Human factor considerations for a licensing point system

September 2019

J Hatfield, T Senserrick, S Boufous, L Mooren, A Williamson, C Sakashita and S Job
Transport and Road Safety (TARS) Research, School of Aviation, University of New South Wales

NZ Transport Agency research report 657
Contracted research organisation – The Transport and Road Safety Research Centre, The University of New South Wales

ISBN 978-1-98-856139-4 (electronic)
ISSN 1173-3764 (electronic)

NZ Transport Agency
Private Bag 6995, Wellington 6141, New Zealand
Telephone 64 4 894 5400; facsimile 64 4 894 6100
research@nzta.govt.nz
www.nzta.govt.nz

Hatfield, J, T Senserrick, S Boufous, L Mooren, A Williamson, C Sakashita and S Job (2019) Human factor considerations for a licensing point system. *NZ Transport Agency research report 657.* 235pp.

The Transport and Road Safety Research Centre at The University of New South Wales was contracted by the NZ Transport Agency in 2015 to carry out this research.

Keywords: demerit point system; deterrence; licensing point system; motorist behaviour; penalty point system; road rule compliance

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Acknowledgements

The authors would like to acknowledge the assistance of NZ Transport Agency personnel, particularly Jane Goulding, Alex Brocklehurst, Karen Johnson and Boah Rasmussen. UNSW provide extensive administrative and research support, with Nick Pappas and Sussan Su of TARS deserving of special mention. We are also indebted to Michael deRoos and Judy Fleiter for their professionalism in conducting expert reviews of this report. Martin Tolich, Convenor of the New Zealand Ethics Committee, was extremely helpful with the process of obtaining approval for the components of the research that were conducted in New Zealand. Kate Brazier of Colmar Brunton assisted greatly in the design and implementation of the survey of New Zealand drivers. Wellington's St Andrew's Centre, where we conducted our focus groups, was very welcoming and helpful. Last, but by no means least, the authors would like to thank the participants in the behavioural studies, who gave so generously of their time and opinions.

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Executive summary

Licensing point systems (LPSs) are used an adjunct to systems of monetary penalties (fines). In a 'typical' LPS when motorists are convicted of specified traffic offences, licensing points (or 'demerit points') are issued to their licence (with the number of points calibrated to the severity of the offence). Licensing points remain active for a specified lifetime from issue and when a specified threshold number of points accrue to a licence it can be suspended for a specified period. The NZ Transport Agency sought to better understand how LPSs operate, including how different population groups respond to a LPS.

A literature review provided a theoretical background for understanding the functions of a LPS and factors that might influence LPS effectiveness, as well as information from studies about the effectiveness of LPS. LPSs have been considered to have three main functions: selection, correction and deterrence. Specifically, LPSs identify drivers with a history of repeat offending and remove them from the road (via licence suspension) so they cannot contribute to crashes, sometimes also offering remediation (eg via road safety courses as a requirement for licence reinstatement). The possibility of licence suspension may deter motorists from offending, particularly as they approach the licensing point threshold. The deterrence function probably has the largest impact on road safety and may be enhanced by LPS features that increase the perceived likelihood and severity of licence suspension. Features which decrease perceived likelihood (such as too-short point lifetime and mechanisms for cancelling points) or decrease perceived severity (such as restricted licences – albeit noting the rationale of avoiding undue hardship) may reduce the effectiveness of a LPS. For a LPS to operate effectively there must be adequate and visible enforcement of licensing point offences, and of unlicensed driving.

Research has shown that implementing or strengthening a LPS (coupled with public education and enforcement) can have positive effects on population-level road safety and self-reported behaviour. Few studies have analysed changes in individuals' offending after they acquire or lose licensing points, or the influence of personal characteristics on response to licensing points. Results suggest most motorists are broadly compliant (either to keep licensing points, or for other perceived benefits of compliance), while a small group of motorists are broadly non-compliant (regardless of licensing points). In addition, a substantial group of motorists are sometimes non-compliant and modify their behaviour as they approach the licensing point threshold. Older drivers, women and drivers who are more reliant on a licence, may be more responsive to accruing licensing points. Little research has examined knowledge and attitudes about LPSs that may be critical to their operation (eg point lifetime, suspension period, different treatment of particular road-user groups). Some research suggests applying licensing points to camera-detected speeding offences may contribute to perceived consistency of enforcement (while difficulties with assigning points to the correct driver are acknowledged). Most relevant research demonstrates positive attitudes toward a LPS.

Considering the LPSs that exist worldwide, features of a 'best-practice' system appear to be:

1 Assignment of points to particular offences based on offence seriousness

2 Application of points to camera-detected speeding offences

3 A point lifetime of three years

4 A suspension period of six months

5 A stricter LPS for novice drivers, most commonly by way of a lower point threshold

6 A stricter LPS for drivers with previous suspensions, ideally by way of a lower threshold and/or longer subsequent suspensions

7 Mechanisms to inform drivers of their current points level; such as warning letters, and on-line 'look-up' services

8 A threshold of 12 points is most common.

NZ Transport Agency offence data was interrogated to investigate patterns of driving offences and licensing points, to explore how individuals and cohort drivers respond to licensing points, and to identify factors that have an impact on the likelihood of multiple-offending. The database included all offences, licensing points, monetary penalties and suspensions for all New Zealand-licensed drivers from 2005 to 2014.

Over the decade, more than 5.6 million road traffic offences were incurred by 1.68 million drivers. While 43% of offenders had only a single offence, 57% of offenders had at least two offences, 36% had three offences, and 25% had four offences. A much smaller percentage of offenders (8.5%) incurred a suspension at some point over the decade. Speeding and licensing/registration offences were the most common types of offences. Speeding accounted for nearly two-thirds of all first offences (in the decade) but was less common amongst multiple offenders. Licensing/registration offences became predominant as the number of offences increased.

The largest group of offenders were males, born in New Zealand, and, on average, aged 37.6 years and driving since 24.5 years at the time of the first offence (in the decade). Multiple offenders were 2.5 times more likely to be aged between 15 and 24 years (compared with between 25 and 55 years) and were also more likely to have less driving experience, be male and be born in New Zealand and the Pacific Islands. Suspended drivers had similar characteristics to multiple offenders.

There was some evidence of deterrence effects (of fines and/or licensing points). With each offence, the time to the next offence increased up to about the fifth offence. However, for offenders with a higher total number of offences the time between offences was shorter and little affected by the previous offence. Suspensions seem to have an initial deterrence effect as the first few offences after the first suspension were accumulated more slowly, but reoffending increased rapidly after the first few offences.

Considering the two-year period from the first offence (in the decade) suggested a 'partial deterrence' effect, with most repeat offenders not exceeding 70–75 points, and only a small subgroup (<10%) accruing 85–95 points. Around two-thirds (64.9%) of offenders had only one offence and around one-quarter (24.2%) had two offences. Multiple offenders could again be identified by the rate at which they incurred offences, suggesting multiple offences within six months could be used as a signal for early intervention to reduce reoffending. Licence/registration and alcohol-related offences accumulate particularly rapidly.

Multivariate analysis to examine factors that increase the odds of multiple-offending (compared with single offending), confirmed the results of the descriptive analysis, in that younger drivers, males and those born in New Zealand and the Pacific Islands were more likely to have multiple offences. The multivariate analysis also suggested a penalty of at least 20 licensing points in combination with a large fine of at least $100 is the best deterrent for repeat offending.

Behavioural studies investigated knowledge of and attitude toward the New Zealand LPS among the New Zealand driving population. In June 2016 a 15-minute, anonymous, on-line questionnaire was completed by 999 members of the Colmar Brunton survey panel who created a study sample representative of New Zealand car-licence holders aged 17 years and above (in terms of age, gender, ethnicity and New Zealand region of residence). Over 90% of respondents held a full car licence and nearly 90% had been licensed for at least 10 years. Some participants also held a motorcycle licence and/or a heavy vehicle licence. Around 40% indicated they drive or ride in their job.

Around 90% of respondents reported they currently have no demerit points, while around 60% of respondents reported they had never had any. Nearly 90% of respondents who have had demerit points reported having received them for 'exceeding the speed limit', while other point-bearing offences were less common. Nineteen respondents reported they had had a demerit-point suspension, including five who reported more than one suspension. Among these previously suspended respondents 'driving or riding over the legal blood alcohol limit' became a more common source of points, and almost half reported driving while suspended.

Results suggest the value of tailoring the LPS to drivers who become more compliant when their demerit points approach the point threshold (approximately 18% of the sample) rather than those who are generally compliant (approximately 80% of the sample) or those who are not influenced by demerit points (approximately 2%). Adjusting for relevant variables, ever having points was four times more likely for respondents who change their driving when they have a few points (compared with respondents who reported driving to avoid getting any). It was also more likely for respondents who were in the middle age bracket (compared with the highest age bracket) and were male, or held a motorcycle licence. Māori drivers did not differ substantially from the remainder of the sample in any respect.

Results suggest the potential value of initiatives to improve knowledge about the LPS and increase the perceived likelihood of licence suspension. Fifty-five percent of respondents correctly identified the demerit point threshold, 49% the point lifetime and 23% the points suspension period. Few respondents could correctly identify the points applying to key offences, and 43% did not know how to check their points balance. Barely half the respondents thought they were 'likely' to be caught if they were to 'exceed the speed limit by more than 20 km/h' or 'drive or ride while over the legal blood alcohol limit', and even fewer for other offences. Results suggested New Zealand motorists would support a point lifetime longer than two years, and a suspension period of longer than three months.

Focus groups were conducted to obtain more in-depth information about the topics investigated by the survey from four key road-user groups: young novice drivers, Māori drivers, professional drivers and motor cyclists, see table 17.1). Results confirmed the presence of the three main driver groups and the potential value of improving knowledge about New Zealand's LPS and one's own current points level. Young novices suggested providing more information about the LPS during the licensing process.

Focus groups offered greater insight into the possible impact of initiatives to increase perceived likelihood and severity of licence suspension. Each group suggested more consistent enforcement, particularly for using a mobile telephone while driving, distracted driving and driving while suspended. All groups except young novices felt that applying demerit points to camera-detected speeding offences would promote compliance but argued it would also exacerbate the perceived unfairness of camera-detection and of penalties for low-level speeding (given the apparent view that being 'a little bit over' the speed limit is safe and acceptable). The possibility of passing on points to another driver was mentioned in two groups. All groups except Māori drivers suggested that a demerit point lifetime longer than the current two years would improve compliance, but recognised a longer lifetime might result in motorists reaching the threshold 'just' for repeated 'minor' offences. A similar concern was raised in relation to the possibility of doubling demerit points during holiday periods, which several participants argued would be excessive in view of existing holiday initiatives. All groups suggested that a suspension period longer than the current three months would improve compliance (except young novice drivers who did not discuss the suspension period), but argued the penalty system should involve mechanisms to avoid licence suspension leading people, particularly young people, into a cycle of crime.

In general, participants felt the LPS should be applied to all drivers in the same way, with the exception that previously suspended drivers should be treated more harshly. Young novices felt that a stricter

system for restricted licence-holders might be appropriate. Young novices, Māori drivers and motorcyclists each suggested that addressing perceived stereotyping and unfair targeting (by Police), could improve compliance for their group.

It must be acknowledged that self-reported data (from the behavioural studies) is subject to errors of recall and reporting (including biased responding). Further, due to the fairly low number of motorists involved in the focus groups their views cannot be treated as representative of their respective road-user groups.

The findings of the four components of this research, (literature and jurisdictional review, data interrogation, survey and focus groups) suggest several approaches to align with international best-practice LPSs, which effectively balance deterrence, road safety and fairness. The broader policy implications of such approaches (out of scope for this project) would need careful consideration.

1 Maintain the LPS because it motivates compliance among a substantial proportion of drivers and has broad public acceptance.

2 Consider initiatives to increase awareness and knowledge of the LPS, including better informing young novice drivers during the licensing process.

3 Consider initiatives to enhance the awareness of enforcement activities, such as consistent and visible policing (especially for offences with low perceived likelihood of conviction) and public education.

4 Consider refining systems to facilitate motorists' access to their current point balance, and publicise such systems.

5 Recognise three main subgroups of motorists when considering any refinement of the LPS: those who are generally compliant (and tend to offend only once or less per decade), partially compliant (and tend to offend up to around 70–75 points within two years), and non-compliant *(*and tend to have multiple offences sufficient to be suspended). Strategy development and implementation could reflect the personal characteristics and offence patterns of these groups.

6 Consider decreasing the licensing point threshold of 100 points to avoid the perception that early points are expendable.

7 Consider increasing the number of demerit points (relative to the prevailing threshold) for key offences, or restricting the number of offences allowed within a specified period.

8 Review penalties across offences to ensure penalties reflect the risk of serious injuries and death, to emphasise the validity of the penalty system for road safety.

9 Review penalties to achieve the most effective combination of licensing points and fines.

10 Consider using the rate at which offences occur and/or points are accumulated to incrementally increase the penalties for repeat offenders (eg if two offences occur within four months the third attracts double demerit points).

11 Consider mechanisms for responding earlier to offenders with licence/registration offences, especially graduated driver licensing system breaches.

12 Consider extending the lifetime of licensing points to three years.

13 Consider increasing the suspension period from three to six months at least for offenders with serious offences, and potentially longer for suspensions after the first.

14 Consider enhancing enforcement of, and public awareness of enforcement and penalties for, driving while suspended.

15 Consider increasing the penalties for speeding, and particularly exceeding the speed limit by 10 km/h or less). Accompanying campaigns could highlight that low-level speeding is the most involved in fatal speed-related crashes and that fines support road safety initiatives.

16 Consider applying licensing points to camera-detected speeding offences (in the context of establishing the likely prevalence of points accruing to the wrong licence), while managing possible public opposition (see above).

17 & 18 Review the penalties for young novice drivers to emphasise the road safety consequences of risky driving for this very at-risk group, in particular considering both higher point penalties (to deter initial offending) and the types of offences that incur licensing points (including licence/registration offences).

19 Consider public awareness campaigns highlighting that the night and passenger restrictions are to manage young novices' exposure to high-risk conditions while they gain experience.

20 Further analysis of patterns of specific offences could further enhance the evidence-base for LPS refinement.

Abstract

The New Zealand Transport Agency (Transport Agency) sought to better understand how licensing point systems (LPSs) operate, including how different population groups respond to LPSs. A literature review provided a theoretical background for understanding the functions of LPSs and factors that may influence LPS effectiveness. The LPSs that exist worldwide were studied to identify the features of a 'best-practice' system. The Transport Agency offence data for all New Zealand-licensed drivers from 2005 to 2014 was analysed to explore how individuals and cohort drivers respond to licensing points, and to identify factors that impact on the likelihood of multiple offending. An on-line survey of a representative sample of 999 New Zealand adult car-licence holders and focus groups with four key road-user groups (young novice drivers, Māori drivers, professional drivers and motor cyclists) were conducted to investigate knowledge of, and attitude toward, the LPS, as well as acceptability of possible refinements. Results suggested approaches for refining the LPS to strengthen deterrence for a substantial group of repeat offenders (including focus on key offences), and to enhance the ability of the LPS to identify, suspend and remediate the smaller group of incalcitrant recidivist offenders. Consistent enforcement, and initiatives to enhance public knowledge and awareness of the LPS and enforcement activities, are critical to supporting the system. Careful consideration of the broader policy implications of approaches to align with international best practice LPSs would be required before the adoption of approaches which effectively balance of deterrence, road safety and fairness.

Introduction to the report

Project background

Many countries, including New Zealand, have adopted a licensing point system (LPS) as an adjunct to systems of monetary penalties (fines). In a typical LPS, motorists accrue licensing points when they are penalised for specified traffic offences (with the number of points calibrated to the severity of the offence). Accruing licensing points above a specified threshold within a specified period of time may result in licence suspension. This type of system, which operates in New Zealand, is also known as a demerit point system (DPS). Some countries operate an LPS in which points are deducted from an initial allotment until none remain, and this is known as a penalty point system (PPS).

The New Zealand Transport Agency (the Transport Agency) is seeking to better understand how LPSs operate, and in particular how different population groups respond to the incentives and deterrents a LPS may offer to encourage safer motorist behaviour. This report provides information about the human, cultural and socio-economic factors that may influence the effectiveness of a LPS.

The research project comprised three main components.

1 A review of scientific and grey literature to discover what LPSs exist in other countries, to establish what is known about LPS efficacy and the factors that influence it, and to highlight pertinent knowledge gaps and research issues.

2 Interrogation of Transport Agency licensing data to address relevant research issues.

3 Behavioural studies – comprising a survey of the general population of New Zealand drivers (aged 17 and above), and focus groups with specific types of drivers (young drivers, older drivers, Māori and Pacific Islander drivers, motorcyclists and professional drivers) – to validate findings from the other components and to consult with the New Zealand population about relevant issues. The behavioural studies allow for tailoring of recommendations to the New Zealand driving population.

Project reporting overview

The research is reported in five parts:

Part 1: Literature review, the present part, describes the aims, methods and findings of the literature review.

Part 2: Data interrogation describes the aims, methods and findings of the data interrogation.

Part 3: Survey of New Zealand drivers describes the aims, methods and findings of the survey.

Part 4: Focus groups describes the aims, methods and findings of the focus groups.

Part 5: High-level synthesis draws together the research findings to make high-level recommendations.

PART ONE: LITERATURE REVIEW

1 Introduction

1.1 Literature review aims

The specific aims of the literature review were to:

1 Discover LPSs that exist in other countries, including details about their features (ie whether points are applied up to a threshold versus removed from an allotment; the treatment of particular road user groups; the threshold/allotment; assignment of points to offences; lifetime of points; period of licence suspension; process for licence reinstatement; the offences included in the system; special features (eg 'double demerit points'; 'merit points'; road safety courses; warning letters).

2 Describe the rationale for decisions in relation to the features of a LPS.

3 Decipher from the scientific research evidence the most effective practices in using a LPS in achieving optimal compliance with traffic regulations by identifying and critically analysing research regarding:

   a the efficacy of a LPS

   b the human factors that influence the efficacy of a LPS.

1.2 Literature review methods

The University of New South Wales (UNSW) Library online search tool was used to search the databases listed in table 1.1 simultaneously. Specific terms were searched in the title field. Search terms and the number of documents retrieved are also summarised in table 1.1. The titles and abstracts of the retrieved documents were reviewed to select unique, relevant English-language academic articles (including books and reports). From the combined searches, 24 academic articles were identified.

The same search terms were employed in Google Scholar and the retrieved documents reviewed to identify any unique, relevant English-language academic documents (not yet been identified in the library searches). Review of the Google Scholar output was terminated when two consecutive pages included no relevant documents.

Additional relevant documents were identified through:

1 a review of the reference lists of documents identified in the library and Google Scholar searches

2 prior team knowledge.

In addition, literature relating to associated topics (eg deterrence theory, licence suspension, driving while disqualified, road safety education for repeat offenders) was sought as their relevance became clear, although the review of this literature was not exhaustive.

Table 1.1 Summary of the UNSW library searches

Databases		Combined with AND	Total retrieved	Unique relevant English-language academic literature
	Penalty point*		108	
		Driv*	11	7 (2 abstract only)
AGIS plus text		Offen*	2	2
APAFT		Violat*	0	0
Business Source Premier		complian*	0	0
JSTOR		deter*	1	1
PsycINFO		Crash*	1	1
Science Direct		Collision*	0	0
Scopus		Injur*	5	4
Social Sciences Citation Index		Fatal	0	0
Web of Science	Demerit point*		12	7
	Licence point*		21	6
	Licence point*		23	6
	Merit point*		21	0

* Within search

Available grey literature, such as reports on evaluations, was sought from the organisations identified in table 1.2. Particular attention was focused on research conducted in New Zealand and Australia, as these studies are more likely to reflect cultural, political and physical environments in New Zealand. Key organisations from other countries were also selected. A number of jurisdictions were selected to represent the USA and Canada, given that their different jurisdictions have distinct road rules. Organisations were invited to provide relevant documents and details of the LPS operating in their jurisdiction (see appendices A and B). Responses received within the period allowed by the restricted timeframe of the project are summarised in table 1.2.

All relevant documents were reviewed, and critically analysed, to address the research aims.

Table 1.2 Organisations contacted for grey literature search (empty cells indicate no response or a response that was not relevant)

Country	State	Agency	Response
New Zealand	Federal	NZ Ministry of Transport	Referred to NZ Transport Agency
		NZ Transport Agency	Provided reports
Australia	Federal	National Transport Commission	
		Austroads	Suggested reports
	New South Wales	Transport for NSW	
	Victoria	VicRoads	Provided/suggested reports
	Queensland	Department of Transport and Main Roads	
	South Australia	Department for Transport, Energy and Infrastructure	

Country	State	Agency	Response
	Western Australia	Main Roads	
	Australian Capital Territory	Roads ACT	
	Tasmania	Department of Infrastructure, Energy & Resources	Provided report
	Northern Territory	NT Department of Transport	
UK	Federal	Department for Transport	
		Transport Research Laboratory [TRL]	
		Transport Scotland	
Canada	Federal	Transport Canada	Provided summary of a LPS in each jurisdiction
US	Federal	Federal Highway Administration	Referred to NHTSA
		National Highway Traffic Safety Administration [NHTSA]	
		National Transportation Safety Board [NTSB]	
		Transportation Research Board [TRB]	
	Alaska	Alaska Department of Transportation	Provided details of a LPS
	California	California Department of Transportation	Referred to Department of Motor Vehicles (which did not respond)
	Idaho	Idaho Transportation Department (Office of Highway Safety)	
	Maine	Highway Safety Commission	Referred to Maine Bureau of Highway Safety (which provided details of a LPS)
	New Mexico	New Mexico Department of Transportation (Traffic Safety)	
	North Carolina	North Carolina Department of Transportation	
	North Dakota	North Dakota Department of Transportation (Traffic Operations)	
	Oklahoma	Oklahoma Department of Public Safety, Highway Safety Office	
	South Dakota	South Dakota Department of Transportation	
	Tennessee	Tennessee Department of Transportation	
Europe		European Transport Safety Council	
		Eurosafe (European Association for Injury Prevention and Safety Promotion)	Provided reports
France		Délégué interministériel à la sécurité routière	
Netherlands		SWOV (research organisation)	Suggested reports

1.3 Literature review reporting overview

The literature review is reported in six chapters, as follows:

1 *An introduction to LPSs* describes the basic structure and key functions of LPSs (chapter 2).

2 *Theoretical and empirical background to the function of LPSs* presents the theoretical and empirical background necessary for understanding the operation of LPSs in terms of their key functions (chapter 3).

3 *Summary of existing LPSs* summarises the features of LPSs that exist in different countries, as well as considering the rationale offered for these characteristics. The information presented in this subsection is drawn largely from summaries provided in Nolen and Ostlin (2008); Klipp et al (2011; BESTPOINT Deliverable 1), and Castillo-Manzano and Castro-Nuño (2012), and supplemented by other articles and information provided by the organisations included in the grey literature search (chapter 4).

4 *Research relevant to the operation of LPSs* (chapter 5):

   a *Research regarding the efficacy of LPSs at a population level* critically analyses research evaluating LPSs. This includes research assessing the effects of introduction of changes to LPSs on reducing offences and crashes at a population level.

   b *Research regarding the efficacy of LPSs at a person level* highlights research that has examined the influence of licensing point accrual or loss on outcomes such as individual patterns of offending.

   c *Research regarding the human factors that influence the efficacy of LPSs* presents and critically analyses the results of the fairly scant research examining the influence of human factors on the efficacy of LPSs. The information from this section is drawn from evaluation research that reports on the effect of human factors, as well as research specifically considering human factor effects. Research on road user attitudes toward aspects of LPSs is also presented in this section.

5 *Discussion of literature review findings* draws conclusions from the findings of the literature review (chapter 6).

6 *Summary of best practice findings from the literature review* presents considerations for strengthening the deterrence, selection and education functions of an LPS. These suggestions correspond to international best practice as identified by the research. Consideration of the wider policy implications of these suggestions was outside the scope of this research (chapter 7).

2 Introduction to licensing point systems

Many countries, including New Zealand, have adopted a LPS as an adjunct to systems of monetary penalties (fines) in order to improve compliance with traffic regulations and, consequently, road safety. Road user compliance is an important element of the Safe System Approach.

Although LPSs vary considerably in their details (see chapter 8), in a 'typical' LPS motorists accrue licensing points when they are penalised for specified traffic offences (with the number of points calibrated to the severity of the offence), and accruing licensing points above a specified threshold within a specified period of time may result in licence suspension. The licence can be reinstated after a specified period of time has elapsed, and any additional requirements are fulfilled (eg licence tests passed, road safety course completed). Some LPSs incorporate road safety courses that may be completed to cancel some accrued points, or must be completed to reinstate the licence. Some LPS incorporate rewards for 'offence free' driving in the form of the points' threshold being increased, or some accrued points being cancelled.

LPSs were initially conceived as facilitating identification of drivers who frequently violated traffic regulations so they could undergo remedial treatment or be removed from the road (see Haque 1990; Chipman and Morgan 1975). More recent taxonomies (eg Basil et al 2015; Bourgeon and Picard 2007; Klipp et al 2011; SWOV 2012; Twisk and Wittink 1994) have described these two functions as 'correction' and 'selection', while also recognising that aspects of a LPS, and particularly licence suspension, can have a 'deterrence' function. The three functions identified by such taxonomies can be summarised as:

- Deterrence: To the extent drivers perceive offending to increase the possibility of licence suspension, they are motivated to comply with traffic regulations.
- Selection: While drivers with a history of offending are removed from the road they will not contribute to crashes.
- Correction: Road safety courses incorporated in a LPS may improve the behaviour of drivers with a history of offending.

Theory and research important for understanding these functions is addressed in chapter 3, but first some refinements will be offered here. While 'deterrence' focuses on penalising undesirable behaviour as a means of motivating compliance with traffic regulations, some LPSs also reward desirable behaviour, so have an 'incentive' function (see Dionne et al 2013). LPSs may have an 'education' function not only through providing road safety courses for recurrent offenders, but also through offering all motorists with safety-relevant information in terms of which offences are included in the system, and the number of points assigned to them (see Klipp et al 2011). Basili et al (2015) suggest that for offenders licensing points operate as a system of 'seriousness weighted warnings', in the sense that the number of points assigned to each offence reflects the risk it poses to road safety.

Internationally LPSs are considered a useful adjunct to systems of monetary penalties because:

- Fines may not be equitable, as they may be differentially effective depending on the wealth of the offender (see Abay 2015; Bourgeon and Picard 2007). For example, the possibility of having to pay a fine may not be particularly relevant to a very wealthy motorist, nor to a motorist who simply does not have the means to pay.
- Fines may be perceived as motivated by a desire to raise revenue rather than a genuine concern for road safety (Corbett and Grayson 2010; McKenna 2007) undermining respect for both traffic authorities and traffic regulations, and in turn compliance (see McKenna 2007). Nonetheless, as an

adjunct to a monetary penalty system, licensing points may do little to undo the perceived revenue raising issue. For example, Corbett and Grayson (2010, p2) report many drivers complained about revenue raising in the context of a survey about 'speed limits, cameras and the points system'.

- LPSs more readily accommodate processes for rewarding good driving and driver education. For example, the threshold might be increased following specified periods of offence-free driving. Suspended drivers may be required to participate in a road safety education course before their licence is reinstated. (The merits of these processes will be considered in chapter 3.)
- LPSs are particularly focused on repeat offenders in a way that fines are not (Benedettini and Nicita 2009). Licence suspension, which is the main penalty in a LPS, would typically occur on a second, third, or fourth offence. A focus on repeat offenders may be justified in terms of improving road safety (see section 3.2). Further, there appears to be community support for road safety interventions that focus on repeat offenders (eg Austroads 2013; Ramos et al 2008).

3 Theoretical and empirical background to the functions of licensing point systems

3.1 Deterrence theory, penalty systems and licensing point systems

Deterrence theory predicts that rational motorists will moderate their behaviour in order to reduce expected costs and maximise expected gains (see Becker 1968; Kahneman and Tversky 1979). For example, a 'decision'[1] about whether to exceed the speed limit will be influenced by the expected costs of speeding (eg being penalised) and the expected benefits of speeding (eg arriving at a destination more quickly).

For the purposes of designing strategies to motivate compliance with traffic regulations it may be useful to recognise a distinction between 'violating traffic regulations' and 'not complying with traffic regulations' (and, conversely, between 'not violating traffic regulations' and 'complying with traffic regulations') (see Wilde and Murdoch 1982). In this context, compliance with traffic regulations may be motivated by

- decreasing the expected gains of violating traffic regulations (offending)
- increasing the expected costs of violating traffic regulations (offending)
- increasing expected gains of complying with traffic regulations (not offending)
- decreasing the expected costs of complying with traffic regulations (not offending).

Penalty systems focus on increasing the expected costs of offending, whereas reward systems focus on increasing the expected gains of not offending. There has been relatively little consideration of decreasing the expected gains of offending or decreasing the expected costs of not offending as avenues for motiving compliance with traffic regulations[2]. Because a LPS is essentially a penalty system, penalty systems will be considered in detail below.

The expected cost associated with both monetary and non-monetary penalties is determined by the subjective size of the penalty, as well as the perceived likelihood of receiving it (Abay 2015). The perceived likelihood of penalty in turn depends on the perceived likelihood of being apprehended while offending, and of being penalised once apprehended. Individuals will be less likely to offend if they consider that in doing so they are likely to receive a penalty that will be meaningful to them.

The extent to which people are motivated by penalties is reduced to the extent these outcomes are delayed, possibly in part because the delay introduces uncertainty about whether the penalty will be received (Ainslie 1992; Rachlin 1989). It has frequently been suggested penalties should be delivered quickly in order to be effective (eg Rachlin 1989; Wagenaar and Maldonado-Molina 2007).

[1] Although 'decision' and related terms are used throughout it is recognised that motorists' behaviours are often determined by their beliefs and motivations as well as by external influences without them necessarily being conscious of the process.

[2] For example, speeding may be reduced among particular groups of young drivers by campaigns undermining any positive image of speeding drivers.

Rachlin's (1989) model of self-control suggests increasing the likelihood of penalty, or reducing the delay in delivery, is more effective in promoting compliance than is increasing the size of the penalty. Research evidence supports these predictions (eg Gras and Riba 1995; cited in Gras et al 2014).

Stafford and Warr (1993) argue that the distinction often made between specific and general deterrence – as applying to those who have received a penalty versus those who are merely aware of the possibility of receiving it, is misguided. They argue that both direct and vicarious experience influence expectations. Here, consideration of *expected* cost is taken to circumvent the issue in the sense that individuals' expectations may be influenced by their own experience of the penalty, or by information from other sources (including vicarious experience, or public education material).

The LPS deterrence function relies on increasing the expected costs of offending primarily through the threat of licence suspension. Licence suspension may have considerable costs that would be meaningful to most drivers – including monetary costs such as forgone income associated with the loss of driving privilege, fees involved with licence reinstatement, and increased insurance premiums; see Abay 2015), as well as non-monetary costs such as inconvenience and/or foregone entertainment associated with loss of driving privilege (see Carnegie 2007; Montoro Gonzalez 2008) and social costs such as embarrassment (Fleiter et al 2013a). The length of licence suspension should have a direct influence on these costs.

The perceived likelihood of licence suspension is less straightforward, for four main reasons:

1 As with monetary penalties, the perceived likelihood of apprehension is influenced by the density of apprehension activities such as Police patrols and cameras (among other things, such as previous experience of apprehension). If such activities are inadequate, or are not adequately visible, the perceived likelihood of apprehension for offending, and so the perceived likelihood of licence suspension, and the expected cost of offending, will be reduced, compromising the deterrent function of the LPS. Motorists may also develop strategies for avoiding apprehension, while not necessarily driving more carefully (although some of these strategies may have a road safety benefit; see Dionne et al 2011). Moreover, if Police consider licence loss to be an unreasonably severe penalty they may be less likely to book motorists for points-bearing offences (Montag 2014), thus potentially reducing deterrence.

2 Because LPSs are principally targeted toward repeat offenders (Benedettini and Nicita 2009), when a motorist is 'deciding' whether to commit a first, or even a second offence, licence suspension is both delayed and uncertain, undermining its efficacy as an expected cost. Motorists could be expected to drive more carefully only when they approach the threshold number of points for licence suspension and it begins to seem likely. (Research evidence for this expected pattern is presented in section 9.1.)

3 LPSs sometimes incorporate features by which points can be cancelled, thus reducing the perceived likelihood of licence suspension, and so it's deterrent effect (Basili and Nicita 2005; Basili et al 2015). For example, in some LPSs motorists may have licensing points cancelled for periods of offence-free driving or for completing a road safety course (see sections 4.2.3 and 4.5.2). (The value of remedial road safety education will be considered in section 3.3.) There is also evidence of motorists avoiding points by organising to have them taken by someone else (eg a family member, or someone whom they pay; Basili and Nicita 2005; see also section 5.5.2.4).

4 Some LPSs incorporate mechanisms by which licence suspensions can be altered to avoid undue hardship (see Corbett 2012; Watson and Siskind 1997), potentially undermining the LPS deterrent function. Such mechanisms have a value in maintaining the perceived and actual fairness of the LPS (Carnegie 2007) and may reduce rates of driving while suspended. For example, in New Zealand licences allowing limited driving are available when suspension would result in loss of employment

(see also Carnegie 2007), or in loss of mobility for persons depending on the applicant for transport. Elsewhere, a person who is eligible for suspension may be allowed to keep their licence for a 'good behaviour' period during which any offence incurs a longer-than-otherwise suspension (Austroads unpublished; Senserrick and Williams 2015). Some motorists may undermine the licence suspension themselves, by choosing to drive while their licence is suspended (see Corbett 2012; Watson 1998). If a motorist already knew they would be prepared to drive while suspended when they chose to offend, then licence suspension would have minimal expected cost and so minimal deterrent effect. (The impact on road safety of driving while suspended is addressed in section 3.4.)

5 Some LPSs incorporate 'merit' points for offence-free driving (see section 4.5.1). Basili et al (2015) argue that merit points reduce deterrence for repeat offenders, while having limited relevance to occasional offenders (who do not accrue sufficient demerit points to become concerned about their license being suspended). Further, merit points may reward drivers who offend but are not caught.

It should be noted LPSs are typically integrated with systems of monetary penalties (Benedettini and Nicita 2009). Thus, fines serve as an expected cost of apprehension that is relatively quick and certain, while LPSs serve to increase the cost of recurrent offending.

Research considering whether points-triggered licence suspension improves motorist behaviour and crash rates (for a meta-analysis see Masten and Peck 2004) is not particularly useful here. First, the research often considers only the *specific* deterrence of motorists who have been suspended. Second, studies have typically included the suspension period, so small observed reductions in both offences and crash rates may simply reflect reduced exposure (Masten and Peck 2004).

So far this section has focused on licence suspension as the expected cost of offending within LPSs. However, for some motorists licensing points themselves may operate as an expected cost. For example, a motorist who values keeping a 'clean' licence record may find it negative to have licensing points as a formal record of an offence (Basili and Nicita 2005). Licensing points could be expected to have a similar perceived likelihood to the fines they accompany. However, the negative value of licensing points is likely to be relatively small for most motorists, particularly since they 'expire' after a finite period.

Reward systems are not considered in detail in this section because even in LPSs that incorporate a reward component, the expected gain of compliance with traffic regulations is 'avoiding the penalty of licence suspension' (rather than a true reward). For example, a motorist who has been offence free for a specified period may be 'rewarded' either by cancelling licensing points or by adding points to the threshold at which the licence may be suspended. LPSs can be harnessed as an administrative tool for 'external' incentive schemes such as reduced licence fees or insurance premiums (eg Dionne et al 2011; Dionne et al 2013). Rewarding desirable behaviour can be an effective tool for behaviour change (Wilde and Murdoch 1982).

3.2 Identification of dangerous drivers and removal of licence privilege

The 'selection' function of a LPS rests on the principle that motorists with a specific number of licensing points are dangerous (ie likely to have crashes), so removing them from the road would improve safety. In principle this notion requires that apprehension for offending is fairly reliable (Twisk and Wittink 1994), and the extent to which particular offences contribute to crashing is fairly reflected in the number of licensing points assigned to each offence (see Chen et al 1995).

An extensive review of the very large literature examining offence history as a predictor of crashing (eg Chen et al 1995; Chipman and Morgan 1975; Chipman 1982; Cooper 1997; Diamantopoulou et al 1997;

Gebers and Peck 2003; Hauer et al 1991; Ho et al 2015) is beyond the scope of the present research.[3] Diamantopoulou et al (1997) provide a good summary of relevant research (including their own):

> *The research on the relationship between demerit points accrual and subsequent crash involvement has shown that inclusion of a driver's prior offences (whether as demerit point levels or categories of offence) in a multivariate model adds to the predictive ability of that model in identifying drivers with subsequent crash-involvements. The more efficient model uses a driver's prior offences classified into demerit point levels. Demerit points alone can be used to predict a driver's subsequent crash involvement, but an even better model can be produced by including prior casualty crash involvements as well.* (p.iii)

The superiority of licensing points over offences as a predictor of crashes highlights the validity of assigning points based on the 'dangerousness' of particular offences (see also Hauer et al 1991; Ho et al 2015), although this is often done without an adequate evidence base (Chen et al 1995). Chen et al (1995) suggested 'to identify high-risk drivers, it is better to include consideration of drivers' at-fault accident records than to use convictions alone' (p17).

In practice, the impact of the LPS selection function may be limited by the relative rarity and the transience of licence suspensions. In short, keeping a small number of possibly dangerous drivers off the road for a relatively short period may not have a very large impact on road safety. The potential for benefit may be greater for young novice drivers, for whom developmental changes that occur even in a short period may result in safer driving. Note that for novice drivers on restricted licences best practice is to extend the restricted licence tenure by the time of the suspension period to maintain the full term of experience in lower risk conditions before transition to a full licence.

Moreover, it appears licence suspension is not an effective method for removing drivers from the road (Joerger 2002). Watson (1998) notes the problem that many suspended or disqualified drivers continue to drive (citing studies from UK, USA and Australia; see also Corbett 2012). Soole et al (2008) noted breaches of licence suspension may be most likely caused by the very motorists targeted by licence suspension – those showing flagrant disregard of the law (see also Knox et al 2003; Rose 2000).

Nonetheless, Benedettini and Nicita (2009) analysed the effect of the 2003 introduction of the LPS in Italy on the number of road crashes and speeding offences using data from 2001 to 2008. They observed a statistically significant negative relationship between the number of suspended licences and crashes.

It is noted again here that licence suspensions may be altered (eg 'good behaviour' licences, limited licences), and motorists may choose to continue driving even though their licence is suspended. Clearly, the LPS selection function would be undermined in each of these cases.

If licensing points serve as an indicator of a motorist's dangerousness, then processes for cancelling them should reflect a stable improvement in the motorist's safety. Road safety courses at least aim to satisfy this criterion (evidence as to their efficacy is considered in section 3.3). On the face of things, periods of offence-free driving are less compelling as grounds for cancelling points; a driver may be motivated to drive safely to cancel some licensing points before returning to old habits.

To the extent that the LPS selection function focuses on removing dangerous drivers from the road, it could be viewed as inconsistent that a LPS should reinstate licences without any attempt at reform. In

[3] Note this research tested a hypothetical positive relationship between offending (as a marker of risky driving) and crashing – the hypothetical relationship which underlies the selection function of licence points. In contrast, the deterrent function of license points would support the prediction of a negative relationship of *points-bearing* offences with subsequent crashes (ie accruing points should deter a driver from subsequent risky driving and so reduce crash likelihood).

defence of LPSs that do not include a reformative component it could be argued: 1) these systems rely on the specific deterrent effect of the licence suspension for improving the driver's behaviour (as per section 3.1); and 2) the evidence for the effectiveness of road safety courses is not compelling (discussed next in section 3.3).

These considerations are less relevant if the selection function of a LPS is viewed in another way: that by repeatedly offending motorists forfeit their licence privilege. In this case more 'serious' offences go further to removing the privilege, points are cancelled when a motorist does something to 'earn' the privilege, and licences are reinstated as another chance to a motorist who is not necessarily 'dangerous'.

3.3 Motorist safety courses

Cameron (1975) argued that driver improvement represents an important component of LPSs and Corbett (2012) recommended greater use of retraining to prevent or shorten suspension – in view of the issues with driving while suspended. Indeed, as noted above, it seems inconsistent removing repeat offenders from the road, only to return them 'unreformed'. However, it must be considered then whether road safety education courses do in fact improve the behaviour of repeat offenders.

Ker et al (2005) conducted a meta-analysis of randomised control trials that evaluated remedial driver education 'aimed at drivers who had poor previous driving records in terms of the number of prior crashes or offenses' (p309). They observed only small effects (see table 3.3), despite numerous factors that may cause effects to be overestimated (eg publication and other selection biases, researcher bias, large losses to follow-up, large participant numbers; see Ker et al 2005). While noting significant heterogeneity in several of their analyses, as well as the age of many of the trials, Ker et al (2005) concluded 'the effectiveness of current driver education programmes is as yet unproven, an observation that casts doubt on the wisdom of placing undue emphasis on this approach in current road safety policy' (p.312).

Table 3.3 Pooled relative risks of offences, crashes and injury crashes reported in Ker et al (2005) meta-analysis of remedial driver education courses

Outcome	Pooled relative risk	95% CI	Number of trials
Offences	0.96	0.94–0.98	18
Crashes	0.98	0.96–1.01	13
Injury crashes	1.17	0.89–1.54	3

While all but one of the evaluations considered by Ker et al (2005) were conducted in the USA, the 'ANDREA' project reviewed evaluation studies in France, Austria, Belgium, the Netherlands and Northern Italy (Bartl et al 2002). However, only studies of remedial programmes for drink-drivers were included, and such programmes are more likely to be effective than more general courses because they often target underlying specific issues such as alcoholism (including via individual counselling). Thus, it is perhaps not surprising that Bartl et al (2002) observed substantial reductions in recidivism rates of participants compared to control groups (see also Watson 1998; Wells-Parker et al 1995).

Findings of research published subsequent to the Ker et al (2005) review are generally consistent with the conclusion of the review: there is no strong evidence for beneficial education effects on repeat offenders. Conner and Lai (2005) reported that participants in the UK's National Driver Improvement Scheme showed modest improvements in self-reported driving attitudes, but no change in on-road driving behaviour, compared with comparison samples. Several further evaluations of education programmes found no effects compared with a control condition (af Wåhlberg, 2010; Farmer et al 2000; Kloeden and Hutchinson 2006). Ekeh et al (2008) reported benefits but these only lasted until the six-month follow-up. In one of the

stronger studies, Carnegie et al (2009) concluded that the educational programme they evaluated (which included licensing point credits and a probation period in lieu of suspension) reduced violations and crashes but was less effective than point advisory notices (plus fees) and licence suspensions (plus one year probation).

In the Australian Capital Territory, drivers aged 17 years and over who have held their provisional licence for a minimum of six months may have their licensing point threshold increased from four to eight points (and the requirement to display P plates waived) by completing the P...Off education programme, which includes facilitated small-group discussions around the experiences of driving. An early evaluation (Di Pietro et al 2004) found programme participants differed little from a control group (provisional drivers who did not opt to undertake the programme) in self-reported attitudes and behaviours. While programme participants appeared to have fewer crashes (51 crashes of 200 participants vs 75 crashes of 209 controls), including injury crashes (one vs. five respectively) following the programme, no significance testing was reported. Programme participants had accrued more licensing points than the control group prior to the programme and continued to accrue more points following participation. The researchers concluded the programme provides at least some support for provisional drivers who have accrued licensing points and who could therefore benefit from some additional insights into their driving.

Basili and Nicita (2005) note that road safety courses, regardless of their efficacy, may have a value when they serve as a requirement for reinstating a licence. Specifically, by increasing the difficulty (and potentially the cost) of reinstatement, road safety courses increase the deterrent effect of licence suspension. They could also serve to delay return to driving (especially if there are waiting lists for them) and therefore have an indirect road safety benefit by reducing exposure. However, increasing the cost and/or decreasing the convenience of processes for licence reinstatement courses may result in drivers failing to reinstate licences, and therefore increase the rate of driving while suspended.

3.4 Possible negative effects of licensing point systems

Some authors have suggested possible negative consequences of LPSs.

First, if LPSs increase the number of suspended licences, they may increase the number of motorists driving with a suspended licence (Corbett 2012). While it has been argued such motorists may drive more cautiously in order to avoid apprehension, there is evidence that questions this (see Watson 1998). Crash rates have been found to be higher among motorists driving with suspended licences (Watson 1997), although this may largely reflect the fact they were dangerous drivers in the first place. DeYoung and Gebers (2004) examined crash and conviction rates for the three years prior to licence suspension for several groups of suspended drivers who were classified according to the reasons for suspension. All suspended groups had elevated crash and conviction rates compared with validly licensed drivers, and drivers suspended due to accruing licensing points had the second highest fatal and non-fatal crash risk, and the highest conviction risk. In any case increasing rates of driving while suspended broadcasts disrespect for road regulations, which may be harmful to road safety. Severe penalties for driving while suspended could minimise this unwanted consequence of LPSs.

Systems within LPSs for modifying suspensions to avoid hardship may limit increases in driving while disqualified (eg good behaviour licences, limited licences), but could be expected to undermine the LPS deterrence function. Nonetheless, research does not support this hypothesis. Austroads (unpublished) evaluated the use of good behaviour licences in NSW, Australia. Once drivers became eligible for suspension, they received a notice which gave them the choice of a three-month licence suspension, or a 12-month good behaviour period, during which any recorded offence would result in a six-month suspension. Of the people who opted for the good behaviour licence, 80% completed the year without

accumulating any additional points. Moreover, drivers who chose the suspension were almost twice as likely to offend on multiple occasions in the three years following the suspension than those who chose the good behaviour period. Watson and Siskind (1997) found no difference between the re-offence rates of drink-drivers granted limited licences, and those undergoing a 'normal' suspension, but this may reflect the type of driver to whom judges grant a limited licence (older, better record).

Second, because deterrence increases as points accumulate (see section 4.4), repeat offenders (who may be 'unreformed') experience minimal deterrence when their licence is reinstated free of licensing points (Corbett, 2012). Imposing stricter conditions (eg lower thresholds, reduced accumulation periods, extended subsequent suspension periods) on reinstated licences may address this issue.

Finally, it has been suggested that as a result of putting too much faith in the LPS, authorities may reduce other road safety initiatives, or funding for road safety (Montag 2014). Here it is critical to recognise that both theory (section 3.1) and evidence (section 5.1) indicate the efficacy of LPSs depends on adequate enforcement activity.

4 Summary of existing licensing point systems and rationale for their features

The following subsections present information regarding the characteristics of DPSs and PPSs in countries for which detailed information was available. They also present the rationale for relevant features offered by the experts consulted for the BestPoint project (Klipp et al 2011; Assailly et al 2012; van Schagen and Machata 2012), as well as considerations based on the theoretical background offered in chapter 3.

The BestPoint project aimed to 'to collect, analyse, and summarize current practices, opinions of experts, and scientific information to assess the usefulness of [LPSs] for road safety and to identify those elements, characteristics and approaches that have proven or are theoretically likely to result in the largest safety effect.' (Assailly et al 2012, p12). Literature was gathered regarding 1) the design of LPSs in EU countries, Canada, Australia and USA, and 2) the effects of LPSs (including evaluations). Interviews were conducted with at least one expert in 21 (of 27) EU countries with an LPS (asterisks in table 4.1). Experts were individuals active in:

- road safety research
- evaluation research
- Ministry of Transport
- authority running the (central or local)
- Ministry of Interior/Police
- Ministry of Justice.

A complete listing is provided by Klipp et al (2011, Annex D).

Information about New Zealand, when available, is presented first in the tables in this chapter, followed by information about Australian jurisdiction, which is arguably the most similar to New Zealand. Appendix C summarises the characteristics of the New Zealand LPS.

4.1 Type of system (DPS versus PPS)

Table 4.1 shows, for 56 jurisdictions with a LPS, whether the system is a demerit point system (DPS) in which points are accumulated up to a threshold, or a penalty point system (PPS) in which points are deducted from an initial allotment until none remain. Licence suspension may occur in a DPS when the threshold is reached, or in a PPS when no points remain. The vast majority of the jurisdictions, including all those in the Western Pacific region, have a DPS. Notably, there is a PPS in Spain and Italy, where many recent evaluations have been conducted. The experts consulted in the BestPoint project offered no strong views about whether a DPS or PPS is better. However, they mentioned the importance of the LPS being transparent and easy to understand (ie not too complicated), which is relevant to most of the LPS features.

Table 4.1 also shows the year of introduction of the LPS in countries for which this information was available. LPSs have been in operation since the 1950s, with systems being introduced as recently as 2008. PPS tend to be recently introduced.

Table 4.1 Jurisdictions with demerit or penalty point systems (DPS or PPS), showing year of introduction where available, by WHO region

WHO region	Country	Type of system	Year of introduction
6	New Zealand	DPS	1967
	Australia NSW	DPS	1969
	Australia Vic	DPS	1970
	Australia Qld	DPS	
	Australia WA	DPS	
	Australia SA	DPS	1959
	Australia Tasmania	DPS	1972
	Australia ACT	DPS	
	Australia NT	DPS	2007
	China	DPS	1984
	Japan	DPS	1968
	Malaysia	DPS	
	Republic of Korea	DPS	
	Singapore	DPS	1983
1	South Africa	DPS	2006
2	Argentina	PPS	
	Bermuda	DPS	
	Brazil	DPS	1998
	Canada Ontario	DPS	
	Canada Quebec	DPS	1978
	Ecuador	PPS	
	Jamaica	DPS	
	Mexico	DPS	
	Panama	DPS	
	Peru	DPS	
	USA Alaska	DPS	1978
	USA Connecticut	DPS	1957
	USA Maine	DPS	1978
4	Qatar	DPS	2007
	The United Arab Emirates	DPS	2008
5	Austria*	DPS	2005
	Bulgaria*	PPS	2000
	Cyprus*	DPS	2000
	Czech Republic*	DPS	2006
	Denmark*	DPS	2005
	Finland*	DPS	1996
	France*	PPS	1992
	Germany*	DPS	1974
	Great Britain*	DPS	1972
	Greece*	DPS	2000

WHO region	Country	Type of system	Year of introduction
	Hungary*	DPS	2001
	Iceland	DPS	
	Ireland*	DPS	2002
	Israel	DPS	
	Italy*	PPS	2003
	Latvia*	DPS	2004
	Lithuania	DPS	
	Luxembourg*	PPS	2002
	Malta*	DPS	2004
	The Netherlands*	DPS	2002
	Norway	DPS	2004
	Poland*	DPS	1998
	Romania*	DPS	2002
	Slovenia*	DPS	1998
	Spain	PPS	2006
	Turkey	DPS	

* = EU member states with a LPS

Source: Assailly et al (2012)

4.2 Basic structure of LPSs

Table 4.2 describes the basic structure of the LPS of 45 countries for which relevant information is available; in terms of initial threshold or allotment of points, lifetime of points and manner of assigning points to each offence. These features are discussed in the following subsections.

Table 4.2 Threshold, lifetime of points, and approach to points-assignment for countries where any information was available (cells are empty where a particular piece of information was not available)

WHO Region	Country	Threshold or allotment	Lifetime of points#	Points assignment
6	New Zealand	100	Points expire 2 years after specific offence	10–50 points based on severity
	Australia NSW	13 / 4 or any speeding offence (L & P1)* / 7 (P2)*/ 14**	Points expire 40 months after specific offence	Based on severity
	Australia Vic	12 / 5*	Points expire 3 years/1 year* after specific offence	1–10 points based on severity
	Australia Qld	12 / 4*	Points expire 3 years/1 year* after specific offence	Based on severity
	Australia WA	12 / 4 or any speeding offence (Learner & P1)* / 8 (P2)*	Points expire 3 years after specific offence	Based on severity
	Australia SA	12 / 4*	Points expire 3 years after specific offence	Based on severity
	Australia Tas	12 / 4*	Points expire 3 years/1 year* after specific offence	Based on severity
	Australia ACT	12 / 4*	Points expire 3 years after specific offence	1–6 points based on severity
	Australia NT	12 / 5*	Points expire 3 years after specific offence	1–6 points based on severity
	China	15 in 2 years		3–10 points based on severity
	Japan	6 (15 for revocation)	Points expire 3 years after specific offence All points cancelled after 1 year offence-free	
	Malaysia	15 / 10*		5–15 points based on severity
	Singapore	24 / 12*** in 1 year / 13 during probation*	All points cancelled after 1 year offence-free	3–24 points based on severity
1	South Africa	12	1 point cancelled after 3 months offence-free	Based on severity
2	Bermuda	12	Points expire 2 years after specific offence	2–12 points based on severity
	Brazil	20 / 5*		
	Canada Ontario	15 / 9*	Points expire 2 years after specific offence	2–7 points based on severity
	Canada Quebec	8 (aged < 23), 12 (aged 23-24), 15 (age 25+)/ 4*	Points expire 10 years after excessive speeding Points expire 2 years after specific offence	1–12 points based on severity
	USA Alaska	12 in 1 year or 18 in 2 years	Points expire 2 years after specific offence	2–10 points based on severity
	USA Connecticut	10	Points expire 2 years after specific offence	1–5 points based on severity
	USA Maine	12	Points expire 1 year after specific offence	Based on severity
4	Qatar	14 / 12 for second licence, 10 for third licence, 8 for fourth licence, 6 for fifth licence***	All points cancelled after 1 year offence-free	1–7 points based on severity

WHO Region	Country	Threshold or allotment	Lifetime of points#	Points assignment
	The United Arab Emirates	24 in 1 year		
5	Austria	3	Points expire after 2 years after first offence Further offences within the 2 years extends period to 3 years	1 point per offence
	Bulgaria	39 / 27*		3–13 points based on severity
	Cyprus	12	Points expire 3 years after specific offence	2–6 points based on severity
	Czech Republic	12	4 points cancelled after 1 year offence-free All remaining points cancelled after 3 years offence-free	Based on severity
	Denmark	3 / 2*	Points expire 3 years after specific offence	1 point per offence
	Finland	3 / 2* in 1 year or 4 / 3* in 2 years	Points expire 2 years after specific offence	1 point per offence
5	France	12 / 6* / 6***	All points for 1-point offences cancelled after 6 months offence-free All points 2-point offences cancelled after 2 years offence-free All points serious offences cancelled after 3 years offence-free	1–6 points based on severity
	Germany	18	Points expire 10 years after specific criminal alcohol/drug-related offence Points expire 5 years after specific other criminal offence Points expire 2 years after specific minor offence Further points within the period prevent the cancellation (with “deletion impediment” limited to 5 years)	1–7 points based on severity
	Great Britain	12 / 6*	Points expire min. 4 years after specific offence (offence-dependent)	3–11 based on severity
	Greece	25 or certain violations twice within 1 year	Points expire 3 / 2 years** after specific offence	3, 5, 7, or 9 points based on severity
	Hungary	18	Points expire 3 years after specific offence	Minor offences: 1 or 3 points Criminal offences: 8, 10, or 12 points
	Ireland	12	Points expire 3 years after 28 days from notification of specific offence	Administrative level cases (e.g. speeding): 2 points Case going to court: 4 points Driving without insurance: 5 points and court fine
	Italy	20	All points cancelled after 2 years offence-free	Based on severity
	Latvia	16 / 10* / 10***	Points expire 5 years after 30-day appeal period from 8-point offence Points expire 2 years after 30-day appeal period from other offence	1-8 points based on severity
	Luxembourg	12	All points cancelled after 3 years offence-free	1-6 points based on severity
	Malta	12*	Points expire 3 years after specific offence (or at full license)	3-11 points based on severity

WHO Region	Country	Threshold or allotment	Lifetime of points#	Points assignment
	The Netherlands	3*	All points cancelled after licensed for 5 years	1 point per offence
	Norway	8	Points expire 3 years after specific offence	
	Poland	24 / 20*	Points expire 1 year after specific offence Further points within the year extends the period	1–10 points based on severity
	Romania	15	Points expire 6 months after specific offence	2–6 points based on severity
	Slovenia	18 / 7* in 3 years		
	Spain	12 / 8* / 15** / 8***	All points for minor offences cancelled after 2 years offence-free All points serious offences cancelled after 3 years offence-free	2–6 points based on severity

Where points expire a defined period after the specific offence, the period mostly commences the day the offence is committed, or the day the fine is paid; * Novice; ** Professional; ***People whose licences have previously been suspended.

Where points are cancelled a defined period after the specific offence, the period mostly commences the day the offence is committed, or the day the fine is paid; * Novice; ** Professional; ***People whose licences have previously been suspended.

4.2.1 Threshold/allotment

Notwithstanding exceptional treatment of particular groups (section 4.3), the point threshold of the 45 countries for which such information is available ranged from 3 to 100 (see table 4.5). Countries that assign 1 point per points-bearing offence have the lowest thresholds (Austria, Denmark, Finland) whereas New Zealand has the highest with a threshold of 100. Only one other country (Bulgaria) has a threshold over 25. The modal threshold of 12 operates in 19 countries.

The number of points allocated to specific offences varies commensurately with the threshold, so the number of offences before eligibility for licence suspension is relatively consistent across countries. Table 4.3 shows the minimum number of offences before suspension for the countries included in the BestPoint project. In most of these countries suspension may occur after between two and four offences.

