

Crime on the Roads: Drinking and Driving

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The purpose of this paper is to present a brief overview of the deterrence of drinking drivers using random breath testing (RBT), with recent developments in all Australian states being described briefly.

Although per se laws and preliminary breath test procedures, modelled on the British Road Safety Act of 1967, were implemented in most parts of Australia by 1971, there was relatively little legislative activity focused on drinking and driving until the mid- to late-1970s. During the early 1970s, the legislative emphasis was mainly on the compulsory wearing of seat belts and motorcycle helmets, the installation of head and child restraints, and the alteration of speed limits with the introduction of the metric system. Of at least equal significance, during this period (and into the 1980s) major programs of road upgrading were implemented, the roadside environment was made more forgiving of human error, and vehicle design rules were greatly expanded in scope (Jiggins 1985). In terms of drink drive law and its enforcement, the introduction of random breath testing (RBT) in Victoria in July 1976 was a watershed, since it was the first step in a sustained movement toward increased penalties and more rigorous enforcement in all parts of Australia.

The developments in legislation were paralleled by, and were to some extent linked with, developments in non-legislative, drink drive countermeasures. Initiatives have included mass media campaigns, school-based education programs, rehabilitation programs for convicted offenders, and modifications to the physical and social environments. However there is no doubt that most activity has occurred in the legislative arena, with random breath testing or random stopping programs receiving the lion's share of attention both from governments and from the public. Indeed, Australia currently has a greater commitment to the mass breath testing of motorists than any other nation (Homel 1988).

Random Breath Testing and Random Stopping

It has been argued in earlier work (Homel 1988) that in Australia there are four major types of RBT or random stopping programs, and that only one type - the boots and all New South Wales model with intensive, visible and continuous enforcement and extensive, continuous publicity - has been unambiguously

successful. While still generally true, the typology is in need of some revision, since the perceived success of RBT in New South Wales has stimulated most other jurisdictions to modify their approaches. Effectively, there is in progress a gradual convergence towards the NSW model, even in Queensland, where the opposition to mass breath testing using RBT has been most vehement.

Table 1 contains an overview of the diverse array of random testing and random stopping programs in Australia, together with the dates the relevant legislation or program was introduced. It also includes a summary of recent developments, and an indication of the nature of the impact of enforcement in each jurisdiction. Western Australia and Queensland, are shown separately, since it was only in late 1988 that both these states moved from random stopping to full random breath testing. Jurisdictions are listed in the order in which RBT legislation was introduced. It is perhaps significant that NSW and Tasmania, the two states which have achieved the greatest success with RBT, were (not counting Western Australia and Queensland) the most recent entrants in the field. To some extent, planners in these states learned from the experience of Victoria and South Australia, although the work of Ross (1982) probably played a more important role in the formulation of policy (Parliament of New South Wales 1982).

New South Wales and Tasmania: RBT boots and all

NSW and Tasmania introduced RBT almost simultaneously and adopted a similar approach from the beginning. The distinctive elements of this approach are: at least one random test for every three licensed drivers each year, resulting in high levels of exposure to RBT; extensive formal or informal publicity focused specifically on RBT; RBT is not only highly visible, it is hard to predict where it will be operating and it is hard to evade once it is in sight, thus increasing the perceived probability of apprehension for drinking and driving; and the enforcement and focused publicity are maintained at high levels permanently, with provision for special additional local or seasonal campaigns. From a theoretical point of view, the significance of this all-out approach is that it represents a very pure and single-minded operationalisation of the key concepts of general deterrence, and thus provides a perfect opportunity for testing the general deterrence model both as a theory and as a guide to effective action (Homel 1988).

Tasmania

Much more is known about the implementation and impact of RBT in NSW than in Tasmania, but Tasmania, with its small size, has probably achieved an intensity of enforcement unmatched anywhere else in the world. For example, in 1985 more than 200,000 roadside tests were conducted out of a driving population of only 268,887 (Sutton et al. 1986).

Tasmania's small population facilitates intensive enforcement but makes analysis

of casualty data difficult, and no survey data are available to complement the analysis of accidents. Nevertheless, there are clear indications that RBT has worked. Although annual data exhibit erratic variations (for example, illegal alcohol levels in dead controllers have varied between 19 per cent and 51 per cent since 1983), when averaged over time, the indicators are positive. Thus alcohol involvement in fatal crashes in the three-year post-RBT period was 42 per cent less and casualty crashes 29 per cent less than for the six years prior to RBT (Federal Office of Road Safety 1986). Given that Tasmanian testing levels are unique, and given the absence of other kinds of data, further fine-grained analyses of the accident data are urgently required.

