

Drinking and Driving

A road safety manual for
decision-makers and
practitioners



Drinking and Driving: a road safety manual for decision-makers and practitioners

ISBN 978-2-940395-00-2

Suggested citation:

Drinking and Driving: a road safety manual for decision-makers and practitioners.
Geneva, Global Road Safety Partnership, 2007.

© **Global Road Safety Partnership 2007.**

A hosted programme of the International Federation of Red Cross and Red Crescent Societies.
All rights reserved.

Publications of GRSP can be obtained from www.GRSProadsafety.org

Permission to reproduce or translate GRSP publications – whether for sale or for non-commercial distribution – should be addressed to:

Global Road Safety Partnership
c/o International Federation of Red Cross and Red Crescent Societies
PO Box 372
17 Chemin des Crêts
CH-1211 Geneva 19
Switzerland

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Global Road Safety Partnership, the International Federation of Red Cross and Red Crescent Societies or the World Health Organization (WHO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the Global Road Safety Partnership, the International Federation of Red Cross and Red Crescent Societies, or WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the Global Road Safety Partnership, the International Federation of Red Cross and Red Crescent Societies and the authors to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the Global Road Safety Partnership, the International Federation of Red Cross and Red Crescent Societies or the authors be liable for damages arising from its use.

Design by Inis: www.inis.ie

Preface

Road traffic injuries are a major public health problem and a leading cause of death and injury around the world. Each year nearly 1.2 million people die and millions more are injured or disabled as a result of road crashes, mostly in low-income and middle-income countries. As well as creating enormous social costs for individuals, families and communities, road traffic injuries place a heavy burden on health services and economies. The cost to countries, possibly already struggling with other development concerns, may well be 1%–2% of their gross national product. As motorization increases, road traffic crashes are a fast-growing problem, particularly in developing countries. If present trends continue unchecked, road traffic injuries will increase dramatically in most parts of the world over the next two decades, with the greatest impact falling on the most vulnerable citizens.

Appropriate and targeted action is urgently needed. The *World report on road traffic injury prevention*, launched jointly in 2004 by the World Health Organization (WHO) and the World Bank, identified improvements in road safety management that have dramatically decreased road traffic deaths and injuries in industrialized countries that have been active in road safety. The report showed that the use of seatbelts, helmets and child restraints has saved thousands of lives. The introduction of speed limits, the creation of safer infrastructure, the enforcement of blood alcohol concentration limits and improvements in vehicle safety, are all interventions that have been tested and repeatedly shown to be effective.

The international community must now take the lead in encouraging good practice in road safety management and the take up of these interventions in more countries, in ways appropriate to their particular settings. To speed up such efforts, the United Nations General Assembly passed a resolution on 14 April 2004 urging greater attention and resources to be directed towards the global road safety crisis. Resolution 58/289 on “Improving global road safety” stressed the importance of international collaboration in the field of road safety. A further resolution (A58/L.60), passed in October 2005, reaffirmed the commitment of the United Nations to this issue, encouraging Member States to implement the recommendations of the *World report on road traffic injury prevention*, and commending collaborative road safety initiatives so far undertaken towards implementing resolution 58/289. In particular, it encouraged Member States to focus on addressing key risk factors, and to establish lead agencies for road safety.

To contribute to the implementation of these resolutions, the Global Road Safety Partnership (GRSP), the World Health Organization, the FIA Foundation for the Automobile and Society, and the World Bank, have collaborated to produce a series of manuals aimed at policy-makers and practitioners. This manual is one of them. Each provides step-by-step guidance to countries wishing to improve road safety and

to implement the specific road safety interventions outlined in the *World report on road traffic injury prevention*. They propose simple, effective and cost-effective solutions that can save many lives and reduce the shocking burden of road traffic crashes around the world. We would encourage all to use these manuals.

