

WORKPLACE SOLUTIONS

From the National Institute for Occupational Safety and Health

Preventing Law Enforcement Officer (LEO) Motor Vehicle Crashes

Summary

Law enforcement officers (LEOs) may spend many hours operating motor vehicles and subsequently face increased risk of crashes compared with non-transportation industry workers [BLS 2022]. Transportation incidents are the most frequent fatal work injury by major event or exposure [BLS 2022]. The National Institute for Occupational Safety and Health (NIOSH) provides several strategies for consideration to help reduce LEO motor vehicle crashes. These strategies include safe driving measures such as using a seat belt, avoiding unnecessary speed, focusing on driving, and reducing stress.

Introduction

More than 800,000 LEOs work in the United States [National Law Enforcement Officer Memorial Fund (NLEOMF) 2023b]. LEOs face many job hazards including physical exertion, psychological stressors, violence, motor vehicle crashes, and other risks to health and well-being. Besides spending numerous hours behind the wheel conducting patrols,

LEOs have unique risk factors for motor vehicle crashes. These risk factors include driving in inclement weather conditions, driving in high-speed situations such as when responding to emergency calls, sleep deficits due to long hours and shift work, and distractions inside the patrol car such as mobile data terminals (MDTs). Motor vehicle incidents among LEOs (single-vehicle incidents, motor vehicle collisions, and motorcycle crashes) remain a leading cause of work-related death for LEOs [NLEOMF 2023b]. Motor vehicle crashes are consistently reported as the leading cause of LEO traffic-related fatalities [NLEOMF 2023b].

Description of Exposure

“Motor vehicle crashes are a public health concern both in the United States and abroad. In the United States, motor vehicle crashes are a leading cause of death, and kill over 100 people every day. However, motor vehicle crash injuries and deaths are preventable” [CDC 2023].

According to the National Law Enforcement Officer Memorial Fund (NLEOMF), between 2012 and 2022, 553 LEO deaths were due to motor vehicle



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incidents (automobile crash, motorcycle crash, and struck by vehicle). Automobile crashes accounted for 326 of those deaths (13% of the total officer, all-cause, line-of-duty deaths) [NLEOMF 2023a]. Taken altogether, these data equate to nearly one LEO death per week in the United States, on average, as a result of motor vehicle-related incidents [NLEOMF 2023a]. The NLEOMF states that more than half of these LEO motor vehicle related deaths occurred while the officer was carrying out administrative duties or on patrol in their assigned area and not while the officer was responding to an active emergency [NLEOMF 2021]. With proper safety practices, the risk of LEO motor vehicle-related injuries and deaths can be reduced [Tiesman and Breul 2021].



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Lack of Seat Belt Use

Motor vehicle crashes are one of the leading causes of officer on-duty injuries and deaths; the use of seat belts and supporting legislation are well-established as measures to reduce deaths [Evans 1986]. The NLEOMF reviewed motor vehicle crashes involving LEOs from 2017 to 2021 and found that nearly half (47%) of LEOs killed in motor vehicle crashes were not wearing seat belts [NLEOMF 2022].

Emergency Mode and Traffic Incidents

LEOs often travel in emergency mode to arrive at the scene as quickly as possible [Hossain et al. 2023]. It is a commonly held belief in the law enforcement community that faster response times lead to better outcomes. However, trying to get to an incident faster and taking more risks can result in a motor vehicle crash [Missikpode et al. 2018]. In an analysis of 2,406 police vehicle crashes from 2005 to 2013, LEOs driving in emergency mode—using their lights and sirens—were 1.3 times more likely to crash [Missikpode et al. 2018].

Stress Response

“Policing is a highly stressful and dangerous profession that involves a complex set of environmental, psychosocial, and health risks” [Baldwin et al 2019]. Under extreme stress, attention, perception, decision-making, and even physical performance can be severely impaired [Baldwin et al 2019]. In the policing community, this is commonly referred to as an adrenaline surge. Adrenaline is a hormone released seconds after being exposed to stress, fear, or dangerous situations and can quickly flood the body [Miller-Keane Encyclopedia 2003]. Officers are routinely exposed to stress and dangerous situations and may encounter the side effects of a stress response when driving a motor vehicle.

