

Safer driving agreements in the Australian context: Can they be effective?

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Abstract

Prior research suggests that greater parental involvement in the safety and learning of their young novice driver can have a positive impact on their child's safety. Safer driving agreements, which typically involve a formal statement of driving conditions and restrictions ratified by a driver and another party, most often parents, are an increasingly common initiative to enhance young novice driver safety. However, there are few formal evaluations of such initiatives and the limited available research suggests only modest differences in traffic violations, and minimal impacts on crash involvement. The current paper reports on an assessment of the potential efficacy of safer driving agreements in the Australian context, via a literature review and extensive stakeholder and community consultations. Specifically, discussions were conducted with an expert panel of United States researchers and program developers; a survey was completed with Australian police, transport and motoring stakeholders; and focus groups and surveys were completed with young drivers and parents. Overall, results suggested mixed understanding of, and support for, safer driving agreements in Australia, with issues relating to voluntary participation and accurate monitoring of behaviour cited as major barriers. Indeed, the potential effectiveness of the initiative was largely perceived as being limited to those young drivers who are already safety conscious, and as being dependent on existing strong relationships with parents (e.g., trust, honesty and respect). Implications of the study and recommendations for future research are discussed.

Introduction

Young novice drivers constitute a major public health concern in terms of their over-representation in crash involvement and the injuries and fatalities arising from these crashes. While crash risk is lowest when a driver is on their Learner licence, the first 6-12 months of independent driving on the Provisional licence represents the most risky driving period in a person's life (McCartt, Shabanova, & Leaf, 2003). Thus, there is a need to develop interventions focused on improving the safety of young novice drivers. Prior research has shown that parents are pivotal in modelling and shaping the driving behaviour of their young novice driver, from modelling safe driving behaviours and attitudes during the pre-licence and early driving phases (Simons-Morton & Ouimet, 2006; Simons-Morton, Ouimet, & Catalano, 2008), to providing most of the driving supervision and instruction during the Learner licence period (Scott-Parker, Bates, Watson, King, & Hyde, 2011). More general parental monitoring (i.e., outside of the driving arena) has also been found to be associated with lower rates of youth risk taking, including risky driving (DeVore & Ginsburg, 2005). However, parents may be unaware of the important role that they play in the road safety of their novice driver (Beck, Hartos, & Simons-Morton, 2002), including the importance of managing the risks associated with the earliest phase of independent driving.

While many parents report having explicit and implicit rules and expectations about independent driving behaviour these may be unclear or ambiguous to their novice driver, particularly when parents are not consistent in the regulation and enforcement of these rules. Thus, prior research has suggested that there is often considerable disagreement between parents and their young novice driver regarding the nature of these rules and expectations (Beck, Hartos, & Simons-Morton, 2005; Hartos, Shattuck, Simons-Morton, & Beck, 2004), and that this discordance is predictive of self-reported risky driving behaviour among young novice drivers (Beck, Hartos, & Simons-Morton,

2006; Hartos, et al., 2004). These findings suggest that increasing the concordance between parents and their young novice drivers is a critical element for improved safety.

Consequently, safe driving agreements have been developed to help parents minimise some of the risks experienced by their young novice driver. Safer driving agreements are a formal statement of driving conditions, restrictions and responsibilities that are ratified by a young novice driver and another party (or parties) with the aim of enhancing or promoting safe driving behaviour. Specifically, the agreements encourage the involved parties to become better informed about the considerable risks associated with the earliest stages of independent driving. Typically, the interested party with which the young driver enters into the agreement is one or more parents or a supervising driver. However, other persons (e.g., grandparents, peers, employers) or organisations (e.g., government licensing authorities, insurance companies, schools) also represent potential partners.

