Then & now: trends in fatal law enforcement traffic collisions

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Abstract

Purpose – The purpose of this paper is to analyze trends in fatal law enforcement officer (LEO) traffic collisions and describes prior research approaches and industry responses. It reviews the issue from historical and contemporary perspectives and details its problems for public policy.

Design/methodology/approach – Descriptive statistics are applied to data primarily covering the period 1995 to 2010 contained in the Federal Bureau of Investigation Crime in the USA and LEO Killed and Assaulted reports and the National Highway Transportation Safety Administration Fatality Analysis Reporting System database. Trends are established and comparisons are offered between groups.

Findings – Traffic collisions are the leading cause of death for LEOs. Traffic fatalities in the general public have steadily decreased in past decades. This has not been the trend among LEOs. This issue has been studied from several disciplinary perspectives in the social, cognitive, biological, engineering, and natural sciences. While the law enforcement industry has documented the trend, concerted efforts to mitigate the issue have been limited until recently.

Practical implications – Law enforcement practitioners and policymakers should take note of research findings and pursue training, policy, and practice changes to limit LEO traffic fatalities and effect an improvement trend consistent with the national reduction in highway deaths.

Originality/value – This paper brings together previously uncoupled data sources and prior research to identify problematic trends and contextualize LEO traffic fatalities as a subset of all traffic fatalities. It provides law enforcement policymakers a stark and revealing assessment of the most dangerous aspect of their field.

Keywords Police, Fatalities, Highway deaths, Law enforcement officers, Traffic collisions

Paper type General review

Uniformed law enforcement – police, sheriff, or highway patrol – has always been challenging and, compared to other vocations, dangerous. During the decades preceding and culminating in the 1970s, death at the hands of a felon was nearly twice as likely as an accidental death (National Law Enforcement Officers Memorial Fund (NLEOMF), 2009). This ratio decreased during the 1980s and, by the mid-1990s, accidental deaths eclipsed felonious killings as the leading cause of death for law enforcement officers (LEOs) nationwide (NLEOMF, 2009). Two factors contributed to the trend change – felonious deaths declined and accidental deaths increased. Traffic collisions became the most prevalent of all accidents and thereby the most deadly aspect of uniformed law enforcement (Gustafson, 2009; NLEOMF, 2009). This paper examines the trends in fatal traffic collisions since the 1990s, reviews research findings, and offers policy recommendations to enhance officer safety behind the wheel.

This paper is based on research made possible by and conducted for the California Commission on Peace Officer Standards and Training and adapted from the author's 2012 dissertation at the University of Colorado Denver titled *What's Driving Fatal Law Enforcement Collisions? A State-Level Analysis*.

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Distribution and counts of LEO deaths

For context, consider that "[a]n average of 162 officers a year died in the 2000s, compared with 160 a year in 1990s, 190 in the 1980s, and 229 in the 1970s" (NLEOMF, 2009, p. 1). Overall there has been a downward trend in the total number of officer deaths in past decades. But traffic deaths have increased. In the 17 years from 1980 to 1996 there was just one (1988) when more than 50 officers were killed in traffic (National Highway Traffic Safety Administration (NHTSA), 2010b). In the 14 years thereafter, from 1997 to 2010, there was just one (2009) when fewer than 50 were killed in traffic. Even allowing for population differences and regression to the mean, the trend is decidedly upward. Figure 1 illustrates the trend in LEO traffic fatalities with the backdrop of LEO population changes for the period 1995-2010 (Federal Bureau of Investigation (FBI) 1995a, b, 1996a, b, 1997a, b, 1998a, b, 1999a, b, 2000a, b, 2001a, b, 2002a, b, 2003a, b, 2004a, b, 2005a, b, 2006a, b, 2007a, b, 2008a, b, 2009a, b, 2010a, b; NLEOMF, 2012c; Officer Down Memorial Page, 2012c).

For an additional point of reference, consider that while officer traffic fatalities have trended up since the 1990s, traffic deaths in the general driving public have remained constant or declined (Gustafson, 2009; Gustafson and Cappitelli, 2010; National Highway Traffic Safety Administration (NHTSA), 2010a). Better cars and safety technology (e.g. air bags, skid control technology), better roadways overall, additional and improved training – all of these advancements would be expected to lead to lower death rates. This is the case for the driving public at large (NHTSA, 2010a), but traffic collision actuarial data indicate that this is not the case for LEOs. This trend in the general population is illustrated in Figure 2 (FBI, 1995a, 1996a, 1997a, 1998a, 1999a, 2000a, 2001a, 2002a, 2003a, 2004a, 2005a, 2006a, 2007a, 2008a, 2010a; National Highway Traffic Safety Administration, 2012).

