

# COUNTERMEASURES AGAINST PRESCRIPTION AND OVER-THE-COUNTER DRUG-IMPAIRED DRIVING

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## INTRODUCTION

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Driving under the influence of potentially impairing prescription and over-the-counter (OTC) drugs is a large public health concern. These drugs are used frequently and have been shown to impair driving and driving-related psychomotor skills. In addition, they are estimated to be prevalent in up to 13% of drivers on U.S. roadways. Although there is a significant need for methods to reduce the prevalence of driving under the influence of prescription and OTC drugs, there is currently a lack of research on effective countermeasures to address this problem. That is, many studies focus on alcohol and/or illegal drugs, but there is a lack of research on effective countermeasures to address driving under the influence of prescription and OTC drugs. Based upon differences in etiology, public perceptions, and existing countermeasures, many countermeasures designed for alcohol and illegal drugs may not be effective for prescription and OTC drugs. This project aimed to fill this gap by assessing the current state of knowledge on countermeasures against prescription and OTC drug-impaired driving.

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## RESULTS

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The research resulted in the identification of approximately 60 specific countermeasures against prescription and OTC drug-impaired driving. Some areas of particular promise included:

- Patient counseling
- Prescription labeling
- Implementation of new technologies (e.g., oral fluid drug testing and electronic pharmacy prompts for impairing medications)
- Increased coordination across the legal system for impaired driving offenses
- Refinements to existing databases
- Advertising and education

A few general findings were evident from the literature review, subject matter experts and existing data. While a number of countermeasures were identified, there was generally a lack of empirical support for and published research on specific interventions. One significant challenge is that research is lacking on the specific effects of a number of drugs on driving performance. Furthermore, individual differences in the effects of a given drug make it even more challenging to systematically predict if a given drug or dosage will impair an individual (even more so with polydrug usage). This knowledge is often critical for the effective development and implementation of countermeasures.

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## ABOUT

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Established in 1947 by AAA, the AAA Foundation for Traffic Safety is a not-for-profit, publicly funded, 501(c)(3) charitable research and educational organization. The AAA Foundation's mission is to prevent traffic deaths and injuries by conducting research into their causes and by educating the public about strategies to prevent crashes and reduce injuries when they do occur. This research is used to develop educational materials for drivers, pedestrians, bicyclists and other road users. Visit [www.AAAFoundation.org](http://www.AAAFoundation.org) for more information.

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It was also identified that while not all prescription and OTC drugs are impairing, drivers may not possess the knowledge necessary to distinguish between impairing and nonimpairing medications or the interactions of various medications. Health care professionals, law enforcement officers, judicial personnel and others closely involved with drivers are instrumental in preventing prescription and OTC drug-impaired driving. However, they too may be unaware of the severity of the problem and may lack the resources to address it. Thus, countermeasures should not only be focused on the driver but also on the numerous other professionals who have an opportunity to intervene with the individual.

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## METHODOLOGY

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A variety of methods were used to collect data for this effort. These included a comprehensive literature review, an expert roundtable, targeted subject matter expert interviews, and a review of existing data sources. These approaches worked synergistically to identify and evaluate countermeasures against prescription and OTC drug-impaired driving. Countermeasures were classified into the following four categories: (1) pharmacy and medical, (2) data recording and toxicology, (3) law enforcement and judicial and (4) education and advertising.

A complex search approach was conducted for the literature review using PsycINFO, PsycNET, Compendex, Inspec, National Technical Information Service (NTIS), Web of Science, PubMed, Ovid and the Transport Research International Documentation (TRID). Professional associations, U.S. government research and transportation databases from the U.K., the Netherlands and Germany were also searched. From 16,295 references that were initially collected from this search, in addition to manual targeted searches, more than 200 sources were identified that were relevant to the topic of prescription and OTC drug-impaired driving countermeasures.

The expert roundtable and interviews leveraged the expertise of 17 leading experts from the domains of law enforcement, toxicology, government, law, research, education, medicine and pharmacy. The expert roundtable was a day-long guided discussion held on July 11, 2017, at AAA Foundation for Traffic Safety headquarters in Washington, D.C. An additional seven individuals were targeted for one-on-one, in-person and/or telephone interviews. The experts from the roundtable and interviews also consisted of practitioners who could provide direct insight into the implementation of countermeasures. These experts were helpful in identifying unpublished countermeasures, brainstorming novel countermeasures, assessing the practicality and feasibility of countermeasures, and providing expert-level insight into future directions for countermeasure implementation and development.

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