

Report on the Queensland Alcohol Ignition Interlock Program

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Biography

James is currently finishing his PhD at the Centre for Accident Research and Road Safety-Queensland. The research examines the self-reported impact of drink driving countermeasures on a group of repeat offenders. James is a registered psychologist and his current research interests focus on the process of producing behavioural change through various rehabilitative interventions.

Abstract

This paper reports on the progress of the first court-ordered trial of alcohol ignition interlocks in Queensland. It focuses on the predominant factors affecting the implementation of the program and the current self-reported impact of using interlocks on key program outcomes such as drinking and drink driving behaviours. The report highlights issues influencing participation rates, the relationship between the downloaded and self-reported data and provides suggestions for future interlock programs.

1. CHARACTERISTICS OF THE INTERLOCK PROGRAM

A trial of alcohol ignition interlocks is currently being implemented in Queensland, with the aim being to determine whether the device in combination with a drink driving rehabilitation program is more effective than the rehabilitation program alone in reducing drink driving recidivism. This approach is based on recent research that is demonstrating interlocks in combination with rehabilitation programs and intensive supervision increases the possibility of long-term behavioural change (Marques, Voas et al., 2000). In the Queensland interlock trial, the rehabilitation program that is combined with interlock installation is an 11-week drink driving program known as the "Under the Limit" (UTL) program, and the interlocks are provided by Drager, Ltd. The UTL program is an education-based drink driving prevention and rehabilitation program that is based on best practice models in the areas of problem drinking as well as drinking and driving. The program aims to promote controlled drinking (not abstinence) and separate drinking from driving. The UTL program is implemented at TAFE colleges in weekly sessions of one and a half hours.

The Queensland interlock trial commenced in February 2001, adopting the predominant judicial approach, as drink drivers are court-ordered to install and use an interlock for a period of time determined by a magistrate. Prior to sentencing, offenders are assessed using a pre-sentencing assessment questionnaire administered by a Community Corrections Officer to determine the offender's ability to comply with the interlock probation order conditions (e.g., cost, access to vehicle). If offenders agree to participate in the trial they are placed on a probation order and sentenced to a period of licence loss as well as to complete the UTL program before installing and operating an interlock. The probation order requires participants to have a BAC of 0.00% when operating the vehicle, although a BAC reading of 0.015% or less does not result in a violation in order to accommodate for low levels of alcohol in certain foods.

Eleven courts are involved in the interlock trial that are divided into two groups consisting of the comparison courts that only offer participants the UTL program (UTL1) and the experimental courts that offer both the UTL program and interlocks (UTL2). Assignment to an interlock is implemented under the Penalties and Sentencing Act Queensland (1992).

Compliance with the UTL program and interlock installation becomes part of the conditions of probation. The model that is currently being implemented is presented in Figure 1.