Significance of the problem

For most of the last two decades, traffic collisions have been the leading cause of death for LEOs in the USA (FBI, 2008b; NLEOMF, 2009). The federal government is aware of this trend (FBI, 2008b; NHTSA, 2010b) and has identified it as one of the primary occupational hazards for LEOs (National Institute for Occupational Safety and Health (NIOSH), 2009). Previous research has indicated that law enforcement traffic deaths

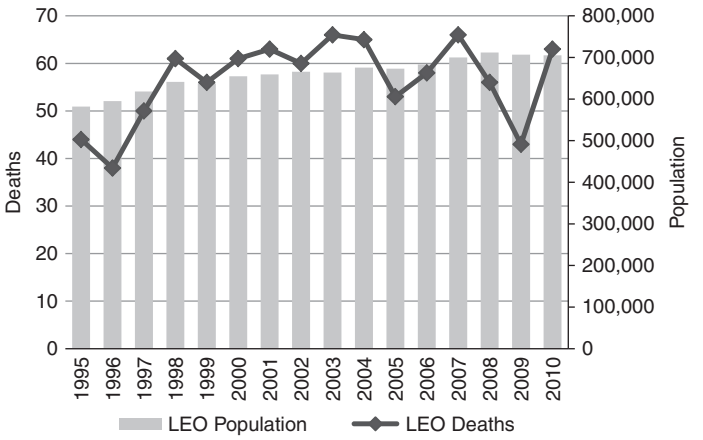

Figure 1.
LEO population and traffic deaths 1995-2010

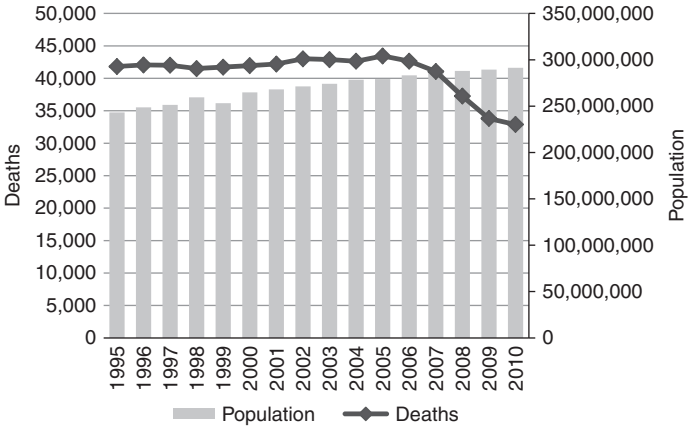

Figure 2.
US population and traffic deaths 1995-2010

pose tremendous financial costs to local, state, and federal governments with each officer fatality costing approximately $1.7 million on average (Gustafson and Cappitelli, 2010). The cost is clearly separate from the immeasurable social and emotional toll associated with loss of human life. This situation alone creates a moral imperative to address the problem.

Beginning of the problem

There is agreement among three data sources that Officer Alonzo B. Bishop of the Baltimore City Maryland Police Department died on Tuesday, August 29, 1899, when his patrol wagon was involved in a collision variously reported as being with "a car" (Maryland Police and Correctional Fallen Officers Memorial, 2012), "another vehicle" (NLEOMF, 2012a) or "an automobile" (Officer Down Memorial Page, 2012a). This is likely the first LEO traffic-related fatality in the USA.

Thereafter, the historical record reveals a number of discrepancies in the facts surrounding many officer fatalities that may have been traffic related for more than a decade after Officer Bishop died. Agreement does exist that Policeman James P. Wylie of the Los Angeles, California, Police Department died on Monday, November 27, 1911, in what was likely the first clear case of an on-duty LEO fatality from a car vs car traffic collision (Los Angeles Police Department, 2012; NLEOMF, 2012b; Officer Down Memorial Page, 2012b).

Reporting inconsistencies aside, the aforementioned cases point to the genesis of the LEO traffic fatality problem addressed here. In this respect, from an epidemiological perspective, it is useful to consider that it was less than 100 years from the first reported incidence of a LEO traffic-related fatality (1899) to the years when traffic collisions became the greatest threat to LEOs (mid-1990s).

Historical context

There was no substantive national conversation or broadly identifiable concern about highway safety prior to the 1960s. Only then did awareness of a problem begin in earnest. Although the National Transportation Safety Board was created in 1926, that division of the federal government was, at that time, solely focussed on air transportation (National Transportation Safety Board, n.d.). During the 1960s, however, the situation changed.

