounted for 46% of the 101 non-motor vehicle collisions reported from 2016 to 2020. Trees were a distant second with only 11% of all non-motor vehicle collisions.

Top First Harmful Event in Non-MV Collisions (2016 - 2020)						
First Harmful Event (FHE)	Interstate	Principal Arterial	Minor Arterial	Collector	Local	Total
Pedestrian	1	19	16	6	4	46
Tree	3	3	0	0	5	11
Curb	1	1	4	2	1	9
Parked Motor Vehicle	0	2	2	0	1	5
Utility Pole	0	0	2	3	0	5

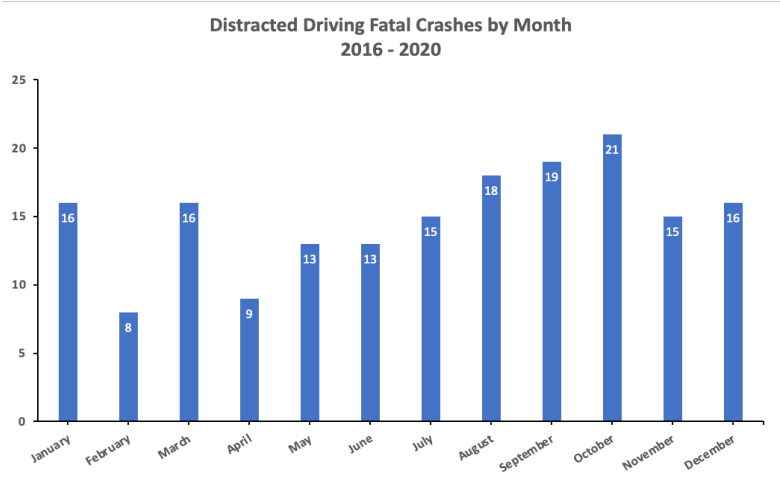
Source: FARS

Although not provided on the chart, bicyclists were the FHE in four crashes, bringing the total for non-motorists to 50, which was half of all non-motor vehicle collisions involving a distracted driver. This reinforces the earlier research conclusions about the dangers of even taking one's eyes off the road for two seconds. In those precious seconds, a pedestrian or bicyclist could enter the driver's range of vision and would not realize it until shifting their eyes back to the road ahead.

Principal and minor arterials accounted for a third of all distracted driving fatal crashes with pedestrians, begging the question: "Are arterial roadways built with consideration for non-motorist safety or simply aimed at moving more motor vehicles from Point A to Point B?" Are arterials providing adequate shoulder space for bicycles or frequent crosswalks with lights for pedestrians? Are sidewalks available for pedestrians along high volume arterials?

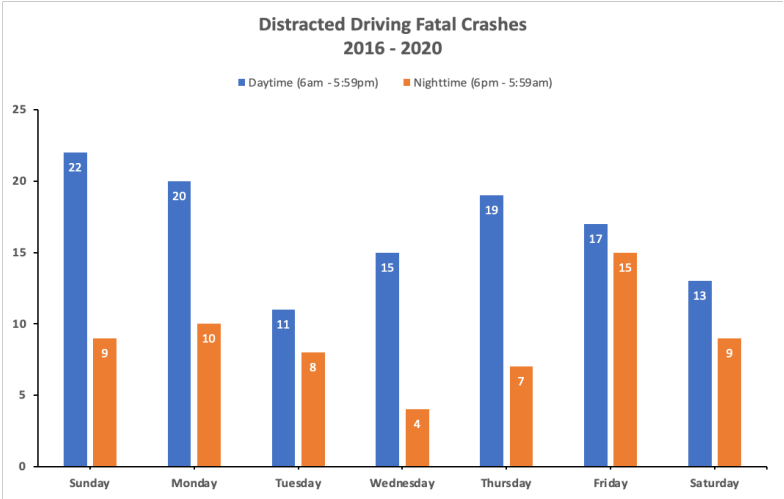
When do distracted driving fatal crashes occur?

From 2016 to 2020, nearly a third of all distracted driving fatal crashes took place from August to October. The average number of fatal crashes per month for 2016-2020 was 15. Eight of the twelve months had an average at or higher than 15, with six of those months happening in the latter part of the calendar year.



Source: FARS

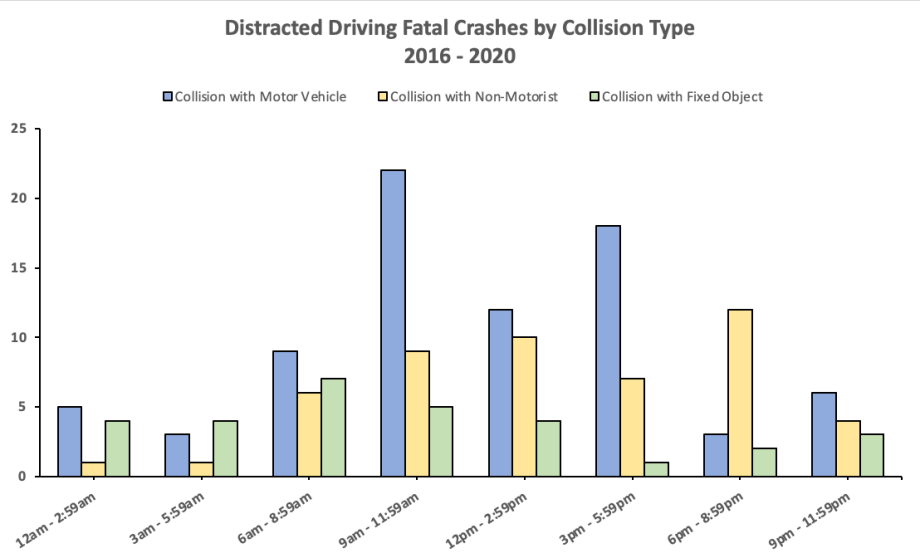
By day of week, the top three days – Friday, Sunday, and Monday – accounted for over half of all distracted driving fatal crashes. Mid-week (Tues/Weds) had the lowest count of deadly crashes. Factoring in time of day, Sunday had the most significant gap between the three days' daytime and nighttime, with 71% of fatal crashes occurring in the daytime. Overall, daytime distracted driving fatal crashes accounted for two-thirds of all distracted fatal crashes.



Source: FARS

Digging a little deeper into the time of day and comparing fatal crashes by collision type is quite revealing. Collisions with another motor vehicle have a high incidence range from 9 am to 6 pm, which would be prime driving hours for commuting and after-work activities. Collisions with non-

motorists are most frequent from 9 am to 9 pm, with fatalities highest from 6 pm to 8:59 pm. This three-hour period is commonly when many joggers, walkers, and bike riders utilize the roadways for post-workday activities. Lastly, collisions with fixed objects (curb, utility poles, trees, etc.) often happen from 12 am to 12 pm, with 6 am to 8:59 am as its high point.



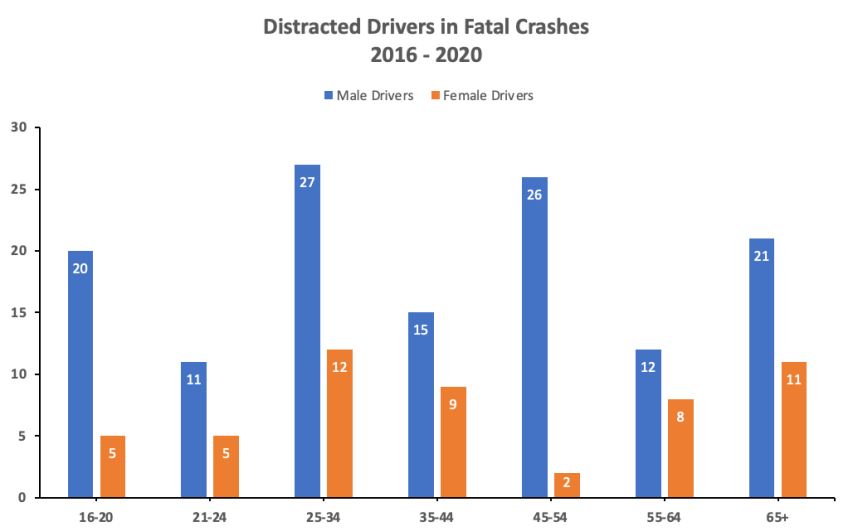
Source: FARS

Overall, distracted driving fatal crashes are far more frequent during daytime than nighttime, with most crashes taking place between 7 am and 6 pm. During this time, two-thirds of fatal distracted driving crashes occurred from 2016 to 2020.