Table 4.3 Minimum number of points-bearing offences until suspension for EU countries with a LPS

Country	Number of points-bearing offences
Austria	3
Bulgaria	4
Czech Republic	2 or 3
Denmark	3 / 2*
Finland	3 / 2*
France	2 / 1*
Germany	4
Great Britain	2 / 1*
Hungary	2
Ireland	3
Italy	3 in 1 year / 1*
Latvia	2
Malta	2*
The Netherlands	3*
Norway	4
Poland	3
Romania	3
Slovenia	1
Spain	2

* Novice

Nonetheless, Benedettini and Nicita (2009, p2) recommend 'a limited initial endowment of points to avoid drivers engaging in a trigger strategy consisting in no effort as long as their credit of points is greater than a critical' amount. For example, even if the points per offence in a 100-point system are directly proportional to those in a 10-point system, motorists may feel they are unlikely to reach such a high threshold (compared with 10, a much lower number), and so they can 'blow off' a few points to start with. In a sense, a 100-point system may 'feel' more lenient.

4.2.2 Assignment of points to offences

In the vast majority of countries, a higher number of points are assigned to offences that are judged to be the most severe or dangerous (see table 4.2). Based on the opinions offered by the experts consulted for

the BestPoint project the criteria for determining severity are often vague. The number of points is mostly fixed by law, but is left to the discretion of law enforcement agencies in some cases.

BestPoint experts alluded to the value of assigning licensing points according to the seriousness of an offence. A clear argument can be made in terms of the LPS deterrence and selection functions. If the most serious offences carry the most points, they have the greatest impact on the likelihood of licence suspension. Thus, motorists should be particularly deterred from committing the most serious offences, and motorists who commit the most serious offences are most likely to be removed from the road. From a community education point of view, assigning a higher number of points to more serious offences has the potential to communicate to motorists something of the relative danger of different behaviours (assuming the community knows the number of points assigned to each offence). The experts also suggested the system of points per offence be kept simple to facilitate understanding.

The BestPoint project also considered what happens when multiple offences are committed simultaneously. Most participant countries count the points for the offences cumulatively, while a few (Czech Republic, Germany, Great Britain, Ireland, Latvia, New Zealand) count only the points for the most serious offence. In Hungary, points for the most serious offence are given with a certain number of other points (depending on the seriousness of the other offences). Other countries impose a sub-threshold limit on the number of points that can be accumulated in a single event or day (eg Italy: threshold=20, limit=15; Luxembourg and Spain: threshold=12, limit=8). Although there is a value to being consistent in penalties for dangerous behaviours, multiple sanctioning may undermine the aim of the LPS to address repeat offending. Specifically, a driver should have the opportunity to modify their driving behaviour in response to accruing licensing points in order to avoid exceeding the threshold for a licence suspension. Multiple sanctioning may result in licence suspension as a result of a single episode of offending. Some BestPoint experts acknowledged these issues.

4.2.3 Lifetime of points

In most countries points remain ‘live’ on the licence record for a specified period from the date of legal determination of the offence, the elapsing of an appeal period, or the payment of the fine (table 4.2). Most commonly points expire two or three years from the specific offence. Longer point lifetimes exist for particular offences in Canada (10 years for excessive speeding), Great Britain (at least four years depending on offence), Germany (10 years for specific criminal alcohol/drug-related offence; five years for specific other criminal offence), and Latvia (five years for eight-point offences). In Austria, Germany, and Poland, the point lifetime is lengthened by (but not for) subsequent offences. In Australia, where novice drivers have a lower threshold, the lifetime is shorter for novice drivers (one year) than for other drivers (three years).

An alternative model adopted in some countries has all points cancelled after a specified period of offence-free driving. The period is one year in Qatar, two years in Italy and for minor offences in Spain, and three years in Luxembourg and for serious offences in Spain. In Czech Republic and South Africa a number of points are cancelled after a specified period of offence-free driving. In countries where the LPS applies only to novice drivers all points are cancelled after a license has been held for a specified period. Japan has a hybrid model, in which points expire three years after specific offence while all points are cancelled after one year of offence-free driving. The implications of such practices for the deterrence and suspension functions of a LPS have not been investigated.

Although many experts consulted for BestPoint were satisfied with the point lifetimes in their countries, there was considerable support for longer point lifetimes (eg five years); because this would increase the

likelihood of suspension for repeat offenders, and so enhance the LPS deterrence and selection functions. A longer point lifetime was recognised as a way of off-setting limited Police activity.

A related matter is what happens to points when a licence is suspended. Typically, when a licence is suspended due to accumulation of points, the reinstated licence is 'clean' (although sometimes with a lower threshold). In Great Britain when a licence is suspended outright due to a single offence (eg high-range drink-driving), points from previous offences remain on the reinstated license. We did not gather information about whether this holds in other countries.

4.2.4 Suspension period and process for licence reinstatement

Table 4.4 presents information about the suspension period and process for licence reinstatement in the 42 countries for which relevant information was available. Notwithstanding exceptional treatment of particular groups (section 4.3), licence suspension periods vary between 15 days (Maine, USA) and two years (Bermuda, where the suspension lasts one month for every two unexpired licensing points for up to two years). While six countries have a three-month suspension period like New Zealand, longer periods are not uncommon. Seventeen countries in table 4.4 have at least a six-month suspension period. In New Zealand the three-month suspension period typically applies when demerit points for minor offences reach the threshold, and serious offences can result in driver disqualifications that exceed three months.

In several Australian jurisdictions the length of the suspension period varies from three to five months depending on the number of points by which the motorist exceeds the threshold (termed 'points bracket'). Similarly, in Japan and Quebec (Canada) the suspension period depends on the points bracket of the driver. In a few countries there is discretion to vary the length of the suspension according to the offences involved and demonstrated hardship.

BestPoint experts from countries with a suspension period of less than six months (eg Austria, Finland and Malta) indicated a longer period would be preferable. Overall a period of at least six months seemed to be preferred. Some experts suggested the length of suspension period might be longer for offenders who had committed at least some serious offences, than for motorists reaching the threshold as a result of multiple relatively minor offences.

While it can be assumed a longer suspension is a worse suspension, the expected cost of offending (and so deterrence) may be increased more effectively by increasing the likelihood of suspension (see Gras et al 2014); for example, by increasing the likelihood of detection or the points per offence. On the other hand, a longer suspension may be an effective approach to enhancing the LPS selection function; removing dangerous drivers from the road for longer.

Australian jurisdictions offer motorists a choice between a suspension and a good behaviour period, during which acquisition of a specified number of points results in a suspension of double the original period. It is noted that doubling the suspension period may increase the prevalence of driving while suspended.

Table 4.4 Suspension period and process for licence reinstatement for countries where any information was available (cells are empty where a particular piece of information was not available)

WHO Region	Country	Suspension period	Process for licence reinstatement
6	New Zealand	3 months	Apply, pass medical and vision assessment, pay reinstatement fee
	Australia NSW	13–15 points: 3 months 16–19 points: 4 months 20+ points: 5 months/3 months (learner drivers: extra 3 months for exceed speed limit by >30 km/h, extra 6 months when exceed speed limit by >45 km/h)[(a)] (May opt for 12-month good behaviour period, during which 2 or more points result in suspension of double the original period. No 'good behaviour' option)[(a)]	Complete course, apply, pass knowledge test/pass the driver knowledge test[(a)]
	Australia Vic	12–15 points: 3 months 16–19 points: 4 months 20+ points: 5 months/3 months[(a)] (May opt for 12-month good behaviour period, during which 1 point results in minimum 6-month suspension)	Apply/pay reinstatement fee
	Australia Qld	12–15 points: 3 months 16–19 points: 4 months 20+ points: 5 months/3 months[(a)] (May opt for 12-month good behaviour period, during which 1 point results in suspension of double the original period)	Apply (probationary licence)
	Australia WA	12–15 points: 3 months 16–19 points: 4 months 20+ points: 5 months/3 months[(a)] (May opt for 12-month good behaviour period, during which 2 or more points result in suspension of double the original period/(No good behaviour option[(a)])	Automatically reinstated Apply, pass knowledge tests (P)[(a)] Automatically reinstated (learner drivers)[(a)]
	Australia SA	12–15 points: 3 months 16–20 points: 4 months 21+ points: 5 months/3 months* (May opt for 12-month good behaviour period, during which 1 point results in suspension of double the original period)/(No good behaviour option)[(a)]	Automatically reinstated Complete course[(a)]
	Australia Tas	12–15 points/ 4–15 points[(a)]: 3 months 16–20 points: 4 months 21+ points: 5 months (May opt for 12-month good behaviour period, during which 1 point results in suspension of double the original period/No good behaviour option[(a)]	Automatically reinstated / Apply[(a)]
	Australia ACT	12–15 points: 3 months 16–19 points: 4 months 20+ points: 5 months/3 months[(a)] (May opt for 12-month good behaviour period, during which 2 or more points result in suspension of double the original period/No good behaviour option[(a)])	
	Australia NT	12–15 points: 3 months 16–19 points: 4 months	Automatically reinstated

WHO Region	Country	Suspension period	Process for licence reinstatement
		20+ points: 5 months / 5–8 points:3 months 9–12 points: 4 months 13+ points: 5 months[a] (May opt for 12-month good behaviour period, during which 2 or more points result in suspension of double the original period/No good behaviour option[a])	
	China	3 months/6 months[c]	
	Japan	6 points: 1 month 15 points: 1 year	Apply
	Malaysia	6 months/1 year for second suspension, 2 years for third suspension (within 5 years) [c] (Option to reduce period by 4 weeks per course completion, up to 8 weeks)	
	Singapore	3 months for first time/6 months for second suspension, 1 year for third suspension, 2 years for fourth suspension 3 years for subsequent suspension[c] ("disqualification" for 1+ years)	Automatically reinstated / Apply, pass knowledge and driving tests (after suspension of 1 or more years)[c]
1	South Africa	32 days	Apply (After 3 suspensions licence is disqualified; reapply for testing after the disqualification period)
2	Bermuda	1 month for every 2 unexpired demerit points for up to 2 years	
	Canada Quebec	3, 6, or 12 months depending on: • the point-bracket of the driver • the number of points on the record • the length of the most recent penalty in the previous 2 years	Apply, pass knowledge test, pay test and licence fees
	USA Alaska	3 months	Apply, pass vision assessment and knowledge test, provide proof of financial responsibility (insurance) for 3 years, pay $100 reinstatement fee and $20 licence reissue fee
	USA Connec-ticut	1 month/until the point total is reduced to or below 10 points[c] For blood alcohol content (BAC) 0.08% to 1.6%: 90 days for first offence, 9 months for second offence, 2 years for third offence For BAC over 1.6% – 120 days for first offence, 10 months for second offence, 2.5 years for third offence	Apply (Probationary licence for 1 year; any violations may result in further licence suspension)
	USA Maine	15 days (opportunity for administrative hearing to avoid suspension)	Apply, pay reinstatement fee
4	The United Arab Emirates	24 points in 1 year: 6 months (vehicle impounded for 1 month) 24 points twice in 1 year: licence disqualified (vehicle confiscated for 3 months)	24 points in 1 year: Automatically reinstated 24 points twice in 1 year: Apply, pass driving test
5	Austria	3 months	Complete course

WHO Region	Country	Suspension period	Process for licence reinstatement
	Bulgaria	6 months	Apply, pass psychological assessment and knowledge test
	Cyprus	6 months/12 months[(c)]	Automatically reinstated
	Czech Republic	12 months	Apply, pass psychological assessment and knowledge test
	Denmark	6 months *unless licence tests passed within 3 months*/6 months[(a)]/3 months[(b)] *unless licence tests passed within 3 months/*6 months[(c)]	Apply, pass licence tests/ Complete lessons at driving school, apply, pass licence tests[(a)]
	Finland	1–6 months/12 months[(c)]	Automatically reinstated
	France	6 months/3 months**/12 months[(c)]	Apply, pass medical and psycho-technical assessment, and knowledge tests/Apply, pass medical and psycho-technical assessment, and knowledge and driving tests[(a)], [(c)]
	Germany	6 months/more than 6 months[(c)]	Apply, pass medical psychological assessment
	Great Britain	6 months	Pass knowledge and driving test For motorcycles and mopeds: redo basic training
	Greece	6 months/12 months or 24 months, depending on number of previous suspensions[(c)]	Complete least 50% of the minimum lessons for theoretical training, apply pass knowledge and driving tests
	Hungary	6 months	Complete course
	Ireland	6 months	Automatically reinstated
	Italy	6 months (if points lost in 2–3 years)/1 year (if points lost in 1-2 years)/2 years (if points lost within 1 year) *unless licence tests passed within 30 days*	Apply, pass driving test
	Latvia	12 months	Apply, pass knowledge and driving tests (Probationary licence for 1 year[(a)])
	Luxem-bourg	12 months	Complete course
	Malta	3 months	Apply, pass knowledge and driving tests
	The Nether-lands	During investigation by the Central Office for motor vehicle driver, until theory test and driving exam are passed	Apply, pass knowledge and driving tests
	Norway	6 months	Automatically reinstated
	Poland	Until theory test and driving exam are passed	Apply, pass psychological assessment, and knowledge and driving test. Re-do training, apply, pass tests[(a)]
	Romania	1 month/2 months[(c)]	Automatically reinstated
	Slovenia	6 months	Apply, pass driving test
	Spain	6 months/3 months[(b)]/12 months[(c)] (except professional drivers: 6 months)[(c)]	Complete course, apply, pass knowledge test

[(a)] Novice; [(b)] Professional; [(c)] People whose licences have previously been suspended.

In most countries in table 4.4 suspended motorists must apply, pass knowledge and/or skills and/or medical tests, and pay associated fees, in order to reinstate their licence. In only eight countries are licences reinstated automatically and generally not for novice drivers. Psychological testing is used in Czech Republic, France, Germany and Poland, in recognition of the importance of psychological factors in risky driving (Klipp et al 2011). A BestPoint expert from Malta also supported psychological testing. However, based on a review of relevant literature, Hatfield et al (2013) concluded 'there is no strong support for any single psychological test to validly and reliably identify youth most at-risk of committing traffic offences, re-offending or crashing'. They argue that tests used to measure the personality characteristics of interest are fairly transparent and therefore susceptible to faking, and there is limited evidence of the stability (test-retest reliability) of test results. Moreover even complex models, including better-performing personality and attitudinal factors, afford only moderate prediction of risky driving or crashing.

4.3 Tailoring for particular groups

In some countries the LPS is applied differently to particular road-user groups, as summarised in table 4.5.

4.3.1 Non-motorists

In most countries the LPS applies only to motorists (ie drivers of motorised vehicles, including motorcycles and heavy vehicles), whereas in a few it also applies to pedal cyclists and/or pedestrians. Mostly, licensing points are applied only to those cyclists and pedestrians who hold a licence, which creates an inconsistency that many BestPoint experts considered a reason for not including these road-users groups in a LPS. Elsewhere (eg Tasmania) points apply to a person, and accumulated points make the person ineligible to *hold* a licence (discussed and summarised earlier in table 4.2).

4.3.2 Novice drivers

In two countries (Malta, The Netherlands) the LPS applies only to novice drivers, while the LPS is stricter for novice than experienced drivers in 24 jurisdictions, including most of those in the Western Pacific region. The definition of 'novice drivers' varies somewhat across jurisdictions, depending in part on the prevailing licensing system. Most commonly the LPS is stricter in that novice drivers have a lower threshold (or initial allotment) of points, which is compensated in some countries by opportunities to augment the threshold (or allotment) by driving offence free for a given period (eg France, Spain) or completing an education programme (Australian Capital Territory; Di Pietro et al, 2004). In Greece novice drivers accrue three extra points per offence, while in Italy the number of points deducted for each offence is doubled for novice drivers. Novice drivers may also have less opportunity to avoid licence suspension (five Australian jurisdictions, Denmark, Poland), or more difficult reinstatement procedures (such as having to complete a course or pass tests, when other drivers do not). Further, to the extent that in many jurisdictions there are offences applying only to novice drivers (including lower speed and alcohol limits), there are more opportunities for licensing points to be applied.

In most Australian jurisdictions the suspension period for novice drivers does not depend on the number of points by which they exceed the threshold, whereas it does for other drivers (see table 4.2). Generally, the suspension period for novice drivers is equivalent to the shortest suspension period for other drivers.

Table 4.5 Application to specific road-user groups for countries where any information was available (N= 'no'; cells are empty where a particular piece of information was not available)

WHO region	Country	Inclusion of non-motorists	Tailoring for particular groups[(b)]
6	New Zealand	Cyclists[4]	N
	Australia NSW	Cyclists Pedestrians	Novice: lower threshold, different suspension period[(a)], no good behaviour option Professional: higher threshold
	Australia Vic		Novice: lower threshold, different suspension period[(a)]
	Australia Qld	Cyclists	Novice: lower threshold, different suspension period[(a)]
	Australia WA		Novice: lower threshold, different suspension period[(a)], no good behaviour option, more difficult reinstatement (probationary only)
	Australia SA	Cyclists	Novice: lower threshold, different suspension period[(a)], no good behaviour option, more difficult reinstatement
	Australia Tas	Cyclists	Novice: lower threshold, different suspension period[(a)], no good behaviour option, more difficult reinstatement
	Australia ACT		Novice: lower threshold, different suspension period[(a)], no good behaviour option
	Australia NT		Novice: lower threshold, different suspension period[(a)], no good behaviour option
	China		Previously suspended: double suspension period
	Malaysia		Novice (but not learner): lower threshold Previously suspended: at least double suspension period
	Singapore		Novice: lower threshold Previously suspended: lower threshold, at least double suspension period, more difficult reinstatement
	Brazil		Novice: lower threshold
	Canada Ontario		Novice: lower threshold, warning letter after a lower percentage of threshold
	Canada Quebec		Novice: lower threshold, different conditions of licence suspension
	USA Alaska	N	N
	USA Connecticut		Previously suspended: different suspension period[(a)]
	USA Maine	N	N

[4] In New Zealand, demerit points are not recorded against the driver licence of a bicycle rider who commits an offence on a bicycle, although the infringement notice references the number of demerit points that may be recorded for the offence.

WHO region	Country	Inclusion of non-motorists	Tailoring for particular groups[(b)]
	Qatar		Previously suspended: lower threshold
5	Austria	N	N
	Bulgaria		Novice: lower threshold
	Cyprus	Cyclists: alcohol	Previously suspended: Double suspension period
	Czech Republic	N	N
	Denmark	N	Novice (<3 years): lower threshold, no opportunity to avoid suspension, more difficult reinstatement Professional: half suspension period Previously suspended: no opportunity to avoid suspension
	Finland	N	Novice: lower threshold Previously suspended: At least double suspension period
	France	N	Novice (<3 years): lower threshold, able to earn up to 3 merit points in first 3 years, more difficult reinstatement Professional: opportunity for points-recovery course twice as often, half suspension period Previously suspended: Double suspension period
	Germany	Cyclists: red-light, alcohol, endangering others Pedestrians: dangerous traffic infringements	Novice: 'Driving licence on probation' rather than suspended
	Great Britain	N	Novice (<2 years): lower threshold Professional: opportunity for points-recovery course twice as often
	Greece	N	Novice (<3 years): 3 additional points per offence Professional: shorter duration of points Previously suspended: Double suspension period
	Hungary		N
	Ireland		N
	Italy	N	Novice drivers (<3 years): double points per offence, able to earn up to 3 merit points in first 3 years Professional: points deducted only on the professional licence for offences committed while working, 50% more points recovered after course completion

WHO region	Country	Inclusion of non-motorists	Tailoring for particular groups[b]
	Latvia	N	Novice (<2 years): lower threshold
	Luxembourg	N	N
	Malta	N	LPS only applies to novice
	The Netherlands	N	LPS only applies to novice (<5 years)
	Poland	Cyclists	Novice: lower threshold, points-recovery course not available in first year, more difficult reinstatement
	Romania	N	Previously suspended: Double suspension period
	Slovenia	N	Novice: lower threshold
	Spain	N	Novice (<3 years): Lower threshold, able to earn 12 merit points in first 2 years Professional: higher threshold, opportunity for points-recovery course twice as often, half suspension period Previously suspended: lower threshold, double suspension period

[a] See table 4.2 for details

[b] In terms of structure of system; there can be specific offences for novice and professional drivers in the context of 'N'

The experts consulted in the BestPoint projects justified a stricter system for novice drivers mostly in terms of the higher likelihood of risky driving and/or crashing of these drivers. A few experts argued a LPS should treat all drivers equally – some noting stricter regulations apply to novice drivers already. Many experts noted the value of early correction.

For stricter application of the LPS for novice drivers to be a sensible approach to reducing their crash rate, the following would hold to be proven:

- stricter application would enhance the LPS deterrence function
- the higher crash rate of novice drivers owed at least in part to motivational issues.

Younger drivers *have* been found to have higher motivation for risky driving than older drivers (Hatfield and Fernandes 2009), and so enhancing the LPS deterrence function may increase compliance with traffic regulations, and reduce crash rates, for *young* novice drivers (eg under age 25). There is no specific evidence regarding mechanisms for increasing the LPS deterrence function.

In terms of the LPS selection function, removing novice drivers from the road because they have been identified as dangerous, makes sense as they are older when they return to the road, and crash rates have been found to reduce with age (McCartt et al 2009; Senserrick and Mitsopoulos-Rubens 2013). Again, this argument is largely restricted to the *youngest* novice drivers. To the extent that the 'novice driver problem' reflects inexperience (McCartt et al 2009), it is critical the period of suspension is added to the novice licence tenure. Graduated licensing systems aim to provide the driving experience under lower risk conditions, and during suspension drivers do not acquire this experience. Austroads (2015) points out that stricter application of LPSs to novice drivers 'is in keeping with allowing novices to make some errors while first driving independently but not allowing serious offences'. A licence that is 'probationary' in the true sense of the word can be suspended if a driver does not demonstrate expected standards of behaviour (including compliance with regulations).

In terms of the LPS correction function, it seems sensible that novice drivers be given early opportunities for correction. In France, young drivers are required to participate in a road safety course when they lose at least three points (where their total endowment is six). Voluntary course participation resulting in cancellation of licensing points may provide an opportunity for early correction, but at the expense of reducing deterrence and selection functions. Moreover, road safety courses are of questionable value (Ker et al 2005). In Poland points-recovery courses are not available to first-year drivers. In the spirit of early correction, novice drivers in Ontario Canada are sent a warning letter after accruing a lower proportion of their point threshold (22%) than is the case for other drivers (40%).

There has been no research specifically evaluating the use of a stricter LPS for novice drivers.

4.3.3 Professional drivers

In six jurisdictions the LPS is more lenient for professional drivers via: a higher point threshold (or total allotment; NSW Australia, Spain), an earlier expiry of points (Greece), more opportunity for points recovery (Great Britain, France, Spain), and/or a shorter suspension period (Denmark, France, Spain). In Italy, the system is made 'fairer' for professional drivers by deducting points for offences committed while working from their professional licence only. Nonetheless, to the extent that in many jurisdictions there are offences that apply only to professional drivers (eg failing to make prescribed stops, lower alcohol limits) there are more opportunities for licensing points to be applied.

Systems which treat professional drivers differently typically have formal procedures for classifying them. In Greece professional drivers hold a Certificate of Professional Capability. In Italy professional drivers hold a specific licence. In Spain a professional driver is certified as such (following provision of required

documentation). In Queensland, Australia, the owner of vehicles registered for commercial use may elect not to identify the driver responsible for a camera-detected offence, thereby ensuring the driver does not accrue the applicable licensing points. In this case, they are required to pay five times the normal fine. This has been highlighted as a loophole in the Queensland LPS.

The experts consulted in the BestPoint projects justified a more lenient system for professional drivers, mostly in terms of their greater exposure to risk of apprehension, and the dependence on driving for their livelihood. On the other hand, some experts argued for higher expectations of *professional* drivers to know, and comply with, traffic regulations (especially if they carry passengers, or dangerous cargo); so a *stricter* system could be justified.

Unless professional drivers are identified as being particularly likely to engage in risky behaviour or to crash there is no reason to enhance the LPS deterrence, selection, or correction functions specifically for them. However, making the LPS more lenient in order to make it 'fairer' for them (in view of their increased exposure to risk of apprehension, and dependence on driving) can be expected to undermine these functions (deterrence, selection, or correction).

4.3.4 Drivers with prior licence suspension

In 12 jurisdictions the LPS is stricter for drivers with a prior suspension (often within a specified timeframe; eg five years) mostly via a longer suspension period (China, Malaysia, Singapore, USA, Cyprus, Finland, France, Greece, Romania, Spain), but also via a lower point threshold (or total allotment; Singapore, Spain, Qatar), no opportunity to avoid suspension (Denmark), and/or more difficult reinstatement (Singapore).

Nonetheless, the experts consulted in the BestPoint projects did not explicitly justify a stricter system for drivers with previous suspensions. Some experts suggested the possibility of relapse should be addressed within the LPS, specifically via re-education before licence reinstatement.

Considering the LPS deterrence function, previously suspended drivers who again reach the point threshold have demonstrated the LPS as it 'normally' applies did not motivate them to comply with traffic regulations. Assuming they did not drive while suspended, a longer suspension appears justified to increase future deterrence. (If they drove while suspended this may have undermined deterrence associated with licence loss). Further, to the extent that previously suspended drivers who again reach the point threshold have shown themselves to be persistent risky drivers, removing them from the road for longer (cf LPS selection function) appears warranted.

4.3.5 Offences included in LPSs

Table 4.6 provides details of offences included, and the treatment of speeding, drink-driving, non-restraint and use of hand-held phones, for LPSs in countries where any information was available.

Countries vary widely in the number of offences included in the LPS ('points-bearing' offences). The Netherlands LPS, which applies only to novice drivers, includes only six offences. Otherwise the number of offences ranges from 13 in Austria to 1,296 in Germany. This can depend partly on how offences are catalogued, for example if speeding by different amounts is catalogued as different offences.

The experts consulted for the BestPoint project discussed the value of using the LPS to highlight offences that are particularly important for road safety (because of their dangerousness or frequency), and which can be readily enforced. Inclusion of a very large number of offences was seen to reduce the simplicity (and therefore comprehensibility) of the system.

In almost all countries licensing points apply to speeding offences. In some countries licensing points only apply to exceeding the speeding limit by a specified amount (eg China, Canada, USA, Bulgaria, Cyprus, Czech Republic, Denmark, The Netherlands, Poland, Romania, Spain, South Africa). With the exception of New Zealand and The Netherlands, all countries that indicated how their LPS treats camera-detected speeding offences, stated they apply licensing points to these offences as they would to other speeding offences.

Generally, the penalties for camera-detected speeding offences are issued to the owner of the vehicle in which the offence was committed. In some countries the registered owner is compelled to either accept the penalty or nominate another individual as the driver at the time of the offence. In some countries only a fine is issued when a driver is not nominated. However, in some countries if the owner nominates 'a close person' constitutionally they cannot be compelled to provide further detail. In Germany, if the owner often fails to identify the driver (eg because they are a close person), they can be ordered to keep a driver's logbook, from which the driver can be identified for any future offences.

Many countries include drink-driving in their LPS, and those that do not often have more serious penalties for drink-driving. The use of hand-held mobile phones while driving, and non-restraint (sometimes only for child passengers) are also fairly common LPS inclusions.

Table 4.6 The number of points-bearing offences, and treatment of key offences, for countries where any information was available (Y= 'yes'; N= 'no'; cells are empty where a particular piece of information was not available)

WHO region	Country	Number of offences	Speeding offences	Drink-driving offences	Use of hand-held phone	Non-restraint
6	New Zealand		From <10 km/h over speed limit; excl. automatically detected	Y for low-level offences; from July 2018 for some offences involving alcohol an alcohol interlock device must be installed for at least 12 months[(a)]	Y	N
	Australia NSW		From 10 km/h over speed limit; Incl. automatically detected	Y	Y	Y
	Australia Vic		From <10 km/h over speed limit; Incl. automatically detected	N; possible immediate suspension and mandatory alcohol interlock scheme on licence reinstatement	Y	Y
	Australia Qld		From <13 km/h over speed limit; Incl. automatically detected	Y; possible immediate suspension and mandatory alcohol interlock scheme on licence reinstatement	Y	Y
	Australia WA		From 9 km/h over speed limit; Incl. automatically detected	Y	Y	Y
	Australia SA		From <10 km/h over speed limit; Incl. automatically detected	Y; possible immediate suspension and mandatory alcohol interlock scheme on licence reinstatement	Y	Y
	Australia Tas	200	From <10 km/h over speed limit; Incl. automatically detected	Not automatic (court-awarded); mandatory alcohol interlock scheme	Y	Y
	Australia ACT	23	From <15 km/h over speed limit; Incl. automatically detected	N; possible immediate suspension and mandatory alcohol interlock scheme on licence reinstatement	Y	Y
	Australia NT	23	From <15 km/h over speed limit; Incl. automatically detected	Y; possible immediate suspension and mandatory alcohol interlock scheme on licence reinstatement	Y	Y
	China	59	From 15 km/h over speed limit	Y		
	Japan			Possible immediate licence revocation and imprisonment		
	Malaysia	18	From 1 km/h over speed limit	Y	Y	Y
	Singapore	52	From 1 km/h over speed limit		Y	Y
1	South Africa		From 21% over speed limit	Y		Y
2	Bermuda	16	Y	Y; possible immediate disqualification	Y	Y
	Brazil		Y	N; possible immediate suspension	Y	Y
	Canada Ontario		From 16 km/h over speed limit			Y
	Canada	38	From 11 km/h over speed limit	Y	Y	Y

WHO region	Country	Number of offences	Speeding offences	Drink-driving offences	Use of hand-held phone	Non-restraint
	Quebec					
	USA Alaska	30	Incl. automatically detected (but speed cameras are being phased out)	Y; 10 points Administrative revocation after 7 days, court revocation after conviction	Y	Y
	USA Connecticut	43	Y	N; possible immediate suspension		
	USA Maine	96	From 15–30mph over speed limit; Incl. automatically detected (>30mph is a criminal offence, resulting in a mandatory 30-day suspension)	N	N	N
4	Qatar	31	Y	Y	N	N
5	Austria	13		Y		Y children only
	Bulgaria		From 20 km/h over speed limit	Y	Y	Y
	Cyprus		50% above or below speed limit; no automatic detection	Y	Y	Y
	Czech Republic	27	From 5 km/h over speed limit in urban areas From 20 km/h over speed limit outside urban areas	Y	Y	Y
	Denmark	17	30% to 59% over speed limit; incl. automatically detected	N; possible immediate suspension	N	Y children only
	France	115	Incl. automatically detected	Y	Y	Y
	Germany	1296	Y	Y		
	Great Britain	102	Incl. automatically detected	N; possible immediate suspension	Y	Y
	Greece	23	Y	Y	Y	Y
	Hungary	19 minor offences 8 criminal offences	Y	Y		
	Ireland	42	Y			Y
	Italy	67	Y	Y		
	Latvia	100	Y	Y		Y
	Luxembourg	19	Y	Y		Y

WHO region	Country	Number of offences	Speeding offences	Drink-driving offences	Use of hand-held phone	Non-restraint
		categories of offence				
	Malta	30	Y	Y	Y	Y
	The Netherlands	6	From 30km/h over speed limit; exc. automatically detected	N; possible immediate suspension	N	N
	Norway		Incl. automatically detected	N; possible immediate suspension	N	N
	Poland		From 20 km/h over speed limit			Y
	Romania	18	From 10 km/h over speed limit			Y
	Slovenia		Y	Y		
	Spain	27	From 20 km/h over speed limit; incl. automatically detected	Y	Y	Y

[(a)]Previously the driver was required to hold an alcohol interlock licence for 12 months.

4.4 Special features of LPSs

4.4.1 Double demerit points

Most Australian jurisdictions (NSW, Qld, WA, SA, Tasmania and Northern Territory), as well as Quebec in Canada, double the demerit points for certain offences (particularly speeding and drink-driving) during holiday periods (which typically have a high rate of serious crashes), while undertaking associated public awareness and enforcement activities. It is hoped this will increase compliance for these offences via the LPS deterrence function. Arguably, double demerit point periods fit less well with the LPS selection function, by increasing the likelihood of drivers who offend relatively infrequently becoming eligible for suspension. Research examining the effects of double demerit point periods is presented in section 5.2.

4.4.2 LPS-based incentives for offence-free driving

A few countries give 'bonus' points for offence-free driving; increasing the point allotment in countries with a PPS (France, Italy, Spain), and increasing the point threshold in the USA (which has a DPS) (see table 4.7). In Japan, offence-free driving is rewarded as licensing points do not accumulate during the three months following a two-year offence-free period (although the licence can be suspended if two violations occur during these three months). (Section 4.2.3 indicates which countries require periods of offence-free driving for points to be cancelled.)

Some BestPoint experts questioned the value of bonus points in a LPS. Motorists who drive offence free for long periods are unlikely ever to need an extended point threshold/allotment. Basili et al (2015) argue merit points are unnecessary for occasional offenders and bonus points would undermine the deterrence for more frequent offenders. Nonetheless, bonus points may be seen as an additional avenue for motivating motorists who typically offend to comply with the regulations.

4.4.3 Availability and function of road safety courses

Many LPSs offer motorists the possibility of completing a road safety course in order to cancel points from their licence (see table 4.7). In some countries, point cancellation through course completion is only allowed once within a specified timeframe (eg two years) that may differ for novice or professional drivers. In Japan and Malaysia course completion may reduce the suspension period. In a few LPSs motorists *must* complete a course when they have a particular number of points, or have committed particular offences, or in order to reinstate their licence.

The BestPoint project highlighted that the length and content of road safety courses may vary substantially from country to country. Courses associated with LPSs tend to focus on skills and knowledge, although some also address attitudes. Very few are offence specific. In most counties course participants must simply attend (a sufficient proportion) of the course, rather than there being any pass criterion. Greece and Italy have a test with a pass criterion.

The rationale offered for cancelling points, or reducing a suspension period, following course completion is:

- These outcomes act as an incentive for completing the course (which is presumed to have a road safety benefit).
- The course makes the driver less dangerous, so there is less need for deterrence or removal.

Table 4.7 Details of special features of LPSs for countries where any information was available (Y= 'yes'; N= 'no'; cells are empty where a particular piece of information was not available)

WHO region	Country	Incentives for offence-free driving	Road safety course [voluntary vs mandatory]	Written warning
6	New Zealand	N	N	At 50% threshold
	Australia NSW		M for reinstatement	Y
	Australia Vic		N	
	Australia Qld			At 58% threshold
	Australia WA			Y
	Australia SA		M for reinstatement[(a)]	At 50% threshold
	Australia Tas	N	N	N
	China		V to cancel 3 points (per 2 years) M at 10+ points	At 53% threshold
	Japan	Points do not accumulate for 3 months after a 2-year offence-free period (but licence suspended if accumulate 2 violations within the 3 months)	V to reduce suspension period	
	Malaysia	Y	V to reduce suspension period	
	Singapore			
1	South Africa			Y
2	Canada Ontario			At 40%/22%[(a)] threshold
	Canada Quebec			Y; warning letter when points reach/exceed the threshold for the driver's bracket (learner, probationary, or driver's licence)
	USA Alaska	Points awarded after 5 years offence free (to maximum of 4 points)	V to cancel 2 points (per 1 year)	At 50% threshold
	USA Connecticut		V to cancel points M when convicted for a third moving or suspension violation	At 60% threshold
	USA Maine	1 point for each year offence free (to maximum of 4)	V to cancel 3 points (per 1 year)	At 50% threshold

WHO region	Country	Incentives for offence-free driving	Road safety course [voluntary vs mandatory]	Written warning
5	Austria		M for reinstatement	
	Bulgaria		V to cancel 1/3 of points (per 1 year)	N
	Cyprus		V at 7+ points	N
	Czech Republic		V to cancel 3 points (for drivers with <10 points and no single offence >6 points)	N
	Denmark	N	N	N
	Finland		N	When next offence would result in suspension
5	France	2 points after first 3 years offence free/3 points after first 2 years offence free if licence obtained through accompanied driving[a]	V to cancel 4 points (for drivers with <12 points; per 2 years/ 1 year[b]) M for committing a 3+ point offence[a]	At 50% of threshold
	Germany		V to cancel 4 points (for drivers with <8 points) V to cancel 2 points (for drivers with 9-13 points) V counselling to cancel 2 points (for drivers with 14+ points) (per 5 years) M to retain licence (for drivers with 14+ points)	At 44-72% threshold At 73-95% order for mandatory participation in course
	Great Britain	N	V to avoid 3 points for speeding (per 2 years/1 year[b])	
	Greece		M for reinstatement	At 60% threshold
	Hungary		V to cancel 9 points (for drivers with <12 points) V to cancel 6 points (for drivers with 13–17 points) (per 1 year) M for reinstatement	At 77% of threshold
	Ireland		N	
	Italy	2 points after 2 years offence free (to maximum of 30 points) / 1 point per year for	V to cancel 6 / 9[b] points	

WHO region	Country	Incentives for offence-free driving	Road safety course [voluntary vs mandatory]	Written warning
		first 3 years offence free[(a)]		
	Latvia		M to cancel 2 points (for drivers with 8 points) For drivers with 12+ points: 2 points cancelled after passing a theoretical and practical exam (2 points *added* for failure to pass exam within 6 months)	At 25% (drive safely) At 50% (attend road safety course) At 75% (pass theoretical and practical test)
	Luxembourg		V to cancel 3 points (per 3 years) M for reinstatement	
	Malta		N	
	The Netherlands	N	N	N
	Norway	N	N	At 75% of threshold
	Poland		V to cancel 6 points (twice per year) (not available for drivers in their first year[(a)])	
	Romania		N	
	Slovenia		N	N
	Spain	2 points after 3 years offence free, 1 point after a further 3 years offence free (to maximum of 15)/ 12 points if no points are lost in the first 2 years[(a)]	V to cancel 4 points (12 hours) or 8 points (24 hours) (per 2 years/ 1 year[(b)]) M for reinstatement	At 50% threshold

[(a)] Novice; [(b)] Professional

Some BestPoint experts noted concerns about whether such courses were effective in improving driver behaviour (see section 3.3 for a review of relevant literature). They commented that courses addressing attitudes were more likely to be beneficial than those focusing on skills or knowledge, particularly for repeat offenders. However, several experts argued attitudinal change might be unlikely in the context of mandatory participation. Others argued offenders would only attend mandatory courses. Some experts suggested the treatment (ie whether a course should be offered/required and course content) should depend on the offences committed.

BestPoint experts also recognised that any possibility for cancelling points, or shortening suspension, undermines the LPS deterrence and selection functions. Where there is a fee for mandatory participation deterrence may be increased. However, wherever there is a fee for courses the system becomes less meaningful for wealthy motorists, and therefore inequitable.

Nonetheless, some BestPoint experts supported voluntary and/or mandatory participation in road safety courses as a component of LPSs, seeming to assume such courses are effective. One or two suggested the 'pay-offs' from participation (cancellation of points, reduced suspension, reinstatement of licence) should depend on demonstrating improved behaviour.

4.4.4 Written warning and availability of personal points level

Motorists in quite a few countries receive a letter from the relevant licensing authority advising (warning) when they have accrued a specified number of points. Table 4.7 shows the percentage of the point threshold/allotment at which a warning letter is triggered. For holders of full licences this ranges from around 40% to 77%. In Ontario (Canada) novice drivers are given earlier warning – at 22% of their licence threshold. In Germany, motorists receive an initial warning at 44% to 72% of threshold, and then at 73% to 95% of threshold receive a request for mandatory attendance at a road safety course. A similar 'stepped' sequence of letters is employed in Latvia.

Table 4.8 Mechanisms for informing motorists of current point level

Country	Number of points-bearing offences
New Zealand	Motorist applies to the relevant authority by phone or in writing (for a fee).
Cyprus	When points are issued motorist is told updated level
Czech Republic	Motorist requests a report (for a fee)
Denmark	Motorist attends Police station for report
Finland	Motorist requests a report (free once per year, else for a fee) Motorist attends Police station for report
France	When points are issued motorist sent a letter with updated level Motorist attends registry for a report Motorist checks website
Germany	Motorist requests a report from traffic authority
Great Britain	When points are issued updated level is recorded on physical licence
Ireland	When points are issued or removed motorist sent a letter with updated level Motorist requests a report by telephone (for a fee)
Italy	When points are issued or removed motorist sent a letter with updated level Motorist requests a report by telephone Motorist checks website

Country	Number of points-bearing offences
Latvia	Motorist checks website
Malta	When points are issued updated level is recorded on physical licence
Poland	Motorist attends Police station for report
Romania	Motorist submits a request for report, and attends Police station to collect
Spain	Motorist requests a report from traffic authority Motorist checks website

BestPoint experts suggested providing drivers with information about their (advanced) point level should strengthen the LPS deterrence function. On the other hand, motorists who know their LPS includes warning letters may be particularly likely to withhold concern about points until they receive a letter. Other experts appeared to support warning letters as providing drivers with a fair opportunity to avoid a suspension, saying they are particularly important for professional drivers. Similarly, one Finnish expert spoke positively of the warning letter in terms of avoiding suspensions resulting from lack of knowledge, and so reducing driving while suspended.

While no evaluation of warning letters specific to licensing point thresholds was identified, Jones (1997) argued on the basis of his own and earlier research that 'driver improvement letters', issued after a certain number of offences in a specified time, may result in small improvements to driving safety. However, the effectiveness of such letters may vary depending on their phrasing, and on the characteristics of the offender (for details see Jones 1997).

Most BestPoint countries have systems by which motorists are informed of their current point levels, in accord with the LPS deterrence function (see table 4.8). In some countries this occurs only when points are issued. In other countries motorists can check their point level by contacting the relevant authority in person or by making a telephone call or checking online. For example, Australian jurisdictions have on-line systems for checking licensing points. Motorists must pay for requested reports in some countries, but generally not in those with online systems. In New Zealand motorists must apply to the relevant authority by phone or in writing and pay a fee. Many BestPoint experts suggested all drivers should be able to check their current point level easily, and the internet was suggested as a good avenue for this.

5 Evidence regarding the most effective practices in using licensing point systems

This report does not focus on whether or not LPSs are effective in improving road safety, but rather on understanding the human factors that influence their efficacy. Thus, evaluations of LPSs are considered mainly with a view to identifying strategies for improving LPS efficacy.

5.1 Population level evaluations following the introduction of a licensing point system

Table 5.1 summarises the 21 studies that have examined the impact of introducing a LPS in Brazil, Czech Republic, Ireland, Italy, Kuwait and Spain. In general, these studies report improvements at a population level in a range of road safety indicators, including offences, crashes, injuries and fatalities. However, it is often difficult to attribute these improvements to the LPS alone, because:

- Only a few of the studies account for improving trends in road safety due to initiatives prior to, or after, the introduction of the LPS either methodologically ie via control groups: (in the Czech Republic: Montag 2014) or statistically (in Italy: Benedettini and Nicita 2009; de Paola et al 2013; Zambon et al 2007); (in Kuwait: Akhtar and Ziyab, 2013); (in Spain: Castillo-Manzano et al 2010; Izquierdo et al 2011; Novoa et al 2010; Pulido et al 2010).
- Introduction of the LPS was often accompanied by other road safety initiatives. For example, fines were increased for some offences in Brazil (de Figueiredo et al 2001); Czech Republic (Montag 2014); and Italy (Zambon et al 2007). New offences were added in the Czech Republic (Montag 2014), speed limits were reduced in Italy (Zambon et al 2007) and driving while disqualified became punishable by vehicle impoundment in Brazil (Liberatti et al 2001).
- Introduction of a LPS is typically accompanied by intensive media coverage (including public education campaigns) and increased Police activity (eg in the Czech Republic: Mikulik 2007); (in Italy: Farchi et al 2007; Zambon et al 2007; Zambon et al 2008); (in Spain: Pulido et al 2010; Izquierdo et al 2011).
- Some measures may show an impact of the LPS that does not necessarily reflect a change in road safety. For example, recorded offences may reduce because motorists learn to avoid apprehension, or drive less, without actually improving their behaviour (Dionne et al 2011). There may be underreporting of crashes to Police for fear of acquiring licensing points (Montag 2014).

Addressing the role of media coverage and policing in the initial and ongoing impacts of a LPS is complicated. Both of these factors should be important to the LPS function; because for the expected cost associated with a LPS to influence behaviour, motorists must know about the system and believe they will acquire penalty points when they offend. To this extent public information and Police activity can be viewed as *critical components* of a LPS. At the same time, both media attention to (any) road safety issue and heightened Police activity could make a contribution to road safety that is independent of the LPS. Moreover, evaluating a LPS during the period of heightened media and policing activity immediately following its introduction may give an inflated estimate of its impact in the long term when such activity generally wanes. Finally, Police activity influences the validity of recorded offences as a road safety indicator in a complex way: increased Police activity should increase the probability of apprehension, hence increasing recorded offences, while also increasing deterrence and decreasing offending.

Table 5.1 Population level evaluations following the introduction of a licensing point system (MVC= 'motor vehicle crash'; s=significant; ns=not significant; snt=significance not tested)

Country	Date of introduction	Authors	Specific location	Study period	Statistical control	Outcome variable	Result	
Brazil	Jan-98	Liberatti et al (2001)	The pre-hospital emergency service, City of Londrina	Jan–Jul 1997 vs Jan–Jul 1998	Chi-square	Car occupants: % treated using seatbelts % treated with alcohol on the breath % treated driving underage Treated Motorcyclists: % treated using seatbelts % treated with alcohol on the breath % treated driving underage	 45.0% to 62.2% (s) 19.0% to 17.0% (ns) 1.7% to 2.1% (ns) -20% (snt) 31.2% to 66.2% (s) 21.0% to 15.3% (s) 9.0% to 5.4% (s) -9% (snt)	First 6 months compared with corresponding period in the year pre-LPS
		de Figueiredo et al (2001)	Brazilian interstate highways (most states) The Level 1 trauma centre, Sao Paolo	Jan–Dec 1997 vs Jan–Dec 1998		Police-recorded offences Police-recorded crashes Police-recorded immediate fatalities MVC-related admissions	-49.5% (snt) -21.3% (snt) -24.7% (snt) -33.2% (snt)	First 12 months compared with the 12 months pre-LPS
		de Andrade et al (2008)	City of Londrina	Jan–Dec 1994 vs Jan-Dec 1999		MVC-related fatality rate (per population)	-28.4% (snt; largest decrease in time series 1994–2005) *Appeared most pronounced in first months*	Second 12 months compared with 12 months 4 years pre-LPS
Czech Republic approx. 3 in 2	Jul-06	Montag (2014)		Jan 2004–Dec 2008	Regression least-square differences-in-differences; Austria and Germany as control groups; car age, GDP per population, freight transport km covariates	MVC-related fatality rate (per registered car)	During first 3 months: approx. 30% (s), already fading and ns thereafter (Discuss indications that Police activity has reduced)	

Country	Date of introduction	Authors	Specific location	Study period	Statistical control	Outcome variable	Result	
Ireland approx. 3 in 3	Oct-02 (expanded 2006)	Healy et al (2004)	National Spinal Injuries Centre	Nov 1998 - Oct 2002 vs Nov 2002 - Oct 2003	Chi-square	MVC-related spinal-injury admissions	First 6 months: - 48.4% (s) Second 6 months: - 0.9% (ns) compared with average for the corresponding periods in the 4 years pre-LPS	First 6 months and second 6 months compared with average of corresponding periods in the 4 years pre-LPS
		Donnelly et al (2005)	6 Dublin hospitals Waterford regional hospital Beaumont hospital, Dublin	Nov 2000 - Apr 2002 vs Nov 2002 - Apr 2003		MVC-related femoral-shaft-injury (a high energy injury) Dublin Waterford MVC-related injury discharge (Beaumont)	-2.9% (snt) -1.6% (snt) -43.8% (snt) compared with average for the corresponding periods in the 2 years pre-LPS	First 6 months compared with average of corresponding periods in the 2 years pre-LPS
		Hussain et al (2006)	National Maxillofacial Unit, St James Hospital, Dublin National Neurosurgical Unit, Beaumont Hospital, Dublin	Nov 2001 - Oct 2002 vs. Nov 2002 - Oct 2003		MVC-related maxillofacial-injury operations	-61.4% (snt) First 6 months: -55.5% (snt) Second 6 mnths: - 66.7% (snt) compared with the corresponding period pre-LPS No significant change in the severity and the pattern of injuries, the number of days spent in ICU, or the total length of stay in the hospital	First 12 months compared with the 12 months pre-LPS; First 6 months and second 6 months compared with corresponding periods in the year pre-LPS
		Lenehan et al (2005)	Emergency Department, Level 1 trauma centre, Cork University Hospital	Nov 2001 - Oct 2002 vs. Nov 2002 - Oct 2003		MVC-related admissions MVC-related patient-bed-days	-36.6% (snt) -47.4% (snt) Reduction in "high-velocity" injuries most pronounced (snt)	First 12 months compared with the 12 months pre-LPS
		Butler et al (2006)	National Spinal Injuries	Nov 1998 - Oct 2002	Chi-square	MVC-related spinal-injury admissions	First 6 months: -48.4% (s)compared with average for	First 6 months compared with average of corresponding

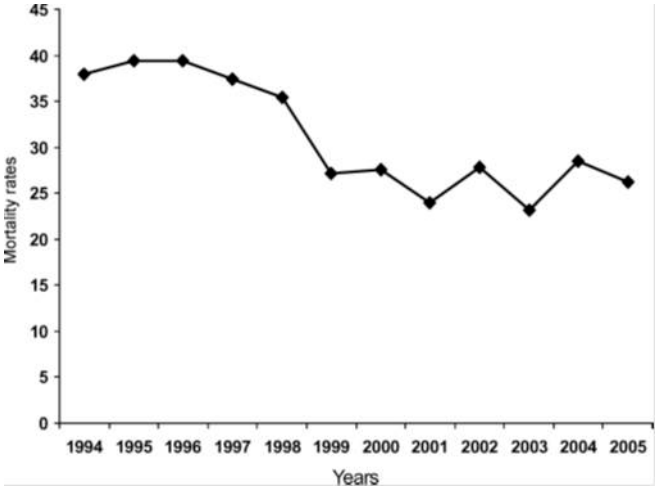
Country	Date of introduction	Authors	Specific location	Study period	Statistical control	Outcome variable	Result	
			Centre	vs. Nov 2002 - Oct 2004			the corresponding period in the 4 years pre-LPS (cf Healy et al 2004) First 2 year average: -27% (ns) compared with average for the 4 years pre-LPS	periods in the 4 years pre-LPS;Average of first 2 years compared with average of the 4 years pre-LPS
		Ellanti et al (2015)	National Referral Centre for pelvic and acetabula trauma	1999-2008		Surgeries for MVC-related pelvic and acetabula trauma	1 year: -17.0% (snt) 2006: similar to pre-LPS 2007 - 2008: dr	First 12 months compared with the 12 months pre-LPS. Uncontrolled consideration of patterns thereafter
Italy 3 in 1	July 2003; Announced March 2001 Named start (for Jan 2003) Jan 2002 Revised start (for June 2003) Feb 2003	Farchi et al (2007)	30 emergency departments, The Lazio Region	Jul 2001 – Jun 2003 vs. Jul 2003 - Jun 2004	Poisson regression; age, gender as covariates	MVC-related ED visits MVC-related admissions MVC-related fatalities	-12% (s); *decreasing post-LPS* -16% (s); *decreasing post-LPS* -4% (ns); *no trend post-LPS* *Appeared most pronounced in first months*	Third month and 15th month post-LPS compared with a third month pre-LPS
		Zambon et al (2007)		Jan 1999 - Dec 2004	ARIMA time series (controls trends); fuel consumption, number vehicles as covariates	Police-recorded MVC-related injuries Police-recorded MVC-related fatalities	-19%; *increasing pre-LPS, decreasing post-LPS* - 18%; *no trend pre-LPS, decreasing post-LPS* *Appeared most pronounced in first months*	Time series from 4.5 years pre-LPS to 18 months post-LPS
		Zambon et al (2007/2008)	The Veneto Region	Apr 2003 vs. Oct 2004 & Oct 2004 vs. Oct 2005	Chi-squarePoisson regression;	Observed seatbelt wearing	54.5% to 82.8% for drivers (s) Minimal change from 3 to 15 months	Third month and 15th month post-LPS compared with a third month pre-LPS
		Benedettini & Nicita (2009)	Highways	Mar 2001 - Sep 2008	LOWESS estimate of change over time; Police patrols, speed	Police-reported speeding offence rate (per vehicle)	March 2001 - Jan 2002: -72.9% Jan 2002: *Increasing*	

Country	Date of introduction	Authors	Specific location	Study period	Statistical control	Outcome variable	Result	
					cameras, as covariates Regression discontinuity	 Police-reported crashes Police-reported fatal crashes	March 2003: *Decreasing* December 2003: *Increasing* *Constantly decreasing pre-LPS, decreasing at an accelerating rate post-LPS, especially for fatal crashes. Returned to constantly decreasing after a few months. Fatal crashes (only) followed a similar course to speeding offences.*	
		De Paola et al (2010)		Mar 2001 - Dec 2009; focus on Jul 2001 – Jun 2003 vs. Jul 2003 – Jun 2005	Poisson regression discontinuity; weather, Police patrols, speed cameras, unemployment rate, petrol price as covariates	Police-reported crashes/day Police-reported injuries/day Police-reported fatalities/day	-9.5% (s) -19.9% (s) -35.6% (s) *Similar pattern for 6 months or 1 year post-LPS*	
Kuwait	Jul-06	Akhtar and Ziyab (2012)		Jan 2003 – Dec 2009	ARIMA time series (controls trends); (population, registered vehicles, road-related oil consumption not required as covariates)	Severe or fatal MVC-related injuries	14.6% reduction (s). *Effect appeared to reverse after first few months.*	
Spain 2 in 2	Jul-06	Pulido et al (2010)	Non-urban roads	Jan 2000 – Dec 2007	ARIMA time series (controls trends); policy prioritising road safety (2004)	Police-reported fatal crashes (24 hours)	-14.50%	Time series to 18 months post-LPS
		Novoa et al (2010)		Jan 2000 – Dec 2007	Time series (controls trends); policy prioritising road safety (2004), unemployment rate, GNP, fuel consumption as covariates.	Police-reported MVC-related injuries Police-reported MVC-related fatalities Police-reported operator in injury collision Police-reported operator in fatal collision	-3% (ns) -8% (ns) -2% (ns) -10% (s) *Initial effect appeared to reverse quickly for injuries, to maintain for serious injuries (incl. killed)*	Time series to 18 months post-LPS

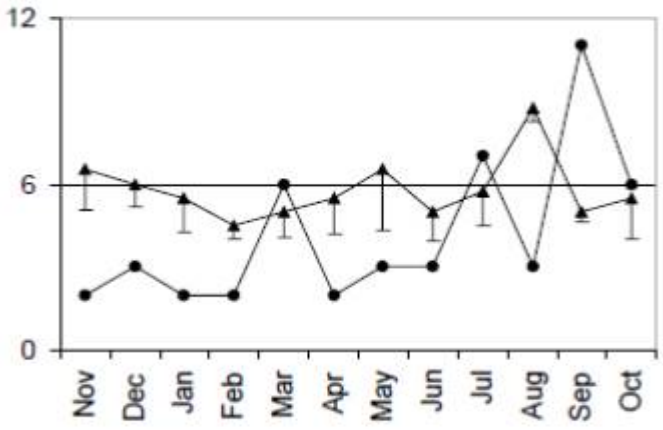
Country	Date of introduction	Authors	Specific location	Study period	Statistical control	Outcome variable	Result	
					Separate models testing for short-term and announcement effects	Police reported serious injury, men Police reported serious injury, women	First 6 months: -9% Second 6 months: -15% Third 6 months: -15% First 6 months: -10% Second 6 months: -15% Third 6 months: -14%	
		Castillo Manzano et al (2010)	Highways and built-up areas	Jan 1980 - Dec 2007	Multivariate unobserved component models (controls trends); with other legal changes (1992), Easter, road-related oil consumption, Industrial Production Index	Injuries on highway Injuries in built-up areas Fatalities on highway Fatalities in built-up areas	TC: -15.6% (s) / LC: -9.7% (s), *duration between 6 months & 1 year* TC: - 16.0% (s) / LC: - 11.1% (s), *duration btwn 6 months & 1 year* TC: -16.3% (s) / LC: - 12.6% (s), *predict duration at least 2 years* TC: 3.8% (ns) / LC: - -2.7% (ns)	Time series to 18 months post-LPS; TC = transitory change, LC = Level change
		Izquierdo et al (2011)	Non-urban roads	Jul 2005 - Jun 2006 vs.Aug 2006 - Jul 2007 Jan 1995 - Jun 2009	ARIMA time series (controls trends); policy prioritising road safety (2004) Penal Code reform (2007)	Positive alcohol/control Speed offences/radar control Non-use of seatbelt offence Non-use of helmet offence Police-reported MVC-related fatalities (24h)	-25.0% (snt) -12.2% (snt) -17.1% (snt) -24.0% (snt) -11.3% to -13.9%*Post-LPS additional reductions during summer months (esp. July-Aug 2006). Penal code reform: -17.8% to -20.7%*	
		Lopez Ruiz et al (2014)		Jan 2004 - Dec 2010	Interrupted time series with comparison group (non-MVC occupational injuries; causing at least 1 day off work)	MVC-related non-fatal occupational injuries - work hours - commuting hours MVC-related fatal occupational injuries - work hours - commuting hours	7% (ns) 10% (s) -19% (ns) -4% (ns) *non-*MVC *occupational fatalities decreased significantly post-LPS*	
United Arab Emirates 24 in 1	Mar-08	Mehmood (2010)	3 arterial roads in Al Ain	Dec 2007 - May 2008	t-tests	Mean observed speed	No sig reduction	

Most studies of the time course of improvements in road safety following the introduction of LPS and using sufficiently disaggregated data, suggest initial improvements are rapid but then either level off or deteriorate (see figure 5.1). For example, Zambon et al (2008) reported a large increase in observed seatbelt-wearing three months after the LPS came into force in Italy, but no further change at 15 months. Montag (2014) reported a significant (30%) reduction in the MVC-related mortality rate (per car) within the first three months after LPS-introduction, after which the effect reduced and was no longer significant. Healy et al (2004) reported a significant (48%) reduction in MVC-related admissions to the National Spinal Injuries Centre during the first six months of operation of the LPS in Ireland, which was no longer significant when assessed for the second six months (compared with the average for the corresponding periods in the four years pre-LPS). In contrast Hussain et al (2006) reported a significant reduction in MVC-related maxillofacial operations for both the first and second six months (compared with the corresponding period in the year pre-LPS).

