INTRODUCTION

The important role which alcohol plays in road crashes and the effectiveness of drink-driving measures in reducing road trauma is well accepted. It seems logical to assume that medicinal and illicit drugs which seem to similarly reduce performance of driving-related tasks will also increase the risk of crash involvement of their users.

Using the model for road safety related alcohol counter-measure development, road crash countermeasures which can legitimately proceed in the current level of knowledge and policy development relating to drugs and driving have been identified.

FREQUENCY OF DRUG USE AMONG CRASH VICTIMS

In contrast to the alcohol situation, reliable information about use of other drugs by road crash victims is limited. Three major studies have screened for a wide range of drugs in driver fatalities: One from Canada (1) one from California (2) and a recently released survey of driver and pedestrian fatalities in Melbourne (3). These suggest that at least as many victims have used drugs other than alcohol as have been drinking (Table 1).

*Dr Hendtlass was a consultant to the Office when she undertook (3)
TABLE 1 - USE OF ALCOHOL AND OTHER DRUGS BY DRIVER AND PEDESTRIAN FATALITIES IN MELBOURNE (3)

<table>
<thead>
<tr>
<th>Alcohol alone</th>
<th>Drugs no alcohol</th>
<th>Drugs and alcohol</th>
<th>No alcohol or drugs</th>
<th>All fatalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>42</td>
<td>11</td>
<td>18</td>
<td>100%</td>
</tr>
</tbody>
</table>

Another Australian project has surveyed use of a limited number of drugs in driver and pedestrian fatalities (4). Further, there has been a survey of cannabis use in the driver casualty population in Sydney (5).

Nearly half (46%) of the drugs detected in driver and pedestrian fatalities in Melbourne are normally only available when authorised by a medical officer and a further one third were over-the-counter medicines. Twenty two percent were illegal drugs, mostly cannabinoids (3). Further, one third of drug users had used more than one substance other than alcohol, nicotine and caffeine so that multiple drug use is common. Two thirds of the cannabis users had combined this with other substances (3).

CRASH RISK

For alcohol, an accurate, unintrusive, acceptable, cheap method of blood alcohol analysis is available to enable calculation of crash risk at different blood alcohol concentrations. No similarly practical procedure is currently available for analysis of any other drugs in uninjured road users, thus determination of a crash risk curve for any drug other than alcohol is, at least in the foreseeable future, not feasible.

However, some comparison of drug use in road crash victims can be made with use of medication by drivers surveyed by interview and with community surveys. Australian studies
have shown that the characteristics of drug users in the road user and road victim populations are very similar to each other and to those of other most frequent users of drugs in the community (5, 3).

EFFECTS OF DRUGS ON PSYCHOMOTOR SKILLS

Many drugs other than alcohol also impair driving related skills of healthy young individuals in apparently the same way as does alcohol. However, in contrast to the way in which alcohol reduces performance, the effects of these other drugs is not directly related to the blood level of the parent drug. Further, these drugs do not always similarly affect patients for whom they are normally prescribed. Many also have different effects on the elderly (6).

This means that different people react differently to different drugs and studies in the laboratory cannot be assumed to indicate the effect expected in each individual driver.

DISCUSSION

In contrast with the relatively simple and easily generalised alcohol results, the information from drug driving research has consistently highlighted the complexity of the issue under investigation.

While much is known about drug usage, the frequency of drug use among control drivers is not known so that risk cannot be determined.

Under these conditions the road safety policy which best takes into account existing knowledge must discriminate between alcohol and other drugs.

There is insufficient evidence to demonstrate that drugs other than alcohol are contributing to road crashes except when used in combination with alcohol. This does not mean
that particular individuals do not increase their risk of crash involvement by taking drugs particularly at the beginning of a new course of a drug to which they are intolerant, as when medicinal drugs are used recreationally rather than therapeutically.

In the current knowledge new drug-driving countermeasures must be educational rather than legislative. These are probably best implemented through medical officers and pharmacists and would involve professional development courses, warning labelling of medicines when applicable and public campaigns particularly directed at drug users who also drink alcohol.

REFERENCES