Safer driving agreements typically commit parents to support the young driver in their early months of independent driving, including a discussion of the risks such as crashes, injuries and fatalities from deliberate risk-taking behaviour. In addition, young drivers commit to comply with certain restrictions. For the most part, these restrictions include those legislated through graduated driver licensing (GDL) schemes, however additional restrictions may also be included (Simons-Morton & Ouimet, 2006; Simons-Morton, et al., 2008). The agreements are typically designed to enforce gradually less-restrictive driving conditions on novice drivers as they demonstrate greater compliance with the agreement or increases in driving skills and experience. Parents also may have a number of responsibilities outlined in the agreement, such as providing a specific number of supervised driving hours and/or driving in certain driving situations. Finally, how behaviour will be monitored, and rewards and consequences associated with particular behaviours are also commonly outlined.

A number of safer driving agreement schemes currently operate in Australia, including *Roads 2 Survival* and *Going Solo*. In addition, the South Australian government operates a safer driving agreement in the context of remediation, such that novice drivers disqualified from driving due to an accumulation of demerit points may enter into an agreement, as opposed to serving the six month disqualification period. The agreement allows driving under strict conditions, with breaches of the agreement resulting in a disqualification period twice the length of the original penalty. In the United States, the *Checkpoints* program, which features a safer driving agreement as a key component, has been extensively developed and implemented. The program integrates the risk-reducing capability of authoritative parenting practices with the risk-reducing capacity of broad countermeasures, such as GDL schemes (Beck, et al., 2002).

To date there has been only one formal evaluation of safer driving agreements in Australia. Indeed, there are currently no evaluations of the effectiveness of safer driver agreements used in Australia, in terms of their impact on offence rates or crash involvement. The only Australian evaluation completed to date, involved 27 parents and their 28 young novice drivers who were randomly allocated to the *Going Solo* intervention or a control group (Zhao, 2009). The study found that no participants in either group actually signed a safer driving agreement. However, parents who utilised the resource (i.e., a booklet), and particularly those with an authoritative parenting style, were more likely to discuss road safety and driving risks with their young novice driver. In addition, significant improvements in attitudes toward risky driving were noted among the intervention group.

In comparison, there has been extensive application and evaluation of the *Checkpoints* program in the United States. Results suggest that participation in the program results in young drivers and their parents being more informed regarding the risks facing newly licensed young drivers (Hartos, et al., 2004; Simons-Morton, Hartos, & Beck, 2003). In addition, the program has been found to

increase the number of restrictions parents place on young novice driving during early independent licensure (Hartos, et al., 2004; Simons-Morton, Hartos, Leaf, & Preusser, 2005, 2006a, 2006b, 2006c, 2006d; Simons-Morton, et al., 2003; Simons-Morton, Hartos, & Beck, 2004; Simons-Morton, Hartos, & Leaf, 2002). However, a number of issues associated with suboptimal uptake and discordance between parents and young drivers regarding the content of the agreements have been reported.

Importantly though, these findings have not been found to translate into significant reductions in key risk outcomes. Specifically, only modest reductions in offence rates, and inconsistent changes in crash-involvement, have been demonstrated for young novice drivers involved in the program (Simons-Morton, et al., 2006a, 2006b, 2006c). The strongest finding of an impact on crashes and violations was for families that included restrictions on carriage of peer passengers and night driving (Simons-Morton, et al., 2006a). It is acknowledged that small sample sizes, relatively short follow-up periods and lack of control for confounding factors may have precluded the studies from having sufficient statistical power to detect significant differences and contributed to these inconsistent findings.

Taken together, the available evidence suggests that safer driving agreements can help educate parents and young drivers regarding the risks associated with driving and motivate them to set greater limits, but the impact on offence rates and crash involvement remains uncertain. One explanation may be that such programs are typically only adopted by families who are among the most safety conscious from the outset. Even among safety conscious families however, positive parent-youth relationships and an authoritative parenting style are likely to be key to the success of safer driving agreements. The implementation of safer driving agreements with partners other than parents is limited and thus lacking evaluation.

