Problem-Oriented Guides for Police
Problem-Specific Guides Series
No. 61

COPS
COMMUNITY ORIENTED POLICING SERVICES
U.S. DEPARTMENT OF JUSTICE

Aggressive Driving

Colleen Laing

www.cops.usdoj.gov

Center for
Problem-Oriented Policing

Problem-Oriented Guides for Police
Problem-Specific Guides Series
No. 61

Aggressive Driving

Colleen Laing

www.cops.usdoj.gov

June 2010

About the Problem-Specific Guide Series

The *Problem-Specific Guides* summarize knowledge about how police can reduce the harm caused by specific crime and disorder problems. They are guides to prevention and to improving the overall response to incidents, not to investigating offenses or handling specific incidents. Neither do they cover all of the technical details about how to implement specific responses. The guides are written for police—of whatever rank or assignment—who must address the specific problem the guides cover. The guides will be most useful to officers who:

- **Understand basic problem-oriented policing principles and methods.** The guides are not primers in problem-oriented policing. They deal only briefly with the initial decision to focus on a particular problem, methods to analyze the problem, and means to assess the results of a problem-oriented policing project. They are designed to help police decide how best to analyze and address a problem they have already identified. (A companion series of *Problem-Solving Tools* guides has been produced to aid in various aspects of problem analysis and assessment.)

- **Can look at a problem in depth.** Depending on the complexity of the problem, you should be prepared to spend perhaps weeks, or even months, analyzing and responding to it. Carefully studying a problem before responding helps you design the right strategy, one that is most likely to work in your community. You should not blindly adopt the responses others have used; you must decide whether they are appropriate to your local situation. What is true in one place may not be true elsewhere; what works in one place may not work everywhere.

- **Are willing to consider new ways of doing police business.** The guides describe responses that other police departments have used or that researchers have tested. While not all of these responses will be appropriate to your particular problem, they should help give a broader view of the kinds of things you could do. You may think you cannot implement some of these responses in your jurisdiction, but perhaps you can. In many places, when police have discovered a more effective response, they have succeeded in having laws and policies changed, improving the response to the problem. (A companion series of *Response Guides* has been produced to help you understand how commonly-used police responses work on a variety of problems.)

- **Understand the value and the limits of research knowledge.** For some types of problems, a lot of useful research is available to the police; for other problems, little is available. Accordingly, some guides in this series summarize existing research whereas other guides illustrate the need for more research on that particular problem. Regardless, research has not provided definitive answers to all the questions you might have about the problem. The research may help get you started in designing your own responses, but it cannot tell you exactly what to do. This will depend greatly on the particular nature of your local problem. In the interest of keeping the guides readable, not every piece of relevant research has been cited, nor has every point been attributed to its sources. To have done so would have overwhelmed and distracted the reader. The references listed at the end of each guide are those drawn on most heavily; they are not a complete bibliography of research on the subject.

- **Are willing to work with others to find effective solutions to the problem.** The police alone cannot implement many of the responses discussed in the guides. They must frequently implement them in partnership with other responsible private and public bodies including other government agencies, non-governmental organizations, private businesses, public utilities, community groups, and individual citizens. An effective problem-solver must know how to forge genuine partnerships with others and be prepared to invest considerable effort

in making these partnerships work. Each guide identifies particular individuals or groups in the community with whom police might work to improve the overall response to that problem. Thorough analysis of problems often reveals that individuals and groups other than the police are in a stronger position to address problems and that police ought to shift some greater responsibility to them to do so. Response Guide No. 3, *Shifting and Sharing Responsibility for Public Safety Problems*, provides further discussion of this topic.

The COPS Office defines community policing as "a philosophy that promotes organizational strategies, which support the systematic use of partnerships and problem-solving techniques, to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime." These guides emphasize *problem-solving* and *police-community partnerships* in the context of addressing specific public safety problems. For the most part, the organizational strategies that can facilitate problem-solving and police-community partnerships vary considerably and discussion of them is beyond the scope of these guides.

These guides have drawn on research findings and police practices in the United States, the United Kingdom, Canada, Australia, New Zealand, the Netherlands, and Scandinavia. Even though laws, customs and police practices vary from country to country, it is apparent that the police everywhere experience common problems. In a world that is becoming increasingly interconnected, it is important that police be aware of research and successful practices beyond the borders of their own countries.

Each guide is informed by a thorough review of the research literature and reported police practice, and each guide is anonymously peer-reviewed by a line police officer, a police executive and a researcher prior to publication. The review process is independently managed by the COPS Office, which solicits the reviews.

For more information about problem-oriented policing, visit the Center for Problem-Oriented Policing online at www.popcenter.org. This website offers free online access to:

- the *Problem-Specific Guides* series,
- the companion *Response Guides* and *Problem-Solving Tools* series,
- special publications on crime analysis and on policing terrorism,
- instructional information about problem-oriented policing and related topics,
- an interactive problem-oriented policing training exercise,
- an interactive *Problem Analysis Module*,
- online access to important police research and practices, and
- information about problem-oriented policing conferences and award programs.

Acknowledgments

Contents

The Problem of Aggressive Driving

What This Guide Does and Does Not Cover

This guide begins by describing the problem of aggressive driving and reviewing factors that increase its risks. It then identifies a series of questions to help you analyze your local aggressive driving problem. Finally, it reviews responses to the problem and what is known about these from evaluative research and police practice.

Aggressive driving includes what is commonly referred to as *road rage,* which involves assault motivated by driver anger. This guide covers aggressive driving and the driving-related triggers for road rage. Aggressive driving has gained widespread public attention over the past 20 years largely due to highly publicized crashes and crimes associated with road rage.

Aggressive driving is but one aspect of the larger set of problems related to impaired, dangerous, and irresponsible vehicle use. This guide is limited to addressing the particular harms aggressive driving creates. Related problems not directly addressed in this guide, each of which requires separate analysis, include:

- drunken and impaired driving,
- reckless driving,
- joyriding,
- speeding,
- street racing,
- unlicensed driving,
- hit-and-run crashes,
- red-signal and stop-sign violations, and
- inattentive driving.

Other guides in this series—all of which are listed at the end of this guide—cover some of these related problems. For the most up-to-date listing of current and future guides, see www.popcenter.org.

General Description of the Problem

Aggressive driving refers to dangerous driving that disregards safety and courtesy. The U.S. National Highway Traffic Safety Administration defines aggressive driving as occurring "when individuals commit a combination of moving traffic offenses so as to endanger other persons or property."[1] Driving behaviors that commonly constitute aggressive driving include:

- speeding,
- racing,
- frequently changing lanes,
- cutting off other drivers,
- failing to signal,
- running red lights,
- failing to yield,
- tailgating,
- slowing rapidly to discourage a tailgater, and
- boxing other cars in and using other intimidation maneuvers.[2]

In addition, aggressive drivers may further try to intimidate their victims by shouting or making obscene gestures at them. Several different legislatively-defined driving offenses are similar in some ways to aggressive driving. While statutory definitions vary from state to state, they include the following:

Careless, inattentive, distracted, or negligent driving involves failing to exercise normal care, or endangering people or property, while driving a vehicle. Many states are adding to their statutes specific language prohibiting use of certain technologies while driving. Some states include negligent driving under reckless or impaired driving statutes so that defendants plead to the lesser negligent-driving charge to avoid the more serious charge.

Reckless driving is a more serious form of careless or negligent driving. It is variously defined as creating a substantial or unjustifiable risk of harm, a conscious or wanton disregard of safety, and/or a gross deviation from reasonable behavior in the situation.

Aggressive driving addresses many of the same behaviors covered by reckless driving statutes, but adds a notion of a pattern of behaviors occurring over a short period and/or intention. As intention is difficult to prove, states with statutes that require the standard of intention be met often see aggressive driving charged as reckless driving. Driving behaviors included in the definition of aggressive driving could result from aggression, selfishness, or competition.

As many of the behaviors that constitute aggressive driving could also occur in the absence of aggression (if a driver is inattentive, for example), some state legislatures use a threshold of three or more potentially aggressive driving behaviors committed in a sequence or over a short period in their statutory definitions. Aggressive driving definitions should cover hostile, competitive, and selfishly motivated driving behaviors.

Road rage is a more extreme form of aggression that involves criminal intimidation and/or violence precipitated by driving activities. Road rage involves an intent to harm, can involve use of the vehicle as a weapon, or can take place outside the vehicle(s) involved.

Driving provokes anger more often than other activities.[3] Driving is a goal-oriented activity, the purpose being to get from point A to point B expeditiously; yet people easily and frequently thwart driving goals. Driving is also a stressful activity that exposes drivers and passengers to potentially significant dangers. Incivility amongst drivers is common[4] and reliably provokes anger in its recipients. For all these reasons, drivers report frequently feeling angry.[5]

Anger may, but usually does not, lead to aggressive driving or road rage. Situational, cultural, and individual factors combine to cause angry drivers to behave aggressively behind the wheel.

