

3

**How to design and
implement a drinking
and driving programme**

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THE PREVIOUS MODULE described how to assess the drinking and driving situation in a country or region. This module describes how to use this information to design and implement a targeted programme to reduce the incidence of drinking and driving. It includes not only technical information but also the practical information needed to ensure that implementation is smooth.

A national or regional programme to reduce the number of road crashes involving alcohol is a long-term commitment. It will have a long-term objective, such as reducing the number of road crashes involving drinking and driving by a certain percentage within a specific time period. It will also contain a number of specific components that will help “deliver” the programme objective. A number of possible components of a national or regional drinking and driving programme are included in this module, such as implementing or strengthening legislation, the enforcement of drinking and driving laws, punishments and sanctions for offenders, and targeted public information campaigns and community programmes.

While all countries differ in terms of culture, the role of alcohol in society, industrialisation, motorization and existing road safety problems, there are a number of underlying “rules” and principles that apply to any road safety intervention programme. This module is not prescriptive in terms of the order in which the described elements are followed.

The sections in this module provide guidance on the following issues:

- **3.1 Gaining political and community support for a drinking and driving programme:** The dedicated support of key political community leaders for a drinking and driving programme is critical for the programme’s success. This section provides guidance on a variety of steps that can be helpful in gaining the support needed, such as establishing a working group.
- **3.2 How to prepare a plan of action:** This section describes the necessary steps to form an action plan for the development and implementation of a drinking and driving programme. These steps include: identifying the problem, setting objectives and targets, deciding on activities and piloting the programme, setting a time-frame, estimating resources and monitoring the programme. Figure 3.2 provides an overview of the steps in this process, and where more detail can be found on them in this manual.
- **3.3 Interventions:** In this core section of the manual, guidance is provided on a range of interventions that can be included in a drinking and driving programme. Some of these interventions are recommended as “high priority” based on research and their proven effectiveness in reducing the incidence of drinking and driving in particular countries. Table 2.6 in module 2 provides an overview of initiatives considered as high, medium or low priority for countries in the initial stages of developing a drinking and driving programme. Interventions discussed in this manual include laws (and setting blood alcohol content (BAC) limits), enforcement of these laws, publicity campaigns and community programmes.

- **3.4 Social marketing and public education:** This section shows how mass media campaigns can increase public knowledge about legislation and raise awareness of increased enforcement. The objectives and target group of such a mass media campaign should be clearly identified, and advertising and public relations specialists should be employed to create targeted campaign messages and materials. The effects of the mass media element of the drinking and driving campaign on the opinions and behaviour of road users should be closely monitored and evaluated, and lessons learned should be used to improve the quality and impact of future campaigns.
- **3.5 Community-based interventions:** Drinking and driving interventions undertaken by and involving the local community can be effective in educating the public about the risks involved in drinking and driving, and preventing it from taking place. This section highlights the interventions of voluntary organizations created specifically to prevent drinking and driving, to programmes undertaken by employers, schools, outlets selling alcohol, and designated-driver programmes.
- **3.6 Engineering interventions:** This section looks at the benefits of engineering interventions to prevent crashes involving drinking and driving. These include reducing roadside hazards for drivers and pedestrians, lower speed limits, better lighting, “refuge islands” to allow staged road crossing, and improved pedestrian signals at traffic lights.
- **3.7 Ensuring an appropriate medical response:** In planning a drinking and driving programme it is also important to consider the ability to respond to crashes that involve victims who are impaired by alcohol. This means taking into consideration the capacity to provide an appropriate first aid response and addressing existing pre-hospital care and trauma care systems.

BOX 3.1: The Polish national road safety programme (GAMBIT 2005)

1. *Revise laws on drinking and driving:*
 - to modify drink-driving and drug-driving laws.
2. *Improve public education and communications to raise awareness of the role of alcohol in crashes:*
 - to nurture, through school education, negative attitudes to driving while under the influence of alcohol or similar substances;
 - to make “sober driving” part of driver training;
 - to introduce systematic drink-drive campaigns.
3. *Improve enforcement of drinking and driving laws:*
 - to provide road traffic enforcement services with devices for recording and testing drivers for alcohol and other substances;
 - to improve random driver-sobriety checks as a standard test procedure;
 - to introduce random checks on drivers for substances other than alcohol;
 - to promote vehicle devices that record and test drivers after they have been drinking.
4. *Conduct systematic studies of road use while under the influence of alcohol or other substances:*
 - to develop a system for monitoring the problem of drivers using roads under the influence of alcohol or other substances;
 - to study the effectiveness of schemes designed to reduce the number of road users under the influence of alcohol.

Source: Polish National Road Safety Council

3.1 Gaining political and community support for a drinking and driving programme

The development and success of any drinking and driving programme will depend greatly on winning the dedicated support of politicians, high-level community decision-makers and the community itself.

After having produced evidence that drinking and driving is a problem in the country or region, support from politicians and decision-makers for the development or strengthening of a drinking and driving programme must be obtained. Establishing a pro-active drinking and driving working group of key stakeholders can be an effective way to gain such support, and develop and implement a comprehensive drinking and driving programme.

3.1.1 How to establish and coordinate a working group

A programme to prevent drinking and driving should ideally be developed and coordinated by the country or regional road safety unit in cooperation with a working group of key stakeholders. Members of the working group should be identified via the stakeholder analysis (see Module 2). If a road safety unit does not exist, a specific working group should be established to develop and coordinate the implementation of the programme.

The working group could draw on the expertise and experiences of a range of individuals, including:

- the lead agency given the task of improving road safety in the country;
- relevant government departments (transport, health, police, licensing authorities, education);
- public health and injury prevention specialists;
- health care professionals;
- independent researchers in the field;
- non-government organizations, including those representing victims of road crashes, where these exist;
- road user organizations (transport operators, motoring and motorcycle associations);
- large employers and fleet operators;
- suppliers and retailers of alcohol.

Ideally, the working group should also engage critics of a drinking and driving programme. Their position needs to be understood as well, so that a programme is devised that addresses possible objections and is acceptable to as many parts of society as possible.

Throughout the programme it is important that all stakeholders are aware of:

- why the intervention is necessary;
- why they are part of the programme;
- their role in the programme;
- what interventions have already been undertaken (by others), are currently in operation or are planned to reduce drinking and driving;
- the long-term objectives of the programme;
- successes (and failures).

BOX 3.2: Developing a publicity campaign involving stakeholders, Thailand

In 1996 and 1997, a Road Safety Master Plan and Action Plan were compiled for Thailand. In implementing the plan, the Ministry of Transport and Communications commissioned local and overseas consultants to conduct pilot projects, including a public education campaign, in Nakhon Pathom and Phuket provinces. The main objectives of the public education campaigns were to minimise the harm caused by road users' attitudes to drinking and driving, which frequently resulted in crashes.

To create a common understanding and gain participation at national and provincial levels, a national committee was established. Sub-committees representing ministers, provincial interests and the transport sector formed the basis for co-ordinated project work.

Much effort was required in the early stages at the provincial level to explain why a public information and education campaign was necessary (1), because many saw law enforcement as the best way to reduce drinking and driving. But when province representatives understood how crucial public information campaigns are in changing behaviour and reducing crashes, they agreed to design an information campaign for their provinces.

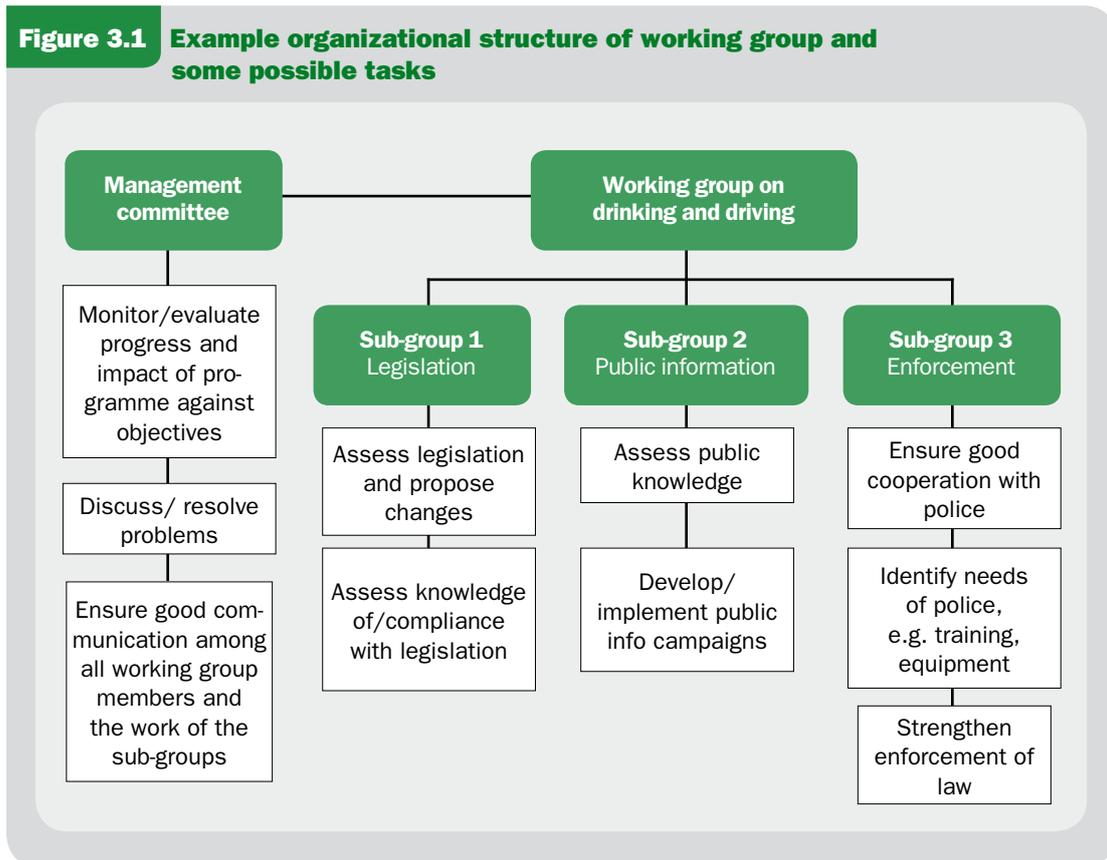
Assigning roles to working group members

The group should set clear objectives and have sufficient authority and resources to ensure the programme is carried out effectively. In addition, the roles and responsibilities of each of the members of the working group should be clear; they should have access to outside expertise, and good lines of communication to the many organizations whose cooperation is necessary to ensure the programme's success.

The group's overall role should be to develop, initiate and manage a drinking and driving programme which embraces assessment of the problem, monitoring the programme, prevention, education, enforcement, punishment, possibly rehabilitation of repeat offenders, and finally evaluating the programme's effect. One way to achieve this is to delegate tasks to sub-groups, at least until the programme is well established as a part of the country or region's road safety strategy. After that point, it may be more effective to re-convene sub-groups on a needs basis as issues arise in the delivery of the programme (see figure 3.1).

As the working group may be made up of a number of diverse stakeholders, a small management committee may be established in order to discuss problems emanating from each area of responsibility. Fine-tuning of project activities can be discussed and agreed at these meetings, and unforeseen problems and action to resolve them may also be raised. The management committee should meet frequently.

Figure 3.1 Example organizational structure of working group and some possible tasks



Certain functions will be common to all well-organized drinking and driving programmes. These include the initiation of the programme – its conceptualization and launch, the operation itself, its coordination and the function of advocacy. Those who are specifically assigned to these functions are described here because of their special roles. Sometimes, one person or agency may fulfil more than one function.

The initiator

The person or agency initiating the activity does not need to be engaged in the same way as other involved parties. However, they must fit into the operation to ensure that the programme moves forward in a coordinated manner. Their enthusiasm should be harnessed for the benefit of the programme.

Operators

These are the people with the technical responsibility for carrying out various aspects of the programme. Frequently, they will be officials of the lead and subsidiary agencies involved – such as the department of transport, the ministry or department of legal affairs, and the police. They must be allowed to participate fully. For this reason, their regular work duties may have to be expanded to take in additional tasks created by the drinking and driving programme. Training and other resources may also be required here.

Operators need to be open to input from others involved in the programme. They should not be discouraging or dismissive of non-technical people, as can be the case with technical experts.

The coordinator

This person has overall responsibility for the execution of the programme and their role is critical to its success. The coordinator, whether paid or not, should have clearly defined responsibilities. These include overseeing the activities of the working groups, monitoring progress, and ensuring that all those involved, including the initiator and operators, are kept well informed. The coordinator should have full authority to carry out these functions, as well as the resources and the support needed to implement these tasks. For this reason, the role is best filled by someone whose work already includes some of these responsibilities. Such a person may be the chief technical officer within the transport department, the person in charge of the traffic police, or a high-ranking official in the health ministry.

The advocate(s)

The advocate champions the battle against drinking and driving. This is usually one or several well known, influential and respected people with good communications skills. The advocate and coordinator can have several qualities and tasks in common, and in some instances, they are the same person. Prominent people who have themselves been affected – generally adversely – by drunk driving, usually make good advocates.

Advisory group

In many circumstances the working group may be supported by an advisory group of other interested stakeholders. If this mechanism is to be used, it is common for advisory groups to meet less frequently. Sometimes advisory groups might engage members of organizations that are, or become, critical of the programme operation. Where this occurs it is even more important that these groups are involved in the advisory structure and have an opportunity to air their concerns. At least one senior member of the programme management team should also be part of the advisory group.

It is rarely a good idea to ignore programme critics. If groups are ignored they will have an additional grievance to add to their critical concerns. To work well, the working group should have well-defined working procedures and a clear work plan – extending to the eventual implementation. It is important to have good communication within the group. To this end, there should be someone in the working group responsible for disseminating information among members.

BOX 3.3: An effective campaign: Mothers Against Drunk Driving (MADD), USA

Mothers Against Drunk Driving (MADD) works to prevent drinking and driving, to support the victims of crashes involving drink-driving and to prevent underage drinking. MADD was founded in 1980 by a small group of grieving mothers and has grown into a network of around 600 affiliates with two million members and supporters in the United States. MADD works through research-based programmes, policy initiatives, victim services and public education.

As well as running public awareness campaigns and youth programmes, MADD has advocated for the passage of numerous drinking and driving, and underage drinking laws. At federal level, MADD lobbied for the passage of the national 21 minimum drinking age law in 1984, and the 1995 'zero tolerance' provision, making it illegal for those under 21 years of age to drive after consuming alcohol. In 2000 MADD advocated for a federal BAC limit of 0.08. MADD also advocates for sobriety checkpoints, primary seat-belt laws and stricter penalties for repeat offenders and other high-risk offenders, as well as other key research-based legislation in states across the country.

More information: www.madd.org

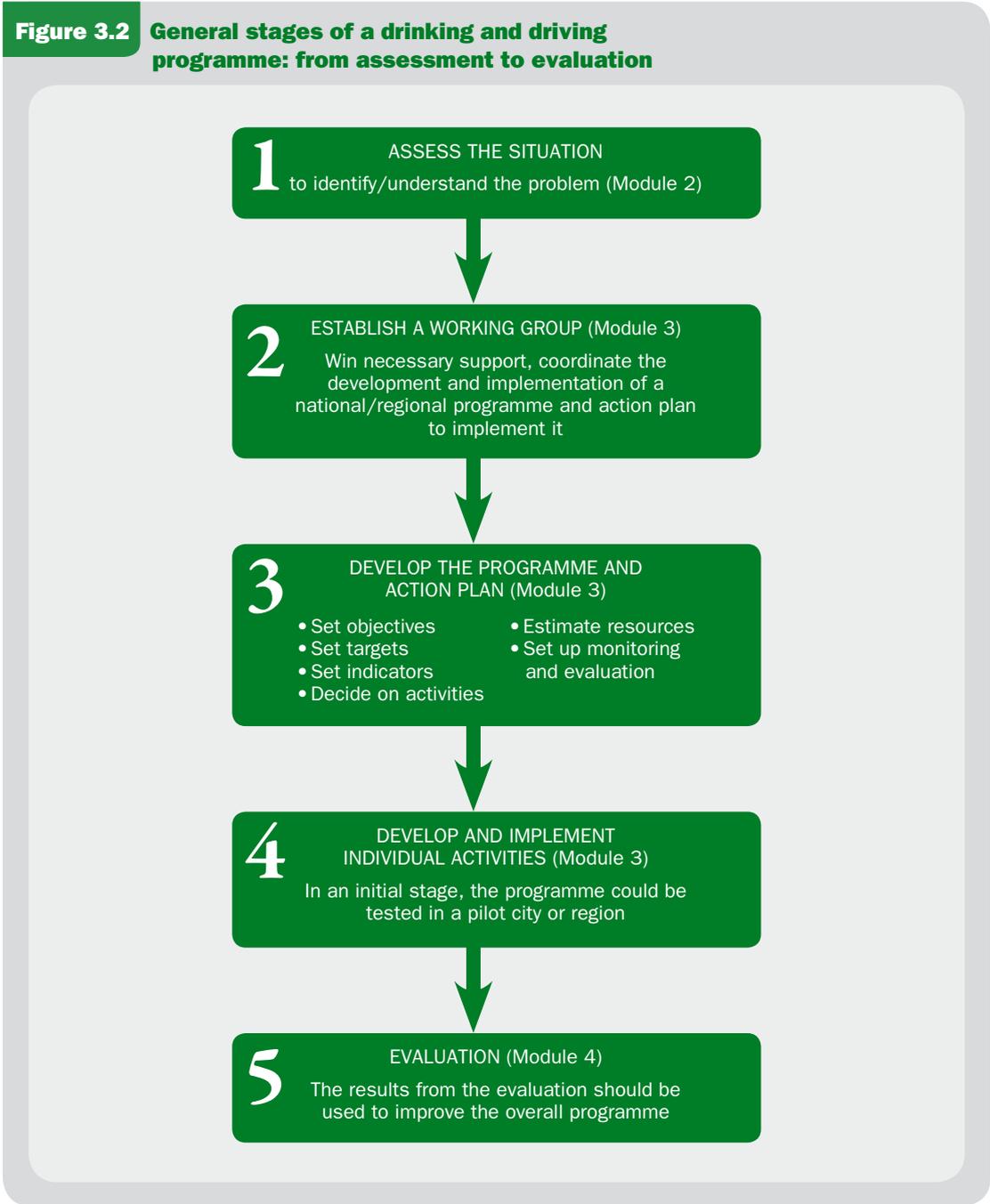
3.2 How to prepare a plan of action

Before a comprehensive drinking and driving programme can be implemented, a plan must be set up that lays out a clear strategy for how the objectives of the programme will be met. This plan must be backed up by data, as described in Module 2. The plan will identify the problem (based on the situation assessment), state the objectives, select the dominant method for reaching the objectives, describe in detail the components of the programme, assign responsibility for the development/implementation of these programme components to specific individuals/agencies, and specify the timing.