The objective of the current research was to assess the potential efficacy of safer driving agreements in the Australian context via extensive stakeholder and community consultations. The scope went beyond agreements involving young drivers and their parents, and also included agreements with other individuals and organisations, particularly peers, schools, road administrations and as part of traffic offender programs.

Methodology

The consultation phase of the research involved four separate phases: (1) consultations with Australian stakeholders; (2) an expert panel with key researchers and program developers from the United States; (3) focus groups and one-on-one interviews with young drivers; and, (4) a focus group and survey of the parents of young drivers.

Consultations were conducted with key Australian stakeholders, including transport authorities, motoring groups, police agencies, driver trainer organisations and program providers. A total of 22 stakeholders participated. Representatives from participating stakeholder organisations were offered two choices regarding their involvement: (a) complete a survey instrument involving eight open-ended questions that could be completed and returned via email in their own time; or, (b) take part in a teleconference covering the same eight questions outlined in the survey instrument (approximately 60 minutes in length). The majority of stakeholders chose to participate through email correspondence, stating that this approach provided increased safeguards against accidental disclosure of sensitive information and allowed multiple representatives to contribute to the preparation of responses in a more feasible and manageable way. Those teleconference discussions that were conducted were audio recorded for transcribing purposes and use in the qualitative analysis.

The second phase of the research involved a face-to-face meeting with an expert panel of four key stakeholders in the United States associated with the development, management and/or evaluation of the *Checkpoints* program. The meeting was conducted in the United States by members of the project team. The meeting covered a range of issues including: historical background of the use of safer driving agreements in the United States; evidence of effectiveness and best practice principles of safer driving agreements in the United States; and perceived applicability of these findings and experiences to the Australian context, including potential barriers and solutions. It is worth noting that all members of the expert panel were relatively familiar with the driver licensing systems in place in Australia and that two of them had made extensive visits to Australia in the past.

The third phase involved focus group discussions and one-on-one interviews with young drivers. Participants were first-year psychology students from an inner city university campus in Brisbane. To be eligible to participate, young drivers were required to hold a current Learner licence or be in the first six months of their first Provisional licence phase (P1). A total of three focus groups ($n = 10$) and five interviews ($n = 5$) were conducted. The sample consisted of ten females and five males. All focus groups and interviews were conducted by the same researcher using a structured interview schedule. Focus groups took approximately 60-90 mins to complete, while interviews took approximately 30 minutes. Participants received either \$20 cash or course credit as reimbursement for their time and effort.

The final phase of the research involved a focus group and survey of the parents of young drivers. Participants in the focus group were also university students, while survey participants were recruited at a parent-young driver information session conducted by Trent Driving School in Sydney, Australia (the session involved approximately 90 individuals, approximately half of whom were parents). To be eligible, participants were required to be the parents of a young driver who currently held a Learner licence or was in the first six months of their P1 licence. The focus group discussion was conducted using a structured interview schedule, took approximately 60-90 mins to complete and participants received course credit as reimbursement for their time and effort. A total of eight participants were involved in this phase of the research. The two participants who were recruited through the focus group were female, while the gender of those participants recruited at the information session ($n = 6$, including one postal return) was not recorded, but included both males and females.

In all four stages of the consultation phase of the research, directed conceptual content analysis was used to analyse the information provided by stakeholders, young drivers or parents (Hsieh & Shannon, 2005; Krippendorff, 2004). In the interest of the confidentiality and anonymity of participants, quotes are reproduced in this paper with no identifiable information.

Results of the Stakeholder and Community Consultations

The overall findings of the four consultation phases of the research are discussed below in terms of the prominent themes that emerged from discussions.

Can safer driving agreements work?

Consultation identified that, overall, safer driving agreements were perceived to be an innovative approach in theory; however there was general scepticism regarding how effective they might be in practice. Support for the wide-scale introduction of safer driving agreements was reported as being contingent upon a successful trial and evaluation, and there was a general perception the initiative, at best, would represent a complementary function to existing rules and regulations. Indeed, current GDL regulations were argued to represent the most effective approach to improving young novice driver safety. Among stakeholders, there was acknowledgement of the scarce empirical evidence of the effectiveness of safer driving agreements in reducing offence rates or crash involvement.