Prevalence of Aggressive Driving

Two-thirds of traffic fatalities involve behaviors commonly associated with aggressive driving, such as speeding, running red lights, and improperly changing lanes.[6] One-third of all traffic injuries result from aggressive driving.[7] Speeding, a common element in aggressive driving, contributes to about one-third of fatal crashes.[8]

Several studies have shown that somewhere between 20 percent and 35 percent of drivers have honked their horns, yelled, obscenely gestured, and cursed at other drivers. Estimates indicate that from 6 percent to 28 percent of drivers have tailgated or blocked other drivers' vehicles.[9] These behaviors can be part of a pattern of acts that constitute aggressive driving, and they can also provoke anger that could lead to aggressive driving in others.

Research findings are mixed on whether aggressive driving is more prevalent today than in the past. What *is* known is that aggressive driving occurs frequently and is a significant contributor to injury and fatality collisions. While the violent and assaultive acts that constitute road rage are rare, they deserve police attention.

Harms Caused by Aggressive Driving

Car crashes are the leading cause of accidental death and injury in the United States and the leading cause of all deaths amongst young people.[10] Aggressive driving is responsible for a significant proportion of all car crashes. Aggressive drivers kill two to four times more people than drunken drivers.[11] Aggressive driving creates an atmosphere of incivility on the roads, heightening driving anxiety and triggering more driving anger.

Factors Contributing to Aggressive Driving

Understanding the factors that contribute to your problem will help you frame your own local analysis questions, determine good effectiveness measures, recognize key intervention points, and select appropriate responses.

Frustration and Anger

Frustration at being slowed or thwarted from a driving goal can easily lead to anger.[12] Frustration can also lead to selfish or competitive aggressive behavior—behavior designed to achieve personal driving goals at the expense of others or the common good.

Frustration and anger do not, however, always result in aggression. Driving aggression occurs when a mix of personal, situational, environmental, and cultural factors combine to reduce the inhibitions most drivers feel against acting aggressively. Personal factors such as antisocial and competitive tendencies can make a driver prone to aggression, but aggression is unlikely to result absent other contributing factors. Environmental factors such as the anonymity cars provide, situational factors such as feeling urgent about meeting driving goals, and cultural factors such as approval for placing personal goals over the common good can all contribute to lower the qualms drivers would otherwise have against aggressive behavior.

Demographics

Research suggests that the single largest group of aggressive American drivers is poorly educated white men under 30 years old who drive high-performance vehicles.[13] There is a strong correlation between such young white men and violent crimes, serious traffic offenses, license suspensions, and minor moving violations. These young white men also appear to be the most likely group to engage in more extreme road rage behaviors.[14] They may be more prone to have antisocial, hostile personalities (as described in the next section). In general, younger people tend to lack the impulse control gained with age, and men tend toward more aggressive behavior than women.

Because members of this group so often break traffic laws, they will be disproportionately represented in any traffic enforcement effort. Accordingly, police officers will contact the most dangerous drivers by enforcing the entire range of moving violations.[15]

While young white men are the largest single group of aggressive drivers, there is no single definitive profile of aggressive-driving perpetrators.[16] Otherwise law-abiding citizens commit many aggressive driving acts.[17]

Personality or Individual Traits

There appear to be two primary personality types prone to becoming aggressive behind the wheel. One is an antisocial, hostile personality; the other, a competitive one.[18] Antisocial drivers are associated with the young white male group. There is significant overlap between the factors associated with antisocial driving and those associated with criminal behavior.[19] These include:

- impulsiveness,
- sensation-seeking,
- unrealistic thinking (underestimating risks and overrating abilities to handle problems),
- poor problem-solving skills,
- egocentricity (lacking concern for others' well-being), and
- values (caring only about oneself).[20]

This antisocial group of drivers is prone to hostile aggression in and out of their vehicles. Antisocial drivers have high rates of accidents and violations and are many times more likely than the general driving population to have criminal histories.[21]

Retaliation and revenge are common motives for antisocial drivers who feel disrespected, slighted, infringed-upon, or endangered. This same motive is common in domestic violence, gang violence, theft, and arson.[22] Seemingly trivial events such as perceived insults to drivers' self-image or safety most often provoke driving anger. These triggering events tap into a deep well of anger already present in the antisocial driver.

Triggering incidents can include frustrations such as slow, hesitant, or distracted drivers; scares such as near-collisions; offensive behaviors such as rude gestures; and territorial encroachments such as competing for a parking space or failure to yield.[23] These acts are not intrinsically aggression-inducing; it is the way a person interprets them and how the person reacts to that interpretation that causes the acts to trigger aggression.[24]

The second group of aggressive drivers appears prone to socially approved forms of aggression such as competition, which can easily be translated into aggressive driving behaviors. Competitive drivers dislike being passed, enjoy the thrill of speeding, and lack the internal controls to override their competitiveness on the road. Research has shown that both the antisocial and the competitive drivers have significantly more accidents and traffic violations than the general driving public.[25]

Environmental Conditions

A tendency toward aggression or competitiveness is not sufficient to cause aggressive driving. Environmental, situational, or cultural factors must come into play before someone with such tendencies will be triggered to drive aggressively.

The car's and the road's physical environment can either facilitate or inhibit the expression of aggression while driving. Manipulating environmental conditions can inhibit antisocial and competitive drivers from driving aggressively.

The lack of negative reinforcement (citations) for aggressive driving can also contribute to a driver's likelihood to engage in it. Given the high number of aggressive driving actions and the relatively low number of police officers, the probability of officers' detecting any particular aggressive driving action is rather low.[26]

Street design can facilitate or inhibit speeding. For example, drivers are likely to speed on wide streets with long, straight stretches.[27] Conversely, traffic-calming devices compel drivers to slow down and exercise skill and attention to the road.§

§ See Problem-Specific Guide No. 3, *Speeding in Residential Areas, 2nd Edition,* for further information.

Road conditions can increase driver frustration. Bottlenecks, lack of signs indicating the source of unexpected congestion, short green-light intervals, confusing intersections (such as roundabouts), and stretches of uncoordinated traffic lights can trigger aggression.

The social environment also influences driving behavior. Driving is a social activity, and good driving depends on accurate interpretation of social cues, without which drivers are unable to judge what others are likely to do. Antisocial drivers may be unable to accurately anticipate others' moves on the road.

Paradoxically, while driving is a social activity, drivers are isolated from each other. This isolation lessens the impact of cultural norms that prevent uncivil behavior in other social settings.[28] Anonymity is the most significant social factor mediating aggressive driving. A driver in a convertible is more likely to feel constrained by social conventions concerning driving behavior than is a driver in an enclosed vehicle with darkly tinted windows.

Situational Factors

Technologies such as mobile phones and e-mail devices have combined with economic pressures to compress many drivers' conception of time, creating intense pressure to make every minute productive. Commuting time, for many drivers, is the last frontier of unexploited time, and the perception that commuting time is lost or wasted time contributes to aggressive efforts to shorten commutes.[29] Time pressure or urgency to achieve a driving goal—such as getting to work or home quickly—combines with frustrating factors such as congestion to trigger aggression in antisocial and competitive drivers.[30]

There is a wide variety of situational variables that can create or promote situational aggression. For example, heat, noise, or other annoying environmental conditions can make drivers irritable and increase the likelihood that a driver will resort to violence when feeling irritated or threatened on the road.[31] These conditions can goad drivers who tend to have aggression issues toward violent responses to provocative events.[32]

The most significant triggering events for road rage are relatively minor. They include aggressive tailgating (62% of cases), headlight flashing (60% of cases), deliberately obstructing other vehicles (21% of cases), and verbally abusing other drivers (16% of cases).[33] In short, aggressive driving begets aggressive driving.

Antisocial and competitive drivers don't commit *all* aggressive driving acts. Ordinary people in extreme situations, including impaired, stressed, and time-pressured drivers, commit some of them.

There is significant overlap between aggressive and violent drivers and their victims. One study found that road rage offenders were more than five times as likely as the general population to have been past victims of a road rage incident.[34] Vigilantism constitutes a common form of retaliatory road rage, where an otherwise responsible driver decides to teach an aggressive driver a lesson by returning the aggression.

In the absence of intensive enforcement of driving laws, victims of aggressive driving sometimes dangerously overreact. Drivers who would express their frustration in less harmful ways in other situations find they have no outlet for expressing anger while driving except by engaging in aggressive driving themselves. It is equally difficult for drivers who frustrate or inconvenience others—intentionally or not—to communicate remorse while driving, which, if they could, might well defuse other drivers' aggression.[35]

One common aggressive driving trigger does not even occur on the road. Parking rage can arise in busy parking lots or those with cramped spaces. Parking tends to trigger territorial and competitive behavior, which can lead to confrontations.[36] Anecdotal evidence indicates that the general driving public is most likely to engage in aggressive driving in parking lots.[37]

Cultural Factors

Culture influences aggressive behavior by shaping how the aggressor interprets triggering events and by influencing whether the aggressor believes a violent response is culturally acceptable in a given situation. To the extent the culture values convenience, individuality over the common good, primacy of cars over bicycles, fast-paced lifestyles, and competition, it promotes aggressive driving.