David Silcock

Chief Executive
Global Road Safety Partnership

Etienne Krug

Director
Department of Injuries and Violence Prevention
World Health Organization

David Ward

Director General
FIA Foundation for the Automobile and Society

Anthony Bliss

Lead Road Safety Specialist
Transport and Urban Development Department
World Bank

Contributors and acknowledgements

This manual was drafted under contract to GRSP by a team from ARRB Transport Research (Australia) and the Transport Research Laboratory (UK). Parts of the manual have also been taken from *Helmets: a manual for decision-makers and practitioners*, the first manual in this series. Many people were involved in its preparation as authors, peer reviewers, workshop participants and technical editors. GRSP expresses sincere thanks to them all.

Advisory Committee

Anthony Bliss, Etienne Krug, David Silcock, David Ward

Editorial Committee

Kathleen Elsig, Andrew Downing, Margie Peden, Tami Toroyan

Principal Authors

Peter Cairney, Stephen Collier, Robert Klein, Allan Quimby, Ray Shuey, Tanya Styles, Ray Taylor

Contributors to Modules

Paul Graham, Jagadish Guria, Yvette Holder, Charlie Mock, Rebecca Ivers

Peer reviewers and workshop contributors

International reviews: Marilena Amoni, Mark Bane, Heidi Coleman, Brett Bivans, Ross Homel, Ian Johnston, Susan Kirinich, Margie Peden, Robin Room, G Gururaj, Vladimir Poznyak, Barry Sweedler, Eduardo Vasconcello, Maria Vegega.

Contributors to workshop in Bangalore: G. Gururaj, M.N.Reddi, Narayana Gowda, Bhaskar Rao, Prof Sreehari, Jai Prasad, M.T. Naik, Andrew Downing, B.H.Sanjeev Kumar, Mr. Vishveshwaran.

Contributors to workshop in Kerala: S. Anil Radhakrishnan, N. Mural, Stein Lundebye, Paul Leslie, Dr. Anoop Lal, Subu Kamal, Jim Jarvis, Jacob George, Johnson J Edayaranmula, Dr. Mahesh Chand

Technical and style editing

Angela Burton

Reference support

Caroline Allsopp

Financial support

GRSP gratefully acknowledges the financial support received from the World Bank Global Road Safety Facility that made the production of this manual possible.



Executive summary

The consumption of alcohol, even in relatively small amounts, increases the risk of being involved in a crash for motorists and pedestrians. Not only does alcohol impair processes critical to safe road use, such as vision and reaction time, it is also associated with impaired judgement and so is often linked to other high-risk road use behaviours such as speeding or not using seat-belts.

In many countries, research indicates that considerable proportions of drivers, motorcyclists and pedestrians have alcohol in their blood in sufficient concentrations to impair their road use skills. While the profile of drink-drivers differs somewhat between regions, there are a number of factors that increase the risk of crashes involving drinking and driving. For example, young male drivers are at a high risk of such crashes, and crashes involving alcohol are more frequent at night.

Unfortunately, in many countries, the scale of the problem is not well understood, there is little public awareness of the problem and legislation and enforcement are often inadequate. The *World report on road traffic injury prevention* identifies the effectiveness of programmes aimed at drinking and driving as a proven effective measure to reduce death and injury on the road.

The purpose of this manual is to inform readers of practical ways to develop coordinated and integrated programmes to reduce drinking and driving (including riding motorcycles) within a country. The manual is aimed at addressing drinking and driving among drivers. Commercial drivers are an especially important group to address in terms of drinking and driving because of the large number of passengers they can carry and/or the number of kilometres they are likely to travel. While impaired pedestrians are acknowledged as a problem, this issue is not addressed here.

The manual is aimed at policy-makers and practitioners, and draws on experience from countries that have succeeded in reducing drinking and driving. It provides the background evidence to start a drinking and driving programme, and takes the user through the steps needed to undertake a problem assessment in a country. It then explains how to plan and implement a programme, including setting up a working group, developing a plan, examples of laws and enforcement needed, how to develop public education and publicity campaigns, and finally how to evaluate the programme.

