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Countermeasures That Work, 10th Edition

The National Highway Traffic Safety Administration has published its tenth edition of *Countermeasures That Work*. The guide is a basic reference to assist State Highway Safety Offices (SHSOs) and other professionals interested in highway safety in selecting effective, evidence-based countermeasures for traffic safety problem areas. These areas include:

- Alcohol- and Drug- Impaired Driving,
- Seat Belts and Child Restraints,
- Speeding and Speed Management,
- Distracted Driving,
- Motorcycle Safety,
- Young Drivers,
- Older Drivers,
- Pedestrian Safety,
- Bicycle Safety, and
- Drowsy Driving.

The Guide

- Describes major strategies and countermeasures that are relevant to SHSOs;
- Summarizes strategy/countermeasure use, effectiveness, costs, and implementation time; and
- Provides references to the most important research summaries and individual studies.

What's included: The guide contains a chapter for each program area. Each chapter begins with a brief overview of the problem's size and characteristics, the main countermeasure strategies, a glossary of key terms, and a few general references. Next, a table lists specific countermeasures and summarizes their effectiveness, cost, use, and implementation time. Each countermeasure is then discussed in approximately one to two pages.

The guide provides an overview and starting point for readers to become familiar with the behavioral strategies and countermeasures in each program area. It focuses on countermeasures about which studies have shown evidence of effectiveness as well as those that are used most regularly by SHSOs. It does not include countermeasures for which SHSOs have little or no authority or responsibility, such as vehicle and roadway-based countermeasures. Updates to the guide are based only on published research. Unpublished studies and research are not included.

Some countermeasure areas are covered in more depth than others, due to the availability of published research. For example, impaired driving has a long and rich research history,

while other topics, such as driver distraction and drowsiness, have not been studied as much. This difference in the availability of published research findings is due to a number of factors, including the relative scale of the problem, the availability of reliable data on the frequency and characteristics of some safety problems, the recency of some safety topics, and the challenge of conducting scientifically valid studies in certain behavioral areas.

References are provided for each countermeasure. When possible, summaries of available research are included, with web links when available, so users can find most of the evaluation information in one place. If no summaries are available, one or two key studies are cited. There has been no attempt to list all research, studies, or program information available on any countermeasure. Readers interested in particular program areas or countermeasures are urged to consult the references. Although all web links in this guide were accurate at the time of publication, please note that web links may change periodically. For broken links to NHTSA documents, we recommend searching NHTSA's Behavioral Safety Research reports (<https://rosap.nhtsa.gov/>). For broken links to other reports or documents, refer to the website of the agency that produced the report.

The guide is not intended to be a comprehensive list of countermeasures available for State use or a list of expectations for SHSO implementation. For a description of an optimal State countermeasure program, SHSOs should refer to the *Highway Safety Program Guidelines*, which delineate the principal components of each of the major program areas.

The evaluations summarized in this guide allow SHSOs to benefit from the experience and knowledge gained by others and to select countermeasure strategies that have either proven to be effective or shown promise. States choosing to use innovative programs can contribute to the collective knowledge pool by carefully evaluating the effectiveness of their efforts and publishing the findings for the benefit of others.

The Star-Rating System—What the effectiveness data mean: The effectiveness of any countermeasure can vary immensely from State to State or community to community. *What* is done is often less important than *how* it is done. The best countermeasure may have little effect if it is not implemented vigorously, publicized extensively, and funded satisfactorily. *The countermeasure effectiveness data presented in the guide probably show the maximum effect that can be realized with high-quality implementation.* Many countermeasures have not been evaluated well, or at all, as noted in the effectiveness data. Effectiveness ratings (from 1 to 5 stars) are based primarily on demonstrated reductions in crashes; how-

ever, changes in behavior and knowledge are taken into account in the ratings when crash information is not available.

What's not included: Since the guide is intended as a tool for SHSO use, it does not include countermeasures for which SHSOs have little or no authority or responsibility. For example, the guide does not include vehicle- or roadway-based solutions. Also, it does not include certain countermeasures that already are in place in every State, such as .08 g/dL blood alcohol concentration (BAC) laws. Nor does the current guide discuss Emergency Medical Services or 911. Finally, because the guide only includes behavioral countermeasures and strategies, administrative or management topics such as traffic safety data systems and analyses, program planning and assessments, State and community task forces, or comprehensive community traffic safety programs are not included.

What's new: All chapters of the guide have been revised and updated for this biennially published edition. Information and research studies through May 31, 2018 have been reviewed and included as appropriate. Data have been updated to include information from NHTSA's 2018 FARS data.

A significant change implemented in the ninth edition and continued in the tenth edition is that the detailed descriptions of one- and two-star countermeasures were moved to an appendix section in the guide.

This change is intended to emphasize that countermeasures that receive one- or two-stars have NOT been determined to be effective, either because there has been limited or no high quality evidence (one-star), or because effectiveness is still undetermined based on the evidence that is available (two-stars). The main section of the guide retains brief summaries for the one- and two-star countermeasures, along with an effectiveness concerns statement to facilitate navigation of the topics and to maintain continuity with previous editions.

Although no new topic areas were added to this edition, the distracted and drowsy driving chapter was separated into separate topic chapters. In addition, several new countermeasures were added, including:

- Chapter 4—The distracted driving countermeasure—employer programs for distracted driving.
- Chapter 6—The young driver countermeasure—electronic technology for parental monitoring.
- Chapter 8—The school-age pedestrian countermeasure—walking school buses.

Multiple countermeasures have been expanded in this edition:

- Chapter 1 expands the sections on administrative license revocation or suspension, publicized sobriety checkpoints, DWI Courts, ignition interlocks, alcohol screening and brief

intervention, alternative transportation, enforcement of drug-impaired driving, education regarding medications, and it augments the discussion of drug-impaired driving characteristics in the chapter and section overviews.

- Chapter 2 expands the sections on short-term, high-visibility seat belt law enforcement, integrated nighttime seat belt enforcement, strategies for low-belt-use groups, strengthening child/youth occupant restraint laws, and inspection stations.
- Chapter 3 expands the section on speed limits and automated enforcement.
- Chapter 4 expands the section on cell phone and text messaging laws and adds to the problem size and characteristics discussion in the chapter overview.
- Chapter 5 expands the sections on universal motorcycle helmet use laws, and alcohol-impaired motorcyclists: detection, enforcement, and sanctions, and adds to the discussion on trends in the chapter overview.
- Chapter 6 expands the sections on graduated driver licensing (GDL), GDL cell phone restrictions, pre-license driver education, and enforcement of GDL and zero-tolerance laws.
- Chapter 7 expands the sections on referring older drivers to licensing agencies, license restrictions, and medical advisory boards.
- Chapter 8 expands the sections on Safe Routes to School and conspicuity enhancement, and adds to the emerging-technologies discussion in the chapter overview.
- Chapter 9 expands the sections on bicycle helmet laws for children, Safe Routes to School, bicycle helmet laws for adults, active lighting and rider conspicuity, and laws that address motorists passing bicyclists, and adds a section on other bike types in the chapter overview to include e-bikes.
- Chapter 10 expands the section on employer programs and augments the discussion of drowsy driving in the chapter overview.

How to Order

Download a copy of [Countermeasures That Work, 10th Edition](#) (641 pages), prepared by Battelle. Kristie Johnson, Ph.D., was the task order manager for this project.

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