Distracted or Multi-tasking While Driving

While operating a patrol car, LEOs constantly process information from multiple sources including radios, cell phones, and MDTs or computers. They also must watch for motor vehicle violations and acts of crime. These competing responsibilities cause the LEO to be distracted, resulting in unsafe conditions.

Although it appears that humans can multitask, studies have shown the brain rapidly switches between tasks and does not perform them simultaneously [Lin et al. 2016]. This applies to audio, visual, manual, and cognitive tasks. The brain has limited capacity, and when there is too much information, the brain decides what to ignore [NSC 2012].

Even when the driver is looking ahead, if the brain is occupied with something else (such as a conversation), the driver’s

ability to detect or respond to changes and threats in their environment is reduced. For this reason, talking on either hand-held or hands-free devices reduces attention to the road [Strayer et al. 2013; Atchley et al. 2017]. Even when a driver’s eyes are on the road and hands are on the wheel, sources of distraction can cause significant impairments in driving, resulting in tunnel vision that can increase the risk of crashing [Strayer et al. 2013]. Increased speed reduces the amount of information a driver can take in and limits the time available to process information and take corrective actions [AASHTO 2018].

Fatigue

Among LEOs, shiftwork and long work hours are standard practice to allow around-the-clock responses [Allison et al. 2022]. LEOs work nonstandard work schedules that may include rotating shifts, long-duration shifts, and overtime [Peterson et al. 2019]. Long work hours have been linked with an increased risk of traumatic injuries and motor vehicle crashes among LEOs [Allison et al. 2022]. Driving performance is impaired if LEOs operate vehicles under sleep-restricted and fatigued conditions [James and Vila 2015].

Potential for Hazardous Road Conditions

Three elements of all motor vehicle crashes are the driver, the vehicle, and the roadway. The physical environment affects all three [Limpert 2016]. The driver can be affected by fog, sun glare, precipitation, and other conditions. The motor vehicle can be affected by rain, snow, ice, or mud. Water or ice can affect the brakes and/or tire traction. The roadway is mostly affected by weather-related conditions such as rain or snow, which affects tire-roadway friction.

Surface friction or skid resistance—the force that develops between the roadway and tires of a motor vehicle—is needed to drive, brake, and negotiate curves. As a motor vehicle’s speed increases, the amount of friction needed to stop or prevent sliding increases. Adverse environmental conditions increase the probability of skidding [Donnell et al. 2009]. Each year, approximately 21% of all motor vehicle crashes are due to adverse weather, and 70% of weather-related crashes are due to wet pavement [FHWA 2020]. Water on roadways acts as a lubricant and can significantly reduce surface friction [FHWA 2020].

NIOSH FACE Cases

Investigations of work-related deaths are conducted using the Fatality Assessment and Control Evaluation (FACE) model [Higgins et al. 2001]. This model reflects the public health perspective that injuries and deaths are preventable. FACE

investigators collect information about the worker who died, and the physical and social aspects of the workplace and the incident. They collect this information on what occurred before, during, and after the incident through interviews, examination of the incident site, and review of documents such as medical examiner and police reports.

FACE investigators develop narrative reports that detail organizational, behavioral, and environmental factors that contributed to the death. The report provides a summary of the event, factors that contributed to the death, and prevention recommendations.

NIOSH uses the FACE model to study LEO motor vehicle crashes. The following are two of the NIOSH FACE case studies that involved LEO motor vehicle crashes and show how speed, driver distraction, and road conditions can contribute to crashes.

Case Study 1

On November 7, 2015, a municipal police officer was killed when her patrol car was struck by another law enforcement motor vehicle on a city roadway while responding to a “shots-fired” emergency response call.

The officer was enroute to her primary patrol when she responded to a shots-fired call from municipal dispatch. Multiple university and municipal police officers were working in the same vicinity and simultaneously responded to the call. As the municipal police officer was traveling westbound, running lights and sirens, she entered an intersection against the traffic control device. At the same time, a university police officer traveling northbound, also running lights and sirens, entered the same intersection. The northbound university patrol motor vehicle crashed into the westbound municipal patrol car. The municipal police officer died from injuries sustained in the crash. The university police officer sustained serious injuries. Neither officer involved in the collision was wearing a seat belt.