Who are the drivers involved in the fatal crashes?

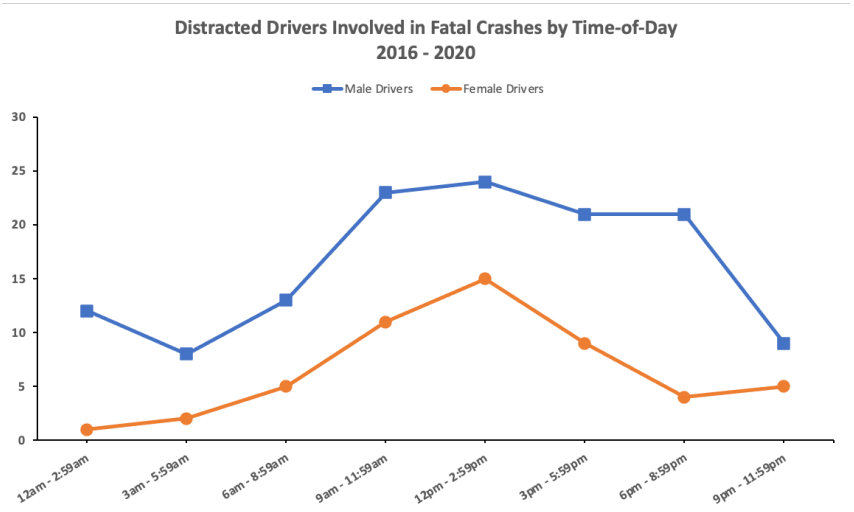
From 2016 to 2020, there were 184 drivers who were distracted at the time of impact and involved in a fatal crash. Male drivers accounted for 72% of distracted drivers; females, 28%. The 25 to 34 group was the most predominant by age, with over 20% of drivers involved. This age group was also the leading group for each sex as well. Young drivers, those under 21 years of age, accounted for 14%.

One thing that stands out is the tremendous disparity in the sex of drivers for two age groups: 45-54 and 16-20. For younger drivers, males accounted for 80% of drivers involved in a fatal crash compared to 20% for females. For ages 45-54, the difference is even more extreme. Male drivers were 93% of involved drivers for the age group; females were only 7% of drivers.



Source: FARS

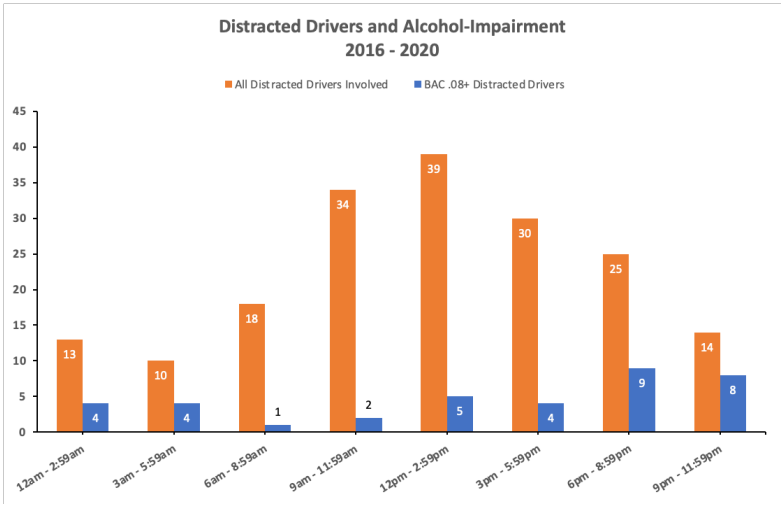
By time of day, both male and female drivers peaked over the three hours from 12 pm to 2:59 pm. Male drivers rose significantly after 8:59 am and remained high throughout the day until falling sharply after 9 pm. Female drivers were most involved in crashes between 9 am and 6 pm.



Source: FARS

For female drivers, 67% of drivers (35 of 52) were involved in fatal crashes between 9 am and 5:59 pm. Of male drivers, 68% (89 of 132) were involved in fatal crashes between 9 am to 8:59 pm.

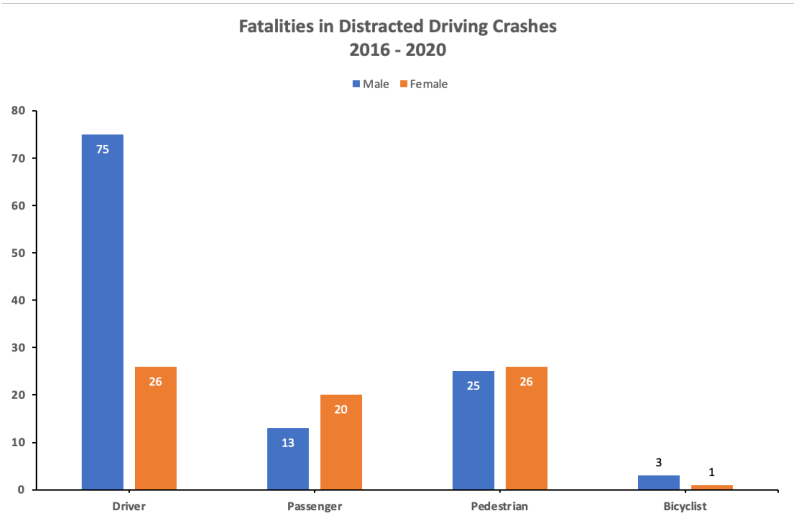
One last element of distracted drivers to examine is whether or not drinking was involved at the time of the crash. From 2016 to 2020, 37 distracted drivers were found with a BAC of .08 or higher, accounting for 20% of all distracted drivers involved in a fatal crash. Alcohol was a factor in driver behavior in 40% of collisions between 6 pm and 6 am. The worst time frame, 9 pm to 11:59 pm, had 8 of 14 distracted drivers in fatal crashes under the influence – representing nearly 60% of all drivers involved during those three hours.



Source: FARS

Who are the fatalities in distracted driving fatal crashes?

From 2016 to 2020, there were 189 fatalities reported in 179 fatal crashes involving a distracted driver. Drivers accounted for over half of all fatalities, followed by pedestrians with 27% of fatalities. Overall, males were the majority of fatalities, with 61% of all fatalities. While passengers were under 20% of fatalities, females were nearly two-thirds of passenger fatalities (20 of 33).

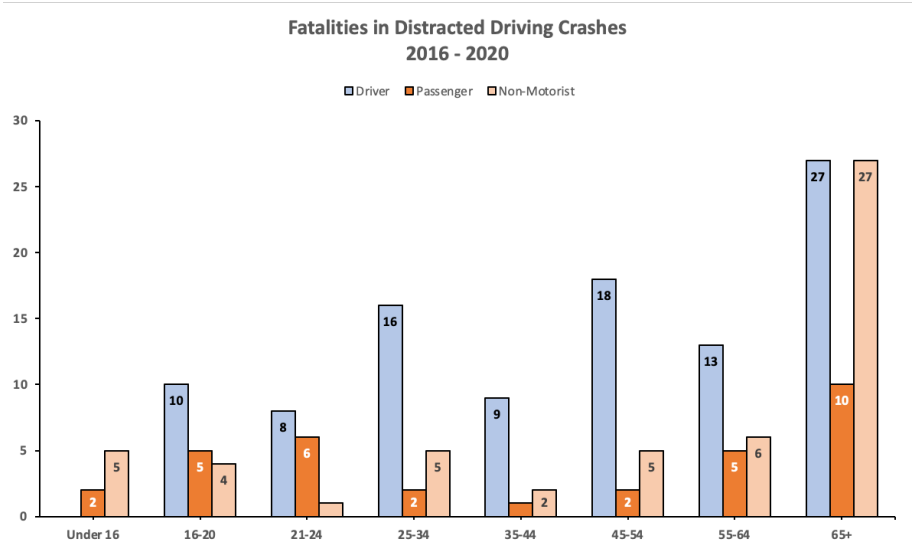


Source: FARS

Of the 101 driver fatalities, 74 were the distracted drivers in the crash accounting for 73% of drivers. Distracted drivers involved in a fatal crash were likely to die in four of every ten drivers involved (74 deaths, 184 distracted drivers).