In developing this manual the authors have drawn on case studies from around the world to illustrate “good practice”. Examples from low and middle-income countries are given wherever possible, but it is a reflection on the lack of attention given to the issue in many countries that most examples are from highly motorized countries.



Introduction

Introduction

Background to the series of manuals

The World Health Organization (WHO) dedicated World Health Day 2004 to the issue of road safety. Events marking the day were held in more than 130 countries to raise awareness about road traffic injuries, stimulate new road safety programmes and improve existing initiatives. On the same day, the WHO and the World Bank jointly launched the *World report on road traffic injury prevention*, highlighting the growing pandemic of road traffic injuries. The report discusses in detail the fundamental concepts of road traffic injury prevention, the impact of road traffic injuries, the main causes and risk factors for road traffic crashes, and proven and effective intervention strategies. It concludes with six important recommendations that countries can follow to improve their road safety record.

Recommendations of the *World report on road traffic injury prevention*

1. Identify a lead agency in government to guide the national road traffic safety effort.
2. Assess the problem, policies, institutional settings and capacity relating to road injury.
3. Prepare a national road safety strategy and plan of action.
4. Allocate financial and human resources to address the problem.
5. Implement specific actions to prevent road traffic crashes, minimize injuries and their consequences and evaluate the impact of these actions.
6. Support the development of national capacity and international cooperation.

The report stresses that any actions taken by countries to prevent road traffic injuries need to be based on sound scientific evidence, and should be culturally appropriate and tested locally. However, in its fifth recommendation, the report makes it clear that there are several “good practices” – interventions already tried and tested – that can be implemented at low cost in most countries. These include strategies that address some of the major risk factors for road traffic injuries, such as:

- setting laws requiring installation and use of seat-belts and child restraints for all occupants of motor vehicles;
- requiring riders of motorcycles to wear helmets;
- establishing and enforcing low blood alcohol concentration limits;
- setting and enforcing speed limits;
- managing existing road infrastructure to increase safety.

A week after World Health Day, on 14 April 2004, the United Nations General Assembly passed a resolution calling for greater attention and resources to be directed towards road safety efforts. The resolution recognised that the United Nations system should support efforts to tackle the global road safety crisis. At the same time, it commended WHO and the World Bank for their initiative in launching the *World report on road traffic injury prevention*. It also invited WHO, working in close cooperation with the United Nations Regional Commissions, to act as coordinator on road safety issues within the United Nations system.

Following the mandate conferred on it by the United Nations General Assembly, WHO has helped develop a network of United Nations and other international road safety organizations – now referred to as the “United Nations Road Safety Collaboration”. The members of this group have agreed common goals for their collective efforts, and are initially focusing attention on the six recommendations of the *World report on road traffic injury prevention*.

A direct outcome of this collaboration has been the establishment of an informal consortium consisting of WHO, the World Bank, the FIA Foundation for the Automobile and Society and the Global Road Safety Partnership (GRSP). This consortium is working to produce a series of “good practice” manuals covering the key issues identified in the *World report on road traffic injury prevention*. The project arose out of the numerous requests made to the WHO and the World Bank by road safety practitioners around the world, especially those working in low and middle-income countries, asking for guidance in implementing the report’s recommendations.

The manuals are aimed at governments, non-governmental organizations and road safety practitioners in the broadest sense. Written in an accessible manner, they provide practical steps to implement each recommendation in a way identified as good practice, while also making clear the roles and responsibilities of all those involved. The manuals are all based on a common format that was used in a similar document on increasing seat-belt use, developed by the FIA Foundation for the Automobile and Society in 2004. Although primarily intended for low and middle-income countries, the manuals are applicable to a range of countries and adaptable to different levels of road safety performance. Each manual includes case studies from developed and developing countries.