From the investigation, contributing factors to the incident included (1) two motor vehicles entering the intersection at the same time, (2) the speed of the motor vehicles, (3) multiple agency and patrol car response, (4) potential adrenaline surge, and (5) poor line of sight at the intersection [NIOSH 2018a].

Case Study 2

On June 23, 2015, a state police trooper was killed when he lost control of his patrol car in a curve and was struck by an oncoming tractor trailer.

The state trooper was responding to a complaint of a reckless driver. The state trooper was wearing his seat belt. Using

his cell phone, the trooper called dispatch to get an update on the location of the driver. As the trooper entered a curve in the road, he lost control of his patrol car, which rotated counterclockwise and crossed into the path of oncoming traffic. Seeing the out-of-control patrol motor vehicle, the driver of an oncoming tractor trailer applied his brakes and steered toward the shoulder. The patrol car spun, placing the driver’s side door in front of the oncoming tractor trailer as the collision occurred. The state trooper died on impact.

From the investigation, contributing factors to the incident included (1) motor vehicle speed, (2) use of a cell phone while driving, and (3) roadway conditions and/or weather [NIOSH 2018b].

Prevention Strategies for Consideration

As a result of the FACE investigation reports, as well as reviewing industry best practices, NIOSH provides the following considerations for law enforcement agencies to help reduce the risk of motor vehicle crashes and injuries:

Increase Seat Belt Use

Seat belts reduce serious crash-related injuries and deaths by about half [NHTSA 2000]. However, “Officers who decide not to wear a seat belt commonly think that there is a higher risk of not being able to exit the vehicle fast enough if needed than of involvement in a vehicle accident. Other officers feel that wearing a seat belt will impede their ability to draw their weapon when necessary. Both of these thoughts are false perceptions that can be addressed by training officers to exit quickly” [FBI 2014]. In addition, agencies and officers may consider practices and policies that increase seat belt use such as establishing or revising a standard operating procedure or policies that require all officers to wear a seat belt while operating or riding in a motor vehicle [Tiesman et al. 2019].

Reduce Unnecessary Speed and Increase Intersection Safety

LEOs face a higher risk of death and injury while traveling to a scene than at the actual scene [DHS 2019]. Driving at an unsafe speed may have an officer arrive on scene mere minutes earlier; however, speeding is a major risk factor for death in a motor vehicle collision [NSC 2023]. In addition, if a collision occurs on the way to a scene, responding to the collision may pull important resources away from the initial scene to attend the scene of the collision.

Best practices when responding to an emergency can include proceeding past a red stop signal or stop sign, but only after slowing down, as may be necessary for safe operation

and clearing the intersection [Lexipol 2017]. The International Association of Fire Chiefs (IAFC) has a policy that law enforcement agencies may consider adopting on intersection crossing that requires drivers to come to a complete stop at traffic lights and stop signs during responses and proceed through intersections only after ensuring it is safe to do so [IAFC 2009].

Reduce Distractions While Driving

According to the National Highway Traffic Safety Administration (NHTSA), distracted driving killed 3,522 people in 2021 [NHTSA 2023b]. “Distracted driving is any activity that diverts attention from driving” [NHTSA 2023a]. At 55 mph, sending or reading a text takes your eyes off the road for 5 seconds, the equivalent of driving the entire length of a football field with your eyes closed [NHTSA 2023a]. “Any non-driving activity you engage in is a potential distraction and increases your risk of crashing” [NHTSA 2023a]. Each state legislature and governor makes laws regarding distracted driving for the public. However, many of these laws exempt police officers and other first responders while they are working [James 2015].

Police officers are often required to use multiple electronic devices such as MDTs while operating a patrol motor vehicle. For MDTs, software is available to limit the number of functions that can be used while a motor vehicle is in motion. Although it is not possible to completely disable the MDT, limiting its use to functions that must be accessed (for example accessing calls and navigation) has the potential to mitigate the distracting effects of these systems [Hall 2020]. “Consider implementing similar policies such as those that restrict the use of cell phones while officers are engaged in driving tasks” [NIOSH 2014, 2022].

