

COCHRANE CORNER

Creation of a register on alcohol-impaired driving

Alcohol-impaired driving is a serious problem for industrialized nations. Of the 39 189 fatal crashes in the US last year, 39% were alcohol related.¹ Alcohol-impaired driving declined worldwide in the 1980s and 90s, a trend that halted in some countries and even reversed in others after the turn of the current century.² This plateau could indicate a failure to identify and disseminate effective interventions in the field. A logical first step is to find the most accurate and up-to-date information on prevention strategies by conducting systematic reviews of controlled evaluations.

Comprehensive identification of relevant papers distinguishes systematic reviews from traditional reviews by minimizing bias. However, identifying controlled evaluations of the broad array of potential strategies to reduce alcohol-impaired driving offers a notable challenge because

- A wide range of disciplines such as road safety, psychology, education, sociology, engineering and criminology may include reports evaluating interventions on alcohol-impaired driving.
- Study results are often published in difficult-to-locate internal reports of governmental agencies or voluntary organizations.
- The terminology used to describe drunk driving may vary substantially among different languages and countries.

These challenges are characteristic of many areas in injury prevention; identifying studies on all injuries caused by road traffic has been likened to “identifying a needle in a haystack”.³

To facilitate the identification of the best available evidence in the field of alcohol-impaired driving prevention, the Colorado Injury Control Research Center, in collaboration with the Cochrane Injuries Group, has begun to develop a register of controlled evaluations of interventions targeting drunk driving. This effort is being supported by the National Center for Injury Prevention and Control, part of the US Centers for Disease Control and Prevention.

As a first step in the creation of the register, we applied objective methods of developing search strategies⁴ to create a sensitive, free-text search strategy that could be applied to multiple electronic bibliographic databases in different fields.⁵ We have thus far applied our search strategy to seven traditional and five gray-literature databases; these searches will be periodically updated in future. Search results are being screened for eligible studies, including randomized controlled trials, controlled trials, controlled before-after studies and interrupted time series studies. Even though randomized controlled trials provide the most reliable evidence on the effectiveness of interventions, they are not always feasible in the evaluation of strategies to prevent alcohol-impaired driving, many of which involve policy and legislative interventions. Hence, a broader range of study designs is being included. Systematic reviews and meta-analyses, which can be a rich source of relevant references for further reviews as well as a resource for identifying evidence-based interventions, will also be included in the register.

To develop as comprehensive a register as possible, we are also identifying studies through means other than electronic searches. Proceedings from 7 years of the International Conference on Drugs, Alcohol, and Traffic Safety and 2 years of the Conference on World Injury Prevention and Safety Promotion have been hand searched. We have contacted traffic research institutes and more than 100 state departments of transportation, public health and public safety in the US, and will begin to contact agencies and organizations worldwide this year. All citations identified through searching databases, hand searching, and contacting organizations and agencies are screened to determine eligibility, using information given in the title, abstract and subject headings of the citation or in full texts where available. All included studies are indexed by type of intervention (eg, community-based program, laws on blood alcohol content) and type of study design. The register is being incorporated into the specialised register of the Cochrane Injuries Group, where it will be widely accessible to researchers and policy makers.

Initial searches, which focused on hand searching, US agency contacts and two electronic databases, have already yielded 212 studies. During this year, we will complete screening and indexing of the citations identified by our initial searches, and expand organizational and agency contacts. Subsequent maintenance of the register will include periodic updating of both electronic searches and contacts with agencies and organizations. We also welcome submissions from readers to Cynthia Goss

(Cynthia.goss@uchsc.edu) or Karen Blackhall

(Karen.Blackhall@lshtm.ac.uk). Additional relevant studies will be submitted on a regular basis to the Cochrane Injuries Group. With its comprehensiveness and easy accessibility, the register should provide a useful resource for the conduct of new systematic reviews on interventions of alcohol-impaired driving, as well as for updating existing reviews. By August 2007, we hope that researchers performing systematic reviews of alcohol-impaired driving will make the register on Cochrane Injuries Review Group's alcohol-impaired driving the first stop in their search process.

K Bartell, C Goss, C DiGuseppi

Correspondence to: C DiGuseppi,
carolyn.diguseppi@uchsc.edu

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