Figure 3.2 shows the general steps involved in developing an action plan (step 3) and how these fit in with other processes described in this manual. A more in-depth discussion on developing an action plan for a national policy is found in *Developing policies to prevent injuries and violence: guidelines for policy-makers and planners (2)*.

A plan of action can be prepared at a national, regional or even town level.

Figure 3.2 General stages of a drinking and driving programme: from assessment to evaluation



3.2.1 Identifying the problem

As described in Module 2, a critical element of any intervention programme is to identify the main problem group (or groups). Information on this may already be available from a variety of sources, in particular the assessment proposed in Module 2. Critical data are likely to be:

- breath tests conducted on crash-involved drivers;
- blood tests on crash fatalities;
- admission information from hospital accident and emergency departments;
- random breath checks (conducted either for enforcement or research);
- public/police anecdotal evidence (for example, about people leaving clubs).

The types of information that should be obtained are:

- the age, sex and social groupings of those involved;
- the times when the behaviour is most prevalent;
- the location(s) where the drinking and driving takes place.

This type of information helps to prioritise activities, and to plan and focus interventions where they are most needed. There must also be a clear statement of problems with respect to public knowledge, legislation, enforcement and penalties. While these are not independent, some issues clearly depend on others. Enforcement, for example, is very difficult if there is no clear, legal definition of “drunk” driving – such as illegal BAC levels.

3.2.2 Setting the programme’s objectives

The objectives are developed by examining the data collected in the situational assessment. This information must be analysed by the working group to identify the problems to be addressed in the programme.

In considering appropriate solutions to the problems, the working group should follow a “systems approach”. That is, one which considers understanding the system as a whole and identifying where there is potential for intervention. Solutions are thus likely to include factors that address the public, such as education, as well as enforcement of laws and regulations, which are combined over a period of time.

Programme objectives may include:

- reduction in crashes;
- reduction in fatal injuries resulting from crashes involving drinking and driving;
- reduction in the incidence of drinking and driving;
- increase in level of community concern about drinking and driving;
- increase in community support for drink-driving initiatives;
- increase in drivers and riders acting to change their drinking and driving behaviour;
- increase in driver perception of stronger enforcement of illegal alcohol laws.

BOX 3.4: Suraksha Sanchara preliminary investigation, Bangalore, India

In 2000, GRSP and Bangalore Agenda Task Force (BATF) facilitated the development of a partnership road safety programme for Bangalore known as *Suraksha Sanchara* (Safe Travel). As part of the first phase of the project, the National Institute for Mental Health and Neuro Sciences (NIMHANS) led a study to establish the extent of the problem of crashes involving drinking and driving, and exploring knowledge, attitudes and practices among drivers with regard to drinking and driving.

The study ran in two phases: the first was a hospital-based study covering 12 major hospitals in Bangalore, and the second was a roadside survey undertaken during the same period.

The hospital surveys revealed that nearly 28% of traffic injuries were attributable to alcohol. A typical case would involve a young man, semi-literate, who had been excessively drinking spirits in a bar, alone or partying, then getting on a two wheeler and sustaining injuries in a skid or head-on collision.

The roadside survey revealed that the proportion of drivers under the influence of alcohol varied from 11% (as detected by the older methodology of police testing drivers selectively on suspicion) to 40% (as detected by the newer methodology of random checking). Among those testing positive, 35% were above the legally permissible BAC limit – 0.03 – when checked with a breathalyzer. Again, it was typically a young male (25–39 years), literate, who had been drinking heavily in bars or at parties, who was knowledgeable about hazards of drinking but ignorant of dangers or legal consequences, who was posing greater dangers on the road. Bus and matador mini bus drivers comprised nearly one quarter of those testing positive.

Based on the results of the study, ten recommendations were put forward by policy-makers, professionals, public and press. These recommendations included:

- strict enforcement programmes with stiff penalties must be undertaken by the police;
- awareness programmes must focus on 25–45 year-olds, two wheeler drivers, heavy vehicle drivers, and people drinking in bars and retail stores;
- systematic training and awareness programmes for bartenders and retail shop owners to help them limit the sale of alcohol to customers, especially those reaching danger levels;
- governments should seriously consider closing times for bars and limiting last-minute service in bars to one hour before closure. Also, public transport must be easily accessible and available to deter people from driving after drinking;
- hospital-based surveillance (active reporting system) must be established to report all road traffic injuries (on a few vital parameters) to document long-term changing patterns and track the ongoing epidemic. Further, all hospitals should compulsorily check for breath/blood alcohol levels among traffic injuries.

More information: www.nimhans.kar.nic.in/deaddiction/lit/BATFReport.pdf

3.2.3 Setting clear targets

Once the main problems are clear and the general objectives have been set, specific targets can be set. The objective to decrease the incidence of drinking and driving, for instance, might be stated as “decreasing the number of crashes caused by a driver impaired by alcohol by a specified amount, over a given time period”. It is generally preferable to set measurable, time-limited objectives; these can be expressed in terms of a target, for example, percentage reduction (or improvement) to be achieved by a certain date. Having targets generally results in more realistic road safety programmes, a better use of public funds and other resources, and greater credibility of those operating the programmes (3).

Any targets also need to take account of the rapidly increasing motorization in many low-income countries; this means that sometimes “standing still” (in terms of crash statistics) can mean that some progress is being made. Such objectives must be measurable and can range from changing attitudes or knowledge, changing behaviour, or reducing the numbers of specific types of crash (for example those involving alcohol). The selection of relevant targets should be made in direct reference to the specific objectives. A range of targets for different objectives is outlined in Table 3.1 (the best range for a particular country will depend on what information is available, or collectable).

Table 3.1 Possible targets for drinking and driving programme objectives

Programme objective	Example performance targets
Reduction in the number of crashes involving drinking and driving (see above paragraph)	Reduction in the number of fatal crashes involving at least one driver/rider with an illegal BAC Reduction in the number of fatal crashes per registered vehicle involving at least one driver/rider with an illegal BAC
Reduction in fatalities resulting from crashes involving drinking and driving (see above paragraph)	Reduction in the number of killed riders and drivers with a recorded illegal BAC Reduction in the number of serious injuries occurring in crashes where an illegal BAC has been recorded for at least one rider or driver
Reduction in the incidence of drink-driving	Reduction in the proportion of drivers with an illegal BAC recorded at (standard) random road checks Reduction in the proportion of drivers with an illegal BAC identified at police random breath-testing stations
Increase in level of community concern about drink-driving	Proportion of population sample survey who identify drink-driving as a crime or a major community problem
Increase in community support for drink-driving initiatives	Level of community support, measured in survey, for strong (or stronger) enforcement and penalties for drink-driving behaviour
Increase in drivers and riders acting to change their drink-driving behaviour	Number of drivers/riders agreeing not to drink and drive in self reported surveys Number of drivers/riders using breath-alcohol testers prior to driving after drinking Proportion of population prepared to not drive if planning to drink in a social setting
Increase in driver perception of stronger enforcement of illegal alcohol laws	Number of drivers/riders believing enforcement activity is more extensive than previously through survey Number of drivers/riders charged with drink-driving offences

Performance targets should be developed in close consultation with partner agencies that may be responsible for initiating action to achieve the targets. Joint acceptance of targets is a critical requirement and is a key part of the coordination role required of the lead agency. The list above is not comprehensive, but is provided to indicate that a range of specific objectives could well be appropriate for a programme.

Once an objective is selected, the specific measures and target levels of performance need to be identified. Baseline measures of all relevant performance criteria should be made. Benchmark measurements represent the basis on which the performance of the programme should be measured.

3.2.4 Setting performance indicators

Once targets are set by the working group, performance indicators that will measure the progress towards the target must be agreed upon. Performance indicators are measures that indicate changes and improvements in areas of concern such as:

- legislation in place;
- legislation being enforced – e.g. number of breath tests carried out;
- number of convictions for illegal BAC levels;
- percentage of road crash victims admitted to hospital with illegal BAC levels.

In order to show changes and improvements, these data need to be compared to the baseline data.

Typical performance indicators include:

- proportion of drivers/riders above legal limit – from roadside surveys;
- percentage of crashes involving drunk drivers/riders.

Further measurement criteria may also be created, particularly for the purpose of monitoring the project. These new indicators may not be readily available, though they should not be difficult to set up. They include:

- numbers of traffic police trained to use BAC equipment and the number of patrols;
- the frequency of public awareness campaigns and public awareness of the messages;
- public attitudes to drinking and driving – from surveys.

For each indicator there should be a specific target. These targets will generally be quantifiable, though they may in some cases be qualitative. In any case, they should be realistic. The issue of performance indicators is also discussed in Module 4 in the context of monitoring and evaluating the programme.

BOX 3.5: Targets for reducing drinking and driving incidents, Poland

The Polish national road safety programme, GAMBIT, sets the ambitious target of reducing the number of fatalities resulting from drinking and driving from 12.2% of total road crash fatalities in 2003 to 6% by 2013.

Statistics collected by traffic police indicate that progress is being made towards achieving this target. For example, the Polish government increased sanctions for drinking and driving offenders in 2000, when there were 1156 deaths attributed to drunken road users. By 2005, police statistics showed almost a 30% decrease in the number of fatalities (825) caused by drink-driving road users.

More information: www.krbrd.gov.pl

3.2.5 Deciding on activities

After specifying the objectives, targets and indicators, the working group must decide on and plan activities. The scope and range of activities used will depend largely on local circumstances and budgets.

As with any programme to reduce road traffic injuries, the approach must involve a wide range of disciplines. Those to be involved in each activity must be identified. Activities will fall into the broad categories of legislation, enforcement, punishments and sanctions, public information and education campaigns. In the implementation process, measures to inform and educate the public about any changes in legislation or the dangers of drinking and driving should always come before the beginning of more intensified enforcement. Enforcement should be undertaken only where the infrastructure is in place (e.g. where there is legislation and the capacity for enforcement) and where the public has already been informed. Table 3.2 is an example of typical activities that may be carried out in the various stages of a drinking and driving programme.

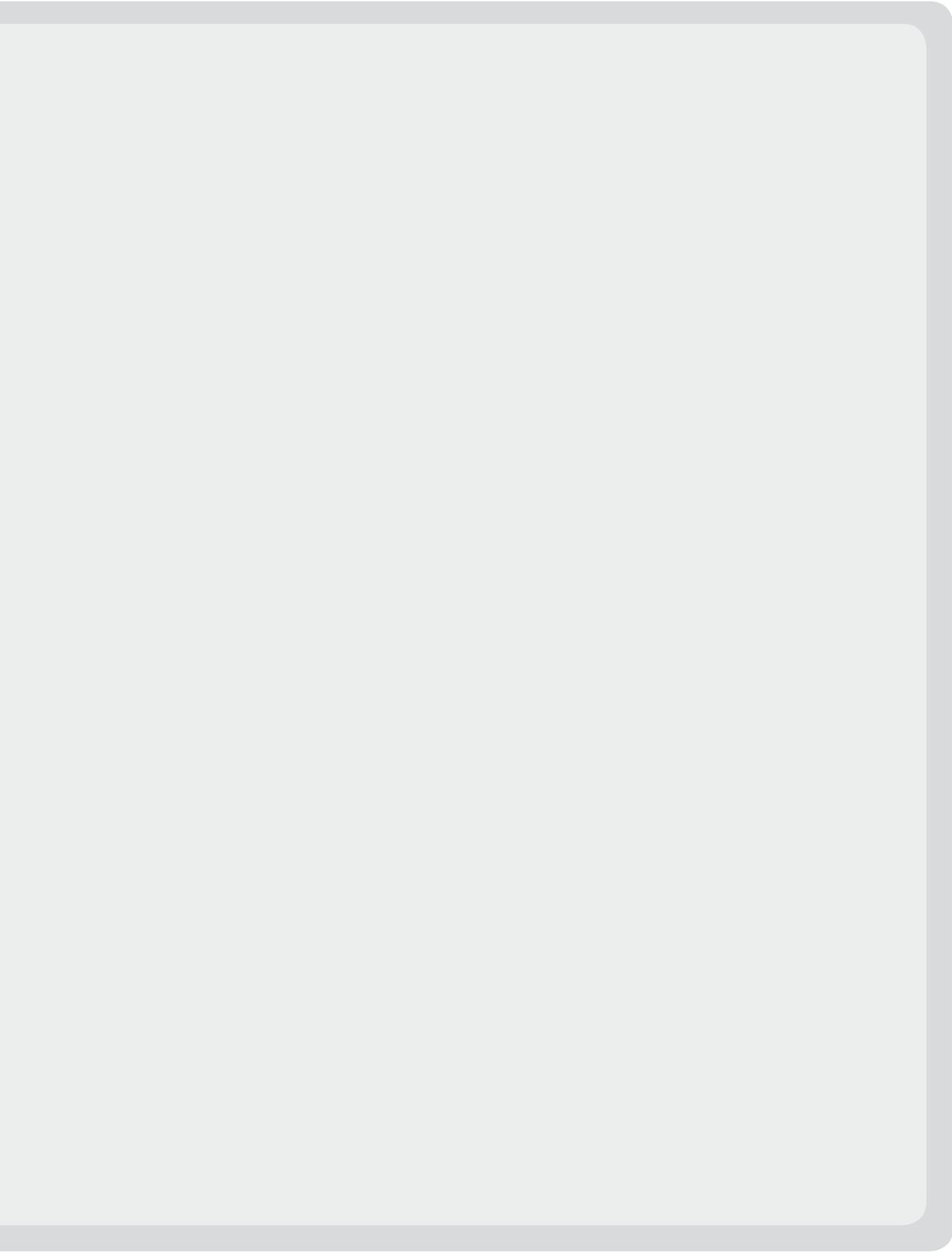
The most productive strategies use **education** to gain community acceptance and raise awareness and **enforcement** to achieve a cultural shift in drivers' behaviour – to change the community and drivers' focus to a “road safety” mentality. This emphasises the benefits of education coupled with enforcement – neither will work in isolation from the other.

3.2.6 Piloting the programme in a community or region

Implementing a smaller scale “pilot” project in carefully selected community or region can provide an extremely valuable opportunity to test the approach, type and impact of activities prescribed in the larger programme. The lessons learned though the pilot project can be used to improve the programme before it is implemented on a broader scale. Criteria for selecting the community or region for piloting the programme might include: sufficient good quality data showing crashes involving drinking and driving are a problem (e.g. from police and/or hospitals); clear community support for an intervention to prevent drinking and driving; clear support from a key stakeholder (such as the head of the traffic police, a high level government official or representative from the health sector) and their willingness to take a leading role in developing and implementing a campaign to reduce drinking and driving in their community or region.

Table 3.2 Possible stages of programme development and implementation

	Programme development		Programme implementation		
Objectives	1. Understand the problem (Module 2)	2. Programme and action plan development (Module 3)	3. Public education/information campaigns (Module 3)	4. Enforcement (Module 3)	5. Evaluation, sustainability of the programme (Module 4)
	Understand the characteristics of the road safety situation, in particular to understand the scope and characteristics of the problem of drinking and driving in the country or region	<ol style="list-style-type: none"> 1. Establish working group based on stakeholder analysis 2. Develop a targeted programme to reduce the incidence of crashes involving drinking and driving based on the results of the situation assessment 	<p>Increase public awareness, about drinking and driving</p> <p>Increase community support for drink-driving initiatives</p> <p>Increase in drivers and riders acting to change their drink-driving behaviour</p> <p>Increase police capacity to enforce laws</p> <p>Start to reduce crashes involving drinking and driving</p>	<p>Increase in perception of drivers of stronger enforcement of illegal alcohol laws</p> <p>Intensify police enforcement of drinking and driving laws</p> <p>Greater reduction in the number of crashes involving alcohol</p>	<p>Further increase rate of reduction of road crashes involving alcohol</p> <p>Ensure sustainability of the programme</p> <p>Feedback to plan based on evaluation results and improvement of programme</p>
Assessments	<p>Situation assessment by performing:</p> <ol style="list-style-type: none"> 1. Road safety and crash data assessment 2. Assess legislation 3. Assess level of enforcement of current legislation and appropriateness of punishments 4. Assess community perspectives 5. Conduct stakeholder analysis 	<p>Assess police capacities to enforce any new laws</p> <p>Training and equipment may be necessary</p>			<p>Reassess road safety and crash data</p> <p>Community perception</p> <p>Stakeholder analysis</p> <p>Level of enforcement of new legislation</p>
Legislation		<p>Develop/ amend law(s)</p> <p>Pass the law(s) through appropriate legal channels</p>	<p>Inform public about new or amended law/s</p>		



3.2.7 Setting a timeframe

An action programme to reduce drinking and driving will include both “preparatory steps” (involving legislation) and “launching steps” (ensuring compliance with the laws and regulations through incentives and enforcement). The timing of each step should be considered when planning the project.