The 65 and older age group had the most fatalities by age, ,with 34% of all fatalities in a crash involving a distracted driver. This age group had the highest count for all three person types: driver (27), passenger (10), and non-motorist (27). It is highly concerning that this age group accounted for nearly half of all non-motorist fatalities (27 of 55) from 2016 to 2020. Factors such as slower

cognitive response, poor hearing and eyesight, and slow motor functions may have led to fatalities among the 65 and older demographic.



Source: FARS

Determining if a driver was distracted at the time of the crash is extremely difficult for law enforcement investigators. Without eyewitnesses, a driver could easily lie about what they were doing before the crash to avoid any fines or penalties. A driver may honestly not recall what they were doing due to shock or a head injury. In general, the reported number of crashes involving distraction-affected drivers should be higher than it is.

Even though accurate reporting regarding distracted driving is complicated at this time, the trends revealed through the data analysis section will help guide OGR's focus of resources towards addressing these areas of concern. Critical takeaways for distraction-affected fatal crashes:

- High mortality rate of pedestrian fatalities age 65 or older in distracted driving crashes is cause for concern; local police should prioritize enforcement patrols near or at crosswalks in the vicinity of neighborhoods with a high percentage of older residents
- With distracted driving crashes more prevalent in the latter part of the calendar year, OGR should focus media messaging on distracted driving from July to December and target two demographics: drivers under 35 and non-motorists (pedestrians primarily) over age 55.
- OGR will seek to increase MRS applicants from top counties for distracted driving fatal crashes – Bristol, Norfolk, and Plymouth – to have more law enforcement agencies participating in April's Distracted Driving mobilization.
- Any overtime enforcement should be conducted during the daytime between 9 am and 6 pm, focusing on Sunday, Monday, and Friday.

Performance Measure for Distracted Driving

Number of Distraction-Affected Fatal Crashes

FFY 2023 Target: 5% decline in the five-year average from 30 in 2021 to 28 by December 31, 2023

Planned Activities for FFY 2023

Distracted Driving Media

ID: DD-23-01

Primary Countermeasure Strategy: Communication and Outreach

Description of Planned Activity:

OGR will support a statewide media campaign to address attentive driving efforts during the April 2023 Distracted Driving mobilization. OGR will collaborate with the Massachusetts Registry of Motor Vehicles and MassDOT to promote awareness of the Commonwealth's "Hands-Free Law" while also messaging about the dangers of distracted driving and the importance of alert driving. OGR will also consider national media buy recommendations when planning paid media. When using NHTSA funds, OGR will contract with an advertising agency to execute any paid distracted driving media campaigns. OGR will lead social media and press outreach efforts to garner earned media in conjunction with paid media and the enforcement mobilization. Crash and citation data will be used for planning enforcement activities and determining the target audiences and media channels used to reach those audiences.

Countermeasure Strategy Justification: *Communication and Outreach*

Public outreach, whether by radio, television, outdoor displays, or social media, will spread the message of paying attention to the road ahead while behind the wheel. This will support and enhance the importance of attentive driving during the planned distracted driving enforcement mobilization periods and remind drivers of the dangers and illegality of using cell phones while behind the wheel.

A FFY 2023 distracted driving media campaign will increase awareness of and compliance with the "Hands-Free Law." Media efforts will augment enforcement to maximize deterrence efforts. OGR will provide all law enforcement partners access to earned media resources, including a local press release template, social media graphics, and PSAs, to ensure a consistent and far-reaching message.

Distracted driving media campaigns can help lower the number of distraction-affected fatal crashes by encouraging drivers to be more aware of the dangers of taking their focus off the road. Media outreach through various mediums (social media, television, print, billboards, and radio) will reach a broad audience across all demographics.

DD-23-01 Distracted Driving Media Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Distracted Driving (Paid Advertising)	$319,174	$0	$0

MSP Distracted Driving Enforcement

ID: DD-23-02

Primary Countermeasure Strategy: High Visibility Cell phone/Text Messaging Enforcement

Description of Planned Activity:

The Massachusetts State Police (MSP) will conduct distracted driving law enforcement during April 2023. Enforcement will focus on violation of the hand-held electronic device law and on visible, cognitive, and audible distractions observed from the driver. MSP will use internal RAMS data to determine the appropriate days, times, and locations. The preliminary timeline for this project will be based on data and guidance from NHTSA and other distracted driving events. The April campaign will coincide with the distracted driving mobilization period conducted by local police departments participating in the Municipal Road Safety grant program.

Countermeasure Strategy Justification: High Visibility Cell phone/Text Messaging Enforcement

The objective of this countermeasure is to deter electronics use by increasing the perceived risk of a ticket. The high visibility approach combines law enforcement with paid and earned media campaigns supporting the enforcement activity. Enforcement officers will seek out drivers actively using or looking at their phones while driving, either through assigned patrols or having a 'spotter' reporting usage to an officer at a location further up the road. During FFY 2023, State Police will participate in a coordinated effort to make the general public aware of the dangers of distracted driving and increase the awareness of the risk of receiving a ticket for violating the law regarding electronic device usage while driving.

MSP employs several trusted high-visibility strategies such as spotter techniques, roving marked and unmarked cruisers, SUVs, and stationary vehicles. Distracted driving comes in many forms, but the direct result of that distraction may cause other offenses such as operating at inappropriate speeds, slow reaction time, and failure to maintain a vehicle within its proper lane. Therefore, these reckless and violating behaviors will receive special attention during the enforcement period.

High visibility enforcement activities are an effective countermeasure to increase awareness among drivers and passengers. OGR sees the combination of enforcement and education through

a targeted media campaign as the best use of funding to impact a high percentage of the driving population in Massachusetts.

DD-23-02 MSP Distracted Driving Enforcement Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Distracted Driving	$249,929	$0	$0

Program Management – Distracted Driving

ID: DD-23-03

Primary Countermeasure Strategy:

Highway Safety Office Program Management

Description of Planned Activity:

Provide sufficient staff to manage programming described in this plan and cover travel, professional development expenses, conference fees, and postage and office supplies. All funding intended for supporting staff and will not be sub awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the distracted driving safety program properly. Lack of oversight due to reduced or no funding could lead to increased distracted driving-related fatalities and injuries on the roadways of Massachusetts.

DD-23-03 Program Management – Distracted Driving Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Distracted Driving	$51,000	$0	$0

Program Area: Traffic Records

Traffic records data are vital to the analysis necessary for successful highway safety planning, programming, and evaluation. As do many of our partners, our agency uses traffic records data to identify problem areas, develop and implement appropriate programs, and evaluate the effectiveness of these programs.

Massachusetts operates a complete set of systems to collect, store, and manage traffic records information. The following agencies oversee these systems:

MassDOT/RMV

- Crash
- Driver history
- Vehicle registration systems

Merit Rating Board

- Operator driving history records consisting of at-fault crash claim records, comprehensive claim records, out-of-state incidents, as well as civil and criminal traffic citation information

Administrative Office of the Trial Court

- Adjudication information

MassDOT Office of Transportation Planning

- Road inventory file

Massachusetts Department of Public Health and the Center for Health Information and Analysis

- Emergency medical services (EMS)/injury surveillance-related information systems

As required by NHTSA's Section 405c grant program, Massachusetts has an active two-tiered Traffic Records Coordinating Committee (TRCC), supported by a Traffic Records Program Coordinator located within the Office of Grants and Research's Highway Safety Division. The Executive-level TRCC, chaired by the EOPSS Undersecretary of Forensic Science and Technology, was established through the coordinated efforts of its member organizations. The ETRCC is comprised of agency heads or senior personnel who set the vision and mission for a Working-level TRCC. The Working-level TRCC is the primary means by which communication is facilitated and perpetuated between the various users and collectors of data and owners and custodians of the data systems that make up the Commonwealth's traffic records systems. These TRCCs foster understanding among stakeholders and promote the use of safety data in identifying problems and developing effective countermeasures to improve highway safety. Both committees seek to improve the accessibility, accuracy, completeness, integration, timeliness, and uniformity

of Massachusetts's six traffic records systems: citation/adjudication, crash, driver, EMS/injury surveillance, roadway, and vehicle. This is accomplished by having the TRCCs ensure that all Section 405c funds received by Massachusetts are used for eligible, prioritized projects that will enhance these systems.

The FFY 2023 Section 405c application and FFY 2023 Strategic Plan for Traffic Records Improvements contain details on the current capabilities and challenges of the Massachusetts traffic records systems. These also describe the progress made to date on projects as well as work towards meeting the unmet recommendations in our 2019 Traffic Records Self-Assessment. The 405c application and the strategic plan were submitted in June 2022.