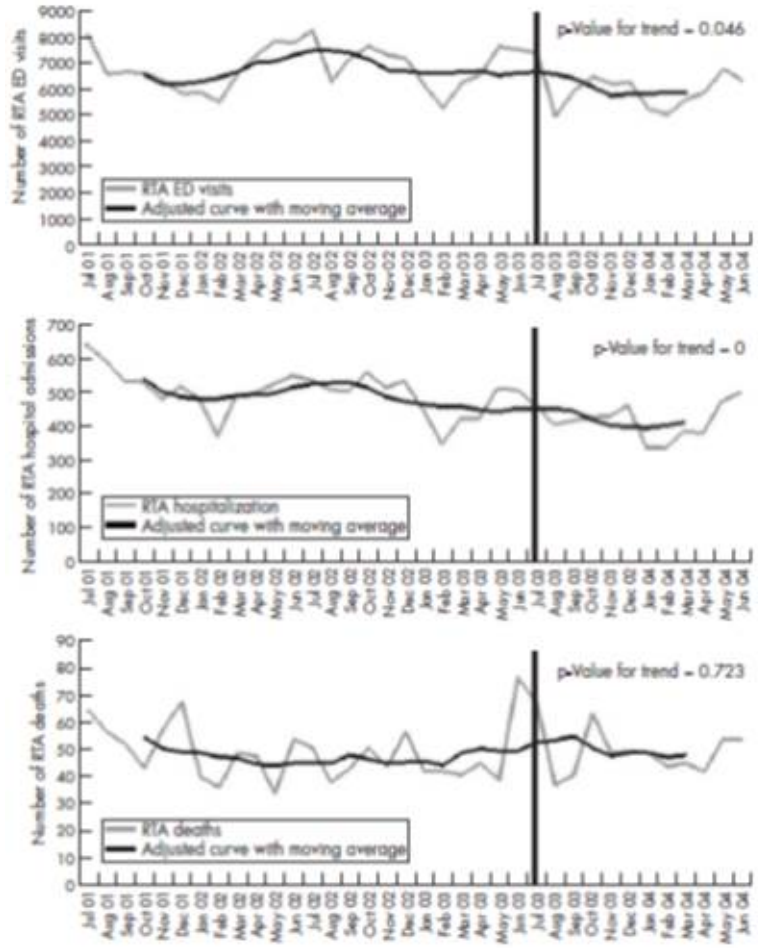
Figure 5.1 Patterns of road safety indicators disaggregated by month or year for a) Brazil, b) Ireland, c) Italy, d) Kuwait and e) Spain



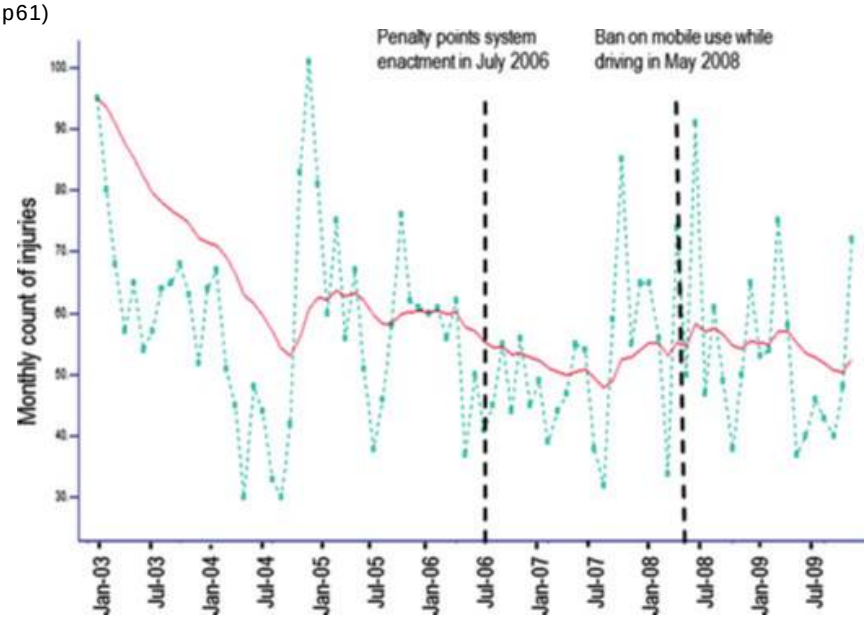
a) MVC-related mortality rate (per 100,000 population), Londrina, Brazil (LPS introduced Oct 1998, from de Andrade et al 2008, figure 1, p452)



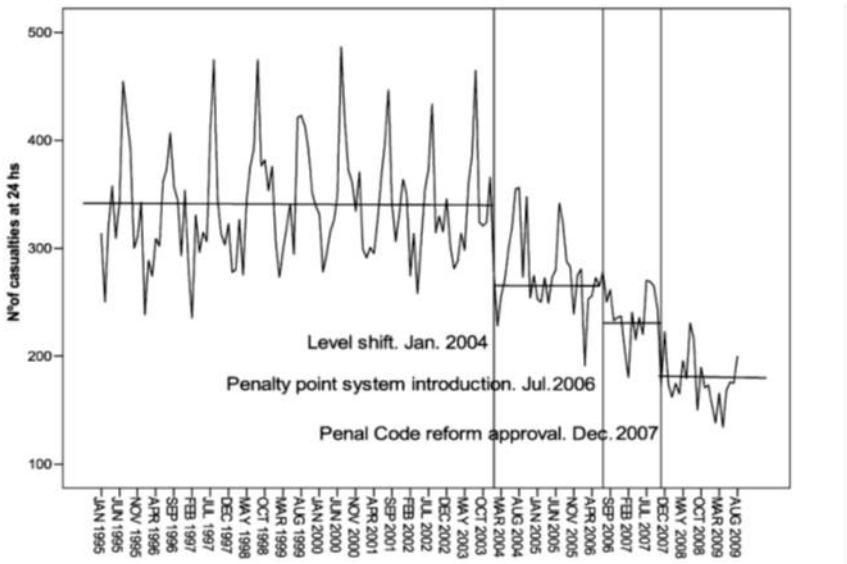
b) MVC-related admissions to the National Spinal Injuries Centre, Ireland from November 2002 to October 2003 (circles) and the average of the preceding 4 years (triangles) (LPS introduced October 2002; adapted from Healy et al 2004, figure 1, p909)



c) MVC-related ED visits, admissions, and fatalities, Lazio Region, Italy (LPS introduced June 2003, from Farchi et al 2007, figure 1, p61)



d) MVC-related severe injuries (incl. fatalities), Kuwait (LPS introduced July 2006; from Akhtar and Ziyab 2013, figure 1, p745)



e) MVC-related fatalities, Spain (LPS introduced July 2006, Izquierdo et al 2011, figure 3, p913)

These patterns raise questions about the causes of the observed changes. Typically, researchers have suggested that improvements following the introduction of a LPS decline as media coverage and Police activity return to pre-LPS levels, and have concluded both are critical to a positive LPS impact (eg Benedettini and Nicita 2009; Butler et al 2006; Ellanti 2015; Izquierdo et al 2011). The immediacy of improvements is also consistent with a strong independent effect of media coverage and Police activity – because most LPS key functions would have some delay in their effect (depending on the features of a particular LPS, such as years allowed for threshold or duration of points). That is, the impact of a LPS could be expected:

- via deterrence only when drivers start to accrue sufficient points for licence suspension to seem like a real possibility (section 3.1)
- selection only when drivers accrue sufficient points for licence suspension to occur (and comply with the suspension; section 3.2)
- correction only when drivers accrue sufficient points to participate (voluntarily or non-voluntarily) in road safety courses (assuming such courses are beneficial; but see section 3.3).

No study to date has considered the patterns that may be produced by the interplay of these LPS functions at the population level. Very few studies have a follow-up period of two years or more (see table 5.1).

Nonetheless, there are some aspects of these findings that suggest a 'true' LPS effect. For example, De Paola et al (2010) using a discontinuity approach to account for trends in road safety, found a reduction in recorded offences per day that was less pronounced for offences that were less affected by the introduction of the LPS (because they already attracted licence suspensions pre-LPS), with the number of Police patrols controlled statistically.

It is difficult to draw conclusions about the optimal features of a LPS (eg threshold, inclusion of road safety courses). First, we are not aware of any study that has sought to evaluate specific features. Second, while it may seem interesting to examine the impact of a particular feature by comparing the impact of LPSs with and without (or with different levels of) the particular feature, such comparisons are flawed in a variety of ways, including:

- There can be differences in the detail of a feature, eg the format or content of road safety courses.
- There are other differences in the LPSs.
- There are other differences in the environments of the LPSs at the time of the relevant study, including regulatory, climatic and cultural differences.
- There are differences in the relevant studies, including in design and outcome measures.

5.2 Population-level evaluations of changes to licensing point systems

A few studies have examined the effect of expanding or strengthening LPSs, including double point periods. Observed improvements in road safety indicators are again likely to reflect other factors, including heightened media attention (including public education campaigns) and Police activity.

Saeed et al (2010) considered the effect of adding 'not wearing a seatbelt' to the points-bearing offences in the Irish LPS (in 2003) in their review of ocular-injury cases admitted to the Opthalmology Department of Waterford regional hospital between October 2001 and September 2007. They reported a statistically significant (60%) reduction in the proportion of ocular-injury admissions that were MVC related. However, the number of MVC admissions was low in both periods (10 and 9, respectively), and there was no control for other factors that may have contributed to the observed difference (in particular trends in road safety).

Sze et al (2011) assessed the effect of increasing the licensing points and fines attracted by red-light running, and deploying red-light cameras in Hong Kong in 2006. Observations were made one month before, one month after and 13 months after the change. Controlling for temporal variation, the presence of a red-light camera and intersection configuration, a significant reduction was observed in red-light running. It is not possible to gauge what extent the reduction can be attributed to the increase in licensing points.

During a trial period in 2002/3 the licensing points for speeding, drink-driving and restraint-related offences were doubled during specified holiday periods in Western Australia. Compared with corresponding periods in 2001, 'double point periods' showed a greater reduction than non-double point periods in total crashes, injury crashes, fatal crashes, as well as speed-related crashes and alcohol-related fatal crashes (Batini 2004). For all these offences, rates per enforcement hour were 15% lower than equivalent double point periods in 2001, and lower than in non-double point periods. Police reported 7.9% greater activity during double point periods.

During the 1997 Easter holiday period, and all subsequent public holiday periods, licensing points were doubled in NSW for speeding offences and increased by one for other offences. Graham (1998) compared the 'increased licensing points' periods during 1997/8 with corresponding periods in 1996/97. Reductions in crashes were observed for Easter 1997, Christmas/New Year and Easter 1998. A reduction in total offences and non-camera offences was reported for all periods except Christmas/New Year and Australia Day (despite increased policing; camera excluded because of more sensitive camera technology). BAC charges were reduced except in June 1997. Although Graham (1998) argued policing and media were comparable to pre-implementation public holidays he also identified that the introduction of the measure in Easter 1997 was part of a 'package including increased policing and media'. Further, results showed increased policing and very high public awareness of the measure in surveys in Easter 1998 and June 1998. Moreover, because the package was introduced in response to unusually high crash rates in previous holiday periods, results may partly reflect regression to the mean. No statistical tests were reported.

5.3 Person-level responses to introduction or changes in licensing point systems

The few studies that have investigated how implementation, or strengthening, of a LPS influences individuals' behaviour suggest a positive effect. However, most studies employed self-reporting of behaviour, which could introduce reporting biases (including demand characteristics).

For example, Gras et al (2014) surveyed 1,452 undergraduate students (19 to 30 years old) two years after the introduction of the LPS in Spain. Participants reported on their frequency of risky behaviour and use of safety equipment before and after the LPS. Analysis was conducted separately for males and females. The proportion of each group that reported at least occasionally performing each of five risky driving behaviours after the introduction of a LPS was lower than before its introduction. Similarly, the proportion of each group that reported always using safety equipment after the introduction of a LPS was higher than before its introduction – for five of six scenarios. The authors acknowledged several limitations of their study. including the use of self-reporting, the non-representative sample, and the possibility that findings reflected participants driving more safely as a result of greater maturity. Results may also have been biased by changes in licence status, given 15% of the sample did not drive in the six months before the introduction of a LPS.

In a national telephone survey, 2,014 Spanish drivers were asked directly about the influence of the introduction of the LPS on their behaviour (Montoro Gonzalez 2008). Results suggest moderate behavioural improvement, particularly for speeding and using a mobile phone while driving. The change was slightly more pronounced in drivers who were charged during the previous year.

Drivers also report improving their behaviour during double point periods. A survey of 1,232 Western Australian drivers (Batini 2004) found 66% reported reducing their speeding, 33% reported reducing their alcohol consumption when driving, and 25% reported increasing their restraint use during double point periods. Again, this may include the effects of publicity and policing.

5.4 Person-level responses to changes in points

A number of studies have examined the way in which individuals' behaviour changes when they acquire or lose licensing points, and results have been consistent with the predictions made based on deterrence theory. Specifically, motorists' likelihood of offending and crashing, appears to reduce as they get closer to the point threshold, and increase as they move away from it (eg due to points expiry).

Redelemeier et al (2003) examined how being convicted for point-bearing offences and no-point-bearing offences influenced the risk of experiencing a fatal crash in a case-crossover design using licence data from Ontario (Canada). Among the 8,975 licensed drivers who had fatal crashes during the study period, the risk of a fatal crash in the month after a conviction was significantly (35%) lower than in a comparable month with no conviction for the same driver. This safety benefit was greater for convictions for which two to three points were applied compared with no-point convictions, and also greater for points-bearing speeding violations than no-point speeding violations.

Diamantopoulou et al (1997) reported that for drivers in Victoria Australia the association between accumulation of licensing points during 1991/1992 and the probability of being involved a crash during 1993/1994 was positive. This is consistent with the hypothesis that risky driving contributes to crashing. However, the association weakened with the number of points accumulated, suggesting a tendency for infringers to improve their behaviour as they approached the threshold for licence suspension.

Using data from the Quebec public insurance plan for 1983 through 1996, Dionne et al (2011) found that effort (operationalised as reduced likelihood of conviction) increased as points accumulated and decreased as points expired. The likelihood of conviction started to reduce only after seven points (when a letter is sent). Convictions also demonstrated a pattern that reflected the step-structure of an 'insurance pricing' scheme (involving payment of a supplementary insurance fee every two years depending on the number of points acquired in the previous two years) from its introduction in 1992. Dionne et al (2011) also considered crashes, and found patterns were less clear, perhaps in part because the analysis was not restricted to at-fault crashes.

Further studies have also shown increases in the likelihood of offending with changes away from the threshold (eg in Italy, Basili et al 2015). Chandler (2012) examined data from Quebec for 1998 to 2010 and used the expiration of points to address the possible heterogeneity of drivers with a different number of points. Specifically, comparisons were made among drivers with the same number of points at one time, for some of whom particular numbers of points would subsequently expire. In a system with a suspension threshold of 15 points, reduction from 14 to 11 points increased the probability of offending by 80%, whereas reduction from 10 to 7 points increased the probability of offending by 50%.

Several earlier studies also showed 'slowing' of offending as the point threshold was approached in the UK (where the threshold is 12 points). Broughton (2008) found that compared with drivers with no convictions in the previous two years, drivers with one conviction were slightly less likely to offend, and drivers with two much less likely. Moreover, the observed likelihood of offending slowed as drivers reached nine points. Haque (1990) examined the offence patterns of all drivers in Victoria (Australia) who were charged for a second offence within three years of their first offence between March 1982 and February 1985. They found the time interval between second and third offences was longer than the time interval between first and second offence (for all studied drivers with more than four years of experience at the start of the first interval). This was taken to indicate a (specific) deterrent effect of licensing points.

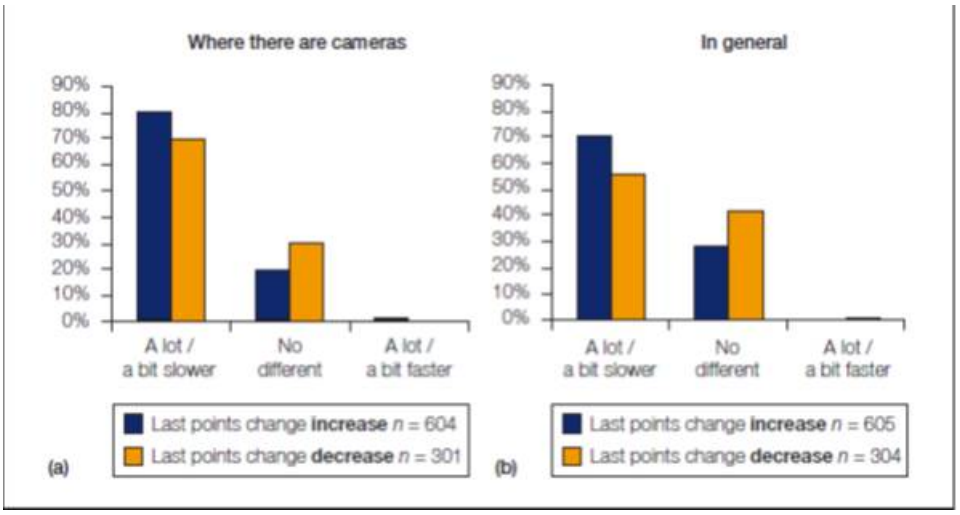
Taking a somewhat different approach, Abay (2015) sought to exploit the feature of the Danish LPS whereby drivers exceeding the speed limit by more than 30% receive one point and a fine, while those exceeding the speed limit by less receive only a fine. Drivers who incurred licensing points in the treatment period reduced their frequency of traffic offences by 15–30%, and their likelihood of committing traffic offence by 11–20%. Analysis suggested a response to each point, but also that response increased with the number of points accumulated (as predicted by deterrence theory). These findings must be interpreted with caution because the research methodology involved complicated, and potentially biasing, sample selection procedures.

Wong et al (2009) used a stated preference methodology in which 220 public light bus drivers in Hong Kong each ranked seven penalty combinations 'for the perceived effectiveness in combatting' red-light running. Penalty combinations were created from three levels of fines and three levels of licensing points ($600/three points; $1,000/three points; $450/five points; $600/five points; $1,000/five points; $450/eight points; $600/eight points). Licensing points were found to influence perceived effectiveness in combatting red-light running. However, the result is difficult to interpret given the imbalance in the penalty combinations. Moreover, the study was conducted immediately after the introduction of a package to curb red-light running, in which licensing points and fines for red-light-running increased, cameras were introduced, and a public education campaign was run – potentially skewing results. Finally, the sample was highly selective, in that public light bus drivers were approached because they are a key group in terms of offending and crashing, and only 34.4% of those approached responded.

Studies based on self-reported response to changes in points are broadly consistent with the results observed for routinely collected data. Corbett et al (2008, reported in Corbett et al 2010) surveyed 1,115

drivers who were selected according to their prior points and suspension history (oversampling drivers with prior suspensions and high point counts). Respondents were asked to indicate how they had driven in general, and where cameras were present, since their last change in penalty points, using responses 'a lot slower', 'a bit slower', 'no different', 'a bit faster' and 'a lot faster'. Figure 5.2 shows the percentage giving each response among respondents whose last change in points was a decrease, and among respondents whose last change was an increase.

Figure 5.2 Percentage of drivers whose last change was an increase (in blue), and of drivers whose last change was a decrease (in yellow), who reported driving a lot or a bit slower, no change, or driving a lot or a bit faster, where there are cameras (panel a) and in general (panel b), since their last change in licensing points.



Source: Corbett et al (2010), figure 8, p190

Those whose points increased at the last change were more likely to report having reduced their speeds around cameras (81% did) and in general (71% did) than were those whose points had decreased (70% and 56%, respectively).

Australian and New Zealand drivers who participated in focus groups regarding speed enforcement (Austroads 2013) indicated that prior penalties for speeding and the possibility of losing demerit points or having their licence suspended were not a primary influence on speeding behaviour. However, those who had lost points in the past reported this encouraged them to drive in such a way as to avoid further penalties and suspension of their licence. Those who believed they had little likelihood of ever losing their licence through a build-up of points said the risk of receiving a fine was a greater deterrent, while those who had already accrued points considered demerit points a greater deterrent as they feared the real prospect of losing their licence.

5.5 Human factors which influence the efficacy of licensing point systems

5.5.1 Demographic population segments

Relatively few studies of the effects of an introduction, or change of, LPSs at a population or individual level have reported on differences between population groups.

At the population level, Donnelly et al (2005) reported that during the year following the introduction of a LPS in Ireland, the individuals admitted with MVC-related injuries, and with MVC-related femoral shaft

injuries, were older (significance tests not reported), than during the year pre-LPS. In contrast, no change in age was observed among MVC-related admissions to the National Spinal Injuries Centre (Healy et al 2004) or to the National Maxillofacial Unit (Hussain et al 2006). Farchi et al (2007) reported that the reduction in MVC-related emergency department visits in the Lazio region following the introduction of the Italian LPS weakened with age. The observed reduction was also significantly stronger outside the metropolitan area of Rome. None of these studies found an association between LPS impact and gender. In their examination of the effect of the introduction of the LPS in Spain, Gras et al (2014) found greater improvements in self-reported behaviour among females than males for drink-driving, speeding on the highway and rear-seatbelt use (on urban roads and highways).

At the individual level, a stronger response to changes in points was found for older drivers (Basili et al 2015), women (Basili et al 2015), and drivers who were more reliant on a licence (ie 'individuals who are self-employed, and those who commute longer distance to their workplace' (Abay 2015, p3).

Palamara and Stevenson (2003) examined the trajectory of demerit points (and infringement notices) for speeding incurred by a cohort of 1,277 young West Australian drivers over a period of 36 months from when they obtained their licence at the age of 17. At the time of the study in Western Australia, exceeding the speed limit by at least 10 km/h attracted between one and six demerit points depending on the level above the limit, and reaching a threshold of 12 demerit points could result in licence suspension (for all drivers). Within 36 months of licensing, 66% of the cohort incurred at least one traffic infringement notice for speeding and 94% of offending drivers accumulated one or more demerit points through speeding. Only 2% qualified for licence suspension under the then-operating threshold. Approximately 18% of the cohort had incurred at least five demerit points, with a maximum of 38. Approximately 61% of offending drivers were 'repeat speeding offenders'. The mean number of demerit points lost by infringing drivers was highest in the second year of licensing. Multivariate analysis showed that male gender, a high disposition for risk taking (as measured by scores on a scale of impulsivity and sensation seeking), high self-rated confidence and adventurousness as a driver (a measure of driving style and skill), and the low level of practice of other health-related behaviours (as measured by scores on items assessing smoking, use of alcohol, frequency of exercise and use of sunscreen) were significant risk factors for the total number of speed-related demerit points lost at 12, 24 and 36-months post-licensing (see full list of included variables in Palamara and Stevenson 2003, table 3.4). Three of these variables (male, confidence-adventurousness, and disposition to risk-taking) were also found to distinguish single offenders from repeat offenders. There was no evidence to suggest the penalties for speeding were likely to influence two of the identified risk factors for speeding (confidence-adventurousness and disposition to risk-taking). Based on these results the authors recommended adopting a more restrictive demerit point system for the probationary licensing period. Specifically, it was recommended the number of demerit points that could be accrued before licence suspension should be reduced to four points in the first year of the probationary period with two points added for the second year of licensure, giving a total of six points for the probationary period.

A few research groups have focused specifically on how different segments of the population respond to licensing points. Broadly, findings suggest some drivers are largely compliant (either to keep points, or for other perceived benefits of compliance), and some drivers are largely non-compliant regardless of any LPS, which they attempt to circumvent. In between there appear to be a large group of drivers who are sometimes non-compliant and modify their behaviour increasingly as they approach the point threshold (either becoming more compliant or otherwise avoiding points).

Basili and colleagues (Basili and Nicita 2005; Basili et al 2015) offer a segmentation that is the most closely aligned with deterrence theory. These researchers assume three types of agent: those who value

keeping points (deterrence[5]), those who consider points to be expendable to some degree for economic gain (partial deterrence), and those who value the gains of expending points higher than licence suspension (non-deterrence). They argue some recidivism is required to induce deterrence in partially deterred agents, and for non-deterred agents only increasing the cost of suspension (eg by making it longer) can be effective. In their analysis of Italian licence data, Basili et al (2015) found partially deterred drivers showed the strongest response to points being cancelled (ie showed greater increases in the likelihood of offending).

Corbett et al (2008, reported in Corbett et al 2010) surveyed 1,115 drivers in the UK, which has a 12-point threshold. Initially drivers from four groups were targeted:

1 Those currently with nine points, including for speeding

2 Those previously with six points but currently less

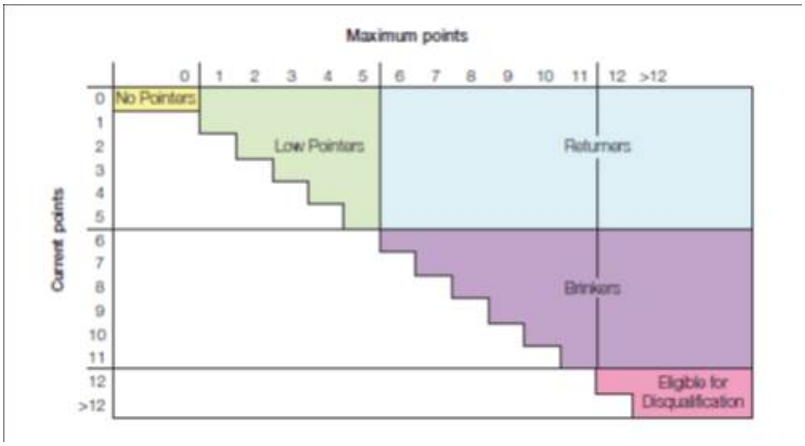
3 Those previously suspended due to reaching the point threshold, including for speeding but now reinstated

4 Those with no points.

However, based on self-reports of current and past maximum number of licensing points, and suspensions, six groups were derived (summarised in figure 5.3):

- 'No pointers' – no points on licence in last four years
- 'Low pointers' – a maximum of five points ever and now 0–5 points
- 'Returners' – those who had returned from greater than six points in the last four years to less than six points now
- 'Brinkers' – those having 6–11 penalty points.
- 'Eligible for disqualification' – currently 12 or more points, but claim never to have been disqualified.
- 'Previously disqualified' – through points, including for speeding. Licence returned in the last two years or if 'have ever been disqualified'.

Figure 5.3 Classification of driver groups based on based on self-reports of current and past maximum number of licensing points and suspensions



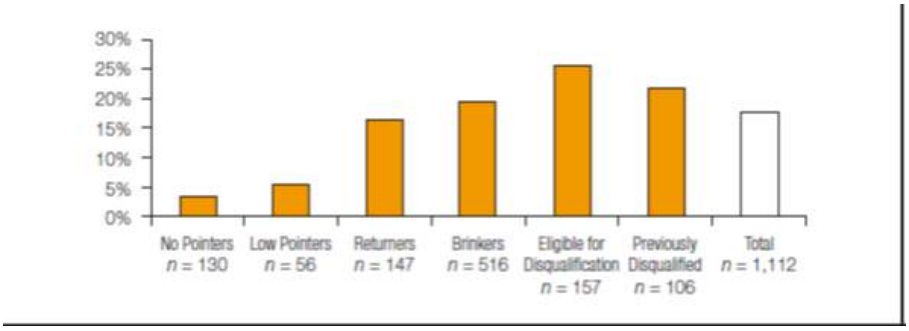
Source: Corbett et al 2010, figure 2, p181

[5] While the authors use the term 'deterrence', drivers who value points may be fairly compliant anyway.

Despite issues with sampling and self-report, and ambiguity of causal direction (for example, particular attitudes to penalties may have contributed to an individual having a particular points status, or vice versa), it is interesting to consider how the different groups responded to relevant survey questions.

Drivers with points are more likely to drive more than one type of vehicle, have higher annual mileage, have a lower awareness of the dangers of speeding, and are more likely to have crashed in the last three years. In terms of response to speed cameras, the modal response for 'no pointers' and 'eligible for disqualification' was 'compliance' ('I tend to drive... within the speed limit regardless of cameras'), while the modal response for low pointers, returners, brinkers and previously disqualified was 'deterrence' ('I tend to drive... within the speed limit all along roads where I think there are cameras because I have slowed down to avoid being caught by them'). The percentage of each group who reported owning radar detectors is shown in figure 5.4.

Figure 5.4 The percentage of each group from Corbett et al (2010) that reported owning a radar detector



Source: Corbett et al 2010, figure 9, p190

All participants were asked which of a range of threats or rewards would most encourage them to comply with speed limits. Point-to-point cameras was the most frequently endorsed threat among the four higher points groups, and overall 'a halved insurance bill for having no points in one year' was the most frequently endorsed reward for all groups (and especially the two low points groups). All but two of the initiatives were most endorsed by no pointers. In each of the high points groups, between 7 and 8 in 10 respondents agreed they would change their driving style to avoid disqualification. Nonetheless 24% of returners, and 15% of brinkers believed their driving style would be unlikely ever to lead to disqualification (see table 5.2). Only 8% of previously disqualified respondents, compared with 75% of no pointers, believed their driving style would be unlikely to lead to disqualification. Eleven percent of brinkers and 9% of returners said they would give points to someone else to avoid disqualification, with 5% of eligible for disqualification the next most likely to do this (see table 5.2).

Table 5.2 Percentage of each driver group endorsing each of four statements relating to licence disqualification and demerit points (adapted from Corbett et al 2010)

Country	No. pointers (n=130)	Low pointers (n=56)	Returners (n=149)	Brinkers (n=517)	Eligible for disqual (n=157)	Previously disqual (n=106)	Total (n=1,115)
I would change the way I drive if I thought it would result in disqualification	47%	55%	75%	72%	80%	72%	70%
I don't think there is anything I could do to avoid being disqualified	6%	2%	10%	15%	12%	21%	13%
My style of driving is unlikely ever to lead to disqualification	75%	59%	24%	15%	5%	8%	23%
I would get someone else to take the points	1%	2%	9%	11%	5%	3%	7%

Using survey data collected from 3,152 drivers in Australia and New Zealand, Austroads (2013) conducted a segmentation analysis on the basis of self-reported speeding, attitudes to speeding and speed enforcement. Response to licensing points was mentioned only for the largest of the six identified segments, which was defined as having the attitude that 'Responsible driving should be common sense, not a cash cow' (n=552). This segment of drivers was most likely to report an influence of fines and licensing points on their behaviour, and to report not speeding. They were also most likely to be female, be over 50 years old, possess an unrestricted licence, and never have had their licence suspended or disqualified for speeding. Austroads (2013) did not report on responses to licensing points for the other segments, as defined by the statements:

- 'Careful, like most people' (n=461)
- 'Worried about crashing, not about speeding' (n=459)
- 'Smart speeding is a safe strategy' (n=423)
- 'Speeding is fun and it's worth the risk' (n=400)
- 'Yeah, I guess I drive fast… but it's not a problem' (n=357)

In a survey of 182 Queensland taxi drivers (Rowland et al 2008; see also Rowland et al 2007) the only two factors significantly associated with self-reported licensing point accrual while working in the last 12 months (n=52) were a greater perception of work-related pressure, and more positive attitude toward overtaking. Analysis included various questionnaire-based measures of risky-driving and relevant attitudes (eg attitudes toward speeding, close following and drink driving; highway-code violations, aggressive violations and errors; kilometres driven each week, gender, age, shift times and length of breaks).

5.5.2 Behavioural and attitudinal moderators

There has been somewhat more research into behavioural and attitudinal factors that may influence the efficacy of LPSs.

5.5.2.1 Attitudes toward LPSs in general

Most research that has examined attitudes to LPSs has reported positive responses. Austroads (2013) reports focus group discussions with drivers in Australia and New Zealand to explore their attitudes towards speed enforcement. Licensing points were viewed positively because of the function of removing recidivist speeders from the roads (see also Ramos et al 2008). Licensing points were also seen to have advantages over fines, which were sometimes seen as unfair as they disproportionally penalised low-income earners, and were ineffective as they did not represent a substantial penalty for wealthier people (see also Fleiter et al 2009). Participants often suggested the role of fines was to raise revenue rather than slow drivers down (see also Ramos et al 2008; Roca et al 2009). Nonetheless, 'hitting the hip pocket' was sometimes seen as a powerful deterrent.

Negative views of LPSs have also been reported. For example, in an investigation of perceptions of speed enforcement, Fleiter et al (2009) reported some Australian focus group participants felt the LPS could be unfair and suggested that people who drive a lot should have a higher point threshold. While 11.1% of Australian survey respondents viewed demerit points as 'not at all severe', 10.1% saw them as 'extremely severe', and overall licensing points were viewed as more severe than fines. These findings suggest respondents were considering the LPS (with its true penalty of licence suspension) rather than the demerit points *per se*. Similarly, in a qualitative analysis of 'other comments' made by survey respondents with licensing points there was a theme of licence suspension being too serious a sanction for 'totting up' minor offences that pose no real threat to safety (Corbett and Grayson 2010).

The perceived fairness of an enforcement system is important because it has been found to promote compliance. For example, in a survey of 1,237 Dutch car drivers, Goldenbeld et al (2013) reported the higher the perceived fairness of the penalty system overall and of the specific penalty, the stronger the intention to drive more carefully in future.

5.5.2.2 Knowledge about LPSs

There is surprisingly little research examining knowledge about aspects of the prevailing LPS that may be critical for its success. In focus group discussions with drivers in Australia and New Zealand (Austroads 2013) participants who had been penalised for speeding recently or repeatedly were able to provide detailed and accurate information about the penalties applying in their jurisdictions. Most other respondents had very little knowledge of the penalties that apply to different levels of speeding (with knowledge of the speed bands being only somewhat better). While Corbett et al (2008) noted respondents might have been unsure how long demerit points stay on their licence, or what happens to points after a suspension, they did not investigate this issue.

We are not aware of any research considering knowledge of the point threshold, lifetime of points, or ways of checking current point level (let alone knowledge of the current level).

5.5.2.3 Perceived severity of penalty

Most relevant studies confirm licence suspension is viewed as a very negative possible cost of offending. Participants in Austroads (2013) focus groups with drivers in Australia and New Zealand agreed losing one's driver licence would be a terrible outcome. In focus groups with 75 young drivers in Victoria Australia (Lewis et al 2013) licence suspension and, by association, demerit points were perceived as the main disadvantage of speeding for males, although females were more concerned with fines. Similarly, in a telephone survey of 1,000 drivers in NSW and the Australian Capital Territory (involving random dialling to fill area, gender and age quotas, and weighting to an estimated distribution of the population of licensed drivers by gender, age, education and area) participants rated the importance of various consequences of speeding in influencing their behaviour (Morphet et al 2005). 'The possibility of losing your licence' was rated as very important by the highest proportion of respondents (81%). Nonetheless, 57% rated 'not wanting to break the law' as very important.

Perhaps unsurprisingly, groups with greater reliance on their licence are the most negative about the prospect of suspension. For example, particularly negative views of licence suspension have been reported by those who require their licence for work (Austroads 2013), including taxi drivers (Ferguson et al 1999), and heavy vehicle drivers (Withaneachi 2007). Austroads (2013) also noted strong negative views from those living in regional areas.

In a national telephone survey about drivers' responses to the introduction of a LPS in Spain, 2,014 drivers reported mobility loss as the most worrying consequence of licence suspension (Montoro Gonzalez 2008). Young drivers involved in focus groups reported by Lewis et al (2013) indicated that relying on public transport was a particularly negative aspect of licence loss.

We are aware of no research clearly and directly examining the extent to which motorists regard licensing points themselves as a negative outcome of offending.

5.5.2.4 Perceived likelihood of penalty

Not enough research has examined factors relating to perceived likelihood of penalty, such as perceived likelihood of incurring licensing points for offending, perceived likelihood of incurring enough points to be eligible for suspension, and perceived likelihood of licence suspension when eligible. A relevant issue in this context is the practice of 'passing on' points accrued for camera-detected offences. This occurs

when an offending driver persuades, coerces or pays another individual, such as a family member or friend, to falsely admit to being the driver at the time of the offence and so to receive the licensing points. In some jurisdictions licensing points are not applied to camera-detected offences largely because of the difficulty of identifying the driver and the possibility of points being passed on.

The importance of perceived likelihood of incurring points for suspending is suggested by the observation that the LPS in Victoria, Australia became 'virtually inoperable' when camera-detected offences were removed. Because camera-detected offences made up about 75% of points-bearing offences, without them drivers became very unlikely to reach the point threshold (Haque 1990).

Although precise data about the prevalence of passing on points incurred for camera-detected offences is inadequate (Assailly et al 2012), there is compelling evidence this practice occurs. In Australia, participants in focus groups in Queensland (Fleiter et al 2007; Fleiter at al 2009) and Victoria (young drivers; Lewis et al 2013) have mentioned persuading family members, or paying non-family members to receive demerit points. In an investigation of perceptions of speed enforcement (Fleiter at al 2009), Chinese focus group participants indicated they would pass on points to someone else, explaining that this is easy because many people have a licence but no car. Amongst 239 Chinese drivers who completed an anonymous questionnaire when attending a mandatory training course following licence suspension (including for reaching the point threshold), 48% said they had claimed someone else was driving at the time of an offence in order to avoid getting licensing points (Fleiter et al 2013b). Thirty-six percent said they had done this sometimes, with smaller proportions saying they had done it 'most of the time' or 'all of the time'.

As discussed previously, driving while suspended is known to be fairly common. Several participants in focus groups with Queensland, Australia provisional and full licence-holders who were classified as 'regular speeders' based on self-reported offences in the last three years (Fleiter et al 2007) mentioned doing this, as well as engaging in strategies to avoid detection (eg learning of camera positions).

5.5.2.5 Attitudes toward specific features of LPSs

A few studies have examined community attitudes towards inclusion of automatically detected offences, and double points periods, whereas attitudes towards other LPS features (eg different treatment of particular road-user groups, point lifetime, suspension period, warning letters) have been little researched.

Austroads (2013) conducted focus groups with drivers in Australia and New Zealand. In New Zealand, the fact that camera-detected speeding offences do not incur demerit points, so do not serve to remove recidivist speeders, was seen as evidence the primary role of the cameras was to raise revenue. Some participants were satisfied with camera-detected offences not attracting demerit points, on the grounds there would not be irrefutable proof of the identity of the driver. In Western Australia the fact that the offence of 0–9 km/h over the speed limit does not attract demerit points was seen as evidence of revenue raising. Since there was no process for removing offenders from the road it was inferred the offence is typically 'accidental' or 'harmless'.

Soole et al (2008) discussed stakeholder opinions about applying immediate suspension for high-range speeding only for drivers who are caught manually (in NSW, Australia). While some from other jurisdictions found it inappropriate to have different penalties for the same behaviour depending on the means of detection, NSW reported having no difficulty passing the laws in parliament, nor with offenders.

In a survey of 1,232 Western Australian drivers three quarters of respondents supported the initiative of doubling demerit points for speeding, drink-driving, and non-use of restraint during public holidays (Batini 2004). Graham (1998) also reported high levels of support for double point periods in NSW, Australia.

6 Discussion of literature review findings

Research that has examined offence patterns at the person level indicates that LPSs influence motorists' compliance with traffic regulations in ways that are influenced by deterrence theory. Specifically, offending becomes less likely with changes toward the threshold, and more likely with changes away from the threshold. Population-level studies indicate this influence of LPSs translates into discernible improvements in road safety only with sufficient policing and public awareness (for example via media campaigns). This is also consistent with deterrence theory. LPSs are also considered to benefit road safety by removing dangerous drivers from the road (selection function) and/or by reforming them (correction function), as discussed further below.

Theoretically, the LPS deterrence function may be strengthened by increasing the expected costs of offending, which is determined by the perceived likelihood of detection, of incurring points, and of losing licence privilege, as well as the perceived severity of penalties (points and licence suspension). Although increasing the severity of penalties seems to be the least effective approach to increasing compliance (Gras et al 2014), and licence suspension is already regarded as a severe penalty in Australia and New Zealand (Fleiter et al 2009; Austroads 2013), a six-month suspension appears to be viewed as best practice internationally (van Schagen et al 2012).

Aspects of LPSs that allow points to be avoided or cancelled without a commensurate gain in road safety may undermine their deterrence function. Thus, it would seem licensing points should be attached to camera-detected speeding[6]. Although passing on points may occur (Fleiter et al 2007; Fleiter at al 2009; Lewis et al 2013), there are many motorists who would not or could not engage in it (eg because no-one is available to accept the points), and it has a cost (if not monetary, then in terms of effort) for those who do. Not applying licensing points to camera-detected speeding may also encourage community perceptions that the primary role of cameras is to raise revenue (because they do not contribute to removing recidivist speeders from the road (Austroads 2013).

The value of cancelling points, or adding to the point threshold, due to periods of offence-free driving has also been questioned (Basili et al 2015; Klipp et al 2011). This practice is likely to be meaningless for drivers who rarely offend, and for repeat offenders undermines the deterrent effect of the LPS to an extent that is not offset by a brief period of careful driving. Moreover, the practice may be inequitable due to different probability of detection/ enforcement by region.

The role of road safety courses in LPSs also requires careful consideration, since there is little evidence for the safety benefit of such courses (eg Ker et al 2005), except those specifically targeting drink-driving (Bartl et al 2002). Thus, cancelling points due to voluntary course attendance may do little more than undermine LPS deterrence. Attendance as a requirement for licence reinstatement, while giving the appearance of reform before returning recidivist drivers to the road, may offer little by way of true reform (regardless of whether or not attendees are required to pass a test). Any road safety course developed in line with evidence-based best-practice would require outcome evaluation before it could be introduced as a LPS component. Nonetheless, regardless of safety benefit, mandatory attendance at a road safety course may contribute to deterrence by increasing the cost of offending (in terms of money and/or effort). If course attendance were a requirement of licence reinstatement it would be important to monitor possible increases in driving while suspended.

Finally, the LPS deterrence function may also be undermined by mechanisms that reduce the perceived likelihood of losing licence privilege – such as the 'sanctioned' mechanism of limited licences as well as

[6] This would not be in keeping with current New Zealand policy

the 'unsanctioned' mechanism of driving while suspended. Availability of 'limited' licences to avoid undue hardship is warranted to maintain the (perceived) fairness of the system (Carnegie 2007), which is important to compliance (McKenna 2007). It is critical restricted licences are only granted to avoid genuine hardship (and where other approaches such as speed limiters/alcohol-interlocks are not warranted on the basis of contributing offences). Clear communication with the public about the criteria for restricted licences is important to ensure they are not perceived as a 'loophole'.

Driving while suspended represents a threat to the LPS, and to road safety (DeYoung and Gebers 2004; Watson 1997) that should be pointedly avoided. For licence suspension to work as the expected cost of offending that supports a LPS, initiatives to detect, and penalise harshly, driving while suspended must be in place. If a high point threshold makes licence suspension seem a distant possibility, then motorists may decide initial points are expendable before they need to be concerned about complying with regulations.

From the few research groups that have considered how different population segments respond to licensing points the most useful findings align with deterrence theory. Specifically, there appear to be three main groups of motorists:

1 Those who value avoiding licensing points, but who are probably the least likely to offend in any case.

2 Those who seek to avoid licensing points only when they approach the point threshold, and then curb their occasional offending.

3 Those who are unconcerned by licensing points and offend habitually.

Because the first group of motorists is generally compliant they are not an important focus of a LPS. The second group of motorists are the main group for which the LPS deterrence function is relevant, and for whom it should be optimised along the lines discussed above. For the final group the LPS selection function is the most relevant (see Watson 1998 in relation to drink-driving). It is likely that longer suspension periods (eg six months) and stricter application of the LPS to previously suspended drivers (ideally via a longer suspension period) would have a beneficial effect on deterrence and serve to keep habitual offenders off the road – provided consistent enforcement for driving while suspended. There is insufficient research investigating the relative size and characteristics of these three groups within a given population.

In some countries particular motorist groups are treated differently within the LPS in order to make it more effective, or fairer. Novice drivers are the group that most commonly has exceptional treatment, over and above having offences which apply only to them (eg graduated licensing system breaches) as is the case in many countries including New Zealand. Young drivers are generally treated more strictly by LPSs – either via a lower threshold/allotment of points (which can sometimes be augmented by a specified period of offence-free driving), or (less commonly) via a greater number of points per offence, less opportunity to avoid licence suspension, or more difficult reinstatement procedures. This practice is warranted to the extent stronger deterrence may be required to curb young drivers' stronger motivations for risky driving, and that licence suspension removes young drivers from the road until they are older (and probably safer; see McCartt et al 2009). Moreover, the community may accept a stricter system for drivers who are seen to be on 'probation'. However, tenure on a novice licence should be extended by the period of suspension (to ensure sufficient driving experience under low-risk conditions) as is the case in the New Zealand system.

Stricter treatment may also be warranted for drivers who reach the point threshold a second (or third etc) time, because they have shown the standard LPS is not sufficiently deterrent, or they belong to the group of drivers for which selection and removal is the best option (as discussed above). Again, there is likely to

be high acceptance from the community of tough penalties for recidivist offenders, including in New Zealand (Austroads 2013; Ramos et al 2008).

Some countries treat professional drivers more leniently within their LPS, on the basis such drivers have high exposure, and rely on their licence for their livelihood. However, it could be argued such drivers should have a greater awareness of traffic regulations and a professional standard of conduct (especially if they carry passengers or dangerous cargo). Moreover, professional drivers should perhaps respect their licence dependency by driving safely, rather than expecting the penalty system to bend to it. Speed limiters and alcohol interlocks may be useful for ensuring compliance amongst professional drivers. The Italian approach of deducting points for offences committed while working only from a separate professional licence is one plausible approach, but has not been adequately evaluated for efficacy and would require substantial administrative change.

Attitudes toward LPSs are generally positive, in particular because they are seen as targeting repeat offenders (Ramos et al 2008) and being fairer than fines, which are criticised as revenue raising and favouring wealthy offenders. Even double points periods have community support (Batini 1994; Graham 1998). Rarely have LPSs been criticised on the grounds that licence suspension is too severe a penalty for drivers who accumulate points for relatively ‘minor offences’, or for professional drivers who drive a lot and need a licence for their livelihood (Corbett and Grayson 2010; Fleiter et al 2009).

7 Summary of best practice findings from the literature review

On the basis of the literature review a number of considerations for strengthening the deterrence, selection, and education functions of an LPS are suggested. These suggestions correspond to international best practice as identified by the research. Consideration of the wider policy implications of these suggestions is outside the scope of this report. It is acknowledged that the operation of a jurisdiction's LPS should be considered in the context of its broader offence and penalty regime. A LPS which appears lenient in comparison to others, may operate in the context of a broad regime with stricter features. For example, in New Zealand less serious offences are treated as infringements, some of which are included in the LPS. The most serious offences result in court prosecutions for which the penalty may be a mandatory driving disqualification.

7.1 Deterrence function best practice

7.1.1 Perceived severity of penalty

- Duration of suspension of six months in line with international best practice.

7.1.2 Perceived likelihood of detection

- Ensure adequate levels of policing, and particularly overt policing, to promote awareness. Awareness campaigns publicising enforcement activity may also be beneficial.

7.1.3 Increase the perceived likelihood of points

- Consider including camera-detected speeding offences, thereby increasing the perceived likelihood of points and suspension, providing more consistent treatment of the same offence, and undermining the misperception that cameras are for revenue raising. These benefits would be offset to some degree by the practice of passing on points by the currently unknown proportion of motorists who would engage in this.

7.1.4 Increase the perceived likelihood of suspension

- A 12-point system to avoid perception that early points are expendable with a seemingly high threshold of 100 points. A low-point threshold was also recommended by Bourgeon and Picard (2007)
- Point lifetime of three years minimum in line with common international practice
- Strengthen enforcement of driving while disqualified in order to protect the integrity of the LPS (also recommended by Corbett 2012; Richardson 1994).

7.2 Selection function best practice

In addition to relevant strategies already identified in section 7.1:

- Consideration of stricter LPS for drivers with previous licence suspensions is recommended. Longer subsequent suspension periods are most justifiable, although a lower threshold might also be considered.

- Consider 'double point periods' during public holidays that have a higher rate of serious crashes. This practice has been found to be effective, and to have community support, for example in Australia.

7.3 Education function best practice

- There is little evidence road safety courses improve the behaviour of repeat offenders, with the possible exception of those designed for recidivist drink-driving offenders. Thus, there is little justification for including them in a LPS as a voluntary mechanism for cancelling points or avoiding suspension (which would be likely to weaken the system) or as a mandatory condition of licence reinstatement (which may increase rates of driving while suspended).

7.4 Improving knowledge and attitudes best practice

- Community education campaigns to ensure adequate knowledge of the system to support deterrence, and to allow suspensions to be avoided (via compliance)
- Develop systems that allow drivers to check their current point levels easily and free of charge (eg web-based, SMS reminders). OECD/ECMT (2006a) noted the importance of motorists being able to check their level of points at all times.
- Consider offering as an alternative to suspension a 'good behaviour' period during which any offence results in a suspension double the length of the initial suspension. This may increase perceived fairness of system and good behaviour periods have been found to have better long-term outcomes than suspensions (Austroads unpublished). However, there would be a need to monitor the number of people who reoffend during the good behaviour period and incur double the suspension period.

7.5 Treatment of particular groups

In addition to relevant strategies already identified in sections 7.1 to 7.4:

- Strengthen the LPS for novice drivers (who in New Zealand are already subject to additional points-attracting offences, such as graduated licensing system breaches). A lower threshold is the usual approach taken (also recommended by Senserrick and Williams 2015). It is important that any suspension period does not contribute to a reduction in experience requirements of licensing[7]. OECD/ECMT (2006b) proposed 'a probationary period, during which [novice drivers] could lose their licence and/or have to undergo additional training if they do not comply with the rules of the road or licensing conditions...' accompanied by special demerit point scales for novice drivers, 'possibly featuring higher numbers of points, lower thresholds, delay of full-licensing, or different requirements for licence reinstatement'. NHTSA recommends novice drivers be required to remain crash and conviction free for at least six consecutive months before full licensure (Compton and Ellison-Potter 2008). Wider policy implications of potentially increasing rates of young driver suspensions and driving while disqualified would need to be considered carefully.

[7] The suspension period does not count toward the qualifying system in the New Zealand licensing process.

PART TWO: DATA INTERROGATION

8 Introduction to data interrogation

8.1 Data interrogation aims

Interrogation of the Transport Agency's licence and offence data aimed to provide insight into the manner in which the New Zealand LPS encourages compliance by drivers, and into factors that could contribute to effective LPSs. It aimed to provide a detailed understanding of how individuals and cohorts respond to licensing points and the scope of the New Zealand LPS.

The research investigated driving offences and penalties incurred by New Zealand-licensed drivers in the period 2005 to 2014. The analysis focused on patterns of offences over this decade, but also examined patterns of offence within the two-year period in which licensing points remained active (per individual). The analysis also examined the characteristics of drivers who offended at least once in the decade, drivers who offended only once, drivers who offended more than once and drivers who had their licence suspended (compared with their counterparts).

8.2 Data interrogation methods

8.2.1 Data

Transport Agency data on offences, licensing points, monetary penalties and suspensions for all New Zealand licence-holders over the 10-year period 2005 to 2014 was analysed. All potentially identifying information was removed before the data was sent to the research team. Deterministic data linkage based on unique offender ID was used to link offences/fines data to suspension data.

8.2.2 Analysis

Descriptive statistical analyses examined patterns of offences over the 10-year period for various types of offences, including those relating to alcohol, noncompliance with road rules (eg failure to stop at stop signs and traffic lights), licensing and registration, mobile phone, reckless driving, speeding, unlicensed vehicle and other offences. (Appendix D contains a list of individual offence codes included in each group.)

It was important to include in the analysis all recorded traffic offences (listed in appendix A), regardless of whether they incurred licensing points or not. The principal reason behind this inclusion was to address one of the main aims of the data interrogation, which was to investigate not only the patterns of various types of offences in New Zealand but also the way drivers responded to licensing points in terms of subsequent offences regardless of whether licensing points were attached.

Overall offence patterns were also examined in relation to demographic characteristics, including age and years of licensing at first offence, as well as gender and region of birth (New Zealand, Pacific Islands, Australia, UK and Ireland, Asia, North America, Africa and Middle East and other countries). The relationship between distribution of offence types by age and years of licensing at first offence, gender, and region of birth was also examined. First offence was used because this included all drivers in the database as all drivers had at least one offence.

Descriptive analyses were carried out to examine patterns of licence suspensions, fines and licensing points, over the 10-year period for the various types of offences and by demographic characteristics. This

included examination of average licensing points incurred for each offence as well as the average time in months between subsequent offences.

Licensing points remain active on a driver licence record for two years from the date of the first offence and accumulate over a two-year period. Patterns of licensing point accumulation (total licensing points) and repeat offending were also examined within a two-year cycle from the date of the first offence incurring licensing points. Only offenders with no licensing points at the beginning of the two-year period were included in this analysis in order to assess the effects of accumulating offences within a two-year period in which offences remained active in the penalty system. Offenders were removed from the analysis if they accumulated 100 licensing points and incurred a licence suspension during the period, or if the end of their two-year period occurred after 31 December 2014. The likelihood of incurring a subsequent offence for each level of total licensing points accumulated during the period was examined by calculating the proportion of offenders who go on to incur another offence for each offence number. In addition, the average time between offences by total number of licensing points, by number of offences and by offence types was examined. It should be noted the decade of driver offence and penalty data only included information about offences and penalties occurred in the decade. It is likely a proportion of drivers will have incurred offences in previous years. This means the first offence in this decade may not have been an individual driver's first ever offence.

Multivariate logistic regression analyses were undertaken to examine the impact of various factors on the likelihood of incurring multiple offences (one offence versus multiple offences) and suspensions (no suspension versus one or more suspensions) over the 10-year period. Independent variables examined were selected if they were shown to have some relationship with the outcome variable in univariate analyses. Independent variables considered at this level included individual age at first offence, gender, region of birth, licensing points incurred at first offence, offence type and fines incurred at first offence. The final model for the likelihood of incurring multiple offences contained all independent variables. The final model for the likelihood of incurring a suspension contained all independent variables except licensing points incurred at first offence. Because fines incurred at first offence modified the relationships of the likelihood of incurring multiple offences with licensing points incurred at first offence and with offence type, the logistic regressions were stratified by three different levels of fines at first offence (no fine, less than $100 fine and $100^{+} fine).

All analyses were carried out using SAS Version 9.1.

8.2.3 Ethical approval

Ethical approval for the data interrogation was granted by the UNSW Human Research Ethics Committee and by the New Zealand Research Ethics Committee.

9 Results of data interrogation

9.1 Overall patterns of 10 years of offence data

During the decade 1 January 2005 to 31 December 2014 over 5.6 million road traffic offences (n=5,637,121) were recorded in New Zealand. These offences were incurred by just over 1.68 million offenders in total (n=1,683,952). Nearly half of all offenders (43%) offended only once over the decade. The pattern of offences shows while over half the offenders incurred a second offence (57%), a decreasing percentage of offenders incurred more, with 36% incurring a third offence, 25% incurring a fourth offence and so on (see figure 9.1). Only a very small percentage of all offenders had more than 100 offences in the decade (0.0012%), but a significantly greater percentage had more than 50 offences (2.02%). The largest number of offences in the decade incurred by a single offender was 187 (incurred by only two offenders). Nevertheless, the likelihood of an additional offence increased with increasing numbers of offences (see figure 9.2). As the number of offences increased, higher proportions of offenders went on to incur another offence. For example, just over half of those with a first offence went on to incur a second, whereas 75% of drivers with five offences went on to incur a sixth offence and close to 90% of those with 15 offences incurred at least one more. A small but notable minority of offenders (8.5%) incurred a suspension of their licence during the 10 years.