The *World report on road traffic injury prevention* advocates a comprehensive systems approach to road safety – one that addresses the road, the vehicle and the user. Its starting point is that to effectively tackle road traffic injuries, responsibility needs to be shared between governments, industry, non-governmental organizations and international agencies. Furthermore, to be effective, road safety must have commitment and input from all the relevant sectors, including those of transport, health, policy-making and law enforcement. These manuals also reflect the views of the report; they too advocate a systems approach and – following the principle that road safety should be pursued across many disciplines – they are targeted at practitioners from a range of sectors.

Background to the drinking and driving manual

Why was the manual developed?

Road users who are impaired by alcohol have a significantly higher risk of being involved in a crash. A survey of studies conducted in low and middle-income countries found that alcohol was present in the blood of between 4% and 69% of injured drivers, 18% to 90% of crash-injured pedestrians and 10% to 28% of injured motorcyclists (1).

Programmes addressing the issue of crashes involving drinking and driving have been effective in several countries where they have included legislation and enforcement. This manual seeks to provide practical advice to road safety practitioners on how to conduct such programmes. It follows on from the *World report on road traffic injury prevention*, which describes how alcohol misuse contributes to injuries and fatalities among vehicle occupants, riders and pedestrians. The manual is one of a series providing, in an accessible form, practical advice on the steps necessary for improving road safety.

Target audience

The manual provides practical advice for countries that want to reduce the incidence of road crashes involving drinking and driving, locally or at a national level. It is targeted at governments, non-governmental organizations and road safety practitioners, particularly those in low and middle-income countries where alcohol is consumed by a large proportion of the population. The list of possible users will vary according to the country and its current situation with regard to alcohol consumption patterns and road safety activity, but will include:

- policy-makers and decision-makers
- members of the judiciary
- politicians
- police officers
- road safety professionals
- health professionals
- manufacturers, suppliers and retailers of alcohol beverages; owners of licensed premises and hospitality venues
- employers in the public and private sectors
- non-governmental organizations
- insurance industry personnel
- school and college teachers
- researchers on road safety and alcohol-related harm
- instructors in driving and road safety.

Although aimed particularly at low and middle-income countries with little legislation and few intervention programmes, it is intended to be useful for all countries.

What does the manual cover and how should it be used?

Achieving reductions in drink-drive road crashes will typically involve working systematically through a series of steps. Exactly how many steps are needed will depend on how much is already in place in a particular country in terms of legislation and intervention programmes.

This manual helps users identify which steps are relevant to their country's situation, and then provides the practical advice needed to implement the steps. As well as focusing strongly on technical measures, the manual also describes the institutional structures that need to be in place for a programme aimed at reducing crashes involving drinking and driving to be successful.

While alcohol-impaired pedestrians are known to be involved in some crashes, there is little practical experience in dealing with this as a road safety issue. This manual is therefore restricted to drinking and driving, including riding motorcycles.

What is covered?

Module 1 explains **why interventions to address alcohol-related road crashes are needed**. It describes how alcohol affects driving performance and contributes to crashes and resultant injuries among drivers, riders and pedestrians.

Module 2 guides the user through the process of **assessing a country's situation in relation to patterns of alcohol consumption and its impact on road crashes**. The section outlines the data needed for a good diagnosis of the problem and for identification of gaps in the mechanisms in place to address it.

Module 3 is about **designing and implementing a drinking and driving programme**, including how to gain political and community support for a programme through establishing a stakeholder working group. It also describes how to draw up plan of action that identifies the problem, sets objectives, timeframes and targets, and estimates the necessary resources. Module 3 also looks at a range of interventions for reducing the impact of drinking and driving, including laws and law enforcement, publicity campaigns and appropriate medical responses for casualties of crashes involving drinking and driving.

Module 4 is about **assessing the impact of a programme in terms of the specified programme objectives**. This includes identifying the data that need to be collected before beginning a campaign.

