

Reducing Aggressive Driving

1. There appears to be at least two major definitions of *aggressive driving*. First is the focus on excessive behavior by drivers. Thus, the NCHRP document (2) defines aggressive driving as involving *behaviors seen as aggressive*
 - A. Aggressive tailgating
 - B. Headlight flashing out of annoyance with another driver
 - C. Aggressive rude gestures or verbal abuse
 - D. Deliberately obstructing or preventing another driver from moving his/her vehicle

2. Second, there is a broader definition of aggressive driving that involves *unsafe driving*. The NHTSA-GHSA document (1) tends to take this approach.
 - A. Speeding is the number one factor associated with crashes (39% in our region) followed by failing to yield (20%), failing to stop at a stop sign (11%), running a red light (8%), and following too close (3%)
 - B. In our region, 54% of speeding crashes occur on Interstate highways, U.S. highways, State highways, or Farm-to-Market roads while 46% occur on county roads, city streets, toll roads or other ‘local’ streets.
 - C. NHTSA has reported that, nationally, around half of all speeding crashes occur on roads where the posted speed limit is 50 mph or lower.

3. Conditions associated with aggressive driving
 - A. Congested roadways and pent-up frustrations (The ‘frustration-aggression’ hypothesis)
 - B. One’s mood prior to driving prefigures one’s level of stress while driving.
 - C. However, the two variables most associated with crashes are age and gender.

4. Younger drivers appear to be more aggressive in driving than other age groups. In our region, 20.7% of all serious crashes involve teenage drivers between 1999 and 2001. The proportion of crashes involving teenagers is more than double their share of the driving age population (9%).
 - A. There are several reasons why teenage drivers have a much higher crash rate than other groups. There is some research that suggests that the high rate of teenage driver crashes is associated with teenager passengers, who increase substantially the likelihood of a crash for a teenage drive.¹ This was a major

¹ Allan F. Williams, *Teenage Passengers in Motor Vehicle Crashes: A Summary of Current Research*. Arlington, VA;

rationale for the graduated licensing restrictions placed on drivers under age 18 by the Texas Legislature in 2002.

- B. Another factor that has been suggested is lack of experience in driving; during the first few years of driving, at any age, an individual is more likely to make errors. But, even with inexperienced drivers, teenagers are more likely to make errors than persons of other age groups.²
- C. The percentage of crashes involving teenage drivers was even higher in the suburban counties – Brazoria (29%), Fort Bend (29%), Montgomery (28%) and Galveston (26%), than for the region as a whole (21%).
 - a. The reason for the higher proportion of crashes involving teenage drivers in the suburbs is not completely clear. The suburbs generally have an older population than the central city. Thus, the higher suburban rates cannot be explained just by the age distribution.
 - b. Part of the reason may involve the higher speeds that generally occur in the suburbs and part may reflect higher incomes since the more affluent suburban counties have higher rates than the less affluent counties.
 - c. Part of the reason may involve teenagers' dependence on the automobile due to lack of other alternatives, such as transit, as well as the spread-out nature of suburban land-use patterns.
 - d. Nevertheless, it's an important issue for suburban governments to address.
- D. Teenagers are much more likely to be involved in serious crashes than other age groups. Nationally, teenager drivers have the highest death rates per mile driven than any other age group.³
- E. The problem is particularly bad among 16 year olds. This age cohort has a crash involvement 75% higher than 17 year olds. Sixteen year olds are more likely to make driver errors, speed, and be involved in single vehicle crashes than any other age group; they are also more likely to carry three or more passengers.
- F. A contributing factor to higher crash rates for teens may be driver distraction, especially due to cell phone usage. According to a December 2005 NHTSA

<http://www.hwysafety.org>

² University of Massachusetts, Amherst, "Novice drivers seldom anticipate dangers on road, UMass researcher finds". News Release, November 15, 2002, <http://www.umass.edu/newsoffice/archive/2002/111502drivers.htm>

³ Insurance Institute for Highway Safety, *Teenage Driving Facts*. Arlington, VA; http://www.hwysafety.org/safety_facts/teens/teenager.htm

study, 10% of younger drivers (ages 16-24) use hand-held cell phones while driving compared to 6% for all drivers.⁴