Figure 9.1 Percentage of all offending drivers incurring each number of offences (up to 15 offences) in New Zealand for the years 2005–2014

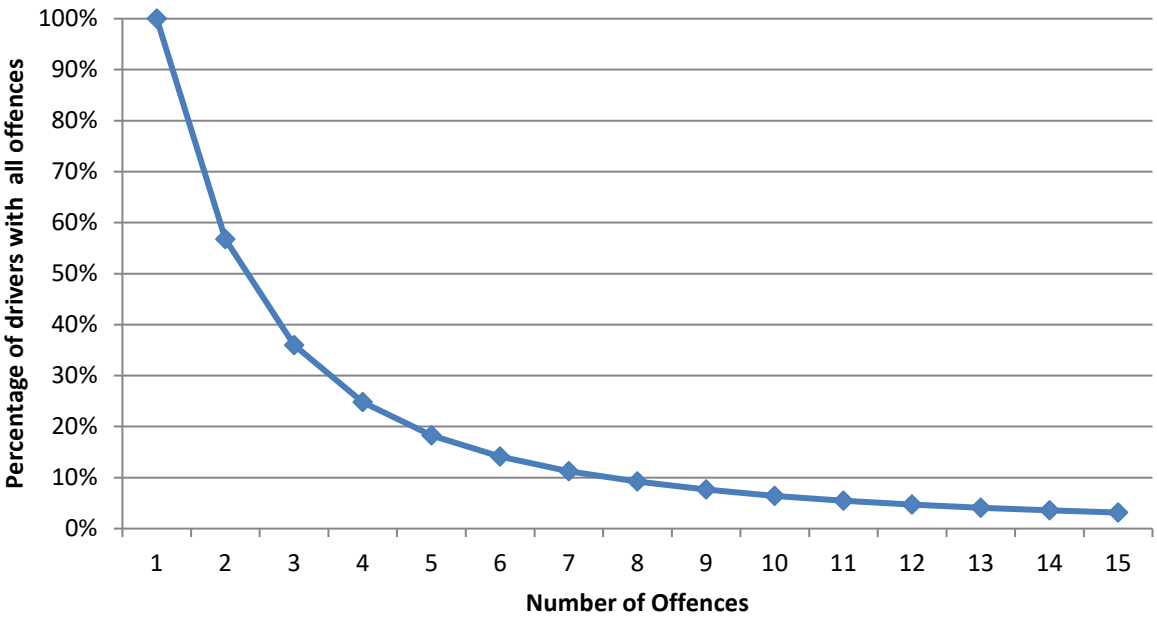
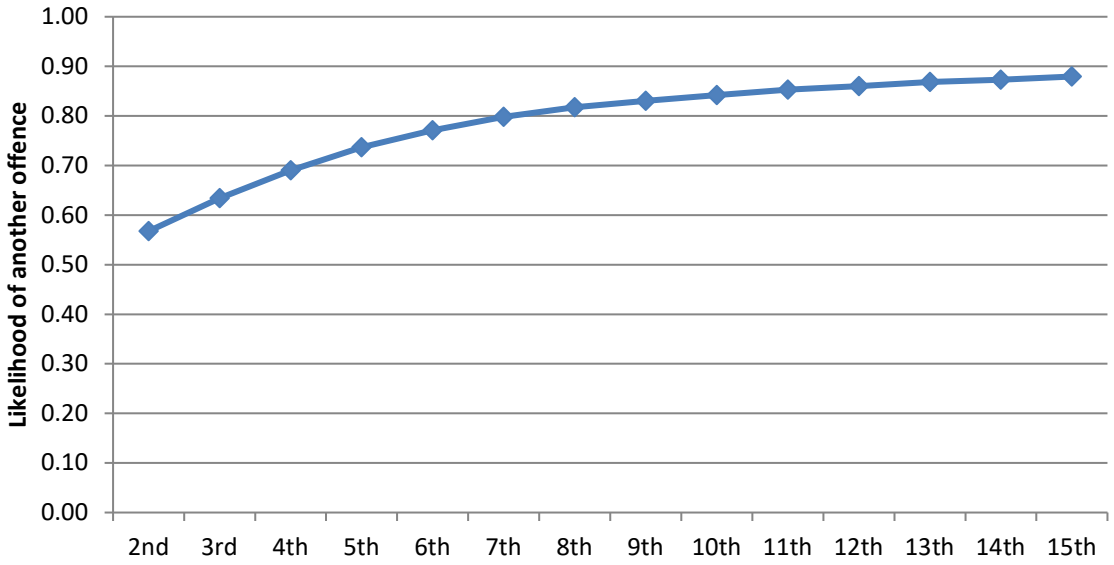


Figure 9.2 Likelihood of a subsequent offence for the first 15 offences in New Zealand for the years 2005–2014



The most common types of offences were speeding and licensing/registration offences (see table 9.1). Almost half of all offences were for speeding followed by around one-quarter for licensing/registration, with considerably smaller percentages for the other offence types. The predominance of speeding offences was more pronounced among first offences, with nearly two-thirds of first offences being for speeding. The next most common first offence types were licensing/registration and alcohol offences, with each accounting for around 10% of first offences.

Table 9.1 Frequency (and percentage) of various types of offence among all offences, and first offences in New Zealand for the years 2005–2014

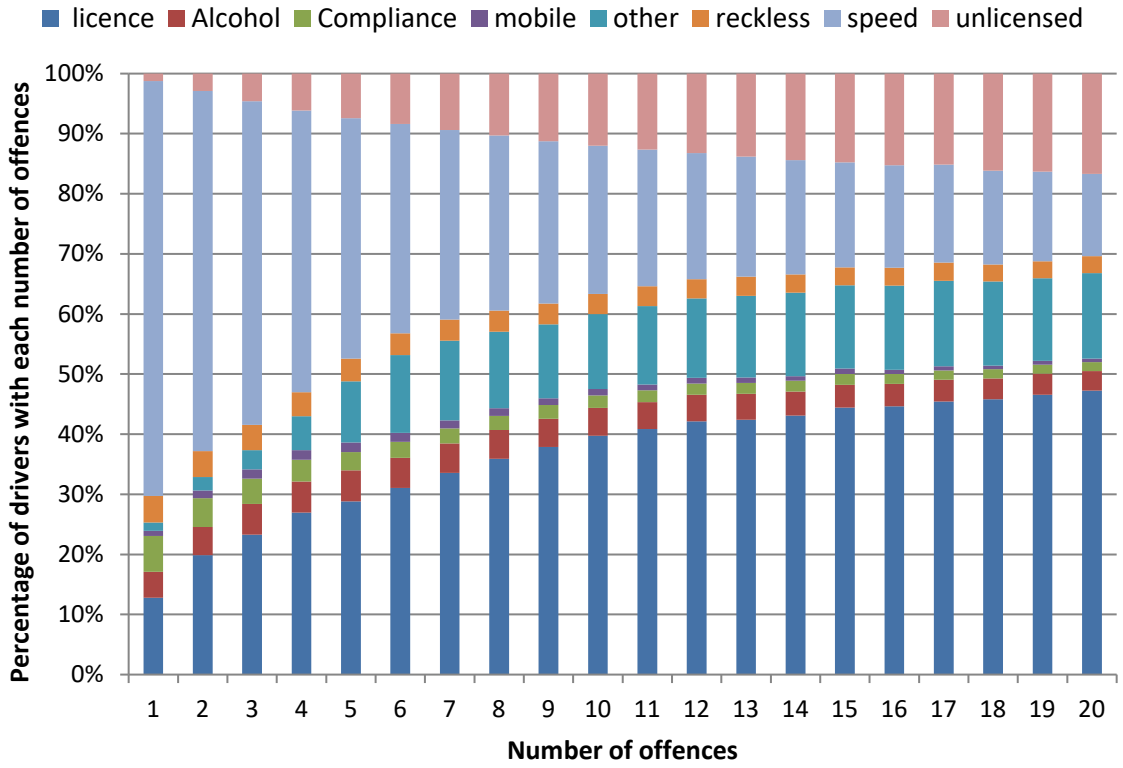
	All offences		First offence	
	Frequency	Percent	Frequency	Percent
Alcohol	255,172	4.5	156,937	9.3
Noncompliance with rules	229,361	4.0	97,182	5.8
Licensing/registration	1,421,280	25.2	171,835	10.2
Mobile phone*	63,975	1.1	21,222	1.3
Reckless driving	223,361	4.0	104,632	6.2
Speed	2,764,440	49.0	1,059,967	62.9
Unlicensed vehicle	338,622	6.0	43,734	2.6
Other	340,535	6.0	28,443	1.7
Total	5,637,121	100.0	1,683,952	100.0

*Mobile phone offences were introduced in November 2009

Figure 9.3 plots the distribution of offence types over the first 20 offences and shows the distribution changes with increasing numbers of offences. Speeding was the most common offence for multiple offenders up to the seventh offence within the decade. For offenders with eight or more offences, licensing and registration offences were the most common. Reckless and careless driving and noncompliance with rules became less common for multiple offenders, whereas driving an unlicensed

vehicle and other offences became more common for multiple offenders. The proportion of offenders with alcohol offences remained fairly stable for different numbers of offences.

Figure 9.3 Percentage of drivers with each number of offences having various types of offence in New Zealand for the years 2005–2014



Further detail of the distribution of offence type by the number of offences incurred across the decade is shown in table 9.2. Around 80% of offenders had at least one speeding offence. In contrast, only 3.5% of offenders had at least one mobile phone offence (most often a single mobile phone offence). For most offence types (except mobile phone and noncompliance with rules offences), a substantial proportion of offenders with at least one of the particular offence types in fact had two or three offences of this type. Notably, 20 offenders had between 100 and 143 licence and registration offences.

Table 9.2 Percentage of offenders who had 0, 1, or more offences of each type in New Zealand for the years 2005–2014, showing the maximum number of offences obtained for each type in parentheses.

Number of offences of each type	Alcohol (%)	Noncompliance (%)	Licence (%)	Mobile (%)	Reckless (%)	Speed (%)	Unlicensed vehicle (%)	Other (%)
0	89.0	87.6	79.0	96.5	88.9	19.3	89.9	88.5
1	8.0	11.4	8.3	3.2	9.5	43.5	5.9	7.3
2	2.1	.9	3.9	0.3	1.2	18.0	2.0	2.2
3	0.9	0.1	2.1	↓	0.4	8.6	.9	.9
4	↓	↓	1.5	100.0	↓	4.5	1.3	1.0
5			1.0	(8 offences)		2.5	↓	↓
6		100.0	4.3		100.0	1.4		
7		(16 offences)	↓		(18 offences)	2.3		
	100.0 (22 offences)		100.0 (143 offences)			100.0 (41 offences)	100.0 (36 offences)	100.0 (53 offences)

9.2 Who has offences?

Analysis of the demographic characteristics of offenders shows the average age at first offence in the decade was 37.6 years (sd=15.6 yrs). More than half of offenders were male (62.1%). Three-quarters of offenders were born in New Zealand (75.4%), the next most common region of birth being Asia (6.9%), UK and Ireland (5.9%), and Pacific Islands (4.6%) (see table 9.3). The mean duration of licensing at the time of the first offence was 24.5 years.

Table 9.3 Demographic characteristics of drivers who offended in New Zealand for the years 2005–2014

Characteristic	Frequency	Percent
Age group at first offence		
15–18 years	182,294	10.83
19–25 years	305,391	18.15
26–55 years	952,956	56.62
56–75 years	221,967	13.19
>75 years	20,391	1.21
Gender		
Male	1,045,610	62.09
Female	638,299	37.91
Region of birth		
New Zealand	1,269,730	75.4
Pacific Islands	77,265	4.6
Australia	27,047	1.6

Characteristic	Frequency	Percent
United Kingdom and Ireland	100,096	5.9
Asia	116,544	6.9
North America	12,591	0.7
Africa and Middle East	42,269	2.5
Other'	38,410	2.3
Total	1,683,952	100.0
Years licensed at first offence		
less than 1 year	213,191	13.01
1–3 years	206,668	12.61
4–10 years	328,524	20.05
11–20 years	264,938	16.17
>20 years	625,240	38.16

The number of offences incurred within the decade varied with the demographic characteristics of offenders (see figure 9.4 and appendix E, table E.2). The likelihood of incurring more offences decreased with age. Younger drivers were more likely to have multiple offences and higher numbers of offences across the decade. As shown in figure 9.5 (and in table E.2), males were considerably more likely to have higher numbers of offences than females. Offenders with higher numbers of offences were more likely to be born in New Zealand or Australia. There was also a clear relationship between years of licensing and the number of offences with greater percentages of offenders with less than one year of licensing and even up to three years having multiple offences and more offences.

Figure 9.4 Percentage of drivers in each age group with varying numbers of offences in New Zealand for the years 2005–2014

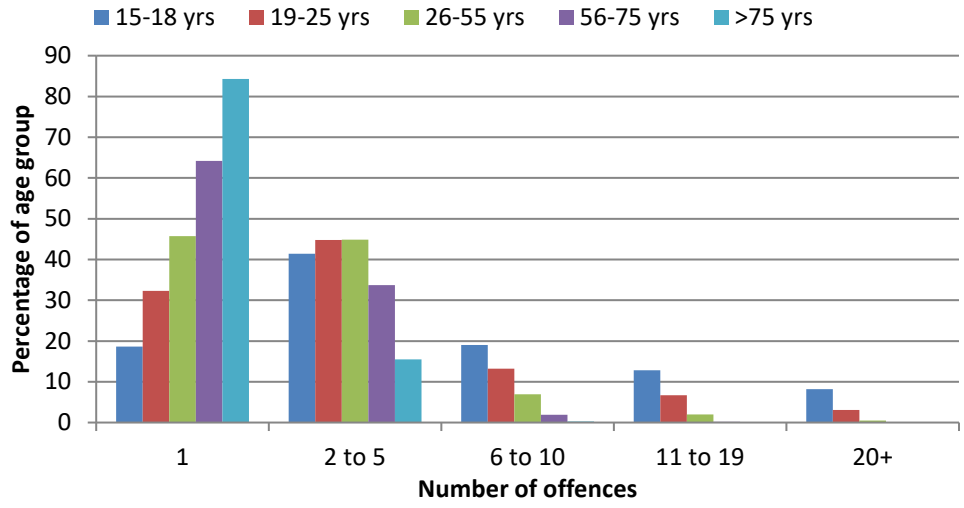
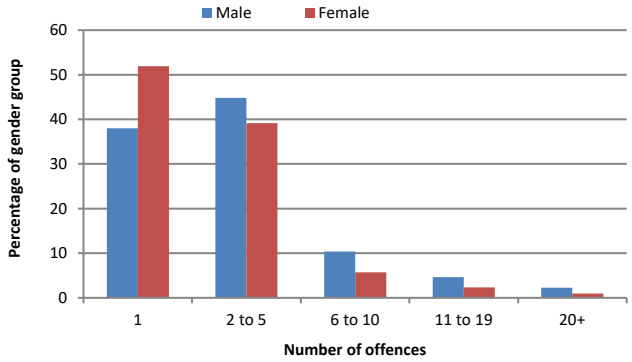
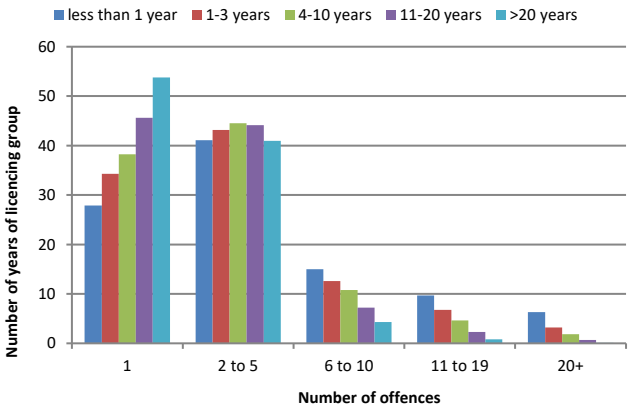


Figure 9.5 Percentage of drivers with varying numbers of offences in New Zealand for the years 2005–2014, by a) gender, b) years of licensing and c) region of birth



a)



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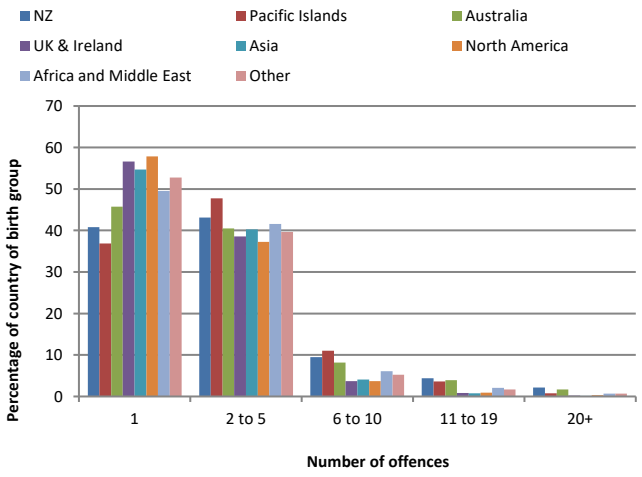


c)

Table 9.4 shows the patterns of suspensions across all drivers who offended in New Zealand in the decade 2005–2014. The patterns are very similar to those for offences. The majority of offenders had no suspensions. Offenders with suspensions were most likely to be between 15 and 18 years of age at first offence, to have only had a driver licence for a short time, to be male and to be born in New Zealand or Australia. There was a clear trend towards decreasing likelihood of suspension with increasing age and length of driving history.

Table 9.4 Number (and percentage) of suspensions by demographic characteristics for all drivers who offended in New Zealand during the years 2005–2014

	Number of suspensions			
	0	1 to 3	4+	Total
Age group at first offence				
15–18 years	126,587	51,650	4,057	182,294
	(69.44)	(28.33)	(2.23)	(100)
19–25 years	259,072	44,085	2,234	305,391
	(84.83)	(14.44)	(0.73)	(100)
26–55 years	913,560	38,394	1,002	952,956
	(95.87)	(4.03)	(0.11)	(100)
56–75 years	220,320	1,643	4	221,967
	(99.26)	(0.74)	(0.00)	(100)
>75 years	20,354	37	0	20,391
	(99.82)	(0.18)	(0.00)	(100)
Gender				
Male	937,525	102,179	5,906	1,045,610
	(89.66)	(9.77)	(0.56)	(100)
Female	603,144	33,763	1,392	638,299
	(94.49)	(5.29)	(0.22)	(100)
Region of birth				
New Zealand	1,145,072	117,729	6,929	1,269,730
	(90.18)	(9.27)	(0.55)	(100)
Pacific Islands	71,289	5,924	52	77,265
	(92.27)	(7.67)	(0.07)	(100)
Australia	24,618	2,322	107	27,047
	(91.02)	(8.59)	(0.40)	(100)
UK and Ireland	97,508	2,524	64	100,096
	(97.41)	(2.52)	(0.06)	(100)
Asia	113,279	3,243	22	116,544
	(97.20)	(2.78)	(0.02)	(100)
North America	12,260	321	10	12,591
	(97.37)	(2.55)	(0.08)	(100)
Africa and Middle East	39,821	2,384	64	42,269
	(94.21)	(5.64)	(0.15)	(100)
Other	36,861	1,499	50	38410
	(95.97)	(3.90)	(0.13)	(100)

	Number of suspensions			
	0	1 to 3	4+	Total
Years licensed at first offence				
less than 1 year	163,764	45,884	3,543	213,191
	(76.82)	(21.52)	(1.66)	(100)
1–3 years	174,402	30,665	1,601	206,668
	(84.39)	(14.84)	(0.77)	(100)
4–10 years	295,329	31,748	1,447	328,524
	(89.90)	(9.66)	(0.44)	(100)
11–20 years	252,751	11,775	412	264,938
	(95.40)	(4.44)	(0.16)	(100)
>20 years	613,400	11,680	160	625,240
	(98.11)	(1.87)	(0.03)	(100)

Analysis of the relationship of licensing points and fines for the first offence in the decade with the demographic characteristics of offenders is presented in table 9.5. Mean licensing points and fines for the first offence were highest for under 26 year-olds, with the youngest driver group, 15 to 18 year-olds, showing the most licensing points and the highest fines. From 26 years onward, the mean licensing points were around the same for each of the age groups, but average fines decreased with increasing age. There was no difference between males and females in mean points incurred, but females had somewhat lower mean fines than males for the first offence. There was little variation between offenders born in different regions, but fines showed some variation, with Pacific Island-born offenders attracting somewhat higher average fines, and UK and Ireland and North American-born offenders attracting the lowest fines.

Table 9.5 Mean (and standard deviation (SD) licensing points and fines for the first offence by age at the first offence, gender and region of birth for all drivers who offended in New Zealand for the years 2005–2014

	Mean	SD	Mean	SD
Age group at first offence				
15–18 years	26.29	9.719	211.47	148.697
19–25 years	23.54	10.203	185.49	150.685
26–55 years	21.31	9.089	146.25	140.654
56–75 years	21.12	7.983	127.69	111.175
>75 years	21.14	7.238	122.44	74.083
Gender				
Male	22.31	9.854	163.56	151.475
Female	22.09	8.500	147.82	123.358
Characteristic	Licensing points		Fine	
Region of birth				
New Zealand	22.16	9.385	157.79	143.895
Pacific Islands	22.21	10.291	185.98	167.195
Australia	22.57	9.414	161.20	140.338
UK and Ireland	22.03	8.515	137.31	114.038

	Mean	SD	Mean	SD
Asia	23.05	9.141	160.08	127.164
North America	21.82	8.612	138.71	116.565
Africa and Middle East	22.99	9.203	153.54	124.814
Other	21.59	9.728	146.81	133.327

There were differences in the type of first offence for offenders of different ages and born in different regions (see table 9.6). For nearly half of the youngest age group the first offence was for licensing or registration offences, and for one-third of this group the offence was for speeding. This pattern changed for 19–25 year-olds where over half of first offences were for speeding and one-quarter were for licensing and registration offences. For these two age groups, the main licensing or registration offences, accounting for over three-quarters of these offences, were learner driver unaccompanied (22.16% and 15.76% of total offences for 15–18yrs and 19–25yrs respectively) and restricted driver carries unauthorised passenger offences (17.4% and 4.6% of total offences for 15–18yrs and 19–25yrs respectively). From 26–75 years, speeding offences dominated, accounting for more than three-quarters of all first offences. In the oldest age group (>75 years), while speeding was still the most common first offence, a significant minority of offences were for noncompliance and reckless driving. Comparison of patterns of offence types for offenders born in different regions showed speeding was the most common first offence for all regions, especially UK and Ireland and North America. Offenders born in the Pacific Island region had a somewhat unique pattern of first offences, because while just over half of first offences were for speeding, nearly one-quarter were for licensing and registration offences, and a larger-than-typical proportion was for alcohol offences. Asia-born offenders also had higher proportions of noncompliance and reckless driving first offences than those born in other regions.

Table 9.6 Distribution of first offence type by age at first offence, gender, region of birth and years of licensing at first offence in New Zealand for the years 2005–2014

Characteristic	Alcohol	Noncompliance	Licensing and registration	Mobile	Reckless driving	Speed	Unlicensed vehicle	Other	Total
Age at first offence									
15–18	4.7%	3.5%	47.3%	0.3%	5.7%	36.0%	0.9%	1.5%	100%
19–25	5.2%	4.5%	25.7%	0.9%	5.1%	55.4%	1.6%	1.7%	100%
26–55	4.5%	6.6%	5.1%	1.0%	3.7%	76.5%	1.3%	1.3%	100%
56–75	2.7%	6.6%	0.8%	0.5%	4.8%	83.0%	0.7%	0.9%	100%
>75	1.0%	14.8%	0.4%	0.1%	13.8%	69.4%	0.2%	0.3%	100%
Gender									
Male	4.9%	5.2%	12.3%	0.8%	4.7%	69.3%	1.1%	1.8%	100%
Female	3.4%	7.2%	13.6%	1.0%	4.1%	68.6%	1.5%	0.7%	100%
Region of birth									
New Zealand	4.5%	5.6%	13.5%	0.7%	4.1%	68.9%	1.3%	1.4%	100%
Pacific Is	7.0%	6.8%	22.2%	0.6%	5.4%	53.2%	1.7%	3.1%	100%
Australia	4.5%	5.8%	13.8%	1.0%	4.4%	68.0%	1.2%	1.1%	100%
UK and Ireland	2.7%	7.4%	3.0%	0.9%	3.9%	80.8%	0.6%	0.6%	100%
Asia	2.8%	8.0%	10.3%	2.1%	7.7%	67.6%	0.6%	0.8%	100%
North America	3.0%	6.2%	3.9%	1.6%	4.4%	79.1%	1.0%	0.6%	100%
Africa and Middle East	2.8%	5.9%	10.7%	1.4%	5.5%	71.8%	0.8%	1.1%	100%
Other	4.2%	6.9%	6.5%	1.3%	5.1%	73.2%	0.8%	2.0%	100%
Years of licensing at first offence									
< 1 year	4.7%	4.4%	40.2%	0.7%	5.6%	42.2%	1.4%	1.0%	100%
1–3 years	5.2%	5.1%	29.8%	0.97%	5.3%	50.7%	1.5%	1.3%	100%
4–10 years	5.0%	6.1%	14.8%	0.9%	4.8%	65.0%	1.5%	1.8%	100%
11–20 years	4.6%	6.9%	3.8%	1.2%	3.7%	76.9%	1.6%	1.5%	100%
>20 years	3.4%	6.3%	0.7%	0.7%	3.9%	83.2%	0.9%	1.0%	100%

9.3 What are the patterns of licensing point acquisition, fines and licence suspensions?

The greater majority of offences in the database incurred licensing points (93.5%) and fines (97.8%). Table 9.7 shows most offences incurred both licensing points and fines (93.3%), very few incurred licensing points only, and a somewhat larger percentage incurred fines only. Offences incurring licensing points only were mainly for reckless driving or other offences. Where only a fine was incurred, it was mainly for alcohol or other offences.

Table 9.7 Percentage of offences of various types incurring licensing points only, fines only, both licensing points and fine, or neither in New Zealand for the years 2005–2014

Offence type	% only points (n)	% only fine (n)	% both points and fine (n)	% Neither points nor fine (n)	Total (n)
Alcohol	1.8 (1,325)	66.3 (48,454)	8.4 (54,605)	23.4 (17,126)	100 (73,056)
Compliance with rules	0.0 (7)	0.8 (823)	99.2 (99,555)	0 (16)	100 (100,401)
Licence-related	0.0 (53)	1.2 (2,582)	97.1 (208,819)	1.6 (3,510)	100 (214,964)
Mobile phone use	0.0 (0)	0.0 (0)	100.0 (14,090)	0.0 (0)	100 (14,090)
Reckless driving	7.8 (5,829)	6.5 (4,902)	79.2 (59,280)	6.5 (4,852)	100 (74,863)
Speeding	0.0 (75)	1.0 (11,291)	99.0 (1,160,893)	0.0 (23)	100 (1,160,991)
Unlicensed vehicle	0.0 (0)	0.0 (0)	100 (20,877)	0.0 (0)	100 (20,877)
Other	4.2 (715)	43.1 (7,364)	34.1 (5,827)	18.6 (3,172)	100 (17,078)
Total	0.5 (8,004)	4.5 (75,416)	93.3 (1,564,201)	1.7 (28,699)	100 (1,572,205)

Comparison of offenders whose first offence of the decade did or did not incur licensing points, and did or did not incur a fine (see table 9.8) showed both not receiving points and not receiving a fine for the first offence was significantly associated with an increased likelihood of having multiple offences in the decade.

Table 9.8 Percentage of first offences with and without licensing points or fines incurred for offenders who offended once versus repeatedly in New Zealand for the years 2005–2014 with associated odds ratios for each comparison

	% No	% Yes		% No	% Yes	
Single	32.5	44.0	1.64 (1.56–1.66) p<0.05	25.7	43.8	2.27 (2.22–2.33) p<0.05
Multiple	67.5	56.0		74.3	56.2	
Total	100	100		100	100	

As shown in figure 9.1 just over half of all offenders (57%) had multiple offences during the decade from 2005 to 2014. Comparison of multiple offenders with single offenders shows higher percentages of males

incurred multiple offences compared with females. In fact, more than half of male offenders had more than one offence during the period (table 9.9). Considerably more offenders born in New Zealand and Pacific Islands had multiple offences than single offences. Australian-born offenders also had more multiple offences than single offences. In contrast, offenders born in the UK and Ireland, Asia and North America had more single offenders (see table 9.10). Multiple offenders were significantly younger than those with only one offence (see table 9.11).

Table 9.9 Gender of offenders who offended once versus repeatedly in New Zealand for the years 2005–2014

		Single offence	Multiple offences	Total
Male	*Count*	397,553	648,057	1,045,610
	%	38.0%	62.0%	100.0%
Female	*Count*	331,507	306,792	638,299
	%	51.9%	48.1%	100.0%
Total	*Count*	729,060	954,849	1,683,909
	%	43.3%	56.7%	100.0%

Table 9.10 Region of birth of offenders who offended once versus repeatedly in New Zealand for the years 2005–2014

		Single offence	Multiple offences	Total
New Zealand	*Count*	518,569	751,161	1,269,730
	%	40.8%	59.2%	100.0%
Pacific Islands	*Count*	29,201	48,064	77,265
	%	37.8%	62.2%	100.0%
Australia	*Count*	12,382	14,665	27,047
	%	45.8%	54.2%	100.0%
UK and Ireland	*Count*	56,697	43,399	100,096
	%	56.6%	43.4%	100.0%
Asia	*Count*	63,731	52,813	116,544
	%	54.7%	45.3%	100.0%
North America	*Count*	7,286	5,305	12,591
	%	57.9%	42.1%	100.0%
Africa and Middle East	*Count*	20,945	21,324	42,269
	%	49.6%	50.4%	100.0%
Other	*Count*	20,268	18,142	38,410
	%	52.8%	47.2%	100.0%
Total	*Count*	729,079	954,873	1,683,952
	%	43.3%	56.7%	100.0%

Single and multiple offenders also differed in terms of their types of first offences and the number of licensing points and fines incurred for the first offence. Multiple offenders incurred significantly more licensing points and had, on average, a 25% larger fine on their first offence than offenders with only one offence (see table 9.11).

Table 9.11 Mean (and SD) age at first offence and penalties for first offence, offenders who offended once versus repeatedly in New Zealand for the years 2005–2014 showing means (number of offenders and results of statistical comparison)

	Single offence	Multiple offences	Total
Age at first offence	42.39	33.95	t=355.78
	(15.93)	(14.28)	p<0.0001
	n=728,236	n=954,848	
Licensing points for first offence	21.54	22.75	t=85.26
	(8.44)	(9.98)	p<0.0001
	n=728,056	n=954,843	
Fine for first offence	137.26	173.18	t=168.86
	(122.41)	(152.99)	p<0.0001
	n=728,267	n=949,106	

Over three-quarters of drivers whose first offence related to licensing/registration had multiple offences over the decade (see table 9.12). Offenders with alcohol or other first offences were three times more likely to have multiple than single offences over the 10 years. Mobile phone-related first offenders on the other hand were more likely to be single offenders. For the remainder of offence types, the likelihood of single and multiple offences was roughly equal.

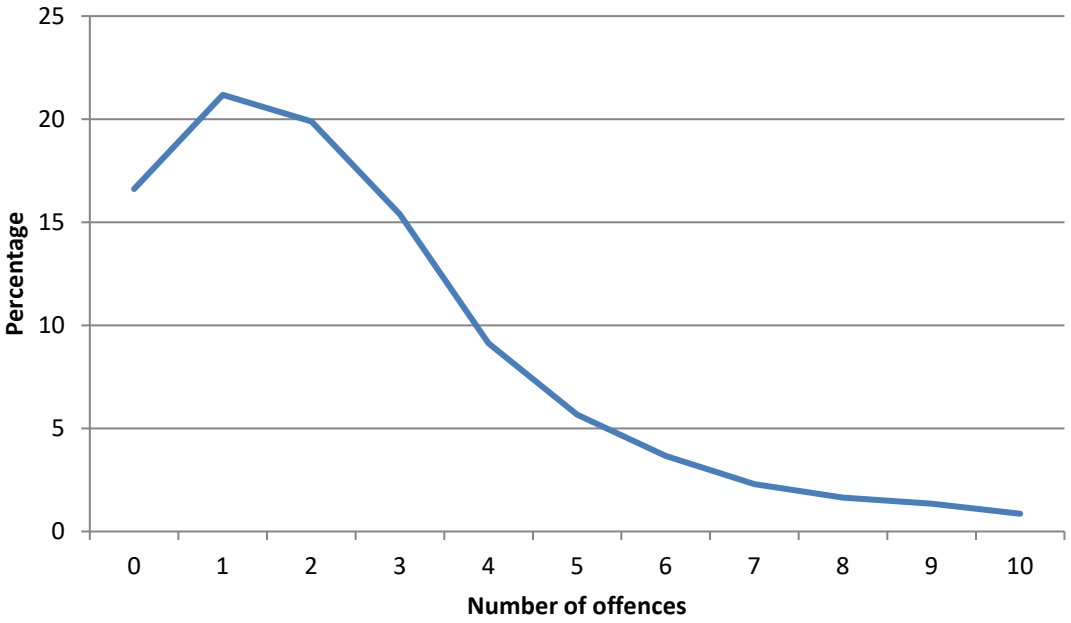
Table 9.12 Type of first offence for offenders who offended once versus repeatedly in New Zealand for the years 2005-2014

		Single offence	Multiple offences	Total
Alcohol	*Count*	24,682	48,488	73,170
	%	33.7%	66.3%	100.0%
Compliance	*Count*	55,575	44,835	100,410
	%	55.3%	44.7%	100.0%
Licensing and registration	*Count*	41,851	173,183	215,034
	%	19.5%	80.5%	100.0%
Mobile	*Count*	9,841	4,249	14,090
	%	69.8%	30.2%	100.0%
Reckless driving	*Count*	34,387	40,545	74,932
	%	45.9%	54.1%	100.0%
Speed	*Count*	546,194	616,127	1,162,321
	%	47.0%	53.0%	100.0%
Unlicensed vehicle	*Count*	10,582	10,296	20,878
	%	50.7%	49.3%	100.0%
Other	*Count*	5,967	17,150	23,117
	%	25.8%	74.2%	100.0%
Total	*Count*	729,079	954,873	1,683,952
	%	43.3%	56.7%	100.0%

Further analysis was conducted of the patterns of offences for the 8.5% of all offenders who incurred a licence suspension over the decade. As shown in figure 9.6, fewer than one in six did not reoffend after

their suspension. Over the decade, the mean number of offences following a suspension was 3.3, with around two-thirds of offenders incurring one to four offences following a suspension.

Figure 9.6 Pattern of offences following a first suspension in New Zealand for the years 2005–2014



9.4 Patterns of multiple offences

Across the decade from 2005 to 2014, the average time between the first and second offence for offenders with only two offences was nearly four years (see figure 9.7). For drivers with three offences, the time between offences was considerably shorter occurring on average around 2.5 to 3 years. Not surprisingly, drivers with more offences in the decade incurred them with increasing speed. As shown in figure 9.7, drivers with 9 or 10 offences incurred offences within 12 months of the last offence. Interestingly, there was little evidence that for multiple offenders the first offence acted as a deterrent for the second offence, as the time between the first and subsequent offences was around the same no matter how many offences were incurred in total. If earlier offences were generally a deterrent for subsequent ones, it would be expected the time between earlier offences would be longer than for later ones. The data shows no such effect. There is some evidence later offences may be having a deterrent effect as the mean time to the last offence was longer than the time between previous offences no matter how many offences were incurred across the decade. This effect seems to be due to the influence of suspensions of licences because repetition of the analysis for drivers who have not incurred a suspension the late slowing in the rate of incurring offences is only evident for drivers with a few offences (up to five), but not with many offences (see figure 9.8).

Figure 9.7 Time to next offence for the first 10 offences for offenders with up to 10 offences in New Zealand for the years 2005–2014

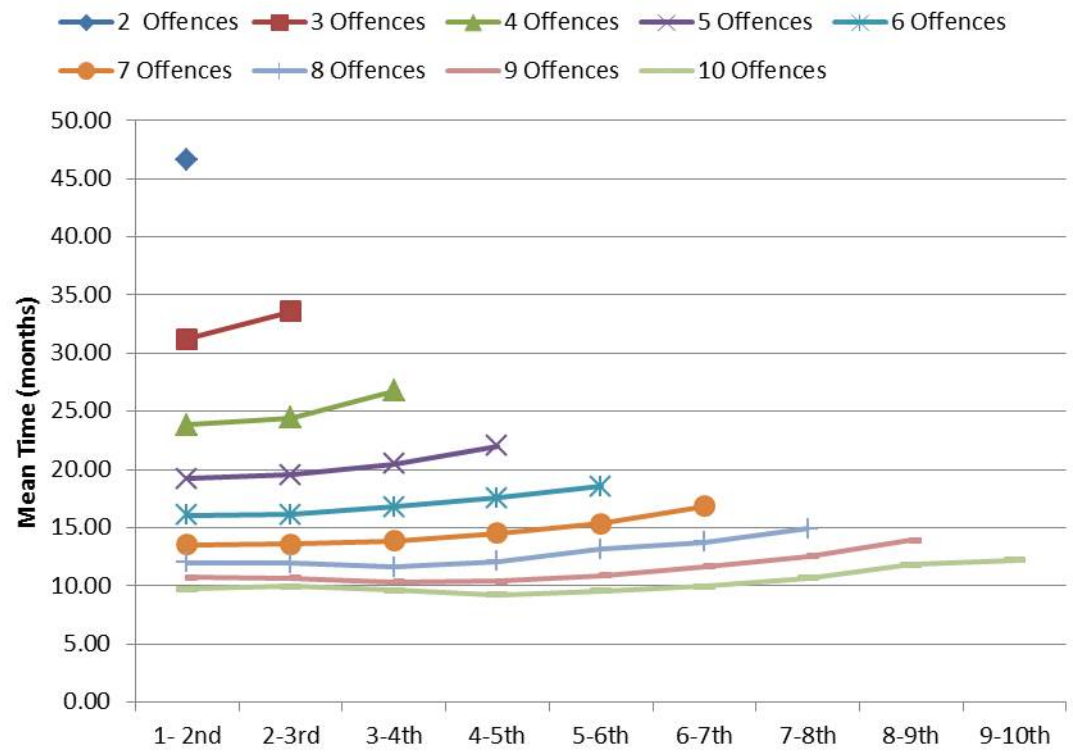
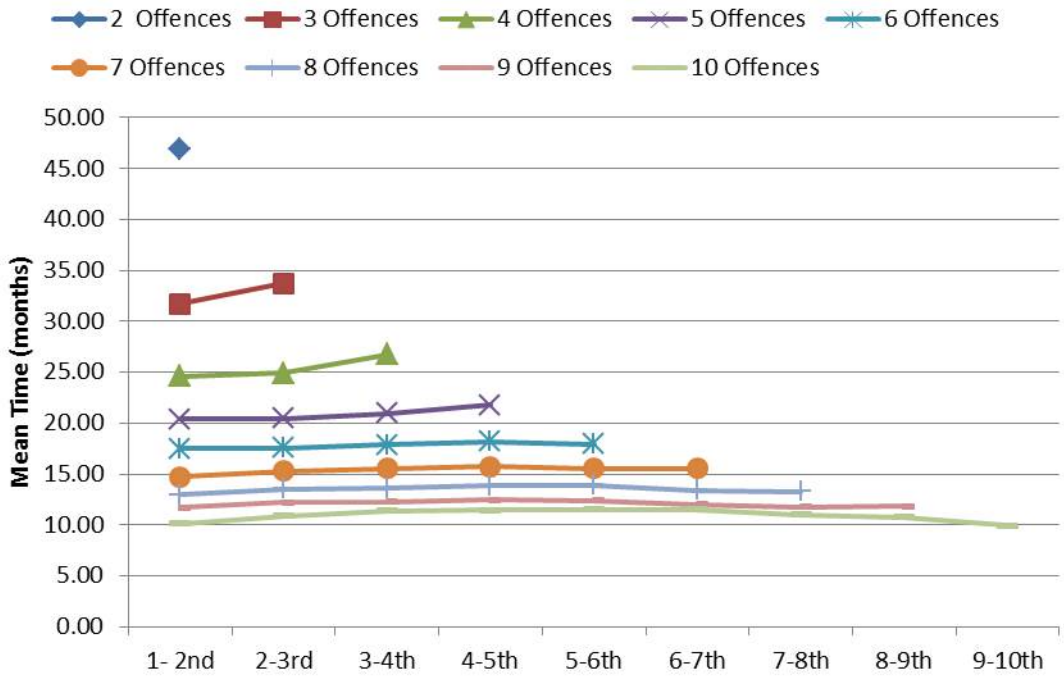
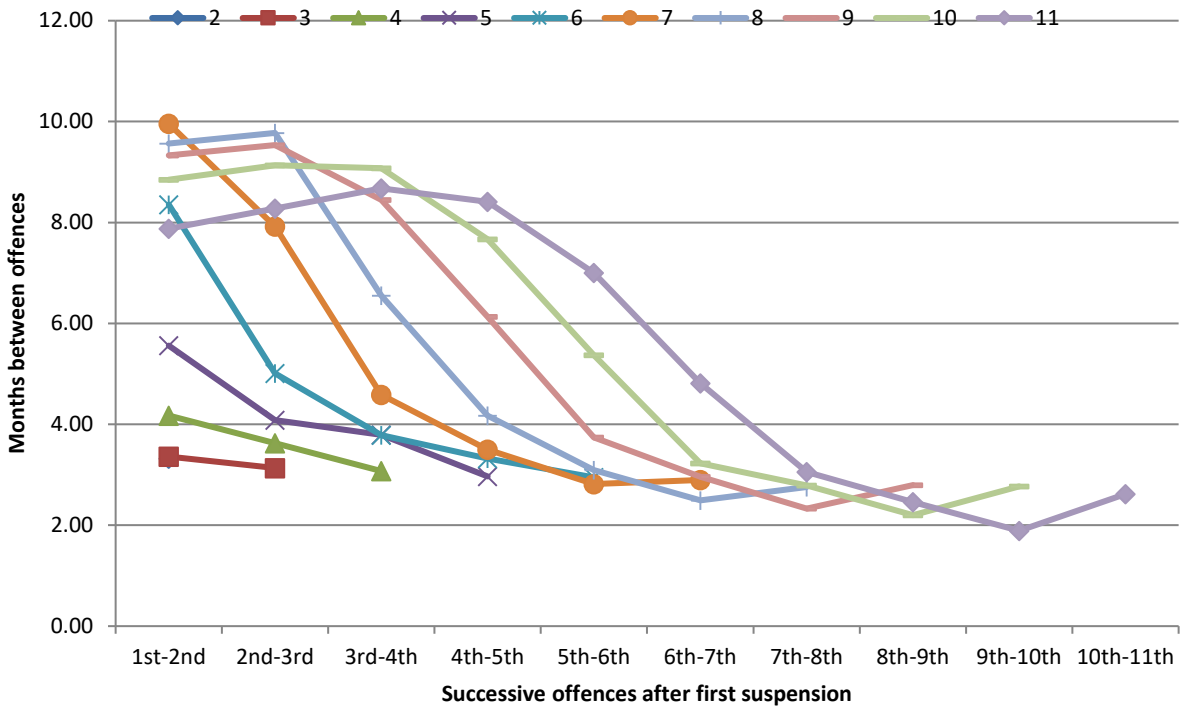


Figure 9.8 Time to next offence for the first 10 offences for offenders with up to 10 offences but not leading to a suspension in New Zealand for the years 2005–2014



Further analysis of patterns of accumulation of multiple offences for drivers who have been suspended from driving showed very different results. The time to suspension was examined for offenders who had their first suspension in 2005. The first year of the database was selected in order to provide a valid database for comparison of the time available for multiple offences. As shown in figure 9.9, the time to the next offence following a first suspension increased markedly, especially for those who accumulated more than a few offences after suspension. The time to the first offence after suspension was longest, although on average it occurred in less than 12 months, and even under six months for those going on to get three to five offences but the average speed of accumulation of offences was under four months for the later offences no matter how many were incurred in total.

Figure 9.9 Time to next offence after a first suspension (occurring in 2005) for offenders with up to 11 post-suspension offences in New Zealand for the years 2005–2014



9.5 Analysis of the patterns of licensing points and fines over a two-year period from the first offence

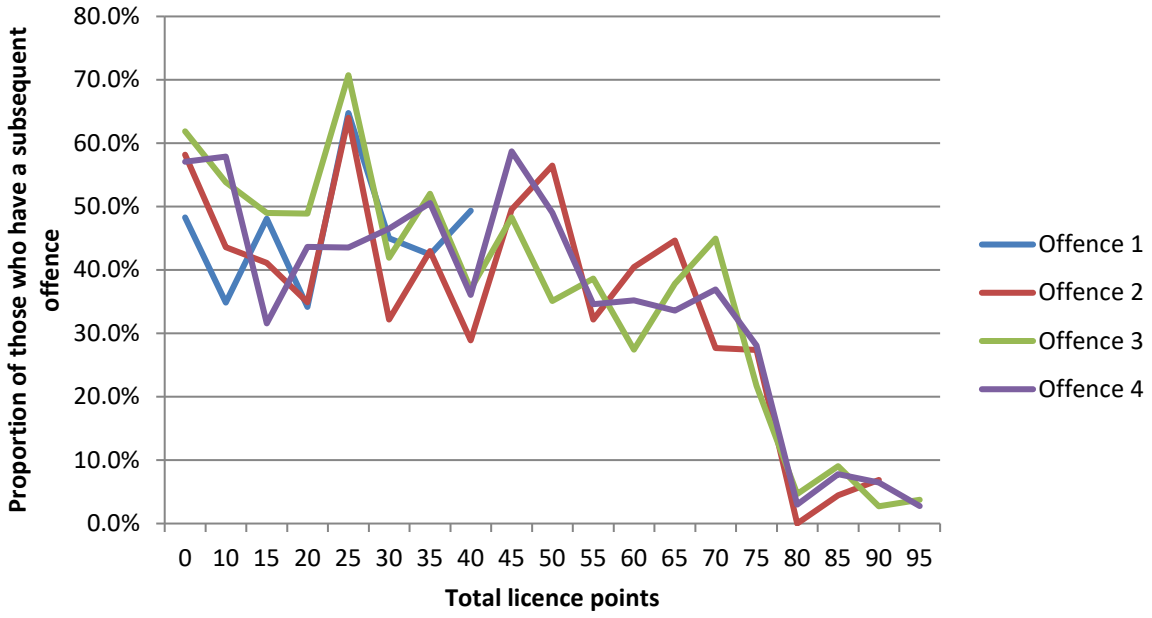
Licensing points remain active on a driver's licence record for two years from the date of the offence and accumulate over a two-year period. Once an offender accumulates 100 points or more their licence will be suspended for three months. Consequently, it is useful to look at the patterns of accumulation of licensing points and fines for two years from the first offence in the decade. Analyses included only drivers with no active licensing points when they incurred their first offence in the decade, and who did not accumulate 100 licensing points and incur a licence during the two-year period. As shown in table 9.13, nearly 0.5 million offenders in the database had a first offence within the decade from 2005 to 2014 with a full two-year period remaining within the decade. Within this subgroup nearly two-thirds of offenders only had one offence in the two-year period, a further one-quarter had two offences, and much smaller percentages incurred three or more offences.

Table 9.13 Number and percentage of offenders incurring each number of offences in a two-year period from the first offence in New Zealand during the years 2005–2014

Number of offences	Number	Percent
1	321,479	64.91
2	119,665	24.16
3	39,580	7.99
4	10,952	2.21
5	2,128	0.43
6	772	0.16
7	318	0.06
8	157	0.03
9	87	0.02
10	39	0.01
11	23	0
12	13	0
13	13	0
14	1	0
15	6	0
16	2	0
17	3	0
19	1	0
20	4	0
>20	52	0.01
Total	495,295	100

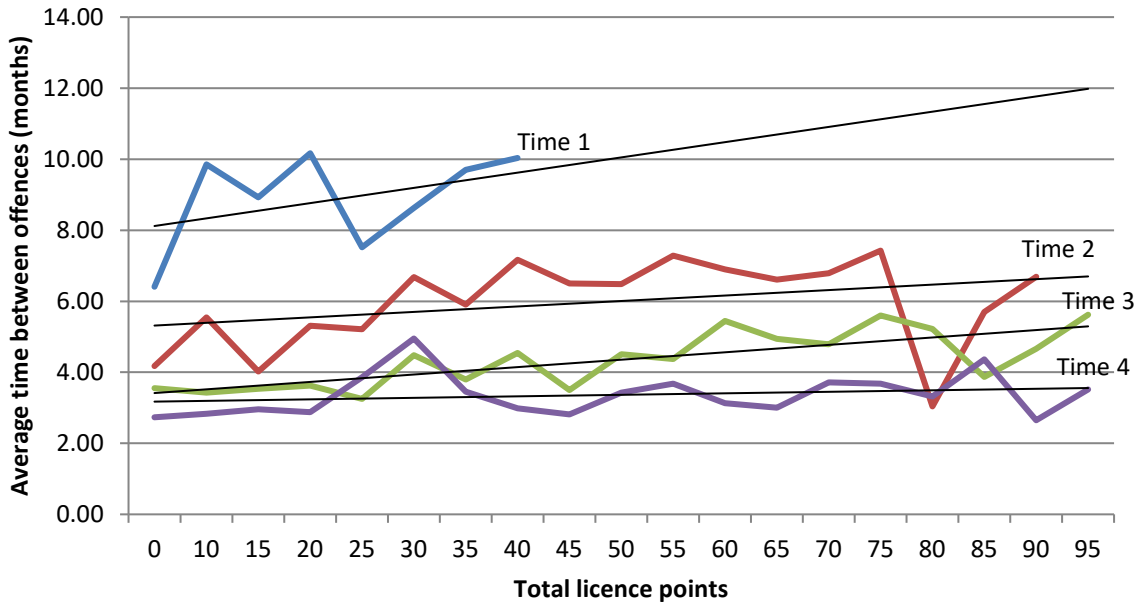
Figure 9.10 plots the likelihood an offender will incur a subsequent offence, after the first, second, third and fourth offences, when they have increasing numbers of licensing points. These results show a clear effect of accumulating around 70 to 75 licensing points. Once drivers have 70 to 75 points their likelihood of committing a subsequent offence reduces to virtually zero. Between 0 and 75 points there is a reducing trend in the likelihood of offending, but the effect is small compared with the pattern that occurs closer to the 100-point threshold. A small percentage of offenders accumulated more than 80 points, and it is likely many of these offenders went on to incur a suspension.

Figure 9.10 Proportion of offenders having a subsequent offence for offenders with increasing total licensing points and increasing numbers of offences in a two-year period from the first offence in New Zealand during the years 2005–2014



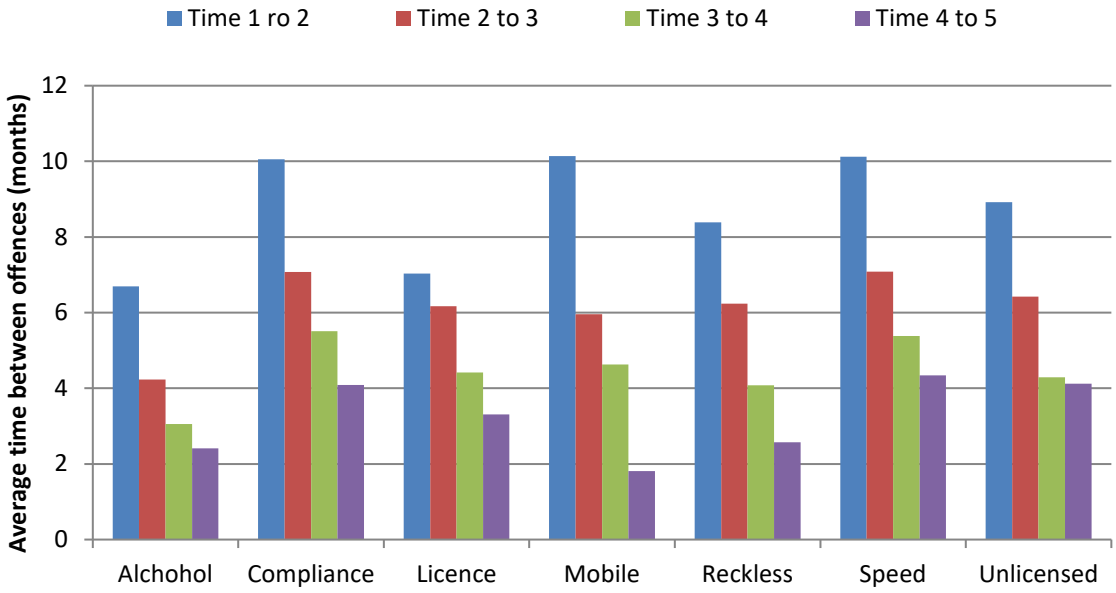
Examining the average time between offences in the two-year period from the first offence during the decade shows a trend for increasing time between subsequent offences as total licensing points increase (see figure 9.11) although this effect was less pronounced for offenders with higher numbers of offences. For example, the time between the second and third offence was around 75% longer if the offender's total licensing points was over around 40, but the average time between the fourth and fifth offences did not change very much with increasing total licensing points.

Figure 9.11 Average time to next offence for offenders with increasing total licensing points and increasing numbers of offences (up to a fifth offence) in a two-year period from the first offence in New Zealand during the years 2005–2014



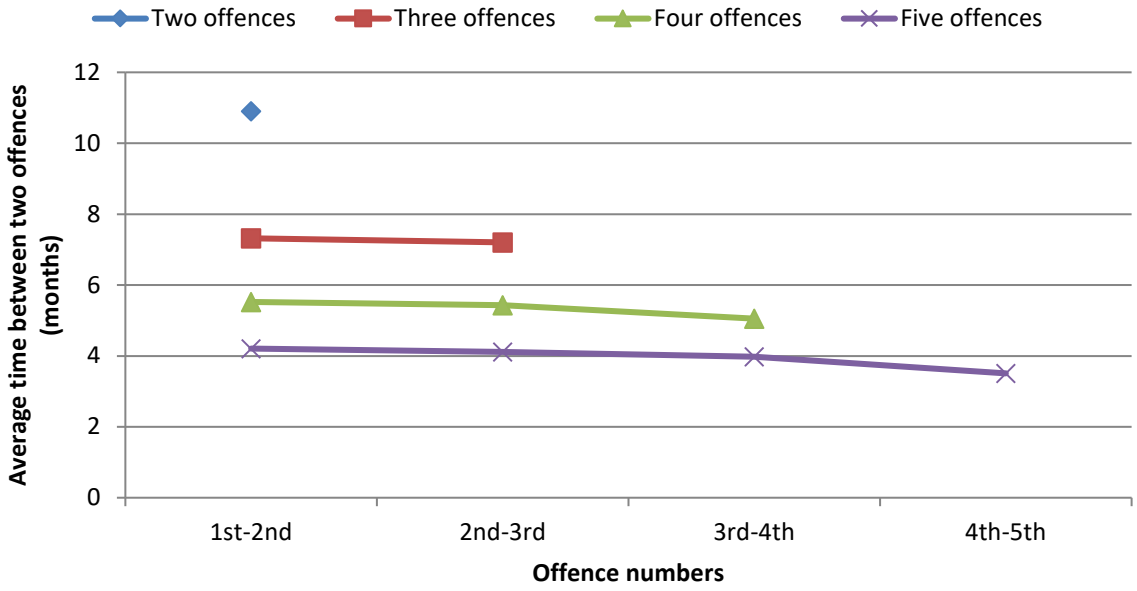
Examination of the time between offences for different types of offence (see figure 9.12) shows where the prior offences relate to noncompliance with rules, mobile phone use and speeding had the longest average time between the first and second offence and alcohol offences had the shortest time. The time between the fourth and fifth offences was longest when the prior offence was speed, noncompliance and unlicensed vehicle offences, and shortest for mobile phone, reckless driving and alcohol offences.

Figure 9.12 Average time to next offence for various offence types in a two-year period from the first offence in New Zealand during the years 2005–2014



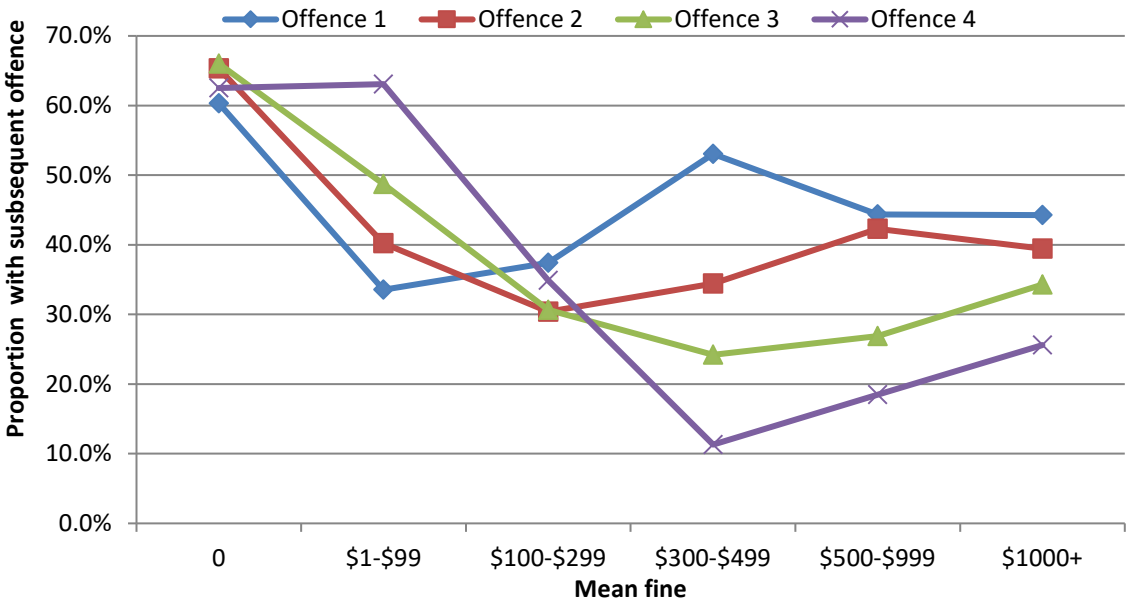
The average time between offences in the two-year period from the first offence during the decade showed the same pattern as for all offences in the decade (see figure 9.13). There was a clear decrease in time to the next offence with increasing numbers of offences. In addition, the average time between consecutive offences was quite similar; the second, third and any subsequent offences were fairly equally spaced in time except with higher numbers of offences, there was a trend for the last offence in the period to occur faster than the earlier offences.