Table 1

An Overview of Random Breath Testing and Random Stopping in Australian States and Territories

Jurisdiction	Date of Introduction	Enforcement Approach	Recent Developments	Impact
A Hesitant Approach to RBT				
Victoria	July 1976	Low level enforcement of RBT, supplemented by short-term blitzes	Increase in overall testing rate after 1983, but not all RBT	Clear short-term impact of blitzes, overall impact unclear
RBT With a Slow Start				
Northern Territory	February 1980	Low level enforcement of RBT	Not known	Public support, but impact on crashes not known
South Australia	October 1981	Low level RBT enforcement, preceded by press controversy	More random tests, more publicity, back streets patrols	Slight initial temporary effect. Recent evidence of more impact
Australian Capital Territory	December 1982	Low level enforcement of RBT	No major developments	Initial impact on casualties
RBT Boots and all				

New South Wales	December 1982	Intensive publicity, highly visible and intensive RBT enforcement	Publicity and enforcement levels maintained	Immediate and permanent decline in alcohol related casualties
Tasmania	January 1983	Very intensive RBT, extensive informal publicity	Intense enforcement maintained	Apparently permanent decline in alcohol related casualties
RBT by the Back Door (Random Stopping Programs)				
Western Australia	November 1980	Roadblocks testing of detected drink drivers - regular blitzes	RBT legislation introduced October 1988 (18 months trial)	Temporary effect of intensive roadblocks
Queensland	August 1986	(RID - Reduce Impaired Driving) Roadblocks with Testing of detected drink drivers, plus publicity RBT	Decline in RID publicity, possible decline in level of enforcement. Introduction of RBT law late 1988	Marked temporary impact of RID, with complete return of alcohol related fatalities to pre-RID levels

Enforcement and publicity in New South Wales

In the first 12 months of RBT (17 December 1982 to 31 December 1983), 923,272 preliminary breath tests were conducted, representing approximately one test for every three licensed drivers (Cashmore 1985). To put this figure into perspective, it should be compared with the 113,985 non random preliminary breath tests conducted in 1982. It should also be compared with the figure of one million tests in Sweden in the first 3 years of RBT, and 335,000 tests in 18 months in France, with a population 10 times as large as NSW (Homel 1988). Since 1983, approximately 1.3 million preliminary tests have been conducted each year, more than 90 per cent of which are due to RBT.

Strategies of enforcement have been refined over time. There is now a rule that

each highway patrol vehicle should carry out one hour of RBT per shift. Following the work of Cashmore (1985), testing was intensified in the early hours of the morning to counter the trend for inebriated drivers to delay their trip home. In 1987 mobile RBT patrols were introduced to complement the work of the stationary test sites. The purpose of these patrols is to police side roads near the main testing site, in order to deter motorists who may attempt to evade RBT.

All these measures have been supported by professional media publicity, as well as by extensive coverage over the years in news media (Cashmore 1985). The initial publicity campaign had as its theme: How will you go when you sit for the test, will you be under .05 or under arrest? Television publicity depicted police carrying out RBT in a friendly and efficient manner, but also carried the message that RBT could not be evaded by such methods as turning into side roads (a real nightmare for drinking drivers, as one of the advertisements put it). No attempt was made to emphasise the penalties - the whole emphasis was on the threat of arrest and on the humiliation entailed for someone who failed the test. This focus on the operations of RBT, and on the threat of arrest for drinking drivers, has, on the whole, been maintained. On only one or two occasions have government officials and the advertising agencies succumbed to the temptation to launch into general drink driving publicity, by (for example) showing interviews with the weeping relatives of dead victims. While such publicity may (possibly) have some educational value, it does not directly serve the purpose of keeping RBT in the public eye.