The timeframe will depend on activities agreed upon. For example, if legislation is to be developed and implemented, it may be decided to phase in enforcement of the new law gradually in different areas. However, clearly an overall timeline must be agreed upon at an early stage in the planning process, as this may be affected by resources.

3.2.8 Estimating resource needs

A drinking and driving programme requires adequate financial and human resources in order to bring about the desired change in road user behaviour. Both mass media campaigns and equipping the police (with of training and equipment) are likely to be expensive. Additionally, any credible and effective “new” intervention programme is likely to take several years and will need to be monitored and managed for many years to come.

Any country planning an intervention strategy to reduce drinking and driving therefore needs to make sensible estimates of the funding that will be required. This will need to be done based on the estimated size of the problem, any similar projects previously undertaken, the specific interventions planned and the likely resistance. The case needs to be made that money spent on road safety is an investment which makes sound economic sense in terms of the social and economic returns it will deliver.

As part of designing the programme, it is therefore important that the following steps are taken:

- the human resource needs, including training, should be estimated;
- the costs of implementing the programme must be broken down by component and by activity chosen;
- national and international funding sources must be identified. Ideally, ministries involved in implementing the programme should adjust their budgets to reflect the new activities. In the short term, the working group can try to secure financial support from donors.

Failure to address fully the resource needs for implementation during the planning stage can jeopardize the success of the programme. Thus it is important that the working group is realistic in estimating the likelihood of being able to secure the funding needs of the programme.

Having worked out the programme’s activities in detail, the working group can calculate the cost of each of activity and draw up a budget (e.g. based on quotes from suppliers or on the cost of recent similar undertakings).

When formulating budgets, the following actions are recommended:

- estimating the funds available for the duration of the programme and specific activities;
- setting priorities, with activities phased if necessary to ensure that priority activities receive adequate funding;
- discussing with other government departments, non-profit-making organizations and private sector firms about similar projects already undertaken, and their costs;
- estimating the likely administrative and operational expenses in implementing the programme;
- estimating the cost of monitoring and evaluation;
- planning for financial reports at regular intervals.

There are two methods for costing a programme:

Total costs: this involves the cost for each activity, plus the allocation of human resources and equipment used in the programme. If, for example, the traffic police have cars for highway patrols that will be used to enforce drink-driving laws, then part of the cost of the police cars can be *allocated to the programme*.

Marginal costs: this involves only costs directly related to the implementation of the programme, including new purchases.

It is estimated that road traffic injuries and death cost developing countries US\$ 65 billion per year (4). An effective drinking and driving programme that significantly reduces the number of road crashes caused by drunk-driving road users can make a major economic impact. It is essential, therefore, that the government has ownership of the programme and finances it. Table 3.3 below provides some suggestions on how this might be done.

Table 3.3 Possible ways to fund a drinking and driving programme

Reinvestment	Some of the money from fines for non-compliance can be reinvested in a central fund to support public education and to help train the police to enforce the law. Similarly, funds from fuel tax, motorcycle licence and registration fees can be earmarked for particular purposes related to the drinking and driving programme.
Sponsorship*	Corporate groups often sponsor activities they see as worthwhile, and they may fund specific components of the programme.
Donor organizations	Development aid agencies and other charitable organizations are possible sources for funding a drinking and driving programme. In a similar way, road safety organizations and educational bodies may provide funding or contribute technical expertise.

* Due regard should be given to any conflict of interest which should arise.

Practitioners often need to seek support funding from sources other than government, and to develop public-private partnerships. Historically, supporters of road safety programmes and projects have included industries such as those involved with fuel, cars, tyres, insurance and the production of alcoholic drinks. In some countries offenders' fines can be applied to road safety programmes.



Stop driving while intoxicated, New York, United States

Under New York's Stop-DWI (Driving While Intoxicated) programme, state law mandates that revenue from DWI fines be returned to the county where the DWI offence occurred. An evaluation of the programme demonstrated that this type of self-sufficient programme is viable and may reduce crashes involving drinking and driving. Additionally, National Highway Traffic Safety Administration (NHTSA) revealed that community-level funding for drinking and driving law enforcement and treatment is characteristic of drink-driving programmes implemented in four of the five US states where significant reductions in crashes caused by drunk drivers have occurred.

More information:

www.nhtsa.dot.gov/people/injury/alcohol/IPTReport/FinalAlcoholIPT-03.pdf

3.2.9 Promoting the programme

It is likely that any significant new drink-driving programme will generate a national debate and this is to be supported (and amplified) since it will allow the arguments to be aired and the public (not just drivers) to be informed. Such promotions can be initiated by ministerial statements at conferences (political or otherwise) or workshops to which the media can be invited. If the person championing the programme is a high-profile celebrity, he or she could also be involved in the promotion as this will personalise and de-politicise the campaign.

While promotion is especially important at the start of any programme it should be maintained throughout. In many countries this ongoing promotion can be tied to local holidays or festivals. The promotion can also be maintained by issuing regular press notices and holding launches of new campaigns, posters and commercials.

3.2.10 Setting up a monitoring mechanism

Methods for evaluating and monitoring the programme are described in Module 4 of this manual. The brief description in this section is meant to provide the reader with a more general understanding of the types of activities in a drinking and driving

programme that should be monitored. In general, monitoring the programme involves keeping a close check on all measurement indicators, to ensure the programme is on track towards the goals set out.

Monitoring can be:

- **continuous**, with the lead agency of the working group overseeing the overall programme in case problems arise;
- **periodic**, with activities measured at the end of each stage of implementation.

Table 3.4 gives an example of what might be monitored during a typical drinking and driving programme, and the possible actions to take if the indicators suggest that activities are missing their objectives. It is important to:

- define resources for the task – human and financial resources should be allocated at the outset of the process to ensure that the monitoring and evaluation takes place at an appropriate time, and that the results are disseminated;
- define the mechanism for monitoring – set out who will be responsible for monitoring progress, at what intervals progress should be reported and to whom, and how implementation can be improved as early as possible, where necessary;
- put in place a feedback mechanism to allow the regular revision of a programme, allowing improvements to the programme's accuracy and relevance where necessary;
- evaluate the programme periodically to determine its effectiveness (evaluation methods are discussed in more detail in Module 4).

Table 3.4 Defining indicators and actions for monitoring

Activity	Indicator(s) for monitoring	Actions to take if monitoring suggests activity is below target
Increasing public awareness of the dangers of drinking and driving	<ul style="list-style-type: none"> • number and frequency of publicity spots in the media • amount of feedback from target audience 	<ul style="list-style-type: none"> • improve persuasiveness of media stories and messages
Increasing capacity of police to enforce	<ul style="list-style-type: none"> • increase in the number of drivers stopped and tested • extent of area covered by enforcement • number of penalties issued 	<ul style="list-style-type: none"> • increase size of traffic police force • change enforcement areas • improve system of issuing penalties and collecting fines
Designing awareness campaign on road safety and drinking and driving	<ul style="list-style-type: none"> • level of awareness of traffic safety • level of awareness of dangers of drunk driving • level of knowledge of drinking and driving laws and their enforcement • observed (or self-reported) changes in behaviour 	<ul style="list-style-type: none"> • redefine target audience • redefine message(s) • evaluate the means of delivering the messages and change it if necessary

3.2.11 Identify capacity-building and training requirements

A team of well trained professionals is needed to bring about long-term sustainable improvements in road safety. They will probably have both “hard” (engineering) and “soft” (psychological) skills. For some members of the team, training opportunities overseas could be beneficial to provide enhanced knowledge and skills of interventions that have proven effective elsewhere. In fact, professional development will need to be considered at all points of the delivery chain.

The police will need training if changes to enforcement activity are envisaged. Hospital staff may need to be trained in measuring BACs. Equally, managers and staff who work in premises licensed to sell beverage alcohol may require training to ensure their dealings with customers are professional and conducted within the law. They may also need training in ways to provide assistance to alcohol-impaired customers.

3.2.12 Ensuring sustainability of the programme

The sustainability of a drinking and driving programme is essential to ensure that any benefits that result from the programme persist. In developing the action plan, it is therefore important to anticipate longer term funding requirements, and the possibility of reinforcement of any communications components of a drinking and driving programme. Thus, for example, if improving enforcement of drinking and driving laws is a project objective, the capacity for enforcement to be provided beyond a short campaign must be considered, and the strategy for enforcement must be made sustainable – with funds allocated on a yearly basis to support the operational capacity of the traffic police. What has been achieved must be maintained, with future programmes aiming at the next level of compliance.

Successfully sustaining a programme also requires that the components of the programme are evaluated to determine what worked and what did not work (see Module 4). The results of this evaluation should be fed back into the design and implementation of future activities.

3.2.13 Celebrating success

When successful outcomes have been identified, it is recommended that both formal and informal activities be arranged with staff from participating agencies to celebrate success. In road safety projects the major benefit that staff receive from participation in a successful project is personal satisfaction. Positive endorsement by senior management of the value of their work is a critical component for maintaining staff morale and showing all participants that their work is acknowledged and acclaimed.

The above sections have described the general steps involved in developing a drinking and driving programme, beginning with an assessment of the current situation (explored further in Module 2). The following sections of this module provide

greater detail on the particular components of a national or regional drinking and driving programme, including legislation, enforcement, public information/education campaigns, and community-based initiatives.

3.3 Interventions

As outlined in Table 2.6 in Module 2, experience and research have shown a variety of interventions to be effective or essential in reducing the number of road crashes involving drinking and driving in a country or region. It is highly recommended that a national or regional drinking and driving programme includes the “high priority” interventions listed in the table. The scope and impact of your programme in terms of preventing drinking and driving will benefit from the inclusion of additional interventions that are most relevant to the specific drink-driving situation in your country or region (see Table 3.5 on the effectiveness of drinking and driving legislation and its enforcement).

The sections below provide more extensive information on many of the interventions listed in Table 2.6. It is hoped this information will help you understand why these interventions are considered essential and/or effective, and the steps that need to be considered when implementing these interventions in your country or region.

3.3.1 How to develop and implement laws on drinking and driving

Targeted and appropriate legislation on drinking and driving that is consistently enforced and well understood by the public is a critical component of a country or region’s efforts to control drinking and driving. There are a number of steps that need to be taken when designing effective drinking and driving legislation. The first step in this process is undertaking an assessment of relevant legislation that is already in place (see Module 2).

Should you identify that the laws need reforming or that new laws are required, the goals of the reforms and new laws should be agreed. These are likely to include one or more of the following:

- address the absence of legislation;
- strengthen an existing law;
- offer further guidance and support to enforce legislation;
- provide greater legitimacy for the law, so that those responsible can enforce it more effectively.

In addition to the information you obtain through your assessment, the following list provides some possible considerations when attempting to formulate coherent drinking and driving laws.

- What level of punishment should be set to deter drivers and, importantly, prevent drivers from re-offending? (see section 3.3.3)
- What devices are going to be used to provide evidential BAC information (evidential BAC readings are those which can be used as evidence in a court of law)?
- Will the responsible authorities be able to implement new legislation and ensure its enforcement?



Police powers

Both Europe and North America have given police officers the power to demand a breath specimen or to undertake a sobriety test. Legislation in the countries of these regions also gives officers the power to make arrests if the person is over a prescribed limit. In addition, there are requirements either to provide an evidential breath specimen or a specimen of blood or urine for analysis, either as written in legislation or, as in the US for example, the consent is “implied” because they hold a driving licence.

Additional police powers include the power to enter premises, if necessary by force, to find the suspected driver of a vehicle involved in a road traffic collision and believed to be under the influence of alcohol. In the UK a refusal to be tested is punished in the same way as being over the legal limit.

In many countries all drivers involved in a crash are automatically given a BAC test.

Most countries have a general traffic law which makes driving while “drunk” an offence. Not all specify “drunk” in terms of BAC or BrAC levels. Even if this is specified, it can often be impractical to carry out a blood or urine test in order to check the level, hence making enforcement difficult. Modern breath-testing equipment allows traffic police to check for impairment at the roadside and the law should allow such test results to be used as evidence in court.



An effective drinking and driving law will:

- make it illegal to drive with a BAC above a certain level;
- allow roadside testing (using approved equipment) and admit the results to a court of justice as evidence;
- require drivers to give a breath test when asked to do so by the police, and make it an offence to refuse;
- prescribe the penalties for the offence.

Table 3.5 Effectiveness of drinking and driving legislation and its enforcement (per 100 000 population)

World Bank region	WHO subregion	Sex	Attributable fractions (per 100,000 deaths)		Effectiveness of drinking and driving laws and random breath testing	
			Deaths attributed to traffic accidents*	Deaths attributed to traffic accidents involving drinking and driving*	Reduced deaths (per 100,000)	Reduced years lost due to disability (per 100,000)
Europe and Central Asia	Europe B	Male	1473	657	141	77
		Female	542	74	16	6
	Europe C	Male	2197	1396	299	193
		Female	799	223	48	30
Latin America and the Caribbean	Americas B	Male	4358	2053	439	148
		Female	1514	220	47	12
	Americas D	Male	2599	861	184	64
		Female	1093	101	22	6
Sub-Saharan Africa	Africa D	Male	2159	417	89	43
		Female	1079	90	19	9
	Africa E	Male	2075	803	172	107
		Female	1027	123	26	17
East Asia and the Pacific	South-East Asia B	Male	7809	1993	427	164
		Female	2343	127	27	8
	Western Pacific B	Male	3629	723	155	66
		Female	1790	157	34	12
South Asia	South-East Asia D	Male	3689	591	126	45
		Female	1451	53	11	3

Key: B = low child mortality, low adult mortality; C = low child mortality, high adult mortality; D = high child mortality, high adult mortality; E = high child mortality, very high adult mortality.

* Percentages for all age groups combined shown here.

Source: (5)

Table 3.6 Wording of legal texts relating to drinking and driving in various countries**Argentina:** BAC (g/l): 0.5 g/litre

Text: It is prohibited to drive any type of vehicle with a BAC above 500 mg/litre. In the case of driving a motorcycle it is prohibited to drive with a BAC above 200 mg/litre. For public transport or cargo vehicles it is prohibited to drive with any BAC above 0.

Source: National Traffic and Highway Safety Law 24.449, article 48 – as amended by article 17 of Law 24.788 (1997) – National Law on the Prevention of Alcoholism.

Botswana: BAC (g/l): 0.8 g/litre

Text: The Blood Alcohol Content (BAC) is 80 mg/litre of blood. The BAC Testing Rules: – any driver maybe required by a police officer to provide a specimen of breath; – where such a person is, for reasons of injury or disability, unable to provide a specimen of breath, he may be required to provide a specimen of blood; – failure to provide any of the above samples will be treated as supporting any other evidence that the driver is unfit to drive and in addition will be liable to a charge of Failure to provide a sample.

Source: Road Traffic Act

Singapore: BAC (g/l): 0.8 g/litre

Text: Prior to taking a specimen of blood for analysis, the person's breath will be tested by a police officer with the prescribed breath alcohol analyser. If he fails the test, he will then be required to provide at a hospital a specimen of his blood for a laboratory test to determine the alcohol content in the blood. The current prescribed limits are: a) 35 microgrammes of alcohol in 100 millilitres of breath; or b) 80 milligrammes of alcohol in 100 millilitres of blood.

Source: Section 67-71C of the Road Traffic Act

Spain: BAC (g/l): 0.5 g/litre

Text: For vehicles with 9 passenger seats, or total weight over 3500 kilograms, or vehicles transporting heavy goods, or public transport vehicles, a BAC limit of 0.3 g/litre applies. The BAC level for new drivers (who obtained driving licence within 2 years of the issue of the licence) is 0.3 g/litre.

Source: Reglamento General de Circulacion, Real Decree 2282/1998, Articulate 20. Rates of alcohol in the blood.

Viet Nam: BAC (g/l): 0.5 g/litre

Text:

Article 8, Prohibited behaviours Item 8: Drunk driving, where the blood alcohol level is over 80 mg/100 ml, or the breath alcohol level is over 40 mg/litre, or driving while under the influence of other prohibited stimulants.

Source: Law on Road Traffic (Reference 26/ 2001/QH10)

Source: Instruction – Ensure the safety of road and urban traffic (Reference 36/2001/NĐ-CP)

Article 29, Prohibiting driving in one of following cases Item 2: Driving while the blood alcohol level is over 80 mg/100 ml, or where the breath alcohol level is over 40 mg/litre, or while using other stimulants.