Figure 9.13 Average time to next offence for the first five offences for offenders in a two-year period from the first offence in New Zealand during the years 2005–2014



The relationship between fines and repeat offending was examined by plotting the proportion of offenders who incurred a subsequent offence against the fine awarded at the time of the last offence for offenders starting with one to four offences (figure 9.14). The likelihood of re-offending varied with the number of prior offences and the size of the fine. After one offence, the likelihood of having another was lowest when the fine was below $100. After two offences, it was lowest with fines between $100 and $299, and after three or four offences it was lowest when the fine was $300 to $499.

Figure 9.14 Likelihood of a subsequent offence for offenders by the mean fine for the last offence and increasing numbers of offences in a two-year period from the first offence in New Zealand during the years 2005–2014



9.6 Multivariate comparisons

Multivariate logistic regression examining the factors that may increase the odds of being a multiple offender compared with a single offender over the decade from 2005 to 2014 (see table 9.14) confirmed the role of age, gender and country of birth. Young, novice drivers are around 2.5 more likely to be multiple offenders than drivers aged 26 to 55. Drivers aged 19 to 25 are still more likely than those aged 26 to 55 years to have multiple offences. In contrast, drivers in the older age groups, including those 56 years and above, were markedly less likely to incur multiple offences. Female drivers were about half as likely to be multiple offenders compared with male drivers. All non-New Zealand born drivers were significantly less likely than New Zealand-born drivers to incur more than one offence, except Pacific Island-born drivers who were slightly more likely.

Characteristics of the first offence in the decade were also predictors of single or multiple offences. Drivers whose first offence was licence related or in the other category were more likely to have further offences compared with those whose first offence was speeding. In contrast, with first offences of the remaining types, the driver was significantly less likely to incur further offences than if the first offence was speeding. Drivers whose first offence was related to mobile phone use were much less likely to incur any further offences.

Compared with drivers who only incurred 20 licensing points for their first offence in the decade, drivers who incurred more were less likely to incur more than one offence. Drivers whose first offence attracted no licensing points were most likely to incur further offences. From the earlier analysis, this is most likely to be alcohol or other offence types. The level of fine incurred on the first offence in the decade showed a similar pattern. Drivers incurring larger fines on their first offence were more likely to go on to incur multiple offences, and those incurring no fines were most likely to become multiple offenders. These seemingly paradoxical results are most likely to be due to the types of offences committed, with more serious offences attracting more licensing points and more fines, and these offenders being more likely to re-offend.

The multivariate analysis was extended to explore how predictors of multiple offences varied with different levels of fine for the first offence (see table 9.14). The results for age, gender and country of birth remained the same across all levels of fine, with young drivers, males and New Zealand and Pacific island born drivers having significantly higher odds of multiple offences for all levels of fines. The relationship between type of the first offence and likelihood of repeat offences was influenced at least partially by the level of fine incurred for that offence. When the first offence was licence related, drivers were more likely to incur more offences regardless of whether a fine was incurred or the size of the fine. Drivers whose first offence was an alcohol offence were also significantly more likely to incur further offences where no fine was incurred, but this effect disappeared when the fine was small (<$100), while they were significantly less likely to repeat-offend if the fine was large. When the first offence was for other offences and there was no fine, further offences were again significantly more likely, but the imposition of a fine for this offence was not associated with further offending. Lastly, as for alcohol first offences, when the first offence was for noncompliance, for reckless driving or for unlicensed vehicles the highest level of fines were associated with lower odds of further offences.

Table 9.14 Predictors of multiple offences offence in New Zealand for the years 2005–2014

Characteristic	All offences			No fine			Fine <$100			Fine ≥ $100		
	Adj OR	95% CI		Adj OR	95% CI		Adj OR	95% CI		Adj OR	95% CI	
Age at first offence												
26–55	1			1			1			1		
15–18	2.49	2.46	2.52	2.49	2.46	2.52	2.55	2.48	2.63	2.47	2.43	2.51
19–25	1.51	1.50	1.52	1.51	1.50	1.52	1.39	1.37	1.42	1.55	1.53	1.57
56–75	0.46	0.46	0.47	0.46	0.46	0.47	0.48	0.47	0.48	0.45	0.45	0.46
76+	0.15	0.15	0.16	0.15	0.15	0.16	0.17	0.16	0.18	0.15	0.14	0.16
Gender												
Male	1			1			1			1		
Female	0.54	0.54	0.55	0.54	0.54	0.55	0.52	0.52	0.53	0.55	0.55	0.56
Region of birth												
New Zealand	1			1			1			1		
Pacific Islands	1.06	1.04	1.07	1.06	1.04	1.07	1.10	1.07	1.13	1.04	1.02	1.06
Australia	0.75	0.73	0.77	0.75	0.73	0.77	0.76	0.73	0.80	0.75	0.72	0.77
UK and Ireland	0.66	0.65	0.67	0.66	0.65	0.67	0.69	0.67	0.70	0.64	0.63	0.65
Asia	0.50	0.50	0.51	0.50	0.50	0.51	0.56	0.55	0.57	0.49	0.48	0.49
North America	0.57	0.55	0.60	0.57	0.55	0.60	0.59	0.55	0.63	0.57	0.54	0.60
Africa and Middle East	0.63	0.61	0.64	0.63	0.61	0.64	0.63	0.61	0.65	0.63	0.61	0.64
Other	0.69	0.68	0.71	0.69	0.68	0.71	0.71	0.69	0.74	0.68	0.66	0.70
Points at first offence												
Less than 20	1			1			1			1		
0	1.60	1.55	1.65	1.60	1.55	1.65	1.71	1.63	1.79	1.03	0.97	1.10
20	1.33	1.31	1.36	1.33	1.31	1.36	1.49	1.46	1.52	0.58	0.55	0.62
Between 20 and 50	1.54	1.51	1.57	1.54	1.51	1.57	1.28	0.94	1.76	0.72	0.68	0.76
50	1.47	1.42	1.52	1.47	1.42	1.52	4.64	0.45	47.65	0.91	0.86	0.97

Characteristic	All offences			No fine			Fine <$100			Fine ≥ $100		
	Adj OR	95% CI		Adj OR	95% CI		Adj OR	95% CI		Adj OR	95% CI	
Offence type												
Speed	1			1			1			1		
Licence-related	1.41	1.39	1.43	1.41	1.39	1.43	3.80	2.63	5.47	1.71	1.69	1.74
Alcohol	0.74	0.72	0.76	2.10	1.28	3.44	4.26	0.88	20.70	0.68	0.65	0.70
Compliance-related	0.73	0.72	0.74	0.73	0.72	0.74	0.79	0.33	1.86	0.71	0.70	0.72
Mobile devices	0.43	0.42	0.45	0.43	0.42	0.45	0.43	0.41	0.44	2.21	0.42	11.59
Reckless driving	0.76	0.75	0.77	0.76	0.75	0.77	1.46	0.76	2.79	0.80	0.79	0.81
Unlicensed vehicle	0.95	0.92	0.99	0.95	0.92	0.99	-	-	-	0.42	0.39	0.44
Other	1.31	1.26	1.36	1.31	1.26	1.36	1.07	0.79	1.45	1.04	0.99	1.09
Fines												
Less than $100	1											
0	2.50	2.42	2.58									
$100–$299	1.19	1.18	1.20									
$300–$499	1.98	1.94	2.01									
$500+	1.57	1.53	1.62									

Fines also influenced the relationship between licensing points and multiple offending. If the first offence incurred no fine, there was no relationship between licensing points and further offences. If a moderate fine was incurred, no additional licensing points or 20 licensing points increased the odds of multiple offences. The highest level of fine, together with higher licensing points significantly reduced the odds of further offences.

Multivariate logistic regression was also performed to examine the factors that may increase the odds of having a licence suspension (or not) during the decade from 2005 to 2014. As shown in table 9.15, the predictors of licence suspension are very similar to the predictors of multiple offences.

Table 9.15 Predictors of licence suspension in New Zealand for the years 2005–2014

Characteristic	All offences		
	Adj OR	95% CI	
Age group at first offence			
26–55	1		
15–18	5.06	4.98	5.15
19–25	2.89	2.84	2.93
56–75	0.19	0.18	0.20
76+	0.04	0.03	0.06
Gender			
Male	1		
Female	0.48	0.47	0.48
Region of birth			
New Zealand	1		
Pacific Islands	0.76	0.74	0.78
Australia	0.78	0.74	0.81
UK and Ireland	0.45	0.43	0.47
Asia	0.25	0.24	0.26
North America	0.38	0.33	0.42
Africa and Middle East	0.53	0.51	0.55
Other	0.59	0.56	0.62
Offence type			
Speed	1		
License-related	2.19	2.15	2.23
Alcohol	0.50	0.48	0.52
Compliance-related	0.65	0.62	0.67
Mobile devices	0.31	0.27	0.37
Reckless driving	0.80	0.77	0.82
Unlicensed	0.84	0.79	0.89
Other	1.33	1.27	1.40
Fine			
Less than $100	1		
0	3.14	3.00	3.28
$100–$299	1.70	1.67	1.73
$300–$499	3.48	3.40	3.56
$500+	2.59	2.48	2.71

The youngest age group had around five times the odds of being suspended compared to offenders aged 26 to 55 (at their first offence of the decade). The next youngest age group (19 to 25 years) had nearly

three times the odds of being suspended compared with offenders aged 26 to 55 whereas the oldest two age groups have very small odds of being suspended. Males are around twice as likely as females to be suspended, and New Zealand-born first offenders are more likely to incur a suspension in the decade than offenders from any other region of birth. As for multiple offenders, when the first offence was licence-related or in the other category drivers were more likely to subsequently incur a licence suspension compared with drivers whose first offence was speeding. Drivers whose first offence was any other type were significantly less likely to incur a suspension than drivers whose first offence was speeding. Fines had an even larger influence on suspension than on to multiple offending. When the fine for the first offence of the decade was very large (≥ $300) the odds of incurring a suspension during the decade were around three times greater than when the fine for the first offence was small. And again, when the first offence incurred no fine, drivers were also around three times more likely to be suspended over the decade.

10 Discussion of data interrogation findings

This study provided an overview of the number and patterns of licensing points obtained by drivers in New Zealand for the years 2005 to 2014. Among the more than 1.68 million drivers who had a driving offence in the decade, just less than half (43%) had only a single offence. The majority of offenders had two or more offences, with one-third having three offences and around one-quarter having four offences. Overall, there was a clear relationship between increasing offences and the likelihood of re-offending. This means for most offenders, a traffic offence was not just a one-off event. For example, a person with five offences in the decade had a 75% chance of committing another offence and with 10 offences the likelihood of another offence was 84%.

The most common type of offence was speeding, which accounted for around half of all offences in the database, and was the reason for first entering the database for nearly two-thirds of offenders. Licensing/registration offences were the second most common offence overall and together with speeding two types of offences accounted for three-quarters of the offences over the decade. However, licensing/registration offences were not as highly represented among first offences, indicating these occurred more often for multiple offenders. Alcohol offences and to a lesser extent reckless driving and noncompliance with rules offences were more highly represented in the first offence than in all offences. Thus the relative frequency of the various offence types changed with multiple offending. Speeding became a less prominent offence type as the number of offences increased and it was overshadowed by other offence types including licence-related, other and unlicensed vehicle offences. Nevertheless, most offenders had at least one speeding offence. In contrast, mobile offences were relatively uncommon and the single offence of the one-off offender.

Most offences of most types attracted both licensing points and fines. The exceptions were alcohol offences, and other offences which mainly attracted a fine. A significant minority of alcohol and other offences (around one in five) attracted neither licensing points nor a fine. A review of these alcohol offences indicated many were treated particularly seriously and resulted in immediate licence disqualification. Many of these mandatory licence suspensions usually resulted in court prosecutions with penalties imposed by the courts and did not incur licensing points.

This study provided a number of useful insights into the deterrence effects of the driving offence and penalty system. First, there was a clear effect of the threat of licence suspension on accumulation of 100 licensing points in a two-year period. Analysis of the patterns of accumulation of licensing points over a two-year period from the first offence showed points were accumulated up to around 70 to 75 points. Almost no drivers reached 80 points although a small minority (less than 10%) went on to accumulate 85 to 95 points. Over the decade, only 8.5% of offenders incurred a licence suspension. It seems that approaching the threshold limited the number of offences incurred. However, with the majority of offenders incurring more than one offence over the decade, this effect was not to deter single offences, but to limit the number of offences drivers accumulated over a two-year period.

Evidence relating to the time between offences also sheds some light on deterrence effects of the penalty system. Over the 10 years included in this study, there is a clear effect of decreasing time between offences for offenders with greater numbers of offences. While there was nearly four years between offences for drivers who had only two offences during the decade, drivers with 9 to 10 offences incurred an offence on average around every 12 months. Notably offences occurred at about the same rate as they accumulated. The time between the first and second offence was around the same as between the fifth and sixth offence, for example, indicating that incurring a fifth offence had about the same delaying effect on incurring a sixth offence as the effect of the first offence on the second offence. Similar analysis of

accumulation of licensing points and offences within a two-year period also showed they occurred more rapidly with increasing numbers of offences and larger numbers of offences were accumulated at a constant rate. Again, this showed that having one, two and up to five offences had no particular deterrence effect as there was no evidence of slowing in the rate of accumulation for either early or later offences.

Because there was some variation between offence types in the nature of the penalty incurred, it was possible to look at the deterrence impact of different combinations of licensing points and fines. A simple analysis of all offences showed where the first offence incurred no licensing points the odds of re-offence increased by 64% compared with incurring any points, and if the first offence incurred no fine the odds of re-offence were more than double compared with incurring any fine. A multivariate analysis of the interactions between licensing points and fines and effects on deterrence extended these findings. This analysis confirmed repeat offending was significantly more likely if no penalty (points or fine) was incurred, even if fines were over $100. The odds of re-offence were also significantly higher if only points were incurred, even where the highest point-penalty of 50 points was incurred. Repeat offending was only significantly reduced when fines were high (>$100) and points were also incurred. Notably, this deterrence effect occurred for all point penalties from 20 points and higher. In fact, the strongest deterrence effect (a halving of re-offending) occurred with higher fines and a 20 point penalty. These findings show the penalty system is effective in deterring further offences, but only when penalties of at least 20 points are combined with a large fine for the first offence. Notably, the same patterns of effectiveness of points and penalties were shown for reducing licence suspensions. The appropriate combination of points and penalty seems to have a specific deterrence effect on drivers who have multiple re-offences, and does not just reduce the odds of a second offence.

The study also showed there were different deterrence effects for different types of offences. Some offence types were much more likely to be represented amongst repeat offenders. The most notable were licensing/registration offences, the other group of offences and alcohol offences. In each case, the majority of offences in the database were repeat offences. Mobile phone offences, on the other hand, were mainly single offences. These differences are likely to at least partly reflect variations in the way offence types are treated. As discussed above, these three types of offences incurred different penalties and, in fact, were more likely to have no penalties or only fines which this study demonstrated are likely to be less effective in deterring further offences. It is also possible there are differences in the types of drivers who incur these offence types and this may also have an effect on deterrence. The high reoffending for alcohol-related offences for example may be due, at least partly, to dependence-related factors so these offenders would be expected to be less responsive to the penalty system.

The dataset provides some information about the characteristics of licence-holders who incur traffic offences. The majority of offenders were males, born in New Zealand, who at first offence in the decade were between the ages of 25 and 55 years, and at that time had been driving for at least five years. Of course these characteristics are likely to describe the majority of drivers on New Zealand roads suggesting these characteristics mainly describe drivers with the most exposure to the road environment. The data also highlights that younger licence holders, especially those aged 15 to 18, who had held their licence for less than one year, were most likely to incur offences. This four-year age group accounted for around 10% of all offences whereas the 30 year age group between 26 and 55 years only accounted for 56% of offences. The 19 to 25 years age group were also more highly represented amongst offenders. These two groups account for nearly one-third of offences, so supporting the conclusion that younger and novice drivers are more likely to incur penalties. In contrast, older drivers were clearly unrepresented amongst offenders. The 56 to 75 years age group only accounted for 13% of offences and drivers over 75 years only accounted for just over 1% of offences.

The groups of drivers who were over-represented in the offender database were also more likely to incur multiple offences. Younger and novice drivers were more likely to be multiple offenders. Less than 20% of 15 to 18 year-olds had only one offence in the decade, whereas well over half the drivers aged over 55 had only one offence. The younger group also had the highest numbers of offences with around 40% of 15 to 18 year-olds incurring six or more offences and 20% incurring more than 10 offences in the decade. The 19 to 25 year-olds were also more likely to be multiple offenders, with nearly one-quarter incurring more than six offences. The same patterns of higher numbers of offences were shown for drivers with the shortest periods of licensing whereas less than 5% of offenders with more than 20 years of licensing had more than five offences.

New Zealand-born drivers were more likely to be multiple offenders as might be expected, but despite not being highly represented in the database, drivers born in the Pacific Islands and Australia were more likely to incur larger numbers of offences than drivers born in other regions. In each case more than 10% of offenders had six or more offences in the decade. Very similar characteristics were found for offenders who progressed to licence suspension (or multiple licence suspensions). Young and novice drivers were again much more likely than other groups to be suspended at all and offenders born in New Zealand, Pacific Islands and Australia were also considerably more likely to be suspended than other groups.

These results show that young novice drivers are more likely to incur driving offences than other groups. This may be due to their youth, lack of skill and related factors in a similar way to the higher representation of young novice drivers in crashes. It is also possible the higher representation of young novice drivers in the database may be because there are more potential offence types relating to novice drivers so there are more opportunities for novices to offend. Most driving offences apply equally to all drivers regardless of age or licence status, but novices can also incur licence-related offences which relate only to novice drivers. Furthermore, licence-related offences also incur somewhat higher licensing points (mainly 35 points), which may increase the speed of accumulation of points for novice drivers and so account for the higher likelihood of suspensions. Consistent with this suggestion, licensing and registration-related offences were the most common type of offence for young novice drivers, accounting for nearly half of their first offences. This possibility is also supported by the finding that young drivers have higher mean licensing points (and higher mean fines) for their first offence than older groups. It seems some characteristics of the driving offences and penalties system itself may play some role in the high representation of young novice drivers entering the system and for accumulating licensing points and fines within it.

This very large dataset of information about driving offences and penalties over a decade in New Zealand provides a rich resource for understanding how the licensing point system operates and its incentive and deterrence effects. A potential limitation of the database is that it provides information about offences occurring over the decade but not about those that may have occurred in the past. This means the interpretation of ‘first offence’ in the decade may not have been the first offence for individual offenders. Similarly, the analysis of single compared with multiple offenders only applies to the decade. However, the offenders classed as first or single offenders did not offend again over the 10 years of the database so were still very infrequent offenders. Another limitation is related to the inclusion of serious court offences that did not incur licensing points as is the case for many alcohol offences. While their inclusion can be justified in terms of investigating the impact of previous offences, it is problematic when looking at their impact, from a licensing point of view, on subsequent crashes. Their exclusion would have also biased the data as court order sanctions associated with these offences would have certainly impacted on the likelihood of subsequent offences. Finally, mobile phone offences were introduced in November 2009 and do not feature in the first half of the study period. Overall, however, the analysis provides useful information about who offends, the nature of offences, how the offences occur over time and, most

usefully provides some insights into how the system may or may not deter driving offences. This dataset is a very rich source of information about the LPS and would warrant further analysis on a range of dimensions including more specific analysis of different types of offences and different patterns of offences in order to enhance evidence-based policy development.

11 Recommendations based on data interrogation

The interrogation of New Zealand licence and offence data for the years 2005 to 2014 showed the New Zealand driving offence and penalties system is having some benefits in reducing multiple offences. It also showed a very large number of drivers had some interaction with the system over the decade of the review and that there are a number of potential opportunities to improve the deterrence effects of the system.

The design of the current driving offence and penalty system means deterrence of single offences is not the primary focus. The system allows accumulation of up to 100 points and so allows for multiple offences. This may be why the majority of offenders have more than one offence. With most offences incurring 20 points, it is possible for offenders to commit up to four offences without further significant penalty. To enhance the deterrence function of the LPS it could be useful to consider limiting the number of offences before licence suspension. This could be done through simply increasing the number of points incurred for single offences although this would need to ensure relative safety risk between different offences is maintained and offences of similar risk level receive similar penalties.

A second strategy that could also be tried to target offenders with larger numbers of multiple offences responds to the present finding that frequent repeat offenders accumulate their offences (and points) much faster than repeat offenders with fewer offences. This strategy would increase the points incurred for each successive offence. Again, this would reduce the number of offences committed before the 100-point threshold.

In any case, reviewing and intervening when offenders incur offences in rapid succession could be a useful strategy for reducing multiple offences. This would take advantage of the finding that multiple offenders are distinguished by the speed at which they incur offences by intervening when drivers commit offences and accumulate points in short periods of time. For example, the rate of accumulation of offences for drivers who go on to incur three to four offences over a two-year period is around one every four to six months. Identifying drivers who have incurred two or more offences within six months and intervening with a strategy targeted at either simply reducing a further reoffending or reducing the specific types of offences incurred, should reduce the likelihood that the driver will go on to commit many more offences.

The study clearly showed deterrence effects were only achieved when penalties included at least 20 points in combination with a sufficiently large fine. This suggests there would be significant benefits from reviewing the nature of penalties particularly for the most common offences (such as speeding and licensing/registration offences) and the offences most strongly associated with multiple offending (such as alcohol and licensing/registration offences). This review should look at potentially increasing penalties where they might be too low for achieving the intended effect.

In particular, there is a need to review the penalties for young novice drivers. This group was highly represented in the database, especially in the multiple offenders and suspended drivers. It was also distinguished by a very high proportion of licensing/registration offences, the majority of which only pertain to novice driving (eg unaccompanied learner and violating the passenger restriction on novice drivers). This analysis suggests there would be benefits in reappraising the nature of the offences and penalties pertaining to young drivers, to highlight the road safety relevance of regulations and penalties. This might include reviewing the need for higher penalties for higher risk offences.

The analysis showed older drivers were also prominent in the database by significantly higher rates of offences for reckless driving (such as slow vehicle or inconsiderate driving, impeding traffic, failure to give way when turning or changing lanes, and careless or inconsiderate vehicle operation) and noncompliance

with road rules (such as making a prohibited right or left turn, failure to give way at a sign and failure to comply with traffic signs). This provides some clear targets for interventions to try to reduce crashes involving older drivers. However, older drivers tend to be single offenders, so may not be a primary target of an LPS.

PART THREE: SURVEY OF NEW ZEALAND DRIVERS

12 Introduction to the survey of New Zealand drivers

12.1 Survey aims

The behavioural studies aimed to investigate the human, cultural and socio-economic factors that influence the effectiveness of a LPS. Specific research issues included those highlighted *a priori* by the Transport Agency, as well as those emerging out of the literature review that comprised the first component of the present project. Specific factors considered were:

- knowledge about the New Zealand LPS
- perceived likelihood of negative consequences of risky driving
  - perceived likelihood of detection when engaging in specific risky driving practices
  - perceived likelihood of suspension, driving while suspended
- perceived severity of licence suspension
- attitudes towards demerit points
  - self-reported effect of demerit points on compliance
  - self-reported number of demerit points required to encourage compliance for specific risky driving practices.

The research also considered associations of personal characteristics, driving characteristics, and beliefs with accruing demerit points (although interpretation is necessarily limited by the use of a cross-sectional design), to address the research question: 'Who cycles through different ranges of demerit points?' Finally the research canvassed community responses to possible features of a LPS that are not currently part of the New Zealand system.

12.2 Survey methods

12.2.1 Recruitment

UNSW engaged market research agency Colmar Brunton to 1) recruit participants from their panel of more than 250,000 New Zealanders aged 17 and over who have consented to being invited to participate in research, 2) host the on-line questionnaire, and 3) provide raw data to UNSW.

Potential participants were randomly selected from the panel to achieve, at least in principle, a sample that was representative of the study population (New Zealand licence holders aged 17 years and above), in terms of age and gender (based on Transport Agency data). Census data was used for stratified sampling according to area of residence (New Zealand region). Ethnicity could not be considered at this stage of recruitment, because Colmar Brunton did not hold relevant information for their panel.

Selected panellists were sent a personalised email inviting them to participate in the research (appendix F). The invitation email introduced a study 'about what motorists think about New Zealand's system of demerit points, and about if and how it might be changed to improve road safety' being conducted 'by

Colmar Brunton for the University of NSW in Australia, on behalf of the New Zealand Transport Agency'. The email indicated participation would involve completing a 15-minute on-line questionnaire, described eligibility requirements and available compensation, and provided researcher contact details and a link to the online survey.

In order to be eligible potential participants were required to:

- be at least 17 years old
- hold a New Zealand restricted or full licence to operate a car or motorcycle.

The online questionnaire commenced with an introductory page that re-iterated the nature of the research, eligibility requirements, and available compensation (see appendix G). Potential participants were also assured of their right to refuse participation or to withdraw without negative consequence, and of the confidentiality/anonymity of their data. Participants indicated their consent by proceeding to the survey. Respondents received 10 FlyBuys points[8] as a compensation for their time and effort.

In order to maximise the response rate, Colmar Brunton monitored response levels closely during fieldwork and sent a single reminder email to all invitees who had not responded within one week (see appendix H). Further invitation emails were sent to meet soft quotas for sample strata, now including ethnicity based on census data. Colmar Brunton managed an email address for queries from respondents throughout the survey period.

12.2.2 Questionnaire

UNSW drafted questionnaire to address research aims. The questionnaire was reviewed by the Transport Agency to ensure its ends were met. The Transport Agency and Colmar Brunton reviewed the language and format of the questionnaire, including for applicability to New Zealand and consistency with research best practice. In particular, typical question phrasing and response options were employed for questions relating to ethnicity, place of residence, level of education and household income.

The revised approved questionnaire was thoroughly tested by the research and programming teams and piloted with 400 people. No changes were made as a result of piloting and so pilot participants were included in the final sample.

The final questionnaire is presented in appendix G. Questions addressing each of the research questions (see section 12.1 above) are described in detail in chapter 14.

12.2.3 Procedures

Data was collected from 8 June to 20 June 2016.

Participants were compensated for their time and effort with 10 loyalty points for the Fly Buys programme to which all Colmar Brunton panel members belong.

12.3 Ethical approval

Ethical approval for the survey and focus groups was granted by the UNSW Human Research Ethics Committee and by The New Zealand Research Ethics Committee.

[8] All members of the Colmar Brunton research panel hold FlyBuys accounts.

13 Data analysis

Colmar Brunton carefully inspected the final dataset to ensure it was representative of the study population (New Zealand licence-holders aged 17 years and over) in terms of age and gender (using Transport Agency data), and of the New Zealand population in terms of New Zealand region of residence and ethnicity (using census data). No weighting of the data was necessary.

All variables were analysed descriptively using appropriate statistical techniques. Inferential analysis was used to examine associations of key outcome variables (eg ever had demerit points) with personal and driving characteristics (eg age, gender, licence type) and with beliefs about the LPS (eg knowledge of the aspects of the LPS, perceived likelihood of detection, perceived severity of suspension). Where appropriate, variables were categorised to two or three levels to facilitate interpretation.

To address the research question: 'Who cycles through different ranges of demerit points?' three regression models were developed. The three dependent variables were ever having had any demerit points (model 1), ever having reached at least 65 demerit points (binary logistic regression) (model 2), and currently having any points (model 3). Model 1 was developed to examine whether motorists who had ever had demerit points might differ from motorists who had not, both in terms of factors that might contribute to receiving demerit points (eg gender), or factors that might be influenced by having had demerit points (eg knowledge of the LPS). Model 2 was developed to examine the characteristics of motorists who had ever reached a relatively high number of points (here: 65 points), compared with those who had reached a lower number. To avoid over-determination of model 2 by features associated with ever having had any points per se we excluded participants who had never had points (60.7% of the sample). The cut-point was set at 65 points because from this level of points a single offence could result in suspension, and sufficient respondents had a higher number of points to allow meaningful analysis (n=97). The 65-point cut-point can also be taken to represent repeat offending. Model 3 was developed to examine the characteristics of motorists who currently have some demerit points, compared with those who do not have any. This measure may be considered less reliable than 'ever had points' because it represents a shorter time frame. However, particularly where associations may reflect an influence of points on other factors (eg knowledge) then 'current points' may be superior due to being more proximal in time. It was not possible to examine a nominal 'high cut-point' (such as 65 points) because an insufficient number of respondents currently had a high number of points. A cut-point low enough to allow reliable comparison of those above and below it (eg 25 points) could easily have been obtained in a single offence, so is not suitable in the context of examining a LPS (which targets repeat offending).

Responses to questions relating to knowledge about the LPS were generally classified as: a number less than the correct number, the correct number, a number greater than the correct number. The exceptions to this were:

- Both 99 and 100 were regarded as correct for the demerit point threshold, in view of potential misunderstanding of the question 'How many points do you think you can have on your licence before it is suspended?'
- Respondents who reported suspension lengths of less than three months were grouped with those who reported with three months, in view of the rarity of the former.
- Respondents who reported points for mid-range speeding less than 35 points were grouped with those who reported 35 points, in view of the small number reporting 35 points.

Naturally the question of whether demerit points apply to camera-detected speeding offences is dichotomous (no= correct; yes= incorrect).

The 21 respondents who indicated 'I don't care how many demerit points I have and I will never change my driving or riding behaviour to avoid them' were excluded for regression modelling because cell sizes became too small when these respondents were allocated to different levels of each dependent variable. Moreover, this response appeared to be given by people who perceived points to be irrelevant because their driving was compliant anyway, as well as respondents who perceived points as irrelevant for another reason. Nonetheless, given the potential importance of the latter group they were described in terms of various characteristics. Previously having had a suspension due to demerit points (and related variables) could not be included in regression models because only 19 respondents had been suspended.

Where questions were asked about each of a number of offences (ie reported number of points applied and perceived likelihood of penalty) mid-range speeding (exceeding the speed limit by more than 20 km/h but not more than 30 km/h) was employed as a proxy variable, because it was the most common offence involved in receiving demerit points, and in being suspended. Moreover, responses for mid-range speeding were strongly correlated with responses for other offences. Including each offence in the models would have reduced their power.

Multivariable binary logistic regression models were developed using the following stages:

Stage 1: Enter each potential predictor variable in a univariate analysis and select those with a p-value below a nominal threshold (here $p=0.15$).

Stage 2A: Enter the demographic variables and driving variables (ie experience, licence type, driving for work) selected at stage 1 into a multivariable model and remove by backwards elimination. Variables with $p<.10$ are retained in the final model. This stage serves to identify segments of the population that might be the target of specific interventions

Stage 2B: Enter all variables selected at stage 1 into a multivariable model and remove by backwards elimination. Variables with $p<.10$ are retained in the final model. This stage supports consideration of causal mechanism (albeit within the limitations imposed by a cross-sectional design).

14 Survey results

14.1 Response to invitations

To reach a target of 1,000 respondents, 9,193 members of the Colmar Panel were invited to participate. Thus, 10.9% of invitees participated (table 14.1 provides details by age and gender).

Table 14.1 Response to invitation for segments of the survey sample defined by age and gender

Characteristic		Invitees	Respondents	% responded
Age	17–24	1,713	98	5.7%
	25–64	6,615	718	10.9%
	65 or older	865	184	21.3%
Gender	Male	6,122	625	10.2%
	Female	3,071	375	12.2%

14.2 Respondent characteristics

Table 14.2 presents information about the licence type of respondents. The respondent holding only a motorcycle licence was excluded from further analysis, so the final sample comprised car licence holders (n=999). Holding a motorcycle licence, and holding a heavy vehicle licence, were included as factors in inferential analysis.

Table 14.2 Number of respondents (N=1,000) holding each combination of licence

Motorcycle only	1
Car only	720
Car and motorcycle	120
Car and heavy vehicle	79
Car, heavy vehicle and motorcycle	80

Only 7.2% of all car licences were restricted while the remainder were full. Among the holders of motorcycle licences that were learner (n=17; 8.5%) or restricted (n=7; 3.5%), all but one held a full car licence. Only three heavy vehicle licences (1.9%) were learners. Only one respondent reported their licence was 'under special conditions'[9], with all other respondents reporting active licences.

An ordinal variable was developed as an indicator of 'independent motoring experience' based on current age group and the age at which respondents reported obtaining their first restricted licence. For 408 respondents who reported never having held a restricted licence (93.4% of whom were aged over 45) the reported age when they obtained their first full licence was used. With this categorisation, 4.3% of respondents had been motoring for up to four years, 7.4% between five and nine years, and the clear majority (87.9%) for 10 or more years (with a further 0.4% not answering relevant questions).

[9] A pink licence means the driver is currently subject to special conditions as the result of a suspension or disqualification. There are three different pink licences. 1) A driver with a limited licence is currently suspended or disqualified and driving under the conditions of a court order. 2) A driver with an alcohol interlock licence has an alcohol interlock condition that allows them to drive only those vehicles fitted with an alcohol interlock device. 3) A driver with a zero alcohol licence must maintain a zero alcohol limit when they are driving.

Around 4 in 10 respondents (41.3%) indicated they drive or ride in their job (other than commuting to work). These respondents were asked in what capacity they drive or ride. Table 14.3 shows the percentage of these respondents who endorsed each of the offered responses.

Table 14.3 Percentage and number of respondents reporting each type of work motoring

Type	%	n
Taxi driver	3.1%	14
Motorcycle courier or courier driver	3.3%	15
Postal delivery services motorcycle rider	1.6%	7
Truck driver	6.0%	27
Emergency services driver	2.9%	13
Bus driver	1.3%	6
Other	81.8%	369

Common 'other' responses were in the fields of other passenger transfer (including medical and community), other deliveries, visiting clients (including medical and community), sales, trades and construction, agriculture, automobile industry, and policing and security. Eleven 'other' responses indicated professional driving was occasional.

Table 14.4 summarises the personal characteristics of respondents in the final sample. The sample was just under two-thirds male. Around 7 in 10 respondents were aged 25 to 64 years, while less than 1 in 10 were younger than 25.

A clear majority of respondents (81.4%) identified with only one ethnic group, while 87 respondents identified with two groups, five respondents identified with three groups, and one respondent identified with four groups. A further 1.3% preferred not to identify with any ethnic group. Because some respondents identified with more than one ethic group the percentages shown in table 14.4 do not sum to 100%.

Table 14.4 Percentage (and number) of respondents reporting each category of personal characteristic variables

Characteristic		%	n
Gender	Male	62.5%	624
	Female	37.5%	375
Age[(a)]	17–24	9.8%	98
	25–64	71.8%	717
	≥65	18.4%	184
Ethnicity[(b)]	New Zealand European	64.6%	645
	Māori	16.3%	163
	Pacific Islander	7.8%	78
	Other	20.0%	200
	Prefer not to say	1.3%	13
Province of residence	Auckland	32.8%	328
	Bay of Plenty/Gisborne	7.2%	72
	Canterbury	12.8%	128
	Hawke's Bay	3.5%	35
	Manawatu/Wanganui	5.2%	52
	Marlborough	1.1%	11

Characteristic		%	n
	Nelson	1.1%	11
	Northland	3.8%	38
	Otago	5.2%	52
	Southland	1.7%	17
	Taranaki	2.8%	28
	Tasman	.3%	3
	Waikato	9.9%	99
	Wellington	11.7%	117
	West Coast	0.8%	8
Rurality of residence [(c)]	Rural	5.2%	52
	Urban	94.8%	947
Highest level of education [(d)]	Primary or secondary school	29.3%	293
	Tertiary	68.7%	686
	Other, don't know, prefer not to say	2.0%	20
Household income [(e)]	Under $40,000	15.6%	156
	$40,000 – $99,999	41.5%	415
	$100,000 or more	29.6%	296
	Don't know, prefer not to say	13.2%	132

[(a)] Response options were: 17–19, 20–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75 or older, prefer not to say.

[(b)] Response options were: New Zealand European, other European (including Australian, English), New Zealand Māori, Cook Island Māori, Other Pacific Islands, Chinese, Indian, other Asian, prefer not to say.

[(c)] Response options were: specific cities, other city, other rural area.

[(d)] Response options were: primary school, secondary school, tertiary certificate/diploma (including trade qualifications), bachelor's degree (or equivalent), postgraduate certificate or higher (including honour, post-graduate diploma, masters and PhD), something else, don't know, prefer not to say.

e Response options were: Under $20,000, $20,000–$39,999, $40,000–$59,999, $60,000–$99,999, $100,000–$149,999, $150,000 or more, don't know, prefer not to say.

The majority of respondents (64.6%) identified as New Zealand European. A substantial proportion of respondents identified as Māori (16.3%) or Pacific Islander (7.8%). For further analysis any individual who identified as Pacific Islander was treated as Pacific Islander, and any individual who identified as Māori was treated as Māori (unless they also identified as Pacific Islander, n=2). Individuals who identified as other, or other together with New Zealand European, were treated as other (unless they also identified as Pacific Islander or Māori).

Over 9 in 10 respondents lived in urban areas. Around 7 in 10 respondents reported having a tertiary education. The modal reported income was $40,000 to $99,999 per annum.

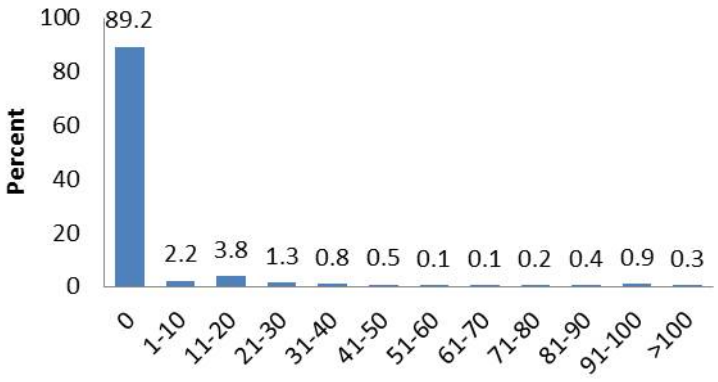
14.3 History of demerit points and licence suspension

14.3.1 Current number of points

All respondents were asked 'How many demerit points do you currently have on your licence?' and given a field in which to type a number. Figure 14.1 shows the histogram of the percentage of respondents

reported currently having zero points, or within each 10-point range[10], currently on their licence. Around 9 in 10 respondents (89.2%) reported they currently have no demerit points on their licence. The next most common response was 20 (reported by 3.6% of respondents), followed by 10 (1.4% of respondents) and 30 (1.0% of respondents). Eight respondents (0.8%) reported having 100 points, while three reported having more than 100 points (including two who reported having 200 points). For further analyses these were recoded as 100 points. No respondent reported being currently suspended.

Figure 14.1 Percentage of respondents who reported having zero points, or within each 10-point range, currently on their licence

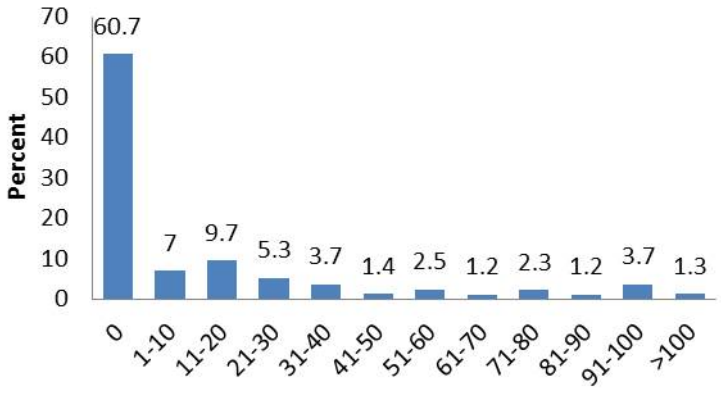


14.3.2 Maximum number of points

All respondents were asked 'What is the maximum number of points you have ever had on your licence at any one time?' and given a field in which to type a number. Figure 14.2 shows the histogram of the maximum number of demerit points respondents reported ever having had on their licence at any one time. Around 6 in 10 respondents (60.7%) reported they had never had demerit points on their licence. Thirty-one respondents (3.1%) reported having had 100 points, while 13 reported having had more than 100 points (including five who reported having 200 or more points). For further analyses these were recoded as 100 points.

[10] A 10-point range was selected because some common offences (eg exceeding the speed limit by not more than 10 km/h) attract 10 points.

Figure 14.2 Percentage of respondents who reported the maximum number of points they had ever had on their licence at any one time was zero, and within each 10-point range



The 393 respondents who reported having had demerit points were asked 'Which of the following behaviours have you ever received demerit points for?' 'Exceeding the speed limit' was endorsed by 88.5% of these respondents, while 'driving or riding while over the legal blood alcohol limit' was endorsed by only 4.3% and 'using a mobile phone while driving or riding' by only 2.8%. Among 17 restricted licence holders who reported having received points, two (11.8%) reported that they were for 'driving between 10 pm and 5 am without a supervisor'. Only one respondent holding a heavy vehicle licence reported having received points for 'producing a log book with omissions', while no respondent holding a motorcycle licence reported having received points for 'Not wearing a helmet'. Just over 14% of the 393 respondents who reported having had demerit points indicated they had received points for 'other' offences but were not asked to specify. More detailed investigation of patterns of point-attracting offences was undertaken in the data interrogation component of the present research.

14.3.3 Licence suspension due to reaching the demerit point threshold

Nineteen respondents (1.9%) reported having had their licence suspended because they had reached the demerit point threshold. Most of these (n=14) reported a single suspension. Thirteen of the respondents who reported having had a suspended licence reported a lifetime maximum number of demerit points of 100, while a further two reported a higher maximum number of points.

Among the 19 respondents who reported having had their licence suspended because they had reached the demerit point threshold, 68.4% identified they had received demerit points for speeding (see response options in section 14.3.2). Driving or riding over the legal blood alcohol limit was identified by 31.6% of respondents and driving between 10 pm and 5 am without a supervisor by 21.0% (while fewer ever suspended respondents indicated they had received demerit points for the other offences mentioned in section 14.3.2.

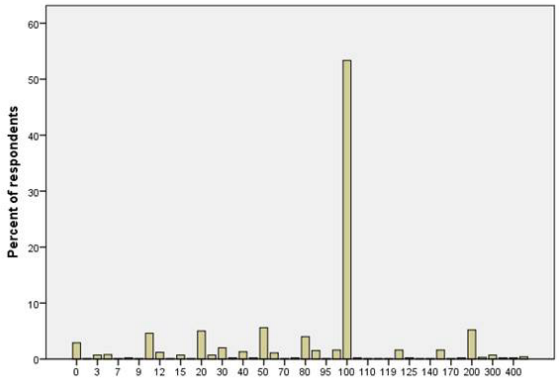
14.4 Knowledge about the New Zealand LPS

14.4.1 Point threshold

When asked 'How many points do you think you can have on your licence before it is suspended?' and given a field in which to type a number, just over half of respondents (53.4%) answered correctly, 100 points, while a further 1.6% answered 99 points (see figure 14.3). Therefore, 55.0% were deemed to have responded correctly. Around one third of respondents (33.6%) reported a lower number of points, with peaks at 50 (5.6%), 20 (5.0%), 10 (4.6%), and 80 (4.0%). Nearly 3% of respondents reported that receiving

any demerit points at all (ie '0' in figure 14.3) could result in licence suspension. A considerable number of respondents (11.4%) reported that more than 100 points were required for licence suspension, with a peak at 200 points (5.2%). Some responses went as high as 500 points.

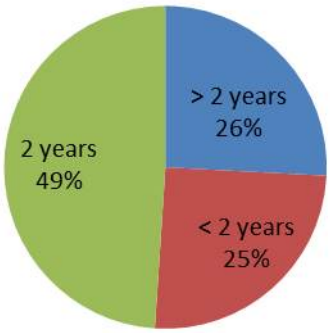
Figure 14.3 Percentage of respondents reporting each point threshold



14.4.2 Point lifetime

When asked 'How long do you think it takes for demerit points to expire?' and given response fields in which to type a number of years and/or a number of months[11], just under half the respondents (48.9%) answered correctly, two years (see figure 14.4). Around one quarter of respondents (25.8%) reported a longer period, with peaks at three years (12.5%) and five years (8.6%). A further quarter of respondents (25.2%) reported demerit points expire more quickly than they in fact do, including 20.8% who reported points expire after one year. It is possible the 11 (1.1%) respondents who responded 'zero' meant the points never expire (ie remain active).

Figure 14.4 Percentage of respondents reporting a point lifetime of two years, <two years and >two years



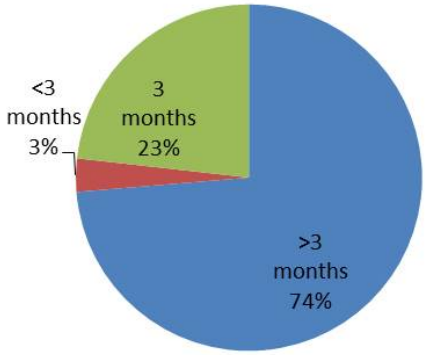
14.4.3 Suspension period

All respondents were asked 'For how long is your licence suspended when you reach the demerit point threshold?' and given response fields in which to type a number of years and/or a number of months[11]. Although the suspension period in New Zealand (after reaching the demerit point threshold) is three months, just under one quarter of respondents (23.2%) gave this response (see figure 14.5). The modal response was six months (reported by 38.2% of respondents), while 35.3% reported a suspension period

[11] Responses were reviewed and categorised for analysis.

of more than six months, with peaks at one year (19.3%) and two years (8.7%), and a maximum of 10 years and five months. Less than 5% of respondents reported a suspension period of less than three months.

Figure 14.5 Percentage of respondents reporting a suspension period of three months, <three months and >three months



14.4.4 Number of points for particular offences and camera detected speeding

All respondents were asked how many demerit points they would get for committing the first four offences in table 14.5. Respondents were only asked about the final three offences if they belonged to the subsamples identified in table 14.5, which shows the percentage of the subsample reporting the correct number of points, a lower number of points, or a higher number of points, or 'Don't know'.

Table 14.5 Percentage of eligible respondents reporting the correct number of points for particular offences, a lower number, or a higher number and 'don't know'

Offence	Correct response	% correct	% lower	% higher	Don't know
Driving or riding with blood alcohol between 50 mg and 80 mg	50 points	13.2%	20.2%	7.7%	58.9%
Exceeding the speed limit by 10 km/h or less	10 points	20.2%	14.8%	28.1%	36.8%
Exceeding the speed limit by more than 20 km/h but not more than 30 km/h	35 points	3.8%	38.5%	18.0%	39.6%
Using a mobile phone while driving or riding	20 points	15.4%	18.6%	15.9%	50.1%
Driving between 10 pm and 5 am without a supervisor[a] *n=68*	35 points	1.5%	27.9%	10.3%	60.3%
Not wearing a helmet[b] *n=200*	25 points	3.0%	15.0%	17.0%	65.0%
Producing a log book with 1–5 omissions[c] *n=159*	10 points	5.7%	6.3%	26.4%	61.6%

[a] Only asked of respondents who reported holding a restricted car licence.

[b] Only asked of respondents who reported holding a motorcycle licence.

[c] Only asked of respondents who reported holding a heavy vehicle licence.

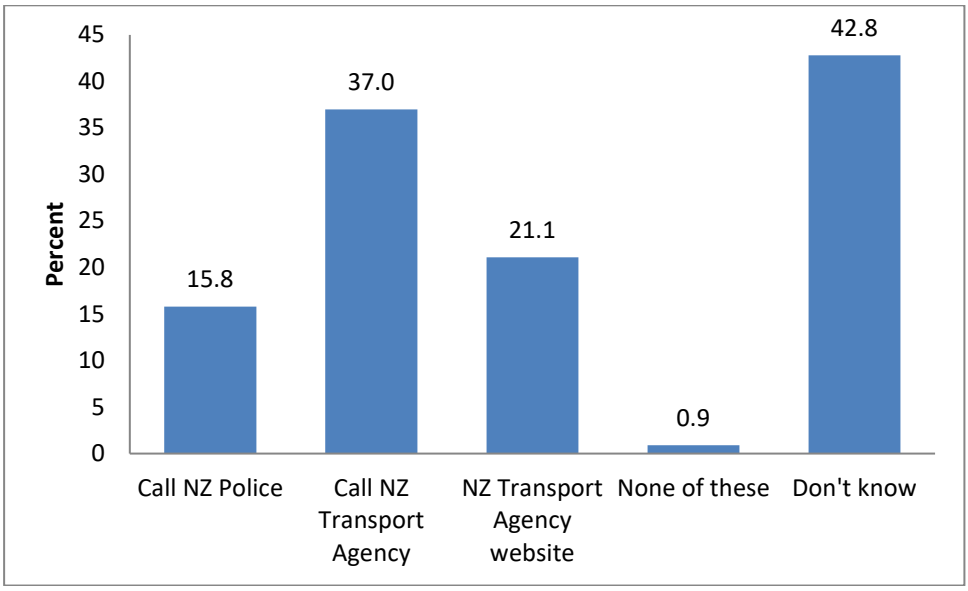
'Don't know' was the modal response for all seven behaviours, highlighting respondents' lack of certainty about the points assigned to particular offences. The percentage of respondents who gave the correct response ranged from 1.5% (for driving unsupervised) to 20.2% (for exceeding the speed limit by 10 km/h or less). Apart from 'Don't know', the modal response was the correct response for three out of seven behaviours, while for high range speeding it was 20 points (15.4%) followed by 30 points (10.8%); for driving unsupervised it was 20 points (14.7%); for not wearing a helmet it was 50 points (5.5%); and for producing a logbook with 1–5 omissions it was 20 points (9.4%).

Nearly 6 in 10 respondents (59.7%) were aware demerit points do not apply to camera detected speeding offences, while 22.6% reported they do apply, and 17.7% reported they did not know.

14.4.5 Finding out points balance

Nearly 9 in 10 respondents (87.3%) reported being 'very certain' or 'completely certain' of the number of demerit points they currently have on their licence (while the remainder reported being 'not that certain' or 'not at all certain'). Asked how to find out their current number of points, 42.8% responded 'Don't know' and only 37.0% gave the correct answer – call the New Zealand Transport Agency (see figure 14.6, which shows the percentage of respondents who endorsed the alternative options). Among the 571 respondents who gave an answer other than 'Don't know', 14.3% reported having checked their points balance at least once (representing 8.2% of the total sample).

Figure 14.6 Percentage of respondents endorsing each of five options for finding out current demerit points
Note: Multiple responses were possible



14.5 Perceived likelihood of negative consequences of risky driving

14.5.1 Perceived likelihood of being caught

All respondents were asked 'How likely are you to be caught if you were to' do each of the first five behaviours in table 14.6. Respondents were only asked about the final three behaviours if they belonged to the subsamples identified in the table. Table 14.6 shows the percentage of the subsample who responded 'Don't know' and 'Likely' (ie 'Quite likely' or 'Very likely'). The remainder responded 'Not that likely' or 'Not at all likely'.

Being caught for not wearing a motorcycle helmet, high range speeding, and driving while over the legal BAC was seen as likely by the highest percentage of the sample (just over half). The lowest percentages were observed for offences specific to a particular group ('Produce a log book with 1–5 omissions' and 'Drive between 10 pm and 5 am without a supervisor') along with 'Drive or ride while your licence is suspended' and 'Use a mobile phone while driving or riding'.

Table 14.6 Percentage of eligible respondents reporting they would be likely to be caught if they committed particular offences (and 'Don't know')

Offence	% Likely[(d)]	% Don't know
Drive or ride while over the legal blood alcohol limit	50.5%	1.2%
Exceed the speed limit by 10 km/h or less	42.8%	0.9%
Exceed the speed limit by more than 20 km/h	55.2%	1.2%
Use a mobile phone while driving or riding	30.3%	1.1%
Drive or ride while your licence is suspended	29.1%	2.2%
Driving between 10 pm and 5 am without a supervisor[(a)] *n=68*	27.9%	0.0%
Not wearing a helmet[(b)] *n=200*	55.5%	1.5%
Producing a log book with 1–5 omissions[(c)] *n=159*	25.8%	8.8%

[(a)] Only asked of respondents who reported holding a restricted car licence.

[(b)] Only asked of respondents who reported holding a motorcycle licence.

[(c)] Only asked of respondents who reported holding a heavy vehicle licence.

[(d)] 'Quite likely' and 'Very likely' (with alternatives 'Not that likely', 'Not at all likely', or 'Don't know')

14.5.2 Driving while suspended

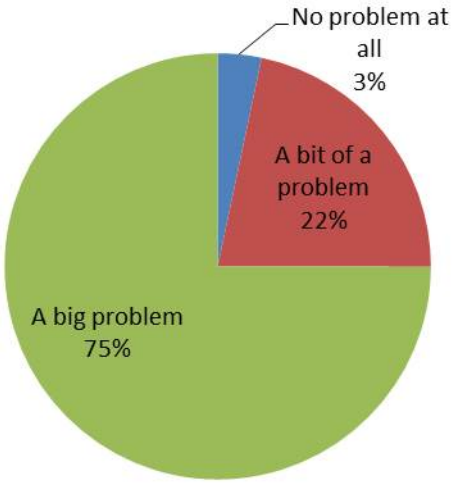
Among drivers who reported their licence had been suspended due to reaching the demerit point threshold (n=19), 52.6% reported they completely stopped driving and riding during the suspension period. The remainder reported they continued driving during the suspension period, either more cautiously (31.6%) or the same as before (15.8%). The majority of respondents who had been suspended due to reaching the threshold reported driving or riding more carefully after the suspension period than before it (63.2%), although a considerable proportion reported driving or riding about the same as before (36.8%).

For comparison, considering respondents who reported their licence had been suspended for reasons other than reaching the demerit point threshold (n=99; including seven who also had a demerit point suspension), 75.8% reported they completely stopped driving and riding, 21.2% reported they continued driving but more cautiously, and only 3.0% reported the suspension had no impact on their driving or riding. There was a fairly even split between respondents who reported driving or riding more carefully after the suspension than before (48.5%), and those who reported driving or riding about the same as before (51.5%).

14.6 Perceived severity of suspension

All respondents were asked 'How big a problem would it be for you to have your licence suspended?' (see figure 14.7). Three quarters of respondents reported it would be 'a big problem'. Only a very small percentage (3%) said it would be 'no problem at all', while the remainder indicated it would be 'a bit of a problem'.

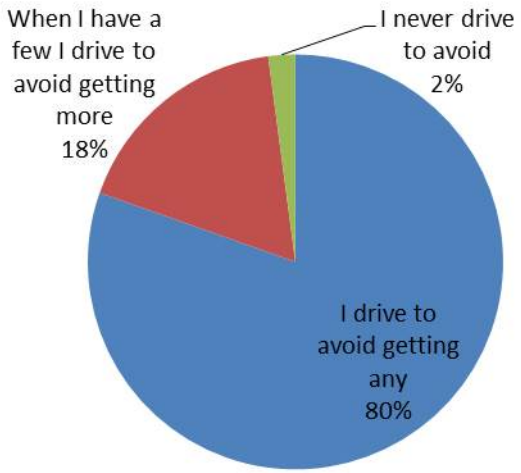
Figure 14.7 Percentage of respondents reporting a suspension would be no problem at all, a bit of a problem, and a big problem



14.7 Attitudes towards receiving demerit points

Figure 14.8 shows the percentage of respondents reporting each of three attitudes toward receiving demerit points. Around 8 in 10 participants reported 'I don't like having any demerit points and avoid driving in a way that would result in receiving any', while 17.5% reported 'I don't mind having a few demerit points, but I will change my driving or riding behaviour when I have a few to avoid getting any more'. Only 21 respondents reported 'I don't care how many demerit points I have and I will never change my driving or riding behaviour to avoid them', including 10 who had never had any points. Only six had ever reached 65 points; two of them 17 to 24 year-old females, two of them 25 to 64 year old females, and two of them 25 to 64 year-old males. Five of them reported having a tertiary education.

Figure 14.8 Percentage of respondents endorsing each of three attitudes toward receiving demerit points



14.8 Factors associated with licence history

The final adjusted personal characteristics model of ever having had points (model 1 stage 2A; table 14.7) indicated respondents who were male, held a motorcycle licence, or drove or rode for work were more likely than their counterparts to have ever had points. Having ever had points was also more likely for respondents in the middle-age bracket compared with the highest-age bracket, for New Zealand Europeans compared with Pacific Islanders and 'other' ethnicities, and for those in the highest income bracket compared with the lowest. Only gender, age and holding a motorcycle licence remained in the *final adjusted full model* (model 1 stage 2B; table 14.7).

In addition, the final adjusted full model indicated that attitude to demerit points was strongly associated with ever having had points. Respondents who reported they did not mind having a few points but drove to avoid getting more, were more than four times more likely to have had points compared with respondents who reported always driving to avoid getting any demerit points.