Increase Training

Task performance is expected to be improved by any form of practice; however, training strategies differ, and some strategies are more efficient than others at improving task performance [Kramer et al 1999]. Consider looking at current agency training policies and offering additional and refresher training for crash prevention. Training should emphasize the connection between speed, friction, and road conditions and motor vehicle crashes and the importance of seat belt compliance.

In addition, consider training on tactical arousal control techniques to enhance officers’ ability to combat negative effects of stress response that can occur when responding to emergency calls. To improve officers’ openness to these techniques, explain that these techniques are used by the highest trained military personnel, including US military special operation teams and the NAVY Seals [Marx 2013]. Consider having field training officers speak to the effectiveness of these techniques and encourage this behavior while on patrol.

Suggested Citation

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References

- AASHTO [2018]. A policy on geometric design of highways and streets, 2018 7th ed. Washington, DC: American Association of State Highway and Transportation Officials, http://app.knovel.com/web/toc.v/cid:kpPGDHSE12/viewerType:toc/root_slug:policy-geometric-design
- Allison P, Tiesman HM, Wong IS, Bernzweig D, James L, James SM, Navarro KM, Patterson PD [2022]. Working hours, sleep, and fatigue in the public safety sector: a scoping review of the research. *Am J Ind Med* 65(11):878–897, <https://doi.org/10.1002/ajim.23407>
- Atchley P, Asleigh TV, Salehinegad AM [2017]. Constructing a publicly available distracted driving database and research tool. *Accident Anal Prevent* 99(A):306–311, <https://www.sciencedirect.com/science/article/pii/S0001457516304420>
- Baldwin S, Bennell C, Andersen JP, Semple T, Jenkins B [2019]. Stress-activity mapping: physiological responses during general duty police encounters. *Front Psychol* 10:2216, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6788355/>
- BLS [2022]. Census of fatal occupational injuries. News Release. Washington, DC: Bureau of Labor Statistics, <https://www.bls.gov/news.release/pdf/cfoi.pdf>
- CDC [2023]. Transportation safety. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, <https://www.cdc.gov/transportationsafety/index.html>
- DHS [2019]. Snapshot: HAAS alert collision prevention for emergency responders. Washington, DC: U.S. Department of Homeland Security, Science and Technology, <https://www.dhs.gov/science-and-technology/news/2019/10/17/snapshot-haas-alert-collision-prevention-emergency-responders>
- Donnell ET, Hines SC, Mahoney KM, Eng D, Porter RJ, McGee H [2009]. Speed concepts: informational guide. Washington, DC: U.S. Department of Transportation, Federal Highway Administration, Office of Safety, http://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwas10001/
- Evans L [1986]. The effectiveness of safety belts in preventing fatalities. *Accid Anal Prev* 18:229–241.
- FBI [2014]. Officer survival spotlight—speed and seatbelts. *Law Enforcement Bulletin*. Washington, DC: U.S. Department of Justice, Federal Bureau of Justice, <https://leb.fbi.gov/spotlights/officer-survival-spotlight-speed-and-seatbelts>