Although Traffic Records' performance targets are not among the core performance measures required by NHTSA, these targets (shown below) allow the TRCC to monitor progress made and provide key statistics for inclusion in the yearly Strategic Plan.

Performance Measures for Program Area

Performance Target #1 – Decrease the rate at which occupant coded fields (protective system, sex, transported by, injury severity, ejected) are left empty in police crash reports queried within MassDOT's crash data portal, IMPACT, by 20% (2.23 relative percentage points) from 11.15% (62369/621595) in January-June 2021 to 8.92% in April-June 2023.

Performance Target #2 – Between 7/1/22 and 6/30/23, DCJIS will install approximately 400 mobile printers for police vehicles and provide associated training for 36 departments new to MACCS.

Performance Target #3 – Increase the number of linked crash-acute hospital case mix records held by MA CRISS in which the injury severity field is assessed for accuracy, completeness, and uniformity from 0 as of 8/1/22 to 40,000 by 6/30/23.

Countermeasure Strategies to be Implemented

Traffic records-related planned activities aim to make core highway safety data accessible, accurate, timely, integrated, uniform, and complete. The countermeasures in NHTSA's *Countermeasures That Work, 9th Edition* do not apply to traffic records projects. Each planned activity provided below has an overarching goal of improving the quality of data that will be accessible by traffic safety agencies and stakeholders in Massachusetts and help improve resource management and fund allocation by accurately highlighting 'hot spots' and areas of concern promptly.

These are the six 'countermeasure' strategies that apply to traffic records projects for FFY 2023:

1. Improves timeliness of a core highway safety database
2. Improves integration between one or more core highway safety databases

3. Improves completeness of a core highway safety database
4. Improves accuracy of a core highway safety database
5. Improves accessibility of a core highway safety database
6. Improves uniformity of a core highway safety database

Each strategy is straightforward and self-explanatory. The TRCC will not approve any project that does not aim to improve a traffic records system in one of these ways.

Planned Activities for FFY 2023

Traffic Records Projects

ID: TR-23-01

Countermeasure Strategy: Improves completeness of a core highway safety database.

Description of Planned Activity:

One or more Availability of Grant Funding (AGF) processes with be conducted to provide 405c funding on a competitive basis to measurable projects to improve the accessibility, accuracy, completeness, integration, timeliness, and uniformity (a performance attribute) of one or more of the following six core traffic records systems: crash data system, roadway inventory file, vehicle registration, driver history, citation/adjudication, and EMS/injury surveillance system. Improving these systems will enhance the ability to identify priorities for a diverse range of local, state, and federal traffic safety programs impacting multiple areas of Massachusetts. Permissible projects could also evaluate the effectiveness of efforts to improve these six systems; link these systems with other state or federal data systems; and enhance the ability of stakeholders to observe and analyze local, state, and national trends in crash occurrences, and rates, outcomes, and circumstances.

Only units of state and local government or not-for-profit organizations with a public purpose would be eligible to apply for funding. All funded projects must help to meet at least one unmet recommendation from the Commonwealth's 2019 Traffic Records Self-Assessment. The project must also have a minimum of one measurable benchmark and one performance measure related to a performance attribute of one of the state's six systems. AGF responses will be reviewed and recommended by an OGR-selected AGF review committee and the Executive-level Traffic Records Coordinating Committee. Those projects approved for funding would then be submitted to NHTSA and EOPSS for review and approval.

Each resulting project will support one or more of the FFY 2023 performance targets listed above or a new one if necessary.

TR-23-01 Traffic Records Projects Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405c Data Program	Traffic Records Improvement	$2,620,245	$200,000	$0

Crash Report E-Manual: Law Enforcement Agency Targeted Resources to Improve Crash Data Quality

ID: TR-23-02

Countermeasure Strategy: Improves completeness of a core highway safety database.

Description of Planned Activity:

This project will enable the University of Massachusetts-Amherst's UMassSafe to further enhance the Massachusetts Law Enforcement Crash Report E-Manual at masscrashreportmanual.com. Building on previous 405c funded projects that built and expanded this tool, including one in FFY 22, this continuation project will provide greater content, features, and functionality, and further promote the use of the tool. This resource helps law enforcement, traffic safety professionals, researchers, and others working on traffic records across Massachusetts. Major enhancements include additional interactive overlays for law enforcement agencies (LEA); ratings/rankings of LEA crash reporting completeness; expansion/updates to the Traffic Records News Page.

This project will enhance the accessibility, accuracy, completeness, timeliness, and uniformity of the crash data system in Massachusetts. This project will help address the unmet data quality control program recommendation from the 2019 Massachusetts Traffic Records Self-Assessment.

This task will support performance target #1:

Improve the completeness of Massachusetts crash data by decreasing the rate in which occupant coded fields (protective system, sex, transported by, injury severity, ejected) are left empty in police crash reports queried within MassDOT's crash data portal, IMPACT, by 20% (2.23 relative percentage points) from 11.15% (62369/621595) in January-June 2021 to 8.92% in April-June 2023.

TR-23-02 Crash Report E-Manual Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405c Data Program	Traffic Records Systems	$149,362	$0	$0

Motor Vehicle Automated Citation and Crash System (MACCS)

ID: TR-23-03

Countermeasure Strategy: Improves integration between one or more core highway safety databases.

Description of Planned Activity:

This project continues efforts since 2017 to achieve statewide use of MACCS and build off an FFY 22 405c funded project towards that end by the Department of Criminal Justice Information Services (DCJIS). MACCS improves officer and motoring public safety on the roadways across the Commonwealth; streamlines data collection; enhances data quality; and increases reporting timeliness to local, state, and federal entities. DCJIS will acquire and install approximately 400 mobile printers for police vehicles and provide associated training to assist an estimated 36 departments waiting to join MACCS. Any printers not necessary for this effort will be allocated to existing departments using MACCS with interest in expanding their use of MACCS to more vehicles/officers. With input from law enforcement users, DCJIS will also make further software improvements to MACCS. All efforts will be coordinated on a day-to-day basis by DCJIS's state-funded MACCS Program Coordinator, assisted by other state-funded DCJIS staff. Before project expenses being incurred by DCJIS, OGR will submit to NHTSA for approval of any necessary associated request letter and Buy America Act statement.

This project will enhance the accuracy, completeness, integration, timeliness, and uniformity of the citation/adjudication and crash data system in Massachusetts. This project will help to improve the unmet data quality control program for the citation/adjudication and crash data systems from the 2019 Massachusetts Traffic Records Self-Assessment.

This task will support performance target #2:

Between 7/1/22 and 6/30/23, DCJIS will install approximately 400 mobile printers for police vehicles and provide associated training for an estimated 36 departments new to MACCS.

TR-23-03 MACCS Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Traffic Records Systems	$166,254	$0	$0

MA Crash-Related Injury Surveillance System (MA CRISS): Data Quality Assessment and Analysis

ID: TR-23-04

Countermeasure Strategy: Improves completeness of a core highway safety database.

Description of Planned Activity:

This project will continue work begun with FFY 22 405c funding by the MA Department of Public Health - Injury Surveillance Program's (MDPH-ISP) MA CRISS to integrate crash, acute hospital case mix, and driver license/history data for multiple years. With this grant funding, MDPH-ISP proposes assessing the accuracy, completeness, and uniformity of key variables and presenting the recommendations for potential data quality improvement actions and related projects to the Traffic Records Coordinating Committees. With the input of key traffic safety stakeholders, ISP will also conduct an analysis of integrated MA CRISS data to provide stakeholders with relevant findings that can guide traffic safety measures. ISP will link additional years of each data source to MA CRISS as they become available. Funding will also allow ISP to continue its work analyzing the ever-expanding MA CRISS data and providing related analytical support to traffic records stakeholders. This funding will partially support two positions to accomplish the projects: current MA CRISS epidemiologist Jeanne Hathaway; and a contract epidemiologist with advanced analytic, data linkage, and SAS programming skills.

This project will enhance the accuracy, completeness, integration, and uniformity of the crash, driver, and EMS/injury surveillance data systems in Massachusetts. This project will help address the unmet data quality control program recommendation from the 2019 Massachusetts Traffic Records Self-Assessment.