"I don't see them as the next great hope to reduce the road toll. What I see them as is just another little strategy ... there is no silver bullet" (Police organisation).

"There is currently a lack of evidence demonstrating any correlation between safer driving agreements and improvements in driver safety or reductions in the incidence of traffic violations or road crashes" (Road authority).

Stakeholders, parents and young drivers all typically believed that the potential effectiveness of safer driving agreements may be limited only to those young drivers who are already safety conscious, rather than more problematic young drivers.

"Probably questionable in relation to those younger drivers who perhaps do engage in risk-taking behaviour ... those people who will do the right thing are likely to do the right thing whether there is an agreement there or not" (Police organisation).

While young drivers agreed that the agreements would be likely to increase the degree to which safer driving is discussed, many questioned the degree to which young people would be motivated to voluntarily enter into the agreements. Specifically, the agreements were perceived as reflecting a restriction of their freedom and independence. Moreover, it was suggested that such agreements were unlikely to be effective with young people who were more independent (e.g., live out of home, have their own vehicle). Young drivers suggested that the potential effectiveness of safer driving agreements would be heavily dependent on having strong relationships with their parents built on trust, honesty and respect.

"I don't know how effective it would be if they [the young drivers] have their own car and pay for everything – they don't really have to sign the agreement" (Male, young driver).

"I think if you had a good relationship with your parents it could work ... You'd have to have a good level of trust otherwise you could just sign it and then go off and still do all the things you said you wouldn't" (Female, young driver).

Parents suggested that time pressures may preclude the active participation of parents. Indeed, the lack of interest in participating in the consultation process among the parents attending the information session may be indicative of the likely low uptake of voluntary programs. In addition, parents questioned the likelihood that their young drivers would reliably and honestly report their driving behaviour to them.

Who are the most appropriate partners for safer driving agreements?

Overall, parents or another trusted adult were argued to be the most appropriate partner for safer driving agreements given their direct and vested involvement in the young driver's life. Indeed, as stated, previous research has highlighted the numerous road safety benefits associated with greater parental involvement for young novice driver safety.

"Young drivers may benefit from participation in safer driving agreement programs involving their parents. In this regard research shows that risky young driver driving behaviours, traffic violations and road crashes are less common when parents impose strict limitations. Safer driving agreements between parents and young drivers that clearly delineate rules and consequences may result in better communication, more restrictions, and safer parent and young driver attitudes" (Transport authority).

"With my parents I actually feel like they legitimately care whereas a government agency or a school or something, you feel like they are only doing it because they have to or to protect themselves" (Female, young driver).

For optimal effectiveness, it was recommended that the development of safer driver agreements should consider family dynamics, including information regarding parenting styles and key factors of parent-young driver relationships.

“The development of a safer driver agreement [should] take into consideration research on parental style, influence and interaction with teenagers and young adults” (Motoring group).

Collective agreements, whereby a peer group of young drivers all agree to enter into separate agreements with their parents, were suggested to have a number of potential benefits, including increased participation rates, reduced stigma associated with participation and generational shifts in attitudes and behaviours of young novice drivers.

“I think there might be some power in having a group of peers, at the same time, signing an agreement with their parents so that they don’t feel as if they are the weirdo who’s got this weird contract with mum” (Female, parent).

Safer driving agreements between young drivers and their employers/workplaces also received considerable support. It was proposed that such an agreement could be additional to those implemented with parents and may become increasingly influential as the young driver becomes more independent.

When should safer driving agreements be implemented?

While there were mixed perceptions of the optimal time to initiate safer driving agreements, there was a universal belief that they must cover the early years of independent driving, when young drivers first receive their Provisional licence. Indeed, the peak in crash risk during this period was highlighted, as was the degree to which young drivers experience a large range of challenging decisions and situations during this period.