Source: Decree Regulations on solving administrative breaches in Road Traffic 152/2005/NĐ-CP

Article 12, Fines for drivers and passengers in cars and other vehicles who infringe Road Traffic regulations Section 7: Fines of 1–2 million VND will be made for the following driving offences:

Item b: Drunk driving, where the blood or breath alcohol content level exceeds regular limits, or where other prohibited stimulants have been used while driving; or not agreeing to give a blood sample to traffic police for alcohol testing.

Source: Decree Regulations on solving administrative breaches in Road Traffic 152/2005/NĐ-CP

Introducing and implementing legislation

For maximum effectiveness, legislation on drinking and driving needs strong support from the highest levels of government, sending a clear message to society that drink-driving and traffic safety are vital national issues.

The working group is an essential element in promoting and gaining approval for the legislation. Members of the group, who are government officials, policy-makers, or injury prevention specialists, will have the greatest influence in convincing others of the need for a law.

The following questions should be considered when introducing a new law and the answers should be incorporated in your action plan:

- Which agencies will be most effective and influential in implementing legislation?
- Are the capabilities of the agencies adequately addressed in the legislation?
- Is the proposed legislation worded in an appropriate way, so as to gain support (see Table 3.6 for examples of wording)?
- What are the proposed penalties for drivers disobeying the law? Are these penalties appropriate and are they likely to be effective?

NOTE

Implementing and enforcing the law will often be a much greater hurdle than introducing it, particularly in low and middle-income countries. Guidance on implementation and enforcement is therefore critical.

It may be necessary to phase-in the implementation of new legislation: in such a case, areas with large numbers of road crashes involving drinking and driving should be the ones selected first. For example, commence enforcement in a city with strong police resources and commitment, and a known high level of alcohol consumption.

Setting BAC levels

As presented in Module 1, blood alcohol concentration (BAC) is a key concept in terms of linking alcohol to road crashes. Drivers who have consumed alcohol are more likely to be involved in a road crash than drivers who have not consumed alcohol. The effects of alcohol on driving performance are directly related to BAC levels. The factors which determine an individual's BAC following alcohol consumption are presented in Appendix 1. The effects of alcohol on the body at a given BAC are largely universal and Table 1.1, Module 1 summarises these effects.

BAC limits which have been adopted by various countries are presented below in Table 3.7. Setting a BAC limit that is appropriate for your country and culture is critical in gaining and maintaining public acceptance for the law.

As shown in Module 1, there is overwhelming evidence that crash risk increases rapidly above 0.08 g/100 ml. Anything higher than this can be strongly criticised in road safety terms. The European Commission recommends a 0.05 g/100 ml BAC level.

Table 3.7 Standard maximum legal BAC limits for drivers by country or area

Country or area	BAC (g/100 ml)	Country or area	BAC (g/100 ml)
Australia	0.05	Luxembourg	0.05
Austria	0.05	Netherlands	0.05
Belgium	0.05	New Zealand	0.08
Benin	0.08	Norway	0.05
Botswana	0.08	Portugal	0.05
Brazil	0.08	Russian Federation	0.02
Canada	0.08	South Africa	0.05
Côte d'Ivoire	0.08	Spain	0.05
Czech Republic	0.05	Swaziland	0.08
Denmark	0.05	Sweden	0.02
Estonia	0.02	Switzerland	0.08
Finland	0.05	Uganda	0.15
France	0.05	United Kingdom	0.08
Germany	0.05	United Republic of Tanzania	0.08
Greece	0.05	United States of America*	0.10 or 0.08
Hungary	0.05	Zambia	0.08
Ireland	0.08	Zimbabwe	0.08
Italy	0.05		
Japan	0.00		
Lesotho	0.08		

* Depends on state legislation

Source: (4)

There is a growing international move towards introducing differential BAC limits, for example adopting a minimum 0.05 limit with a relatively small penalty for offenders and severer penalties for offenders caught with higher BAC levels.

NOTE**In South Korea, the law regarding BAC levels states:**

- drivers below 0.05 – no penalty
- drivers with a BAC of 0.05–0.09 – 100 days of licence suspension
- drivers with a BAC of 0.09–0.10 – cancellation of driving licence
- drivers with a BAC of 0.10–0.36 – arrest
- an individual caught driving while drunk 3 times within a 5 year period, or 2 times in 3 years, is arrested.

If your country is setting a limit for the first time, there may be an advantage in using 0.08 for a period until drivers become used to the new regime, and then reducing it and applying differential limits for different classes and age of driver, for example setting a lower BAC level for high risk groups and those with responsibility for passengers or heavy vehicles. The law must be enforceable and broadly accepted by the public, if it is to be effective and not widely flouted.

France, for example, first set a BAC level of 0.08 in 1978. This was reduced to 0.07 in 1995 and is now set at the level of 0.05, as recommended by the European Commission.

Lower BAC limits for specific groups of drivers

Although BAC limits of 0.05 or 0.08 are typical of those imposed on fully licensed drivers travelling for private purposes, lower limits are often employed for other categories of driver. Several countries apply lower limits to **younger** or **less experienced drivers** which appear to be effective in reducing alcohol-related crashes among this group (7).



Lower BAC levels for young drivers

In the United States, 30 states have enacted lower BAC limits for young drivers. One study evaluated the effects on drinking and driving of lowered allowable BAC limits for drivers younger than 21 years in these states between 1984 and 1998. Results showed clearly that the changed BAC laws were followed by statistically significant decreases (19%) in the amount of driving after drinking (8).

A review of six studies on the effectiveness of low BAC for younger drivers found a reduction in injuries or crashes after implementation of the law. There was the greatest reduction, 22%, in night-time, single vehicle fatalities in those states with 0.0 BAC laws. In states with 0.02% BAC laws the reduction averaged 17%, and in states with 0.04% to 0.06% BAC laws the reduction was 7% (9).

Drivers of commercial vehicles and public transport operators can also be subject to lower BAC limits. Indeed, some privately owned companies may set their own limits for their drivers; often such policies dictate a 0.00 BAC (see section 3.3.5).



BAC limits, Australia

BAC limits vary by state but in the Australian Capital Territory the following driver categories must not exceed a BAC of 0.02:

- taxi drivers
- bus drivers
- dangerous goods vehicles
- heavy vehicles (gross vehicle mass over 4.5 tonnes)
- Commonwealth vehicles
- learner and probationary drivers.

Many drivers do not know what their BAC or BrAC level is after drinking – nor can they calculate it accurately. Some will “allow” themselves one drink (some two) without knowing what this means in terms of BAC. Educating drivers about BAC and risks for harm is critical in creating a responsible drinking and driving culture. For more information on how alcohol affects the body and how BACs are linked to both driving performance and crash risk, see section 1.2.1 in Module 1.

Additional relevant drinking and driving legislation

Legislation specifying BAC limits and how these are to be enforced are a cornerstone of any national or regional programme to reduce drinking and driving. Additional types of legislation targeting, for example, known high risk groups such as young drivers, regulating the sale of beverage alcohol (e.g. to specific hours), taxation on beverage alcohol to decrease its accessibility, and licensing premises selling beverage alcohol have been enacted in many countries in an effort to curb the occurrence of drinking and driving with positive results. A few of these types of legislation are described below.

Minimum legal drinking age

In some countries minimum legal drinking age (MLDA) laws specify an age below which people cannot purchase or publicly consume alcohol. In the US, an individual must be at least 21 years of age to purchase alcoholic beverages; in Denmark the MLDA is set six years lower at 15 years. In several other European countries the MLDA varies for beer, wine and spirits. There is strong evidence to suggest that MLDA laws are effective in preventing crashes involving drinking and driving (7).



Statistics collected by the United States General Accounting Office (1987) show that states which adopted the minimum legal drinking age of 21 in the 1980s experienced a 10–15% decline in drink-driving related fatalities among drivers compared with states that did not adopt such laws. Further, the National Highway Traffic Safety Administration (NHTSA) predicts that on average, 1000 fatalities per annum caused by drinking and driving are avoided through the introduction of a MLDA of 21 within US states.

Alcohol sales points

Some regions have implemented laws limiting the hours during which alcohol can be sold, or the density of outlets selling beverage alcohol. There is evidence that, in some circumstances, a relationship exists between alcohol-related problems and both outlet density and hours during which alcohol can be sold, with longer hours and more outlets leading to increased problems and shorter hours and a reduction in outlets resulting in a reduction in such problems, including road deaths (10). These measures may be most effective when they impact upon large geographic areas so as to minimise opportunities for circumvention.

Licensing laws

The licensing laws of a country regulate the general availability of alcohol. A series of measures are employed to control criteria for granting licences for the sale of alcohol, hours during which business may be conducted, the number of licensed premises within a local area and also to set a drinking age, etc. These laws, typically carried out by a “licensing board” (or similar entity) should require that fairly stringent requirements are applied before a licence to sell alcohol is granted to an individual. The aims of the licensing laws are:

- to prevent crime and disorder;
- to maintain public safety;
- to prevent public nuisance;
- to protect children/vulnerable people.

It is in the best interest of businesses serving/selling alcohol that they work within the framework of the licensing law as failure to do so would result in loss of the licence, which leads to loss of income and possible closure of their business.

Developing a timeframe for implementation of laws

It is important that an appropriate timeframe be developed for the implementation of the law. Adequate public awareness must be ensured in order to optimise the success of the law. The timeframe from implementation of the law to full enforcement and penalty for non-compliance can be anything from a couple of months to several years. This will depend on the circumstances, and must be articulated in the overall action plan. Similarly, the indicators by which this component of the programme will be measured must be included in the plan.

Legislative requirements in summary

- A country or region seeking to reduce the burden of crashes involving drinking and driving must enact relevant and robust legislation that has strong political support and can be enforced.
- Laws on a maximum BAC limit for drivers/riders is essential. Legislation should specify how BAC levels are to be enforced and what powers are to be given to the police in their enforcement efforts.
- Many countries have lower BAC limits for specific driver groups, such as young drivers, drivers of commercial vehicles, which have proven effective in reducing crashes involving drinking and driving.
- Legislation should state the type of offence and realistic penalties for those offences.
- A coherent drinking and driving policy will, without doubt, reduce the road safety burden, both in terms of lives lost and the financial costs of investigation.

3.3.2 How to enforce drinking and driving laws

Like robust legislation on drinking and driving, the consistent and visible enforcement of drinking and driving laws is a critical component of any drink-driving programme in a country or region, and should be considered a high priority in any action plan. *The community must understand and believe that if they drink and drive there is a strong likelihood of both detection and prosecution.*

The principal objective of police intervention is to save lives and reduce drink-driving related road trauma. Apprehending offenders is a by-product of the intervention, not the main objective itself. As the intervention proves to be successful, apprehensions should decline and allow police to then concentrate on the recidivist drink-drivers.

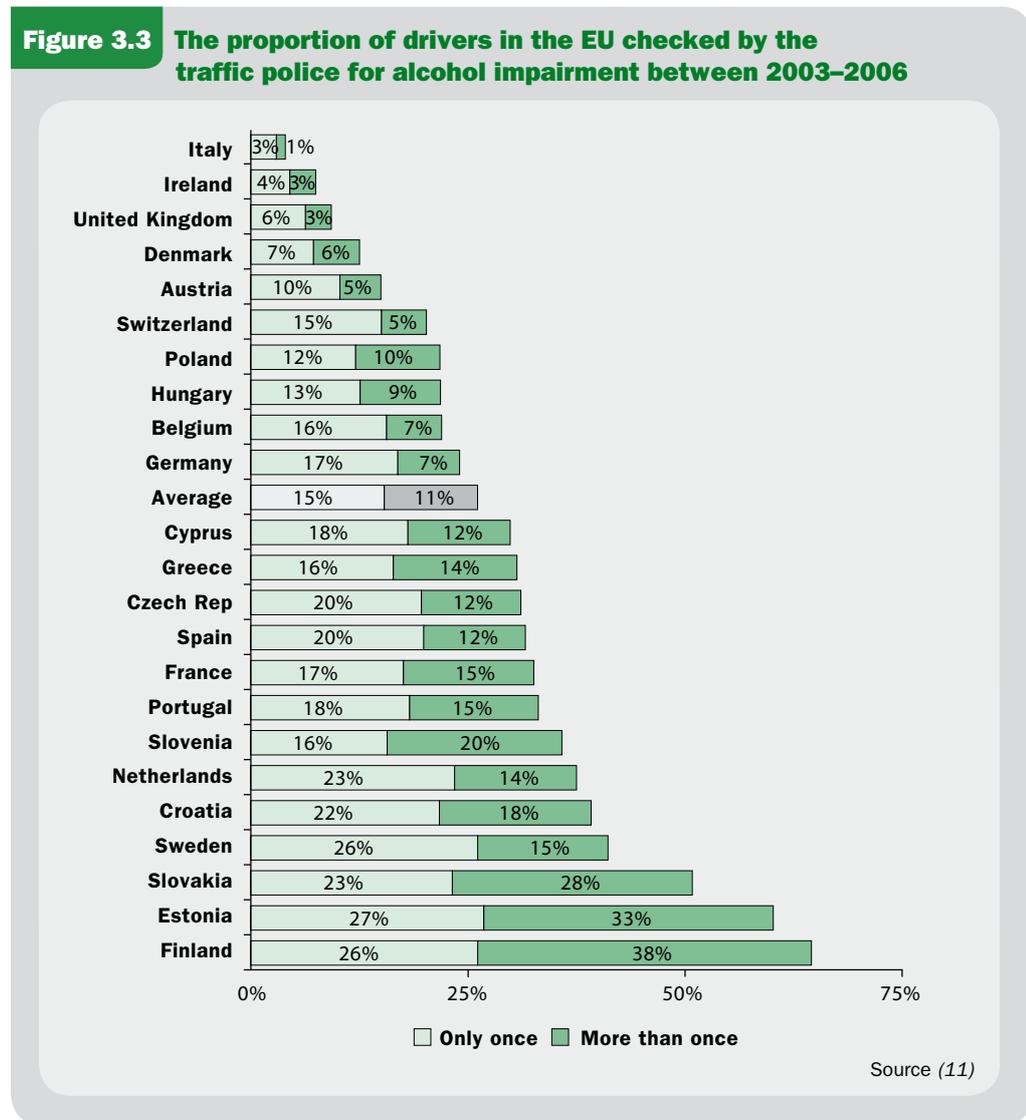
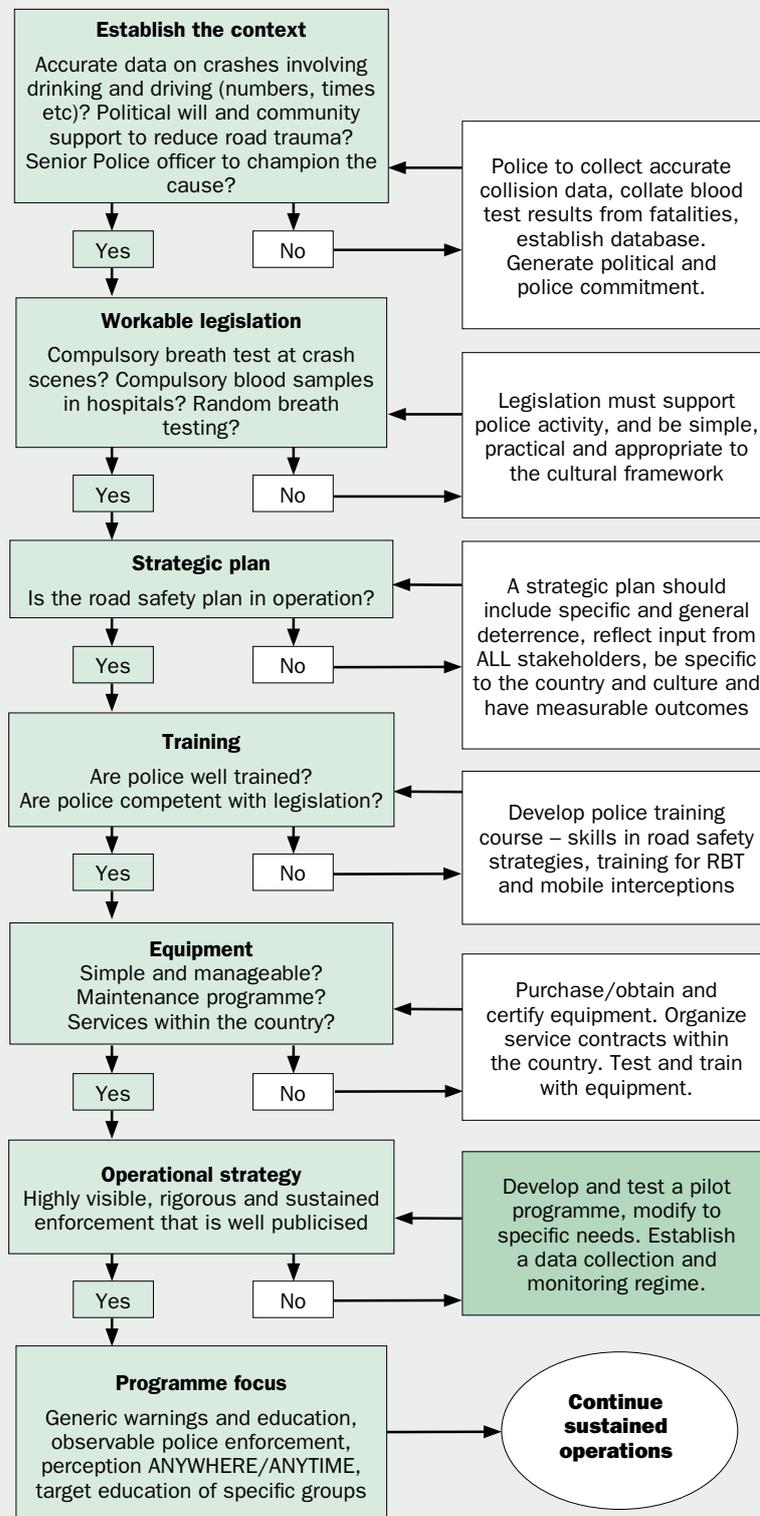


Figure 3.4 provides a simple outline of the steps required for strategic enforcement of drinking and driving laws, each of which is described in greater detail in this section.