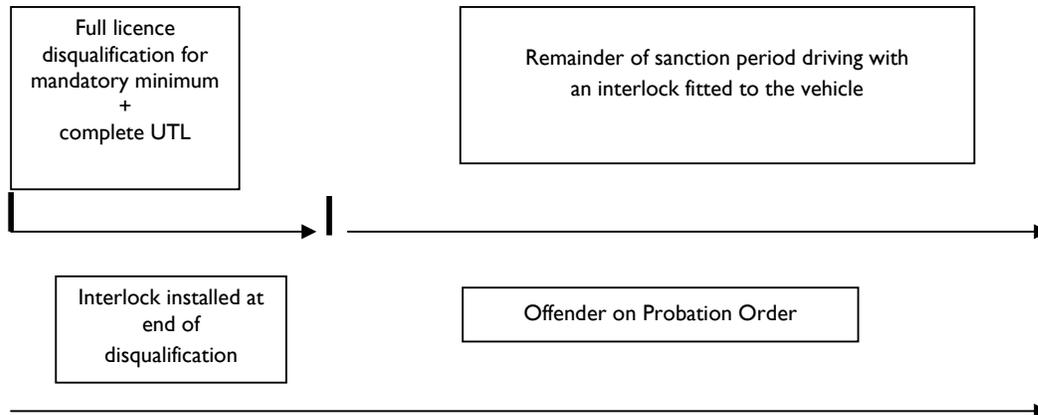


Figure 1. Model of the Queensland Interlock Program

2. IMPLEMENTATION OF THE PROGRAM

2.1 Low Participation Rate

At present, a key issue affecting the implementation of the program has been the low accrual rates for interlock installation. Historically, participation rates in interlock programs have been low, with less than 10% of eligible offenders taking up the option. However, participation rates have been demonstrated to increase (62%) when interlocks are offered as an alternative to other punishments such as house arrest or incarceration (Beirness, 2001). To enhance participation rates in the Queensland program, magistrates were asked to reduce the licence disqualification period to the mandatory minimum and waive or reduce the usual fine given the cost of the interlock option to the offender (approximately \$965.00). Despite the promotion of the interlock program within the legal system and the proposed incentives of reduced sentences, very few offenders convicted in the six trial courts accepted the interlock probation order. At the time of writing this report (August, 2003), 15 offenders had installed an interlock and another 5 were completing a licence disqualification period before installing the device.

2.2 Screening Outcomes

Entry into the program is not automatic as offenders are screened for their suitability for the program (i.e., "gatekeeper" questionnaire). An examination of the reasons for approximately 100 offenders not passing the assessment process during the first 18 months of the trial revealed that 70% reported not being able to afford the interlock option, 20% did not have use of a motor vehicle, 8% were unable to report to the service provider and the remainder reported they would experience difficulties providing breath samples. The results indicate that the cost of interlock installation is a major influence in accepting the interlock order.

The Queensland interlock trial operates on a user pays principle, and the probation order is available to all drink driving offenders who are sentenced in one of the six trial courts. However, due to the cost of the interlock probation order (UTL program = \$500 & interlock installation/servicing = \$470) it was considered more likely that only repeat and/or high range BAC offenders who were possibly facing fines of at least \$900 and long licence disqualification periods would consider the interlock option. Despite this, a high proportion of offenders who declined the interlock option reported that the cost of the order was the major contributing factor to the refusal. Considering the device was provided free of a hire fee for

the duration of the study period, further research is needed to determine the option of subsidised programs, what affect such an approach has among lower-income offenders and other possible incentives to improve participation levels. However, it is also recognised that other factors that affect accrual rates include the availability of a vehicle and the ability to report to the service provider.

3. IMPACT OF INTERLOCKS ON KEY PROGRAM OUTCOMES

An examination of the impact of interlocks from a users' perspective was undertaken that involved comparing the downloaded interlock recordings with the self-reported data. The study incorporated a longitudinal case study design in which quantitative and qualitative data was collected through structured interviews on five separate occasions and examined using grounded theory research methods. Interviews were performed at participants' local Community Corrections Regional Centre both before and after completing the UTL program, upon interlock installation then one month and three months after interlock installation. The downloaded interlock data and self-reported experiences of twelve participants were examined to determine the impact of the device on key program outcomes such as drinking levels, driving performance, operational assessment, and circumvention attempts. The following section reviews the major findings.

Sample Characteristics

Participants in the sample were all male repeat offenders, averaging 39 years of age, who had been convicted of approximately three drink driving offences ($M = 3.08$). The majority were employed on a full-time basis in blue-collar occupations, earning approximately \$12,000 - \$35,000 p.a., with half the sample currently in a relationship. Licence disqualification periods ranged from 2 to 12 months ($M = 8$), and interlock installation orders varied from 7 to 13 months ($M = 10.75$ months).