“Statistics show that young drivers are most at risk of crashing during their first few years of solo driving ... therefore, an intervention that targets young drivers during the first few years of solo driving seems the most appropriate” (Motoring group).

While some believed agreements should first be implemented as novice drivers transition into the Provisional licence phase, others suggested that safer driving agreements should first be implemented in the pre-licence or Learner phase, to normalise the process and encourage young persons to think about road safety issues from an earlier stage in the licensing process. Surprisingly, integrating safer driving agreements into existing licensing processes was suggested by young drivers but received minimal discussion among stakeholders.

“If it’s brought in in the build-up to them getting their L’s then they realise that this is serious ... it becomes a natural part of what happens in life and of getting their licence” (Female, parent).

Conditions, rewards and consequences associated with safer driving agreements

Perhaps not surprisingly, it was argued that the conditions included in a safer driving agreement should focus on illegal and unsafe driving behaviours, as well as complying with licence restrictions. This reflected the overall focus of increasing young driver safety as the fundamental aim of the initiative.

“It would presumably seek to pick the highest risk factors: (i) reinforcing key safety and legal requirements already, and (ii) those that are not already controlled via legislation and place ‘voluntary’ restrictions in the early months of licensing” (Transport authority).

However, young drivers were strongly opposed to conditions on the agreement being more stringent than existing regulations, suggesting they believed they had ‘earned’ the right to drive under certain conditions and perceived further restrictions as a restriction of their independence and freedom.

“I would resent the control my parents were trying to exert over me and be more tempted to break the conditions and road rules simply to rebel against the restricting rules ... people don’t like being told what to do, especially if it is an area where they are supposed to be gaining their independence” (Male, young driver).

Parental responsibilities, such as being readily available to render assistance and in a supportive and non-judgmental manner, treating the young driver like an adult, modelling appropriate driving behaviours, and providing access to a safe vehicle were also highlighted. In this way, the initiative would represent a two-way agreement between parents and the young driver, rather than all the responsibilities being borne by the novice driver only.

“Parents/caregivers should also acknowledge that they have responsibilities ... helps to develop a culture where accountability is expected, especially in relation to care and consideration for people and property” (Motoring group).

Furthermore, it was argued that the development of the conditions should involve the young driver, be tailored to the individuals involved in the agreement, and be amenable to change.

“Young drivers are going to be less motivated to break the rules of the agreement if they help make the rules. If they don’t have any say in the plan then they will resent the plan and be angry and disobey it” (Male, young driver).

There were mixed perceptions regarding the specification of rewards and punitive consequences as part of safer driving agreements, as well as what rewards and punishments would be appropriate should they be an element of the initiative. Overall, punitive consequences were perceived as more important than rewards, given that in the absence of consequences, agreements would lack ‘teeth’ and there would be limited motivation for young drivers to adhere to the conditions. There was a strong argument that consequences must be vehicle- or driving-related to be meaningful, with the most commonly suggested consequence being the removal or restriction of driving privileges. Interestingly, there was not a strong indication that financial incentives would encourage greater rates of participation in safer driving agreements

Barriers to implementation and potential solutions

The greatest perceived barrier to the effectiveness of safer driving agreements was the degree to which the behaviour of young novice drivers could be reliably and accurately monitored and for breaches of conditions to be readily enforced. This was perceived as being particularly important as the young driver becomes more independent.

“Where the young person is the owner of the vehicle and has exclusive access to it. In these circumstances ... the ability to measure compliance, offer reward or impose sanction is considerably limited” (Police organisation).

“A lot of my friends live out of home and for them it is their rules, what they want to do and what time they want to do it and they have very rare contact with their parents ... so I think it’s very hard for the driver and the parent to have that communication” (Female, young driver).