The proportion of Sydney motorists who have been breath tested has increased steadily, from 25 per cent prior to RBT to 53 per cent in February 1987, with some motorists having been breath tested up to five times. It is interesting to note, therefore, that nearly half of all metropolitan drivers have still not been breath tested, despite the large number of tests annually. On the other hand, in 1987, 83 per cent of a sample of 600 Sydney motorists reported that they had seen RBT in operation in the last six months (Homel, Carseldine & Kearns 1988). Moreover, those actually tested undoubtedly drive more often at night when RBT is more likely to be operating, and are therefore the population most at risk of drinking and driving (McLean et al. 1984).

The impact of RBT in New South Wales

An analysis of weekly accident data was reported by Homel, Carseldine and Kearns (1988). It is clear from this paper that on only a few brief occasions have alcohol related fatalities approached pre-RBT levels. During the three years prior to the introduction of RBT the average number of drivers and riders killed with a blood alcohol concentration (BAC) of .05 or more was 4.36 per week. In the four years after RBT this average dropped 36 per cent to 2.81. Other statistical series, notably total fatal crashes and classic alcohol related crashes (single vehicle accidents on a curve at night) show exactly the same pattern, although the decline in total fatal crashes (five years before, to five years after, RBT) was only 22 per

cent, consistent with the expectation that RBT had its major impact on alcohol related crashes.

The results are fairly convincing, and are supported by survey data collected by the NSW Traffic Authority (Homel, Carseldine & Kearns 1988). Self-reports of drinking before driving more often than once a month declined slightly, from around 46 per cent in 1982 to 41 per cent in 1987. There was a more marked decline in the proportions admitting to driving at least once a month over their own self-assessed safe BAC limit, the figures being 16 per cent in 1982 and only 6 per cent in 1984. Corresponding to these declines in self-reported drink driving, between 1982 and 1987 there was a steady trend for drinkers to rely more on counting drinks than on checking their feelings and co-ordination, an increase in the numbers making prior arrangements not to drive home after a celebration, an increase in the perceived probability of apprehension for drinking and driving, and a decline in the proportion of respondents who believed they could do something to avoid RBT. All the survey indicators are consistent with the contention that the decline in alcohol related casualties is due largely to RBT.

The process of general deterrence and general prevention

Based on survey data collected within the first few months of RBT, the central ideas of deterrence implied by the use of RBT was analysed in detail (Homel 1988). The analysis supported the thesis that RBT had an initial deterrent impact of considerable magnitude, since there were relationships (in the expected directions) between levels of actual police testing, exposure of the target population to RBT, perceived certainty of arrest, and steps taken to avoid drinking and driving. However, longitudinal data (based on interviews with 185 motorists six weeks apart) demonstrated that the deterrence process was very unstable. Direct exposure to RBT, through being tested or through driving past an RBT station, resulted in an increase in use of strategies to avoid drinking and driving (such as leaving the car at home or getting a sober companion to drive), but a lack of exposure to RBT, strong peer pressure to drink in a group situation, or successful drink driving episodes (the experiential effect), correlated with declines in measures taken to avoid drink driving. Among those who felt the greatest pressure to drink in a group situation, an increase in the perceived certainty of arrest between interviews corresponded to a decline in attempts to avoid drinking and driving, consistent with the predictions of prospect theory that a certain loss (loss of status) will outweigh a merely possible loss (getting caught) (Homel 1988).

A most important aspect of the analysis was the finding that 40 per cent of respondents claimed that RBT made it easier to resist pressure to drink in a group situation. In fact, this provision of an exculpatory defence (Gusfield 1981) was as important an influence on behaviour as the direct deterrent impact of RBT. This illustrates how a legal intervention may influence non-legal sanctions surrounding the commission of an offence. More recent survey data, collected in

four Australian states in mid-1988 (Berger et al. 1989; Homel et al. 1989), suggest that RBT in NSW is continuing to exercise a strong influence on behaviour through the same indirect mechanism. In response to a question on how often respondents use police breath testing as an excuse to limit their drinking in a group situation, only 48 per cent of NSW respondents answered never, in comparison with 57 per cent in Queensland, 63 per cent in Victoria and 67 per cent in Western Australia. Clearly the impact of police breath testing is of major importance as an influence on group drinking practices, especially in NSW where the enforcement of RBT has been so intense.