Figure 3.4 Flowchart showing the strategic enforcement of drinking and driving regulations



The enforcement process

Effective and efficient law enforcement interventions are critical in achieving a reduction in road trauma and do not necessarily require high-cost, modern technology or a huge resource commitment. Enforcement should be “intelligence-led”, which requires:

- acknowledging and understanding the drinking and driving problem through data collection and analysis;
- understanding community perceptions and political commitment regarding drinking and driving. Public pressure on politicians can lead to greater support for more intense enforcement of drinking and driving laws. Political will is critical in ensuring consistent community education and the enforcement of drinking and driving laws.
- expanding the programme slowly based on lessons learned in pilot communities. Pilot programmes enforcing drink-driving laws should be undertaken in communities where there is known political and community commitment to reducing the incidence of drinking and driving.



Data that can guide intelligence-led enforcement

- Accurate statistics on fatalities, serious injuries, injuries and crashes, and the role alcohol plays as a causal factor.
- Crash data as it relates to times of the day, days of the week and particularly critical locations. If presented in an appropriate format, this data will provide the profile on high alcohol times, days of the week and locations upon which to focus police resources for maximum effect.
- Accurate statistics on the amount of alcohol consumed by offending drivers.
- The locations where drivers consumed the alcohol – this information can assist with targeted enforcement and educational intervention campaigns.
- Blood alcohol readings of drivers admitted to hospital.
- The BAC readings obtained from apprehended offenders.
- The toxicology reports from the coroner’s court relative to all deceased drivers.
- The identification of high-risk user groups by age or social standing, thereby assisting strategies for targeted enforcement and specific education.
- Data collected must be accurate and analysed for trends to determine enforcement strategies and, most importantly, must be maintained for assessing performance outcomes.

Senior police officers must take a lead in the initial planning and implementation of intervention strategies. A “champion” in the police field will ensure ownership within the enforcement community and assist in ensuring the sustainability of a national programme on drinking and driving.

Training in effective strategic law enforcement may be helpful in obtaining and maintaining the commitment of police officers to enforce drinking and driving laws, including:

- community education – ensuring the community is educated to understand the dangers of drinking and driving is critical and police should understand the power of the media and how to use it to support road safety education and policing strategies;
- aspects of “general” and “specific” deterrence to bring about crash and injury reduction as the primary objective rather than apprehensions;
 - ▷ **General deterrence** strategies focus on preventing illegal behaviours (such as driving while in excess of the prescribed legal BAC limit) by producing and maintaining the perception that such behaviours will be noticed and punished.
 - ▷ **Specific deterrence** strategies are aimed at punishing those known to have broken the law in order to prevent them from doing do again.
- the dangers that drink-drivers present on the road – a commonly held perception among some police officers is that only drivers with a very high BAC level are a danger to the community not those just in excess of the legislated limit;
- operation of enforcement needed for gathering evidence.

NOTE**A dedicated alcohol intervention unit**

Many countries that have been successful in reducing drinking and driving have dedicated alcohol intervention units within the traffic police. This specific police unit is responsible for the coordination of policing efforts and counter-measures relating to drinking and driving. A dedicated unit provides the benefits of centralised coordination and ability for expertise to be established. It should be responsible for:

- integration with other road safety strategies for road trauma reduction;
- facilitating education campaigns and publicity;
- facilitating training for general police personnel;
- gathering statistical data and intelligence to improve enforcement and detection methods;
- working with industry and large organizations in the provision of education, seminars and workshops on the effects of drinking and driving. The dedicated unit can provide comprehensive advice and education to assist in reducing drinking and driving within industry;
- developing partnerships with government, semi-government agencies and large representative groups such as those within the transport industry and professional drivers. Drinking and driving is a community problem needing community-based solutions. Police cannot and should not be expected to achieve the results without a cooperative and consultative approach.
- maintaining direct links to research organizations. This will enable police to seek independent evaluation and research before, during and after implementing any programmes.

Enforcement methods

Enforcement methods that have been used successfully to change driver behaviour include *alcohol screening of drivers* (random and based on “probable cause”), and *targeted enforcement based on intelligence*. These enforcement methods are not mutually exclusive and should ideally be employed in combination to achieve maximum effect.

Alcohol screening of drivers

The **alcohol screening¹ of drivers** provides a prevention-based strategy in the form of extremely visible, high-volume screening. This method reminds drivers of the

1 In some countries, eg the United States, this method is referred to as an “alcohol test”, not “alcohol screening”.

possibility of being detected if they have been drinking, and reduces their certainty that detection will not occur. Prevention strategies such as alcohol screening should:

- be high profile and highly visible, using “sobriety checkpoints” or roadblock operations to ensure all drivers (or a high percentage of drivers) are tested;
- include stationary vehicle checks at locations such as toll gates, service stations and rest stops.

Some countries such as Australia allow for random alcohol screening, also known as random breath testing (RBT), of any driver at any time. Other countries, such as the United States, require traffic police to establish “probable cause” before a driver can be effectively screened for alcohol consumption in selective breath testing (SBT).



Random versus selective breath testing

The US based Task Force on Community Preventive Services (2001) revealed that sobriety checkpoints of both types are effective in reducing crashes involving drinking and driving, and have sizeable economic benefits. Crashes thought to involve drinking and driving dropped an average of 18% (for RBT checkpoints) and 20% (for SBT checkpoints) following implementation of sobriety checkpoints, while fatal crashes thought to involve alcohol dropped a median of 22% (for RBT checkpoints) and 23% (for SBT checkpoints) following implementation of sobriety checkpoints.

Accurate measuring of alcohol in the bloodstream is a vital component of effective enforcement. It is critical to have a screening device which is practical and easy to use. Equipment that lapses into disarray after a few months or needs expensive servicing outside the country of operation (with consequential additional costs and lack of continuity of use of the product) should be avoided (see Appendix 2).

A **minimum annual target** of alcohol screening tests should be set and maintained. Testing can take place at *designated testing stations* (checkpoints or roadblocks) or *during normal police interceptions*. The minimum targets set should relate to the percentage of the driving population tested during the year. A solid strategy aims to test 1:3 drivers annually, although the more progressive enforcement bodies in richer countries aim at 1:1 – on average every driver would expect to be tested once per year.

Targeted enforcement based on intelligence

The second enforcement method commonly used is the detection of drink-drivers at specific locations, times, and under specific circumstances, including:

- stopping drivers as they leave selected alcohol distribution premises such as hotels, entertainment venues, night clubs, sporting venues and gaming venues that should be the subject of police attention on account of the high possibility that drinking and driving may take place;

- during high-risk alcohol times or days of the week (see Module 2);
- at collision zones or high-risk areas;
- breath testing all drivers intercepted by police regardless of the reason for interception, if legislation permits random breath testing;
- breath testing all drivers involved in collisions;
- breath testing individual drivers who are known to continue to drink and drive after initial detection (i.e. repeat drink-drivers). As a principal enforcement measure, covert operations should support the major operational strategies but never take precedence. The main focus must be on high visibility enforcement for the whole of the driving population.

BOX 3.6: Random breath testing in Australia and Finland

Australia

In Victoria, the use of special-purpose “booze buses” – clearly identified as random alcohol-screening vehicles and immediately recognisable by the public – have been highly successful in reducing drinking and driving over the past 15 years. These vehicles possess all the necessary equipment to operate as a mobile police station for the efficient processing of offending drivers. The enforcement process is complemented by a highly professional and intense public advertising campaign using television, radio, print media and billboards.

Finland

Since random breath testing was introduced in Finland in 1977 the rate of drinking and driving has been reduced by 50%, and there were notable reductions in deaths and injuries from crashes associated with drinking. Researchers found that problem drinkers are more likely to be driving in morning traffic, when vulnerable road users such as children are using the road network, and are more likely to be detected by random breath testing than by other police activities (12). Random breath testing was judged to be a popular measure with the public and a measure that paid for itself through savings in health care and other resources.

Alcohol screening checkpoints

The use of alcohol screening checkpoints, also referred to as sobriety checkpoints or roadblocks, is an effective way of detecting and apprehending those who drink and drive. They allow a high profile, visible police presence, and provide an effective deterrent to other motorists who are not stopped. Checkpoints are used to achieve three main objectives:

1. to ensure that the maximum number of drivers observe police enforcing drink-driving regulations;
2. to test drivers for alcohol consumption;
3. to process those offenders detected driving over the prescribed BAC limit.

Traffic police can maximize the effect of the checkpoints through (13):

- **making them highly visible**
 - ▷ Deploy many police officers and police vehicles. To this end it is important to have mobile units with the capacity to provide evidential testing and processing

of offenders at the site of interception. This gives the public the impression of a higher level of enforcement activity than is actually being delivered as the police may move their enforcement or checkpoint zone to different locations during a single shift. Having evidential testing equipment at the point of interceptions also avoids the resource drain and wasted time in having to transport suspected offenders to a police station for a confirmation test. Police should:

- work in teams
- operate at diverse locations
- have day and night-time operations
- use flashing warning lights to draw attention to the programme
- set up checkpoints at interceptions
- display a sign at the checkpoint indicating the reasons for the checkpoint (for example, “drink-driving enforcement”). This will not alert the drivers before they are checked but provide a strong message to all drivers going through the site or past the checkpoint.

- **rigorously enforcing drinking and driving laws to ensure credibility**
 - ▷ If the law is not enforced, drivers will not comply. They must be informed, persuaded about the legitimacy of the intervention and believe that this will improve their safety.
 - ▷ Everyone is equal – no exemptions, no bargaining, no special circumstances.
 - ▷ Always be polite, fair and firm when processing offenders.
- **setting up checkpoints as often as possible, over a long period**
 - ▷ Drivers must consistently see enforcement activities and consistently hear about anywhere, anytime.
 - ▷ The same enforcement strategy must be repeated often.
 - ▷ Conduct night-time blitzes involving teams of police officers working in well-lit, safe areas.
 - ▷ Where the law permits, continual random testing – every driver intercepted for any offence is tested.

In order to reduce the incidence of drinking and driving it is necessary to keep people guessing about the actual chances of detection. People who are uncertain about the real risks tend to over-estimate the chances of detection, which is important with limited enforcement resources. The four points above form the basis of an intervention strategy that can be highly successful in bringing about a general perception that drivers or riders can be tested **anywhere, anytime**.

Roadblock/checkpoint management

Intercepting moving vehicles in the flow of traffic for random or specific enforcement requires the utmost attention to planning and risk assessment.

The primary consideration when setting up a checkpoint or roadblock is the safety of police officers, suspected drink-drivers and other road users. No site should be in operation without a designated safety officer who has the responsibility of ensuring overall safety (this person may have other roles as well). Even where only two or three officers are operating, one officer should be the safety officer. Managing checkpoints includes:

1. Choosing a safe location

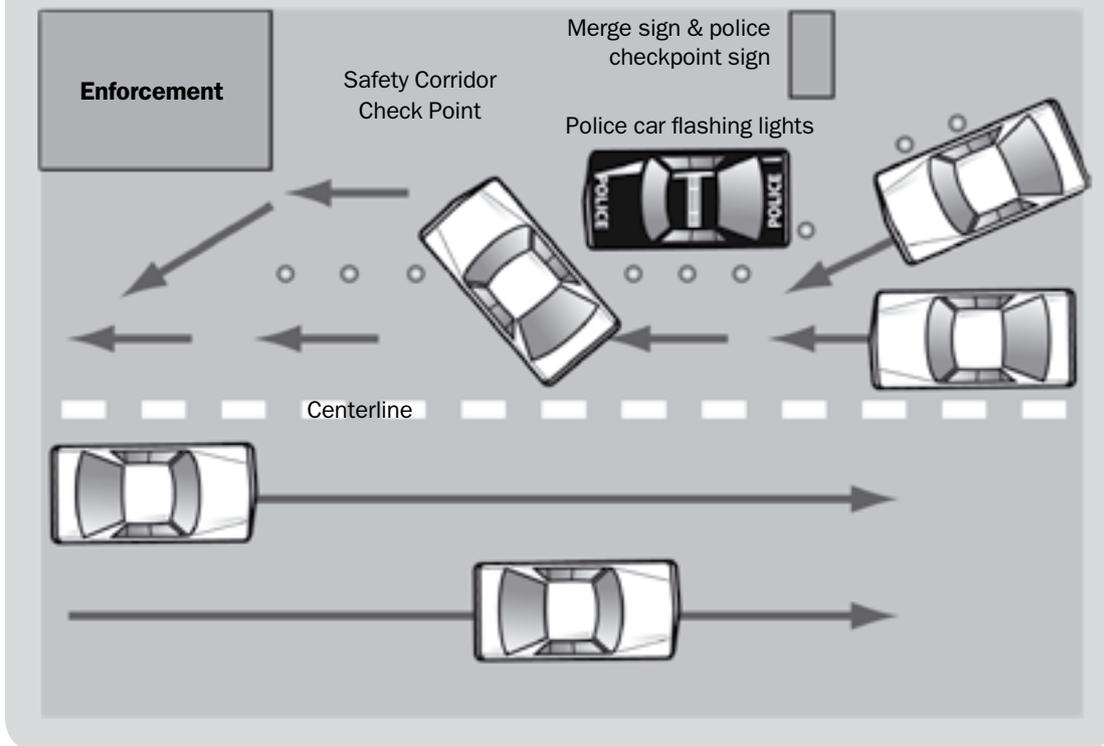
Selecting a safe location includes considering:

- locating the site where approaching drivers have sufficient time and visibility to adjust their driving in order to safely negotiate the checkpoint. If in doubt, choose another location;
- safety factors for officers when setting up and dismantling the site. Persistent bad weather can render a site impractical or unsafe;
- moving the site to a multiple locations during the course of the work period to maximise the visible police presence;
- sun glare for drivers approaching the site (the sun will change its position during the course of the day);
- visibility for motorists, which is of particular concern at dusk and dawn, so extra precautions should be taken if the operation is taking place over that period;
- locating night-time operations where there is effective illumination and providing additional lighting for high visibility;
- control of vehicles moving into the site as well as those vehicles passing it;
- the avoidance of unnecessary traffic congestion. Judgement as to what constitutes unreasonable congestion is subjective, but as a general rule, if you cannot see the end of the traffic in the distance, it is time to suspend testing operations and allow it to flow until you can.
- the use of natural barriers where traffic calming is achieved, e.g. toll gates.

2. Slowing traffic safely

On a two or three-lane carriageway, it is best to slow the traffic down using a funnel formation of delineation cones, a police checkpoint sign and a merge sign so that the selection and interception of vehicles can be done from a line of slow moving traffic rather than a high-speed one. A police car with flashing lights acts as a visible warning to approaching motorists and more importantly provides a safety corridor for officers to interview offending drivers. If the funnel method (see Figure 3.5) is chosen, be aware of the traffic volume both at the time of establishment and what could be expected later. Narrowing to one lane will automatically create congestion so those not selected must be moved through quickly.

This method may create advance notice that alcohol intervention enforcement is being undertaken. Suspected drink-drivers may take a number of evasive actions e.g. change positions with a passenger, abandon their vehicle, attempt to drive through

Figure 3.5 Funnel method of slowing traffic (○ = safety cone)

the checkpoint, turn left or right before the interception point, or carry out a U turn. For these reasons it is important to have an “intercept vehicle” strategically placed prior to the interception point to pick up drivers attempting to evade the checkpoint or roadblock. Sometimes the drivers attempting to evade the checkpoint are under the legal limit but traumatised by a guilty conscience.

A team approach to the management of checkpoints is particularly beneficial where only two or three police officers are operating, for example, at a set of traffic lights where there is a safe interception point just through the intersection. One officer may stand at the traffic lights and identify drivers who stop at the red light. They can be directed by that officer to his colleague(s) undertaking the alcohol intervention checkpoint. This system operates successfully at toll gates as well. It provides a mix of visible enforcement and warnings to motorists.

3. Choosing the right method to select vehicles

Methods include random and specific selection:

- **Random selection** can include directing the following vehicles into the site:
 - cars (at random)

- every tenth vehicle (depending upon traffic flow)
- five cars, then let the traffic continue to flow.
- **Specific selection** will depend upon intelligence gained about drinking patterns and collision data or prior history of alcohol consumption among sub-groups in the community and can include:
 - all vehicles
 - all taxi drivers or professional drivers
 - all vehicles of a particular type
 - all heavy vehicles.

4. Using equipment to ensure safety

Safety is paramount. The right equipment must be used properly to ensure the safety of traffic police officers and road users at all times.