Some researchers have characterized American culture as contentious, argumentative, and disrespectful,[38] and the American media as portraying aggressive driving in a positive light, thereby creating aggressive role models. Risky-driver role models create cultural norms accepting of dangerous and threatening driving behavior.[39] Currently, mainstream society does not stigmatize vehicle crimes in the same way as other crimes. Popular media portray aggressive driving as cool, thereby implying social approval, especially to young drivers.

Multiple Causes

While each of the above factors contributes to aggressive driving, none alone explains it. A complex dynamic operates whereby individual traits, situational circumstances, car- and road-related factors, and cultural influences all interrelate to build up to aggressive action or excessive risk-taking while driving. Sitting in traffic on a very hot day with no air-conditioning might be irritating, for example, but in the absence of a triggering event that taps into an antisocial outlook or competitive instinct, aggressive acts are unlikely to occur. Being cut off in traffic is a potential trigger, but without latent aggression and a stressful or irritating environment, aggressive driving is again unlikely to occur.

Understanding Your Local Problem

Effective responses to aggressive driving will take into account the preceding general information about the dynamics and contributing factors to it, as well as a specific understanding of your local problem. An analysis of the local problem will shape the most effective response possible in your jurisdiction.

Responses tend to work best when based on sound data about problem behaviors, locations, times of day, physical features, and offender characteristics in your locale.

Stakeholders

In addition to criminal justice agencies, the following groups have an interest in the aggressive driving problem, and you should consider them for the contribution they might make to gathering information about the problem and responding to it.

Elected officials can gauge public concern about the problem and enact legislation to address it.

The media can call attention to aggressive driving issues and how to avoid becoming a victim or a perpetrator.

State and local motor vehicle and highway safety departments may have conducted their own studies of the problem and can identify and mitigate the physical environmental factors that contribute to aggressive driving.

Transportation safety advocates may also have conducted studies of the problem and can raise awareness about aggressive driving, and work with states and localities to reduce the factors that contribute to it.

Private businesses, including business associations, have a stake in ensuring employees can commute to their jobs safely and efficiently. They can partner with states and localities in addressing aggressive driving issues and disseminating information to employers, especially to businesses that have vehicle fleets.

Private businesses, including cellular phone and data companies, which keep records on electronic device use, can be partners in providing evidence after violations.

Motor vehicle insurance companies benefit financially when traffic collisions are reduced. They can partner with police to fund research on aggressive driving, develop community education materials, and include information on aggressive driving in their publications.

Road construction contractors can work with police to design road construction sites and traffic detours to minimize traffic disruptions and optimize safety.

Auto clubs can educate members about ways to avoid being either a victim or a perpetrator of aggressive driving.

Victims' advocacy organizations can collect data on aggressive driving victimization for use in assessing the extent and severity of a locale's problem.

Public health agencies' and hospitals' injury prevention staff can conduct research on the prevalence of aggressive driving, its contribution to injuries, and the injuries' social and cost impacts. These data can support police problem-solving efforts.

Asking the Right Questions

The following are some critical questions you should ask in analyzing your particular problem of aggressive driving, even if the answers are not always readily available. Your answers to these and other questions will help you choose the most appropriate set of responses later on. The various entities with a stake in the problem and its solution can help you collect some of these data, as not all of the information will be readily available to police.

If you rely solely on traffic crash and citation data, recognize that you will not have a complete picture of the problem, as much aggressive driving goes undetected, unenforced, or unreported.

Incidents

- How many aggressive driving incidents occur in your jurisdiction? How many do other motorists report to police? How many do police discover during a vehicle crash investigation? How many unreported incidents are estimated to occur? (You would need to conduct a survey of motorists to obtain this information.)

- What harms do you know aggressive driving is causing in your jurisdiction? Vehicle crashes? Injuries? Psychological trauma (e.g., fear)?

- Who brings the incidents to police attention? Are they mostly on-views, technology-initiated, citizen-reported, or some combination?

- What are the most prevalent and/or most dangerous aggressive driving behaviors in your jurisdiction?

- What types of events trigger the aggressive driving incidents?

- How concerned is the community about aggressive driving?

Offenders

- Are there certain driver profiles that stand out in your jurisdiction (e.g., the antisocial or competitive drivers described earlier)?

- What do aggressive drivers say about their motivations for driving aggressively?

- What proportion of cited aggressive drivers are repeat offenders?

Victims/Complainants

- Are most victims/complainants also engaging in aggressive driving behaviors before documented incidents?
- Are most victims/complainants engaging in nonaggressive behaviors that typically irritate other drivers (e.g., driving slowly in the left lane)?
- What do you know about the demographics of victims/complainants (e.g., age, gender, race, and ethnicity)?
- Are there any tensions among different demographic groups contributing to the aggressive driving complaints?

Locations/Times

- Where do aggressive driving incidents typically occur?
- Are there environmental factors at hot spots that contribute to the incidence of aggressive driving (e.g., road construction, confusing intersections, congested roads)?
- Are there situational factors related to the location that contribute to the incidence of aggressive driving?
- Are most incidents on freeways, arterials, collectors, or residential streets?
- When do most incidents occur (time of day, day of week, special occasions, seasons)? What is it about these times that contribute to aggressive driving?

Current Responses

- How do police respond to aggressive driving complaints?
- To what extent do police officers actively look for and intervene in aggressive driving?
- How many citations/arrests do police issue/make for aggressive driving offenses?
- What penalties or other sentences are typically imposed on those convicted for aggressive driving offenses?

Measuring Your Effectiveness

Measurement allows you to determine to what degree your efforts have succeeded, and suggests how you might modify your responses if they are not producing the intended results.

You should take measures of your problem *before* you implement responses, to determine how serious the problem is, and *after* you implement them, to determine whether they have been effective. You should take all measures in both the target area and the surrounding area. For more detailed guidance on measuring effectiveness, see the Problem-Solving Tools Guide No. 1, *Assessing Responses to Problems: An Introductory Guide for Police Problem-Solvers.*

The following are potentially useful measures of the effectiveness of responses to aggressive driving:

• reduced number of crashes in which aggressive driving is a contributing/causal factor, broken down by property damage only, injury, and fatality;

• reduced severity of injuries;

• reduced number of citizen reports and requests for police response (these may increase initially if citizens are encouraged to report aggressive driving more often); and

• improved driver perceptions of safety.

Responses to the Problem of Aggressive Driving

Your analysis of your local problem should give you a better understanding of the factors contributing to it. Once you have analyzed your local problem and established a baseline for measuring effectiveness, you should consider possible responses to address the problem.

The following response strategies provide a foundation of ideas for addressing your particular problem. These strategies are drawn from a variety of research studies and police reports. Several of these strategies may apply to your community's problem.

It is critical that you tailor responses to local circumstances, and that you can justify each response based on reliable analysis. In most cases, an effective strategy will involve implementing several different responses. Law enforcement responses alone are seldom effective in reducing or solving the problem.

Do not limit yourself to considering what police can do: carefully consider whether others in your community share responsibility for the problem and can help police better respond to it. In some cases, you made need to shift the responsibility of responding toward those who have the capacity to implement more-effective responses. (For more-detailed information on shifting and sharing responsibility, see Response Guide No. 3, *Shifting and Sharing Responsibility for Public Safety Problems*.)

General Considerations for an Effective Response Strategy

There are several response strategies that can effectively address aggressive driving, including enforcement, legislation, environmental and situational factors, public education, and judicial responses. A comprehensive strategy that blends tactics from each of these components and that addresses psychological, environmental, situational, and cultural factors is most likely to be effective.

A comprehensive aggressive driving intervention should focus on reducing the likelihood that drivers will act aggressively and the aspects of the driving environment that precipitate aggressive behavior. A focus on drivers can occur at the individual or aggregate level. At the individual level, enforcement and sanctions can modify the behavior of identified aggressive drivers. At the aggregate level, data analysis can identify hot spots for targeted saturation and emphasis enforcement, and public education can impact group behavior. A focus on the driving environment can lead to interventions that mitigate the physical and social environments and situational stressors that contribute to aggressive driving.

Specific Responses To Reduce Aggressive Driving

Enforcing Traffic Laws

Traffic enforcement to address aggressive driving has three primary goals:

- to deter the cited driver from driving aggressively again in the future,
- to deter other drivers who learn about police enforcement from driving aggressively, and
- to remove aggressive drivers from the roads while they are angry and most dangerous.

Deterrence is advanced through significant fines or other consequences such as jail time, and through high-visibility enforcement.

Enforcement provides only partial deterrence to aggressive driving because of police staffing limitations. Most of the time, police do not catch drivers who violate the law. Risk-inclined drivers are less likely than the general driving population to accurately gauge the likelihood of being caught.

If you are considering emphasizing aggressive driving enforcement, you should narrowly define the scope of the intervention, deciding which observable behaviors and sites you should target, what the ticketing threshold will be, what information you will collect, what type of enforcement you will deploy, what deployment schedule you should use, and what planned project to implement.

You should also consider what types of partners should be involved; whether you will undertake efforts to educate the general public as part of the project; what type of education and sanctions will be in place for offenders; and whether construction, weather, or other situational variables are likely to affect the project.

Geographic Information System (GIS) mapping of aggressive driving hot spots can help you target your efforts where the need is greatest. You can identify hot spots based on information such as traffic or speed survey findings, collision and fatality data, and citation data. You can compare aggressive driving or road rage hot spots with felony and drug crime hot spots to increase the value of hot-spot enforcement.