Evidence for an impact of RBT in NSW on the broader social environment is less systematic and more equivocal. Initially, proprietors of clubs and pubs complained of greatly reduced patronage, and there is evidence that overall beer consumption, relative to levels in other states, declined for a period (Cashmore 1985). However, the most marked effects appear to have been a trend away from on premise drinking, especially draught beer, to buying packaged alcohol and consuming it away from licensed premises. Responses of the liquor industry, in NSW and other states, have included the heavy promotion of low alcohol beers (breathe easy is a current advertising slogan), and the development of more up-market drinking establishments which provide good food and entertainment. In addition, patron-operated breathalysers have proliferated in clubs, pubs and naval establishments (E.L. Sly, private communication, November 10 1988).

One result of the introduction of RBT was to increase markedly the level of public support for the concept of random testing, a phenomenon also noted in other states (Monk 1985). While support in NSW in 1982 (before the law) was 64 per cent, in 1983, 85 per cent thought it should continue. By 1987 the level of support had grown to 97 per cent (Homel et al. 1988). Even more significant, the percentages willing to label a drinking driver who crashes, or is stopped by police, as irresponsible, a criminal, or a potential murderer, rose to their highest levels ever in the most recent government survey (Homel et al. 1987). This is the first piece of quantitative evidence that moral attitudes to drinking and driving may be beginning to change in NSW. Of course it is difficult to prove that RBT (or any other factor) is the major cause of this change, but since RBT is known to have had a major impact on behaviour, it provides a plausible explanation for at least some of the change in attitudes. Perhaps RBT has acted for some people as a moral eye-opener (Andenaes 1983, p. 2).

Victoria: a Hesitant Approach to RBT

The apparent success of RBT in Victoria was a major reason for its introduction in South Australia and NSW. However, as South (1988) emphasises, although alcohol involvement in fatal crashes or in casualties admitted to hospital generally declined between 1977 and 1986, it is impossible to attribute this decline to any one factor. RBT is almost certainly part of the explanation, but

exactly how much a part is difficult to say. Alternative explanations (which apply across the nation) include general mass media publicity and drink driving education, industry initiatives (for example, free soft drinks for designated drivers and the promotion of low alcohol beers), and increases in the relative price of draught beer.

The introduction of RBT in July 1976 was a daring initiative, given the beery atmosphere of the mid-1970s, but it seems that most of the daring went into passing the law, with little left over for actual enforcement. In the first full year of operation (1977) 19,006 tests were conducted, compared with nearly one million in NSW in the first year of RBT in that state.

After the dramatic success of the NSW law in 1983, testing was increased from about 60,000 per annum to 314,000 (in 1986), with a concomitant increase in expenditure on drink drive and RBT publicity. However, the rate of testing is still far short of the one in three licensed drivers achieved in NSW and adopted as a goal by Victorian authorities (South 1988). It is not entirely clear whether the shortfall in the test rate is due to a lack of political will and a corresponding lack of police resources, or whether it reflects confusion concerning the objectives of mass breath testing.

Preliminary breath testing and random breath testing

Personal observation of the current Victorian approach to drink drive law enforcement suggests that in the absence of strong political leadership, to some extent, police may have lost sight of the major purpose of RBT, which is general deterrence. Legislation passed in March 1987 has given police wide discretionary powers, allowing them to request any motorist to submit to a preliminary breath test at any time, regardless of their manner of driving and regardless of whether they have committed an offence or had an accident. However, this form of preliminary breath testing is less visible to the public than RBT, and results in a much higher proportion over .05. One of the main reasons for the higher rate of positive tests is that in implementing the law, the police only breath test motorists who, after they have been pulled over, appear to have been drinking (something they were instructed to check for in every case: Harrison 1988). In other words, the procedure essentially involves a form of target testing.

The worrying thing from the point of view of those concerned with general deterrence is that target-oriented preliminary breath tests now constitute about 40 per cent of all preliminary tests in Victoria. Police have been required to increase the total number of breath tests, and in fact have been allotted monthly quotas, but no instructions have been issued concerning the ratio of RBT to non-RBT preliminary tests. Naturally police officers prefer a method of enforcement that is more obviously productive than RBT, with the result that in many areas RBT appears to have become a residual activity. To this writer, the practice of conducting an alcohol check before requiring a preliminary breath test, represents

a backwards step, at least if general deterrence is the objective.