Self-reporting on the part of the young driver was acknowledged as the most likely approach to behaviour monitoring, with high levels of scepticism displayed regarding the likelihood for such self-reports to be honest, particularly in agreements involving rewards and/or consequences.

“If they know they are going to get punished for reporting it [violating the conditions] they probably won’t report it – I know I wouldn’t” (Male, young driver).

“If your reward, an \$80 tank of petrol, is contingent upon your not having broken any road rules, and you want that \$80 tank of petrol, you’re not going to tell your parents that you broke any road rules” (Male, young driver).

The use of in-vehicle technological devices to monitor young novice driver behaviour was not strongly supported, given the detrimental impact on the parent-young driver relationship and issues associated with costs of the approach. Interestingly, while young drivers were opposed to the use of invasive technology (e.g., video cameras, GPS trackers), they were more accepting of less invasive devices (e.g., speed monitoring). Such reports suggest that young drivers are not opposed to devices in which they can determine a direct link to safety, however are strongly opposed to those that are perceived as restricting their freedom of movement and independence.

“I think if you put a monitoring device in the car ... the child would not trust their parents anymore because they would feel like their trust had been violated. So I think that would be the worst approach” (Female, young driver).

“I would probably object to the video cameras in the car because I think that is probably a step too far, but as far speed monitoring and things like that I don’t think the majority of people would mind” (Female, young driver).

The perceived difficulties associated with engaging young drivers in voluntary safer driving agreements were noted. Indeed, young drivers reported being opposed to initiatives that restrict their independence and freedom. In addition, it was suggested there may be difficulties associated with engaging parents, such that they may not be aware of the risks associated with young drivers and are often time-poor.

“One of the biggest barriers to overcome would be the reluctance on a [young] driver’s part to allow someone to dictate their ability to use the vehicle after they have obtained a legal right to drive” (Transport authority).

“Parents are very time poor and arguably do not understand the important influence and participation that they can provide to assist the young driver. Many parents/carer cannot be ‘reached’ to pitch these agreements to” (Police organisation).

The power imbalance for young drivers, and their inability to sanction parents if they fail to meet their responsibilities within the agreement, was also discussed, with perceptions of unfairness in the management of the agreement among young drivers argued to be potentially destructive to their continued participation in the initiative.

“There is a significant imbalance in the power relationship between a young person and a parent ... It is unclear what meaningful conditions could be set out in these circumstances for which there is recourse for the young person should the agreement be violated [by the parents]” (Police organisation).

Safer driving agreements with young driving offenders

Overall, there was a consensus that safer driving agreements could be effectively applied as an

additional intervention for young driving offenders returning from a period of licence suspension or disqualification, or in lieu of suspension for less serious traffic offences. A number of differences in the operation of the agreements in such instances were noted however, including involving a regulated body (e.g., licence/transport authority, police) as the partner and using in-vehicle technological devices to monitor behaviour. This latter element is of particular relevance, given that many suggested that without such an approach to monitoring behaviour the agreement would have little additional benefits compared to existing systems.

Discussion & Conclusions

Presently, there is limited empirical evidence on which to base recommendations for best-practice in the development and implementation of safer driving agreements in the Australian context. Nevertheless, a number of conclusions can be drawn from the present research. While safer driving agreements may be effective in increasing discussion about safe driving among parents and young drivers, as well as increasing limits placed on driving, there is currently only a modest indication that such initiatives can produce reductions in risky driving, traffic offences and crashes. Thus, safer driving agreements are likely only to represent a complementary approach to improving young driver safety, rather than a prominent strategy.

Overall, it was believed that safer driving agreements involving younger drivers and their parents would have the greatest opportunity for success. This finding is consistent with previous research highlighting the safety benefits of parental involvement (Simons-Morton & Ouimet, 2006; Simons-Morton, et al., 2008). Specifically, such agreements would need to be voluntary, flexible, tailored to the individuals involved and involve the young driver in their development. Moreover, the effectiveness of such agreements was perceived as likely to be greatest among families where existing relationships between the young driver and parent are built on trust, honesty and respect. The development of the safer driver agreement should consider family dynamics, including information regarding parenting styles and key factors of parent-young driver relationships.