Respondents who had had points were more likely to give correct responses to questions about the demerit point lifetime and whether points applied to camera-detected offences, possibly reflecting engagement with the system.

The models of ever having reached 65 points (table 14.8) included only respondents who reported ever having had demerit points, and who might be more familiar with the system than those who had not received demerit points. The *final adjusted personal characteristics model* (model 2 stage 2A; table 14.8) indicated respondents in the youngest and middle-age brackets were more likely to have reached 65 points than those in the highest age bracket, and the difference between the middle and highest age bracket remained in the *final full adjusted model* (model 2 stage 2B; able 14.8).

Table 14.7 Modelling of ever having had demerit points stage 1 (univariate models), stage 2 set A (multivariate personal characteristics model), and stage 2 set B (full multivariate model)

	%	Stage 1		Stage 2A		Stage 2B	
		OR	95%CI	Adj. OR	95%CI	Adj. OR	95%CI
Gender							
Male	45.8	2.12*	1.61–2.79	1.67*	1.21–2.31	1.84*	1.27–2.67
Female	28.5	1		1		1	
Age							
17–24	26.5	0.81	0.47–1.39	1.36	0.72–2.56	0.68	0.32–1.45
25–64	43.2	1.70*	1.20–2.40	1.83*	1.21–2.77	1.51*	0.97–2.37
≥65	31	1		1		1	
Ethnicity							
Other	31.7	0.62*	0.44–0.88	0.56*	0.37–0.83	EXC	EXC
Pacific Islander	31.2	0.60*	0.36–1.00	0.63*	0. 36–1.09	EXC	EXC
Māori	39.8	0.88	0.61–1.25	0.93	0.63–1.39	EXC	EXC
New Zealand European	42.9	1		1		EXC	
Rurality of residence							
Rural	32.7	0.74	0.41–1.34	NT	NT	NT	NT
Urban	39.7	1		NT		NT	
Highest education							
Primary or secondary school	37.2	0.89	0.67–1.17	NT	NT	NT	NT
Tertiary	40.1	1		NT		NT	
Household income							
Under $40,000	27.6	0.42*	0.28–0.64	0.56*	0.35–0.89	EXC	EXC
$40,000–$99,999	39.5	0.72*	0.53–0.97	0.80	0.58–1.11	EXC	EXC
$100,000 or more	47.6	1		1		EXC	
Motoring experience							
1–9 years	26.5	0.52*	0.34–0.80	EXC	EXC	EXC	EXC
≥10 years	41.0	1		EXC		EXC	
Motorcycle licence							
Yes	53.5	2.06*	1.51–2.82	1.94*	1.34–2.81	1.98*	1.28–3.078
No	35.8	1		1		1	
Heavy vehicle licence							
Yes	50.9	1.77*	1.25–2.47	EXC	EXC	EXC	EXC
No	37.1	1		EXC		EXC	
Drives/rides for work							
Yes	47.7	1.82*	1.40–2.35	1.35*	1.00–1.83	EXC	EXC
No	33.4	1		1		EXC	
Reported point threshold							
<99	26.2	0.61*	0.39–0.96			0.67	0.37–1.21
99–100	47.9	1.58*	1.04–2.39			1.35	0.79–2.32

	%	Stage 1		Stage 2A		Stage 2B	
		OR	95%CI	Adj. OR	95%CI	Adj. OR	95%CI
>100	36.8	1				1	
Reported point lifetime							
< 2 years	23.4	0.61*	0.42–0.90			0.48*	0.29–0.81
2 years	50.7	2.06*	1.50–2.82			1.56*	1.03–2.35
> 2 years	33.3	1				1	
Reported suspension length							
≤ 3 months	51.0	1.91*	1.44–2.54			EXC	EXC
> 3 months	35.2	1				EXC	
Reported points[a]							
≤ 35	48.9	0.98	0.69–1.39			NT	NT
> 35	49.4	1				NT	
Points for camera-detected speeding							
Yes	27.0	0.38*	0.27–0.53			0.53*	0.35–0.79
No	49.2	1				1	
Perceived likelihood of detection [(a)]							
Likely	41.4	1.23*	0.95–1.59			EXC	EXC
Not likely	36.5	1				EXC	
Perceived severity of suspension							
A big problem	41.9	1.56*	1.15–2.12			EXC	EXC
No, or a bit of a, problem	31.6	1				EXC	
Attitude to points							
Don't mind a few	70.3	4.94*	3.46–7.07			4.03*	2.60–6.23
Don't like any	32.4	1				1	

[(a)] for mid-range-speeding * p is less the criterion for the stage (stage 1 criterion p = 0.15, stage 2 criterion p = 0.10); NT= not tested at this step; EXC= excluded as a result of this step

Table 14.8 Modelling of ever having reached 65 demerit points stage 1 (univariate models), stage 2 set A (multivariate personal characteristics model), and stage 2 set B (full multivariate model)

	%	Stage 1		Stage 2A		Stage 2B	
		OR	95%CI	Adj. OR	95%CI	Adj. OR	95%CI
Gender							
Male	23.1	0.74	0.45–1.21	NT	NT	NT	NT
Female	29.0	1		NT		NT	
Age							
17–24	46.2	2.25*	1.79–15.4	5.25*	1.79–15.36	7.79	1.73–35.16
25–64	24.8	2.02*	0.92–4.46	2.01*	0.91–4.43	1.75*	0.62–5.02
≥ 65	14.0	1		1		1	
Ethnicity							
Other	30.0	1.55	0.82–2.92	NT	NT	NT	NT
Pacific Islander	33.3	1.81	0.73–4.46	NT	NT	NT	NT

	%	Stage 1		Stage 2A		Stage 2B	
Māori	29.7	1.53	0.82–2.83	NT	NT	NT	NT
New Zealand European	21.7	1		NT		NT	
Rurality of residence							
Rural	17.6	0.64	0.18–2.29	NT	NT	NT	NT
Urban	25.0	1		NT		NT	
Highest education							
Primary or secondary school	24.8	0.98	0.58–1.64	NT	NT	NT	NT
Tertiary	25.1	1		NT		NT	
Household income							
Under $40,000	32.6	1.36	0.65–2.84	NT	NT	NT	NT
$40,000–$99,999	22.0	0.79	0.47–1.34	NT	NT	NT	NT
$100,000 or more	26.2	1		NT		NT	
Motoring experience							
1–9 years	41.9	2.41*	1.13–5.13	EXC	EXC	EXC	EXC
≥ 10 years	23.1	1		EXC		EXC	
Motorcycle licence							
Yes	18.7	0.62*	0.36–1.08	EXC	EXC	EXC	EXC
No	26.9	1		EXC		EXC	
Heavy vehicle licence							
Yes	19.8	0.7	0.38–1.28	NT	NT	NT	NT
No	26.0	1		NT		NT	
Drives/rides for work							
Yes	26.4	1.2	0.76–1.91	NT	NT	NT	NT
No	23.0	1		NT		NT	
Reported point threshold							
<99	12.5	0.17*	0.07–0.42			0.16*	0.05–0.53
99–100	25.5	0.41*	0.21–0.81			0.26*	0.10–0.65
>100	45.2	1				1	
Reported point lifetime							
< 2 years	22.0	1.45	0.63–3.37			EXC	EXC
2 years	28.2	2.02*	1.07–3.82			EXC	EXC
> 2 years	16.3	1				EXC	
Reported suspension length							
≤ 3 months	35.1	2.26*	1.41–3.61			2.50*	1.35–4.63
> 3 months	19.3	1				1	
Reported points [(a)]							
≤ 35	21.7	0.61*	0.35–1.06			EXC	EXC
> 35	31.5	1				EXC	
Points for camera-detected speeding							
Yes	32.8	1.58*	0.87–2.88			3.14*	1.40–7.05
No	23.5	1				1	

	%	Stage 1		Stage 2A		Stage 2B	
Perceived likelihood of detection[(a)]							
Likely	26.3	1.27	0.79–2.04			NT	NT
Not likely	22.0	1				NT	
Perceived severity of suspension							
A big problem	25.2	1.14	0.64–2.04			NT	NT
No, or a bit of a, problem	22.8	1				NT	
Attitude to points							
Don't mind a few	30.1	1.64*	1.00–2.67			1.73*	0.93–3.23
Don't like any	20.8	1				1	

[(a)] for mid-range-speeding; * p is less that criterion for stage (stage 1 criterion p = 0.15, stage 2 criterion p = 0.10); NT= not tested at this step; EXC= excluded as a result of this step

Again, respondents who reported they did not mind having a few points but drove to avoid getting more were more likely to have reached 65 points compared with respondents who reported always driving to avoid getting any demerit points. Relationships with knowledge about the system were quite different for model 2 than for model 1. Respondents who believed the threshold was higher than 100 were more likely to reach 65 demerit points than those who believed it was 100 or less. Respondents who believed that suspension was three months or less were more likely to have ever reached 65 points than those who believed suspension was more than three months. Respondents who believed that points applied to camera-detected speeding were more likely to have reached 65 demerit points.

Only age was included in the *final adjusted personal characteristics model of currently having points* (model 3, stage 2A; table 14.9), again with each of the younger age groups more likely than the older age group to currently have points, and the difference between the middle and highest age bracket remaining in the *final full adjusted model* (model 3, stage 2B; table 14.9)

Again, respondents who reported they did not mind having a few points but drove to avoid getting more were considerably more likely to currently have points compared with respondents who reported always driving to avoid getting any demerit points.

Respondents who reported points have a lifetime of exactly two years, or more than two years, were more likely to currently have points than respondents who reported points have a lifetime of less than two years.

Table 14.9 Modelling of currently having points stage 1 (univariate models), stage 2 set A (multivariate personal characteristics model), and stage 2 set B (full multivariate model)

	%	Stage 1		Stage 2A		Stage 2B	
		OR	95%CI	Adj. OR	95%CI	Adj. OR	95%CI
Gender							
Male	11.7	1.29	0.84–1.97	NT	NT	NT	NT
Female	9.3	1		NT		NT	
Age							
17–24	14.3	3.24*	1.35–7.79	3.20*	1.33–7.70	EXC	EXC
25–64	11.9	2.62*	1.29–5.30	2.56*	1.26–5.20	EXC	EXC
≥ 65	14.0	1		1		EXC	
Ethnicity							
Other	11.6	1	0.60–1.67	EXC	EXC	EXC	EXC
Pacific Islander	5.2	0.42*	0.15–1.18	EXC	EXC	EXC	EXC
Māori	9.3	0.78	0.43–1.41	EXC	EXC	EXC	EXC
New Zealand European	11.6	1		EXC		EXC	
Rurality of residence							
Rural	9.6	0.87	0.34–2.24	NT	NT	NT	NT
Urban	10.9	1		NT		NT	
Highest education							
Primary or secondary school	10.2	0.92	0.59–1.43	NT	NT	NT	NT
Tertiary	11.1	1		NT		NT	
Household income							
Under $40,000	9.6	0.88	0.46–1.68	NT	NT	NT	NT
$40,000–$99,999	11.6	1.08	0.67–1.73	NT	NT	NT	NT
$100,000 or more	10.8	1		NT		NT	
Motoring experience							
1–9 years	13.7	1.37	0.78–2.42	NT	NT	NT	NT
≥ 10 years	10.4	1		NT		NT	
Motorcycle licence							
Yes	12.0	1.16	0.72–1.88	NT	NT	NT	NT
No	10.5	1		NT		NT	
Heavy vehicle licence							
Yes	13.8	1.41	0.85–2.33	NT	NT	NT	NT
No	10.2	1		NT		NT	
Drives/rides for work							
Yes	13.1	1.48*	0.99–2.21	EXC	EXC	EXC	EXC
No	9.2	1		EXC		EXC	
Reported point threshold							
<99	8.3	0.77	0.38–1.58			NT	NT
99-100	12.4	1.20	0.63–2.30			NT	NT
>100	10.5	1				NT	
Reported point lifetime							

	%	Stage 1		Stage 2A		Stage 2B	
< 2 years	5.6	0.57*	0.29–1.14			0.47*	0.22–0.98
2 years	14.3	1.63*	1.00–2.66			1.30	0.77–2.21
> 2 years	9.3	1				1	
Reported suspension length							
≤ 3 months	12.9	1.33	0.86–2.05			NT	NT
> 3 months	10.1	1				NT	
Reported points[(a)]							
≤ 35	13.9	1.3	0.76-2.23			NT	NT
> 35	11.1	1				NT	
Points for camera-detected speeding							
Yes	9.3	0.71	0.43–1.19			NT	NT
No	12.6	1				NT	
Perceived likelihood of detection[a							
Likely	12.0	1.31	0.87–1.98			NT	NT
Not likely	9.4	1				NT	
Perceived severity of suspension							
A big problem	11.1	1.12	0.70–1.80			NT	NT
No, or a bit of a, problem	10.0	1				NT	
Attitude to points							
Don't mind a few	25.7	4.53*	2.94–6.99			4.37*	2.80–6.82
Don't like any	7.1	1				1	

[(a)] for mid-range-speeding; * p is less that criterion for stage (stage 1 criterion p = 0.15, stage 2 criterion p = 0.10); NT= not tested at this step; EXC= excluded as a result of this step

14.9 Support for possible changes

All respondents were asked 'how strongly, or not' they would support 'possible changes that could be made to demerit point systems'. Table 14.10 presents the percentage of respondents who gave each response option for the whole sample and for the sample subsets who have never had points or ever had points.

Among participants who correctly believed that the point lifetime is currently two years, 55.7% would support a longer lifetime. Thus, 53.1% of the total sample either believe that the point lifetime is currently longer than two years (25.8%) or would support a point lifetime longer than two years (27.2%). Support for a longer lifetime was considerably lower among those who had ever had points, than among those who had never had points (see table14.10).

Among participants who correctly believed that the suspension period is currently three months, nearly two thirds would support a longer suspension. Thus, 88.4% of the total sample either believe the suspension period is currently longer than three months (73.7%) or would support a suspension period of longer than three months (14.7%). Again, support for a longer suspension period was considerably lower among those who had ever had points, than among those who had never had points (see table 14.10).

In contrast, support for double demerit points was low, with no support the modal response given by nearly half of all respondents. Support was somewhat lower among respondents who had ever had points.

Over 9 in 10 respondents supported each of the proposed changes to facilitate awareness of current level of points, although support appeared to be stronger for an on-line self-serve facility than for an email or text message notification. Attending a road safety course before licence reinstatement was also supported by over 9 in 10 respondents, though support was lower amongst respondents who had ever had points.

14.9.1 Number of points required to motivate compliance

Respondents who indicated they drive to avoid getting more demerit points when they already have a few (n=175) were asked how many points would motivate them not to do each of the four behaviours in table 14.11. Table 14.11 presents the percentage who typed any number up to the current number, or a higher number, or indicated that 'No amount would motivate me' or 'Don't know'.

Among respondents who indicated they would be influenced by demerit points when they had a few, for both levels of speeding, and using a mobile phone while driving, respondents were most likely to indicate that a higher number of points than the current number would be required to motivate them to comply (rather than give other responses). For driving or riding with blood alcohol between 50 mg and 80 mg, 16.1% indicated that a higher number of points would be required to motivate them to comply, while 31.4% said they did not know how many would be required. In fact, among respondents who indicated how many points would motivate them, a higher-than-the-current number was reported by 80.1% of respondents for low range speeding, by 65.2% for using a mobile phone while driving, by 61.3% for mid-range speeding, and by 30.5% for driving or riding with blood alcohol between 50 mg and 80 mg.

Table 14.10 Percentage of respondents reporting different levels of support for various possible changes to demerit point systems (and Don't know), for a) the whole sample; b) the subset of the sample who have never had points; and c) the subset of the sample who have ever had points.

Change	a) Whole sample (n=999)				b) Never had points (n=606)				c) Had points (n=393)			
	% Strong support	*% Some support*	*% No support*	*% Don't know*	*% Strong support*	*% Some support*	*% No support*	*% Don't know*	*% Strong support*	*% Some support*	*% No support*	*% Don't know*
Points stay on your licence for longer[(a)]	20.7	35.0	42.5	1.8	29.0	38.6	29.9	2.5	12.5	31.5	54.8	1.2
A longer suspension period after reaching the point threshold[(b)]	26.3	37.1	34.9	1.7	29.5	43.4	24.0	3.1	24.6	31.3	42.5	1.5
Double the points for offences during a holiday period	21.0	28.8	48.6	1.5	23.1	32.8	42.4	1.7	17.8	22.6	58.3	1.3
An online facility where you can check the number of points on your licence	72.2	24.1	2.2	1.5	69.3	26.1	2.8	1.8	76.6	21.1	1.3	1.0
An email or a text to let you know when you are half way to your threshold	55.5	34.5	8.4	1.6	55.0	33.2	10.1	1.8	56.2	36.6	5.9	1.3
Attending a road safety course before your licence is reinstated	58.8	31.0	8.6	1.6	66.3	25.7	6.3	1.7	47.1	39.2	12.2	1.5

[(a)] Calculated for subset of respondents who reported that the point lifetime is currently two years (for a: n=489; for b: n= 241; for c: n= 248)

[(b)] Calculated for subset of respondents who reported that the suspension period is currently three months or less (for a: n=232; for b: n= 129; for c: n= 134)

Table 14.11 Percentage of respondents reporting that a number up to the present number, or a higher number, would motivate them not to commit particular offences, that 'No amount would motivate me' and 'Don't know'

Offence [present points]	% Present or less	% Higher	% 'No amount'	% 'Don't know'
Driving or riding with blood alcohol between 50 mg and 80 mg [50 points]	36.5%	16.1%	16.0%	31.4%
Exceeding the speed limit by 10 km/h or less [10 points]	9.2%	37.1%	25.1%	28.6%
Exceeding the speed limit by more than 20 km/h but not more than 30 km/h [35 points]	23.6%	36.8	10.9%	29.1%
Using a mobile phone while driving or riding [20 points]	18.3%	34.5%	17.7%	29.7%

15 Focus on Māori motorists

As shown in tables 14.7 and 14.8, 39.8% of Māori drivers had received demerit points, while 29.7% had reached 65 demerit points. Two (1.2%) reported their licence had been suspended due to reaching the demerit point threshold. These rates are similar to those of New Zealand-born Europeans. In contrast, 31 Māori motorists (19.3%) had received a suspension for 'other reasons'. Of the 64 Māori motorists who had received demerit points, 52 (81.3%) reported they were for 'Exceeding the speed limit', while three (4.7%) reported 'Driving or riding while over the legal blood alcohol limit'.

Of the 32 Māori motorists who reported at least one licence suspension, 22 (68.8%) reported they 'completely stopped driving and riding', seven (4.3%) reported they 'continued driving and riding but more cautiously', and three (1.9%) reported they 'continued driving and riding exactly as before'. Just under half (46.9%) indicated that when the licence was reinstated they drove or rode 'more carefully than before', while the remainder drove or rode 'about the same as before'.

Considering knowledge of the system among all surveyed Māori motorists, 59.0% believed the point threshold was 99 or 100 points, 50.3% knew the point lifetime was two years, and 28.6% believed the duration of a points-induced suspension was three months or less. Just over half (52.8%) knew demerit points did not apply to camera-detected speeding offences.

Over half of all surveyed Māori motorists felt they would be unlikely to get caught if they were to 'exceed the speed limit by more than 20 km/h' (53.8%), 'drive or ride while over the legal blood alcohol limit' (50.9%), or 'drive or ride while your licence is suspended' (67.7%). A strong majority indicated they did not like to receive demerit points (82.6%) and a licence suspension would be a big problem (71.4%)

Among 81 Māori participants who correctly believed the point lifetime was two years at the time of the survey, 65.4% (n=53) would support a longer lifetime. Further, 22.4% of the total sample (n=36) already believed the point lifetime was currently longer than two years. Thus, at least 55% of the Māori sample would support a point lifetime longer than two years (and some who believed the lifetime was less than two years might also). Around 80% of Māori participants would support a longer licence suspension regardless of whether they believed the suspension period was three months or less, or more than three months. Just over half of all surveyed Māori motorists indicated they would support double demerit points during holiday periods. Support for the proposed changes to facilitate awareness of the current level of points was high, although support appeared to be stronger for an on-line self-serve facility (97.5%) than for an email or text message notification (88.8%). Attending a road safety course before licence reinstatement was also supported by 88.8% of respondents.

Among the 14 Māori respondents who indicated how many points would motivate them not to 'exceed the speed limit by more than 20 km/h but less than 30 km/h', 12 gave a number greater than the current number (35 points), including four who answered 50 points. Six had indicated no amount would motivate them. Among the 10 Māori respondents who indicated how many points would motivate them not to 'drive or ride with blood alcohol between 50 mg and 80 mg', four gave the current number (50 points) and three gave a greater number (60, 80 or 200 points). Eleven indicated no amount would motivate them.

16 Discussion of survey findings and recommendations

Results provide insights into patterns of accrual of demerit points and factors that might influence this. It is noteworthy that just over 6 in 10 respondents reported they had never had demerit points on their licence, while nearly 9 in 10 reported they currently had no points. These fairly high proportions may offer a useful marketing tool – to alert those with demerit points to the 'anormalcy' of their behaviour.

Correspondingly, around 8 in 10 respondents reported 'I don't like having any demerit points and avoid driving in a way that would result in receiving any'. These results suggest that for many people demerit points themselves are more relevant than suspension – and so system changes which affect the likelihood of accruing and retaining points may have more impact than changes which address features of licence suspension. For the 17.5% of respondents who reported 'I don't mind having a few demerit points, but I will change my driving or riding behaviour when I have a few to avoid getting any more' (presumably to avoid licence suspension) the efficacy of the system would be improved by 'moving forward' the impact of demerit points on behaviour. Only 21 respondents reported 'I don't care how many demerit points I have and I will never change my driving or riding behaviour to avoid them', including 10 who had never had any points.

Results indicate that, among those surveyed, knowledge about the specifics of the New Zealand demerit point system was not high. In particular:

- 55% of respondents were deemed to have correctly identified the demerit point threshold, while 33.6% reported a lower number
- 48.9% of respondents correctly identified the demerit point lifetime, while 25.8% reported a longer lifetime
- 23.2% of respondents correctly identified the demerit points suspension period, while 74% reported a longer period
- When asked to identify the points applying to key offences, large percentages responded they did not know. Barely more than one in five responded correctly for 'exceeding the speed limit by 10 km/h or less' (while lower percentages were correct for other offences).
- A large percentage of respondents (42.8%) reported they did not know how to check their points balance, only 37.0% gave the correct answer – call the New Zealand Transport Agency.

Improving knowledge of the New Zealand LPS may enhance its impact.

Around half of the sample thought they were 'likely' to be caught if they were exceeding the speed limit by more than 20 km/h, driving while over the legal BAC, and not wearing a motorcycle helmet. Just under a third of the sample thought they were 'likely' to be caught for using a mobile phone while driving or driving while suspended. Increasing the perceived likelihood of apprehension may also be an avenue for enhancing the impact of the penalty system (including the LPS). Some relevant initiatives include: increasing enforcement activity, increasing the visibility of enforcement activity, and addressing motorists' strategies for avoiding apprehension (eg avoiding known Police positions) such as by increasing the randomness of Police enforcement activity.

Three quarters of respondents reported it would be 'a big problem' to have their licence suspended, while only 3% said it would be 'no problem at all'. This finding suggests there would be little gain to increase

the perceived cost of licence suspension (for example, by increasing costs associated with licence reinstatement).

Respondents who drive to avoid getting points when they already have a few were more likely to have ever had points, to have ever reached 65 points and to currently have points, than those who always drive to avoid points.

Ever having had points was also more likely among respondents who were male, held a motorcycle licence, drove or rode for work, were in the middle-age bracket (compared to the highest), were New Zealand European (compared to Pacific Islanders and 'Other'), and were in the highest income bracket (compared to the lowest). Respondents who had had points were more likely to give correct responses to questions about the demerit point lifetime and whether points applied to camera-detected offences, possibly reflecting engagement with the system.

Being younger was also associated with having reached 65 points at some stage and currently having points. However, these two outcomes showed quite different relationships in respondents' knowledge of the system (compared with having had points). Ever having reached 65 points was more likely among respondents who believed the point threshold was higher than 100 (rather than 100 or less), that the suspension period was three months or less (rather than more than three months), and that points applied to camera-detected speeding. Currently having points was more likely among respondents who believed points have a lifetime of more than two years (rather than less than two years).

Considering support for possible features of a demerit point system:

- 53.1% of the sample either believed the point lifetime was currently longer than two years (25.8%) or would support a point lifetime longer than two years (27.2%).
- 88.4% of the sample either believed the suspension period was currently longer than three months (73.7%) or would support a suspension period of longer than three months (14.7%).
- Over 9 in 10 respondents supported each of the proposed changes to facilitate awareness of their current level of points, although support appeared to be stronger for an on-line self-serve facility than for an email or text message notification.
- Attending a road safety course before licence reinstatement was supported by over 9 in 10 respondents.
- Nearly half the sample did not support double demerit points (the modal response).

Thus, features of 'best-practice' LPS appeared to be generally acceptable to New Zealand motorists – with the clear exception of doubling demerit points during holiday periods.

Results speak for considering increasing the number of demerit points associated with speeding and using a mobile phone while driving. Among respondents who indicated they would be influenced by demerit points when they had a few, and who indicated how many points would motivate them to comply with particular offences, a majority reported a higher than the current number for exceeding the speed limit by 10 km/h or less (80.1%), for exceeding the speed limit by more than 20 km/h but not more than 30 km/h (61.3%), and for using a mobile phone while driving (65.2%). For driving or riding with a BAC between 50 mg and 80 mg the proportion that indicated a higher than the current number would be required to motivate compliance was still substantial (30.5%).

Naturally, it must be acknowledged self-reported data is subject to errors of recall and reporting. For example, respondents' recall of the maximum number of points they have ever had on their licence may not be accurate. Indeed, some respondents reported a maximum of 200 points, which is not possible.

Further, particularly when there are social norms relating to beliefs, behaviours or circumstances (such as current number of points), participants may not give accurate responses. In this research, findings relating to knowledge of the LPS, however, were not likely to be distorted in this way, because people generally tried to provide a correct answer. In addition, it is hoped assurances of anonymity reduced participants' motivation to provide socially desirable responses. Nonetheless, questions may often be misinterpreted. For example, when asked 'How many points do you think you can have on your licence before it is suspended?' a correct answer could be 99, 100 or 101 depending on how the question is interpreted. We have attempted to accommodate such imprecision as far as possible in analysis.

It must also be acknowledged the survey sample may not be representative of the population of New Zealand licence holders aged 17 years and above. Recruitment was tailored to achieve a sample representative in terms of age, gender, area of residence and ethnicity, and there was no requirement to weight the data in terms of these variables. However, the sample may be biased in terms of variables for which comparison to the population was not possible, or not done. For example, motorists who are on a research panel, and respond to a survey relating to demerit points may not be typical of all New Zealand adult motorists. The influence of such biases on the survey findings cannot be known.

PART FOUR: FOCUS GROUPS

17 Introduction to focus groups

17.1 Focus group aims

The behavioural studies aimed to investigate the human, cultural and socio-economic factors that influence the effectiveness of a LPS. Specific research issues included those highlighted *a priori* by the Transport Agency, as well as those emerging out of the literature review that comprised the first component of the present project.

The research canvassed community responses to possible features of a LPS (that are not currently part of the New Zealand system).

The specific aim of the focus groups was to obtain more in-depth qualitative information from key road-user groups: young drivers, Māori drivers, professional drivers and motorcyclists. (See section 12.1 for a list of the overall survey aims.)

Because speed enforcement was a key issue for the focus groups it is noted here that:

- New Zealand's road safety camera network consists of both static (fixed) and mobile cameras placed at carefully chosen locations throughout the road network.
- Police officers also use radar and laser devices to enforce speed limits. These devices can be operated when stationary or moving.
- Police internal procedures state static cameras and speed camera vans must be visible from the roadside.

17.2 Focus group methods

17.2.1 Recruitment

Recruitment occurred in several stages until sufficient participants meeting the eligibility criteria for each focus group were obtained (within the limits of the research timeframe). The eligibility criteria are presented in table 17.1. In addition, survey respondents were only considered for inclusion if they lived in Wellington. Only Wellington residents were recruited because budgetary constraints required a large population centre to be chosen, and participants could not be reimbursed for travel.

Advertisements/invitations indicated the sessions would be held in Wellington.

Table 17.1 Eligibility criteria for each focus group

Group	Eligibility criteria
Young drivers	Aged 17, 18 or 19 Hold a restricted New Zealand licence to operate a car
Māori drivers	Aged 25 or over Identifies as Māori Hold a New Zealand licence to operate a car
Professional drivers	Aged 25 or over Hold a New Zealand licence to operate a car or heavy vehicle Drive for work
Motor cyclists	Aged 25 or over Hold a New Zealand licence to operate a motorcycle Not professional riders

Stage 1: The first stage involved approaching participants in the survey component of this research project, which had been conducted earlier. We had information about the personal characteristics of survey respondents, which allowed us to approach only those eligible for the focus groups. The efficiency of this recruitment strategy was important to achieving the timeframe set out for the research project. Invitation emails were sent to respondents in the survey component of the research[12] who had provided their contact details, and who gave permission for Colmar Brunton to pass on (to UNSW) their responses to survey questions relevant to their eligibility for focus groups. The invitation email identified a specific focus group, explained what participation in the focus group would involve (including compensation in the form of a Prezzy voucher to the value of NZ$80), and asked potential participants to identify their availability for sessions in the week beginning 19 September 2016 (see appendix I). A detailed participant information statement was attached to the email (for example see appendix J). Potential participants received up to two follow-up invitation emails or phone calls, with the second giving a specific session time if it had already been set (for example see appendix K).

Stage 2: Several relevant Wellington-based organisations were approached for assistance with advertising the young driver, Māori driver and motorcyclist focus groups. Advertisements tailored to the specific groups were posted on websites hosted by Massey University, Victoria University and Te Wānanga o Raukawa, as well as on the Wellington Riders Facebook page. These advertisements identified the eligibility criteria for the specific focus group, explained what participation in the focus group would involve (including compensation in the form of a Prezzy voucher to the value of NZ$80), and asked interested people to contact the researchers (for example see appendix L). Potential participants who contacted the researchers were sent an invitation email, with a detailed information statement attached.

Stage 3: Towards the end of recruitment all contact with potential participants identified places were available for additional participants in their focus group and invited them to provide the researchers' contact details to friends who met the provided eligibility criteria (see appendices K, L and M). Potential participants who contacted the researchers were sent an invitation email, with a detailed information statement attached.

[12] Eligibility criteria for inclusion in the survey component of the research were: 1) Being a member of the Colmar Brunton research panel (including being aged 17 and above); 2) Holding a New Zealand licence to operate a car or motorcycle.

17.2.2 Procedures

Times for each focus group session were set to maximise the number of potential participants available (according to the available times they had sent). Potential participants who indicated they were available at these times were sent a confirmation email that provided practical information about the session (ie location, compensation, and refreshment) (for example see appendix M). Other potential participants were sent an email apologising that the session had been set for a time they had indicated they were not available, inviting them to attend at the set time, and providing practical information about the session (for example see appendix N). All potential participants were asked to confirm their attendance.

Confirmed participants were sent an email they day before their session reminding them of the practical information about the session (for example see appendix O).

Focus group sessions were held at St Andrews on the Terrace in Wellington on 21 and 22 September 2016 (see table 17.2). The discussion groups were led by an experienced facilitator, while a second researcher took detailed notes. The discussions were also audio-recorded, with permission from participants.

Table 17.2 Time of each focus group

Group	Time
Young drivers	10 am 22 September 2016
Māori drivers	12.30 pm 22 September 2016
Professional drivers	5.30 pm 22 September 2016
Motorcyclists	5.30 pm 21 September 2016

Participants were compensated for their time and effort with a Prezzy voucher to the value of NZ$80. They were also provided with refreshments or lunch as appropriate to the time of the session.

17.2.3 Structured discussion protocol

A draft structured discussion protocol was developed by UNSW to address research aims. Revisions were made on the basis of comments from the Transport Agency.

A final protocol is presented at appendix P. First participants were welcomed, guided through the Participant Information Statement, and asked to sign a Consent Form (for example see appendix J). Questions were then used to prompt discussion. While the protocol was very similar for each focus group, the facilitator guided discussion to allow a focus on issues specific to each group. Showcards were available to provide information about the number of demerit points assigned to particular offences (for example see Appendix Q).

17.3 Ethical approval

Ethical approval for the survey and focus groups was granted by the UNSW Human Research Ethics Committee and by The New Zealand Research Ethics Committee.

18 Data analysis

The discussion from each focus group was thematically analysed and organised under the following topics

- General attitudes toward New Zealand LPS; including effect of demerit points on risky driving
- Knowledge about the New Zealand LPS
- Perceived likelihood of licence suspension and enforcement issues
- Perceived severity of licence suspension
- Attitudes toward possible LPS features
  - lower threshold
  - longer points expiry period
  - longer suspension
  - requirements for licence reinstatement
  - points for camera-detected speeding offences
  - double demerits on holiday periods
  - different treatment of specific groups
- Attitudes toward approaches to informing motorists of their current points level
- Attitudes toward other approaches to improve compliance
- Additional issues for particular motorist groups.

The reporting of results identifies relevant themes that were raised by particular groups, without implying a consensus was reached within the group.

19 Results of data analysis

19.1 Group composition

Table 19.1 summarises the composition of each group. Despite concerted efforts to achieve sufficient participants in the Māori driver group, only two attended. The motorcycle group was overbooked to allow for any no-shows. In fact, all confirmed non-participants attended, as did two participants who had not confirmed. This resulted in a group that was somewhat larger than ideal. In addition, the majority of the group was sourced from the Wellington Riders Facebook page, possibly biasing findings. The professional driver group consisted of one courier, two delivery drivers (one delivering produce and one delivering materials to schools), one consultant who visits clients and one Police photographer. One participant's father was a Supreme Court judge. Involvement with the legal system may have influenced the views of two participants in the professional group.

Table 19.1 Composition of each focus group

Group	Number of participants	Number sourced from survey respondents	Friends of participants
Young drivers	5 females, 2 males	1	1
Māori drivers	2 males	1	1
Professional drivers	2 females, 3 males	5	0
Motorcyclists	14 males	1	<5

19.2 Young driver group

19.2.1 General attitudes toward New Zealand LPS, including effect of demerit points on risky driving

Overall, demerit points appeared to be of limited relevance to this group of young drivers. Participants remembered hearing little about the LPS during the demerit process so 'it's not something that is discussed or really considered until you actually do something wrong'. Another suggested points were 'easy to forget' so 'people only really care about it if they are like, one more like offence or something, and they lose their licence'. One participant talked about some friends who had come close to losing their licence from 'doing stupid things' but kept doing stupid things anyway.

In contrast, there was a clear sense participants' responses were influenced by the possibility of being fined.

One participant indicated she first thought about demerit points when she was asked by a prospective employer if she had any demerit points, and she was happy to say she did not. She highlighted, though, the motivational impact of maintaining a clean record is lost with a first points-bearing offence (ie as soon as you have any points, you cease caring about getting more). Moreover, this participant suggested the issue of points being used as an indicator of character concerned her parents more than it did her.

19.2.2 Knowledge about the New Zealand LPS

While the group of young drivers seemed to know of the New Zealand LPS, they appeared to have poor knowledge of specific details. For example, one participant indicated 'I honestly couldn't tell you... what offence gives you how many demerit points, so I don't know how many offences gives you how many

demerit points' and suggested this might be one reason for their low impact. While some participants knew the expiry period, one indicated she knew there was an expiry period but did not know what it was. One participant knew the suspension period because someone in his family had been suspended, while the other participants were less sure of it. The group suggested including in the licence test questions about the LPS, particularly the number of points assigned to offences common among young drivers.

19.2.3 Perceived likelihood of licence suspension and enforcement issues

The group suggested several mechanisms by which the perceived likelihood of licence suspension was undermined. For example, one participant talked about people (including themselves) committing traffic offences without getting caught, so not thinking about the LPS because they were 'getting away with it'. Participants also talked of specific ways to avoid detection, such as using alternative routes to known Police locations, and students texting each other warnings about where Police were located.

Participants believed there was some Police discretion in whether an offence was recorded. For example, there was a perception that by being polite to the Police it would be possible to avoid an offence being recorded, and there was agreement that sometimes they 'let off' drivers when they should not. Participants told of drivers on restricted licences being given a warning for offences specific to the restricted licence. Some participants also believed Police had discretion in relation to demerit points; whereas they were compelled to apply a fine they could decide not to apply points and might not give them 'especially if people are young or just, you know, first offence'.

The group suggested Police targeted young people. For example, one participant believed Police had quotas to meet, and focused enforcement activities near schools to meet them. Another participant stated Police were more likely to pull young drivers over, especially those driving certain types of car or wearing particular clothing (eg a 'hoodie').

Participants explicitly highlighted lack of knowledge about the number of points applying to specific offences as undermining the perceived likelihood of licence suspension. However, one participant suggested the lack of knowledge about the number of points applying to specific offences might broaden their deterrent effect, in the sense it could limit the extent to which drivers might calculate how much they could get away with.

There was also discussion of avoiding suspension despite reaching the demerit point threshold. Through Police reality television, participants knew of the possibility of applying for a 'special conditions' licence, for example, to allow travel to and from work. The group also mentioned knowing young people who drove while suspended, without really modifying their driving style. Further, one participant suggested people who flout the law sufficiently to have their licence suspended may be precisely those who will drive while suspended.

The group supported harsh penalties for driving while suspended; such as a criminal conviction that would stay on record. Vehicle impoundment was also discussed, highlighting participants' lack of clarity about how this could occur. It was recognised impoundment might pose difficulties when people were sharing a vehicle. Participants emphasised such harsh penalties should only occur in a fair and consistent system, in which licence suspension genuinely reflected dangerous driving and perhaps courts would have final arbitration.

19.2.4 Perceived severity of licence suspension

This group of young drivers felt having their licence suspended would not pose too big an issue for them, explaining they mainly travelled short distances within Wellington, where public transport is good and driving is not always pleasant. Consistent with this, the participant who talked about friends who kept

'doing stupid things' despite being close to losing their licence, suggested they probably figured they would just catch the bus if they were suspended from driving. Nonetheless, participants acknowledged for young drivers in regional towns it would be more inconvenient to have a licence suspended.

19.2.5 Attitudes toward possible LPS features

19.2.5.1 Lower threshold

One participant mentioned '100 points seems like a lot' and some participants thought a lower threshold (eg 12 points) might seem easier to reach than a higher threshold (eg 100 points). However, it was also argued the 'larger' points penalties allowed by a higher threshold (eg 50 points for an offence in a 100-point LPS) would have a stronger psychological impact than the penalties in a lower-threshold LPS (eg six points for an offence in a 12-point LPS).

19.2.5.2 Longer points expiry period

The group indicated the expiry period would only become relevant to them once they had demerit points. It was argued too long an expiry period (eg five years) would be inappropriate in the sense points could contribute to the possibility of licence suspension when they were no longer indicative of a driver's current driving style, and when the driver might no longer be aware of having them:

> *They might have only had two offences, but if those offences were 4 years ago and now they are reaching the end of their 5-year period like those earlier demerit points have almost no relevance, but like they won't be as conscious of them to drive safely because they just seem so removed.*

One participant suggested a three-year expiry period would be acceptable, whereas a five-year period would not.

19.2.5.3 Longer suspension

This was not discussed in this group.

19.2.5.4 Requirements for reinstatement

This was not discussed in this group.

19.2.5.5 Points for camera-detected speeding offences

Asked whether applying points to camera-detected speeding offences would change their behaviour, one participant suggested it would not make much of a difference because she had seldom heard of drivers being detected by cameras and had heard more of detection by Police.

Participants suggested points might not be applied to camera-detected speeding offences because:

- The penalty is not received immediately, so a driver could accrue a large number of points without being aware of it.
- The driver cannot be identified, so the points could be assigned to the wrong person. Further this could open up the possibility of passing on points.

19.2.5.6 Double points on holiday periods

Participants indicated they drove more cautiously during holiday periods because 'there's double the cops on the road and zero tolerance' (ie the tolerance for speeding is 0 km/h). Moreover, participants suggested having more Police on the roads would have more of an impact on them than doubling the demerit points applying to particular offences. Again, participants seemed more focused on fines than on

demerit points. It was suggested there might be a public backlash if people were to have their licence suspended because they were not aware of a double points initiative. A prominent public information campaign about the double points initiative, and about the LPS in general, in the lead up to holiday periods was suggested as a way of countering this concern.

19.2.5.7 Different treatment of specific groups

Participants felt a lower demerit point threshold for young drivers is 'probably smart':

> *...to start people off being concerned about the system, being more aware of it, and then just as they get older, sort of like: 'You've done well. You haven't had your licence suspended yet. You can have a higher threshold now'.*

It was suggested a lower threshold for younger drivers would be consistent with having additional conditions on a restricted licence, so graduating to a full licence would involve both fewer restrictions and a higher threshold. Participants indicated it would be appropriate to link the 'reward' of a higher threshold to the change of licence, ie 'a skill level as opposed to an age level'. They also suggested this would make more sense, and have more impact, than building up the threshold via periods of offence-free driving.

Nonetheless, the point was also made that young drivers have less experience so may be more prone to making mistakes. Thus, a lower threshold could be a bit unfair. One participant mentioned 'one of the things that went around was that if you got any demerit points then you couldn't... do your defensive driving certificate, so you had to wait the full year and a half before you'd get your full licence'.

There was some agreement with the idea that previously suspended drivers should be treated more harshly; for example, with a longer suspension period. 'Like they've gone through the whole process once. They should know how it goes by that time.' However, one participant suggested 'if they've got a second suspension then perhaps that system doesn't work at all for them'.

19.2.5.8 Attitudes toward approaches to keeping motorists informed of their current points

Participants were somewhat unclear about how drivers are notified about the demerit points they acquire. They suggested there can be quite a delay between paying a fine and receiving a letter (notifying of offence/demerit points). They indicated the Transport Agency website would be the most convenient place to source this information 'because you can already like login to... do your rego and stuff, you should be able to find out your demerit points'.

19.2.5.9 Attitudes toward other approaches to improve compliance

In discussion of rewards for offence-free driving, participants felt 'tangible' rewards such as reduced insurance premiums, reduced cost of defensive driver certificate, or reduced cost of the full licence test would be more motivating than LPS-based incentives (such as increases of the point threshold). One participant noted poor knowledge of the LPS meant it was difficult to harness it to provide incentives (or punishments). Another noted LPS-based incentives were not relevant to drivers who did not get demerit points.

Removing conditions from the restricted licence was also discussed as a possible reward for offence-free driving. For example, it was suggested after a period of having no points restricted drivers could be allowed to carry more passengers. Nonetheless, it was recognised restrictions were set for a reason, and drivers should earn the rights that come with a full licence (ie by 'serving their time' on a restricted licence).

One participant suggested efforts should be made to avoid stereotyping restricted drivers as bad drivers, in order to avoid 'self-fulfilling prophecy'. Reducing perceived distrust of young drivers may encourage

compliance. Recognising restricted drivers who drive safely may be one mechanism for achieving this. Reduced insurance premiums may be particularly appropriate here, because of the current difficulty/expense of obtaining insurance for young drivers.

There was some discussion of (radar) signs that post travelling speeds. One participant felt in her home town these had successfully caused drivers to slow down via a shaming mechanism. However, another participant suggested such signs could also have a negative effect of normalising speeding by sending the message to drivers 'they are speeding too, so it is fine'. A third participant said when she had seen such a sign she was not sure whose speed was being displayed (eg hers or the driver next to her).

19.2.5.10 Additional issues for young drivers

There was considerable discussion of the issues for young drivers that were not directly related to the LPS. For example, participants talked about large variability in the pricing of the defensive driving certificate. Further because 'it is harder to fail it than it is to pass it, to me it seems like: "give us money and we'll cut time off this thing" '. They also queried whether many young drivers actually learn anything from it.

The group also discussed the merits of the restricted licence conditions, and in particular, passenger conditions.

19.3 Māori driver group

19.3.1 General attitudes toward New Zealand LPS; including effect of demerit points on risky driving

Both drivers claimed they 'drive like a grandma', partly because they have children – so the LPS has limited relevance to them. In relation to other drivers, they believed 'they're definitely a good deterrent, because they last for two years'. One participant expressed a concern about the number of points 'you get if you just go over (the speed limit)' particularly for groups with high exposure, citing taxi drivers.

Asked whether the system is fair, one participant suggested the threshold is too high 'because from memory you can speed five times' before you reach it. Increasing the number of points per offence was recognised as a way of adjusting the LPS. When shown the number of points for different speeding offences, participants suggested increasing the points assigned for all but the lowest-range speeding offence, for which they suggested a reduction from 10 to 5 points. This appeared to reflect a review that low-range speeding is quite distinct from other speeding, and the 'mums and dads' who do it should not be too harshly penalised:

> *if you were going more than 10 km over the limit you can say 'well, you were purposely doing that' whereas if it's less than 10 then it could just be an accident.*

Participants indicated they were deterred by fines more than by demerit points because they would never reach the threshold:

> *Fines. Just the fines. Because I am not going to do something 10 times within 2 years but if I do it once then I am thinking there is a $200 fine.*

They also argued that other drivers are generally motivated by the possibility of getting a fine rather than demerit points. Nonetheless participants identified that some people do not care about the fines. Perhaps they can afford the fines, or simply do not pay them. They mentioned that some drivers build up fines without serious consequence and recognised that demerit points address this issue to some extent. One participant also suggested that while fines may promote compliance, they do not necessarily cause drivers to think about whether their behaviour was unsafe.

19.3.2 Knowledge about the New Zealand LPS

Though aware of the LPS, participants were vague about its details and particularly the number of points assigned to specific offences.

19.3.3 Perceived likelihood of licence suspension and enforcement issues

Participants suggested that the likelihood of being pulled over by Police is influenced by people's skin colour, age, clothing ('hoodies'), and type of vehicle:

> *If you've got a car that is... a bit done up, or a bit beaten up, or something like that, then you are probably likely to get pulled over more.*
>
> *you could have a businessman driving down the road in a Mercedes in a suit, he'll be speeding and they allow it and you have an 18 year old Polynesian, worse car, he'll be going slower than that Mercedes but he'll get pulled over.*

They felt the Police should enforce more consistently and should not have discretion about whether to apply an offence.

Participants were aware of the possibility of avoiding a licence suspension having reached the threshold, mentioning the special condition of 'driving to and from work'.

These participants said they would not drive while suspended for fear of the fine but were aware of drivers being caught driving while suspended in 'Police traffic programmes'. They supported harsh penalties for this behaviour. For example, they suggested vehicle impoundment for a first instance, and a jail term for a second.

19.3.4 Perceived severity of licence suspension

Participants did not discuss how difficult *they* would find licence suspension but recognised it would be a serious issue for people who depend on a licence for their livelihood.

19.3.5 Attitudes toward possible LPS features

19.3.5.1 Lower threshold

Participants indicated the current threshold is too high to have a psychological impact.

19.3.5.2 Longer points expiry period

Participants indicated a longer expiry period would not make demerit points more relevant to them.

19.3.5.3 Longer suspension

Participants felt that three months' suspension is 'probably a little bit short', while six months would be sufficient. However, they suggested the nature/number of offences be taken into account in determining the length of suspension.

> *for something minor like 3 km over the limit each time it's three months but if it was something like more than 35 and they do it four times...*

19.3.5.4 Requirements for reinstatement

Participants were sceptical about the value of driver education courses (eg as a requirement for licence reinstatement) highlighting that often all that was required was attendance, without any 'proof of learning'.

19.3.5.5 Points for camera-detected speeding offences

The participants felt that enforcement using speed cameras was unfair in the sense that cameras were placed to catch drivers at the bottom of hills – and appeared to offer this as an argument for not applying demerit points to camera-detected speeding. Participants in this group felt that speeding drivers were more likely to be detected by a camera than by Police.

19.3.5.6 Double points on holiday periods

Participants argued that since there were already high levels of policing and zero tolerance during holiday periods, doubling points would be excessive. One participant suggested that if people were to slow down too much (eg to 45 km/h) this would frustrate other drivers and contribute to unsafe overtaking manoeuvres.

19.3.5.7 Different treatment of specific groups

Participants felt the LPS should apply equally to all drivers, including restricted drivers. They felt a more complicated system would be unfair and potentially confusing.

Asked whether professional drivers, such as taxi drivers, should be given leniency, participants generally disagreed. They indicated that taxi drivers, couriers and truck drivers often drive particularly poorly. Further, trucks have the potential to do more damage, so compliance is particularly important (and should be closely enforced). Nonetheless, participants did not feel they should be treated more harshly, noting that professional drivers would already be particularly deterred by points as they depended on their licence for their livelihood.

Participants supported harsher treatment of previously suspended drivers ‘because... if they have been suspended once then it might... have been an accident... but then to get suspended again then there’s obviously a problem’. It was suggested ‘the threat of jail, that might actually make them stop’. One participant expressed doubt that further suspension would change behaviour because ‘you have a lot of people on those Police traffic programmes and they’ve been caught time and time again while they’re suspended’. There was also discussion of people going to jail for repeated drink-driving offences and re-offending when released.

19.3.6 Attitudes toward approaches to keeping motorists informed of their current points

Participants were unsure of how to find out how many points they had and suggested that drivers be notified of the number of points they have on their letters of offence or registration renewal forms.

19.3.7 Attitudes toward other approaches to improve compliance

It was suggested that drivers may be motivated to comply by increasing their awareness of the possible outcomes of their behaviour (in a way that fines and demerit points do not), for example by ‘making them attend a workshop where they actually talk about speeding, and crashes and the damage you can actually do... Have people that have been in accidents and what happened, and that might scare them and make them think “I’m not going to speed again”’. Considering when such an intervention might occur, it was suggested that it might be triggered at a particular level of points, such as 60 points, with not attending the intervention (eg workshop) to result in a suspension. As an alternative it was suggested that it may be required for drivers whose licence gets suspended.

When rewarding good behaviour was raised by the facilitator, participants felt this would not be appropriate because 'the reward might be being *allowed* to drive'. Instead they raised the possibility of charging *higher* levies for drivers who have had their licence suspended.

19.4 Professional driver group

19.4.1 General attitudes toward New Zealand LPS; including effect of demerit points on risky driving

Participants indicated they were more concerned by fines than demerit points. One participant identified that not getting demerit points for camera-detected speeding rendered them irrelevant to her, with speeding being her most frequent offence. The same participant talked about her 18 year-old daughter and friends ignoring the passenger restriction despite some of them having received demerit points for breaking it. High levels of mobile phone use were cited as evidence for the current system not operating as an effective deterrent. Participants also indicated that speeding is quite a 'normal' behaviour.

Nonetheless, participants talked about the demerit points influencing drivers as they approach the threshold. For example, one participant indicated that he bought a radar detector that 'slows [him] down' because two speeding offences had put him in a position where only one more would have resulted in him reaching the demerit point threshold. He indicated that this influence on his behaviour was ongoing (despite some points since having expired). He suggested that drivers who had a previous suspension might be more aware of, and influenced by, the demerit point system.

There was also recognition of a recidivist group:

> *other people they collect speeding tickets. They don't care about them, they're not going to pay them. If they get enough demerit points well for a bit... until ... it's a wee bit probably cyclic... until they get their licence taken off them, and then maybe drive a car, and then they get that taken off them.*

One participant offered the example of a recidivist drink-driver who was caught 19 times and killed someone while driving suspended.

19.4.2 Knowledge about the New Zealand LPS

Although participants knew the demerit point threshold, the demerit point lifetime and the suspension periods, there appeared to be confusion about the finer points of the LPS. For example, the group discussed one participant's story about a friend whose licence was suspended on the spot when an offence 'pushed him over the limit'. Some participants argued that this would not be possible because the points must 'go into the system' and suggested that the single offence may have been a 'licence loss offence'. No participant appeared to be aware that the Police can serve an on-the-spot demerit suspension to a person who is identified on their system as 'wanted for service of a demerit suspension notice' (because they could not previously be located for the notice to be served).

Although discussion often focused on speeding, when prompted participants were aware of other offences that attract demerit points (eg using a mobile phone while driving).

19.4.3 Perceived likelihood of licence suspension and enforcement issues

Participants felt that enforcement was fairly 'lax', particularly for mature drivers. They suggested more visible enforcement would promote compliance. This group also talked about inconsistency in

enforcement; for example, identifying that young drivers, and especially young males, were more likely to be pulled over.

Participants talked about various ways in which they avoided being caught for speeding. For example, one participant indicated she knew where Police radar and cameras were located, and that she had a speed app on her phone mounted on her dashboard. Other participants reported using similar apps or radar detectors, while one participant felt it should be illegal 'because it provides an excuse for people to do excessive speeds where they can't detect cops'. Participants also mentioned knowing the location of drink-driving controls, for example, because they were clearly visible on approach and/or in regular locations, or via Twitter.

Participants were aware of 'special conditions' licences, particularly for work-related driving. However, they indicated that the cost of obtaining one was prohibitive.

Participants were aware of people driving while suspended but gave no indication that they would. They supported strict enforcement of suspended driving, but repeatedly suggested that vehicle impoundment is not effective because people borrow vehicles from friends and family. In fact, borrowed vehicles can be impounded if the owner has taken no steps to check that the person to whom they lend their vehicle has a current valid licence, and public awareness of this might limit the loaning of vehicles to suspended drivers. Jail terms were raised as a possible solution, albeit with the recognition that this was a serious penalty, and that particularly for young people this might instigate ongoing involvement with the criminal justice system.

19.4.4 Perceived severity of licence suspension

Participants were fairly consistent in reporting this and because they depended on their licence for their work, licence suspension was not an option for them and appeared to imply that this contributed to their driving more carefully. For example, one participant talked about driving being central to her job and having a work car and an employer-funded petrol card, neither of which she wouldn't want to lose. Another explained 'our licence is our livelihood'.

19.4.5 Attitudes toward possible LPS features

19.4.5.1 Lower threshold

Some participants indicated they would drive more carefully with a lower threshold (despite understanding the mathematical equivalence of the systems.)

19.4.5.2 Longer points expiry period

One participant who had approached the threshold indicated that his driving had been influenced by the two-year expiry, and did not feel a three-year expiry would increase the effect. However, others felt that extending the points expiry period, say to three years, would increase the deterrent effect of the system. One participant recognised that extending the period to three years might influence the driving of people who acquire substantial numbers of demerit points, while being irrelevant to others. Another argued 'people are still going to take risks. You can't change that'. One participant raised it as an issue that a longer expiry period might result in drivers exceeding the threshold for a number of 'low range' offences.

19.4.5.3 Longer suspension

Participants indicated the three months seemed fairly short, so six-month suspension periods might increase compliance.

19.4.5.4 Requirements for reinstatement

Participants felt suspended drivers should undergo tests in order to have their licence reinstated. Participants were sceptical about the value of driver education courses (eg as a requirement for licence reinstatement) and felt that 'proof of learning' should be required.

19.4.5.5 Points for camera-detected speeding offences

The participant who indicated demerit points were essentially irrelevant to her because they did not currently apply to camera-detected speeding offences confirmed that were this to change she would drive differently 'out of Wellington... but not in Wellington because I know where [the cameras] are'.

Some in the group mentioned that enforcement of speeding was too strict; for example, suggesting that penalising drivers for exceeding the speed limit to execute passing manoeuvres was inappropriate. Thus, additional penalties for speeding would be perceived as unfair.

19.4.5.6 Double demerits on holiday periods

Participants indicated that combining double demerit points with zero tolerance during holiday periods would be unfair. One participant argued that the existing practice of zero tolerance effectively changed the speed limit over holiday periods – and appeared to find this unfair. Another felt that both initiatives would exacerbate the issue of penalising drivers when they were overtaking.

There appeared to be a sense that double demerit points would result in drivers being suspended for 'just' a couple of offences: 'before you know it the points are just racking up'.

Another participant had been impressed by awareness of double demerit points during holiday periods in Australia and felt that if it were introduced and promoted in New Zealand it would influence driver behaviour. Even one participant who was opposed to it recognised 'it changes your behaviour, yeah'.

19.4.5.7 Different treatment of specific groups

Asked if the LPS should be different for people who drive for work, participants mentioned both sides of the argument: 1) those who drive for work should be exemplary drivers (so should be subject to a stricter LPS); and 2) those who drive for work have more exposure to the risk of being fined (so should be subject to a more lenient LPS). However, they generally appeared to feel the LPS should treat people who drive for work the same as other drivers, noting that participants indicated the same system was, in effect, harsher for professional drivers because of the implications of losing their licence. Participants with branded company cars highlighted that they drove more carefully to avoid sanction from their employer. Participants appeared to suggest that people who drove for work might be particularly likely to drive while suspended.

There was some support for a stronger system for young novice drivers on the basis that this group was statistically most at risk, and in a position to develop good habits (as compared to 'old dogs'). However, there was a recognition that a system that made it easier for young people to lose their licence would run the risk of 'criminalising kids that are actually good kids, and then putting them into the criminal system... of demerit points and suspending them from driving. Then they are quickly transferring over to the criminal element of society... 'cause then they are dealing with the Police...'. A suggested solution to this issue was requiring that young novices who reached the threshold could be required to sit a licence test to retain the licence.

There was some support for the notion that the LPS should be stricter on previously suspended drivers: 'That would impact certain people. Some people wouldn't care but...' It was suggested that in cases of severe recidivism jail terms might be justified to keep dangerous drivers off the road.

19.4.6 Attitudes toward approaches to keeping motorists informed of their current points

This issue was not discussed in this focus group.