- FHWA [2020]. How do weather events impact roads? Washington, DC: U.S. Department of Transportation, Federal Highway Administration, Road Weather Management Program, https://ops.fhwa.dot.gov/weather/q1_roadimpact.htm
- Hall HB, Brooking J, Jacobs R [2020]. Law enforcement's role in distracted driving: helping to keep our roadways and officers safe. *Police Chief Online*, September 23, <https://www.policechiefmagazine.org/law-enforcements-role-in-distracted-driving/>
- Higgins DN, Casini VJ, Bost P, Johnson W, Rautiainen R [2001]. The Fatality Assessment and Control Evaluation program's role in the prevention of occupational fatalities. *Inj Prev: J Int Soc Child Adolescent* 7(Suppl 1):i27–i33, https://doi.org/10.1136/ip.7.suppl_1.i27
- Hossain M, Zhou H, Das S [2023]. Data mining approach to explore emergency vehicle crash patterns: a comparative study of crash severity in emergency and non-emergency response modes. *Accident Anal Prevent* 191:107217, <https://doi.org/10.1016/j.aap.2023.107217>
- IAFC [2009]. Guide to model policies and procedures for emergency vehicle safety. Fairfax, VA: International Association of Fire Chiefs, https://www.iafc.org/docs/default-source/1safehealthshs/vehclsafety_iafcpolandproceeds.pdf?sfvrsn=b5e5da0d_2
- James SM [2015]. Distracted driving impairs police patrol officer driving performance. *Policing Int J* 38(3):505–516, <https://doi.org/10.1108/PIJPSM-03-2015-0030>
- James SM, Vila B [2015]. Police drowsy driving: predicting fatigue-related performance decay. *Policing* 38(3):517–538, <https://doi.org/10.1108/PIJPSM-03-2015-0033>
- Kramer AF, Larish JL, Weber TA, Bardell L [1999]. Training for Executive Control: Task Coordination Strategies and Aging. In *Attention and Performance XVII: Cognitive Regulation of Performance : Interaction of Theory and Application*, edited by D. Gopher & A. Koriat, 617–652. Cambridge: The MIT Press.
- Lexipol [2017]. The code 3 distraction: quick tips for safer emergency vehicle operations. Frisco, TX, April 2017, <https://www.lexipol.com/resources/blog/code-3-distraction-quick-tips-safer-emergency-vehicle-operations/>
- Lim SH, Chi J [2013]. Cellphone bans and fatal motor vehicle crash rates in the United States. *J Pub Health Pol* 34(2):197–212, <https://doi.org/10.1057/jphp.2013.3>
- Limpert R [2016]. Motor vehicle accident reconstruction and cause analysis. New York, NY: Lexis Nexis, <https://store.lexisnexis.com/products/motor-vehicle-accident-reconstruction-and-cause-analysis-skuusSku6792>
- Lin L, Cockerham D, Chang Z, Natividad G [2016]. Task, speed, and accuracy decrease when multitasking. *Tech Know Learn* 21(3):307–323, <https://doi.org/10.1007/s10758-015-9266-4>
- Marx J [2013]. Train like a U.S. Navy Seal. Littleton, CO: Law Enforcement Survival Institute, *CopsAlive.com*, <http://www.copsalive.com/train-like-a-u-s-navy-seal/>
- Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health [2003]. *Adrenaline*. 7th ed. Philadelphia: Saunders.
- Missikpode C, Peek-Asa C, Young T, Hamann C [2018]. Does crash risk increase when emergency vehicles are driving with lights and sirens? *Accident Anal Prevent* 113:257–262. <https://doi.org/10.1016/j.aap.2018.02.002>
- NHTSA [2000]. Fatality reduction by safety belts for front-seat occupants of cars and light trucks: updated and expanded estimates based on 1986–99 FARS data. By Kahane CJ. U.S. Department of Transportation, National Highway Traffic Safety Administration Publication No. DOT-HS-809-199. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/809199.pdf>.
- NHTSA [2023a]. Distracted driving. Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration, <https://www.nhtsa.gov/risky-driving/distracted-driving>
- NHTSA [2023b]. Traffic safety notes. Distracted driving in 2021. Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration, <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813443>
- NIOSH [2014]. Law enforcement officer motor vehicle safety: findings from a statewide survey. By Tiesman HM, Heick RJ. Morgantown, WV: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2015-101, https://stacks.cdc.gov/view/cdc/26008/cdc_26008_DS1.pdf
- NIOSH [2018a]. Officer dies in motor vehicle crash at an intersection while responding to a shots fired call—South Carolina. Morgantown, WV: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH LEO Report 2016-03, <https://www.cdc.gov/niosh/face/pdfs/L201603.pdf>
- NIOSH [2018b]. Trooper crashes on roadway while responding to reckless driver complaint—Kentucky. Morgantown, WV: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH LEO Report 2016-02.
- NIOSH [2022]. Distracted driving at work. NIOSH Safety and Health Topic. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, <https://www.cdc.gov/niosh/motorvehicle/topics/distracteddriving/>

NLEOMF [2021]. Traffic-related fatalities involving law enforcement officers. Police vehicle collision incidents from 2015–2019. Washington DC: National Law Enforcement Officers Memorial Fund, <https://nleomf.org/wp-content/uploads/2021/06/2015-2019-Traffic-Collision-fatalities.pdf>