A significant contributor to this shift was Ralph Nader, an attorney and consumer protection activist. Nader (1965) may have had the broadest impact through his now classic book *Unsafe at Any Speed: The Designed-in Dangers of the American Automobile* in which he detailed significant oversights and missed opportunities in safety engineering considerations among American car manufacturers. In his review of the book, Cutcliffe (1966) noted that "[w]hen the Senate Commerce Committee opened its hearings on the Highway Safety Act of 1966, Ralph Nader as author of *Unsafe At Any Speed* was among the first witnesses" (p. 445).

Following the Senate hearings, Congress passed the Highway Safety Act of 1966, which (among many changes and initiatives) mandated seatbelts in automobiles and created the National Highway Safety Bureau, which later became NHTSA in 1970 (National Highway Traffic Safety Administration, 2006). The framing of the issues and summation of the topic was perhaps most succinct and poignantly delivered by President Johnson in his signing remarks upon authorizing the act when he wrote on September 9, 1966:

> Over the Labor Day weekend 29 American servicemen died in Vietnam. During the same Labor Day weekend, 614 Americans died on our highways in automobile accidents.
>
> Twenty on the battlefield.
>
> Six hundred and fourteen on the highways.
>
> In this century, more than one and a half million of our fellow citizens have died on our streets and highways: three times as many Americans as we have lost in all our wars.
>
> Every 11 minutes a citizen is killed on the road.
>
> Every day 9,000 are killed or injured – nine thousand.
>
> Last year 50,000 were killed.
>
> And the tragic totals have mounted every year.
>
> It makes auto accidents the biggest cause of death and injury among Americans under 35.
>
> And if our accident rate continues, one out of every two Americans can look forward to being injured by a car.
>
> This is not a new problem. Ten years ago in the Senate I told my colleagues that the deadly toll of highway accidents demanded action [sic]. And that this was a responsibility Congress must face. Now, finally, we are facing it (National Highway Traffic Safety Administration, 1985, p. 31).

This rhetoric helped catapult the issue of traffic fatalities to the forefront of public conversation about risks. Contrasting a heavy weekend death toll in Vietnam with a homeland traffic death toll some 20 times greater captured significant attention. That same month (September 1966), the National Research Council (1966) released *Accidental Death and Disability: The Neglected Disease of Modern Society*. In the introduction it noted that of 107,000 accidental fatalities in 1965, 49,000 resulted from traffic collisions. Further, the work asserted that, "Public apathy to the mounting toll from accidents must be transformed into an action program under strong leadership" (p. 5).

These (among other) factors led to changes in many aspects of safety. From that point forward, highway safety took a new direction in USA. Even so, traffic fatalities continued to rise for several years after Johnson signed the Highway Safety Act – peaking at 54,589 deaths in 1972 (National Highway Traffic Safety Administration, 1997). While the awareness of the traffic deaths problem and its peak occurred among the general public in the mid-1960s and early 1970s, respectively, the timeframes for the LEO-specific

epidemic came much later. Writing for *Police Chief Magazine* in 2004, NHTSA Deputy Administrator Otis Cox extolled the highway safety advances of NHTSA and only incidentally noted that "some of the other news is not all that uplifting. Traffic crashes are the leading cause of death in the line of duty for law enforcement officers. In 2003 […] 75 officers died in motor vehicle crashes" (Cox, 2004, p. 6).

Perspectives on the problem

Cox (2004) also made the point that traffic deaths are not inevitable and accidents (i.e. collisions) can be prevented. High-profile law enforcement leaders like retired California Peace Officer Standards and Training Executive Director Paul Cappitelli and Lexipol President Gordon Graham have been working to dispel the myth that LEO traffic deaths are largely unavoidable or a simple industry cost or risk as opposed to a problem to be fixed (Gustafson and Cappitelli, 2010). Finally, in 2009, NIOSH prioritized scholarly investigation of LEO traffic injuries and deaths in the National Occupational Research Agenda (NIOSH, 2009), but prior to 2002 there was no way to assuredly know if the driver of a vehicle involved in a fatal traffic collision was a LEO when reviewing national traffic death data from National Highway Traffic Safety Administration (2008).

Previous scholarship

Problems and solutions – prior understandings and responses

The problem of traffic fatalities may be understood as a technical or engineering problem with the automobile itself, as Nader (1965) suggested. Alternatively, it may be understood as a cognitive training problem – drivers just lack skill. These different conceptions of the problem have naturally led to different responses and solutions.