- All members on site should wear reflective vests or jackets both day and night.
- All members must be in police uniform.
- Use police vehicles as traffic protection.
- Use marked police vehicles with lights flashing to maximise visibility (be conscious of the battery life with lights flashing and engine off).
- If there are any “official” observers, they should not be permitted on site without reflective vests.
- Equipment should include illuminated torches fitted with a red cone to provide a contrasting colour.
- Delineation of the site should be with strobe lighting and/or red safety cones.
- Consider if any of the surrounding equipment could be used as a safety barrier.
- Consider natural barriers or natural interception points e.g. toll gates, service stations, parking centres, entry/exits.
- Ensure there are sufficient police numbers for a safe, effective operation.
- Ensure the Operations Command Centre is aware of the site location.
- Consider photographic and/or video evidence.

5. Contingency planning

Ensure there is a process for dealing with:

- no licence
- no registration
- stolen vehicles
- intoxicated drivers
- refusal to stop at interception point.

While the majority of drivers will be compliant and not present any problems, there are others who may be argumentative, or who try to avoid being stopped – e.g. nervous drink-drivers or criminals.

6. Getting the message across

The most important aspect of this method of policing is to provide a deterrent to both those being checked and drivers who pass by unchecked. Drivers passing the site should be made aware of the purpose of the checkpoint by means of either a “variable message sign” or large fixed sign advising “Drinking and driving enforcement”. It is highly important to have a message clearly visible.

If this is not done, other drivers may assume it is an ordinary police security check or other traffic checkpoint and no change to their attitude will occur.

7. Processing offenders quickly

If drivers are to be processed it should be undertaken with minimum delay to the driver. Observations should be clearly stated to the driver and corroboration from fellow officers sought if there is denial. Evidence should be recorded without argument or bargaining. Police must always be courteous and polite and maintain a high degree of skill and professionalism.

8. Meeting statistical requirements

The following information should be recorded:

- number of motor vehicles that passed the site (estimated by taking a number of sample counts during the operation and multiplying the numbers for the time at the location);
- number of offenders processed;
- number of police persons involved;
- number of hours worked at the location.

The most important aspect of any checkpoint or roadblock is the safety of the police officer, the safety of the citizens and the safety of the offenders or suspects.

The NHTSA has developed guidelines dealing specifically with low-staffed sobriety checkpoints (www.nhtsa.dot.gov/people/injury/enforce/LowStaffing_Checkpoints/images/LowStaffing.pdf). These checkpoints achieve the same results as conventional checkpoints but with fewer people. They are mobile, and typically they will not last as long as full-scale checkpoints.

BOX 3.7: Establishing alcohol as “probable cause” of impairment, United States

In countries such as the United States, traffic police are required to establish “probable cause” in order to stop a vehicle for a potential drinking and driving offence. The following list of symptoms, from a publication issued by the National Highway Traffic Safety Administration (DOT HS-805-711), is widely used in training officers to detect drunk drivers. After each symptom is a percentage figure which, according to NHTSA, indicates the chances that a driver is over the legal limit.

Turning with wide radius	65	Following too closely	45
Straddling center or lane marker	65	Tires on center or land marker	45
Appearing to be drunk	60	Braking erratically	45
Almost striking an object or vehicle	60	Driving into opposing or crossing traffic	45
Weaving	60	Signalling inconsistent with driving actions	40
Driving on other than a designated roadway	55	Stopping inappropriately (other than in lane)	35
Swerving	55	Turning abruptly or illegally	35
Slow speed (more than 10mph below limit)	50	Accelerating or decelerating rapidly	30
Stopping (without cause) in traffic lane	50	Headlights off	30
Drifting	50		

Probable cause to detain

The officer will typically approach the driver’s window and ask some preliminary questions. The purpose is to detect the possible presence of such preliminary evidence as:

- an odor of alcohol on the driver's breath or in the car generally;
- slurred speech in response to questioning;
- bloodshot or reddish eyes;
- flushed face;
- difficulty in understanding and responding intelligently to questions;
- fumbling with driver's licence and registration;
- the plain-view presence of containers of alcoholic beverages in the vehicle.

If the officer observes enough to have a reasonable suspicion to legally justify a further detention and investigation, he will ask the driver to step out of the vehicle.

Field sobriety tests

The officer will administer one or more field sobriety tests (FSTs) if alcohol impairment is suspected. The most commonly administered FSTs include:

- walk-and-turn (heel-to-toe in a straight line);
- finger-to-nose (tip head back, eyes closed, touch the tip of nose with tip of index finger);
- modified-position-of-attention (feet together, head back, eyes closed for 30 seconds; also known as the Romberg test);
- one-leg-stand for 30 seconds;
- recite all or part of the alphabet;
- touch fingers of hand to thumb in both directions in rapid succession;
- horizontal gaze nystagmus (following an object with the eyes to determine characteristic pupil reaction);
- count backwards from a number such as 30 or 100;
- pick up a coin from the ground without bending down;
- breathe into a “preliminary breath test” device.

Probable cause to arrest

If the officer has sufficient facts justifying a reasonable suspicion that the suspect has been driving under the influence of alcohol, he will make the arrest, handcuff the suspect and transport him to the police station. En route, the officer may advise him of his rights and his legal implied consent to submit to an evidentiary chemical test of blood, breath or possibly urine.

Summary of ways to enforce drinking and driving laws

- Enforcement activities should be based on a sound understanding of the problem, supportive legislation, adequate training and equipment, and a strategic direction.
- Police intervention objectives should be casualty reductions, not apprehensions.
- Enforcement activities should be intelligence-led and expanded gradually.
- Random alcohol screening provides general deterrence while targeted enforcement serves to facilitate prosecution of drivers who refuse to stop drinking and driving.
- Both general deterrence and targeted enforcement activities should be employed in combination.
- Mobile alcohol screening units should have the capacity to provide evidential testing and to process offenders at the site.
- Ideally, at least 1 in 3 drivers will be screened every year.
- A range of mobile screening devices are available.
- Enforcement activities should be combined with publicity and public education to gain community acceptance.
- Enforcement activities should be highly visible, rigorously enforced, sustained over the long term and well publicised.

3.3.3 Punishments and sanctions for drinking and driving offences

Countries have adopted a diverse range of punishments and sanctions for drinking and driving offences. Drinking over the legal limit should be one of the most serious driving offences possible and the punishment should be suitably large, and culturally and economically appropriate.

Punishments and sanctions for drinking and driving offences that have been adopted in various countries include:

- Monetary fines, which may rise with multiple convictions, as BAC levels increase, or with the offender's income;
- Suspension or withdrawal of driving licence;
- Where crashes which result in a casualty occur, an drunk driver may be jailed for several years and/or have their driving licence permanently revoked (see Box 3.8)
- Less common and more controversial measures not discussed in detail this manual are vehicle sanctions such as licence plate impoundment and alcohol interlocks. Dealing with repeat offenders is handled in at the end of this section.

These final measures assume that a country has a well-developed system for vehicle registration and tracking recidivist drinking and driving offenders, which is not generally the case in low and middle-income countries, who are the primary target audience of this manual.

BOX 3.8: Example punishments for drinking and driving offences**Sri Lanka**

The fine for drinking and driving was increased from Rs 2000 to Rs 7000 (a 350% increase). A second drinking and driving offence within a one year period results in a punishment of a night in custody and a suspension of the licence.

United States

All 50 states now have two statutory offences. The first is the traditional offence, variously called driving under the influence of alcohol (DUI), driving while intoxicated/impaired (DWI) or operating while intoxicated/impaired (OWI).

The various versions of “driving under the influence” generally constitute a misdemeanor (punishable by up to one year in jail). However, the offence may be elevated to a felony (punishable by a longer term in state prison) if the incident caused serious injury (felony DUI) or death (vehicular manslaughter or vehicular homicide), or if the defendant has a designated number of prior DUI convictions within a given time period (commonly, 3 prior convictions within 7 years). California, which is being followed by a growing number of states, now charges second-degree murder where the legal state of mind of malice exists – that is, where the defendant exhibited a grossly reckless indifference to the lives of others.

Severe punishment for drunk driving is already underway in the state of Ohio for DUI offenders convicted of aggravated vehicular homicide to qualify for capital punishment. The new laws are a result of groups of friends and family of drunk-driving victims engaging in active campaigns to get the same justice as victims of other forms of murder. The logic of these laws is that drunk driving is premeditated, and because aggravated vehicular homicide is a felony in both states, the act of killing someone in the commission of such a crime qualifies for a charge of felony murder in the first degree. However, it is unlikely that anyone would be executed due to constitutional issues regarding the Eighth Amendment. This penalty is in addition to the regular DUI and court charges.

Penalties for driving under the influence commonly include incarceration, fines, driver’s licence suspension or revocation, mandatory attendance at DUI schools, community service, probation and,

increasingly, installation of a breath-alcohol ignition interlock device.

Canada

Driving under the influence of alcohol is a generic term for a series of offences under the Canadian Criminal Code. The main offences are operating a motor vehicle while the ability to do so is impaired by alcohol or a drug, contrary to section 253(a) of the Canadian Criminal Code, and operating a motor vehicle while having a blood alcohol concentration of greater than 80 milligrams of alcohol in 100 millilitres of blood, contrary to section 253(b) of the Criminal Code. See Criminal Code Sections 253 to 259.

The minimum punishments for impaired driving are:

- for the first offence: \$600 fine, one-year driving prohibition or time in jail;
- for the second offence: 14 days’ jail, two-year driving prohibition; time in jail
- for the third or subsequent offence: 90 days’ jail, 3-year driving prohibition.

On January 27, 2001, Andrey Knyazev, a Russian diplomat in Canada, killed a Canadian woman while drink-driving. He was imprisoned in Russia. This incident triggered a crackdown on drink-driving by diplomats in Canada.

United Kingdom

In the UK, drivers who exceed the prescribed limit (which is higher than in many other European countries) are very heavily punished. Offenders receive a 12-month disqualification from driving, a prison sentence and/or a fine of up to £5000. The same tariffs apply to both the offences of exceeding the prescribed limit or of being unfit to drive. However, a recent introduction will allow a driver to undergo a drink related rehabilitation course and on successful completion of the course part of the disqualification may be reduced by up to six months.

This “high limit – heavy punishment” model is somewhat unusual. Some countries impose a fine but not a loss of licence, and other countries, such as France, have a two-tier level of punishment. Drivers just over the limit receive a fine while those exceeding the limit by a large amount can lose their licence. There is, however, a concern that drivers who lose their licence may continue to drive.

Monetary fines

In many countries monetary fines are a common form of punishment for offenders (see Box 3.9). Fines must take account of local economic circumstances, and be seen as appropriate relative to fines for other offences in the traffic law. The aim is to create an effective deterrent.

BOX 3.9: Penalties and fines for drinking and driving offences

China

On May 31, 2004 the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China issued the GB19522 2004, in which the national standard for definitions of "drink-driving" and "drunk driving" were set up. According to the GB19522 2004, drivers with a BAC below 0.02 are sober, drivers with a BAC between 0.02 and 0.08 are driving under the influence (DUI) and those with a BAC in excess of 0.08 are driving while intoxicated (DWI). The technical indicators and capability of the BrAC tester should meet the requirements of the GA307 standard; and those of the BAC analyser should meet the GA/T105 standard. However there is no standard procedure to identify blood alcohol level and no description about how to detect alcohol.

The Road Traffic Law of PR China, published on May 1, 2004, indicates the punishment measures for drinking and driving. According to the 91st article of the law, the driving licence of drink-drivers will be suspended for a period from one month to three months, and the driver will be fined 500 Yuan. Drunk drivers will be restrained until awake by the department of traffic management at the public security sector. Furthermore, the driver will be put into custody for no more than 15 days and fined from 500 Yuan to 2000 Yuan, and the driving licence will be suspended for a period from three months to six

months. The driving licence of commercial vehicle drink-drivers will be suspended for three months and the driver should pay a penalty of 500 Yuan. Drunk drivers will be restrained until awake by the department of traffic management at the public security sector. Furthermore, the driver will be put into custody for no more than 15 days, given a fine of 2000 Yuan and the driving licence will be suspended for a period for six months. Those who are punished more than twice because of drunk driving for the above two items of prescript will have their driving licence revoked, and be prohibited to drive commercial road vehicles in the next five years.

France

In August 1995, the BAC limit was lowered to 0.05 g/100 ml. Driving with a BAC of 0.05 to 0.08 g/100 ml results in a fine amounting to 756. If the offender has a BAC level of more than 0.08 g/100 ml, the maximum sentence is a fine of 4537 and a two-year jail sentence.

Malta

With a first offence, a minimum fine of Lm200 and/or three months' imprisonment is applied, and the offender's driving licence is suspended for six months. In the case of second offences, a minimum fine of Lm500 and/or six months imprisonment is applied, in addition to a one-year licence suspension.

Disqualification from driving

In theory, withdrawing a driving licence prevents the person from driving until the end of the disqualification period. In practice, many disqualified drivers continue to drive illegally, although perhaps not as much as previously. The effectiveness of this sanction will depend on the chances of the driver being stopped in any subsequent police check and their willingness to risk driving illegally. In considering the use of

this penalty, account should be taken of local enforcement capabilities, the administrative complexity of following up on driving licence offences, frequency of police checks and whether the sanction is already used for other traffic offences.



Unlicensed driving in the United Kingdom

Research carried out for the Department for Transport estimated the scale of unlicensed driving. It found that approximately 0.5% of hours driven in the UK were by unlicensed drivers, but that they committed 9% of driving offences, and were involved in 4% of fatal crashes.

12% of drivers who had been disqualified from driving for drinking and driving offences admitted that they still drove illegally, while 39% of drivers who had been disqualified as a result of accumulated penalty points admitted that they drove illegally.

Vehicle sanctions

There is a diverse range of vehicle sanctions. In order for a country or region to use vehicle sanctions effectively as a part of a drinking and driving programme, the country must have a well-developed vehicle registration and tracking system in place. As the target audience of this manual is low and middle-income countries in the beginning stages of developing programmes to curb drinking and driving, interventions of this type are considered non-essential and not described in detail here.

- **Vehicle impoundment** has been used as a “last resort” option for repeat DWI offenders but there is little information available on the effectiveness of this measure.
- **Vehicle licence plate seizure** has been found to be effective when it can be undertaken by police at the time of the arrest. Fees are typically charged to obtain plates so this activity can be revenue neutral (14).
- **Vehicle registration cancellation** – cancelling vehicle registration is likely to have limited applicability in low and middle-income countries unless registration rates are already high. Even where this is the case, vehicle registration cancellation is typically only applied in cases where the DWI offender is the sole driver of the vehicle.
- **Alcohol interlocks** – although probably not relevant to many low and middle-income countries at the moment, ignition locks are being used successfully in a small number of more developed countries primarily to prevent recidivist drinking and driving.

Dealing with repeat offenders

The issue of repeat offenders is not covered in great detail in this manual. This is because countries need well-developed data collection systems that enable repeat drinking and driving offenders to be identified and tracked, and this is generally not the case in the target audience countries for this manual.

In brief, the two main methods of dealing with repeat offenders in countries with advanced drinking and driving programmes are: **vehicle sanctions** and **rehabilitation programmes**. Vehicle sanctions have been briefly discussed in the previous section.

Rehabilitation programmes are diverse and their effectiveness is often unresearched. However, there is sufficient evidence to demonstrate that rehabilitation courses that follow good practice can be effective in reducing repeat offences, including (14):

- **education-based programmes** that assume that lack of knowledge about alcohol and the risks of drinking and driving results in poor decision-making. While breaking the connection between drinking and driving is the main aim of such programmes, they may also have the benefit of encouraging participants to recognise a drinking problem and consider alternatives to drinking and driving while over the legal BAC limit.
- **psychotherapy or counselling-based programmes**, directed mostly to individuals with signs of alcohol dependence or addiction. They are generally focused on reducing alcohol consumption. However, these programmes may fail to address drinking and driving.
- **combined programmes** that recognise that the problems are a combination of crash risk and alcohol misuse. Education sessions are often used to address knowledge about the risks of drink-driving, while individual counselling tackles issues related to individual alcohol misuse.

Researchers (15) report that rehabilitation programmes reduced drinking and driving recidivism by 7–9%. Shorter follow-up periods resulted in greater variability in effect size. A number of characteristics were common to successful programmes, including that they:

- targeted high-risk groups;
- were based in the community rather than a single institution;
- had a focus on both behavioural and cognitive factors;
- had clear objectives and content;
- had a directive treatment style;
- were delivered exactly as designed.