Given the demonstrated increase in crash risk during the first 6-12 months of independent driving (McCartt, et al., 2003), the optimal target of safer driving agreements should be to positively influence the early Provisional period. However, it might be necessary to work through and establish agreements during earlier phases (e.g., pre-licence, Learner phase) to normalise the process and achieve maximum impact during the Provisional phase. This characteristic of the initiative requires further research. Focusing conditions on known novice driver risks, and ensuring rewards and consequences are related to driving, received the greatest support. In addition, there was not a strong indication that financial incentives would encourage greater rates of participation in safer driving agreements.

The ability to monitor the conditions of a safer driving agreement was considered the greatest barrier to their success. While technological advances were perceived as an approach that could help overcome this barrier, in-vehicle technology (particularly invasive devices) received limited support. Indeed, the impact of such invasive monitoring approaches was perceived to be damaging to the underlying relationship between the young driver and parent and represent a lack of trust. Moreover, young drivers reported that they would be unlikely to readily accept conditions that were perceived as being over-restrictive in terms of their freedom and independence. As such, ensuring that agreements foster a sense that young drivers were being treated like adults was perceived to be very important to their likely success. How the power imbalance between young drivers and their parents will be addressed, should also be examined.

Despite the limited existing empirical evidence regarding safer driving agreements, there is scope to undertake the trial and evaluation of such an initiative. As part of this process a number of factors should be thoroughly explored. Specifically, whether the agreement will be mandatory and

integrated into current licensing processes or voluntary, and what impact this decision will have on the flexibility of the agreement and the ability to involve the young driver in the development of the agreement and the conditions within it, should be examined. In addition, the impact of the inclusion of rewards and/or consequences should be assessed, including the impact it may have on behaviour monitoring and the accuracy of self-reporting. Options to include non-invasive in-vehicle technology, including speed monitoring, should be explored, but not more invasive technology such as in-vehicle cameras. The potential benefits associated with engaging young drivers in a collective environment should also be investigated. That is, collective agreements made between a peer group of young drivers (e.g., schools, sporting/social clubs) and their parents may help to reduce the stigma associated with agreements and improve rates of participation (*Roads2Survival* provides an example already in practice that could be readily investigated). In addition, the potential role of employers/workplaces as a third-party in the agreement should be explored.

Both an outcome evaluation (focussing on tangible road safety outcomes, including crash and offence rates) and process evaluation should be conducted should such a trial be pursued. The process evaluation should include observations of agreement negotiations to understand how best to implement the initiative, as well as examining participation rates and the characteristics of participating and non-participating individuals and the subsequent impact on behaviour, offences and/or crashes. The evaluation should also seek to determine the cost-effectiveness of the approach.

Finally, it is suggested that the use of safer driving agreements with young driving offenders returning from a period of licence suspension or disqualification, or in lieu of suspension for less serious traffic offences could be investigated. In this case particularly, the role for in-vehicle monitoring technology should be explored. This follows precedents in alcohol interlock technology for alcohol-related driving offences, for example.

Safer driving agreements are increasing in popularity in the United States and continue to grow in Australia. On balance, the literature and current study suggest they could have a complementary role to graduated licensing systems in restricting young novice drivers from high risk driving situations. In addition, safer driving agreements may serve to increase the focus on, or awareness of, road safety issues among the involved parties and having a positive effect, not only the young novice driver, but also those involved parties who may not have revised the road rules for some time (e.g., parents). Nonetheless, further evaluation is required to determine their efficacy in reducing crash involvement in the Australian context.