LEO fatalities as a technical problem. Anyone who has seen an array of car commercials over some number of years has likely seen traffic safety posed as a technical problem. The implication of some of these commercials is that cars simply need to be better engineered; then you and yours will be safe on the road. In many respects this social construction may have evolved directly from Nader's (1965) indictment of the auto industry. In the span of a modest lifetime, technical fixes to vehicle safety have evolved from the requirement of a lap (seat) belt to anti-lock brakes to air bags to recent models that will apply the brakes, monitor traffic in the blind spots, or make minor steering adjustments automatically to assist the presumably unaware driver (Müller and Stajic, 2011).

In terms of a technical problem for law enforcement, there was a growing dialogue throughout the industry that police cars are really just vehicles adapted to policing purposes. This may seem obvious. But consider garbage trucks, fire engines, limousines, parking enforcement vehicles, school buses, and delivery vans. Each of these vehicles is technically engineered to an occupational need/task. They were designed with a specific function in mind. This is not the case with the American police car. While car companies may market a police package, it typically includes a more robust electrical system (to support all the lights and equipment), heavy-duty brakes, and speed-rated tires. But these are options available to anyone and engineered to a somewhat generic need. So the discussion began between a frustrated law enforcement official and an automotive executive that an engineered police vehicle was needed (Carbon Motors, 2011).

As a result, Carbon Motors was born in 2003 (but notably went out of business within a decade). The prototype vehicle was debuted at the IACP Convention in San Diego, CA in 2008 (Jonsson, 2008). The car had features that include integrated control panels,

specially designed seats that allowed space for an officer's gun belt, and a heads-up display that allowed the officer to see critical information while keeping their eyes on the roadway (Carbon Motors, 2011). These were clearly technical fixes/responses to problems that had been identified as having some nexus to LEO traffic collisions.

LEO fatalities as a human performance problem. Vila (2000, 2006) has reported on the effects of fatigue as it contributes to law enforcement accidents (errors in general) and traffic collisions specifically. This has been his primary area of research for more than a decade and as a former LEO, Vila has uncommon insights. Vila found that the more fatigued officers are, the more likely that they will make judgment errors. While this finding may not be surprising at an intuitive level, consider that there are no laws or standards that regulate how much fatigue is too much in law enforcement.

Vila (2000, 2006, 2009) also studied sleep deficits and found that the disruptions to Circadian rhythms endemic to law enforcement shift work have a lasting and increasing toll on performance and that overall shift length (e.g. 8, 10, or 12 hours) is a contributor to fatigue. He noted this physiological response has been studied relatively well in other industries like aviation and transportation, and more recently among emergency room doctors (2009). The human body is limited in the number of hours it can be deprived of sleep and safely complete complex tasks (2000, 2006, 2009). Consequently, truck drivers and pilots have limits on the number of hours they can work and are required to keep logs to show when they drive or fly and when they sleep. But no such regulation exits for LEOs (or emergency room doctors). Simply put, "Whom do you want out there doing the job? The person who "grabbed a few hours of sleep," or the person who made it a priority to come to work rested and ready to handle life and death situations?" (Vila and Gustafson, 2011, p. 12).

James and Vila (2012) also studied distraction as it relates to law enforcement traffic collisions. As technological innovations have advanced, there have been more demands on a LEO's attention in the patrol vehicle. In the early days of patrol cars the vehicle was just that – a conveyance. Then, progressively over time, technologies were added – lights, sirens, radio(s), scanner(s), weapons (e.g. shotgun, patrol rifle, baton), safety cage, radar, stolen vehicle locators, video cameras, computers, and more. According to James and Vila, " 'Multitasking' is a myth, the brain must shift from one focus of attention to another, and back. Switching requires cognitive resources that tend to diminish as an officer progresses through the work shift" (p. 17). Even if officers manage to avoid focusing their attention on these technologies (i.e. actively use them), they still have to look through/around them in order to view the roadway and check their blind-spots as they drive.

These research findings are representative of the intersection of the technological and human performance aspects of the problem. Where Carbon Motors was attempting to design away the problems of distractions, James and Vila are researching interventions to help officers cope with distractions. This contrast is one of the best examples of two different ways of understanding and responding to the same set of circumstances viewed through a different problem construction.