(a) Downloaded Interlock Recordings

A review of the downloaded interlock data indicated that the vehicles were used on over 80% of the days, with 4.85 trips (e.g., engine starts) each day, 2.93 rolling re-tests each day, and 1.49 re-tests per trip. Participants drove their vehicles on average 3 times more often during the week than on weekends and twelve times more often during the day than at night. Participants recorded a higher level of incorrect breath samples during the first month, but these operational difficulties appeared to diminish over the four-month period, which was also reflected in the self-reported data. Examination of the self-reported data attributed this pattern of behaviour to participants using their vehicle for predominately "functional" purposes (e.g., driving to work) and being less willing to drive during "peak" drinking periods (e.g., weekends and at night). The interlock usage of participants in the current study is comparable to larger interlock trials. For example, Marques et al. (1999) examined the driving behaviours of 1309 drink driving offenders in the Alberta interlock study and reported participants used the device on 80% of the days, with 6.5 engine starts and one rolling-retest per day, and approximately 12 hrs of driving time per week.

There were 53 "start-up" breath test failures over the four-month installation period (M BAC = 0.022%, range 0.016% - 0.166%) and 11 re-test failures (M BAC = 0.020%, range 0.016% - 0.026%). All 12 participants recorded a "start-up" failure at some time during the four-month period, which signifies an attempt to drive after drinking. There were 42 "start-up" failures during the day and 11 at night and 10 re-test failures during the day and one at night. A more refined examination of the frequency of breath test failures by the hour of the day revealed that the highest failure times were around lunchtime (e.g., 13:00), and during the mid-to-late afternoon (14:00 to 17:00). In addition to the examination of breath-test failures by time of day, an investigation was undertaken into the frequency of failures by week vs week-end revealing that 2.5 times as many failures were recorded during the week than on weekends. Taken together, the findings of the above section indicate that participants used

the interlock-fitted vehicle mostly during week-days for functional purposes, which contributed to the highest frequency of violations during this time period.

(b) Self-Reported Impact of Interlock Usage

In addition to the downloaded data, participants were interviewed both before and during interlock installation to investigate the impact of the device on key program outcomes such as drinking and drink driving behaviours. Participants completed the Alcohol Use Disorders Identification Test (AUDIT [Saunders et al., 1993]) as well as an interlock questionnaire that incorporated both likert-scaled and open-ended questions. In general there was considerable variability in participants experiences of operating interlocks and their driving behaviours. While a complete review of each participants' experiences of interlock usage is beyond the scope of this paper, two major findings that emerged from the self-reported data which appear associated with avoiding drink driving are described below.

(i) Willingness to Reduce Alcohol Consumption Levels

The first major factor that emerged regarding successful interlock operation - specifically being locked out of one's vehicle after providing breath violations- was being unwilling to reduce alcohol consumption levels. Although participants completed a drink driving rehabilitation program that promotes controlled drinking, three quarters (8) of the sample were not planning to reduce their alcohol consumption levels upon interlock installation. Furthermore, 8 of the 12 participants were consuming harmful levels of alcohol upon interlock installation (e.g., AUDIT score of ≥ 8). After one month of interlock operation only five participants reported attempting to drink less, with three of the five participants not drinking heavily. Importantly, the majority of heavy alcohol users did not reduce their alcohol consumption levels after the first month, and together recorded the highest frequency of breath violations.

The results suggest that heavy alcohol consumption levels combined with an unwillingness to change drinking behaviours increase the likelihood of breath test violations. Similar to previous research, closer examination of the pattern of violations indicated that those who registered the highest number of breath test failures also reported the highest alcohol consumption levels (Marques et al., 1999; Marques, Tippetts et al., 2000). While it is not surprising that participants who consumed the most alcohol also recorded the highest frequency of breath test failures, it is notable that this groups' extremely negative experiences of interlock operation (e.g., continually being locked out of their vehicle) did not facilitate the reduction of alcohol consumption.