Random breath testing blitzes

Despite an apparent failure currently to appreciate the full general deterrent potential of RBT, a unique feature of Victorian RBT enforcement was the use, between 1977 and 1983, of intensified periods of random testing in regions of Melbourne selected according to a pre-determined experimental design. The main evidence that RBT has had an impact in Victoria comes from evaluations of these six scientifically planned police blitzes (for example, Cameron et al. 1980; Cameron & Strang 1982).

Using night-time serious casualty accidents as a surrogate for alcohol involved accidents, Cameron and Strang (1982) evaluated the effects of three periods of intensified enforcement in 1978 and 1979. They reported a 24 per cent reduction in accidents in the areas and weeks of RBT operations, a 23 per cent reduction in the areas of RBT operations during the two weeks after operations ceased, and an 11 per cent contamination effect in nearby areas (apart from those directly influenced). They also carried out a cost-benefit analysis, and concluded that the preventive value of each police man-hour was in the range A\$150 to A\$589 (or more).

South Australia and the Territories: RBT with a Slow Start

Between February 1980 and October 1982, the Northern Territory, South Australia and the Australian Capital Territory introduced RBT. In each case, enforcement levels were relatively low to begin with, and the impact of the law was slight. There are no published evaluations for the territories, although in the ACT there was a statistically significant reduction in the number of road users hospitalised in the first three months (Federal Office of Road Safety 1986), and in the Northern Territory total road deaths fell by 14.2 per cent in the first year (Bungey & Sutton 1983). *The introduction of RBT in South Australia*

There are several reasons why evaluation of RBT in South Australia is of particular importance. These relate to the controversy surrounding its introduction and to the limited resources devoted initially to its enforcement, as well as to the quality of the data (unique in Australia) obtained through the use of random roadside surveys as an evaluation tool.

As Bungey and Sutton (1983) note, in many respects South Australia's experience with RBT has been unique, since it was opposed not only by specific interest groups but by one of the two major daily newspapers. The News was so strongly opposed to the law that it referred to the first offender apprehended as a victim (Bungey & Sutton, p. 28). Nevertheless, the publicity generated by the controversy appeared to have a salutary impact on drinking drivers, since the number of drivers admitted to hospital with an illegal (.08) BAC showed a

marked dip in June and July 1981. What is noteworthy about this decline is that it occurred four months before the police were actually geared up to enforce the law (October 1981).

Partly as a result of the media opposition, the initial enforcement of RBT was very low-key, with only two RBT units operating in the Adelaide metropolitan area and only a few country towns having police trained to use evidentiary devices (King 1988). There was little official publicity.

An evaluation (McLean et al. 1984) found that a low-key, unpublicised enforcement campaign caused a slight, temporary reduction in drinking and driving and in alcohol related casualties. It demonstrated clearly that many drivers took action to avoid RBT sites, especially by using back roads. This finding was consistent with a 40 per cent increase, in relative terms, in the proportion of accidents occurring on back streets between 10:00 p.m. and 3:00 a.m. on Friday and Saturday nights. The evaluation also pointed to some subtle aspects of the impact of RBT, and suggested ways in which enforcement could be improved.

Recent developments in South Australia

Responding to the evaluations, and comparing the results of RBT in South Australia with those in NSW, the South Australian government moved late in 1986 to intensify greatly the enforcement of RBT, and to support the enforcement with an extensive publicity campaign, emphasising both the risk of detection and the penalties (The Legislative Council of South Australia 1985). The aim, more or less, was to match the NSW level and style of enforcement, with an increase in the number of tests so that roughly one third of motorists were tested each year. In addition, there was a move away from RBT sites which were predictable and able to be seen a long way ahead, steps were taken to prevent drivers turning off before reaching an RBT site, and block testing of 8 vehicles at one time was introduced, to counter the (correct) belief of some drivers that if they hung back in passing traffic they would not be pulled over for a test. A further important development, imported from NSW, was the requirement that each traffic patrol car perform one hour of RBT per day, in the afternoon shift.

From a scientific point of view this intensification of RBT enforcement, supported by publicity, is of particular importance, since it affords an opportunity to test whether the weak initial intervention crippled RBT as an effective deterrent.

Roadside surveys conducted before and after the increase in RBT at 20 sites around Adelaide revealed a decline in actual levels of drinking and driving at all times and among all age groups. The percentage over .08 declined from 4.3 per cent to 2.5 per cent overall, with more marked declines for women, drivers aged 21-29, and those driving between 11:00 p.m. and 1:00 a.m. Fatalities in the 12

months from May 1987 were 13 per cent less than expected on the basis of the previous 5 years, and alcohol involvement in fatal crashes also declined. However, more time is required to evaluate fully the impact on accidents.