This task will support a new performance target #3:

Improve the accuracy, completeness, and uniformity of crash data by increasing the number of linked crash-acute hospital case mix records held by MA CRISS in which the injury severity field is assessed for accuracy, completeness, and uniformity from 0 as of 8/1/22 to 40,000 by 6/30/23.

TR-23-04 MA CRISS Data Quality Assessment and Analysis Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405c Data Program	405c Data Program	$97,048	$24,262	$0

Program Management – Traffic Records

ID: TR-23-05

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Provides enough staff to manage programming described in this plan and cover travel, professional development expenses, conference fees, and postage and office supplies. All funding is intended for supporting staff and will not be sub-awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the traffic records program properly. Lack of oversight due to reduced or no funding could lead to increased speed-related fatalities and injuries on the roadways of Massachusetts.

TR-23-05 Program Management – Traffic Records Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	402	Traffic Records Management	$162,398	$0	$0

Program Area: Police Traffic Services

The overarching goal of Police Traffic Services is to help reduce traffic fatalities across the state through specialized training, enforcement, education, and awareness programs. Better educated law enforcement members, prosecutors, and judiciary personnel will improve approaches to traffic safety. It will also help address legal issues such as the integration of testimony of Drug Recognition Experts into courtrooms and pulling over suspected OUI alcohol or drug-impaired drivers.

The FFY 2023 Planned Activities for Police Traffic Services encompass a well-rounded approach to reducing crashes. This plan includes specialized police training, supporting the activities of a Law Enforcement Liaison and a Traffic Safety Resource Prosecutor, training for prosecutors and judges, and local and state police High Visibility Enforcement.

Through these planned activities, OGR aims to lower traffic fatalities across the Commonwealth.

Performance Measure for Police Training Services

Number of Traffic Fatalities

FFY 2023 Target: 1.69% drop in the five-year average from 361 in 2021 to 355 by December 31, 2023.

Planned Activities for FFY 2023

MPTC – Municipal Police Specialized Training

ID: PT-23-01

Primary Countermeasure Strategy: Prosecutor/Law Enforcement Training

Description of Planned Activity:

OGR will provide funding to the MPTC to conduct various levels of motor vehicle crash investigation and speed measurement training for municipal police officers. Motor vehicle crash investigation training is intended to facilitate accurate and complete crash investigations and advance traffic safety. Accurate crash reporting can help determine whether a traffic law was violated, if the roadway needs evaluation and any other data that can help describe what occurred during the crash. Speed measurement, including radar and lidar classes, will focus on training recruits in academies around the state and classes geared towards boosting the instructor cadre to ensure sufficient coverage for future academies and courses.

Funding will cover instructor and Statewide Coordinator fees and the purchases of a v-sense reconstruction package, drag sled, training manuals, and office supplies.

Countermeasure Strategy Justification: *Prosecutor/Law Enforcement Training*

Funding for MPTC will allow the agency to offer numerous training classes for municipal police departments and increase the number of officers eligible to become instructors and maintain their certifications in the topics. Increased knowledge by law enforcement on these critical topics will lead to officers' improved and more focused policing, whether on patrol or assisting with a traffic checkpoint. Officers will be more effective and efficient when engaging in traffic checkpoints, enforcement patrols, and crash scene reporting with this knowledge.

This, in turn, will help improve the quality of crash reports submitted to the RMV and increase the safety of all roadway users.

PT-23-01 Municipal Police Specialized Training Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Police Traffic Services	$237,444	$0	$0

MDAA TSRP

ID: PT-23-02

Primary Countermeasure Strategy: Prosecutor/Law Enforcement Training

Description of Planned Activity:

Funds will be used to support the activities of the Massachusetts District Attorneys Association's (MDAA) Traffic Safety Resource Prosecutor (TSRP). These activities include conducting training and conferences, providing technical assistance, and creating and maintaining vehicular crime resources for prosecutors and law enforcement.

The vehicular crime database/resource is for prosecutors and law enforcement to utilize in a court of law. Providing a database of vehicular crimes will assist prosecutors in handling cases, especially those involving impaired driving.

The main objectives of this program are to:

1. Support the activities of a staff attorney dedicated to training, educating, and offering technical support to prosecutors throughout the state.

2. Strengthen and expand training for the prosecution regarding the investigation and prosecution of distracted or impaired driving and vehicular fatality cases.

3. Develop and update distracted or impaired driving training programs and resources.

Some of the planned training that the TSRP will provide:

Crash Reconstruction – Advanced
Trial Advocacy Training for New Prosecutors
Prosecuting OUI Cases
Courtroom Success for Prosecutors & Police in Crash Reconstruction
Drug Impairment for Prosecutors

Additional responsibilities dealing with impaired driving and motor vehicle-related issues include:

Train the Commonwealth's prosecutors and, subject to resources, other professionals in the criminal justice field, including law enforcement officers and the judiciary

Electronically alert prosecutors, law enforcement, and other criminal justice professionals to changes in statutory and case law regarding motor vehicle crimes.

Maintain a database of vehicular crimes-related expert witness transcripts

Create and maintain the vehicular crimes pages and resources on MDAA's Mass.gov public website and its secure intranet site, MDAA.net

Continue to update the Massachusetts Prosecutors OUI Manual

Monitor legislation in conjunction with MDAA's Special Counsel

Provide technical assistance to prosecutors and, subject to resources, law enforcement officers, the judiciary, and other state and local agencies

Act as a liaison between prosecutors and other stakeholder entities, including the Executive Office of Public Safety and Security, Mothers Against Drunk Driving, the Massachusetts Judicial Institute, the MPTC, and the Administrative Office of the Trial Court

Countermeasure Strategy Justification: *Prosecutor/Law Enforcement Training*

Although there is not a specific countermeasure strategy for a TSRPs defined in the "Countermeasures That Work, Tenth Edition 2020 (CTW)" publication, NHTSA recognized the value of these positions and developed a manual to assist new TSRPs (NHTSA, 2007b). This publication is referenced in the CWT.

A TSRP conducts training and provides technical assistance to prosecutors and law enforcement personnel to utilize in a court of law. The TSRP helps increase stakeholders' knowledge in the adjudication of impaired driving cases, whether at a roadside stop or in court.

PT-23-02 MDAA TSRP Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405d 402	Police Traffic Services	$100,000 (405d) $96,797 (402)	$41,355	$0

MSP Law Enforcement Liaison (LEL)

ID: PT-23-03

Primary Countermeasure Strategy: Prosecutor/Law Enforcement Training

Description of Planned Activity:

Provide funds to MSP for training and travel-related expenses for the LEL to attend meetings, training, and national conferences in support of significant traffic safety issues, including but not limited to impaired and distracted driving, occupant protection, and drug recognition expert training.

National conferences will include the Lifesavers Conference in April 2023 and the International Association of Chiefs of Police (IACP) Conference in August 2023. Funding will also be used to cover the cost of local travel for the LEL to attend meetings and training with local law enforcement and other traffic safety stakeholders.

Countermeasure Strategy Justification: *Prosecutor/Law Enforcement Training*

Funding for the MSP LEL position will help OGR better communicate with MSP and develop a shared vision of improving traffic safety. Furthermore, the MSP LEL will mitigate the flow of information between the six MSP Troops and OGR, which will lead to a more detailed understanding of the traffic safety issues occurring on the state highways and roads of the Commonwealth. Funding will also lead to enhanced communications between LELs, MSP, and OGR, resulting in greater cooperation and collaboration in improving traffic safety across Massachusetts.

PT-23-03 MSP LEL Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Police Traffic Services	$8,000	$0	$0

MSP Young Drivers Education

ID: PT-23-04

Primary Countermeasure Strategy: Youth Programs

Description of Planned Activity:

Funds will be provided to the MSP to educate young drivers and the general public on the importance of wearing a seatbelt and the dangers of impaired driving. MSP will conduct up to 20 demonstrations of the Rollover Simulator and SIDNE vehicle (Simulated Impaired Driving Experience) at high schools, on weekends, and at highly populated events in Massachusetts. Accompanying the rollover vehicle demonstrations and when feasible, the MSP will provide a hands-on interactive display that will highlight the dangers of impaired driving.

A portion of the funds will allow overtime for personnel to finalize audits and make revisions to the SCARR program, conduct instructional, educational presentations, and purchase a low-speed seatbelt decline sled demonstrating and emphasizing the importance of seatbelt usage. MSP will also contract out with Thinkfast Interactive to host interactive educational programming and with the B.R.A.K.E.S. School to host educational workshops for teens and their parents.