- G. In our region, of the fatal crashes in the region from 1999 to 2001, 16.9% involved a teenage driver. Of the serious incapacitating type of crashes, 19.2% involved a teenage driver.
 - a. Whether the percentage of serious crashes involving teenagers remained high past 2001 is not clear since our data stop at that year. Hopefully, the graduated licensing law will have reduced this substantially.
 - H. Aggressive driving plays a role, too. Teenagers are slightly more likely to be involved in speeding crashes than non-teenagers (21.9% v. 20.0%) and are more likely to be involved in failing to yield crashes than non-teenagers (25.5% v. 19.5%).
 - I. One NHTSA study surveyed people about whether they usually pass other cars more than other cars pass them, or vice versa (<http://www.nhtsa.dot.gov/people/injury/aggressive/unsafe/att-beh/Chapt4.html#1>).
 - a. As might be expected, younger persons stated that they were more likely to pass than be passed (e.g., 60% of 16-20 years old and 54% of 21-24 year olds), whereas it was the opposite for older persons (e.g., 14% of 55-64 years olds and 9% of those 65 or older).
 - b. Males stated that they were more likely to pass than females (34% v. 27%).
 - J. On the other hand, in our region, teenagers are not more likely to be involved in a failing to stop crash than non-teenagers. Also, contrary to popular opinion, teenagers are less likely to be involved in DUI crashes than non-teenagers (13.3% v. 21.2%).
 - a. However, given that the legal drinking age is 21 in Texas, the fact that even 13.3% of DUI crashes involved a teenager is a major concern.
5. After age, gender is the most predictive variable. Males are more likely to be involved in serious ones.
- A. In our region, between 1999 and 2001 78.3% of all serious crashes involved at least one male driver compared to 57.1% that involved at least one female driver.

⁴ National Highway Traffic Safety Administration, "Driver Cell Phone Use in 2005 – Overall Results," *Traffic Safety Facts*, December 2005, Washington, DC, <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/RNotes/2005/809967.pdf>

- B. The more serious the crash, the higher the percentage of male drivers. Thus, between 1999 and 2001, 83.4% of all fatal crashes involved at least one male driver compared to 32.5% that involved at least one female driver. For incapacitating injury crashes (Type A), 79.4% involved at least one male driver compared to 49.7% that involved at least one female driver.
6. Effective strategies
- A. Personal strategy – “Keep out of the way” and avoid eye contact..
 - B. Speed limits – proven strategy
 - C. High-visibility enforcement – uncertain outcomes according to (1). Short-term effectiveness but expensive to run.
 - D. Strict and consistent penalties (inc. insurance penalties) – proven strategy
 - E. Traffic violator school – uncertain outcomes, sometimes effective other times not.
 - F. Automated enforcement – proven strategy, but one prone to public ambivalence.
 - G. Targeting repeat offenders – uncertain effectiveness.
 - H. More restrictions on younger drivers. Probably very effective, but difficult to implement politically.
 - I. Educational and Public Information campaigns – unknown effectiveness.
 - J. Minimizing “Triggers” for aggressive driving – such as reducing nonrecurring delays. Probably effective but expensive.
7. Sources:
1. Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices (NHTSA & GHSA, 2005). Distributed to members.
 2. Guide for Reducing Aggressive Driving Collisions (NCHRP, 2003). Distributed to members.
 3. Strategies for Aggressive Driver Enforcement (NHTSA, 2001)
<http://www.nhtsa.dot.gov/people/injury/enforce/aggressdrivers/toc.html>
 3. Bibliography of studies on aggressive driving (NHTSA)
<http://www.nhtsa.dot.gov/people/injury/enforce/aggreddriver.html>

4. National Survey of Speeding and Other Unsafe Driving Actions:(NHTSA, 1998):
 Volume I: Methodology
 Volume II: Driver attitudes and behavior
 Volume III: Countermeasures

<http://www.nhtsa.dot.gov/people/injury/aggressive/unsafe/>

Countermeasures That Work – Aggressive Driving

From *Countermeasures That Work: A Highway Safety Countermeasure Guide For State Highway Safety Offices*, Governors Highway Safety Association, Washington, DC, 2005, p. 3-3

Countermeasures to reduce aggressive driving and speeding are listed below and discussed individually in this chapter. The table is intended to give a rough estimate of each countermeasure’s effectiveness, use, cost, and time required for implementation. The terms used are described below. Effectiveness, cost, and time to implement can vary substantially from State to State and community to community. Costs for many countermeasures are difficult to measure, so the summary terms are very approximate. See each countermeasure discussion for more information.