1. **Deploying surveillance technologies.** Surveillance technologies can increase the pervasiveness of enforcement, creating greater saturation and increasing both the likelihood of apprehending offenders and their perception of that likelihood. This increased saturation enhances deterrence.

You can use surveillance technologies for automatic enforcement through mailed citations. They also help you collect data about aggressive driving behaviors such as speeding and running red lights.

There is a variety of surveillance technologies you can use to apprehend and deter aggressive drivers, such as the following:

• Red-light photo-enforcement cameras.
• Automatic number-plate recognition technology in aggressive-driving hot spots.

- Closed circuit television or CCTV at aggressive-driving hot spots, construction zones, or high-collision intersections that can detect unusual traffic patterns and illegal maneuvers and capture license plate data for automatic enforcement or mailed warnings.
- Video-equipped patrol cars recording drivers' behavior and police stops.
- Video-equipped unmarked cars to follow aggressive drivers before marked-car vehicle stops.
- Tailgating detection devices for fleet vehicles.
- Road sensors and cameras working in concert to detect illegal passing.
- Helicopter-mounted cameras that can download clear license plate number photos into patrol vehicles.
- Electronic speed displays attached to speed-limit signs.
- Crash reconstruction software that allows investigators to clear congested roads quickly.
- Downstream lights that allow traffic enforcement officers to cite red-light runners without being physically present in dangerous intersections.
- Telephone-reporting hotlines connected with police follow-up procedures such as keeping a database for use in future investigations, mailing citations, mailing warnings, or mailing anger-management or aggressive-driving-avoidance tip cards.
- Data from vehicles equipped with event data recorders (EDR) could be subpoenaed to support aggressive driving investigations and prosecutions. Data typically recorded include whether the driver was speeding, whether the driver was pressing the brakes, and whether the driver was wearing a seatbelt. Some jurisdictions, including that of the Pennsylvania State Police, access data from vehicle EDRs when investigating crashes.

The purpose of electronic surveillance is both to facilitate detection and apprehension, and to promote self-monitoring of driving behavior. Cameras have succeeded in achieving substantial reductions in speeding, and red-light cameras have succeeded in reducing infractions, injuries, and fatalities.[40] Nonetheless, visibility would have to be very high, or surveillance widespread,

for enforcement alone to impact risk-inclined drivers. Antisocial drivers, especially, are likely to be difficult to influence with negative reinforcement because they tend to overestimate the benefits and underestimate the risks of their aggressive driving behaviors.

You should consult your state codes to ensure that camera- and mail-based ticketing is permitted, and laws should be amended, as necessary, before enforcement programs' initiation.[41] If your jurisdiction decides to use electronic surveillance and enforcement, you should first gauge public support for using such technology. Publicizing the contemplated use of surveillance technology allows you to assess the public's reaction before implementation. You might also consider issuing warnings for a set period before issuing citations. An evaluation program should be designed before police issue citations.[42]

Non-technology-based surveillance, such as when police monitor aggressive driving from aircraft, highway overpasses, and unmarked cars, is also used around the country to apprehend and deter aggressive driving. Some types work well with technology-based enforcement.

2. **Conducting high-visibility enforcement.** High-visibility enforcement has the effect of calming the driving behavior of a greater number of motorists than those police actually stop. Using marked vehicles can increase visibility, as well as adding magnetic "aggressive driving patrol" signs to enforcement vehicles.

Pennsylvania Department of Transportation.

Example of high-visibility aggressive driving enforcement.

§See Response Guide No. 1, *The Benefits and Consequences of Police Crackdowns,* for further information on how to make hot-spot enforcement effective.

3. **Conducting "centipede" enforcement.** In centipede enforcement, six or more speed enforcement cars are placed approximately two miles apart to stop speeding drivers who think it is safe to speed up after passing a police officer who has pulled another driver over. Centipede enforcement is useful for apprehending aggressive drivers by distinguishing them from motorists who maintain lower speeds after they pass the initial visible enforcement officer.

4. **Conducting enforcement crackdowns.** Aggressive driving enforcement crackdowns, properly timed and executed, can be effective.§ For example, saturation police patrols on congested streets or around aggressive driving hot spots focus enforcement geographically. In addition to enforcing actual aggressive driving violations, enforcing precursors or actions that commonly trigger aggressive driving—such as blocking intersections during rush hour, failing to yield the right-of-way, and abruptly changing lanes—can also help reduce aggressive driving.

5. **Referring habitual aggressive drivers to state licensing agencies.** Where police officers have ready access to motorists' driving histories, they can determine whether the current aggressive driving violation reflects a pattern of similar driving. If so, the officer might then refer the driver to the state licensing agency for consideration of a license suspension or revocation.

6. **Checking records of portable electronic device use.** If officers suspect that aggressive driving occurred in conjunction with the driver's use of a cell phone, personal digital assistant, or other distracting technologies, they should check those devices' electronic records to verify their time of use and, perhaps, the nature of the communication. Enhanced penalties may apply.

Enhancing Legislation and Regulation

Efforts to address aggressive driving should include a review of your jurisdiction's current regulatory environment. This will help determine whether police agencies have legislative authority to address aggressive driving effectively.

A robust aggressive-driving regulatory environment would include the following:

- A statutory definition of aggressive driving exists and does not require that intent to harm be proved, but rather is based on objective driving behaviors. Intent to harm is difficult to prove in court.

- Criminal statutes and sentencing guidance provide for enhanced penalties for violence arising from road incidents.

- A range of judicial sanctions exist for aggressive driving, including fines, jail time, license suspensions and revocations, vehicle confiscation, booting or impounding, anger management treatment, probation, and enhanced penalties for repeat violators.

- Police are authorized to cite drivers on the basis of camera, laser, and other technological evidence.

- Police are authorized to use unmarked vehicles for traffic enforcement.

- Police are authorized to work in teams in which the officer issuing the citation is not the same officer who witnessed the incident.

7. **Defining and prohibiting aggressive driving in the state vehicle code.** At a minimum, aggressive driving should be defined in the state traffic code and sanctions prescribed. States and localities vary widely in terms of whether they have aggressive driving laws in place and how they define aggressive driving. Arizona, Nevada, and Delaware developed aggressive driving prohibitions in the late 1990s, and other states have since followed suit. Arizona defines aggressive driving as the co-occurrence of speeding and two other traffic violations that create an immediate danger to another. The law includes a list of violations that meet the terms of the definition, including failing to obey a traffic signal, passing on the shoulder, unsafely changing lanes, tailgating, or failing to yield. Other parts of the state's traffic code separately define each of these violations.

8. **Restricting window tinting.** Window tinting increases driver anonymity, thus lowering inhibitions to aggressive driving. Restricting the level of front window tinting reduces driver anonymity. Some states regulate the percentage of light that window tinting can block. Rules vary widely by state.

9. **Requiring Intelligent Speed Adaptation systems in large vehicle fleets.** Intelligent Speed Adaptation systems can be installed in vehicles to notify drivers and/or automatically slow vehicles when drivers exceed speed limits. While private vehicle owners may not choose to use such technology, these systems could help improve professional drivers' driving habits when the entire fleet uses them.

Removing or Modifying Environmental and Situational Triggers

Certain environmental changes are known to reduce aggressive driving. For example, more efficient use of existing road capacity can improve traffic flow, better aligning natural human behavior with desired driving behavior. Engineering efforts such as coordinated signals, high-occupancy vehicle (HOV) lanes, shoulders converted into merge lanes, and similar measures can improve traffic flow. Non-road efforts, such as telecommuting and flexible work schedules, can also increase road-use efficiency.[43]

Environmental and situational responses are varied, and can include strategies that address vehicles' features, traffic signals' operation, road features, signs, and other means for providing additional information to drivers and traffic-calming techniques. Many of the following environmental strategies reflect Crime Prevention Through Environmental Design (CPTED) principles,§ or what traffic engineers call *ergonomic strategies.*

§See Problem-Solving Tools Guide No. 8, *Using CPTED in Problem-Solving,* for further information.

10. **Timing traffic signals to reduce aggressive driving triggers.** Traffic-signal timing can influence driver frustration and anger and can facilitate safe and nonfrustrating driving.[44] Ensuring adequate green signal times to reduce driver waits and frustration, eliminating excessively long red signals, ensuring appro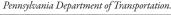priate signal-change intervals, and coordinating or synchronizing traffic signals all permit traffic to flow more smoothly and irritate drivers less.

11. **Enhancing traffic-signal and street-sign visibility.** Low traffic-signal visibility puts drivers in the position of having to make last-second driving decisions, which could increase driver errors and violations. Easy-to-see signal housings and signs that provide advance warning about approaching signals on roads with high speeds and/or short sight distances can enhance traffic-signal visibility. Sufficient signal brightness is also important to help drivers clear intersections quickly. Clear and highly visible street signs help drivers find their way and also reduce last-second driving decisions.