Countermeasure Strategy Justification: *Youth Programs*

Massachusetts ranks as one of the lowest in the United States for seatbelt usage. Conducting information and education sessions at schools has been shown to increase seat belt use and an overall understanding of the importance of restraints while driving or riding in a vehicle.

Conducting information/education sessions at schools has been shown to increase seat belt use and an overall understanding of the importance of restraints while driving or riding in a vehicle.

For FFY 2023, funding is being provided to MSP to travel to various high schools across the state to conduct vehicle simulations to educate the public, or more specifically, young drivers (those under 20 years of age), on the necessity of wearing a seat belt anytime one is in a moving vehicle.

PT-23-04 MSP Young Drivers Education Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Police Traffic Services	$139,484	$0	$0

Municipal Road Safety (MRS)

ID: PT-23-05

Primary Countermeasure Strategy: Communication and Outreach / High-Visibility Enforcement

Description of Planned Activity:

The MRS program will offer up to five elements: Traffic Enforcement, Traffic Equipment, Pedestrian/Bicyclist Enforcement, Pedestrian/Bicyclist Safety Items, and Non-Enforcement Traffic Safety Activities. The overtime high visibility enforcement (HVE) will be conducted during months, times, day of week and locations that data show to be the most critical for crash and pedestrian fatalities and injuries. The HVE will also be conducted during and in support of the FFY 2023 national safety driving campaigns. Equipment and safety items will be used to augment enforcement and program efforts, and, the non-enforcement activities will allow departments to provide trainings and other presentations geared toward traffic safety.

Examples of training planned include, but are not limited to ARIDE, SFST, LiDAR certification and CPS training. Examples of non-enforcement activities include, but are not limited to Fatal Vision presentations at colleges and high schools, discussions with high school students regarding the dangers of speeding and driving under the influence, and for younger demographics, bike rodeos, bike and pedestrian safety presentations at local elementary schools.

The MRS grant program will allow all 351 local police departments to apply for funding. This grant is competitive and the application review process will not occur until after July 1, 2022. Once completed, OGR will provide NHTSA with a list of subrecipients and the amount awarded to each one. Based on prior year participation in OGR enforcement programs, OGR expects well over 130 municipalities to participate during FFY 2023.

Countermeasure Strategy Justification: Communication and Outreach / High-Visibility Enforcement

High-visibility enforcement (HVE) campaigns have been shown in the past to be effective in helping deter dangerous driving behaviors such as impaired driving, distracted driving, speeding, and not wearing seat belts while riding in a motor vehicle. Similarly, HVE serves as a deterrent in pedestrian and bicyclist safety enforcement efforts. Using the latest data, OGR will work with selected subrecipients to target high incidence periods of fatal crashes involving dangerous driving behaviors as well as place focus on pedestrian problem areas. Through this data-driven targeted approach, high-visibility enforcement will lead to improved driving, pedestrian, and bicyclist safety behaviors in 2023.

PT-23-05 Municipal Road Safety Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405h 402	Police Traffic Services	$1,000,000 $6,129,810	$0	$6,129,810

MSP Sustained Traffic Enforcement Program (STEP)

ID: PT-23-06

Primary Countermeasure Strategy: Sustained Enforcement

Description of Planned Activity:

In support of impaired driving and occupant protection laws, this task will provide funds to the MSP to deploy sustained and selective "zero tolerance" traffic enforcement overtime patrols through the STEP program. The activity will occur on the day/time/location identified using MSP RAMS data. This activity will augment local police department efforts within the same general location whenever reasonably possible. Along with local police departments, MSP STEP enforcement patrols will provide maximum visibility for deterrent purposes and saturate target areas taking immediate and appropriate action on all motor vehicle violations. The funding for the MSP allows for increased enforcement throughout the year instead of only during mobilization periods. This funding will help MSP conduct overtime enforcement focusing on impaired driving, seat belt usage, child passenger safety infractions, speed, and aggressive and dangerous driving. The result will improve traffic safety for both motorists and non-motorists along the roadways of Massachusetts.

Countermeasure Strategy Justification: *Sustained Enforcement*

Impaired drivers are detected and arrested through regular traffic enforcement and crash investigations and special impaired driving checkpoints and saturation patrols. Another enforcement tactic is to integrate impaired driving enforcement into special enforcement activities focused on other offenses such as speeding or lack of seat belt usage. In Massachusetts, the Sustained Traffic Enforcement Program (STEP) provides MSP with the funding to take this integrated enforcement approach to traffic safety. This funding will help MSP tackle high crash and fatality rates for both motorists and non-motorists across the Commonwealth.

The funding for MSP STEP allows for increased enforcement throughout the year instead of only during mobilization periods. This funding will help MSP to conduct overtime enforcement to improve traffic safety for both motorists and non-motorists along the roadways of Massachusetts.

With MSP conducting increased enforcement throughout FFY 2023, not only will the number of impaired driving fatalities drop but also the number of unrestrained fatalities and speed-related fatalities. Data has shown that impaired drivers and passengers are most likely not to wear a seat belt and be involved in a speed-related fatal crash.

PT-23-06 MSP STEP Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	402	Police Training Services	$65,000	$0	$0

Program Management – Police Traffic Services

ID: PT-23-07

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, and postage and office supplies. All funding is intended for supporting staff and will not be sub awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the police training services program properly. Lack of oversight due to reduced or no funding could lead to increased fatalities and injuries on the roadways of Massachusetts.

PT-23-07 Program Management – Police Traffic Services Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Police Training Services	$372,700	$0	$0

Program Area: Community Traffic Safety Projects

The overarching goal of Community Traffic Safety Projects is to help reduce traffic fatalities across the state through education and awareness programs launched by selected subrecipients. Competitive grant awards will support non-profit organizations and local governmental agencies in implementing community-based traffic safety programs tailored to the geographical area and the high-risk demographics of their respective town, community, or region.

By empowering communities to craft customized, data-driven, educational and awareness efforts, OGR sees an opportunity to introduce new and more effective behavioral changes to road users. These changes may lead to a reduction in crashes, fatalities, and injuries in Massachusetts.

Performance Measure for Community Traffic Safety Projects

Number of Traffic Fatalities

FFY 2023 Target: 1.69% drop in the five-year average from 361 in 2021 to 355 by December 31, 2023

Planned Activities for FFY 2023

Community Traffic Safety Projects for Underserved Communities

ID: CP-23-01

Primary Countermeasure Strategy: Communication and Outreach

Description of Planned Activity:

This program will be made available to municipalities that have yet to participate in the Municipal Road Safety (MRS) program since its inception three years ago to support nonenforcement educational community-based traffic safety activities in underserved communities. Through a competitive grant process, funds will be awarded to nonparticipating MRS communities for data-driven traffic safety awareness projects. Municipalities will be asked to focus on impaired driving, occupant protection, distracted driving, pedestrian and bicyclist safety, and local transportation safety equity.

Once the competitive process is completed, an amendment will be submitted to NHTSA, which will provide specifics on each selected municipality, their proposed project, and respective award amount. Projects will generally be focused on raising awareness of road safety, training, and changing social attitudes and behaviors to reduce vehicle crashes and their associated fatalities, serious injuries, and economic losses on the state's roadways.

OGR will encourage applicants to develop partnerships with local traffic safety nonprofit organizations and stakeholders to achieve project goals. The intent of the new project is to offer

seed funding for nonenforcement type activities to attract municipalities that haven't solicited previous funding from the MRS program. This project will be structured to offer great flexibility for first time participants in hopes of encouraging participation in future MRS funding opportunities. The Commonwealth is made up of 351 cities and towns. The Massachusetts State Police provide full law enforcement services to 11 communities and partial law enforcement support to an additional 50. There is over 100 cities and towns that are responsible for their own law enforcement support yet aren't seeking NHTSA MRS funding from OGR. It is our goal to attract these underserved communities and populations with this opportunity.

Countermeasure Strategy Justification: *Communication and Outreach*

This planned activity aims to lower traffic fatalities across the Commonwealth and support OGR's impaired driving, occupant protection, and non-motorist safety goals. The educational and awareness projects developed by selected subrecipients will complement statewide media safety campaigns and supplement local law enforcement efforts.