19.4.7 Attitudes toward other approaches to improve compliance

There was a sense that more fair and consistent enforcement would improve compliance. For example aspects of speed enforcement were perceived as unfair, including penalising drivers for speeding when overtaking. One participant suggested that if the Police enforced 'small things' (like indicating on roundabouts) this might change the 'wider behaviour'.

Participants suggested some changes to licensing procedures. For example, one participant suggested 21 as a minimum age for obtaining a full licence. Others suggested more regular testing of all drivers, particularly older drivers (although they were not clear about the details of the current testing regime.) Participants were aware their knowledge and practice might not be up-to-date and expressed surprise that they were not required to undergo regular testing. One participant suggested 'at least a written test', with practical testing to follow if this were failed.

Participants supported harsh penalties for very serious, or extremely recidivist, offenders. In this context participants appeared to support the 'crushing' of vehicles.

One participant suggested:

> *I don't think that... you'd be able to change everybody's driving habits who have been driving for multiple years. I think you could improve the next generation of drivers by having tougher laws, tougher penalties, restricting the hours that they drive a car...*

19.5 Motorcyclist group

19.5.1 General attitudes toward New Zealand LPS

A clear theme to emerge from the discussion with motorcyclists related to unfair treatment of motorcyclists by the enforcement system, particularly in the context of speeding. Moreover, this sense of general unfairness coloured perceptions of the LPS. Often when a question related specifically to the LPS, discussion turned to problems with enforcement in general (and of speeding in particular). Reporting has been limited to aspects that are directly relevant to the LPS.

The group was generally supportive of mechanisms to encourage safe riding, including the LPS. However, there were mixed views about whether demerit points work to motivate compliance. For example, amongst the group a wide range of personal attitudes was expressed:

- I ride safely regardless (sometimes combined with 'I don't like to have any points').
- I ride to avoid points.
- I don't worry too much about points because I don't think I'll ever get to 100; I seem to cycle through them, losing about as fast as I get them.
- I just adjust my speed depending on the number of demerit points I have.
- I don't mind having a few points, and I begin to ride safely when I am nearly there.
- I don't change my driving style even if I am close to the limit, because I don't feel there is anything wrong with it.

- I don't worry about getting points because I have decided that if I ever got a suspension I would continue riding, albeit perhaps more carefully.
- I don't want demerit points because they can affect your reputation.
- I don't want demerit points because they add to the shame I feel for being penalised.

Some participants indicated that fines were more reliable in motivating compliance:

> *A fine affects me immediately because it is cash going out. Demerit points don't matter until it gets close to losing your licence.*

Nonetheless, some participants felt demerit points were better than fines because motorists did not care about getting fines, thinking they could amass huge sums and be given leniency (for example in terms of the time limit for paying them) or simply not pay them. At the same time demerit points appeared to be 'tarred with the same brush' as fines when it came to the perceived unfairness of penalties. Specifically, the LPS appeared not to alleviate the belief that the key aim of enforcement is not road safety, but rather meeting Police quotas and revenue raising.

There was discussion of demerit points being used as an indication of character (eg applications for residency, credit card rating), which was viewed as unfair and inappropriate. Also in this context, it was suggested that reaching a high demerit point level for several low-range offences should be distinguished from reaching the same level for fewer high-range offences.

19.5.2 Knowledge about the New Zealand LPS

Participants highlighted the importance of consistency, fairness and transparency of enforcement systems, including the LPS.

Although participants knew the rudiments of the New Zealand LPS they were unclear about the number of points that applied to different offences. Participants were also unclear whether suspension was for three or six months, and whether testing was required for reinstatement.

Most participants felt they knew their current points level.

19.5.3 Perceived likelihood of licence suspension and enforcement issues

Enforcement was seen as somewhat fickle and inconsistent. The group felt the number of demerit points a motorist accrued was not a particularly accurate reflection of their driving or riding. They argued that some motorists did very little wrong and accumulated a high number of demerit points, while others behaved very dangerously and accumulated very few.

The group argued that speed was enforced more actively than other offences because it was easy for Police to measure and achieve the outcomes they were required to get. Participants felt that motorcyclists were particularly susceptible to being penalised for speeding; for example, because of the sensitivity and power of their vehicles. The group suggested there should be more active policing of driving offences such as driving while distracted.

Some participants argued that Police should have discretion in awarding penalties, and particularly demerit points, based on the circumstance, while others felt this would undermine clarity and consistency of rules and enforcement. One participant identified that having discretion over demerit points but not fines might reinforce the perception of fines as revenue raising.

There was a general perception that you definitely lost your licence if you reached 100 points. However, participants talked about delaying payment of the fine to delay application of demerit points, and so possibly 'saving' the suspension.

One participant indicated they would ride (albeit very carefully) despite the suspension – changing their motorcycle and helmet, which would be slightly inconvenient. Many participants agreed with stronger enforcement of suspended driving, but scoffed at vehicle impoundment, highlighting the ease of getting another motorcycle. They mentioned a concern that vehicle impoundment could lead people, particularly younger people, into a cycle of crime.

19.5.4 Perceived severity of licence suspension

Licence suspension was clearly an undesired outcome for participants. For example, one participant stated:

> *Losing my licence is obviously something that I don't want to do.*

One participant highlighted the broader consequences of licence suspension in terms of qualifying for insurance, the cost of insurance and job prospects.

19.5.5 Attitudes toward possible LPS features

19.5.5.1 Lower threshold

There was no clear indication that participants would be more motivated by a lower threshold (say 12 points) if the number of points per offence was adjusted commensurately.

19.5.5.2 Longer points expiry period

Participants reacted very negatively to the possibility of points lasting longer, for example three years. They appeared to feel that unfairness in the process of assigning points to motorcyclists, particularly for speeding, would be exacerbated by them lasting longer.

> *If I got 95 demerits and I had three years to get rid of it, I would just sell my motorbike... that's just ridiculous.*

> *Even two years seems a little bit long.*

One participant indicated that if they approached the threshold they would commit an offence to take them over the limit:

> *It'd be worth losing your licence for three months rather than having it hanging over your head for three years.*

19.5.5.3 Longer suspension

The likely effects of increasing the duration of suspension were not discussed by this group. However, it was suggested that for drivers who avoided suspension, for example by participating in driver education and then subsequently offending, the suspension should be made longer. Presumably, this indicates that a longer suspension was viewed as a stronger deterrent.

19.5.5.4 Requirements for reinstatement

This was not discussed in this group.

19.5.5.5 Points for camera-detected speeding offences

Some participants indicated that applying points to camera offences would be an effective motivator:

If you attached demerit points to speed cameras, then that would make you another level even more careful again.

Many participants indicated that most of their speeding penalties have been camera issued and received for car driving rather than motorbike riding. Participants highlighted that the likelihood of being caught by cameras was reduced for motorcyclists because motorcycles have only rear number plates. Thus, motorcyclists might be least affected by applying demerit points to camera-detected speeding.

It was argued that applying points to camera-detected offences would exaggerate the unfairness of aspects of camera enforcement, ie:

they hide the bloody things most of the time, so you don't know where they are

they were originally for safety in blackspot areas, and now they put them in areas where people are most likely to exceed the speed limit overtaking

Nonetheless one participant identified that hidden speed cameras resulted in him taking care not to exceed the speed limit virtually everywhere.

Participants identified the possibility of passing on points as an issue for applying demerits to camera-detected offences.

19.5.5.6 Double demerits on holiday periods

Participants indicated they already did not ride, or rode extremely carefully, in public holiday periods due to perceived higher levels of enforcement and very low speed enforcement tolerances (when just 4 km/h over the limit). Several in the group agreed with the participant who indicated:

I feel a lot less safe, because I spend my whole time looking at my speedo rather than what's going on the road because I am terrified of getting demerit points.

One participant argued that if points were to be doubled during these periods, motorcyclists in particular 'would probably need a bit more leeway with the points' or it would be too easy for them to accrue points as a result of unintentional, minor speed transgressions.

19.5.5.7 Different treatment of specific groups

In general, participants felt the LPS should apply equally to all motorists. They did not feel motorcyclists should be treated differently.

They argued that having a harsher system for young drivers could risk getting them into a cycle of crime.

It might start off with a couple of speeding offences, or driving without licence, ... and then it gets worse and it gets harder for them to be legal, harder for them to get a job, and harder for them to ... be a decent citizen.

In fact they argued that the LPS should assist young drivers to avoid suspension. Police focus should be on advising the young drivers/riders and assisting them to learn to be good drivers/riders. While the young riders needed to have it made clear to them when they did something wrong (unsafe), it might just be a warning.

Some participants would support a stricter system for previously suspended motorists, for example by subsequent suspension periods being longer. However, it was suggested that:

the serial offenders... would lose respect for the system and they would just keep driving anyway.

19.5.6 Attitudes toward approaches to keeping motorists informed of their current points

Asked how to find out the current demerit points level, participants mentioned a number of avenues:

> *you get it when you get the ticket*
>
> *there's an 0800 number*
>
> *on the NZTA website*

One participant asked 'Don't you get a letter from the Police when you go over 50 or 55?'

Participants suggested providing an on-line facility where it would be easy to check the current level of their points.

19.5.7 Attitudes toward other approaches to improve compliance

The group indicated that a system which was fairer and more consistent would motivate better compliance. In such a system enforcement would focus on all dangerous behaviours, and not simply the one that is easiest to measure (and the one that motorcyclists are likely to do inadvertently) – speeding. One participant suggested a system in which demerit points for 'low-risk' offences (such as low-range speeding) would not contribute to suspension, but rather reaching the threshold would result in mandatory driver education. In contrast, three 'high-risk' offences would result in suspension.

The group discussed how positive incentives might be employed to motivate compliance, including within a LPS.

> *You need carrot. You keep whacking us with a stick. We're going to say 'the hell, you keep treating us like outlaws then you're going to get outlaws.*

For example, the group also suggested the Accident Compensation Corporation (ACC) could give a 50% discount on premiums to riders with no points for two years. The group also suggested that demerit points be removed for participating in training. As a particular instance of this, it was suggested that when the threshold is reached a motorist might avoid suspension by doing a 're-education course that would include a test you have to pass', thus working off your demerit points. However, re-offending with serious offences like exceeding the limit by 20 km would result in a longer suspension (eg six months) and a requirement to pass a test for licence reinstatement.

Outside of the LPS, the group suggested a graduated licence system of A2 and A1 riders. To qualify for an A1 licence, riders would need to ride offence free, and complete training to meet the Police or Institute of Advanced Motorists standard. A1 riders would then be eligible for a licence rebate.

19.5.8 Special issues for motorcyclists

Many participants indicated feeling like a 'persecuted minority'; some because of feeling targeted by Police, and more generally because regulations and their application did not accommodate motorcycle-specific issues. In relation to filtering, the judgement of 'due consideration and care' was considered very subjective. Motorcyclists indicated they felt angry that their lives could be put at risk by driver behaviour when motorists were less likely to be penalised than they were.

> *you do lose your temper when you are on a bike because you're vulnerable and people do really stupid crazy stuff ... when you've got no support and you see police officers happy to ping you for doing 5, 10km/hr over the speed limit but not do the guy that's like off his face on something and swerving all over the road...*

The group identified a number of ways in which motorcyclists were susceptible to being 'unfairly' penalised for speeding. They argued that when riding a motorcycle it is difficult to maintain a constant speed; acceleration is faster than cars and going over the speed limit is a matter of a few millimetres turn of the throttle. They also mentioned they often sped briefly while overtaking to make overtaking safer, and that they needed to accelerate around bends. In fact, participants said that they often sped to be safe (eg to get away from a distracted motorist, or a tailgating motorist). For these reasons it was argued that single-point speed detection was unreliable and unfair (ie in picking up momentary speeding), and that measuring average speeds over a length of road would be more accurate and fair. For example, the size of the speed excess, and thus the number of demerit points, might be reduced if an average speed were considered.

The group also highlighted other instances when motorcyclists break the law to keep safe. For example, one rider talked about being rear-ended on two occasions at a particular stop sign, so no longer being willing to comply with the sign.

Participants insisted that motorcyclists took riding well (safely?), very seriously and frequently undertook additional training. They felt this should be recognised and rewarded. By contrast motorcyclists perceived other motor vehicle drivers to be less careful and less well trained, while being less likely to be pulled up by Police. A number of their behaviours, that put motorcyclists at risk, such as not paying attention and talking on phones, were not as closely enforced as speeding (which motorcyclists could do inadvertently, and to a 'small' extent, and be penalised). It would be fairer, and motorcyclists more compliant, if motorists were more routinely fined for offences such as driving while distracted.

20 Summary of focus group findings

Most focus group participants indicated they were not particularly influenced by demerit points. This appeared to be in large part because they had never approached the threshold. Moreover, in each group there were participants who indicated they were careful drivers (irrespective of the LPS). A few participants, in the professional driver and motorcycle group, indicated they had changed their behaviour when they approached the threshold. Further, this expected curvilinear relationship between demerit points and behavioural improvement was described in each group. However, there was also broad recognition that there was a recalcitrant group of drivers who were most likely to accrue demerit points, and even licence suspensions, without changing their behaviour. One participant in the motorcyclist group indicated he planned to continue riding if he were ever to be suspended.

Consistent with the survey findings, knowledge of the New Zealand LPS was incomplete. However, only in the young driver focus group was this explicitly identified as lessening the impact of the LPS. Young drivers did not recall hearing much information about the LPS during the licensing process and felt addressing this issue might make young drivers more aware of, and therefore more responsive to, the LPS. Participants in the motorcyclist discussion group appeared to be the most familiar with the New Zealand LPS. The LPS might be strengthened by improving public awareness of two points that focus group participants were not clear about: the possibility of 'on-the-spot' issue of demerit suspension to persons 'wanted for service of a demerit suspension notice' and of impoundment of borrowed vehicles when the owner had not checked the validity of the driver licence.

Perceived inconsistency of enforcement appeared to undermine compliance in each group. For example, young drivers talked about friends or acquaintances who frequently drove unsafely without getting caught. Professional drivers and motorcyclists talked about dangerous behaviours they had witnessed on the roads and felt were not adequately enforced. Each group indicated that Police target drivers based on their appearance and/or car, so certain groups are somewhat 'immune' to detection or can 'talk their way out of a ticket'. Driving while using a mobile telephone was singled out as a behaviour that should be more actively enforced.

In discussing the New Zealand LPS most groups appeared to focus on speeding, perhaps indicating that this was the offence which was most (visibly?) enforced. Motorcyclists argued that speeding was enforced to meet Police quotas because it was the easiest to measure. They felt this affected them particularly unfairly, because of the responsiveness of their vehicle, and their need to accelerate around bends or when overtaking in the interests of safety. One participant argued that point-to-point speed cameras would assist in treating motorcyclists more fairly.

Participating young drivers, Māori drivers and motorcyclists each mentioned unfair targeting of their road user group by Police. The perceived unfairness of this was heightened for the motorcyclists, who believed they made more effort to improve their motoring than the average driver. Furthermore, young drivers and motorcyclists suggested this could undermine compliance by their group. Reducing perceptions of stereotyping might contribute to improved compliance.

In three groups, participants talked about strategies for avoiding detection (many of which would limit the safety impact of enforcement activities to some extent). Young drivers and professional drivers talked about drivers warning each other of the locations of enforcement activities (eg via texts, tweets and apps). There was also mention of avoiding known Police locations or slowing down only in those locations. One professional driver reported buying a radar detector when he had accrued a large number of points (which

he still continued to use). Initiatives to limit such strategies might broaden the impact of enforcement activities.

Each group was aware of motorists driving while suspended (in part from television policing shows) and supported harsh treatment of this group. Vehicle impoundment was raised as an option but questioned on the basis of being unfair to motorists who had been sharing the impounded vehicle, and likely to be ineffective because of the possibility of accessing an alternative vehicle). A jail term was suggested for repeated driving while suspended offences, but only in the context of a fair and consistent enforcement system.

Licence suspension was regarded as a negative outcome, particularly in the professional driver group, who depended on their licence for their livelihood. Participants in the young driver focus group indicated a licence suspension would not have a particularly negative impact on them because of transport options in Wellington, while acknowledging the same may not be true for young drivers in regional areas. Nonetheless, some costs of having demerit points *per se* were highlighted (eg applications for jobs or credit cards) and this might offer avenues for intervention (albeit participants felt such consideration of demerit points was inappropriate). Further, linking alternative negative outcomes to reaching the demerit point threshold could be an avenue for increasing the impact of the system.

Discussions generally supported possible LPS structural features. In the young driver, Māori driver and professional driver groups there was some support for the notion that a lower threshold (eg 12 points) might seem easier to reach than a higher threshold (eg 100 points) – thereby better motivating compliance, even in a mathematically equivalent system. Even so, one young driver pointed out the 'larger' points penalties allowed by a higher threshold (eg 50 points for an offence in a 100-point LPS) would have a stronger psychological impact than the penalties in a lower-threshold LPS (eg six points for an offence in a 12-point LPS).

In general, there were indications that a demerit point expiry period longer than the current two years would motivate compliance more effectively, albeit not in the Māori driver group. However, young drivers expressed a concern about points still having an impact when they were no longer an accurate indication of driving style, or may have been forgotten. A longer expiry period was also seen by the professional driver and motorcyclist groups to increase the risk of motorists reaching the threshold 'just' for repeated 'minor' offences. Motorcyclists were particularly negative about a longer expiry period, feeling that unfairness in the process of assigning points to motorcyclists, particularly for speeding, would be exacerbated by the points lasting longer. There was greater acceptance for a three-year than for a five-year expiry period.

There was some evidence that a suspension period longer than the current three months would motivate compliance more effectively (in the Māori driver, professional driver and motorcyclist groups). Participating Māori drivers suggested the number and nature of offences be considered when determining the suspension length, and some motorcyclists believed this was already the case. Six months appeared to be considered a reasonable suspension period. Suspension periods were not discussed by young drivers.

The Māori driver and professional driver groups discussed requirements for licence reinstatement. Both indicated that for driver education courses to be valuable participants should be required to prove their learning through testing. Motorcyclists made this same point in relation to driver education to avoid suspension. Mandatory involvement in programmes to raise awareness of the consequences of crashing was suggested in the Māori driver group.

Discussion group findings were substantially less encouraging of applying points to camera-detected speeding offences. Young drivers indicated this would have minimal effect on them, believing that most

speeding penalties are issued by the Police (rather than cameras). Although some Māori drivers, professional drivers and motorcyclists believed most speeding offences were camera-detected, they argued that the unfairness of camera detection would be exacerbated by applying demerit points. (In particular, it was considered unfair that cameras were often hidden and placed in locations where drivers were likely to be speeding momentarily, such as at the bottom of hills and when overtaking.) Nonetheless, several participants (in the professional driver and motorcyclist groups) indicated that applying points to camera-detected offences would have a major impact on their driving/riding. Motorcyclists pointed out that for them the likelihood of being detected by a camera was reduced (relative to cars) because they had only rear number plates. The possibility of passing on points was mentioned in two of the four groups.

Discussion suggested there would be little benefit in doubling demerit points during holiday periods. In each group participants highlighted there was already heightened policing and zero tolerance of speeding during holiday periods, and this was sufficient to increase compliance. Participants argued that doubling demerit points would be excessive and would risk people being suspended just because they were not aware of the double demerits initiative. It was also suggested this would exacerbate any unfairness of speed enforcement or of totting up points for minor offences (in the professional driver and motorcyclist groups). However, the professional driver group recognised that double demerits could be effective in promoting compliance.

In general there was a feeling the LPS should be applied to all drivers in the same way, with the exception of previously suspended drivers. Nonetheless, somewhat surprisingly the young driver group felt a stricter system for novice drivers might 'start people off being concerned about the system' and would be consistent with having restricted conditions (and similar ideas were offered by the professional driver group). Each group agreed that previously suspended drivers should be treated more harshly (eg with a longer suspension period, or a jail term), although it was acknowledged that such drivers might simply be beyond the penalty system.

Each focus group raised concerns about the risk of licence suspension, and penalties for driving while suspended, leading people, and particularly young people, into a cycle of crime. It was argued that the penalty system should involve mechanisms to avoid this, such as Police discretion, judicial discretion and options for avoiding suspension (eg by completing training with performance testing, driver awareness programmes). Nonetheless participants acknowledged the need for care to maintain the deterrent and selection functions of the system.

Most participants appeared to be only vaguely aware of their current number of points, and several avenues for gleaning this information were mentioned. Participants generally felt a website would provide the easiest source of this information. Māori drivers suggested notification on registration renewal forms.

In each group participants discussed a range of approaches to improve compliance. All groups suggested that more fair and consistent policing would promote compliance. Particularly for young drivers and motorcyclists this would require addressing the perceived targeting of their respective road user groups. More broadly, young drivers might have greater respect for regulations if they had a better understanding of some specific restrictions, such as the passenger restriction. Motorcyclists might have a greater respect for regulations, and particularly speed regulations, if enforcement practices better accounted for momentary speeding resulting from the nature of their vehicles. Professional drivers and motorcyclists mentioned the importance of enforcing offences other than speeding, especially including distracted driving. Māori drivers and motorcyclists suggested strategies for discriminating between 'minor' and serious offences.

Rewards for offence-free driving were discussed by several groups. Young drivers felt that tangible rewards such as reduced insurance premiums, reduced cost of a defensive driver certificate, or reduced

cost of the full licence test would be more motivating than LPS-based incentives (such as increases of the point threshold). Removing conditions from the restricted licence was also discussed as a possible reward for offence-free driving. The motorcyclist group suggested the ACC could give a 50% discount on premiums to riders with no points for two years. Motorcyclists also suggested rewards participating in training (including the removal of demerit points). Both young drivers and motorcyclists indicated that rewards for safe behaviour would somewhat address the 'persecution' they felt.

Further specific initiatives that were raised included:

- (radar) signs that post travelling speeds to slow drivers down via a shaming mechanism (young driver group)
- workshops to raise awareness of the consequences of speeding and crashes for recidivist motorists (Māori driver group)
- regular testing of all drivers, particularly older drivers (professional driver group)
- continued young driver initiatives, including licence restrictions (professional driver group)
- 21 as minimum age for obtaining a full licence (professional driver group)
- a graduated licence system for motorcyclists; where qualifying for an A1 licence, riders would be required to ride offence free and complete training to a meet a specified A1 standard, and would receive a licence rebate (motorcyclist group).

In all groups there appeared to be a view that being 'a little bit over' the speed limit was safe and acceptable. Many participants indicated they aimed to drive just within the tolerance – even arguing the 'no tolerance' periods effectively changed the speed limit. There was a perception that penalising people for being a little bit over was unfair, and the LPS was unfair if it resulted in the suspension of drivers for repeatedly being penalised for low-range speeding. Campaigns to change public attitudes to low-range speeding might improve compliance with relevant regulations.

Due to the fairly low number of motorists involved in the focus groups it was important their views were not treated as representative of their respective road-user groups. This was particularly relevant for the Māori group, which involved only two participants, and the motorcyclist group, whose members were mostly recruited from the Wellington Riders Facebook page. Moreover, two of the motorcyclist participants dominated the discussion. The composition of the professional driver group highlighted the heterogeneity of people who drive for work, and this was borne out by the wide range of opinion, even in this small focus group.

Moreover, only Wellington residents were recruited (because of budgetary constraints), and this may have influenced the views expressed. For example, focus groups conducted in rural areas may have given different findings. It is also possible the responses of focus group participants who had previously responded to the survey might have been influenced by this earlier involvement in the project. Nonetheless, this applied to only 29% of focus group participants, and there was at least a three-month delay between completing the survey and participating in a focus group.

PART FIVE: HIGH-LEVEL SYNTHESIS

21 Recommendations to achieve LPS best practice

Safe compliant users are a key element of a safe system, and LPSs aim to improve compliance. The specific functions of LPSs, as outlined in *Part 1 Literature review* of this report, are deterrence, selection and correction. Consistent with international best practice, an LPS should be designed to achieve a balance of maximum deterrence and fairness and road safety, applying greater penalties to offences that present the greatest threat to road safety and to repeat offenders, while providing opportunities to learn and practice safe driving behaviours.

Putting together the findings of the four sections of this research: the literature review, data analysis, survey and focus groups, has generated a series of 20 suggestions likely to strengthen and improve the LPS. Each of these recommendations is described below and for each one, the rationale is summarised.

21.1 General recommendations

1 The LPS should be continued as it motivates compliance amongst a substantial proportion of drivers, and particularly some repeat-offenders as they near the licensing point threshold. It has broad public acceptance.

   a The survey results suggest the LPS influences the attitudes of drivers. Most people do not like having licensing points and the idea of suspensions of their licence is a concern for the greater majority of people. Even people who said they did not mind having licensing points, reported they would improve their driving behaviour as their points got closer to the 100-point threshold. The data analysis also supported the conclusion that the LPS reduced multiple offences as the majority of offenders limited the number of penalty points to 85 or fewer within a two-year period.

2 There should be more information campaigns about the New Zealand LPS in order to enhance knowledge and awareness of the system. Young novice drivers should be specifically targeted in these campaigns.

   a Awareness and knowledge of the LPS is not high. From the survey, only those who currently have points were able to provide accurate responses about the nature and enforcement details of the system. This clearly calls into question the deterrence effect of the LPS across the general driving population. This is an obvious target for action. Enhancing awareness and knowledge of the system is also likely to increase the perceived likelihood of being caught if offending. Support for this comes from the literature review. Previous evaluations of LPSs show their effects diminish as media coverage and Police activity decline. In addition, the focus groups indicated that young drivers had little knowledge of the specific details of the LPS, again reducing its deterrence effects.

3 Enhance the awareness of enforcement activities by more visible policing especially for offences for which there is a low perceived risk of being caught in order to motivate compliance and reduce all offending.

   a As discussed in the literature review, previous research demonstrates that the effectiveness of LPSs diminishes with declining media coverage and Police activity; consequently there is a clear benefit for deterrence from offending at all and for repeat offenders if Police enforcement

activities are sustained at moderate to high levels and are well publicised. This is likely to be of particular benefit for offences perceived to have low detection rates such as those rated by survey respondents as having a low likelihood of being caught: using a mobile phone while driving, driving when suspended, driving between 10 pm and 5 am without a supervisor for novice drivers and low-range speeding (< 10 km/h over the limit).

4 An enhanced system is needed to provide ready access by drivers to their current point balance and this should be well-publicised.

   a The survey highlighted the need for more ready access to checking a driver's status which would also enhance the effectiveness of the LPS as we know that most drivers moderate their driving behaviour as they move closer to the 100-point threshold. From the literature review, strategies used successfully internationally include sending warning letters, email or texts when more than halfway to reaching the point threshold and providing an on-line facility where licence holders are able to find out their current point status.

21.2 Improving general deterrence effects of the LPS

1 Within the group of offenders, three main subgroups should be distinguished because they may well need different strategies for intervention. These include *single offenders* or drivers who either offend only once or as rarely as once per decade, *lower-level repeat offenders* who offend up to around 70–75 points within two years, and *recidivist offenders* who have multiple offences sufficient to be suspended. Strategy development needs to take these groups into account and address each one specifically.

   a The survey showed that the best predictors of currently having points were having a history of points and not minding having points so highlighting that current offenders are a continuing subgroup of drivers. The data analysis also shows that the characteristics that distinguish the two repeat offender subgroups from single offenders are similar (ie male, young novice drivers who have little driving experience), so limiting options for targeted intervention. On the other hand, the type or nature of offences incurred will assist in identifying those offenders most likely to be repeat offenders or recidivists. It is worth noting that young males are most likely to drive unlicensed, and this should be considered in the developing strategy (especially for recidivists).

2 Decrease the seemingly high licensing point threshold of 100 points to avoid perception that early points are expendable. The jurisdictional review showed the modal threshold of 12 operates in 19 countries and only one country other than New Zealand (Bulgaria) has a threshold over 25. A low-point threshold was also recommended by Bourgeon and Picard (2007).

3 The value of points for many offences should be increased (relative to the prevailing threshold) in order to enhance deterrence effects and reduce overall offences. Offending appears to become less likely as offenders approach the point threshold. Increasing the number of points per offence will result in offenders approaching the threshold with fewer offences and so reduce the overall rate of offending. The same outcome could also be achieved by restricting the number of offences allowed within the accumulation phase.

   a From the data analysis, it is clear that multiple offending is curtailed by the two-year penalty point threshold. Similarly, the survey responses suggest that increasing the point value for speeding and mobile phone offences will motivate many drivers not to commit these offences. It is of note, however, that this may not be as effective for low-level speeding as over one-quarter of respondents reported that no amount of points would deter them from low level speeding (< 10

km/h).

4 Review the penalties incurred across offences to ensure the offences with the highest risk of serious injuries and death attract the highest penalties in order to emphasise the validity of the penalty system for road safety.

   a Previous research supports the linking of offence seriousness and the size of the point penalty as discussed in the literature review. The focus group responses supported ensuring a balance between perceived risk to road safety of the offence and the size of the penalty; however, many of the groups also argued the LPS should be fair and applied to all drivers in the same way.

5 The LPS penalties should be reviewed to establish the most effective combination of licensing points and fines.

   a From the data analysis, repeat offending was only significantly reduced when points were incurred along with a significant fine of at least $100 and the best deterrence effects occurred with at least a 20-point penalty in combination with a higher fine.

6 The rate at which offences occur and/or points are accumulated should be a used as a trigger for increasing the strength of the penalties for repeat offenders. For example, if the first two offences occurred within four months, the third offence could attract double licensing points. As another example, if the first two offences occurred within four months, no subsequent offence might be allowed for the following six months.

   a The data analysis shows a direct relationship between repeat offences and accumulation time, as offenders with higher numbers of offences accumulated them more quickly. In addition, offences occur at a constant rate. This means the rate of accumulation is likely to be a good predictor of offenders who will repeat and potentially become recidivists and consequently would benefit from earlier and enhanced enforcement and penalties.

7 The LPS should respond earlier to offenders who incur licence/registration offences, especially those relating to unaccompanied learner drivers and violations of the passenger restrictions on novice drivers.

   a The data analysis revealed that young novice drivers who incur these types of offences are most likely to be in the reoffender and recidivist subgroups. This has been actioned in other jurisdictions by introducing a lower licensing point threshold for newly licensed drivers, for example.

8 The lifetime of licensing points could be extended to three years to be consistent with international 'best practice' and as a method of increasing the deterrence effect of the LPS.

   a As shown in the literature review, there is considerable variation internationally in the lifespan of points. The support for a longer point lifetime is based on the view that because this increases the likelihood of suspension for repeat offenders, it may enhance the LPS deterrence and selection functions. Most of the focus groups, with the exception of the small Māori group, supported the idea that a longer point lifetime would motivate compliance. Around one-quarter of respondents believed points had a lifetime of more than two years, and around one quarter of those who knew the current lifetime would support a longer lifetime. Thus, increasing the point lifetime may not meet a great deal of adverse response from the driving population. On the other hand, the survey also showed nearly half of the respondents who had been suspended reported driving anyway during the suspension. Clearly, extending the lifetime of points would not be an advantage if its deterrence effect was mainly manifest in increased suspensions rather than reducing the number of offences before suspension.

21.3 Managing suspensions and deterrence

1 Extending the length of the suspension period from three to six months should be considered at least for offenders committing the most serious offences and potentially for longer periods for multiple suspensions.

   a The literature review revealed a considerable variation in the suspension period, although six-month periods are most common. The advantages of extending the period of suspension is again to enhance deterrence effects and take recidivist drivers off the road, but the potential disadvantage described above of suspended drivers not complying with the requirement to keep off the road may be even more likely with longer suspension periods. Nearly nine in ten survey respondents overall and the majority (80%) of Māori respondents supported a possible increase in the suspension period so extending the suspension period would be favoured by most of the driving population. Extending the time length only for the most serious offences and/or for repeated suspensions is likely to achieve more support.

2 Highly visible licence checks by Police, and activities to increase public awareness of the potential for vehicle impoundment when suspended drivers are caught driving illegally, in order to enhance deterrence of unlicensed driving.

   a While the data analysis did not highlight unlicensed driving as a major offence, the focus groups and surveys suggested the group of offenders who continue to drive when suspended may be larger than indicated simply because these offences are more difficult to detect. Highlighting these offences through obvious checking and clear penalties is likely to deter offenders from unlicensed driving. This strategy would be even more justified if the likelihood of unlicensed driving increased due to higher numbers of suspended drivers in the system as discussed for the previous two recommendations.

   b Although focus groups suggested some awareness that drivers caught driving illegally while suspended could have their vehicle impounded, it appeared not to be clear borrowed vehicles might also be impounded if the owner has not taken steps to check the validity of the driver's licence.

21.4 Managing speed

Speeding offences deserve particular attention because they are clearly the most common offence overall and importantly the most common offence on entry to the LPS. Further, speeding is the most prevalent factor in serious injury crashes.

1 To enhance deterrence, consideration should be given to increasing the penalties for speeding, which represents such a large proportion of the offences. Low-range speeding (exceeding by 10 km/h or less) should be addressed in particular, because this offence currently attracts the lowest number of points, and so is subject to the least deterrent effect. Accompanying campaigns might inform the public that low-level speeding is the most prevalent type of fatal speed-related crashes (Job et al 2012) and that 'revenue' is put back into road safety initiatives.

   a Survey results supported increased licensing points for speeding between 20 to 30 km/h over the limit. The data interrogation showed licensing points below 20 did not reduce the likelihood of multiple offending, suggesting the 10-point penalty for low-range speeding had limited deterrence effect. Nonetheless, over one-quarter of respondents reported that for low-range speeding no amount of points would make them comply. Focus group results highlighted

enforcement of low-level speeding is an offence that is viewed as particularly unfair, because low-level speeding appears not to be seen as particularly dangerous. Current penalties for speeding are not well-supported by drivers, many of whom see speed-related penalties as revenue related. In developing a strategy for low-range speeding, these attitudes would need to be taken into account.

2 Camera-detected speeding offences should be included within the LPS in order to be consistent in enforcement of this most common road safety problem.

   a As discussed in the literature review, not including offences for speeding simply on the basis of how they are detected undermines the deterrence effect of the LPS and at the same time allows the perception that speeding offences detected by camera are less of concern than Police-detected offences. Comments from focus group participants suggested that application of licensing points to camera-detected speeding offences may increase compliance but may face public opposition. It was suggested that application of points would exaggerate the perceived unfairness of camera-detection, and that the delayed issue of points would limit drivers' opportunity to respond to them with more compliant driving before receiving more points and potentially a licence suspension. The possibility of licensing points accruing to the wrong licence was also raised.

21.5 Improving the safety outcomes for young novice drivers

1 Penalties for young novice drivers should be reviewed with a focus on emphasising the road safety consequences of risky driving for this very at-risk group. In particular, emphasis should be on both higher point penalties that deter initial offending as once in the system, this group is likely to become multiple offenders as well as on deterrence for high-risk behaviours. High-level fines are likely to be less effective as this group is unlikely to have the resources to pay them, although lower fines are likely to be effective.

   a The data analysis shows 15 to 25 year-olds were highly represented amongst offenders and especially multiple offenders and suspended drivers, but, as discussed above, many of their licensing points were obtained from licensing-related offences. The focus groups also highlighted that keeping young novices out of the LPS should be a primary aim because once in the system, the next deterrence point for many young novice drivers is when they come close to the point threshold. In the focus groups, young novice drivers supported the suggestion that they should have lower licensing point thresholds.

2 For young novice drivers there should be a good balance between size of the penalty and the level of road safety risk and potential outcome. This should include review of the types of offences that incur licensing points, including licence/registration offences.

   a As seen in the data analysis, offences relating to learners driving unaccompanied and drivers on restricted licences violating the night driving restrictions are highly represented among first offences so are a major reason for these drivers entering the LPS.

3 An information campaign about the LPS is needed for young novice drivers. Public awareness campaigns might identify that the night and passenger restrictions are to manage young novices' exposure to high-risk conditions while they gain the experience.

   a As shown from the survey, young novice drivers have low levels of knowledge and awareness of

the LPS so ensuring there are clear road safety implications of the offences that incur licensing points is particularly important for young novice drivers.

21.6 Further analysis of the effectiveness of the LPS

1 The LPS database is a very rich source of information about the nature and patterns of offences that attract licensing points and fines over a full decade. Further analysis would be most useful for refining the LPS further and especially focusing on specific types of offences and understanding more about who incurs them.

a The data analysis focused on timeline characteristics of offenders and offences, but there is much more that could be learned from the database. While further work is needed to clean the dataset to allow this further analysis, this effort is likely to be well rewarded in terms of understanding more about how the LPS is operating. Further, a good database of LPS information will be most useful for evaluation of the effects of changes to the LPS in the future.

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Appendix A: Email sent to organisations included in grey literature search

Subject: Experience with license (demerit) point systems

Our research team at UNSW is conducting a review of research investigating the effectiveness of licensing point systems in encouraging driver compliance with road regulations. We have a particular focus on which factors influence the effectiveness of licensing point systems, and on road-user attitudes to such systems.

We have conducted a thorough review of relevant scientific literature and are now seeking to source any reports published or unpublished that may assist us to gain a fuller understanding of the effects of license point systems on road-user behaviour.

If you have or know of any such reports, we would be grateful to receive these (hopefully by Friday, 16 October, 2015).

We would also appreciate if you would check/complete the information relating to your country in the attached overview of the licensing point systems that exist worldwide.

Best regards,

Appendix B: Column headings of Excel spreadsheet sent with email to organisations included in grey literature search

Each organisation was sent an Excel document including sheet 1 with the column headings shown in table B.1 and completed with as much detail as we could glean from available publications. Table B.1 also shows the explanations given for each heading on sheet 2.

Table B.1 Headings of Excel spreadsheet summarising LPS for each country, and their explanations

Heading	Explanation
Year of introduction	What year was the licensing system introduced?
Type of system	Demerit point system (DPS) or penalty point system (PPS)?
Tailoring for particular groups	Are different groups (eg novice driver, professional driver, people who previously lost their licence) treated differently in the system? If so please explain how.
Inclusion of non-motorists	Whether pedestrians and pedal cyclists can receive demerit points (and how this works if they do not have a driver licence)?
Threshold or total	What is the total number of demerit or penalty points until licence suspension?
Number of point-bearing offences until suspension	How many points-bearing offences can be made until licence suspension?
Different points	How many points are acquired/lost per offence? Is this based on the severity of the offence?
Double demerits	Are there double demerit points for offences for particular groups or during particular periods?
Number of points-bearing offences	How many points-bearing offences are there in the system?
Speeding	Are points applied to any speeding offences? How much over the speed limit does a motorist need to be to acquire/lose points? Does this include speeding detected by speed cameras (ie. automatically detected speeding)?
Drink-driving	Are points applied to any drink-driving offences? Do any drink-driving offences result in immediate licence suspension?
Non-restraint	Are points applied for non-restraint (not wearing safety belt)?
Use of hand-held mobile phone	Are points applied for the use of hand-held mobile phone?
Duration of points	How long do the points for each offence last?
Points recovery	Can the driver do something to annul/recover their points? If so, what, when and how frequently?
Driver improvement course [voluntary vs mandatory]	Is there a driver improvement course incorporated in the system? If so, is the driver improvement course taken to annul/recover points, or to reinstate a suspended licence? Must it be passed, or simply completed, (or some other criterion)? Is the course voluntary or mandatory?
Merit points	Can drivers be awarded with points for offence-free driving? If so, how many points are awarded, and when can drivers be awarded?
Written warning	Do drivers receive written warnings that their licence will be suspended when they have accumulated/lost a certain number of points? If so, how many points will trigger this written warning?
Licence suspension	Is the licence suspended unconditionally, or do drivers have an opportunity to avoid the

Heading	Explanation
	suspension? How long is the licence suspension period?
Process for licence recovery	What is the process for recovering a licence after suspension? (eg Is it reinstated automatically after the suspension period has expired? Are there tests to pass? Is there a driver improvement course to complete/pass?)
Monetary penalty system?	Does the DPS or PPS operate alongside a system of monetary penalties?

Appendix C: Summary of the New Zealand LPS

Type of system	**Demerit point system**
Inclusion of non-motorists	No
Tailoring for particular groups	Not structured differently for novice or professional drivers/riders, although there are offences specific to these groups
Threshold	100
Lifetime of points#	Points expire two years after a specific offence
Points assignment	10–50 points based on severity
Suspension period	Three months
Process for licence reinstatement	Apply, pass medical and vision assessment, pay reinstatement fee
Inclusion of specific offences	Speeding: from <10 km/h over speed limit, excl. automatically detected Low-range drink-driving offences (alcohol interlock licence mandatory for some high-range drink-driving offences) Use of hand-held phone
Special features	No incentives for offence-free driving No road safety course [voluntary vs mandatory] A written warning (letter) is sent once the person accrues 50 or more active demerit points on their driver licence record
Availability of personal points level	Apply to NZ Transport Agency (by phone or in writing) and pay a fee

Demerit points for speed-related offences (excluding speed camera offences)

Exceeding the speed limit fixed by not more than 10 km/h	10
Exceeding the speed limit by more than 10 km/h but not more than 20 km/h	20
Exceeding the speed limit by more than 20 km/h but not more than 30 km/h	35
Exceeding the speed limit by more than 30 km/h but not more than 35 km/h	40
Exceeding the speed limit by more than 35 km/h	50
Using, in a motor vehicle, equipment that interferes with operation of speed measuring device	25
Possessing, in a motor vehicle, equipment that is designed to interfere with operation of speed measuring device	25
Exceed speed for stopping distance	20
Exceed speed for stopping distance on road not marked in lanes	20

Demerit points for mobile phone-related offences

Driver uses mobile phone while driving a vehicle	20

Demerit points for driver licence-related offences

Drives motor vehicle contrary to the graduated driver licensing system (GDLS) conditions of his or her driver licence (excluding the requirement to display L plates)	35
Failure to display L plate as required	25
Drives a motor vehicle contrary to the non-GDLS conditions of his or her driver licence	25
Drives in breach of conditions applying to stage 2 of accelerated licensing process	35
Drives in breach of conditions applying to stage 3 of accelerated licensing process	35

Demerit points for vehicle related offences

Operating unregistered motor vehicle by driving or using it on road in contravention of section 242(1) of the Land Transport Act 1998	20
Operating unlicensed motor vehicle by driving or using it on road in contravention of section 242(1) of the Land Transport Act 1998	15
Operating motor vehicle on road without plates affixed	20
Using trade plate when not eligible	20
Operating motor vehicle displaying plates or licence not authorised for that motor vehicle	25
Operating motor vehicle displaying object or design likely to be mistaken for plates or licence authorised for that motor vehicle	25
Operating motor vehicle with plates or licence that are wholly or partially obscured or not easily distinguishable	25
Operating motor vehicle with temporary exemption granted under regulation 20 of the Land Transport (Motor Vehicle Registration and Licensing) Regulations 2011	20
Failure to operate a motor vehicle with an exhaust system that complies with relevant noise output standards	25
Operate vehicle that creates excessive noise	25
Create excessive noise within or on vehicle	25

Demerit points for alcohol and enforcement officer related offences

Failure or refusal to remain for evidential breath test or blood test	50
Person younger than 20 driving or attempting to drive with excessive breath alcohol or blood alcohol concentration	50
Driving or attempting to drive with breath alcohol exceeding 250 micrograms but not exceeding 400 micrograms	50
Driving or attempting to drive with blood alcohol exceeding 50 milligrams but not exceeding 80 milligrams	50
Driving or attempting to drive with blood alcohol exceeding 50 milligrams but not exceeding 80 milligrams and failing or refusing to undergo an evidential breath test	50
Failure or refusal to wait for the result of a breath screening test or an evidential breath test	50

Failure to stop on request or signal of an enforcement officer, or on being followed by motor vehicle displaying flashing blue, or blue and red, lights or sounding a siren	35
Failure to remain stopped for an enforcement officer	35
Driving or attempting to drive when forbidden by an enforcement officer	35
Failure or refusal to accompany an enforcement officer when so required	50
Person fails to produce zero alcohol licence	25
Holder of an interlock licence or zero alcohol licence contravenes specified breath or blood alcohol level	50

Demerit points for commercial driving-related offences

Person produces logbook with 1–5 omissions	10
Person produces logbook with 6–10 omissions	20
Person produces logbook with 11 or more omissions	30
Person fails to produce logbook	35
Requirement to produce approved alternative record to an enforcement officer on demand	35
Vehicle recovery service vehicles (requirement to complete and retain tow authorities)	35
Requirement on driver or contractor working within an alternative fatigue management scheme to keep records	35
Taxi driver must not accept hire in specified area unless taxi is fitted with an in-vehicle security camera system that is operating	20
Taxi driver must not accept hire in specified area unless taxi is fitted with an in-vehicle security camera system that has an unobscured view of the interior	20

Demerit points for helmet-related offences

Drive or ride all-terrain vehicle, motorcycle, or moped without securely fastened approved helmet	25
Drive or ride all-terrain vehicle, motorcycle, or moped with damaged, etc, safety helmet	25

Demerit points for pedestrian crossing and pedestrian zone related offences

Driver fails to give way at pedestrian crossing	35
Driver enters pedestrian crossing when passage blocked	35
Driver of vehicle fails to give way to pedestrian on shared zone	35
Fail to comply with school patrol sign	20
Passing at school crossing point or pedestrian crossing	20

Demerit points for rail-related offences

Driver fails to give way to rail vehicle approaching level crossing	20
Drive etc, cycle, vehicle, or animal across level crossing when risk of collision with rail vehicle	20
Fail to comply with stop sign at level crossing	20

Fail to remain stationary at stop sign until level crossing clear	20
Driver enters controlled area of level crossing when red signal displayed	20
Driver enters controlled area of level crossing when barrier arm lowered	20

Demerit points for road rules-related offences

Fail to drive as near as practicable to the left of the roadway	20
Fail to allow impeded traffic to pass	20
Unsafe passing	35
Impeding vehicle when passing	35
Passing to right of no-passing line	35
Drive in emergency stopping lane	10
Fail to comply with handheld stop sign	20
Driver fails to stop at stop sign	20
Driver fails to give way at stop sign	20
Driver fails to give way at give-way sign	20
Driver fails to give way at give-way sign controlling a one-way section of road	25
Driver of vehicle changing lanes or turning fails to give way to vehicle not changing lanes or turning	20
Driver of right-turning vehicle fails to give way to an approaching left-turning vehicle	20
Driver at intersection fails to give way to vehicle approaching from right	20
Driver on terminating road approaching or crossing a T intersection fails to give way	20
Driver fails to give way to road user on footpath when entering/exiting driveway	20
Driver fails to give way to a vehicle on roadway when exiting driveway	20
Driver entering roundabout fails to give way	20
Drive too close to vehicle in front	20
Exceed speed for stopping distance	20
Exceed speed for stopping distance on road not marked in lanes	20
Driver permits riding dangerously	20
Careless or inconsiderate use of motor vehicle	35

Appendix D: Classification of offence types

D1 Alcohol-related offences

A101	DROVE UNDER THE INFLUENCE OF DRINK
A102	DROVE UNDER THE INFLUENCE OF A DRUG
A103	UNDER INFLUENCE OF DRINK CAUSING INJURY
A104	UNDER INFLUENCE OF A DRUG CAUSING INJURY
A105	UNDER INFLUENCE OF DRINK CAUSING DEATH
A106	UNDER INFLUENCE OF DRUG CAUSING DEATH
A107	EXCESS BREATH ALCOHOL CAUSING INJURY
A108	EXCESS BREATH ALCOHOL CAUSING DEATH
A109	DROVE UNDER THE INFLUENCE OF DRINK/DRUG OR BOTH
A110	UNDER INFLUENCE OF DRINK/DRUG CAUSING INJURY
A111	UNDER INFLUENCE OF DRINK/DRUG CAUSING DEATH
A112	AGGRAVATED CARELESS (UNDER INFLUENCE) CAUSING DEATH/INJURY
A113	AGGRAVATED CARELESS (UNDER INFLUENCE) CAUSING DEATH
A114	AGGRAVATED CARELESS (UNDER INFLUENCE) CAUSING INJURY
A130	DROVE UNDER INFLUENCE DRINK OR DRUG - 3RD OR SUBSEQUENT
A202	ALCOHOL INTERLOCK LICENCE HOLDER OFFENDED IN RELATION TO INTERLOCK DEV
A204	ALCOHOL INTERLOCK LICENSEE'S BREATH CONTAINED ALCOHOL - NOT OVER 400 M
A205	ZERO ALCOHOL LICENSEE'S BREATH CONTAINED ALCOHOL - NOT OVER 400 MCGS
A206	ALCOHOL INTERLOCK LICENSEE'S BLOOD CONTAINED ALCOHOL - NOT OVER 80 MGM
A207	ZERO ALCOHOL LICENSEE'S BLOOD CONTAINED ALCOHOL - NOT OVER 80 MGMS
A208	ALCOHOL INTERLOCK LICENSEE'S BREATH CONTAINED ALCOHOL - OVER 400 MCGS
A209	ZERO ALCOHOL LICENSEE'S BREATH CONTAINED ALCOHOL - OVER 400 MCGS
A210	ALCOHOL INTERLOCK LICENSEE'S BLOOD CONTAINED ALCOHOL - OVER 80 MGMS
A211	ZERO ALCOHOL LICENSEE'S BLOOD CONTAINED ALCOHOL - OVER 80 MGMS
A213	ZERO ALCOHOL LICENSEE'S BREATH CONTAINED ALCOHOL - NOT OVER 250 MCGS
A217	ZERO ALCOHOL LICENSEE'S BREATH CONTAINED ALCOHOL - OVER 250 MCGS
A303	EXCESS BLOOD ALCOHOL CAUSING INJURY
A304	EXCESS BLOOD ALCOHOL CAUSING DEATH
A305	REFUSED TO GIVE BLOOD SPECIMEN TO A DOCTOR
A305	REFUSED TO GIVE BLOOD SPECIMEN TO A DOCTOR OR MED OFFICER
A306	REFUSED TO ACCOMPANY ENFORCEMENT OFFICER
A309	REFUSED OFFICERS REQUEST FOR BLOOD SPECIMEN
A311	FAILED TO REMAIN FOR EVIDENTIAL BREATH TEST
A313	FAILED TO REMAIN FOR BLOOD SAMPLE
A315	REFUSED BLOOD AT HOSPITAL
A316	REFUSED TO ACCOMPANY OFFICER TO ANOTHER PLACE FOR BLOOD TEST
A317	FAILED TO REMAIN FOR RESULT OF BREATH SCREENING TEST
A318	AID/PERMIT DRIVING WITH EXCESS BLOOD ALCOHOL
A319	FAILED TO REMAIN FOR RESULT OF EVIDENTIAL BREATH TEST
A320	LICENSED PERSON EXCESS BLOOD ALCOHOL LEVEL

A323	DROVE WITH EXCESS BLOOD ALCOHOL CONTENT
A324	PERSON UNDER 20 EXCEEDED BLOOD ALCOHOL LIMIT
A326	PERSON UNDER-20'S BLOOD CONTAINED ALCOHOL - OVER 30 MGM
A328	PERSON UNDER-20'S BLOOD CONTAINED ALCOHOL - 30 MGM OR LESS
A329	AIDED PERSON UNDER 20 TO DRIVE - BLOOD CONTAINED ALCOHOL - 30 MGM OR L
A330	DROVE WITH EXCESS BLOOD ALCOHOL - 3RD OR SUBSEQUENT
A331	REFUSED OFFICER'S REQUEST FOR BLOOD SPECIMEN - 3RD OR SUBSEQUENT
A332	REFUSED TO GIVE BLOOD SPECIMEN TO DOCTOR - 3RD OR SUBSEQUENT
A333	REFUSED TO GIVE BLOOD AT HOSPITAL - 3RD OR SUBSEQUENT
A334	EXCESS BLOOD ALCOHOL CAUSING INJURY-3RD OR SUBSEQUENT
A335	EXCESS BLOOD ALCOHOL CAUSING DEATH-3RD OR SUBSQUENT
A336	BLOOD ALCOHOL LEVEL EXCEEDED 50MGM BUT NOT MORE THAN 80MGM
A401	DROVE IMPAIRED-BLOOD CONTAINED EVIDENCE OF THE USE OF A QUALIFYING DRU
A402	DROVE WITH BLOOD CONTAINING EVIDENCE OF USE OF CONTROLLED DRUG
A403	FAILED TO REMAIN FOR A COMPLUSORY IMPAIRMENT TEST
A405	REFUSED UNDERGO COMPLUSORY IMPAIRMENT TEST
A408	IN CHARGE-BLOOD CONTAINED EVIDENCE OF CONTROLLED DRUG-CAUSED INJURY
A430	DROVE IMPAIRED-BLOOD CONTAINED EVIDENCE OF QUALIFYING DRUG-3RD OR SUB
A431	REFUSED UNDERGO COMPLUSORY IMPAIRMENT TEST-3RD OR SUBSEQUENT
A434	DRIVER'S BLOOD CONTD EVIDENCE OF USE OF CONTROLLED DRUG-3RD OR SUB
A501	DRIVING WITH EXCESS BREATH ALCOHOL LEVEL
A504	AID/PERMIT TO DRIVE WHILE UNDER INFLUENCE OF DRINK
A516	AID/PERMIT PERSON TO DRIVE WITH EXCESS BREATH ALCOHOL
A518	BREATH ALCOHOL LEVEL OVER 400 MGMS/LITRE OF BREATH
A519	PERSON UNDER 20 EXCEEDED BREATH ALCOHOL LIMIT
A521	PERSON UNDER-20'S BREATH CONTAINED ALCOHOL - OVER 150 MCG
A523	PERSON UNDER-20'S BREATH CONTAINED ALCOHOL - 150 MCG OR LESS
A524	AIDED PERSON UNDER 20 TO DRIVE - BREATH CONTAINED ALCOHOL - 150 MCG OR
A525	BREATH ALCOHOL LEVEL EXCEEDED 250 MCGS BUT NOT MORE THAN 400 MCGS
A526	AIDED PRSN WITH BREATH ALCOHOL LVL > 250 MCGS BUT NOT OVER 400 MCGS
A530	DROVE WITH EXCESS BREATH ALCOHOL - 3RD OR SUBSEQUENT
A531	EXCESS BREATH ALCOHOL CAUSING INJURY - 3RD OR SUBSEQUENT
A532	EXCESS BREATH ALCOHOL CAUSING DEATH - 3RD OR SUBSEQUENT
A533	EXCESS BREATH ALCOHOL CAUSING DEATH = 3RD OR SUBSEQUENT
A601	TRANSPORT SERVICE DRIVER UNDER THE INFLUENCE OF DRINK
A602	TRANSPORT SERVICE DRIVER UNDER THE INFLUENCE OF DRUG
A613	TRANSPORT SERVICE DRIVER UNDER INFLUENCE DRINK OR DRUG-3RD OR SUBSEQUE
A617	TRANSPORT SERVICE DRIVER REFUSED TO ACCOMPANY ENFORCEMENT OFFICER
A627	DROVE IN TRANSPORT SERVICE WITH EXCESS BLOOD ALCOHOL CONTENT
A629	DROVE IN TRANSPORT SERVICE WITH EXCESS BLOOD ALCOHOL - 3RD OR SUB
A630	REFUSED OFFICER RQUEST FOR BLOOD SPECIMEN-3RD OR SUB-TRNSPRT SERVICE
A631	REFUSED TO GIVE BLOOD SPECIMEN TO DR-3RD OR SUB-TRANSPORT SERVICE
A637	TRANSPORT SERVICE DRIVER BREATH ALCOHOL LEVEL OVER 400 MGMS PER LTR
A640	DROVE IN TRANSPORT SERVICE WITH EXCESS BREATH ALCOHOL - 3RD OR SUB

A646 TRANSPORT DRIVER IMPAIRED-BLOOD CONTAINED EVIDENCE OF QUALIFYING DRUGS
A647 TRANSPORT DRIVER IMPAIRED - QUALIFYING DRUG IN BLOOD - 3RD OR SUB
A653 TRANSPORT DRIVER CAUSED INJURY-QUALIFYING DRUG IN BLOOD
A661 TRANSPORT DRIVER UNDER-20'S BLOOD CONTAINED ALCOHOL - 30 MGM OR LESS
A662 TRANSPORT DRIVE UNDER-20'S BREATH CONTAINED ALCOHOL - OVER 150 MCG
A663 TRANSPORT DRIVER UNDER-20'S BREATH CONTAINED ALCOHOL - 150 MCG OR LESS