12. **Improving drivers' commute information in congested areas.** The more drivers know about what to expect on their commutes, the better prepared they are to handle delays calmly. Information can reduce driver frustration in situations where congestion and time urgency could combine to trigger aggression. There are many ways that transportation departments have enhanced drivers' information about their driving environment on freeways. Such tactics include signs that inform drivers of traffic delays, their causes, alternate routes, and estimated arrival times to urban centers. Added information gives drivers a sense of control and the option to choose alternate routes.
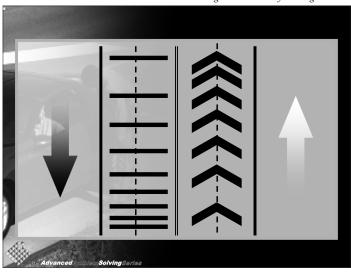
Pennsylvania Department of Transportation.

Providing drivers with more information about their commutes can help them to handle delays calmly.

13. **Clarifying appropriate merging zones.** Clarifying where drivers should merge can reduce all drivers' frustration. This can be achieved by using signs and painted indications on the road, for example, an arrow with the words "Merge Here" painted nearby. Merging can be encouraged late or early, as long as all drivers have the same idea about the point at which they should start merging. From a traffic-flow perspective, appropriate merging involves cars' using all lanes and merging at a fair speed rather than forming a single queue early and coming to a near stop.

14. **Providing speed and distance indicators in areas where speeding or tailgating is common.** When drivers are reminded of the law and their own driving behavior, they often monitor themselves and self-enforce driving rules. Police widely use digital speed-limit signs that indicate the legal limit and the speed of the approaching driver to remind drivers to slow down in areas where speeding is common. Similarly, painted dots on the road can indicate appropriate driving distance for the road's speed. Based on road speed limits and safe following distances, painted indicators can help drivers gauge their distance from the car ahead and remind them that safe following distances are important. Painted chevrons create the illusion of a narrowing roadway, thereby reducing driving speeds.[45]

Virginia Community Policing Institute.

The use of painted chevrons has been successful at reducing driving speeds.

§See Problem-Specific Guide No. 3, *Speeding in Residential Areas, 2nd Edition* for further information.

15. **Using traffic-calming features in neighborhoods where speeding is common.** Traffic calming describes a wide range of road and environmental design changes that either make it more difficult for a vehicle to speed or make drivers believe they should slow down for safety. Some commonly used physical features include flat-topped speed bumps that double as crosswalks, traffic circles, radar speed signs, and road markings. Visual cues include street trees and streetlights. Tested traffic-calming approaches create self-enforcing behavior in drivers.§

16. **Maximizing the use of existing roads. In already congested areas, adding road capacity is not feasible, for either lack of funding or space.** You can use existing road capacity more effectively, however. Measures such as coordinating traffic-signal timing, using HOV lanes and promoting nontraditional work hours and arrangements all reduce congestion without requiring added road capacity.

17. **Modifying physical road features.** Sometimes modifying existing road features can reduce triggers for aggressive driving. By converting shoulders to merge lanes, congestion at peak traffic times can be somewhat mitigated. Creating right-sized freeway entrance and exit ramps that allow for effective merging can also reduce congestion. Converting shoulders into well-designed bus and bike lanes encourages alternatives to vehicle use. Limiting road construction and repair work to off-peak hours also reduces congestion and removes an aggressive driving trigger.

Educating Drivers

In public health matters such as road safety, primary prevention is generally considered the most effective approach to reducing injury. Although a small percentage of drivers are responsible for most traffic incidents, a primary prevention approach gets the prevention message out to all drivers.

Deterrence is heightened when society stigmatizes the behavior in question. Potentially aggressive drivers weigh the likelihood of negative consequences such as fines, increased insurance, vehicle damage, injury, and social stigma against the rewards of breaking traffic laws, namely enjoyment and efficient mobility. Antisocial drivers are partially immune to the deterrent effects of most negative consequences because they underestimate their personal risk, but both antisocial and competitive drivers are interested in maintaining their image, thus making them susceptible to social stigma's influence.

According to an advertising executive, "We need to raise the salience of the embarrassment that…their failure to contain their rage on the road will make them appear foolish and pathetic. The most powerful deterrent to road rage will be the damage it might do to [an aggressive driver's] image…. If people who are prone to road rage are to maintain their cool, it will be because, by doing so, they can avoid social disapproval."[46]

18. **Stigmatizing aggressive driving through public information campaigns.** The most promising education approach for educating antisocial drivers involves stigmatizing aggressive driving behaviors in much the same way advertising campaigns transformed social perceptions of drunken driving.[47] Such a campaign targeting the young white male demographic from which most antisocial drivers are drawn is more likely to reduce aggressive driving than a general prevention campaign.[§]

§See Response Guide No. 5, *Crime Prevention Publicity Campaigns*, for further information.

19. **Addressing aggressive driving in drivers' education curricula.** Mandatory aggressive driving components in driver's education can instruct young people, who are more at risk for aggressive driving, in the triggers, dangers, and consequences of such behavior.[48] Virginia includes information about avoiding aggressive driving behaviors in its mandatory drivers' education curriculum.

20. **Providing primary education on avoiding aggressive drivers.** The general public could likely benefit from education about how to avoid becoming the victim or aggressor in a driving violence or aggressive driving incident.[49] Education-based responses include the following:

- a media and public outreach campaign to stigmatize aggressive driving behaviors;

- a media campaign promoting safe parking-lot etiquette;

- road signs with public education messages, for example, signs reminding slower traffic to keep right, clear street signs to help drivers find their way, and signs that inform drivers about their obligation to share the road with cyclists in areas where bicycling is common;

- officers' providing educational materials to cited drivers; and

- educational programs for new, young drivers, focused on the social aspects of driving and avoiding aggressive driving offending and victimization.

21. **Training professional drivers in aggressive driving prevention.** Professional drivers, such as those who drive large trucks, taxis, and buses, should receive special training concerning general driving attitudes and avoiding aggressive behaviors as a condition of their employment.[50] Company policies against aggressive driving behaviors, vehicle monitoring and regulating devices, and surveillance of drivers' behavior can complement training.

22. **Encouraging employer monitoring of professional drivers' driving.** Commercial fleets that used "How's my driving?" bumper stickers reduced crashes between 20 percent and 53 percent.[51] Some companies have hired trained safety consultants with law enforcement or fleet management experience to report to the company on their commercial drivers' driving behavior. Such consultants can surveil drivers' behavior patterns in a variety of situations and provide credible, professional feedback to employers.

Enhancing the Consequences of Aggressive Driving

23. **Requiring anger management treatment for aggressive drivers.** Anger management treatment may be beneficial to aggressive drivers, risky drivers, impaired drivers, and drivers convicted of violent offenses. Cognitive-behavioral therapy for anger management has proved effective in reducing anger.[52] Court referral to anger management treatment has been demonstrated effective in reducing aggressive driving.[53] Traffic court judges in some states can refer aggressive driving offenders to anger management treatment or traffic safety education, in addition to imposing fines and jail time. Both the Maryland and Virginia suburbs of Washington, D.C. have anger management treatment options available to traffic court judges. The National Center for State Courts examined these programs, but an insufficient number of referrals took place to support a program outcome evaluation.

Many jurisdictions already have post-conviction programs to address impaired drivers' needs. These programs are often required as a condition of license reinstatement. One researcher concluded, "Currently, available evidence provides strong support that these programs can reduce subsequent recidivism and collisions and may provide additional health and social benefits as well."[54] Court-based anger management programs require provider training and certification and eligibility guideline checklists for judges to use in making referrals.

Courts could also require that aggressive drivers with alcohol and/or mental health issues seek treatment for those problems as part of their diversion or sentence.[55] Judges must be trained and willing to make referrals, and police officers must be trained to write citations in a way that will indicate to judges that the defendant is a candidate for referral to anger management for aggressive driving.

Courts may not have sufficient numbers of eligible offenders to keep treatment programs open if only aggressive driving offenders are eligible. Because reckless and aggressive driving are interrelated and involve some of the same behaviors, it may make most sense to have both be eligible offenses, although reckless drivers should not be automatically referred, as they may not have anger management problems.

Drivers identified by courts in other matters as having anger control issues such as intermittent explosive disorder, or other indicators that a person is highly vulnerable to acting aggressively, could be referred to state licensing agencies for license restrictions or additional education requirements. License restrictions are commonly used for physical and mental health issues that could impact driving safety. While treatment for convicted aggressive driving offenders has been successfully piloted, treatment for persons not yet charged with aggressive driving has not been evaluated.

24. **Requiring vehicle-based monitoring systems to enforce driving restrictions.** Judges can also impose certain driving restrictions on aggressive drivers. Vehicle-based monitoring systems can include ignition locks and intelligent speed adaptation systems that report supervised drivers' speeding to the court.

Responses with Limited Effectiveness

25. **Discouraging aggressive driving through general publicity campaigns.** General publicity campaigns designed to alter drivers' attitudes toward aggressive driving have failed to reduce collisions.[56] Aggressive drivers tend to be those who underestimate their risk of apprehension and overestimate their driving skill. They respond to trivial triggers that activate reservoirs of latent anger. Such drivers are unlikely to be swayed by logic and reason.