CP-23-01 Community-Based Traffic Safety Projects Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	405h 402	Traffic Safety Projects for Underserved Communities	$500,000 (405h) $2,000,000 (402)	$0	$2,000,000

Program Management – Community Traffic Safety Projects

ID: CP-23-02

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Provide sufficient staff to manage programming described in this plan and cover travel, professional development expenses, conference fees, and postage and office supplies. All funding is intended for supporting staff and will not be sub awarded.

Countermeasure Strategy Justification: *Program Management*

The day-to-day operation of OGR requires funding to allow staff to oversee the community traffic safety program properly. Lack of oversight due to reduced or no funding could lead to increased fatalities and injuries on the roadways of Massachusetts.

CP-23-02 Program Management – Community Traffic Safety Projects Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Community Traffic Safety Projects	$30,000	$0	$0

Program Area: Planning & Administration

This section covers the Planning and Administrative programming required to faithfully execute the planned activities detailed in the FFY 2023 Highway Safety Plan. Funding is needed to support OGR staff for day-to-day operations and comply with all Federal and State regulations.

Administration of Statewide Traffic Safety Programs

ID: PA-23-01

Primary Countermeasure Strategy: Highway Safety Office Program Management

Description of Planned Activity:

Funding to plan, implement, monitor, and evaluate programs and projects detailed in the FFY 2023 Highway Safety Plan (HSP), produce the FFY 2022 Annual Report (AR), and produce the FFY 2024 HSP. Provide required staff salaries, professional development, travel, office space, equipment, materials, and fiscal support. Funds will support SHSO staff and will not be sub awarded.

It must be noted that the significant increase in P&A costs from the previous fiscal year is due to increased personnel and expected increase in operational costs NHTSA funds must share in the overall agency expenses that includes agency leadership, fiscal staff and operational costs such as leasing of space, which is expected to rise when OGR relocates to new space by December 2022. Increasing the P&A for FFY 2023 will ensure costs are charged appropriately and fairly amongst each division.

Project staff: Kevin Stanton, Jeff Larason, Corine Pryme, Diane Perrier, Denise Brown, Susan Burgess-Chin, and Annette Powell

PA-23-01 Administration of Traffic Safety Programs Planned Funding

Source Fiscal Year	Funding Source ID	Eligible Use of Funds	Estimated Funding Amount	Match Amount	Local Benefit
2023	NHTSA 402	Planning and Administration	$2,279,225	$2,279,225	$0

Appendix A: Financial Summary of Planned Activities

Project #	Planned Activity	HSP Budget	Funding Source	Local Benefit	Match
AL-23-01	Impaired Driving Media	$6,566,545	405d		
AL-23-02	MSP Sobriety Checkpoints and Saturation Patrols	$1,431,992	405d		$7,277,564
AL-23-03	MA Trial Court - Judicial Training and Awareness	$18,135	405d		$4,550
AL-23-04	MSP-Office of Alcohol Testing (OAT) Breath Test Operator (BTO) Training	$169,222	405d		
AL-23-05	MSP Drug Recognition Expert (DRE) Training	$150,222	405d		
AL-23-06	MPTC Alcohol Impaired Driving Enforcement Training	$77,321	405d		
AL-23-07	MPTC Drug Evaluation and Classification (DEC) Training	$748,859	405d		
AL-23-08	ABCC Underage Drinking Compliance Checks Program	$159,562	405d		$39,891
AL-23-09	ABCC Enforcement Program to Prevent the Sale of Alcohol to Intoxicated Persons	$163,863	405d		$40,966
AL-23-10	Program Management - Impaired Driving	$170,000	402		
OP-23-01	Occupant Protection Media	$1,183,342	405b		
OP-23-02	MSP Occupant Protection Enforcement	$250,000	405b		
OP-23-03	Car Seat Distribution Program	$500,000	402	$500,000	
OP-23-04	Child Passenger Safety Training Program	$425,000	405b		
OP-23-05	Statewide Safety Belt Observation Survey	$150,000	405b		
OP-23-06	MSP Child Passenger Safety (CPS) Program	$96,516	405b		
OP-23-07	Program Management- Occupant Protection	$176,300	402		
SC-23-01	Speed and Aggressive Driving Media	$562,340	402		
SC-23-02	MSP Speed Enforcement	$837,660	402		
SC-23-03	Program Management- Speed Management	$60,000	402		
MC-23-01	Motorcycle Safety Media	$331,328	405f		
MC-23-01	Motorcycle Safety Media	$150,000	402		
MC-23-02	Program Management- Motorcycle Safety	$10,000	402		
PS-23-01	Pedestrian and Bicyclist Safety Media	$392,923	405h		
PS-23-02	Program Management- Pedestrian & Bicyclist Safety	$12,000	402		
DD-23-01	Distracted Driving Media	$319,174	402		
DD-23-02	MSP Distracted Driving Enforcement	$249,929	402		
DD-23-03	Program Management-Distracted Driving	$51,000	402		
TR-23-01	Traffic Records Projects	$2,620,245	405c		$200,000
TR-23-02	Crash Report E-Manual: Law Enforcement Agency Targeted Resources to Improve Crash Data Quality	$149,362	405c		
TR-23-03	Motor Vehicle Automated Citation and Crash System (MACCS)	$166,254	405c		
TR-23-04	MA Crash-Related Injury Surveillance System (MA CRISS): Data Quality Assessment and Analysis	$97,048	405c		$24,262
TR-23-05	Program Management- Traffic Records	$162,398	402		
PT-23-01	Municipal Police Specialized Training	$237,444	402		
PT-23-02	MDAA - Traffic Safety Resource Prosecutor	$96,797	402		$41,355
PT-23-02	MDAA - Traffic Safety Resource Prosecutor	$100,000	405d		
PT-23-03	MSP Law Enforcement Liaison (LEL)	$8,000	402		
PT-23-04	MSP Young Drivers Education	$139,484	402		
PT-23-05	Municipal Road Safety	$1,000,000	405h		
PT-23-05	Municipal Road Safety	$6,129,810	402	$6,129,810	
PT-23-06	MSP Sustained Traffic Enforcement Program (STEP)	$65,000	402		
PT-23-07	Program Management- Police Traffic Services	$372,700	402		
CP-23-01	Community Traffic Safety Projects	$2,000,000	402	$2,000,000	
CP-23-01	Community Traffic Safety Projects	$500,000	405h		
CP-23-02	Program Management- Community Traffic Safety Projects	$30,000	402		
PA-23-01	Administration of Statewide Traffic Safety Programs	$2,279,225	402		$2,279,225
		$31,567,000		**$8,629,810**	**$9,907,812**

Appendix B: TSEP & HVE Strategies

Evidence-based Traffic Safety Enforcement Program (TSEP)

Listed below are planned activities for FFY 2023 that, based on data analysis of fatal crashes, fatalities, and injuries from 2016 to 2020, constitute the TSEP for Massachusetts. Each planned activity involves enforcement of varying degrees by local and state police agencies with the overarching goal of making the roadways safer for all road users, whether a driver, passenger, motorcyclist, pedestrian, or bicyclist.

Unique Identifier	Planned Activity Name
AL-23-02	MSP Sobriety Checkpoints and Saturation Patrols
DD-23-02	MSP Distracted Driving Enforcement
OP-23-02	MSP CIOT Enforcement
PT-23-05	Municipal Road Safety
PT-23-06	MSP Sustained Traffic Enforcement Program (STEP)
SC-23-02	MSP Speed Enforcement

The identification of traffic safety issues for the FFY 2023 HSP was made using data analysis of numerous traffic safety data elements including, but not limited to, causes, counties, time of day, month, day of the week, road type, gender, and age group. Each of the planned enforcement activities for FFY 2023 will aim to reduce fatal crashes and fatalities for Massachusetts's traffic safety performance measures.

From 2016 to 2020, Massachusetts reported 1,768 motor vehicle-related fatalities and 13,212 incapacitating injuries along its roadways. This total marks a 0.1% decline in deaths from 1,769 from 2015 to 2019; and a 4.1% drop in serious injuries from 13,783 from 2015 to 2019.

Of the 14 counties in Massachusetts, eight accounted for 88% of all fatalities and serious injuries reported during the five years of 2016 – 2020. These counties – Bristol, Essex, Hampden, Middlesex, Norfolk, Plymouth, Suffolk, and Worcester, will be a focus for OGR for FFY 2023. These eight counties represent 91% of the population in Massachusetts.