Another example of this technological/human performance bifurcation exists with the issue of cellular telephones in vehicles. Bener *et al.* (2006) researched the effects of mobile phone use (in the general population) and found the distraction of mobile phone use while driving increased collision rates by statistically significant amounts. Similar findings have prompted many states to ban mobile phone use while driving – except with the technological solution of a hands-free device (e.g. Bluetooth headset). However,

Abdel-Aty (2003) found that drivers are distracted when talking on a cellular phone – hands-free or otherwise – and his results were confirmed in a meta-analysis of 125 studies on the same topic (Mccartta *et al.*, 2006).

Finally, many authors have considered effects of speed on traffic collision and fatality rates among drivers in general (Friedman *et al.*, 2009; Garber and Gadiraju, 1992). These researchers have universally found that higher mean speeds associated with higher speed limits (e.g. a 65 MPH limit vs a 55 MPH limit) result in higher collision fatality rates. Using a human performance construct, the problem is drivers – LEOs or the general public – have a diminishing capacity to manage higher speeds.

LEO fatalities as a managerial control problem. Many practitioners and scholars (e.g. Batiste *et al.*, 2011; Gustafson, 2009; IACP, 2011; Schultz *et al.*, 2010) have examined LEO traffic collisions and fatalities as an issue of command and control management and/or policy. The general premise in this perspective is that law enforcement executives, managers, and supervisors must set expectations (both in policy and practice) that hold LEOs accountable for driving responsibly. Because studies (Gustafson, 2009; NHTSA, 2010b) have shown that approximately half of all LEO traffic collision fatalities involve either excessive speed while not assigned to an emergency call or the LEO driver not wearing a seatbelt, there is a sense that the fatalities are avoidable and that there is a lack of will or discipline on the part of decision-makers.

Schultz *et al.* (2009, 2010) investigated traffic collisions and fatalities resulting from police pursuits. They found that more permissive pursuit policies or regulations (e.g. granting officers discretion to pursue for minor traffic violations) are linked to higher collision rates and fatalities. Some law enforcement agencies prohibit pursuits and others restrict pursuit initiation to only violent offenders (Alpert and Smith, 2008). In this view of the problem, restricting or prohibiting pursuits might be part of the solution.

LEO fatalities as a cognitive/behavioral problem. Since the 1930s, scholars have worked to develop a psychological theory of traffic collisions separating roadway or vehicular variables from human factors (Sorensen, 1994). Consistent with other literature reviewed, a series of authors have, over several decades, developed a theory of traffic collisions based on human characteristics of driver behavior (Fell, 1975; Fell and Tharp, 1969; Salminen and Lähdeniemi, 2002). Fell's (1975) model includes driver perceptions as a factor in traffic collisions – for example, where a driver has to perceive the proximity of an oncoming car. Perception might arguably border on the physiological. Other components of Fell's model, however, include exposure and risk-taking. In the case of LEOs, exposure could be the number of hours officers worked or miles driven and risk-taking could include the necessity (or prohibition) of driving above the speed limit or engaging in vehicular pursuits.

Other authors have identified distinct behaviors such as aggression and risk taking that contribute to collision involvement (Castro, 2008; Dorn, 2005, 2010). From this perspective, individual personality/behavioral/cognitive factors increase collision likelihood. Responses to the cognitive/behavioral problem have included training, screening (for purposes of prevention), and, from the technological aspect, surveillance (Castro, 2008; Dorn and Barker, 2005; Dorn, 2010). In the case of training, the premise is that officers can gain knowledge, skills, and abilities that will enable them to monitor and manage their behavior. With respect to screening, which is widely used in the UK, the idea is to identify risky or problem drivers before they are put into an emergency

driving role. Last, with respect to surveillance, technologies like in-car video cameras and global positioning system monitoring of speed provide for various social control systems (Giddens, 1991). One system might include concertive control, whereby coworkers monitor each other and adopt the organizational goal (e.g. safe driving) as their own (Barker, 1993). Other systems might include panoptic control in the Foucaultian sense whereby workers monitor themselves for fear of constant surveillance (Sewell, 1998) or strictly bureaucratic (i.e. managerial) control (Taylor, 1911) – consistent with managerial control described previously.

LEO Fatalities as a socio-cultural problem. Research in the socio-cultural area is relatively new and developing. The premise from this perspective is that a driving culture may develop which encourages either better or worse driving behavior. Colloquially, this has been described as a continuum ranging from a culture of safety – one concerned with getting to the destination without loss of life or property – to a culture of speed – one primarily orientated to getting to the destination fast and first if possible (Gustafson and Cappitelli, 2010). Wehr *et al.* (2012) have studied this as an agency-level phenomenon, as have Alpert *et al.* (2012) and there is evidence to suggest there is an industry-wide culture among LEOs wherein they (officers) have a sense that the rules of the road are for the public, but not for them. Responses to the socio-culture problem construction mirror those described for both cognitive and managerial problems. The possible interventions include training, discipline, regulation, and monitoring.