Random Stopping in Western Australia and Queensland: RBT by the Back Door

Until late 1988, when both states introduced RBT legislation, Western Australia and Queensland utilised random stopping programs, in which only a small proportion of motorists pulled over were breath tested (2 per cent Perth, WA, and fewer than 1 per cent in Queensland). In addition, fewer motorists were stopped each year than with RBT in NSW and Tasmania, with 1 road block check for every 6 licence holders in Perth, and 1 in 9 in Queensland (WA Police Department 1988; Queensland Transport Policy Planning Unit 1987).

Western Australia

Random stopping began in November 1980 in WA, and was conducted initially in the form of blitzes. According to the only published evaluation of these operations (Maisey & Saunders 1981), the Christmas/New Year campaign in 1980-81 resulted in a reduction in night-time casualty crashes comparable to that obtained in Victoria using full random testing. This supports the argument that RBT is not an essential ingredient for the success of short-term intensive campaigns (Homel 1988). In June 1986, random stopping was intensified on a long-term basis, with a claimed reduction of 6 per cent in night-time casualty crashes (WA Police Department 1988).

Survey data do not support the contention that random stopping had a major deterrent impact. A police survey (Van Brakel 1987) indicated that only 38.3 per cent of drivers in WA were aware of any new police method to deal with drinking and driving, including random road checks. A survey of 500 respondents in June 1988, reported by Loxley and Lo (1988), revealed that only 18 per cent had ever been pulled over for a roadside check, and 67 per cent thought it unlikely that they would be pulled over for a police breath test in the next month. Nearly four drinkers in ten (39 per cent) admitted to driving while slightly intoxicated during the past year, compared with about 29 per cent in the eastern states (Berger et al. 1989). Loxley and Lo (1988) conclude that only minimal deterrence from drink driving as a result of road block testing was operating in WA.

Queensland

Both random stopping and full RBT were resisted in Queensland longer than anywhere else in Australia. Arguments advanced by government ministers against RBT seemed to reflect simple ignorance as well as the influence of powerful lobby groups (Levy 1986). For example, the role of alcohol as a causal

factor in road deaths was simply denied, and at other times the fact that few offenders are apprehended through RBT was emphasised. Evidence for the long-term effectiveness of RBT in NSW was simply dismissed as irrelevant to the situation in Queensland, and opinion poll data indicating that a majority of the state's population were in favour of RBT was ignored.

The introduction of RBT late in 1988 should probably be seen primarily as an attempt by the new National Party regime to distance itself from the policies of the previous Cabinet. It is probably also a response to the failure of the random stopping program, RID (Reduce Intoxicated Driving). RID began in August 1986, and was accompanied by intense publicity over Christmas 1986. Despite the low rate of actual testing, there was a 16.1 per cent decline in fatal crashes in the first 12 months, compared with the mean for the previous three years. Fatal crashes in which the driver had a BAC in excess of .05 declined by 32.9 per cent and late night weekend fatal crashes declined by 28.2 per cent (Queensland Transport Policy Planning Unit 1987). However, by July 1987 the road toll was at levels similar to those which existed prior to the introduction of RID, and the Queensland Transport Policy Planning Unit (1988) concluded that any improvements which resulted from the introduction of RID have been lost.

Conclusion: Random Breath Testing and Beyond

The decade of the 1980s has been a time of rapid development in Australia in the use of mass breath testing as a primary means of combating drinking and driving. Random testing boots and all, using the NSW and Tasmanian approach of intensive and continued enforcement and extensive publicity, is now perceived as the optimum model for achieving a general deterrent effect, and all states and territories had taken steps to emulate this approach. Even WA and Queensland, those states which had relied hitherto on random stopping rather than RBT, have opted for the NSW model, with the goal of conducting annually one breath test for every three licensed drivers. Thus symbolic enforcement, so well described by Gusfield (1981), appears to have given way to a more wholehearted approach.