To increase the impact of enforcement, OGR will recommend that subrecipients consider the following general and mobilization-specific observations from the analysis of crash data from 2016 to 2020:

- Warmer months (April-September) have more fatalities than colder months (October-March).
    - One exception: if doing enforcement related to pedestrian safety, overtime activity should occur over colder months as two-thirds of all pedestrian fatalities happened from October to March.

- Half of all traffic fatalities occurred over the three days of Friday, Saturday, and Sunday. Monday had the lowest fatality count of any day of the week.
    - 53% of all unrestrained fatalities took place Friday – Sunday
    - 60% of alcohol-impaired fatalities took place Friday – Sunday
    - 51% of speed-related fatalities took place Friday – Sunday
    - 60% of motorcycle fatalities took place Friday – Sunday
    - 44% of non-motorist fatalities took place Friday – Sunday
    - 47% of distracted driving fatal crashes took place Friday - Sunday

- Traffic fatalities were most frequent between 12 pm and 9 pm and least frequent between 3 am, and 9 am.
    - Unrestrained fatalities were highest in late evening/early morning (9 pm to 2:59 am)
    - Alcohol-impaired fatal crashes tended to be far more frequent in evening/early morning hours (6 pm to 2:59 am)
    - Speed-related fatal crashes were highest during evening/early morning hours (6 pm to 2:59 am)
    - Distracted driving fatal crashes were more often during afternoon/early evening hours (12 pm to 5:59 pm)
    - Motorcycle fatalities were highest in the afternoon/early evening (12 pm to 8:59 pm)
    - Non-motorist fatalities were most frequent in late afternoon/evening (3 pm to 11:59 pm)
    - Distracted driving fatal crashes occurred more often late morning/afternoon (9 am to 6 pm)

- Males accounted for 70% of traffic fatalities; most were drivers of either a motor vehicle or motorcycle.

- The 25 – 34 age group accounted for 19% of traffic fatalities. Fatalities among those aged 16 to 34 represented well over a third of all fatalities.

- One exception: older adults (age 65+) accounted for 32% of non-motorist fatalities. Fatalities among the under 35 crowd were only 14% of non-motorist deaths.

These fatalities and fatal crashes trends will be used to help law enforcement plan patrols. The most frequent traffic fatality is a male driver under 35 years of age. Males dominated all types of deaths: unrestrained (72% of fatalities), alcohol-impaired (74% of fatalities), speeding (76% of fatalities), motorcyclist (93% of fatalities), and non-motorists (62% of fatalities).

For each planned enforcement activity, as shown above, prioritizing overtime patrols during key periods of high fatality incidences will maximize the impact on the community and make the roadways safer.

These general and Planned Activity-specific suggestions for scheduling enforcement patrols will help subrecipients better target driver, passenger, and non-motorist behaviors. OGR is confident that when local police apply such guidelines to plan enforcement activity, it will have a net positive effect on the safety of all roadway users.

Deployment of Resources

When determining key areas to fund for FFY 2023, OGR utilizes data and stakeholder feedback to ascertain the types and severity of the problems and identify where the most significant impacts in terms of reducing crashes, injuries, and fatalities are can be made. With numerous charts, graphs, and tables provided in the FFY 2023 HSP, all Planned Activities are supported by data and justify the need for funding to reduce traffic crashes, fatalities, injuries, and economic loss across the Commonwealth.

Subrecipients are primarily selected based on competitive grant applications that are data-driven and evidence-based. Each applicant is encouraged to provide data on crashes and fatalities within their respective community or region.

The Commonwealth of Massachusetts evidence-based traffic safety enforcement methodology will also include enforcement of traffic laws on impaired driving, seat belt usage, and pedestrian safety, coupled with numerous sobriety checkpoints held throughout the state. The combined efforts among local and state law enforcement agencies and non-profit organizations will help promote traffic safety and increase public awareness of pedestrians on the roads and of the risk involved with impaired driving and failure to wear a seat belt.

Based on the data contained in this section, OGR will make recommendations to local police departments and MSP so they can make more informed decisions about where and when to deploy resources.

Effectiveness Monitoring

A two-pronged approach to oversight will be employed to ensure that projects remain focused on their respective objectives – namely, decreasing traffic safety-related crashes, fatalities, and

injuries. First, OGR will conduct ongoing post-award assessments of each grant-funded agency. The assessments will ensure all grant requirements are met and fund expenditures are accounted for properly.

OGR will make site visits to keep enforcement agencies from lagging in their efforts and ensure subrecipients are making efforts to reach the desired objectives of their grant-funded project. These visits will not only be to ensure subrecipients are adhering to the requirement of the grants but also to identify towns or cities that experience increases in crash fatalities to see what the subrecipient is (or is not doing) to address the problem.

During FFY 2023, program coordinators plan to conduct numerous site visits, whether in-person or virtually, across the Commonwealth. All visits will be documented through a standard reporting form, and copies of the completed reports will be placed in the grant files.

Furthermore, all grant-funded agencies will be required to regularly report covering activities, hours of enforcement, and expenditures. HSD aggregates data collected from these monthly reports to detect any positive or negative trends. If necessary, changes to the program may be made.

Based on the reporting data collected from grant-funded agencies, HSD reserves the right to reduce or stop funding if a subrecipient has shown a failure to adhere to the requirements of the grant.

High-visibility enforcement (HVE) strategies

As required by NHTSA, Massachusetts is providing information regarding planned High-Visibility Enforcement activities for FFY 2023.

Planned HVE strategies to support national mobilizations:

Countermeasure Strategy
High Visibility Enforcement
Short-term, High Visibility Seat Belt Law Enforcement

HVE planned activities that demonstrate the State's support and participation in the National HVE mobilizations to reduce alcohol-impaired and drug-impaired operation of motor vehicles, distracted driving, and increase the use of seat belts by occupants of motor vehicles:

Unique Identifier	Planned Activity Name
AL-23-02	MSP Sobriety Checkpoints & Saturation Patrols
DD-23-02	MSP Distracted Driving Enforcement
PT-23-05	Municipal Road Safety (MRS)
SC-23-02	MSP Speed Enforcement
OP-23-02	MSP Occupant Protection CIOT Enforcement

Appendix C: Equity in Traffic Safety

OGR is committed to advancing racial equity and support for underserved communities through the distribution of our NHTSA grant funds. The term "underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in or benefit from aspects of economic, social, and civic life. Although people of all ages, races, ethnicities, and income levels are impacted by traffic fatalities, some communities or neighborhoods and the people residing within those areas may suffer more than others.

OGR has a history of collaborating with state agencies, municipalities, community stakeholders and private organizations and business when addressing traffic safety here in the Commonwealth. Every 5 years, OGR staff are active participants in the development of the Commonwealth's HSP submitted by our Massachusetts Department of Transportation. Over 50 organizations and community stakeholders take part in the development of their plan. OGR also relies on input from a wide range of statewide and community partners for our plan, including state and local police and non-profit organizations focused on road safety. These stakeholders provided valuable information and suggested solutions to traffic safety issues facing their communities and constituencies.

For our recently posted, FFY23 MRS competitive opportunity, OGR has embedded language to address this. Applicants, if not doing so already, were advised to explore existing or new data sources to better identify and understand the disproportionate impact of traffic crashes within one's jurisdictions. Applicants were told to involve community stakeholders when developing their grant application and be open to new ideas to address issues of inequity in road safety. OGR believes the non-enforcement element of the MRS grant program provides an excellent opportunity to develop projects that address these inequities. It is our belief that these opportunities will lead municipalities to create innovative, stronger partnerships within the communities they serve and steer funds to support activities and services that address identified needs in underserved communities/neighborhoods. Such actions should not only increase the quality of the applications received but reduce crash-related fatalities and injuries and reduce disparities within traffic safety, advancing diversity, equity, and inclusion across our highway safety programs.

Lastly, OGR is also looking at alternative ways to reach the underserved communities who aren't participating in our annual MRS grant opportunity. One concept being contemplated is for OGR to offer seed funding for nonenforcement traffic safety activities to attract municipalities that haven't solicited previous funding from the MRS program. This project will be structured to offer great flexibility for first time participants in hopes of encouraging participation in future MRS funding opportunities. The Commonwealth is made up of 351 cities and towns. The Massachusetts State Police provide full law enforcement services to 11 communities and partial law enforcement support to an additional 50. There is over 100 cities and towns that are responsible for their own law enforcement support yet aren't seeking NHTSA MRS funding from OGR. It is our goal to attract these underserved communities and populations with this opportunity.