3.4 Social marketing and public education

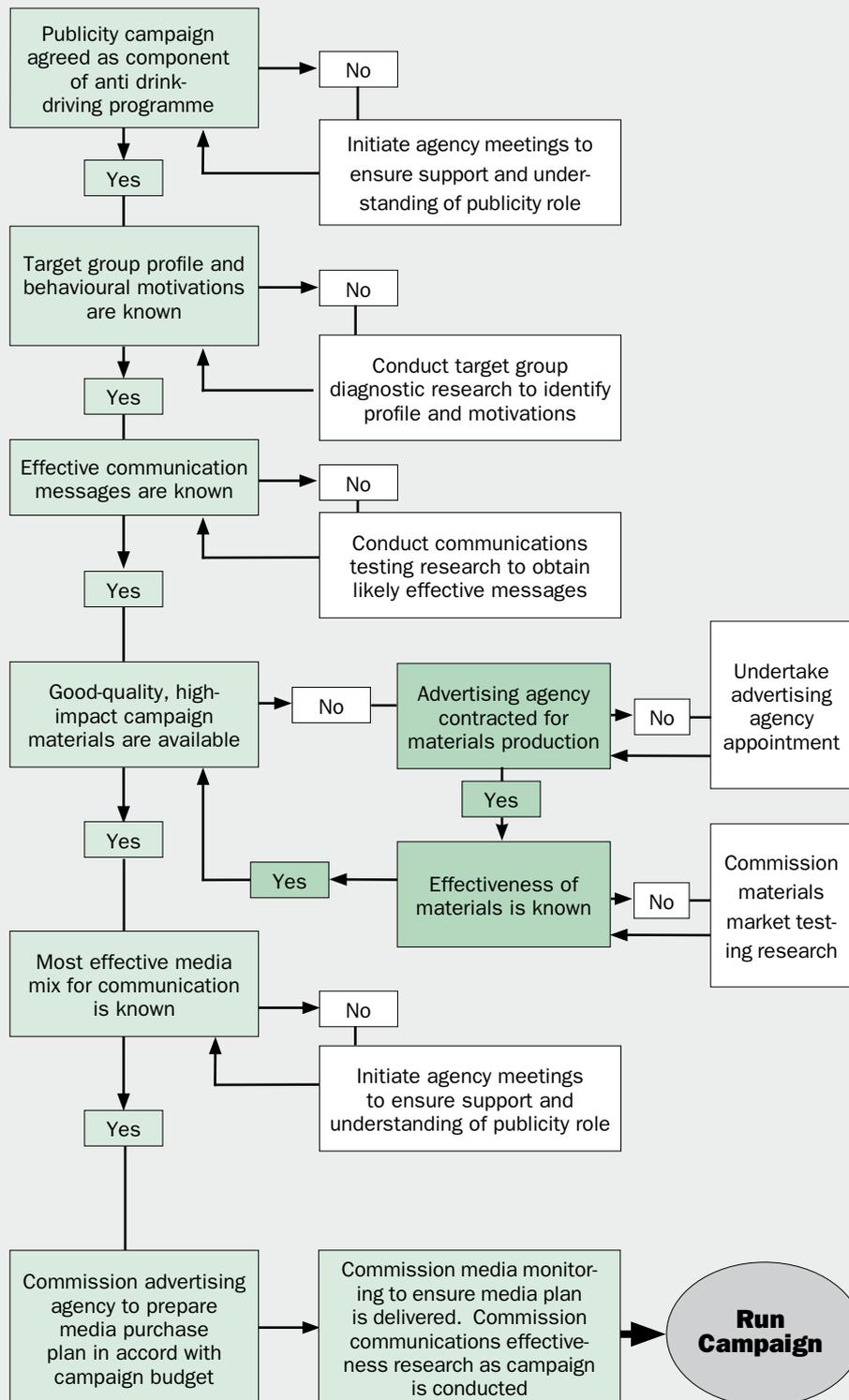
Public education has an important role to play in road safety, but it is not the only approach that should be employed. Road safety publicity is used most successfully as a support to other initiatives, rather than being the lead initiative.

Publicity works to advise people of things they might not know, to reinforce things they already know but might forget, and to encourage behaviour that people may not want to undertake. It generally supports the more powerful influences of law enforcement, legislative amendment, driver management arrangements (such as licensing) and engineering changes which typically lead to an effective road safety programme.

Public education is particularly important in cases where new laws are being introduced, or serious enforcement is planned of existing laws that are currently disregarded. This is needed to give legitimacy to the law and enforcement action, and it also provides a basis for influencing community reactions to the law and its enforcement. In such cases a staged programme of information and enforcement should be used.

Figure 3.6 depicts a simplified version of the process that should be undertaken in developing a publicity campaign to reduce drinking and driving.

Figure 3.6 Steps involved in a drinking and driving publicity campaign



3.4.1 How to raise public awareness and change attitudes through a mass media campaign

A mass media campaign can be an effective tool to educate the public about the risks of drinking and driving. The most effective road safety campaigns have been those that achieve a change in behaviour. It is of course also important to increase awareness and improve attitudes, but lives are actually saved when the desired behaviour patterns are adopted.

New forms of behaviour can often be best achieved when legislation is backed up by enforcement and information. When strong legislation is in place, it is much easier to persuade people of the value of not drinking and driving. Issuing penalties can even be held back in the early stages while people realize that the rules are being enforced.

Conducting a mass media campaign requires expertise in marketing or advertising, development of specific campaign objectives, articulation of the campaign messages and the target audience, specifying a timeframe for implementation, and a methodology for evaluating this initiative.

Selecting an agency for the campaign

A successful campaign may be carried out by qualified personnel within a government department, but usually needs the expertise of a professional marketing or advertising agency. Overall control of the campaign should, however, stay with the government agency responsible. The campaign may also require the services of a public relations or advertising agency and a research agency, unless the government agency can provide these services itself.

The first step in selecting an agency is to issue a tendering document, outlining the overall aims and objectives of the campaign, the time schedule and the budget. From their initial applications, a shortlist of agencies should be drawn up, based on:

- the agencies' previous experience with social marketing campaigns;
- their creative ability;
- their physical location;
- their media purchasing ability;
- their size.

These agencies are then asked to tender for the work, by providing creative ideas, plans for media work and budgets.

Setting objectives for the campaign

The most important aspect of any campaign is to have a clear idea of what the campaign is meant to achieve. The objectives may be stated in quantifiable terms. For instance, the public might be told that "by date X a BAC law of 0.05 will be introduced".

The assumptions for the campaign are that drink-driving is a problem and that the enforcement of any current legislation is not intense enough.

At an early stage it will be necessary to define (and then refine) the objectives of any campaign or campaigns. Within the context of drinking and driving a campaign could be conducted for a number of reasons. For example, it may strive to:

- inform the public of new legislation;
- tell the public about increasing enforcement activity;
- educate road users about the crash risk associated with consuming any alcohol;
- quantify the (personal) risks of driving while over the legal BAC limit;
- warn about social consequences to other (“innocent”) parties;
- point out the risk of detection;
- emphasise the social unacceptability of certain behaviours;
- warn about the wide-ranging consequences of being detected.

It is important to specify the campaign objective or objectives from the outset so that the campaign can be properly planned and conducted – but also so that an appropriate evaluation can be planned and implemented as part of the campaign.

This would normally be done in discussion with an advertising agency selected to prepare the campaign materials.

Each of these objectives should be quantifiable. It is therefore necessary first to ascertain:

- the current level of awareness of the dangers of drinking and driving;
- the current level of compliance with any legislation in place;
- the current level of enforcement.

BOX 3.10: Targeting summer drink-driving, United Kingdom

At first the UK’s drink-drive campaigns focused on drinking during the Christmas period. This was eventually extended to target summer drinking and driving, and to deliver messages to an audience of potential drink-drivers at crucial decision-making moments. The primary target was 17–29 year old males – drink-drivers, not drunk drivers.

The key objectives of the campaign were:

- to increase awareness of the dangers of having a couple of drinks and driving;
- to educate drivers that they can’t calculate their alcohol limit;
- to shake drivers’ confidence in their own “rules of thumb” for what is “safe” to drink before driving;
- to get drivers to think about the consequences of being caught.

The key messages were:

- it takes less than you might think to become a drink-driver;
- you can’t calculate your alcohol limit;
- don’t drink and drive.

More information: www.thinkroadsafety.gov.uk/campaigns/drinkdrive/drinkdrive.htm

Creating campaign messages

No campaign will be effective unless it identifies and develops the appropriate message or messages. There is no easy formula for determining the correct message; therefore working with skilled professionals is critical to campaign success.

Messages should target known behaviour (e.g. drinking after work and then driving), focus on known risk groups (e.g. young men) and never suggest that drinking and driving is acceptable under certain circumstances (e.g. during national holidays, or at wedding celebrations) since this leads to confusion about what is and is not acceptable.

One of the problems with addressing road safety issues is that the target audience often does not see the benefits of changing their behaviour. People are naturally resistant to change, and will often look for an excuse to dismiss the message. It is therefore important not to provide individuals with such excuses, e.g. if people see the message as being irrelevant to them (“it’s meant for older people, not my age group”).

Figure 3.7 Billboard used as part of a drinking and driving campaign in Namibia



Market research is used to determine peoples’ knowledge of legislation as well as the opinions, beliefs, fears and motivations of high-risk groups that are known to be involved in drink-drive crashes. A first step in this process is to identify the target groups involved and then collect information from them that is relevant for the campaign.

1. Diagnostic testing

The first step in developing campaign messages is to assemble a small group of individuals representing your main target group. Ideally these individuals will have been charged with a drinking and driving offence. The goal of discussions is to:

- identify and understand why these individuals drink and drive (*e.g. they don't understand the road safety risks involved, they are not familiar with the effect of alcohol on their ability to drive safely, they don't think they will be caught*);
- understand the motivations that might be used to change the alcohol consumption and driving behaviour of the target group;

2. Develop campaign messages and materials

On the basis of the information you receive from the diagnostic testing with your target group, a range of messages and campaign materials are developed to encourage a change in thinking and behaviour in relation to drinking and driving (*e.g. don't drink and drive – your family is waiting for you at home*). Preparation of these products is commonly undertaken by advertising agencies contracted by the road safety authorities.

The draft campaign messages and materials should then be tested with small groups of individuals representing the target group by an independent market research agency contracted for this purpose. *The agency that created the materials must not be allowed to market-test their own materials – they are unlikely to be self-critical.* The purpose of testing the materials is to determine the most effective message and method for communicating to the target group, and changing their perception and behaviour in relation to drinking and driving.

3.4.2 Getting the campaign message to the target audience

The messages and materials you develop for the campaign can be publicised and disseminated through a wide variety of media that your diagnostic research shows will be most effective in reaching the target audience.

Road safety publicity includes a range of activities designed to inform, advise, encourage and persuade the target audience to undertake a particular behaviour. A publicity campaign itself is made up of a range of individual activities, one of which is usually advertising.

Road safety advertising is usually the most visible part of a campaign, and often is mistaken for the whole campaign itself. A typical campaign could incorporate the components outlined in Table 3.8. A campaign that is undertaken only once – even if it includes dedicated enforcement – will not have a long-term sustainable impact on reducing drinking and driving; regular enforcement accompanied by a repetition of the key messages is needed.

The target audience must interpret campaign messages as relevant to them, as with the poster (see Figure 3.8) from Papua New Guinea.

Advertising alone is unlikely to reduce road crashes involving drinking and driving. It should be seen as one element of a wider campaign involving enforcement, legislation, engineering and other measures. However, there is general agreement among practitioners that “mass media” publicity is an essential and long-term part of any strategy to reduce the number of people killed and injured on roads as a result of drinking and driving.

Figure 3.8 Making the message relevant – a poster campaign from Papua New Guinea



Table 3.8 Publicity campaign components

Campaign component	Reason for considering
Television advertising	Large target audience reach. Communicate short key message. Visual and aural communication. Not good for detailed messages.
Radio advertising	Large target audience reach. Short message. Message while driving through car radio. Aural communication.
Press advertising	Large target audience reach. Short message. Use as link to media public relations stories. Limited by literacy levels of audience. Can be basis of word-of-mouth communication.
Outdoor advertising, e.g. road signs, taxis, police vehicles, buses	Short message targeting the audience while using the road. Can reach a range of road users. Can reinforce and extend TV and press images.
A project launch event	Broad public awareness, government exposure, free media exposure. Opportunity for two-way communication at media briefing. Can form the basis of word-of-mouth communication.
A series of public relations activities	More detailed explanations of initiative. In-depth analysis. Public credibility. Exposure for campaign figureheads. Can be linked to public events and community meetings. Provides opportunity for local participation and to “localize” campaign messages.
Media interviews, presentations and articles	Detailed explanations of initiative. Public credibility. Exposure for campaign figureheads. Opportunity for two-way communication.
A kit of activities to be undertaken in regional or local areas	Support for regional contributions, support for regional media and public relations activities. Opportunity to localize the issues. Potential to profile local figureheads. Basis of information for public or village meetings.
Activities designed and funded to operate in local communities	Provide information to support continuing local media coverage. Can establish local ownership of issues and support action at local levels.
Sponsorship of sporting and cultural events	Good for campaign positioning and branding. Can access high-profile and highly credible personnel. Link with specific road safety issue can be tenuous unless properly thought out.
Publicity for the enforcement activities undertaken	Enhance deterrent effect to generate short-term behaviour change. Powerful influence on immediate behaviour provided enforcement level is sufficient to be acknowledged by the public.
Interview key figures: police, celebrities and religious leaders	Exposure for campaign figureheads. Campaign credibility. Opportunity for two-way communication.
Community or school-based promotional events	Enhance public/target group interest. Opportunity for positive behaviour reinforcement. Link to school curriculum teaching on road safety for children. Opportunity for parents’ road behaviour to be influenced through their children. May be a weak influence if community culture does not support assertive children’s behaviour.

BOX 3.11: THINK! An integrated publicity campaign, United Kingdom

The UK's THINK! campaign television advert, "Crash", was launched in 2004. It warned that it takes less than you think for your driving to be impaired by drinking alcohol, and supported the strategy of "just saying no".

The advert shows three men meeting after work for a quiet drink. One of the men gets in a second round, and our "hero" tries to decline because he is driving. However, he quickly gives in, thinking, "after all it's only two". The advert dramatises that exact moment of decision-making and shows the consequences of that second drink. It also raises the idea that you become a drink-driver in the pub, not on the road.

A radio advert, leaflet and posters were developed as part of an integrated campaign. The national radio advert focuses on the moment in a pub when we decide to stay for that extra drink – or not.

The leaflet and posters support the TV and radio adverts by reinforcing the message that it is impossible to calculate your alcohol limit, so you shouldn't risk guessing.

More information: www.thinkroadsafety.gov.uk/campaigns/drinkdrive/drinkdrive.htm

Timeline of publicity campaign relative to law and enforcement activity

The timing of a drinking and driving publicity campaign in respect to related activities such as changes in the law and police enforcement is an important factor in the overall success of changing road user behaviour. Coordination among the initiatives is critical.

Typically people are more prepared to change their behaviour if it means that they are complying with the law rather than simply being urged to do something because "it makes sense". An example of this is the experience of the United Kingdom in relation to seat-belt wearing. After many years of "persuasive" advertising that produced only limited behaviour change, the law was changed to make seat-belt use compulsory. As a result of this change in legislation, wearing rates in the UK went from being one of the lowest in Europe to the highest.

Similarly it is important to publicise, either by campaigns or mass media coverage, any changes in (typically more or tougher) enforcement activity. Visible and frequent enforcement is critical in persuading the general public to obey drinking and driving laws, and not just to catch those breaking them. Enforcement works because it acts as a deterrent. Thus, informing the public about enforcement activities can deter people from drinking and driving by increasing their perception of being caught.

Long-term and sustainable changes in public perception and driver behaviour, especially in relation to behaviour such as drinking and driving, are not generally achieved easily or quickly. This means that a timeframe of years rather than months should be anticipated.

Monitoring public perspectives

Prevailing community views about risk and the morality of some types of behaviour (such as drinking and driving), and the level of control over daily activities that people are prepared to accept, all influence which countermeasures are likely to be acceptable, what messages will be understood and accepted, and what barriers to change exist in the community. For these reasons, monitoring public perspectives is an important “back room” activity which must be undertaken regularly. In addition, the lessons learned from monitoring and evaluation activities are critical to improving the quality and impact of future campaigns.

Monitoring can be both formal and informal in nature, and does not necessarily require extensive funding to undertake. Some approaches could include:

- **public opinion surveys**
Formal surveys undertaken regularly using the same or very similar questions each time can be implemented. Maintaining the same questions for a number of surveys allows a trend to be established on public views.
- **media monitoring**
Information on issues discussed on talk-back radio, presented in television programmes, provided in letters to editors or leading articles in newspapers are all potential sources. However, in countries where media is strongly controlled, this method may not provide the access to real public views which is sought, and a combination of other methods may need to be employed.
- **surveying stakeholder views**
For crashes involving drinking and driving, key stakeholders may have continued contact with the public, and their perspectives on public opinion can also be tapped. Stakeholders include NGOs, the alcohol industry, breath testing equipment industry, health authorities, medical professionals, licensed premises, restaurant owners and reception and events agencies.

There are many examples of large “community attitudes” surveys that have been used to glean public opinion on several aspects of driving, including drink-driving (*10*). These include the Community Attitude Survey (Australia), the National Survey of Drinking and Driving Attitudes and Behaviour (USA) and Social Attitudes to Road Traffic Risk in Europe (SARTRE).

Summary of social marketing and public information campaigns

Social marketing and public education on drinking and driving are important elements of any programme to reduce the incidence of drinking and driving.

- The most effective drinking and driving campaigns include social marketing and education to increase public knowledge about legislation, particularly when changes in the law have been made, and to inform the public about increased enforcement.

- The objectives and the target group of the mass media campaign should be clearly stated.
- Advertising and public relations specialists should be employed to create targeted campaign messages and materials.
- All campaign messages and materials should be market tested.
- A mass media campaign on drinking and driving should involve a range media, of which advertising is only one.
- A mass media campaign on drinking and driving should be planned in close coordination with legislative changes and increased enforcement activities in order to inform the public of changes and deter drinking and driving
- The effects of the mass media element of the drinking and driving campaign on the opinions and behaviour of road users should be closely monitored and evaluated. The lessons learned through the monitoring and evaluation activities should be used to improve the quality and impact of future campaigns.

The World Bank provides information on issues to consider in planning a campaign (17). Additional information on designing road safety campaigns is also available (18).