(ii) Willingness to Acknowledge Breath Violations

A second important factor to emerge, which relates to attaining successful interlock outcomes such as separating drinking from driving, was the discrepancy between the downloaded interlock recordings and self-reported data regarding the cause of breath test violations. Participants displayed a propensity to attribute breath test violations to "machine error", rather than to inappropriate drinking behaviours. For example, all 12 participants registered a breath test violation during their interlock usage, and half the sample (6) attributed violations to "reading errors" with the device. Of note was the strength of participants' denial of drinking before attempting to drive, and their general resistance to engage in discussions regarding the possibility of making judgement errors.

While it is acknowledged that many products contain alcohol in small dosages (e.g., mouth wash, certain foods), it is unlikely that such substances would exceed the 0.015% BAC breath violation limit that accommodates for such minor dosages. In addition, the interlocks were serviced, checked and recalibrated every month, resulting in a reduction in the possibility of machine error. An alternative hypothesis is that participants were attempting to start their vehicle with "un-metabolised" alcohol in their bodies (Marques et al., 1999). It was

proposed that the UTL program (which incorporates a lesson on interlock usage) would provide participants with adequate knowledge regarding appropriate drinking behaviours during the interlock trial. But rather, the high alcohol consumption levels of some participants suggest that residual levels of alcohol were present during attempts to start vehicles. This finding was also evident in the Alberta interlock trial, as the highest rate of failed start-up attempts were on Saturday and Sunday mornings (Marques et al., 1999).

The results indicate that some participants: (a) are not aware of safe drinking levels before using a vehicle and/or (b) are not willing to recognise when they have consumed an inappropriate level of alcohol and have made an error in judgement. An unwillingness to recognise and acknowledge attempts to drink and drive remains a concern, as it is hoped that interlocks provide users with immediate feedback regarding their intoxication levels, which serves to help participants make better decisions regarding when they should not attempt to drive (Popkin et al., 1992).

4. DISCUSSION

This paper has highlighted the characteristics of the Queensland interlock program, key factors affecting accrual rates, as well as current evidence regarding the self-reported effect of the program on breaking the drinking and driving sequence for a group of repeat offenders. A considerable constraint of the Queensland program has been the low participation rates, with the screening process indicating the cost of interlock installation to be a major influence in offenders' decisions not to accept the interlock option. Considering that low participation rates are a continuing limitation within the literature, further incentives need to be developed and reviewed to determine effective methods of increasing the numbers of offenders installing the device.

The small sample size provided an ideal opportunity to conduct an in depth analysis of the self-reported and downloaded interlock data, which revealed important program issues such as willingness to reduce alcohol consumption levels and willingness to acknowledge the predominant cause of breath test violations. Preliminary results of the study provide support for the assertion that some offenders are not aware of the severity of their drinking behaviours and/or may not be willing to be truthful regarding their drinking behaviours (Cavaiola & Wuth, 2002). Furthermore, the results of the current study provide some insight into why interlocks are only effective whilst installed to offenders' vehicles. If individuals do not acknowledge inappropriate drinking levels during interlock usage, then achieving successful behavioural change once the device is removed from vehicles appears unlikely. This finding has direct implications for program developers, facilitators and probation officers who need to be aware of some offenders' unwillingness to change drinking behaviours and the corresponding effect this attitude has on interlock performance.

From these results, it appears that supervision whilst operating an interlock is vital. For interlocks to be effective, inappropriate driving performances and general program violations need to be adequately addressed to ensure participants become aware of the consequences of their behaviour, in order to reduce the chances of re-offending once the interlock is removed. In addition, a high number of breath test violations during early interlock usage may prove to effectively identify individuals who should be directed towards additional interventions e.g., alcohol counselling. While program resources will always regulate the level of interlock support, the findings of the present study suggest addressing heavy alcohol consumption levels is essential to reduce drink driving. The outcomes of the study point to some major issues that need to be addressed if there is to be an improvement in the recruitment rates of serious drink driving offenders. These include the cost of interlocks, the screening process as well as other factors not addressed in this paper such as the need for specific legislation and the incorporation of further incentives such as reductions in licence disqualification periods.

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