References

- Beck, K. H., Hartos, J., & Simons-Morton, B. (2002). Teen driving risk: The promise of parental influence and public policy. *Health Education and Behavior, 29*(1), 73-84.
- Beck, K. H., Hartos, J., & Simons-Morton, B. (2005). Parent-teen disagreement of parent-imposed restrictions on teen driving after one month of licensure: Is discordance related to risky teen driving? *Prevention Science, 6*(3), 177-185.
- Beck, K. H., Hartos, J., & Simons-Morton, B. (2006). Relation of parent-teen agreement on restrictions to teen risky driving over 9 months. *American Journal of Health Behavior, 30*(5), 533-543.
- DeVore, E. R., & Ginsburg, K. R. (2005). The protective effects of good parenting on adolescents. *Current Opinion in Pediatrics, 17*(4), 460-465.
- Hartos, J., Shattuck, T., Simons-Morton, B., & Beck, K. H. (2004). An in-depth look at parent-imposed driving rules: Their strengths and weaknesses. *Journal of Safety Research, 35*, 547-555.

- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.
- Krippendorff, K. (2004). *Content Analysis: An Introduction to its Methodology* (2nd ed.). Thousand Oaks: Sage.
- McCartt, A. T., Shabanova, V. I., & Leaf, W. A. (2003). Driving experience, crashes and traffic citations of teenage beginning drivers. *Accident Analysis & Prevention, 35*(3), 311-320.
- Scott-Parker, B., Bates, L., Watson, B., King, M. J., & Hyde, M. K. (2011). The impact of changes to the graduated driver licensing program in Queensland, Australia on the experiences of Learner drivers. *Accident Analysis and Prevention, 43*(4), 1301-1308.
- Simons-Morton, B., Hartos, J., Leaf, W. A., & Preusser, D. F. (2005). Persistence of the effects of the Checkpoint program on parental restrictions of teen driving privileges. *American Journal of Public Health, 95*(3), 447-452.
- Simons-Morton, B., Hartos, J., Leaf, W. A., & Preusser, D. F. (2006a). Do recommended driving limits affect teen-reported traffic violations and crashes during the first 12 months of independent driving? *Traffic Injury Prevention, 7*, 238-247.
- Simons-Morton, B., Hartos, J., Leaf, W. A., & Preusser, D. F. (2006b). The effect on teen driving outcomes of the Checkpoints program in a state wide trial. *Accident Analysis and Prevention, 38*, 907-912.
- Simons-Morton, B., Hartos, J., Leaf, W. A., & Preusser, D. F. (2006c). The effects of the Checkpoints program on parent-imposed driving limits and crash outcomes among Connecticut novice teen drivers at 6-months post licensure. *Journal of Safety Research, 37*, 9-15.
- Simons-Morton, B., Hartos, J., Leaf, W. A., & Preusser, D. F. (2006d). Increasing parent limits on novice young drivers: Cognitive mediation of the effect of persuasive messages. *Journal of Adolescent Research, 21*(1), 83-105.
- Simons-Morton, B., Hartos, J. L., & Beck, K. H. (2003). Persistence of effects of a brief intervention on parental restrictions of teen driving privileges. *Injury Prevention, 9*, 142-146.
- Simons-Morton, B., Hartos, J. L., & Beck, K. H. (2004). Increased parent limits on teen driving: Positive effects from a brief intervention administered at the motor vehicle administration. *Prevention Science, 5*(2), 101-111.
- Simons-Morton, B., Hartos, J. L., & Leaf, W. A. (2002). Promoting parental management of teen driving. *Injury Prevention, 8*(SII), ii24-ii31.
- Simons-Morton, B., & Ouimet, M. C. (2006). Parent involvement in novice teen driving: A review of the literature. *Injury Prevention, 12*(SI), i30-i37.
- Simons-Morton, B., Ouimet, M. C., & Catalano, R. F. (2008). Parenting and the young driver problem. *American Journal of Preventive Medicine, 35*(3S), S294-S303.
- Zhao, D. (2009). *Evaluation of the Going Solo Booklet*. Accident and Injury Prevention Research.