3.5 Community-based interventions

Drinking and driving interventions that are undertaken by and involve the local community can be an effective means of both educating the public about the risks involved in drinking and driving and preventing it from taking place. These kinds of interventions are highly diverse and many are not evaluated. The interventions can range from the activities of non-governmental organizations, created specifically to prevent drinking and driving (such as Mothers Against Drunk Driving (MADD) – see section 3.2) to programmes undertaken by employers, schools, outlets selling beverage alcohol (e.g. server training), and designated driver programmes.

Responsible employers

Increasingly, responsible employers with large fleets and many drivers impose internal regulations on their staff that are designed to improve road safety. This is both socially responsible, and often a financial benefit to employers whose staff are costly to train and have responsibility for expensive vehicles, valuable and sometimes dangerous cargo as well as the lives of others. An absolute ban on drinking and driving – effectively a zero BAC level – is used by many. Breaking such internal safety regulations can result in dismissal.

The proportion of vehicles that are professionally driven is often high in low and middle-income countries. Working with fleet operators to embed mandatory or voluntary regulations and rules within their conditions of employment can be an effective strategy.

Many international transport companies, in particular those involved in the transport of hazardous goods, have strict policies banning alcohol from the workplace and prohibiting drinking and driving.

BOX 3.12: **Commercial drivers and road crash injuries, Ghana**

In 1999, a survey estimated the proportion of road crash injuries that involved commercial vehicles in Ghana (19). The knowledge, attitude, and practices of commercial drivers in relation to road safety were also evaluated using a community-based survey and focus group discussions.

The survey revealed that of 122 crashes reported for the preceding year, 81% involved commercial vehicles, principally buses (40%) and taxis (24%). The involvement of commercial vehicles was the same for both motor vehicle crashes (81%) and pedestrian injuries (82%). However, injuries to children involving motor vehicles were especially likely to involve commercial vehicles (95%), in comparison with adults (79%). The focus groups revealed that most commercial vehicle drivers believed actions could be taken to lower the risk of crashes, including avoiding alcohol. However, this knowledge was not fully implemented (19).

Workplace alcohol prevention programme and activity (WAPPA), India

A workplace alcohol prevention programme and activity (WAPPA) has been instituted by the Karnataka State Road Transport Corporation (KRSTC) as a major contribution to road safety improvement in the state. KRSTC is responsible for provision of bus-based services in the south of the state and for all

interstate and intercity coach services.

The project objectives include improved worker welfare, increased productivity, and accident prevention in the workplace.

The programme includes prevention and treatment components. Education and training to combat drinking and driving are provided, and alcohol consumption is prohibited within the workplace – a policy that applies to all employees and managers, not just drivers. In the next phase of the programme, the use of breath analysis machines in depots is planned for testing drivers prior to shifts.

Treatment at the company's expense is provided for first-time offenders against the policy, Second-time offenders are required to attend at their own cost, and third-time offenders are subject to severe disciplinary action, including possible dismissal

Strategies under the programme are grouped into three “zones” – red, amber and green. There is an individual employee focus in red zone activities, building towards more organization-wide strategies in the green zone.

Corporate evaluations claim a reduction in crash rates of more than 20% between 1997 and 2000, with additional corporate productivity and profitability benefits.

Designated driver and ride service programmes

A **designated driver** is an individual within a group of people drinking alcohol at an event/establishment who promises to remain sober in order to drive the others home afterwards. In some countries, designated drivers are offered complimentary non-alcoholic drinks by proprietors to encourage the safe travel of their customers after spending time at their establishment.

BOX 3.13: The BOB campaign, Belgium

The BOB campaign started in Belgium in 1995 with the aim of raising awareness of the dangers of drinking and driving. Most importantly, it highlighted the benefits of having a designated driver.

The campaign involves several governmental departments, the police and a private sector company. Alongside general information about drinking and driving, the campaign provides for increased police surveillance, especially during the weeks running up to Christmas and New Year.

Within few weeks of its launch in 1995, 4 out of 5 Belgians had heard about BOB. Now, 97% of the Belgian population knows about the campaign, and BOB has become the definitive symbol for combating drink-driving.

The concept has been picked up in several other European countries including the Netherlands, Luxemburg, France and Greece, with each country adapting the formula to its own needs.

To date, more than 37% of all drivers in Belgium claim to have offered to be a designated driver, 34% have been a designated driver and 46% have been driven home safely by one.

According to official figures, the BOB campaign has triggered a change in attitude. Today, 80% of the population considers drinking and driving unacceptable.

Ride service programmes provide transport for people who have consumed alcohol and may otherwise drive.

Numerous ride service businesses have started up across the United States to help address the problem of drinking and driving. NightRiders Incorporated was the first such service. The business employed drivers equipped with collapsible, motorized scooters. The drivers drove customers home in their own vehicles, stowing the scooters in the customer's trunk. Upon arrival at the customer's destination, the driver collected the fare, assembled the scooter, and rode off to the next customer.

Server responsibilities

In some jurisdictions retailers are liable for injuries caused by intoxicated adults or by minors to whom they sold alcohol. In some cases this liability extends to injuries caused by the intoxicated person to themselves. The available evidence suggests that legislation of this sort can significantly reduce crashes involving drinking and driving (20).

Responsible beverage service and sales legislation is generally aimed at reducing sales of alcohol to minors and to intoxicated people. Responsible beverage service and sales legislation can apply to premises which sell alcohol to be consumed on-site or off-site and should comprise policies that promote:

- alcohol servers being at least 21 years of age;
- outlet staff awareness of legal responsibility;
- staff awareness of outlet policies and of consequences for violating these;
- the checking of age of all patrons appearing to be under 30 years of age;
- guidelines and training as to what constitutes acceptable serving practice;
- retailer-initiated compliance checks and enforcement (21).

It is difficult to draw conclusions about the effectiveness of responsible beverage service and sales legislation in general because of the huge variation in the content of existing examples.

A common component of a “responsible serving programme” is to request a potential customer to produce a recognised form of identification in order to prevent underage drinking. Servers at premises selling alcohol should be educated about responsible drinking, should discourage binge drinking and avoid drink promotion offers (such as free drinks, happy hours or drinking competitions) which often encourage excessive alcohol consumption. Servers should be trained to advise their customers not drive after drinking. The licensee should ensure that a variety of soft drinks are readily available to customers preferring not to consume alcoholic beverages.

3.6 Engineering countermeasures

Enforcement and education are typically emphasised where addressing the issue of drinking and driving, but some engineering treatments are likely to be especially valuable in preventing crashes involving alcohol too.

Drivers/riders

The majority of road engineering treatments that will help reduce drink-driving related injuries fall into two groups. The **reduction of roadside hazards** will reduce the severity of crashes, while **enhanced information presentation** in the traffic system will help reduce the risk of a crash occurring in the first place.

Reducing roadside hazards

A high proportion of crashes involving drinking and driving are “run-off road” crashes. Such crashes will be more severe if they result in a collision with fixed roadside objects such as trees or electricity poles. As such, action to relocate, guard, or remove fixed roadside objects where drink-driving crashes are likely to occur should have a positive impact on the severity of these crashes.

Enhanced information presentation in the traffic system

Visual, perceptual and cognitive skills are adversely affected by alcohol and it therefore follows that providing information in a clear and easy to understand manner will be important in maximising the performance (and thus minimising the crash risk) of drunk drivers.

Some elements that may enhance information provision include improved guidance around curves and audio-tactile edge lining. Australian field experiments (22) revealed that of nine roadway delineation treatments trialled by drivers with BAC of 0.05, the most beneficial form of delineation was chevron alignment signs. These were shown to help drivers negotiate curves. In addition, the use of a wide edge-line tended to reduce the extreme lane positioning common among drink-drivers. Consequently, the “optimum” delineation treatment appeared to be one which combines chevron alignment signs with a wide edge-line.

It is also important, given the dulled cognitive and physical functioning of drunk drivers, to ensure that road geometry and delineation are kept as consistent as possible.

Pedestrians

While alcohol-impaired pedestrians are not a main focus of this manual, this road user group is at high risk of injury and death in road crashes, particularly in low and middle-income countries. For this reason, a few measures are provided below that have proven effective in reducing the incidence of road crashes involving all pedestrians.

Lower speed limits

Lower speed limits have the potential to improve safety for alcohol-impaired pedestrians in a number of ways. Gaps in traffic traveling at lower speeds are easier to judge for alcohol-impaired pedestrians. Drivers traveling at lower speeds have greater ability to avoid a collision with a pedestrian, and, in the event of a collision, the severity of the injury will be reduced.

Pedestrian fencing

Pedestrian fencing may be useful for improving the safety of alcohol-impaired pedestrians, as it requires no decision-making by the pedestrian. It may be particularly appropriate at locations where such pedestrians are likely to spill out onto the road or cross the road at an inappropriate point, for example, outside licensed premises.

Refuge islands and medians

Refuge islands and medians can assist alcohol-impaired pedestrians in crossing the road by allowing a staged crossing and simplifying the decision-making task. Kerb extensions can also improve the safety of alcohol-impaired pedestrians by reducing the crossing distance and the area in which the pedestrian is at risk. While such treatments usually attract pedestrians to cross where they are located, alcohol-impaired pedestrians are probably less likely to detour from their desired line of walking to use the facilities. The effectiveness of refuge islands and kerb extensions for alcohol-impaired pedestrians may therefore depend on their being located where such pedestrians would be likely to cross anyway.

Lighting

Since most crashes involving alcohol-impaired pedestrians occur at night, improved street lighting is likely to have a major impact on this type of event. Improved lighting has obvious implications for the safety of alcohol-impaired pedestrians by increasing their visibility to motorists. It also has less obvious implications in terms of attracting intoxicated pedestrians to designated crossing places, and lessening the risk of trips or falls. Although relatively costly, lighting can, in some circumstances, be paid for by the private sector and brings with it a number of social benefits.

**Street lighting project, Whiteriver, Arizona, United States**

One street lighting project aimed to reduce pedestrian injuries – especially alcohol-related ones – in a Native American jurisdiction in Arizona (23). In the five years prior to the additional street lighting, 15 pedestrian crashes had occurred along the 1.8 km target section of highway. In the five years after their installation only three crashes occurred.

Cost-benefit analysis revealed that the installation of the 28 street lights along the length of highway was followed by an average reduction of 2.5 pedestrian crashes per year, and a benefit-cost ratio of 10.

Crosswalks

The safety of unsignalled crossings and of crosswalks for alcohol-impaired pedestrians is also questionable. Alcohol-impaired pedestrians are less likely to detour from their desired line of walking to use the crossing facility and crossing in the roadway adjacent to the crosswalk may actually increase their risk. However, alcohol-impaired pedestrians who do cross on the crosswalk do not need to make gap selections as the onus is on the driver to give way to the pedestrian.

Pedestrian signals at traffic signals

Crossing the road at pedestrian and traffic signals simplifies the task of crossing the road by removing the need to make gap selection. However, alcohol-impaired pedestrians still need to make the choice to use the crossing to be able to push the button to operate the pedestrian signal, and wait for the walk signal.

3.7 Ensuring an appropriate medical response

3.7.1 Organization and planning of trauma care systems

The primary prevention of death and injury caused by drinking and driving is an overriding priority. However, if a crash occurs, many lives can also be saved through proper trauma care. This is especially the case in developing countries, where there are high fatality rates from potentially repairable injuries.

3.7.2 Crash-site care of alcohol-impaired casualties

Emergency workers advise that drink-drivers injured in a road crash generally create additional risks and problems for rescue and medical services.

Notwithstanding an excessive consumption of alcohol, patients are deserving of good medical care. This should be undertaken in a professional and non-judgmental manner. Patients should be assessed for signs and symptoms of alcohol use in conjunction with the normal injury diagnosis or trauma survey. Medical treatment of people involved in road crashes is made more difficult if they are alcohol impaired. For example:

Scene management

- Alcohol-impaired patients tend to be more aggressive, non-compliant and difficult to manage.

- Where they are mobile they may get in the way of rescue personnel trying to assist other injured patients in the vehicles.
- In extreme circumstances, it may be necessary for medical staff to withdraw from the immediate scene and allow police to regain control of the situation.

Patient assessment/treatment diagnosis

- Alcohol can reduce the response to pain which is critical for determining spinal injuries and suspected head injuries.
- As alcohol intoxication produces a neurological impairment, it is often impossible to clinically exclude a significant head or spinal injury, resulting in otherwise unnecessary investigations or prolonged hospital assessments.
- Alcohol can affect accurate history and assessment e.g. reporting of high blood pressure, allergies, medication, drug taking and diabetes may also affect the physiological signs.

Injury aggravation

- There is the increased possibility of further self-injury where alcohol-impaired patients do not have full control of their actions. Serious injuries may be made worse. This includes risk of spinal injury in the context of unstable vertebral fractures, where intoxicated patients may not comply with instructions to remain still.
- There is a tendency not to remain still or calm during normal treatment.
- There is potential for the patient to vomit.

Although not a medical issue, patients are more likely to refuse a breath test at the scene or blood test in hospital in an attempt to side-step the evidentiary requirements of legislation. Penalties for refusing a breath and/or blood test should cover these circumstances and be clearly contained within the legislation. For countries where compulsory blood tests are not taken in hospital, both law enforcement officers and medical staff must be aware that some drink-drivers will exaggerate or fake injury from a collision to seek the refuge of a hospital or medical services to avoid arrest or prosecution.

It is important to appreciate the problems which can be confronted by health professionals and rescue workers. Policy and procedures must clearly describe the processes and authorizations necessary to ensure the delivery of effective medical treatment and safe transportation. Training for dealing with alcohol-impaired patients can be included in regular training for dealing with aggressive or violent individuals.

BOX 3.14: Ensuring that the emergency medical services are prepared

Setting up an EMS system may not be feasible for many countries, but alternative pre-hospital care arrangements can be developed.

Trauma care, in both pre-hospital and hospital settings, requires speedy and appropriate action by trained personnel, with proper supplies and equipment. Improving trauma systems has been shown to lower the mortality in all treated trauma patients by between 15% and 20%, and to cut the number of preventable deaths by more than 50%.

Several recent publications provide technical details of on how to improve trauma care. Two, published by WHO, are strongly recommended: *Guidelines for essential trauma care (24)* and *Pre-hospital trauma care systems (25)*.

Pre-hospital care

The pre-hospital stage is an important one to target in efforts to cut the number of road traffic deaths. The care given will depend on the services that exist.

Situations where no formal emergency medical service exists

A “formal” system of emergency medical services (EMS) is usually one with ambulances and trained personnel, who work in an agency with some supervision and with a network of communications. Where no formal EMS exists, governments should make alternative arrangements to provide pre-hospital care. Ways can be found to build on existing, informal systems and harness community resources, such as training members of the public in basic first aid. Setting up formal EMS systems in urban areas and along major inter-urban roadways should also be explored. Cost should be one consideration, given the high cost of these systems.

Strengthening existing EMS systems

Many EMS systems could be strengthened in a

number of ways, for example, by establishing a regulatory agency to promote minimum standards for the delivery of prompt, quality and equitable pre-hospital care. They can also be strengthened by streamlining communication between sites where calls are received (such as alarm centres) and the sites of ambulance dispatch, as well as between different ambulance services; and by keeping good records on people cared for by the EMS, so as to monitor and improve the quality of care.

Essential trauma care

Improvements in trauma care need not necessarily involve high-cost, high-technology equipment. Much can be accomplished in an affordable and sustainable way through better planning and organization.

The essential trauma care services and the resources required for them can be promoted in several ways, including through needs assessments of trauma care requirements, through training in trauma care provided in appropriate educational settings, through quality improvement programmes that consider the entire trauma facility setting, and through the inspection of trauma facilities (24).

Rehabilitation

Many of those who survive injury go on to develop physical disabilities that limit their physical functions. Tragically, many of these consequences are avoidable and can be reduced through better rehabilitation services. Rehabilitation services are an essential element of trauma care, and can be improved by conducting in-depth needs assessments for injury-related rehabilitation and by strengthening national rehabilitation programmes. They can also be improved by incorporating the recommendations of World Health Assembly Resolution WHA58.23 and the recommendations on rehabilitation in the *Guidelines for Essential Trauma Care (24)* into a country's health policy.

Summary

- In combating crashes involving drinking and driving it is essential to adopt a multi-faceted approach combining legislation and enforcement, public education and social marketing. It is also essential to involve a wide range of stakeholders, including those who may initially oppose the programme.
- Appropriate and enforceable laws must be in place – mandating use of roadside BrAC-testing equipment and the use of their results as evidence.
- Several devices which permit roadside testing of BrAC are now available to facilitate the enforcement of drinking and driving laws, and results are admissible in court in a number of countries.
- Legal BAC limits range from 0.00 to 0.08 g/100ml. The European Commission recommends 0.05.
- Enforcement efforts should be intelligence-led and aimed at promoting the perception among the driving public that they can be tested anywhere and at anytime.
- Publicity campaigns should include, but not be limited to advertising, and can include launch events and media interviews.
- Campaigns can pass on information, encourage people to change their behaviour, shift attitudes and perspectives, and drive home to agencies their role in road safety. However they are not sufficient in themselves – they must be used as a part of a strategy involving high-profile law enforcement.
- Long timeframes must be allowed for changing public perceptions and behaviour in relation to drinking and driving.
- Post-crash care of alcohol-impaired casualties can pose additional challenges to emergency staff.

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