Appendix: Summary of Responses to Aggressive Driving

The table below summarizes the responses to aggressive driving, the means by which they are intended to work, the conditions under which they should work best, and some factors you should consider before implementing a particular response. It is critical that you tailor responses to local circumstances, and that you can justify each response based on reliable analysis. In most cases, an effective strategy will involve implementing several different responses. Law enforcement responses alone are seldom effective in reducing or solving the problem.

Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
Enforcing Traffic Laws					
1	19	Deploying surveillance technologies	It increases the probability of detection	...the problem is well-defined, the response is based on analysis of incident and hot-spot data, environmental issues have already been addressed, and the public is notified and educated before enforcement occurs	Surveillance systems require staff to install and maintain them, officer and staff training in use of equipment and data interpretation, and coordination with your jurisdiction's transportation department
2	21	Conducting high-visibility enforcement	It increases the probability of detection and deters aggressive driving	...it is done in aggressive driving hot spots and in conjunction with other awareness-raising techniques	It should take place intensively or frequently, both resource-intensive propositions
3	22	Conducting "centipede" enforcement	It increases the probability of detection	...drivers are generally aware of the enforcement effort, but cannot predict exactly when and where it will occur	It is staff-intensive; it works only as long as drivers continue to be surprised

Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
4	22	Conducting enforcement crackdowns	It increases the probability of detection and/or the consequences to the driver	...locations are selected based on analysis of crime and GIS data	It can be staff-intensive and sometimes practical only on an overtime basis; experienced personnel can be more efficient in detecting aggressive driving
5	22	Referring habitual aggressive drivers to state licensing agencies	It deters aggressive drivers by restricting their driving privileges	...officers can readily access driving records	Providing access to new data systems can be complex, time-consuming, and costly; drivers may disregard licensing restrictions
6	22	Checking records of portable electronic device use	It increases the probability of linking crashes to aggressive driving behaviors	...enhanced penalties apply to driving offenses that occur while drivers are using portable electronic devices	Checking device records may be burdensome, so this response should be used when called for by the severity of the offense and/or when a link to distracting technology is clear
Enhancing Legislation and Regulation					
7	24	Defining and prohibiting aggressive driving in the state vehicle code	It clarifies for drivers and police officers what constitutes aggressive driving and provides for appropriate penalties	...the statute is based on observable behaviors and not on proving driver intent, and police enforcement is robust	It may require new legislation

Response No.	Page No.	Response	How It Works	Works Best If…	Considerations
8	24	Restricting window tinting	It removes driver anonymity and thereby deters aggressive driving	…the law restricts tinting of both front and side windows	After-market window tinting combines with factory tinting, so the law must address the percentage of light transmitted inside the vehicle after both types of tinting are applied
9	24	Requiring Intelligent Speed Adaptation systems in large vehicle fleets	It physically restricts vehicles from reaching excessively high speeds	…it is limited to large vehicle fleets where one organization owns the vehicles and employs the drivers	Regulatory requirements impose a cost burden on private-sector businesses
Removing or Modifying Environmental and Situational Triggers					
10	25	Timing traffic signals to reduce aggressive driving triggers	It reduces drivers' frustration	…it is part of an overall effort to reduce environmental triggers of aggressive driving	Traffic engineers must carry it out
11	25	Enhancing traffic-signal and street-sign visibility	It reduces drivers' frustration	…it is part of a local transportation department's capital improvement plan or annual survey process	It requires equipment purchase, installation, and maintenance funding
12	25	Improving drivers' commute information in congested areas	It reduces drivers' frustration	…it is focused on areas with congested commute routes	It may require state transportation departments' cooperation
13	26	Clarifying appropriate merging zones	It clarifies driving expectations and thereby reduces drivers' frustration	…drivers understand and comply with merging directives	It is relatively inexpensive to implement; it would benefit from media exposure for public education

Response No.	Page No.	Response	How It Works	Works Best If...	Considerations
14	26	Providing speed and distance indicators in areas where speeding or tailgating is common	It reminds drivers to drive safely	...indicators are installed in areas where speeding and tailgating are common	It is relatively inexpensive; it works to raise drivers' internal controls, so it likely will reduce aggressive driving behaviors in average drivers; it is less likely to affect committed aggressive drivers
15	27	Using traffic-calming features in neighborhoods where speeding is common	It makes it more difficult and risky to speed	...the features are placed in residential neighborhoods and areas where a cohesive physical and visual environment exists or can be created	It is in the purview of neighborhood planners and traffic engineers rather than police, and it is easier to integrate seamlessly when neighborhoods are initially designed.
16	27	Maximizing the use of existing roads	It reduces drivers' frustration due to traffic congestion	...it is part of a comprehensive traffic-flow strategy	Some of these strategies have large policy implications, such as promoting telecommuting and flexible work schedules; it may require the cooperation of government and corporate leaders
17	28	Modifying physical road features	It reduces drivers' frustration	...road features are well-designed such that they reduce rather than increase drivers' frustration	Some physical features are very expensive to alter; it should be considered for both new and existing roads

Response No.	Page No.	Response	How It Works	Works Best If…	Considerations
Educating Drivers					
18	29	Stigmatizing aggressive driving through public information campaigns	It deters aggressive driving through informal social pressure	…a coordinated, long-term campaign can be funded and implemented, and messages are carefully aimed at specific driver groups and are compelling to target audiences	Media campaigns are expensive and require professional advertising or marketing services; a long-term effort is likely needed
19	29	Addressing aggressive driving in drivers' education curricula	It deters aggressive driving through early education	… it is undertaken during a routine update to drivers' education curricula	It requires cooperation from state licensing agencies and public and private driving schools
20	29	Providing primary education on avoiding aggressive drivers	It reduces the likelihood of provoking angry drivers to drive aggressively	…it is part of a coordinated, long-term campaign	Primary education can be expensive and requires the participation of professional advertising and public health specialists
21	30	Training professional drivers in aggressive driving prevention	It deters aggressive driving through education	…a trainer knowledgeable in aggressive driving prevention conducts the training	It might be made mandatory or offered for free or at a discounted charge
22	30	Encouraging employer monitoring of professional drivers' driving	It deters aggressive driving by increasing the probability of detection and the resulting consequences	…employers are committed to enforcing companies' driving rules, and fleet insurance rates are reduced by having such programs in place	It requires the cooperation of company executives and fleet managers

Response No.	Page No.	Response	How It Works	Works Best If…	Considerations
Enhancing the Consequences of Aggressive Driving					
23	30	Requiring anger management treatment for aggressive drivers	It reduces drivers' aggressive reactions to frustration	…judges and prosecutors support treatment options, effective treatment programs are available in the jurisdiction, and eligible defendants are selected	To reach a critical mass of defendants to justify a treatment contract, program designers may wish to develop referral criteria that consider other offenses, such as reckless and impaired driving, and some nondriving offenses in which anger is a significant contributing factor
24	32	Requiring vehicle-based monitoring systems to enforce driving restrictions	Systems lock ignitions and report drivers' speeding to the courts	All parties involved agree to their use	They may be expensive to install
Responses with Limited Effectiveness					
25	32	Discouraging aggressive driving through general publicity campaigns	Print, radio, Internet and television media can all be employed	Used in conjunction with responses targeted at those most likely to offend	Aggressive drivers tend to underestimate the risk of apprehension and overestimate their driving skills; they are also less likely to be swayed by logic and reason

Endnotes

[1] National Highway Traffic Safety Administration (2004).

[2] James and Nahl (2000).

[3] James and Nahl (2000).

[4] James and Nahl (2000).

[5] Neighbors, Vietor, and Knee (2002).

[6] National Highway Traffic Safety Administration (2006).

[7] Galovski, Malta, and Blanchard (2006).

[8] National Highway Traffic Safety Administration (2004).

[9] Galovski, Malta, and Blanchard (2006).

[10] James and Nahl (2000).

[11] James and Nahl (2000).

[12] Dollard et al. (1939), referenced in Millar (2007).

[13] James and Nahl (2000).

[14] Joint (1995); Smart and Mann (2002); Wells-Parker et al. (2002).

[15] Rose (2000).

[16] Parliament of Victoria Drug and Crime Prevention Committee, Australia (2005).

[17] Mizell (1997).

[18] Galovski, Malta, and Blanchard (2006).

[19] Ross and Antonowicz (2004).

[20] Ross and Antonowicz (2004).

[21] Ross and Antonowicz (2004).

[22] Ross and Antonowicz (2004).

[23] Parliament of Victoria Drug and Crime Prevention Committee, Australia (2005).

[24] Parliament of Victoria Drug and Crime Prevention Committee, Australia (2005).

[25] Galovski, Malta, and Blanchard (2006).

[26] Ross and Antonowicz (2004).

[27] Congressional Quarterly (1997).

[28] Ross and Antonowicz (2004).

[29] Shinar (1998).

[30] Galovski, Marla, and Blanchard (2006).

[31] Parliament of Victoria Drug and Crime Prevention Committee, Australia (2005).

[32] Parliament of Victoria Drug and Crime Prevention Committee, Australia (2005).

[33] Galovski, Marla, and Blanchard. (2006).

[34] Asbridge, Smart, and Mann (2003).