LEO fatalities as a LEO problem. Some scholars have investigated LEO traffic fatalities as a LEO phenomenon. This frame of reference suggests that there are inherent or enculturated differences between LEOs and other drivers. This perspective is closely related – if not intertwined – with the cultural orientation described above. NHTSA (2010b) published Characteristics of Law Enforcement Officers' Fatalities in Motor Vehicle Crashes which explored demographic and situational factors in all fatal LEO traffic collisions in the USA from 1980 to 2008. NHTSA found that:

> The LEO and non-LEO groups show substantially different characteristics at crash time, first harmful event, roadway function class (rural/urban), emergency use, fire occurrence, rollover, most harmful event, impact point, vehicle maneuver, crash avoidance maneuver, age, sex, person type, seating position, restraint use, and air bag availability and deployment (p. i).

LEO fatalities as a public policy problem

LEO traffic fatalities are first and finally a public policy problem. This leads to the perspective of the policy sciences – which somewhat ambiguously refer to those fields and disciplines concerned with "issues of the most intractable nature" (deLeon, 1988, p. 2). They are interdisciplinary and solution oriented (Lasswell, 1951). As such, they provide exactly the right framework for this problem.

Previous scholarship reprised

Speed kills; higher speed limits correlate with increased traffic fatalities (Friedman *et al.*, 2007; Pant *et al.*, 1992). This has been studied repeatedly. The faster vehicles travel, the greater the rate of traffic fatalities.

State occupational (process) regulation serves the public interest and may improve quality through continuing education requirements (Teske, 2004). Speaking to the issue of purposeful regulation, Teske noted that "states that want greater professionalism in all aspects […] should require it in both entry barriers and in maintenance requirements" (p. 150). Applied to LEOs, this could be interpreted to mean that the

performance and discipline that is required of recruits should also be required of incumbent, veteran officers.

Human beings can only focus attention on one thing at a time. Put another way, multitasking is a myth (James and Vila, 2012; Loukopoulos *et al.*, 2009; Rosen, 2008). Some people may switch between tasks or refocus attention better than others, but the operative terms are switch and refocus. Distraction is a challenge for everyone who drives. For LEOs, it is compounded by a necessarily greater number of distractions and demands for attention (e.g. radios, computers, scanners inside the vehicle, and non-driving-related surveillance demands outside the vehicle such as watching for suspicious pedestrians, traffic violators, or people in need of help).

Seat belts save lives (Richens *et al.*, 2000). Mandatory seat belt laws (that have penalties) increase seat belt use and thereby save lives (Richens *et al.*, 2000; Wagenaar *et al.*, 1988). As with speed, the effects of seat belt use (and non-use) have been studied repeatedly. The evidence is unambiguous.

Fatigue impacts driving performance and the more fatigued a driver is, the more likely they will have a collision (Vila, 2000, 2006, 2009). Driving while tired is like driving while alcohol-impaired (Williamson *et al.*, 2001). A person who has been awake for 20 hours has approximately the same performance capacity as a person who is legally drunk (i.e. a 0.08 percent blood-alcohol content) (Dawson and Reid, 1997). Socially, Americans have displayed diminishing tolerance for drunk driving; fatigue has not received the same scrutiny.

Training improves performance – especially in highly complex tasks (Schneider, 1985). In order to drive well and maintain desired behaviors, drivers need training in both skill development and cognitive behaviors, which may benefit from periodic refresher training (Dorn, 2010; Dorn and Barker, 2005). Professionals regularly train and practice their skills. LEOs should train and practice not only their psychomotor skills, but also their (driving) decision-making skills. Training these skills is different from everyday driving. An accountant balancing their checkbook would not consider it to be training to perform an audit. Just because LEOs drive on a daily basis does not mean they are honing their skills, learning good habits, or getting feedback on their performance – important aspects of training.

Highway traffic enforcement reduces traffic fatalities (DeAngelo and Hansenyz, 2010). Traffic laws are established to promote safety in order to reduce injuries and fatalities. This suggests that there should be some kind of enforcement for LEOs. This might come in the form of supervision or management or strong leadership or in more enforcement-oriented terms like traffic citations or disciplinary measures.

Policy implications of findings

The logical question to ask next is simply this: given the findings that have been presented, what can be done?