1. Laws

Countermeasure	Effectiveness	Use	Cost	Time
1.1 Speed limits	Proven*	High	Low	Short
1.2 Aggressive driving laws	Unknown	Low	Low	Short

* When enforced and obeyed

2. Enforcement

Countermeasure	Effectiveness	Use	Cost	Time
2.1 High-visibility enforcement	Uncertain	Low	High	Medium
2.2 Automated enforcement	Proven	Medium	High*	Medium
2.3 Other enforcement methods	Varies	Unknown	Varies	Varies

*Can be covered by income from citations

3. Penalties and Adjudication

Countermeasure	Effectiveness	Use	Cost	Time
3.1 Penalty types and levels	Proven	High	Varies	Low
3.2 Diversion and plea agreements	Unknown	Unknown	Varies	Varies

4. Communications and Outreach

Countermeasure	Effectiveness	Use	Cost	Time
4.1 Supporting enforcement	Likely	Medium	Varies	Medium

Effectiveness:

Proven: demonstrated by several high-quality evaluations with consistent results.

Likely: balance of evidence from high-quality evaluations.

Uncertain: limited and perhaps ambiguous evidence.

Unknown: no high-quality evaluation evidence.

Varies: different methods of implementing this countermeasure produce different results.

Effectiveness is measured by reductions in crashes or injuries unless noted otherwise. See individual countermeasure descriptions for information on effectiveness size and how effectiveness is measured.

Use:

- High: more than two-thirds of the States, or a substantial majority of communities.
- Medium: between one-third and two-thirds of States or communities.
- Low: fewer than one-third of the States or communities.
- Unknown: data not available.

Cost to implement:

- High: requires extensive new facilities, staff, or equipment, or makes heavy demands on current resources.
- Medium: requires some additional staff time, equipment, and/or facilities.
- Low: can be implemented with current staff, perhaps with training; limited costs for equipment or facilities.

Time to implement:

- Long: more than one year.
- Medium: more than three months but less than one year.
- Short: three months or less.

These estimates do not include the time required to enact legislation or establish policies.

Countermeasures That Work – Young Drivers

From *Countermeasures That Work: A Highway Safety Countermeasure Guide For State Highway Safety Offices*, Governors Highway Safety Association, Washington, DC, 2005, p. 6-4

Countermeasures to improve young driver safety are listed below and discussed individually in this chapter. The table is intended to give a rough estimate of each countermeasure’s effectiveness, use, cost, and time required for implementation. The terms used are described below. Effectiveness, cost, and time to implement can vary substantially from State to State and community to community. Costs for many countermeasures are difficult to measure, so the summary terms are very approximate. See each countermeasure discussion for more information.

1. Graduated Driver Licensing

Countermeasure	Effectiveness	Use	Cost	Time
1.1 Graduated driver licensing (GDL)	Proven	High	Medium	Long
1.2 Learner’s permit length, supervised hours	Proven	High	Low	Medium
1.3 Provisional - nighttime restrictions	Proven	High	Low	Medium
1.4 Provisional - passenger restrictions	Likely	Medium	Low	Medium
1.5 Provisional - belt use requirements	Uncertain	Unknown	Low	Medium
1.6 Provisional - cell phone restrictions	Unknown	Low	Low	Medium
1.7 Provisional - violation penalties	Uncertain	High	Low	Medium

2. Driver education

Countermeasure	Effectiveness	Use	Cost	Time
2.1 Prelicensure driver education	None	Unknown	High	Long
2.2 Postlicensure or advanced driver education	Unknown	Low	High	Long

3. Parents

Countermeasure	Effectiveness	Use	Cost	Time
3.1 Parent roles in teaching and managing	Varies	Medium	Low	Short

4. Traffic law enforcement

Countermeasure	Effectiveness	Use	Cost	Time
4.1 Enforcement of GDL and zero-tolerance laws	Likely	Unknown	Medium	Short

Effectiveness:

Proven: demonstrated by several high-quality evaluations with consistent results.

Likely: balance of evidence from high-quality evaluations or other sources.

Uncertain: limited and perhaps ambiguous evidence.

Unknown: no high-quality evaluation evidence.

Varies: different methods of implementing this countermeasure produce different results.

None: several high-quality evaluations show no effect.

Effectiveness is measured by reductions in crashes or injuries unless noted otherwise. See individual countermeasure descriptions for information on effectiveness size and how effectiveness is measured.

Use:

High: more than two-thirds of the States, or a substantial majority of communities.

Medium: between one-third and two-thirds of States or communities.

Low: fewer than one-third of the States or communities.

Unknown: data not available.

Cost to implement:

High: requires extensive new facilities, staff, equipment, or publicity, or makes heavy demands on current resources.

Medium: requires some additional staff time, equipment, facilities, and/or publicity.

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