Case studies, in the form of boxed text, are included throughout the manual. These examples have been chosen to illustrate processes and outcomes, with experiences from a wide range of countries, reflecting regional, cultural and socio-economic diversity.

How should the manual be used?

The manual is not intended to be prescriptive, but rather adaptable to a particular country's current needs. Each module contains flowcharts and checklists to help readers determine where their country stands with regard to crashes involving drinking and driving, and to take those steps offering the greatest potential for improvement. The modular structure of the manual is intended to help this process of using only the relevant sections of the document.

Readers are encouraged to read the entire manual; however, the various sections may be more relevant to some countries than to others. Nonetheless, all users will probably benefit from reading Module 2, enabling them to assess their own situation and then pick particular actions to undertake. The choices made at this point will determine which of the remaining sections are most useful.

What are the limitations of this manual?

This manual is not meant to be comprehensive. It draws upon the experience of its contributors to identify practical and effective steps that can be taken to prevent crashes involving drinking and driving, and thus partly reflects the views of those involved in its production. There may well be successful interventions that are not reported here. Similarly, the case studies – used to illustrate processes, good practice and practical constraints – are not exhaustive but merely illustrate ideas presented in the main text.

As the manual aims primarily to provide guidance to countries in the early stages of developing and implementing programmes to prevent alcohol-related crashes, it does not provide extensive information on general alcohol issues. The manual concentrates on the three main topics of law regarding drinking and driving, enforcement and public education. Effective actions on these topics – taken together – will have a beneficial effect. Other possible interventions, such as “alcolocks” (devices built into vehicles to prevent drunk drivers from using the vehicle), which are under development and trial in some high-income countries, are not covered.

This manual is restricted to impairment due to alcohol. Other reasons for impairment, such as drugs or fatigue, are not considered here. It also focuses on drinking and driving (including riding motorcycles). Impaired pedestrians are known to be a problem, but there are few practical examples about how to address this.

How was the manual developed?

The manual was based on a standard format developed by the four partner organizations, the GRSP, WHO, the World Bank and the FIA Foundation for the Automobile and Society and was reviewed externally. The format was not meant to be rigid, but to provide a flexible structure that, where possible, would unify the series of manuals in their form and approach.

An advisory committee of experts from the different partner organizations oversaw the process of developing each manual and provided guidance on its content. A small editorial committee for each manual then coordinated its technical content.

An outline of this manual was produced by GRSP, as the project leader, with additional support provided by the World Bank and WHO. Drafting was undertaken by a team from ARRB and TRL, under contract to GRSP. Technical sections of the document were prepared by organizations or individuals with particular expertise in an area. These people further developed the outline of their sections, reviewed the relevant literature and contributed to the technical content, ensuring it reflected the latest scientific views on good practice. The manual was subject to two rounds of peer review, and a near final draft was also discussed in depth at two workshops with practitioners in India that led to further modifications.

Dissemination of the manual

This manual is being translated into a number of major languages, and countries are encouraged to translate the document into local languages. The manual will be disseminated widely through the distribution channels of all four organizations involved in the series of manuals.

The manual is available in PDF format to be downloaded free from the websites of all partner organizations. Visit GRSP's website at www.grsproadsafety.org

How to get more copies

Further copies of this manual can be ordered from:

Global Road Safety Partnership
c/o International Federation of Red Cross and Red Crescent Societies
PO Box 372
17 Chemin des Crêts
CH-1211 Geneva 19
Switzerland

E-mail: grsp@ifrc.org

References

1. Odera W, Zwi AB. *Alcohol-related traffic injuries and fatalities in developing countries: a critical review of literature*. London, Health Policy Unit, Department of Public Health, London School of Hygiene and Tropical Medicine, 1995.
2. Peden M et al., eds. *World report on road traffic injury prevention*. Geneva, World Health Organization, 2004.