NLEOMF [2022]. Five years of law enforcement traffic-related fatalities. An analysis of cases from 2017–2021. By Breul N. Washington, DC: National Law Enforcement Officers Memorial Fund, <https://nleomf.org/wp-content/uploads/2022/08/Traffic-Safety-Summit-Presentation-Nick-Breul.pdf>

NLEOMF [2023a]. Causes of law enforcement officer deaths over the past decade (2012–2022). Washington, DC: National Law Enforcement Officers Memorial Fund, <https://nleomf.org/memorial/facts-figures/officer-fatality-data/causes-of-law-enforcement-deaths/>

NLEOMF [2023b]. Law enforcement facts: key data about the profession. Washington, DC: National Law Enforcement Officers Memorial Fund, <https://nleomf.org/memorial/facts-figures/law-enforcement-facts/>

NSC [2012]. Understanding the distracted brain: why driving while using hands-free cell phones is risky behavior. Itasca, IL: National Safety Council, <https://www.nsc.org/forms/ddam-understanding-driver-distraction-white-paper>

NSC [2023]. Motor vehicle safety issues: speeding injury facts. Itasca, IL: National Safety Council, <https://injuryfacts.nsc.org/motor-vehicle/motor-vehicle-safety-issues/speeding/>

Peterson SA, Wolkow AP, Lockley SW, O'Brien CS, Qadri S, Sullivan JP, Czeisler CA, Rajaratnam SMW, Barger LK [2019]. Associations between shift work characteristics, shift work schedules, sleep and burnout in North American police officers: a cross-sectional study. *BMJ Open* 9:e030302, <https://bmjopen.bmj.com/content/bmjopen/9/11/e030302.full.pdf>

Strayer DL, Cooper JM, Turrill J, Coleman J, Medeiros-Ward N, Biondi F [2013]. Measuring cognitive distraction in the automobile. Washington, DC: AAA Foundation for Traffic Safety, <https://aaafoundation.org/measuring-cognitive-distraction-automobile/>

Tiesman HM, Breul N [2021]. Eight years of motor-vehicle fatalities among Georgia's law enforcement officers. The

Georgia Police Chief. Summer Edition:50–53, https://gachiefs.com/wp-content/uploads/2021/07/Magazine_Summer2021_063021.pdf

Tiesman HM, Gwilliam M, Rojek J, Hendricks S, Montgomery B, Alpert G [2019]. The impact of a crash prevention program in a large law enforcement agency. *Am J Ind Med* 62(10):847–858, <https://doi.org/10.1002/ajim.23032>

Resources

Alert International provides resources for LEOs, including a Law Enforcement Training Reference Guide. How to establish a training process, driving policies, and instructional guidelines and aids can all be found in the training reference guide.

Below 100 is an organization with a vision to reduce LEO line-of-duty deaths to fewer than 100 per year. Their program has identified five initiatives, including speed of patrol vehicle, to improve officer safety. The program believes advanced driver training and awareness of the trends in preventable line of duty deaths will influence LEOs and reduce the number of fatalities.

Drive to Survive is a training program that focuses on vehicle dynamics in relation to how and why crashes occur as well as topics for the safe operation of a police vehicle during routine and emergency conditions. The training is conducted using the same techniques used by crash investigators and includes roadway friction, critical curve speeds, hydroplaning, and other important topics.

National Policing Institute: National Law Enforcement Roadway Safety Program provides a suite of no-cost training, technical assistance, and resources to local, state, and tribal law enforcement agencies with the goal of reducing the number of officers seriously injured and killed on the nation's roadways from officer-involved collisions and struck-by incidents.

SAFECOM is a federal program managed by the U.S. Department of Homeland Security that coordinates interoperability efforts. SAFECOM has developed key documents for baseline communications and interoperability standards for emergency responders, including a technical assistance guide and the interoperability continuum.

For More Information

Find more information about the NIOSH FACE program can be found at <https://www.cdc.gov/niosh/face/default.html>

More information about Law Enforcement Officer Motor Vehicle Safety can be found at <https://www.cdc.gov/niosh/topics/leo/default.html>

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