[35] Strahilevitz (2006).

[36] James and Nahl (2008).

[37] James and Nahl (2008).

[38] Tannen (1998).

[39] James and Nahl (2008).

[40] National Highway Traffic Safety Administration (2006).

[41] Parliamentary Advisory Council for Transport Safety (2005).

[42] National Campaign to Stop Red Light Running (2002).

[43] Asbridge, Smart, and Mann (2006).

[44] Shinar (1998).

[45] Stetenfeld (2003).

[46] Crimmins and Callahan (2003).

[47] Crimmins and Callahan (2003).

[48] Shinar (1998).

[49] National Highway Traffic Safety Administration (2004).

[50] National Highway Traffic Safety Administration (2006).

[51] Strahilevitz (2006).

[52] Deffenbacher (2002); Beck and Fernandez (1998).

[53] Asbridge, Smart, and Mann (2006).

[54] Galovski, Marla, and Blanchard (2006).

[55] Flango, Cullen, and Keith (2003).

[56] Parliament of Victoria Drug and Crime Prevention Committee, Australia (2005).

References

Asbridge, M., R. Smart, and R. Mann (2006). "Can We Prevent Road Rage?" *Trauma, Violence and Abuse* 7(2): 109-121.

——— (2003). "The 'Homogamy' of Road Rage: Understanding the Relationship Between Victimization and Offending Among Aggressive and Violent Motorists." *Violence and Victims*, 12(5): 517-531.

Beck, R., and E. Fernandez (1998). "Cognitive-Behavioral Therapy in the Treatment of Anger: A Meta-Analysis." *Cognitive Therapy and Research* 22(1): 63–74.

Congressional Quarterly (1997). "Aggressive Driving: Can Road Designers and Police Calm Motorists Down?" *The CQ Researcher* 7(28): 649-672.

Crimmins, J., and C. Callahan (2003). "Reducing Road Rage: The Role of Target Insight in Advertising for Social Change." *Journal of Advertising Research* (December).

Deffenbacher, J. (2002). "Principles of Empirically Supported Interventions Applied to Anger Management." *The Counseling Psychologist* 30(2): 262–280.

Flango, V., D. Cullen, and A. Keith (2003). "The Status of Court-Based Aggressive Driving Programs in Virginia: A Report to the Virginia Department of Motor Vehicles." Williamsburg, Va.: National Center for State Courts.

Galovski, T., L. Malta, and E. Blanchard (2006). *Road Rage: Assessment and Treatment of the Angry, Aggressive Driver.* Washington, D.C.: American Psychological Association.

Gaventa, J. (2005). "Policing Road Risk: Enforcement Technologies and Road Safety: Occasional Research Reports." London: Parliamentary Advisory Council for Transportation Safety.

James, L., and D. Nahl (2008). "The Psychology of Parking Rage: Threestep [*sic*] Program for Prevention." www.DrDriving.org

——— (2000). *Road Rage*. Amherst, N.Y.: Prometheus Books.

Joint, M. (1997). "Road Rage." Washington, D.C.: AAA Foundation for Traffic Safety.

Millar, M. (2007). "The Influence of Public Self-Consciousness and Anger on Aggressive Driving." *Personality and Individual Differences* 43:2117-2126.

Mizell, L. (1997). "Aggressive Driving." Washington, D.C.: AAA Foundation for Traffic Safety.

National Campaign to Stop Red Light Running (2002). *Stop On Red = Safe On Green: A Guide to Red Light Camera Programs.* Washington, D.C. National Campaign to Stop Red Light Running.

National Highway Traffic Safety Administration (2004). *Aggressive Driving Enforcement: Strategies for Implementing Best Practices.* Washington, D.C.: U.S. Department of Transportation.

——— (2006). *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices.* Washington, D.C.: U.S. Department of Transportation.

Neighbors, C., N. Vietor, and C. R. Knee (2002). "A Motivational Model of Driving Anger and Aggression." *Personality and Social Psychology Bulletin* 28:324-335.

Parliament of Victoria Drugs and Crime Prevention Committee (2005*).* "Inquiry Into Violence Associated With Motor Vehicle Use: Final Report." Melbourne, Australia: State of Victoria Government Printer.

Rose, G. (2000). "The Criminal Histories of Serious Traffic Offenders, a Home Office Research Study." London: Home Office.

Ross, R., and D. Antonowicz (2004). *Antisocial Drivers: Prosocial Driver Training for Prevention and Rehabilitation.* Springfield, Ill.: Charles C. Thomas.

Shinar, D. (1998). *Aggressive Driving: The Contribution of the Drivers and the Situation.* Transportation Research Part F: 137-160. London: Home Office.

Smart, R., and R. Mann (2002). "Deaths and Injuries from Road Rage: Cases in Canadian Newspapers." Canadian Medical Association Journal 167(7): 761-762.

Stetenfeld, E. (2003). "Milwaukee Pavement Markings Show Speed-Reduction Promise." *SmartNews: The Wisconsin ITS Alliance Newsletter* 1(3) (Fall/Winter).

Strahilevitz, L. (2006). "'How's My Driving?' for Everyone (and Everything?)." John M. Olin Law & Economics Working Paper No 290. Chicago: University of Chicago Law School.

Tannen, D. (1998). *The Argument Culture: Moving From Debate to Dialog.* N.Y.: Random House.

Wells-Parker, E., J. Ceminsky, V. Hallberg, R. Snow, G. Dunaway, S. Guiling, M. Williams, and B. Anderson (2000). "An Exploratory Study of the Relationship Between Road Rage and Crash Experience in a Representative Sample of US Drivers." *Accident Analysis and Prevention* 34:271-7.

About the Author

Colleen Laing is the principal consultant in Laing Communications, a professional writing consulting firm. She has worked extensively on human services and criminal justice policy issues and is well versed in many public policy areas. She previously worked as a research analyst and research and grants unit manager for the Seattle Police Department. Laing has a master's degree in public administration from the University of Southern California's Public Affairs Center in Washington, D.C., and a bachelor's degree in political science from Santa Clara University.

Other Problem-Oriented Guides for Police

Problem-Specific Guides series:

1. **Assaults in and Around Bars, 2nd Edition.** Michael S. Scott and Kelly Dedel. 2006. ISBN: 1-932582-00-2
2. **Street Prostitution, 2nd Edition.** Michael S. Scott and Kelly Dedel. 2006. ISBN: 1-932582-01-0
3. **Speeding in Residential Areas, 2nd Edition.** Michael S. Scott with David K. Maddox. 2010. ISBN: 978-1-935676-02-7
4. **Drug Dealing in Privately Owned Apartment Complexes.** Rana Sampson. 2001. ISBN: 1-932582-03-7
5. **False Burglar Alarms, 2nd Edition.** Rana Sampson. 2007. ISBN: 1-932582-04-5
6. **Disorderly Youth in Public Places.** Michael S. Scott. 2001. ISBN: 1-932582-05-3
7. **Loud Car Stereos.** Michael S. Scott. 2001. ISBN: 1-932582-06-1
8. **Robbery at Automated Teller Machines.** Michael S. Scott. 2001. ISBN: 1-932582-07-X
9. **Graffiti.** Deborah Lamm Weisel. 2002. ISBN: 1-932582-08-8
10. **Thefts of and From Cars in Parking Facilities.** Ronald V. Clarke. 2002. ISBN: 1-932582-09-6
11. **Shoplifting.** Ronald V. Clarke. 2002. ISBN: 1-932582-10-X
12. **Bullying in Schools.** Rana Sampson. 2002. ISBN: 1-932582-11-8
13. **Panhandling.** Michael S. Scott. 2002. ISBN: 1-932582-12-6
14. **Rave Parties.** Michael S. Scott. 2002. ISBN: 1-932582-13-4
15. **Burglary of Retail Establishments.** Ronald V. Clarke. 2002. ISBN: 1-932582-14-2
16. **Clandestine Methamphetamine Labs, 2nd Edition.** Michael S. Scott and Kelly Dedel. 2006. ISBN: 1-932582-15-0
17. **Acquaintance Rape of College Students.** Rana Sampson. 2002. ISBN: 1-932582-16-9