Potential changes and adaptations

Following are seven independent policy actions that can be implemented to reduce LEO traffic fatalities. One can reasonably expect that taken as a whole these policies will have complimentary effects. Even so, each can improve LEO traffic safety on its own and policymakers should start with what is feasible rather than take an all or nothing approach. Incremental change is preferable to inaction. Policy recommendations in no specific order.

Slow down. Limit the speeds LEOs are allowed to drive. The Carbon Motors police car referenced earlier had an advertised top speed of greater than 150 MPH (Carbon Motors, 2011). Why? When would a policymaker ever want a LEO to drive in excess of 150 MPH? A standard should be thoughtfully established and enforced.

Perhaps the standard should be something dynamic that recognizes changing environments. The policy could dictate a LEO maximum that is 20 MPH over the speed limit posted on the roadway (e.g. 45 MPH in a 25 MPH zone or 85 MPH in a 65 MPH zone). Alternatively, the policy could be designed with performance expectations in mind. In some cases, it may be appropriate that highway enforcement LEOs have a higher speed limit than municipal police LEOs. Exceptions can be specified.

Create and standardize requirements. Specify how LEOs should drive in specific situations. From emergency driving to pursuits to vehicle operations training, LEOs (and the motoring public) will benefit from consistency and standardization. Should LEOs respond with lights and sirens (i.e. emergency response) exempted from speed limits and stop signs to a report of a burglary when there is no indication that a suspect is in the area? There are some agencies that allow this type of response for any felony report. What is gained vs what is risked with this type of response? Does arriving at the scene 30 seconds or a minute sooner change the outcome enough that it justifies the risk of collision associated with an emergency response?

What about pursuits? There was an entire television series titled *World's Scariest Police Chases*. The show also spawned a video game. Does it make sense to chase everyone for any violation of law? Pursuits are a form of group risk exposure that should be thoughtfully regulated and standardized because they create danger not just for the individual LEO (or even the fleeing suspect), but for the motoring public at large.

Concentrate and stay focussed. Limit what technologies and activities LEOs can use and do while driving. Distractions are dangerous and many cannot be avoided in a police car. But some distractions, like cellular telephones and particularly texting, can be managed if not entirely avoided while driving. It is almost unimaginable that a LEO would have to text while driving. These activities are difficult and dangerous for humans – LEOs included. If exceptions need to be specified, they should be narrow and specific as opposed to a blanket exemption for on-duty LEOs.

Do not be a dummy […]. Require LEOs to wear seat belts while driving. Seat belts save lives. There is no normative reason for a LEO to drive without a seat belt. There may be many specific instances when a LEO could justifiably have a vehicle in motion and not have the seat belt on – in the half-block before pulling up to an in-progress call, for example. Exceptions should be specified rather than covered by a broad exemption for all LEOs all the time.

Get some rest. Limit work periods and manage rest for LEOs. Fatigue reduces human performance and increases risk of accidents in general and traffic collisions specifically. Limits should be established for total shift length; consecutive work days; total weekly work hours; and allowable hours of secondary employment. Minimum rest periods should be required between shifts. Exceptions can be made for emergencies (e.g. disasters, in-progress crimes, etc.). This has been done for commercial truck drivers and pilots and makes sense for LEOs making life and death decisions too.

Train for safety and success. Design and mandate basic and refresher driver training relevant to performance expected and outcomes desired. Broadly speaking, LEOs are taught to shoot their weapons accurately (i.e. accuracy and skill) and to know when to

shoot or not shoot (i.e. deadly force decision making). The same two elements are essential to driving. LEOs need to know how to operate a vehicle proficiently in the conditions they are expected to drive. This may mean driving in ice or snow or off road. It might also mean driving at high speeds on interstates or in heavy traffic congestion. LEOs may also need to improve skills for emergency and pursuit driving – how to properly clear an intersection against a red light or how to manage a fleeing vehicle. Likewise, LEOs also need to know when, where, and under what circumstances they should or should not utilize these skills.

Design accountability. Create systems to hold LEOs, supervisors, and managers accountable for their actions and inactions. Improper driving has consequences for members of the public; it should also have consequences for LEOs. Education, enforcement, and engineering (commonly known as the 3E's) have long been referred to as the foundation of highway safety for the public (the now common fourth E – for EMS – is an after-the-fact measure for lifesaving post-collision). A standardized system that educates LEOs on expectations, rights, and responsibilities; enforces these expectations, rights, and responsibilities; and engineers (whether through policy, training, or technology) these expectations, rights, and responsibilities will improve traffic safety outcomes.