Effective RBT: Lessons from the Australian Experience

Although Victoria was first into the field with RBT, it has never been clear how much of the decline in alcohol related casualties recorded in that state was due to RBT, especially since it has never been enforced at anything like the levels obtaining in NSW and Tasmania. RBT clearly achieved short-term reductions in casualties when it was enforced through the use of blitzes, but these effects have been achieved through random stopping in other parts of Australia (Maisey & Saunders 1981) and through saturated enforcement overseas (for example, Sykes 1984). In any case, long-term reduction in accidents is the primary goal of drink drive law enforcement.

The experience of South Australia, where a timid introduction was followed some years later by more wholehearted enforcement and publicity, suggests that the impact of RBT is pretty much a linear function of the resources devoted to it. The same conclusion could be drawn by comparing the performances of NSW, Victoria, and the non-RBT programs of Queensland and WA. The experiences of the non-RBT states in particular conform closely to the pattern observed by Ross (1982) in his review of the international literature on deterrence - an initial reduction in casualties, followed within a year or so by a return to pre-intervention accident levels.

Nothing in the Australian literature encourages the belief that roadblocks or sobriety checkpoints, without the use of full random testing, are capable of delivering a substantial and sustained reduction in alcohol related casualty crashes. It suggests equally as strongly that full random testing is also not capable of achieving long-term reductions in casualties, unless it is rigorously enforced and extensively advertised. If visible enforcement and publicity are maintained, the deterrent impact is maintained; if enforcement is relaxed, the deterrent impact starts to wane.

The need for continued, intense enforcement and publicity using RBT rather than random stopping is the central lesson of the Australian experience. Evaluation suggests that the whole NSW program, including media publicity, costs about A\$3.5 million per annum. This is estimated conservatively to save 200 lives each year, with total dollar savings to the community of at least A\$140 million per annum (Carseldine 1988). However, it is clear that in order to achieve these results certain guidelines, beyond the rather gross and arbitrary, one test for every three licence holders, must be observed. Some of these guidelines are listed below:

- While RBT operations should be visible, the visibility must be threatening (King 1988). What this means is that drivers should not believe that RBT operations can be easily evaded once they are in sight, and they should not be able to adopt tactics such as hanging back in a group of cars in order to avoid being pulled over. The actual means of achieving these conditions will vary from jurisdiction to jurisdiction, and even from area to area. They will probably also vary depending on the time of day and the day of the week.
- The goal of threatening visibility is to increase the perceived chances of apprehension for drinking and driving. Experimentation within each jurisdiction is required in order to determine how much testing should be conducted at times and places of high traffic volume when the incidence of drinking and driving is low, and how much should be conducted when traffic volume is low, but the incidence of drink driving (and accidents) is high.
- Continuous feedback to police on the goals and effectiveness of RBT is

required, to counter inevitable trends for apprehension-based enforcement policies to displace RBT. Media publicity on RBT is helpful in this respect, since it provides a model for police to emulate and encourages them in the knowledge that they have the full support of the government.

- Media publicity is essential in order to launch RBT with a bang. Subsequently, visible enforcement is probably more important than publicity, but periodic media blitzes (usually around Christmas) act to boost the visibility of RBT. Publicity should be centred around RBT and should not be simply educational in content.
- Penalties no more severe than fines of a few hundred dollars and licence suspensions of a few months duration are required. Imprisonment is unnecessary, costly, and counterproductive (Homel 1988).
- RBT as a preventive policy must be run in parallel with enforcement methods which aim to maximise the apprehension rate. One reason for this is that the overall goal of general deterrence is better achieved if persistent offenders experience for themselves arrest and conviction, since convicted offenders are more responsive to the threat posed by RBT (Homel, in press). In addition, it is necessary to target offenders who believe that RBT can be avoided. Thus stationary RBT operations, which are not designed to catch many offenders, can never be the sole mode of drink drive law enforcement.

Achieving and Maintaining Deterrence through RBT

While RBT appears to have been successful in NSW, it should be recalled that deterrence is an unstable process at the individual level, with peer pressure, lack of exposure to RBT, and successful drink driving episodes operating to erode perceptions and behaviour patterns built up through earlier exposure to RBT (Homel 1988). This is the main reason why enforcement and publicity must be maintained at high levels, at least until drivers start to act as their own policemen. However, this need for long-term high-level enforcement creates a number of problems, not the least of which is that over time, police and politicians may lose sight of the primary goal of general deterrence. Strong leadership at the political level is required to ensure that RBT stays on the rails. In the absence of such leadership, there is a tendency, noted earlier, for police to revert to a more obviously productive enforcement approach. On the other hand, the perceived success of a program like RBT to some extent ensures its continuation in pristine form, since any government will tend to back a proven winner.