18. **Burglary of Single-Family Houses.** Deborah Lamm Weisel. 2002. ISBN: 1-932582-17-7
19. **Misuse and Abuse of 911.** Rana Sampson. 2002. ISBN: 1-932582-18-5
20. **Financial Crimes Against the Elderly.** Kelly Dedel Johnson. 2003. ISBN: 1-932582-22-3
21. **Check and Card Fraud.** Graeme R. Newman. 2003. ISBN: 1-932582-27-4
22. **Stalking.** The National Center for Victims of Crime. 2004. ISBN: 1-932582-30-4
23. **Gun Violence Among Serious Young Offenders.** Anthony A. Braga. 2004. ISBN: 1-932582-31-2
24. **Prescription Fraud.** Julie Wartell and Nancy G. La Vigne. 2004. ISBN: 1-932582-33-9
25. **Identity Theft.** Graeme R. Newman. 2004. ISBN: 1-932582-35-3
26. **Crimes Against Tourists.** Ronald W. Glesnor and Kenneth J. Peak. 2004. ISBN: 1-932582-36-3
27. **Underage Drinking.** Kelly Dedel Johnson. 2004. ISBN: 1-932582-39-8
28. **Street Racing.** Kenneth J. Peak and Ronald W. Glensor. 2004. ISBN: 1-932582-42-8
29. **Cruising.** Kenneth J. Peak and Ronald W. Glensor. 2004. ISBN: 1-932582-43-6
30. **Disorder at Budget Motels.** Karin Schmerler. 2005. ISBN: 1-932582-41-X
31. **Drug Dealing in Open-Air Markets.** Alex Harocopos and Mike Hough. 2005. ISBN: 1-932582-45-2
32. **Bomb Threats in Schools.** Graeme R. Newman. 2005. ISBN: 1-932582-46-0
33. **Illicit Sexual Activity in Public Places.** Kelly Dedel Johnson. 2005. ISBN: 1-932582-47-9
34. **Robbery of Taxi Drivers.** Martha J. Smith. 2005. ISBN: 1-932582-50-9
35. **School Vandalism and Break-Ins.** Kelly Dedel Johnson. 2005. ISBN: 1-9325802-51-7
36. **Drunk Driving.** Michael S. Scott, Nina J. Emerson, Louis B. Antonacci, and Joel B. Plant. 2006. ISBN: 1-932582-57-6

37. **Juvenile Runaways.** Kelly Dedel. 2006.
ISBN: 1932582-56-8

38. **The Exploitation of Trafficked Women.** Graeme R.
Newman. 2006. ISBN: 1-932582-59-2

39. **Student Party Riots.** Tamara D. Madensen and John E. Eck.
2006. ISBN: 1-932582-60-6

40. **People with Mental Illness.** Gary Cordner. 2006.
ISBN: 1-932582-63-0

41. **Child Pornography on the Internet.** Richard Wortley and
Stephen Smallbone. 2006. ISBN: 1-932582-65-7

42. **Witness Intimidation.** Kelly Dedel. 2006.
ISBN: 1-932582-67-3

43. **Burglary at Single-Family House Construction Sites.** Rachel
Boba and Roberto Santos. 2006. ISBN: 1-932582-00-2

44. **Disorder at Day Laborer Sites.** Rob Guerette. 2007.
ISBN: 1-932582-72-X

45. **Domestic Violence.** Rana Sampson. 2007.
ISBN: 1-932582-74-6

46. **Thefts of and from Cars on Residential Streets and
Driveways.** Todd Keister. 2007. ISBN: 1-932582-76-2

47. **Drive-By Shootings.** Kelly Dedel. 2007.
ISBN: 1-932582-77-0

48. **Bank Robbery.** Deborah Lamm Weisel. 2007.
ISBN: 1-932582-78-9

49. **Robbery of Convenience Stores.** Alicia Altizio and Diana
York. 2007. ISBN: 1-932582-79-7

50. **Traffic Congestion Around Schools.** Nancy G. La Vigne.
2007. ISBN: 1-932582-82-7

51. **Pedestrian Injuries and Fatalities.** Justin A. Heinonen and
John E. Eck. 2007. ISBN: 1-932582-83-5

52. **Bicycle Theft.** Shane D. Johnson, Aiden Sidebottom, and
Adam Thorpe. 2008. ISBN: 1-932582-87-8

53. **Abandoned Vehicles.** Michael G. Maxfield. 2008.
ISBN: 1-932582-88-6

54. **Spectator Violence in Stadiums.** Tamara D. Madensen and
John E. Eck. 2008. ISBN: 1-932582-89-4

55. **Child Abuse and Neglect in the Home.** Kelly Dedel. 2010.
ISBN: 978-1-935676-00-3

56. **Homeless Encampments.** Sharon Chamard. 2010.
ISBN: 978-1-935676-01-0
57. **Stolen Goods Markets.** Michael Sutton. 2010.
ISBN: 978-1-935676-09-6
58. **Theft of Scrap Metal.** Brandon R. Kooi. 2010.
ISBN: 978-1-935676-12-6
59. **Street Robbery.** Khadija M. Monk, Justin A. Heinonen, and John E. Eck. 2010. ISBN: 978-1-935676-13-3
60. **Theft of Customers' Personal Property in Cafés and Bars.** Shane D. Johnson, Kate J. Bowers, Lorraine Gamman, Loreen Mamerow and Anna Warne. 2010. ISBN: 978-1-935676-15-7
61. **Aggressive Driving.** Colleen Laing. 2010.
ISBN: 978-1-935676-18-8

Response Guides series:

1. **The Benefits and Consequences of Police Crackdowns.** Michael S. Scott. **2003.** ISBN: 1-932582-24-X
2. **Closing Streets and Alleys to Reduce Crime: Should You Go Down This Road?** Ronald V. Clarke. 2004.
ISBN: 1-932582-41-X
3. **Shifting and Sharing Responsibility for Public Safety Problems.** Michael S. Scott and Herman Goldstein. 2005.
ISBN: 1-932582-55-X
4. **Video Surveillance of Public Places.** Jerry Ratcliffe. 2006
ISBN: 1-932582-58-4
5. **Crime Prevention Publicity Campaigns.** Emmanuel Barthe. 2006. ISBN: 1-932582-66-5
6. **Sting Operations.** Graeme R. Newman with assistance of Kelly Socia. 2007. ISBN: 1-932582-84-3
7. **Asset Forfeiture.** John L. Worall. 2008
ISBN: 1-932582-90-8
8. **Improving Street Lighting to Reduce Crime in Residential Areas.** Ronald V. Clarke. 2008. ISBN: 1-932582-91-6
9. **Dealing With Crime and Disorder in Urban Parks.** Jim Hilborn. 2009. ISBN: 1-932582-92-4
10. **Assigning Police Officers to Schools.** Barbara Raymond. 2010. ISBN: 978-1-935676-14-0

Problem-Solving Tools series:

1. **Assessing Responses to Problems: An Introductory Guide for Police Problem-Solvers.** John E. Eck. 2002. ISBN: 1-932582-19-3

2. **Researching a Problem.** Ronald V. Clarke and Phyllis A. Schultz. 2005. ISBN: 1-932582-48-7

3. **Using Offender Interviews to Inform Police Problem-Solving.** Scott H. Decker. 2005. ISBN: 1-932582-49-5

4. **Analyzing Repeat Victimization.** Deborah Lamm Weisel. 2005. ISBN: 1-932582-54-1

5. **Partnering with Businesses to Address Public Safety Problems.** Sharon Chamard. 2006. ISBN: 1-932582-62-2

6. **Understanding Risky Facilities.** Ronald V. Clarke and John E. Eck. 2007. ISBN: 1-932582-75-4

7. **Implementing Responses to Problems.** Rick Brown and Michael S. Scott. 2007. ISBN: 1-932582-80-0

8. **Using Crime Prevention Through Environmental Design in Problem-Solving.** Diane Zahm. 2007. ISBN: 1-932582-81-9

9. **Enhancing the Problem-Solving Capacity of Crime Analysis Units.** Matthew B. White. 2008. ISBN: 1-932582-85-1

10. **Analyzing Crime Displacement and Diffusion.** Rob T Guerette. 2009. ISBN: 1-932582-93-2

Special Publications:

Crime Analysis for Problem Solvers in 60 Small Steps, Ronald V. Clarke and John Eck, 2005. ISBN:1-932582-52-5

Policing Terrorism: An Executive's Guide. Graeme R. Newman and Ronald V. Clarke. 2008.

Effective Policing and Crime Prevention: A Problem-Oriented Guide for Mayors, City Managers, and County Executives. Joel B. Plant and Michael S. Scott. 2009.

Upcoming Problem-Oriented Guides for Police

Problem-Specific Guides
Missing Persons
Stranger Rape
Theft of Vehicles for Export

Problem-Solving Tools
Understanding Repeat Offending

Special Publications
Intelligence Analysis and Problem-Solving
Problem-Oriented Policing Implementation Manual

For a complete and up-to-date listing of all available POP Guides, see the Center for Problem-Oriented Policing website at www.popcenter.org.

For more information about the *Problem-Oriented Guides for Police* series and other COPS Office publications, call the COPS Office Response Center at 800.421.6770, via e-mail at askCOPSRC@usdoj.gov, or visit COPS Online at www.cops.usdoj.gov.

Center for Problem-Oriented Policing

Got a Problem? We've got answers!

Log onto the Center for Problem-Oriented Policing web site at www.popcenter.org for a wealth of information to help you deal more effectively with crime and disorder in your community, including:

- Recommended readings in problem-oriented policing and situational crime prevention:

- A complete listing of other POP Guides

- A listing of forthcoming POP Guides.

Designed for police and those who work with them to address community problems, www.popcenter.org is a great resource for problem-oriented policing.

Sponsored by the U.S. Department of Justice Office of Community Oriented Policing Services (the COPS Office).

Center for Problem-Oriented Policing

Aggressive Driving provides an overview of the problem of aggressive driving, commonly referred to as road rage, and reviews factors that increase its risks. The guide also identifies a series of questions to help you analyze your local aggressive driving problem. Finally, it reviews responses to the problem and what is known about these from evaluative research and police practice.