Anticipated challenges and resistance

It is clear that policy change almost always involves real challenges and resistance. Some challenges and resistance are objectively valid and others may have a more rhetorical or ideological basis that is subject to interpretation. Several examples of anticipated challenges and resistance are enumerated in this section along with potential counterarguments.

We have always done it this way. Past practice has a powerful inertia. Combined with some measure of success (e.g. a relatively low incidence of LEO fatalities), this can be a persuasive argument. Often a lack of some experience incorrectly reassures people that they are doing the right thing. An example of this is air transportation security. There were thousands of uneventful flights before the tragedies that occurred on September 11, 2001. Thereafter, a system-wide review found numerous security inadequacies and failures (Kettl, 2004). The mantra that we have always done it this way is insufficient and should invite a discussion about needs and goals. Simply proposing change because it appears in the latest popular publication is similarly inadequate. Policymakers should collaborate with stakeholders and engage in dialogue. This will at least create an opportunity for buy-in.

But what if […]. Many times people will look at a new requirement and take issue with it because there might be a time when it would actually be better not to have such a requirement. Wehr *et al.* (2012) describe this (with a direct quote) as the "fear of the ninja assassin" (p. 25) when reporting why many LEOs routinely choose not to wear their seat belts. Many LEOs fear that they might be ambushed and unable to take cover or return fire if they are wearing a seat belt in a car.

There are exceptional circumstances and rarities that happen. Policy should be designed for frequent, normal, and likely circumstances. If there are specific times when it should not apply, those can be exempted. LEOs have been involved in tens of thousands of traffic collisions. In the 1995-2010 period reviewed here, nearly 600 LEOs died in automobile traffic collisions and approximately half of them were not wearing seat belts. Although the exact number is not known, it is clear that relatively few LEOs

are ambushed. Even fewer have been ambushed while driving. It makes pragmatic sense to base standard operating procedures on what is most likely to happen as opposed to what might just happen.

Local control – the miracle of federalism. The reality is that the 10th Amendment to the Constitution granted rights to states, not cities, counties, or other subdivisions of government. Even so, the concept of local control took hold in this country many years ago and has been clearly evidenced in the areas of education and law enforcement. Many police chiefs and sheriffs will assert that it is their right to decide what is best for their departments and communities. Arguing this point may be futile; rather, it may be better to assert that since law enforcement has long desired recognition as a profession (McClellan and Gustafson, 2012), it should be treated like one and uniformly regulated (at the state level) (Gerber and Teske, 2000). Issues of broad concern and impact should be broadly addressed.

Politics of labor and management. Matters relating to work hours, overtime, and accountability (which might include discipline) are likely to create interest and concern among labor leaders and representatives of management. The key in this respect is to consider what the point of any policy change is and identify who is served by it. Each of the proposed policy actions here is aimed at enhancing safety for LEOs. This should be a common goal for everyone – labor and management leaders alike.

The degree to which a policy supports safety or specifies sanctions is a matter of design, not a foregone conclusion of the policy process. One option could be to specify liability or punishment in only the most egregious of cases where due regard is wholly ignored. In terms of work hours and overtime, it may be an option to specify required rest instead of limited work. The key is for all stakeholders to work toward the common goal of LEO safety and find areas of agreement.

Economics of programmatic changes. Some policy changes require funding. New standards or training requirements create new costs. Other policy changes require little more than the time it takes to develop them (although it is a given that there should be some form of training to support any policy change). When funding is limited, as it often tends to be for most law enforcement agencies, these issues must be prioritized. Little cost is involved in terms of training or policy implementation to mandate that officers wear seat belts or observe some form of speed limit(s). Enhanced standards or training curricula may need to be strategically planned over time and phased in as funding allows.

Conclusions

Research reviewed here suggests that persistent rates of LEO traffic fatalities are not just a technical problem, but a problem of politics, economics, training, human performance, and industry/organizational culture. The findings also suggest that the problem persists not due to a lack of knowledge about effective interventions, but because known interventions and strategies are not implemented.

Vehicles and traffic have become an integral part of society. They have also become the most dangerous threat to on duty LEOs. Research reviewed here shows that this is not an inevitable reality for LEOs. There are practical means for individuals, supervisors, agency leaders, associations, and state and national law enforcement leaders to address this challenge. Moreover, there is nothing preventing an individual LEO from wearing a seat belt, slowing down, getting more rest, and maintaining focus when driving. Similar opportunities exist for supervisors, agency leaders, and others who choose to embrace these recommendations.

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Further reading

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