RBT boots and all in NSW happened because RBT was believed to have worked in Victoria, most people believed that alcohol related road deaths were a major problem and public opinion was strongly in favour of RBT, there was an absence of strong lobby groups (including citizen's groups) who could have diverted resources from a preventive approach, and on the basis of expert opinion the

government was prepared to take the political risk. RBT worked because it was supported by extensive publicity and the police force was structured in such a way that the threatened enforcement levels could actually be delivered. RBT continues to work because neither the politicians nor the police have (yet) lost sight of the central goal of general deterrence.

Alternatives to RBT

Laurence Ross, has been a consistent and severe critic of deterrence-based approaches to the reduction of alcohol related casualties (for example, Ross 1988a and b; Ross & Hughes 1986). While conceding (Ross 1988a, p. 75) that ... drink driving law enforcement that manages to breath-test a third of the driving population every year may exceed the threshold for long-term effectiveness, and conceding the cost effectiveness of the NSW program, he nevertheless argues that RBT is like ... a mass stop and frisk, which cannot clearly be distinguished from, say, stopping all passing pedestrians to be sniffed by dogs for the possession of drugs or to be patted down to see whether they are carrying weapons (p. 75). He suggests such strategies as increasing the cost and diminishing the convenience of alcohol consumption, designing better highways, and removing environmental hazards such as trees (Ross 1988b).

There is no doubt that Ross' emphasis on the need for institutional and environmental countermeasures is absolutely correct, and in Australia, some progress has been made in these directions. Moreover, the reduction of drinking and driving through deterrence has only been a central concern of Australian policy makers for about the last 15 years. Prior to this, and even during this period, many more resources have been devoted to such things as vehicle design rules, compulsory wearing of seat belts, road upgrading and modifications to the roadside environment than have been devoted to RBT (Homel et al. 1988). Australia was among the first countries in the world to legislate for seat belts and bike helmets, and unlike the United States has achieved a high level of compliance with these laws.

The nub of the problem is that alcohol related casualties still occur at a very high rate in Australia, despite seat belts, helmets, and a more forgiving roadside environment, and despite RBT (Berger et al. 1989). The removal of roadside hazards has been a priority in Victoria for more than 10 years, but is quite complex, and requires (among other things) detailed route analyses encompassing all potential roadside hazards. An effective program could take many more years to develop. It is hard to avoid the conclusion that Australians drink (and drink and drive) more than is good for them, and that modifications to the roadside or vehicle environment, while absolutely necessary, are not going to provide an early or complete solution to the problem.

In this context, Ross' recommendations concerning controls on alcohol

availability are attractive. The problem is that no measures that would actually achieve anything seem to have any chance of getting off the ground. According to a recent NSW survey (Homel & Flaherty 1988), there is very little support for reductions in the availability of alcohol. Fewer than one third of the population support reductions in outlets or opening hours, or increasing the legal age for purchasing alcohol. Most people are happy with the status quo.

The unique importance of RBT in the Australian context may now be a little clearer. It is one of the few socially acceptable alcohol countermeasures which has achieved some measure of success. In my view, the long-term value of RBT will be not so much the direct reduction in deaths and injuries, but the changes in drinking practices and attitudes which it may have helped to bring about (Homel et al. 1988). Total per capita alcohol consumption has declined 16 per cent from a peak in 1977-78 of 13.2 litres (Commonwealth Department of Community Services and Health 1988), and RBT has probably been one factor in this decline. More directly, RBT has dramatised the role of alcohol in road deaths, it has perhaps begun to change attitudes to drinking and driving in NSW, and it has had a marked impact on the dynamics of drinking in group situations.

In short, RBT may be the entering wedge for further countermeasures which do not explicitly target consumption, but which capitalise on the new social climate, and particularly on the changing nature of public drinking. Server intervention programs, which modify directly the drinking environment without reducing profits or affecting the enjoyment of patrons (Homel & Wilson 1987; Saltz 1987), are a clear policy priority, given the obvious unwillingness of Australian governments to reduce access to alcohol.

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