D2 Compliance with rules

F101 FAILING TO STOP FOR RED FLASHING LIGHTS
F103 DRIVER TURNING AT LIGHTS FAILS TO GIVE WAY TO PEDESTRIAN
F106 FAILING TO COMPLY WITH AMBER TRAFFIC SIGNAL (VEHICLES)
F106 FAILED TO COMPLY WITH YELLOW TRAFFIC SIGNAL (VEHICLES)
F110 FAILING TO COMPLY WITH RED TRAFFIC SIGNAL (VEHICLES)
F111 FAILING TO COMPLY WITH RED TRAFFIC SIGNAL (VEHICLES)
F112 FAILED TO COMPLY YELLOW ARROW TRAFFIC SIGNAL (VEHICLES)
F112 FAILED TO COMPLY AMBER ARROW TRAFFIC SIGNAL (VEHICLES)
F113 TURNED AT TRAFFIC LIGHTS AGAINST A RED ARROW
F115 FAILED TO COMPLY WITH YELLOW T OR B TRAFFIC SIGNAL
F117 DROVE THE WRONG WAY ON A ONE-WAY ROAD
F118 MADE A PROHIBITED U TURN
F119 MADE A PROHIBITED RIGHT OR LEFT TURN
F120 FAILED TO COMPLY WITH A NO ENTRY SIGN
F201 FAILING TO STOP AT STOP SIGN
F202 FAILING TO GIVE WAY AT STOP SIGN
F203 FAILURE TO STOP AT RAILWAY CROSSING STOP SIGN
F204 FAILING TO REMAIN STOPPED AT RAILWAY CROSSING STOP SIGN
F207 PASSENGER VEHICLE FAILED TO STOP AT LEVEL CROSSING
F211 FAILED TO GIVE WAY AT RAILWAY CROSSING
F212 FAIL GIVE WAY AT SIGN
F213 FAILED TO REMAIN STOPPED FOR A HAND HELD ROAD SIGN
F214 FAILED TO GIVE WAY ENTERING ROUNDABOUT
F215 ENTERED ROUNDABOUT IN WRONG LANE - EARLY EXIT
F217 ENTERED ROUNDABOUT IN WRONG LANE - LATE EXIT
F218 FAILED TO INDICATE LEFT TURN AT ROUNDABOUT
F220 FAILED TO COMPLY WITH RAIL BARRIER ARMS
F221 RISKY CROSSING OF LEVEL CROSSING - ANIMAL OR VEHICLE
F222 FAILED TO STOP RED SIGNAL AT LEVEL CROSSING
F223 DRIVER FAILED TO GIVE WAY TO RAIL VEHICLE
F225 FAILED TO INDICATE LEFT TURN AT ROUNDABOUT ? LATE EXIT
F226 FAILED TO GIVE WAY AT A ONE-WAY GIVE-WAY SIGN
F301 FAILED TO GIVE WAY AT A GIVE WAY SIGN
F401 FAILED TO GIVE WAY AT A PEDESTRIAN CROSSING
F401 FAILING TO YIELD RIGHT OF WAY AT A PEDESTRIAN CROSSING
F402 PASSED VEHICLE STOPPED AT PEDESTRIAN CROSSING
F403 FAILING TO STOP AND REMAIN STOPPED FOR SCHOOL PATROL

F404	BLOCKED A PEDESTRIAN CROSSING
F405	FAILED TO GIVE WAY TO PEDESTRIAN AT SHARED ZONE
F501	FAILING TO STOP OR MAKE WAY FOR SIREN
F502	FAILED TO MAKE WAY FOR BLUE - RED BEACONS
F601	FAILING TO COMPLY WITH DIRECTIONAL ARROWS
F602	INCORRECTLY ENTERING A MOTORWAY
F603	MAKING U TURN ON MOTORWAY
F604	ENTERING BLOCKED INTERSECTION
F605	INCREASING SPEED AT INTERSECTION
F605	INCREASED SPEED AT INTERSECTION
F606	FAILED TO COMPLY WITH A TRAFFIC SIGN
F608	REVERSING ON MOTORWAY
F609	INCORRECTLY ENTERING CROSSING OR LEAVING A MOTORWAY

D3 Licence and registration related

L101	DRIVING HEAVY MOTOR VEHICLE WHILE UNDER 18 YEARS
L109	FALSELY CLAIMING TO BE THE HOLDER OF A DRIVERS LICENCE
L112	HELD OR APPLIED FOR LICENCE WHILE PROHIBITED
L114	FAILED TO PRODUCE DRIVERS LICENCE
L122	DROVE CONTRARY TO CONDITIONS OF DRIVER LICENCE
L126	FAILED TO RETURN DRIVER LICENCE TO DIRECTOR
L129	AIDING/ABETTING AN UNLICENSED DRIVER TO DRIVE
L129	AIDED/ABETTED AN UNLICENSED DRIVER TO DRIVE
L143	DROVE WHILE LICENCE SUSPENDED OR REVOKED
L144	DROVE WITHOUT APPROPRIATE DRIVER LICENCE
L145	INTERFERED WITH DRIVER LICENCE DOCUMENT
L146	GAVE FALSE INFORMATION IN APPLICATION FOR DRIVER LICENCE
L147	FAILED TO SURRENDER DRIVER LICENCE
L148	AIDED/ABETTED DRIVER WITH EXPIRED LICENCE TO DRIVE
L149	DROVE WITH AN EXPIRED DRIVER LICENCE
L201	DROVE WHILE DISQUALIFIED
L202	DRIVING WHILST DISQUALIFIED 2ND/SUB OFFENCE
L204	DROVE CONTRARY TO LIMITED LICENCE
L205	AIDING A PERSON TO DRIVE WHILE DISQUALIFIED
L207	AIDED PERSON TO DRIVE WHILE LICENCE SUSPENDED OR REVOKED
L208	DROVE CONTRARY TO AN ALCOHOL INTERLOCK LICENCE
L209	DROVE CONTRARY TO A ZERO ALCOHOL LICENCE
L230	DROVE WHILST DISQUALIFIED - 3RD OR SUBSEQUENT
L231	DROVE CONTRARY TO LIMITED LICENCE - 3RD OR SUBSEQUENT
L232	DROVE WHILE SUSPENDED OR REVOKED - 3RD OR SUBSEQUENT
L306	FAILED TO SURRENDER DRIVER IDENTIFICATION CARD
L401	USED VEHICLE - UNAUTHORISED LICENCE OR ITEM AFFIXED
L401	USES VEHICLE - UNAUTHORISED LICENCE OR ITEM AFFIXED
L402	AFFIXING A LICENCE OTHER THAN AN AUTHORISED LICENCE
L402	AFFIXED A LICENCE OTHER THAN AN AUTHORISED LICENCE

L403	CAUSED AN UNAUTHORISED LICENCE TO BE AFFIXED
L404	FAILURE TO DISPLAY LICENCE LABEL IN PRESCRIBED MANNER
L404	FAILED TO DISPLAY LICENCE LABEL IN PRESCRIBED MANNER
L406	FAILING TO DISPLAY REGISTRATION PLATES
L406	FAILED TO DISPLAY REGISTRATION PLATES
L407	UNREGISTERED MOTOR VEHICLE
L408	USED AN UNLICENSED MOTOR VEHICLE
L408	DID USE UNLICENSED MOTOR VEHICLE
L411	USED MOTOR VEHICLE WITH UNAUTHORISED REGISTRATION PLATE
L411	USING MOTOR VEHICLE UNAUTHORISED REGISTRATION PLATE
L412	REGISTRATION PLATE NOT EASILY DISTINGUISHABLE
L413	SELLER FAILED TO NOTIFY CHANGE OF OWNERSHIP
L415	FAILED TO PAY ANNUAL ACCIDENT COMPENSATION LEVY
L416	WRONG CLASS OF LICENCE LABEL
L417	OBSCURED REGISTRATION PLATE
L422	NO DRIVING INSTRUCTORS CERTIFICATE
L423	FALSE INFORMATION IN CHANGE OF OWNERSHIP NOTIFICATION
L425	FAILS DISPLAY REGISTRATION PLATE(S) IN PRESCRIBED MANNER
L425	FAILED TO DISPLAY REGISTRATION PLATE(S) IN PRESCRIBED MANNER
L426	DISPLAYED OTHER THAN APPROPRIATE REGISTRATION PLATE(S)
L426	DISPLAYS OTHER THAN APPROPRIATE REGISTRATION PLATE(S)
L427	DISPLAYED OTHER THAN APPROPRIATE LICENCE LABEL
L427	DISPLAYS OTHER THAN APPROPRIATE LICENCE LABEL
L428	FALSE APPLICATION FOR SUBSTITUTE REGISTRATION PLATE
L429	FALSE DETAILS IN APPLICATION FOR REGISTRATION OF VEHICLE
L430	FALSE DETAILS IN APPLICATION FOR LICENCE FOR VEHICLE
L434	LICENCE LABEL NOT EASILY DISTINGUISHABLE
L435	USES VEHICLE WITH OTHER THAN AUTHORISED LICENCE AFFIXED
L435	USED VEHICLE WITH OTHER THAN AUTHORISED LICENCE AFFIXED
L446	BUYER OF MOTOR VEHICLE FAILED TO PROVIDE INFORMATION
L447	BUYER OF MOTOR VEHICLE FAILED TO NOTIFY REGISTRAR
L451	SUPPLIED FALSE INFORMATION REGARDING MOTOR VEHICLE REGISTER TRANSACTIO
L452	OPERATED AN UNREGISTERED MOTOR VEHICLE
L454	REGISTRATION PLATES NOT AFFIXED IN PRESCRIBED MANNER
L455	CURRENT LICENCE LABEL NOT AFFIXED IN PRESCRIBED MANNER
L456	FAILED TO KEEP MOTOR VEHICLE CONTINUALLY LICENSED
L457	FAILED TO PAY THE PRESCRIBED FEES AND ACC LEVY
L460	OPERATED VEHICLE WHERE INCORRECT LICENCE FEE AND ACC LEVY PAID
L461	SELLER FAILED TO NOTIFY SALE OF MOTOR VEHICLE
L462	PURCHASER FAILED TO NOTIFY SALE OF MOTOR VEHICLE
L463	ACQUIRER FAILED TO NOTIFY ACQUISITION OF MOTOR VEHICLE
L466	USED TRADE PLATE WHEN NOT ELIGIBLE
L467	BREACHED CONDITIONS OF USE OF TRADE PLATE
L468	DISPLAYED OTHER THAN AUTHORISED REGISTRATION PLATE

L469	DISPLAYED OTHER THAN AUTHORISED MOTOR VEHICLE LICENCE
L470	DISPLAYED ITEM LIKELY TO BE MISTAKEN FOR A PLATE OR LICENCE
L471	OBSCURED OR INDISTINGUISHABLE REGISTRATION PLATE
L472	OBSCURED OR INDISTINGUISHABLE LICENCE LABEL
L473	DROVE VEHICLE WITH TEMPORARY EXEMPTION FROM CONTINUOUS LICENSING
L474	INTERFERED WITH A SECTION 248 PROHIBITION NOTICE
L504	LEARNER DRIVER UNACCOMPANIED
L505	LEARNER'S OVERSEER HELD FULL LICENCE LESS THAN 2 YEARS
L505	LEARNER'S OVERSEER NOT SUITABLY QUALIFIED
L507	LEARNER'S OVERSEER NOT SEATED NEAR AS PRACTICABLE TO DRIVER
L508	LEARNER MOTORCYCLIST EXCEEDED 70 KM/H
L509	LEARNER'S MOTORCYCLE GREATER THAN 250 CC DISPLACEMENT
L510	LEARNER RODE MOTORCYCLE OR MOPED BETWEEN 10PM AND 5AM
L511	LEARNER CARRIED PILLION ON A MOTORCYCLE OR MOPED
L514	LEARNER LICENCEE FAILED TO DISPLAY AN 'L' PLATE
L514	LEARNER LICENSEE FAILED TO DISPLAY AN 'L' PLATE
L515	AIDED/ABETTED LEARNER TO DRIVE UNACCOMPANIED
L516	AIDED/ABETTED LEARNER TO RIDE MOTORCYCLE BETWEEN 10PM & 5AM
L516	AIDED/ABETTED LEARNER TO RIDE A MOTORCYCLE BETWEEN 10PM & 5AM
L517	LEARNER RIDER USED MOTORCYCLE TO TOW ANOTHER VEHICLE
L519	AIDED OR ABETTED LEARNER TO USE NOT SUITABLY QUALIFIED OVERSEER
L523	RESTRICTED DRIVER UNACCOMPANIED BETWEEN 10PM AND 5AM
L524	RESTRICTED DRIVER'S OVERSEER HELD FULL LICENCE UNDER 2YRS
L524	RESTRICTED DRIVER'S OVERSEER NOT SUITABLY QUALIFIED
L526	RESTRICTED DRIVER'S OVERSEER NOT SEATED NEXT TO DRIVER
L527	RESTRICTED DRIVER RIDES MOTORCYCLE GREATER THAN 250CC
L528	RESTRICTED DRIVER RODE MOTORCYCLE OR MOPED BETWEEN 10PM AND 5AM
L528	RESTRICTED DRIVER RIDES MOTORCYCLE BETWEEN 10PM AND 5AM
L529	RESTRICTED DRIVER CARRIED PILLION PASSENGER ON MOTORCYCLE OR MOPED
L531	RESTRICTED DRIVER CARRIES UNAUTHORISED PASSENGER
L533	AIDED/ABETTED RESTRICTED DRIVER UNACCOMPANIED BETWEEN 10PM & 5AM
L534	AIDED/ABETTED RESTRICTED DRIVER TO RIDE MOTORCYCLE BETWEEN 10PM & 5AM
L534	AIDED/ABETTED RESTRICTED DRIVER RIDE MOTORCYCLE BETWEEN 10PM & 5AM
L535	AIDED/ABETTED RESTRICTED DRIVER TO DRIVE WITH UNQUALIFIED OVERSEER
L536	DROVE IN BREACH OF AUTO TRANSMISSION COND ON RESTRICTED LICENCE
L537	RESTRICTED RIDER USED MOTORCYCLE TO TOW ANOTHER VEHICLE
L538	DRIVER FAILED TO CARRY APPROVAL NOTICE - STAGE 2 ACCELERATED LIC
L540	DRIVER NOT WORKING FOR APPROVED EMPLOYER - STAGE 2 ACCELERATED LIC
L541	DRIVER FAILED TO MAINTAIN LOGBOOK - STAGE 2 ACCELERATED LICENCE
L542	DRIVER FAILED TO HAVE REQUIRED REST BREAK - STAGE 2 ACCELERATED LIC
L543	DRIVER DROVE MORE THAN 8 HOURS IN A DAY - STAGE 2 ACCELERATED LIC
L544	DRIVER UNDERTOOK NON-SPECIFIED DUTIES - STAGE 2 ACCELERATED LICENCE
L546	DROVE WITHOUT A SUPERVISOR - STAGE 2 ACCELERATED LICENCE
L548	DRIVER FAILED TO PRODUCE APPROVAL NOTICE - STAGE 3 ACCELERATED LIC

L550	DRIVER FAILED TO MAINTAIN LOGBOOK - STAGE 3 ACCELERATED LICENCE
L551	DRIVER FAILED TO HAVE REQUIRED REST BREAK - STAGE 3 ACCELERATED LIC
L553	DRIVER UNDERTOOK NON-SPECIFIED DUTIES - STAGE 3 ACCELERATED LICENCE
L555	RESTRICTED RIDER RODE OTHER THAN APPROVED MOTORCYCLE
L556	AIDED OR ABETTED LEARNER'S OVERSEER NOT TO BE SEATED NEAR DRIVER
L557	AIDED OR ABETTED LEARNER TO CARRY PILLION ON A MOTORCYCLE OR MOPED
L558	AIDED OR ABETTED LEARNER LICENSEE TO FAIL TO DISPLAY AN 'L' PLATE
L561	AIDED OR ABETTED RSTRCTD DRIVERS OVERSEER NOT SEATED NEXT TO DRIVER
L562	AIDED OR ABETTED RSTRCTD RIDER TO CARRY PILLION ON MTRCYCLE
L563	AIDED OR ABETTED RESTRICTED DRIVER TO CARRY UNAUTHORISED PASSENGER
L564	AIDED OR ABETTED BREACH OF AUTO TRANSMISSION CONDITION ON LICENCE
L566	AIDED OR ABETTED RSTRCTD RIDER TO RIDE OTHER THAN APPROVED MTRCYCLE

D4 Mobile-phone use

N411	DRIVER USED A MOBILE PHONE WHILE DRIVING

D5 Reckless and careless driving

D101	OPERATED A MOTOR VEHICLE RECKLESSLY
D102	RECKLESSLY CAUSED DEATH OR INJURY
D104	RECKLESSLY CAUSED INJURY
D105	RECKLESSLY CAUSED DEATH
D201	DROVE A MOTOR VEHICLE IN A DANGEROUS MANNER
D202	DROVE DANGEROUSLY CAUSING DEATH OR INJURY
D203	DRIVING IN A DANGEROUS MANNER CAUSING DEATH
D204	AIDING DRIVING IN A DANGEROUS MANNER
D204	AIDED DRIVING IN A DANGEROUS MANNER
D205	PARTY TO DRIVING IN DANGEROUS MANNER CAUSING INJURY
D206	DROVE DANGEROUSLY CAUSING INJURY
D207	DROVE DANGEROUSLY CAUSING DEATH
D301	DROVE A MOTOR VEHICLE AT A DANGEROUS SPEED
D303	DRIVING AT A DANGEROUS SPEED CAUSING DEATH
D350	OPERATED MOTOR VEHICLE IN UNAUTHORISED STREET OR DRAG RACE
D350	OPERATED VEH IN RACE OR UNNECESSARY EXHIBTION OF SPEED OR ACCELERATION
D351	OPERATED A MOTOR VEHICLE CAUSING SUSTAINED LOSS OF TRACTION
D352	POURED PLACED OR ALLOWED SLIPPERY SUBSTANCE TO SPILL ON ROAD
D353	UNAUTHORISED STREET OR DRAG RACING CAUSING DEATH OR INJURY
D354	SUSTAINED LOSS OF TRACTION CAUSING DEATH OR INJURY
D356	PARTY TO OPERATION OF VEHICLE CAUSING SUSTAINED LOSS OF TRACTION
D357	PARTY TO EXHIBITION OF SPEED OR ACCELERATION CAUSING DEATH OR INJURY
D361	UNNECESSARY EXHIBITION OF SPEED OR ACCELERATION CAUSING INJURY
D362	UNNECESSARY EXHIBITION OF SPEED OR ACCELERATION CAUSING DEATH
D363	SUSTAINED LOSS OF TRACTION CAUSING INJURY
D366	PARTY TO EXHIBITION OF SPEED OR ACCELERATION CAUSING DEATH
D369	USED VEHICLE IN RACE/EXHIBIT OF SPEED OR ACCELERATION - 3RD OR SUB IN
D370	OPERATED VEHICLE CAUSING SUSTAINED LOSS OF TRACTION - 3RD OR SUB IN 4

D401	OPERATED A VEHICLE INCONSIDERATELY
D402	(SLOW VEHICLE) (INCONSIDERATE DRIVING) IMPEDING TRAFFIC
D402	SLOW VEHICLE OR INCONSIDERATE DRIVING IMPEDED TRAFFIC
D405	PASSED STATIONARY SCHOOL BUS WITHOUT DUE CARE
D501	CARELESSLY OPENING OR CLOSING DOOR
D501	CARELESSLY OPENED OR CLOSED DOOR
D502	OPERATED A VEHICLE CARELESSLY
D503	CARELESS OR INCONSIDERATE DRIVING CAUSING DEATH OR INJURY (ON A ROAD)
D504	CARELESS DRIVING CAUSING DEATH
D505	AGGRAVATED CARELESS DRIVING CAUSING DEATH OR INJURY
D506	CARELESS DRIVING AND EXCESS SPEED CAUSING DEATH
D507	CARELESS DRIVING ALCOHOL INVOLVED CAUSING INJURY
D512	AID AND ABET CARELESS USE
D520	AID/ABET CARELESS DRIVING CAUSING INJURY
D521	CARELESS OPERATION CAUSING DEATH (NOT ON A ROAD)
D522	CARELESS OPERATION CAUSING INJURY (NOT ON A ROAD)
D523	CARELESS OR INCONSIDERATE VEH OPERATION CAUSING INJURY (ON A ROAD)
D524	CARELESS OR INCONSIDERATE VEH OPERATION CAUSING DEATH (ON A ROAD)
D525	AGGRAVATED CARELESS DRIVING CAUSING DEATH
D526	AGGRAVATED CARELESS DRIVING CAUSING INJURY
D601	CUTTING IN WHEN OVERTAKING
D602	OVERTAKING ON LEFT WITH NO CONSIDERATION
D603	PASSING AT RAILWAY LEVEL CROSSING
D604	PASSING WITH LESS THAN 100 METRES OF VISIBILITY
D604	PASSED WITH LESS THAN 100 METRES OF VISIBILITY
D605	ATTEMPTING TO PASS WITH LESS THAN 100 METRES VISIBILITY
D609	OVERTAKE ON RIGHT AT INTERSECTION UNSAFE MANOEUVRE
D610	OVERTAKING ANOTHER VEHICLE - INSUFFICIENT CLEAR ROAD
D611	OVERTOOK ANOTHER VEHICLE ACROSS A FLUSH MEDIAN
D701	FAILING TO KEEP TO THE LEFT
D702	FAILING TO DRIVE ENTIRELY WITHIN LANES
D702	FAILED TO DRIVE WITHIN A LANE
D703	FAILING TO KEEP LEFT OF NO PASSING LINE
D703	FAILED TO KEEP LEFT OF NO PASS LINE WHEN PASSING OR ATTEMPTING TO PASS
D703	FAIL TO KEEP LEFT OF NO PASSING LINE WHEN PASSING OR ATTEMPT TO PASS
D703	FAILED TO KEEP LEFT OF NO PASSING LINE WHEN PASSING OR ATTEMPTING TO P
D704	UNSAFE CHANGING OF LANES
D705	FAILING TO KEEP LEFT THROUGHOUT LEFT HAND TURN
D706	FAILING TO MOVE TO THE LEFT WHEN TURNING LEFT
D707	FAILING TO MOVE TO THE RIGHT WHEN TURNING RIGHT
D708	FAILURE TO TURN INTO CORRECT POSITION AFTER TURNING RIGHT
D709	DRIVING IN UNAVAILABLE LANE-OVERHEAD TRAFFIC SIGNAL
D710	DRIVE IN LANE OVER CENTRE LINE (2 WAY 2 LANE)
D711	DRIVE IN A LANE RIGHT SIDE OF CENTRE LINE (2 WAY-3 LANES)

D712	DRIVE IN UNAVAILABLE LANE-CENTRE LANE (2WAY 3LANE)
D713	DROVE IN UNAVAIL LANE - WRONG SIDE OF NO PASS LINE (NOT OVERTAKING)
D713	DRIVE IN UNAVAILABLE LANE - WRONG SIDE NO PASS LINE
D714	DRIVING IN LANE ON WRONG SIDE OF TRAFFIC CONES
D715	CUT CORNER TURNING RIGHT
D716	DROVE IN A LANE NOT AVAILABLE
D717	FAILED TO USE SLOW VEHICLE BAY
D719	UNAUTHORISED USE OF SPECIAL VEHICLE LANE
D721	UNSAFE PASSING MANOEUVRE
D722	INCONSIDERATE PASSING MANOEUVRE
D723	UNLAWFULLY PASSED ON LEFT
D724	PASSED VEHICLE AT SCHOOL CROSSING POINT
D726	DROVE IN AN EMERGENCY STOPPING LANE
D801	FAILED TO GIVE WAY TO A VEHICLE ON THE RIGHT
D802	FAILED TO GIVE WAY WHEN TURNING-OTHER VEHICLE NOT TURNING
D803	FAILED TO GIVE WAY TURNING LEFT-OTHER VEHICLE TURNING RIGHT
D804	TURN AT LIGHTS-FAIL TO GIVE WAY TO STRAIGHT THROUGH TRAFFIC
D804	TURNED AT LIGHTS-FAILED TO GIVE WAY TO STRAIGHT THROUGH TRAFFIC
D805	TURN LEFT AT LIGHTS-FAIL GIVE WAY TO RIGHT TURNING RIGHT
D806	FAILED TO GIVE WAY WHEN TURNING - OTHER VEHICLE NOT TURNING
D807	LEFT TURNING DRIVER FAILED TO GIVE WAY TO VEHICLE TURNING RIGHT
D808	FAILED TO GIVE WAY WHEN CHANGING LANES - OTHER VEHICLE NOT CHANGING
D810	FAILED TO GIVE WAY TO ROAD USER ON FOOTPATH
D811	RIGHT TURNING DRIVER FAILED TO GIVE WAY TO VEHICLE TURNING LEFT
D813	DRIVER EXITING DRIVEWAY FAILED TO GIVE WAY TO VEHICLE ON ROADWAY
D901	SPEED TOO GREAT TO STOP IN HALF VISIBLE ROAD-NOT LANED
D902	SPEED TOO GREAT TO STOP IN LENGTH OF LANE VISIBLE
D903	SPEED TOO GREAT TO STOP SHORT-SUDDEN STOP BY OTHER VEHICLE
D904	FOLLOWING TOO CLOSE - 40 TO 50 KILOMETRES AN HOUR
D905	FOLLOWING TOO CLOSE - 50 TO 60 KILOMETRES AN HOUR
D906	FOLLOWING TOO CLOSE - 60 TO 70 KILOMETRES AN HOUR
D907	FOLLOWING TOO CLOSE - OVER 70 KILOMETRES AN HOUR
D910	FOLLOWED TOO CLOSE - 80 KILOMETERS AN HOUR OR MORE
D910	FOLLOWED TOO CLOSE - 80 TO 90 KILOMETERS AN HOUR
D911	FOLLOWED TOO CLOSE - 90 KILOMETERS AN HOUR OR MORE

D6 Speed related

E101	EXCEEDED 50 KM/H IN A RESTRICTED AREA
E102	EXCEEDED 50 KM/H IN A GAZETTED AREA
E103	EXCEEDED 50 KM/H IN A DISTRICT AREA
E201	EXCEEDING 70 KM/H IN A GAZETTED AREA
E601	EXCEEDING TEMPORARY SPEED LIMIT - RISK OF DANGER OR DAMAGE
E604	EXCEEDED 20KMH TEMP SPEED LIMIT PAST ACCIDENT SIGN
E605	EXCEEDING 70KMH TEMPORARY SPEED LIMIT - ROAD WORKS

E606	EXCEEDING 50KMH TEMPORARY SPEED LIMIT - ROAD WORKS
E607	EXCEEDED TEMPORARY SPEED LIMIT
E608	EXCEEDED 80 KM/H ON SPACE SAVER TYRE
E707	EXCEEDING 25 KM/H ON BACK BEACH NELSON
E806	EXCEEDING 20 KM/H PASSING SCHOOL BUS
E808	TOWED DISABLED MOTORCYCLE IN EXCESS OF 30KM/H
E877	EXCEEDED 60KM/H ON A DESIGNATED SECTION OF SH 1 HAMILTON CITY
E936	EXCEEDED SPEED LIMIT ON STATE HIGHWAY 1 - NGAURANGA GORGE
E970	EXCEEDED 90 KMH POSTED SPEED LIMIT
E971	EXCEEDED 10 KMH POSTED SPEED LIMIT
E972	EXCEEDED 20 KM/H POSTED SPEED LIMIT
E973	EXCEEDED 30 KM/H POSTED SPEED LIMIT
E974	EXCEEDED 40 KM/H POSTED SPEED LIMIT
E974	EXCEEDED 40 KM/H ON POSTED SPEED LIMIT
E975	EXCEEDED 50 KM/H POSTED SPEED LIMIT
E975	EXCEEDE
E976	EXCEEDED 60 KM/H POSTED SPEED LIMIT
E977	EXCEEDED 70 KM/H POSTED SPEED LIMIT
E978	EXCEEDED 80 KM/H ON POSTED SPEED LIMIT
E978	EXCEEDED 80 KM/H POSTED SPEED LIMIT
E979	EXCEEDED 100 KM/H POSTED SPEED LIMIT
E979	100 KM/H POSTED SPEED LIMIT
E980	EXCEEDED 30KM/H TEMPORARY SPEED LIMIT
E981	EXCEEDED 40KM/H TEMPORARY SPEED LIMIT
E982	EXCEEDED 50KM/H TEMPORARY SPEED LIMIT
E983	EXCEEDED 60KM/H TEMPORARY SPEED LIMIT
E984	EXCEEDED 70KM/H TEMPORARY SPEED LIMIT
E985	EXCEEDED 80KM/H TEMPORARY SPEED LIMIT
E986	EXCEEDED 90KM/H TEMPORARY SPEED LIMIT
G101	EXCEEDED 100 KM/H
G201	EXCEEDING 80 KM/H WHILE TOWING
G202	EXCEEDED 90 KM/H WHILE TOWING - LIGHT VEHICLE
G202	EXCEEDED 90KM/H WHILE TOWING - TRAILER
G401	HEAVY MOTOR VEHICLE EXCEEDING 90 KM/H TOWING SEMI-TRAILER(S)
G501	EXCEEDING 90 KM/H WITH HEAVY MOTOR VEHICLE
G601	EXCEEDING 80 KM/H IN SCHOOL BUS
G702	EXCEEDED 90 KM/H TOWING DISABLED VEHICLE-RIGID TOWING CONNECTION
G703	EXCEEDED 50 KM/H TOWING DISABLED VEHICLE-NON-RIGID TOWING CONNECTION
G802	EXCEEDED 20 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL
G803	EXCEEDED 30 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL
G804	EXCEEDED 40 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL
G805	EXCEEDED 50 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL
G806	EXCEEDED 60 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL
G807	EXCEEDED 70 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL
G808	EXCEEDED 80 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL
G809	EXCEEDED 100 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL
G810	EXCEEDED 90 KM/H POSTED SPEED LIMIT IN THE VICINITY OF A SCHOOL

J101	EXCEEDED 50 KM/H - SPEED CAMERA
J101	EXCEEDED 50 KM/H RESTRICTED AREA - SPEED CAMERA
J102	EXCEEDED 50 KM/H GAZETTED AREA - SPEED CAMERA
J201	EXCEEDED 70 KM/H - SPEED CAMERA
J201	EXCEEDED 70 KM/H GAZETTED AREA - SPEED CAMERA
J301	EXCEEDED 100 KM/H - SPEED CAMERA
J405	EXCEEDED 90 KM/H HEAVY MOTOR VEHICLE - SPEED CAMERA
J408	EXCEEDED 90 KM/H LIGHT VEHICLE TOWING - SPEED CAMERA
J502	EXCEEDED 80 KM/H ON HARBOUR BRIDGE - SPEED CAMERA
J513	EXCEEDED 80 KM/H SH1 AT SILVERDALE - SPEED CAMERA
J516	EXCEEDED 60 KM/H ON PAKURANGA ROAD - SPEED CAMERA
J528	EXCEEDED 80KM/H ON STATE HIGHWAY 1 AT NGAURANGA GORGE - SPEED CAMERA
J535	EXCEEDED 60KM/H - SPEED CAMERA
J535	EXCEEDED 60KM/H IN A GAZETTED AREA - SPEED CAMERA
J536	EXCEEDED 80KM/H - SPEED CAMERA
J536	EXCEEDED 80KM/H IN A GAZETTED AREA - SPEED CAMERA
J540	EXCEEDED 40 KM/H - SPEED CAMERA
J541	EXCEEDED 90 KM/H - SPEED CAMERA
J605	EXCEEDED 70 KM/H IN A TEMPORARY SPEED LIMIT AREA-SPEED CAMERA
J606	EXCEEDED 80 KM/H IN A TEMPORARY SPEED LIMIT AREA-SPEED CAMERA
J606	EXCEEDED 80 KM/H AREA OF TEMPORARY DANGER-SPEED CAMERA
J702	FAILED TO COMPLY WITH RED TRAFFIC SIGNAL - CAMERA OFFENCE
J703	TURNED AT TRAFFIC LIGHTS AGAINST A RED ARROW - CAMERA OFFENCE
J803	INTERFERED WITH OPERATION OF VEHICLE SURVEILLANCE EQUIPMENT
J901	MADE A FALSE OR MISLEADING STATUTORY DECLARATION
J910	REFUSED OR FAILED TO PAY A TOLL

D7 Unlicensed vehicle

L453	OPERATED AN UNLICENSED MOTOR VEHICLE

D8 Other offences

B106	GAVE FALSE DETAILS AS TO OWN IDENTITY
B107	GAVE FALSE DETAILS AS TO DRIVER IDENTITY
B108	FAILED TO STOP WHEN REQUIRED
B109	FAILED TO GIVE NAME AND ADDRESS ON DEMAND
B110	FAILED TO STOP WHEN FOLLOWED BY RED/BLUE FLASHING LIGHTS
B111	FAILED TO REMAIN STOPPED FOR AN ENFORCEMENT OFFICER
B112	OBSTRUCTED AN ENFORCEMENT OFFICER
B113	INTERFERED WITH NON-OPERATION ORDER AFFIXED TO VEHICLE
B114	FAILED TO REMOVE A VEHICLE FROM A ROAD
B116	FAILED TO ATTEND OR PAY FOR COURT ORDERED COURSE
B118	DROVE VEHICLE ISSUED WITH NON-OPERATION ORDER
B120	FAILING TO PROVIDE ALTERNATIVE IDENTIFICATION
B124	REFUSED TO BE WEIGHED
B126	FAILED TO COMPLY WITH PROHIBITION BY ENFORCEMENT OFFICER
B127	FAILED TO SURRENDER KEYS OF MOTOR VEHICLE
B130	FAILED TO ASSIST OFFICER TO INSPECT VEHICLE

B132	FAILING TO COMPLY WITH DIRECTIONS OF AN OFFICER
B134	FAILED TO OFF-LOAD WHEN DIRECTED
B146	CAUSE INJURY-RECKLESS DISREGARD - C/ACT
B147	FAILED TO DRIVE TO A SPECIFIED PLACE FOR REST
B148	DRIVER OF COMMERCIAL VEHICLE FAILED TO STOP WHEN DIRECTED
B153	RESIST/OBSTRUCT CONST IN EXECUTN OF DUTY
B155	ASSAULT A CONSTABLE IN EXECUTION OF DUTY
B156	POSSESSION OF AN OFFENSIVE WEAPON
B161	INTENTIONAL DAMAGE
B163	ATTEMPT TO PERVERT THE COURSE OF JUSTICE
B165	COMMON ASSAULT
B166	ATTEMPT TO PERVERT THE COURSE OF JUSTICE
B169	ASSAULT WITH A WEAPON
B174	BEHAVE IN A DISORDERLY MANNER
B177	ASSAULT WITH INTENT TO INJURE
B178	ATTEMPTED TO ESCAPING FROM CUSTODY
B182	FAILING TO COMPLY WITH DIRECTIONS OF A PARKING WARDEN
B184	UNLICENSED DRIVER FAILED TO COMPLY WITH PROHIBITION
B185	INCAPABLE DRIVER FAILED TO COMPLY WITH PROHIBITION
B186	AIDED OR ABETTED PERSON TO DRIVE WHEN FORBIDDEN
B188	FAILED TO COMPLY WITH A CONDITION OF A NON-OPERATION ORDER
B189	AIDED OR ABETTED PERSON TO DRIVE WHEN PROHIBITED
B190	FAILED TO COMPLY WITH DIRECTIONS OF OFFICER ON POINT DUTY
B192	AIDED/ABETTED PERSON TO DRIVE VEHICLE ISSUED WITH NON-OPERATION ORDER
B193	FAILED TO STOP WHEN REQUIRED - 3RD OR SUBSEQUENT OFFENCE
B194	FAILED TO GIVE NAME AND ADDRESS ON DEMAND - 3RD OR SUBSEQUENT OFFENCE
B195	FAILED TO STOP WHEN FOLLOWED BY RED/BLUE FLASHING LIGHTS - 3RD OR SUB
B196	FAILED TO REMAIN STOPPED FOR AN ENFORCEMENT OFFICER - 3RD OR SUB
B198	FAILED COMPLY WITH COMMISSIONER'S PROHIBITION ON SALE/DISPOSAL OF VEH
B199	LEARNER OR RESTRICTED DRIVER FAILED TO COMPLY WITH DIRECTION
B201	GAVE FALSE DETAILS AFTER AN ACCIDENT
B203	FAILED TO STOP OR ASCERTAIN INJURY -NON INJURY CRASH
B204	FAILED TO STOP OR ASCERTAIN INJURY AFTER INJURY CRASH
B208	FAILED TO REPORT DAMAGE TO VEHICLE OR PROPERTY
B210	FAILING TO REPORT INJURY OR FATAL ACCIDENT
B214	UNLAWFULLY REMOVED OR RELEASED IMPOUNDED VEHICLE
B216	FAILED OR REFUSED TO FACILITATE AN AUDIT OR INSPECTION
B217	FAILED TO PROVIDE PARTICULARS AFTER AN ACCIDENT
B221	FAILED TO STOP WHEN REQUIRED - AGGRAVATED
B222	FAILED TO GIVE NAME AND ADDRESS ON DEMAND - AGGRAVATED
B223	FAILED TO STOP WHEN FOLLOWED BY RED/BLUE FLASHING LIGHTS - AGGRAVATED
B224	FAILED TO REMAIN STOPPED FOR AN ENFORCEMENT OFFICER - AGGRAVATED
B301	OWNER OR HIRER GAVE FALSE DETAILS
B305	OWNER OR HIRER FAILED TO GIVE INFORMATION
B404	USED EQUIPMENT IN A VEHICLE THAT INTERFERED WITH A SPEED MEASURING DEV
B405	EQUIPMENT IN VEHICLE DESIGNED TO INTERFERE WITH SPEED MEASURING DEVICE
C101	NO EVIDENCE OF INSPECTION - PRIVATE VEHICLE

C108	OPERATE VEHICLE NOT UP TO WOF STANDARD
C111	ISSUED EVIDENCE OF INSPECTION TO DEFECTIVE VEHICLE
C116	OPERATED A VEHICLE NOT UP TO WARRANT OF FITNESS STANDARD
C201	NO EVIDENCE OF INSPECTION - COMMERCIAL VEHICLE
C208	NOT UP TO CERTIFICATE OF FITNESS STANDARD
C301	OPERATED VEHICLE WITHOUT CERTIFICATE OF LOADING
C305	FAILED TO DISPLAY CERTIFICATE OF LOADING
C401	EXCEEDED CERTIFICATE OF LOADING (WEIGHT)
C404	EXCEEDING CERTIFICATE OF LOADING (PASSENGERS)
H101	NO DISTANCE LICENCE CARRIED
H102	FAILED TO DISPLAY ROAD USER LICENCE
H103	FAILED TO PRODUCE ROAD USER LICENCE ON DEMAND
H120	RUC VEHICLE IS NOT FITTED WITH A PROPERLY WORKING DISTANCE RECORDER
H124	INACCURATE DISTANCE RECORDER FITTED TO THE RUC VEHICLE
H125	RUC VEHICLE DID NOT HAVE VALID DISTANCE LICENCE
H127	RUC VEHICLE HAD EXPIRED DISTANCE LICENCE
H128	EXCEEDED MAXIMUM READING ON DISTANCE LICENCE - LIGHT RUC VEHICLE
H129	EXCEEDED MAXIMUM READING ON DISTANCE LICENCE - HEAVY RUC VEHICLE
H130	OPERATED RUC VEHICLE ON OVERWEIGHT PERMIT WITHOUT APPROPRIATE RUC LICE
H131	RUC VEHICLE FITTED WITH DAMAGED OR ALTERED DISTANCE RECORDER
H132	RUC VEHICLE FITTED WITH TAMPERED DISTANCE RECORDER
H133	ALTERED
H134	RUC VEH FITTED WITH UNLAWFULLY REPAIRED OR MODIFIED DIST RECORDER
H136	RUC VEH FITTED WITH EQUIPMENT THAT INTERFERED WITH DIST RECORDER
H140	OPERATED A RUC VEHICLE WITH INCORRECTLY DISPLAYED RUC LICENCE
H141	FAILED TO PRODUCE RUC LICENCE ON DEMAND
H142	SELLER FAILED TO PROVIDE ACQUIRER WITH CURRENT RUC LICENCE
H145	ITEM LIKELY TO BE MISTAKEN FOR RUC LICENCE DISPLAYED ON RUC VEHICLE
H201	DRIVING WITH INCOMPLETE DISTANCE LICENCE
H202	DRIVING WITH NO DISTANCE RECORDER
H203	DRIVING OUTSIDE MILEAGE STATED ON LICENCE
H206	INACCURATE RECORDING HUBODOMETER (OWNER)
H210	DRIVING OUTSIDE MILEAGE STATED ON LICENCE (OPERATOR)
H211	OPERATOR EXCEEDING GROSS WEIGHT ON DISTANCE LICENCE
H212	HUBODOMETER NOT IN GOOD WORKING CONDITION
H214	HUBODOMETER ON WRONG SIDE
H215	HUBODOMETER FOR WRONG TYRE SIZE FITTED
H216	HUBODOMETER FACE/NUMBER/READING NOT VISIBLE
H301	TIME LICENCE NOT CARRIED
H501	EXCEEDS GROSS WEIGHT DISTANCE LICENCE
H601	EXCEEDED AXLE MASS LIMIT
H601	EXCEEDED AXLE WEIGHT
H602	EXCEEDED MASS LIMIT ON 2 AXLES IN TANDEM AXLE SET
H602	EXCEEDED WEIGHT ON 2 AXLES IN TANDEM AXLE SET
H603	EXCEEDED MAXIMUM GROSS WEIGHT
H603	EXCEEDED MAXIMUM GROSS MASS LIMIT
H610	EXCEEDED GROSS WEIGHT LIMIT - BRIDGE (30% TO 70% OF CLASS 1)

H614	EXCEEDED LIMIT 2 OR MORE AXLES (NOT TANDEM OR TRIAXLE)
H620	EXCEEDED AXLE MASS LIMIT ON A TRAILER
H624	EXCEEDED MAXIMUM WEIGHT IN A TRI-AXLE SET - TRAILER
H624	EXCEEDED MAXIMUM MASS LIMIT IN A TRI-AXLE SET - TRAILER
H630	EXCEEDED 39 TONNE - UNFIT VEHICLE
H640	HEAVY TRAILER MASS EXCEEDED 1.5 TIMES LIGHT TOWING VEHILE
H642	EXCEEDED STATIC ROLL THRESHOLD (WEIGHT)
H701	ALTERED OR DEFACED A ROAD USER LICENCE
H707	MAKING A FALSE APPLICATION FOR A ROAD USER LICENCE
H708	HUBODOMETER MOUNTED OFF CENTRE
H711	FALSE APPLICATION FOR RUC LICENCE
H712	DEFACED ROAD USER CHARGES LICENCE
H714	ROAD USER LICENCE INVALID OR NOT CURRENT
H715	ROAD USER LICENCE UNRELATED TO VEHICLE
H716	FITS HUBODOMETER PREVIOUSLY FITTED TO SAME VEHICLE
H717	FITS HUBODOMETER TO ANOTHER VEHICLE
H718	INACCURATE DISTANCE RECORDER (OWNER)
H719	INACCURATE DISTANCE RECORDER (OPERATOR)
H720	ALTERS/WILFULLY DAMAGES DISTANCE RECORDER
H721	INACCURATE HUBODOMETER (OPERATOR)
H722	DISPLAYING A FALSE ROAD USER LICENCE
H723	DISPLAYING ROAD USER LICENCE THAT WAS INVALID OR NOT CURRENT
H724	DISPLAYING ROAD USER LICENCE UNRELATED TO THE VEHICLE
H725	OPERATES VEHICLE WITH A FALSE ROAD USER LICENCE
H727	OPERATED VEHICLE WITH A TAMPERED HUBODOMETER
H731	HUBODOMETER READILY DETACHABLE
H732	FAILED TO DELIVER CURRENT ROAD USER LICENCE TO PURCHASER
K101	CARRIED ON AN UNLICENSED SERVICE
K102	CARRIED ON UNLICENSED SERVICE - 2ND OR SUBSEQUENT OFFENCE
K103	ACTING AS AN AGENT FOR UNLICENSED TRANSPORT SERVICE
K107	DRIVING IN A TRANSPORT SERVICE WHILE DISQUALIFIED
K110	DROVE SMALL PASSENGER SERVICE VEHICLE WITH NO IDENTIFICATION
K111	FAILED TO PRODUCE DRIVER IDENTIFICATION CARD ON DEMAND
K112	FAILED TO BELONG TO APPROVED TAXI ORGANISATION
K118	TRANSPORT SERVICE LICENSEE FAILS TO NOTIFY CHANGE OF ADDRESS
K125	FAILED TO DISPLAY IDENTIFICATION ON GOODS SERVICE VEHICLE
K126	FAILS TO DISPLAY IDENTITY ON LARGE PASSENGER SERVICE VEHICLE
K138	MANAGER ALLOWED AN UNLICENSED SERVICE
K139	MANAGER ALLOWED UNLICENSED SERVICE - 2ND OR SUBSEQUENT
K140	PARTY TO OFFENCE OF UNLICENSED TRANSPORT SERVICE
K173	FAILED TO ENSURE APPROPRIATE AREA KNOWLEDGE CERTIFICATE HELD
K183	USED AN UNLICENCED TRANSPORT SERVICE
K184	DROVE A TRANSPORT SERVICE VEHICLE WHEN PROHIBITED
K187	PERSON FAILED TO COMPLY WITH PROHIBTN RELATING TO UNLIC TRANSPORT SERV
K189	FAILED TO PAY PASSENGER SERVICE FARE
K190	ACTED IN CONTRAVENTION OF DIRECTION RELATING TO PASSENGER SERVICE VEH
K201	FAILED TO PRODUCE SMALL PSV EXEMPTION ON DEMAND

K202	SMALL PSV NOT FITTED WITH ROOF SIGN
K203	SMALL PSV NOT FITTED WITH ‘FOR HIRE’ SIGN"
K204	SMALL PSV SIGNS NOT ILLUMINATED AT NIGHT
K207	SMALL PSV FAILED DISPLAY FARES & CHARGES INSIDE VEHICLE
K208	DRIVING SMALL PSV NOT DISPLAYING INFORMATION IN VEHICLE
K209	SMALL PSV NOT DISPLAYING INFORMATION ON OUTSIDE OF VEHICLE
K212	SMALL PSV NOT DISPLAYING OPERATOR INFORMATION
K213	SMALL PSV DRIVER IDENTIFICATION NOT DISPLAYED
K217	SMALL PSV DRIVER'S BEHAVIOUR UNACCEPTABLE
K227	SMALL PSV DRIVER USED A METER TO DECEIVE
K229	SMALL PSV EXCEEDED CERTIFICATE OF LOADING
K233	SMALL PSV DRIVER ACCEPTED HIRE WITHIN 20M OF STAND
K242	SMALL PSV INCONSIDERATELY STOPPED IN ROAD
K243	SMALL PSV NOT FITTED WITH METER IN GOOD ORDER
K246	SMALL PSV METER NOT SEALED
K260	SMALL PSV NOT IN A CLEAN AND TIDY CONDITION
K267	OPERATED A TAXI WITHOUT AREA KNOWLEDGE CERTIFICATE
K271	SMALL PSV DRIVER FAILED TO CEASE PLYING FOR HIRE
K301	OPERATOR INFORMATION NOT IN OR ON VEHICLE RECOVERY VEHICLE
K302	VEHICLE RECOVERY SERVICE VEHICLE DRIVER ID NOT DISPLAYED
K309	VEHICLE RECOVERY VEHICLE USED WITHOUT TOW AUTHORITY
K406	RENTAL SERVICE HIRE AGREEMENT NOT PRODUCED BY DRIVER
K505	DROVE WITHOUT HAZARDOUS SUBSTANCE ENDORSEMENT IN LICENCE
K518	OBSTRUCTED A HAZARDOUS SUBSTANCE ENFORCEMENT OFFICER - ROAD
K530	FAILED TO UNDERTAKE SAFE DANGEROUS GOODS PRACTICES
K536	WRONGLY IDENTIFIED GOODS AS DANGEROUS
K543	CONSIGNOR FAILED TO PROVIDE DANGEROUS GOODS DOCUMENTATION
K553	LOADER FAILED TO ENSURE MIXED LOADS SEGREGATED
K554	LOADER FAILD TO ENSURE VEH OR CONTAINER PLACARDED
K555	LOADER FAILD TO ENSURE DANGEROUS GOODS SECURED
K560	OPERATOR FAILED TO PLACARD DG LOAD
K561	FAILED TO DISPLAY DG PLACARDS IN CORRECT PLACE
K562	OPERATOR FAILED TO CORRECTLY PLACARD DGS
K564	OPERATOR FAILED TO ENSURE DGS SECURED
K565	EMERGENCY RESPONSE INFORMATION NOT CARRIED IN THE VEHICLE
K568	OPERATOR FAILED TO CARRY DG DOCUMENTATION
K569	OPERATOR FAILED TO CARRY DG DOCS IN FOLDER
K608	DROVE SMALL PASSENGER SERVICE VEHICLE WITH NO IDENTIFICATION
K609	DRIVER IDENTIFICATION CARD NOT DISPLAYED IN SMALL PSV
K612	SMALL PSV DRIVER FAILED TO GIVE HIRER INFORMATION
K618	SMALL PSV INCONSIDERATELY STOPPED IN ROAD
K619	SMALL PSV DRIVER'S BEHAVIOUR UNACCEPTABLE
K632	SMALL PSV NOT DISPLAYING OPERATOR INFORMATION
K633	TAXI FAILED TO DISPLAY TRANSPORT SERVICE LICENCE NUMBER
K634	TAXI FAILED TO CORRECTLY DISPLAY ATO NAME OR UNIQUE IDENTIFIER IN VEH
K635	TAXI FAILED TO CORRECTLY DISPLAY INFORMATION ON BOTH FRONT DOORS
K635	TAXI FAILED TO DISPLAY INFORMATION ON BOTH FRONT DOORS

K636	TAXI FAILED TO DISPLAY THE REQUIRED INFORMATION IN BRAILLE
K637	TAXI NOT FITTED WITH A ROOF SIGN
K638	TAXI SIGNS NOT ILLUMINATED AT NIGHT
K639	TAXI DRIVER IMPEDED TRAFFIC WHILE CRUISING
K641	TAXI DRIVER FAILED TO ACCEPT HIRER
K643	TAXI DRIVER CREATED TRAFFIC HAZARD
K646	TAXI DRIVER USED STAND WHEN NOT AVAILABLE FOR HIRE
K653	TAXI NOT DISPLAYING INFORMATION ON OUTSIDE OF VEHICLE
K654	TAXI NOT DISPLAYING INFORMATION ON OUTSIDE FRONT PASSENGER DOOR
K656	TAXI FAILED TO DISPLAY FARES AND CHARGES INSIDE VEHICLE
K657	DROVE TAXI NOT DISPLAYING INFORMATION IN VEHICLE
K660	USED TAXI WITH A METER THAT HAD NOT BEEN TESTED
K691	SHUTTLE DRIVER FAILED TO CARRY ACKOWLEDGEMENT OF REGISTRATION
K697	DROVE SHUTTLE WHEN REQD INFO NOT DISPLAYED INSIDE & OUTSIDE VEHICLE
K698	DROVE SHUTTLE WHEN FARE SCHEDULE NOT CARRIED IN THE VEHICLE
K713	PRIVATE HIRE VEHICLE USED TAXI-METER TO DETERMINE FARE
K717	PRIVATE HIRE DRIVER FAILED TO CARRY DIRECTOR'S ACKNOWLEDGEMENT OF REG
K762	FAILED TO CORRECTLY DISPLAY TRANSPORT SERVICE LICENCE ON A TAXI CARD
K765	FAILED TO CORRECTLY DISPLAY TSL CARD ON GOODS SERVICE VEHICLE
K766	FAILED TO CORRECTLY DISPLAY TRANSPORT SERVICE LICENCE CARD ON LARGE PS
K768	SMALL PSV NOT DISPLAYING APPROVED CHILD SAFETY LOCK SIGNS
K772	TAXI DRIVER ACCEPT HIRE WITHOUT CAMERA SYSTEM WORKING AS PRESCRIBED
K779	TAXI DRIVER FAILED TO PRODUCE TAXI METER CERTIFICATE ON DEMAND
K802	CAUSED OR REQUIRED A DRIVER TO EXCEED MAXIMUM WORK TIME
K803	CAUSED OR REQUIRED A DRIVER TO FAIL TO COMPLY WITH REST TIME REQMENTS
K804	CAUSED OR REQUIRED A DRIVER TO FAIL TO MAINTAIN A LOGBOOK
M120	DRIVER EXCEEDS FIVE AND A HALF HOURS CONTINUOUS DRIVING
M121	DRIVER EXCEEDS 11 HOURS DRIVING IN 24 HOURS
M122	DRIVER EXCEEDS 14 HOURS WORK IN 24 HOURS
M126	DRIVER WORKS MORE THAN 70 HOURS WITHOUT 24 HOURS OFF
M127	DRIVER DRIVES MORE THAN 66 HOURS WITHOUT 24 HOURS OFF
M128	DRIVER HAS LESS THAN 9 HOURS OFF DUTY
M131	OPERATOR PERMITS PERSON EXCEED 11 HOURS DRIVING IN 24 HOURS
M143	OPERATOR PERMITS PERSON TO HAVE LESS THAN 9 HOURS OFF DUTY
M201	DRIVER FAILED TO RETAIN LOGBOOKS FOR 12 MONTHS
M202	DRIVER FAILED TO DELIVER COPY OF LOGBOOK TO EMPLOYER
M204	FALSE STATEMENT IN A LOGBOOK
M205	FAILED TO PRODUCE LOGBOOK ON DEMAND
M206	PRODUCED A LOGBOOK CONTAINING FALSE PARTICULARS
M207	PRODUCED A LOGBOOK WITH OMISSIONS
M208	FAILS TO MAINTAIN CLEAR AND LEGIBLE LOGBOOK
M209	ALLOWS A VEHICLE TO BE USED WITHOUT A LOGBOOK
M210	ALLOWS A VEHICLE TO BE USED WITH A LOGBOOK WITH FALSE DETAIL
M211	ALLOWS A VEHICLE TO BE USED WITH A LOGBOOK WITH OMISSIONS
M213	FAILED TO PRODUCE LOGBOOK FOR 10 DAYS PRIOR
M214	MAINTAINED 2 LOGBOOKS
M215	PARTY TO AN OFFENCE OF MAINTAINING TWO LOGBOOKS

M220	DRIVER FAILED TO MAKE WAGE AND OTHER RECORDS AVAILABLE ON DEMAND
M221	EMPLOYER FAILED TO MAKE WAGE AND OTHER RECORDS AVAILABLE ON DEMAND
M226	DRIVER FAILED TO RETAIN LOGBOOK FOR 12 MONTHS
M226	DRIVER FAILED TO RETAIN LOGBOOK FOR THE REQUIRED PERIOD
M227	DRIVER FAILED TO DELIVER COPY OF LOGBOOK RECORD TO EMPLOYER
M228	DRIVER FAILED TO CARRY LOGBOOK WHEN DRIVING
M229	DRIVER FAILED TO PRODUCE CURRENT LOGBOOK ON DEMAND
M232	DRIVER MAINTAINED 2 LOGBOOKS
M233	PARTY TO AN OFFENCE OF MAINTAINING TWO LOGBOOKS
M234	MADE A FALSE STATEMENT IN A LOGBOOK
M235	CAUSED A FALSE STATEMENT TO BE MADE IN A LOGBOOK
M236	ALLOWED AN OMISSION TO OCCUR IN A LOGBOOK
M237	PRODUCED A LOGBOOK CONTAINING A FALSE PARTICULAR
M238	PRODUCED A LOGBOOK CONTAINING BETWEEN 1 AND 5 OMISSIONS
M239	PRODUCED A LOGBOOK CONTAINING BETWEEN 6 AND 10 OMISSIONS
M240	PRODUCED A LOGBOOK CONTAINING 11 OR MORE OMISSIONS
M241	PRODUCED A LOGBOOK THAT WAS NOT CLEAR AND LEGIBLE
M242	ALLOWED VEHICLE TO BE USED WHEN LOGBOOK WAS NOT MAINTAINED
M243	ALLOWED VEHICLE TO BE USED WHEN LOGBOOK HAD FALSE PARTICULAR
M245	DRIVER EXCEEDED 5 AND 1/2 HRS CONTINUOUS WORK TIME (LESS THAN 60 MINS)
M246	DRIVER EXCEEDED 5 AND 1/2 HRS CONTINUOUS WORK TIME (60 MINS OR MORE)
M247	DRIVER EXCEEDED 7 HRS CONTINUOUS WORK TIME (LESS THAN 60 MINS)
M248	DRIVER EXCEEDED 7 HRS CONTINUOUS WORK TIME (60 MINS OR MORE)
M249	DRIVER EXCEEDED 13 HRS WORK TIME IN A WORK DAY (LESS THAN 60 MINS)
M250	DRIVER EXCEEDED 13 HRS WORK TIME IN A WORK DAY (60 MINS OR MORE)
M251	DRIVER FAILED TO HAVE 10 HRS CONT REST IN WORK DAY (LESS THAN 60 MINS)
M252	DRIVER FAILED TO HAVE 10 HRS CONT REST IN WORK DAY (60 MINS OR MORE)
M253	DRIVER EXCEEDED 70HRS WORK TIME IN CUMULATIVE WORK PERIOD (< 120 MINS)
M254	DRIVER EXCEEDED 70HRS WORK TIME IN CUMULATIVE WORK PERIOD (120 MINS+)
M257	TAXI DRIVER DROVE A TAXI DURING A REST BREAK
M265	DRIVER FAILED TO OFFER PROOF THAT COMPLYING WITH LOGBOOK EXEMPTION
M278	DRIVER FAILED TO MAKE WAGE AND OTHER RECORDS AVAILABLE ON DEMAND
M279	DRIVER FAILED TO MAKE ALL LOGBOOKS AVAILABLE ON DEMAND
M301	DRIVER FAILING TO REMOVE SUBSTANCE FROM ROAD
M304	OPERATING VEHICLE EQUIPPED WITH BELL SIREN OR WHISTLE
M308	CARRIED LOADED FIREARM ON A VEHICLE
M311	FAILS TO SIGNAL TURN OR MOVE TO RIGHT OR MOVE FROM LEFT KERB
M312	FAILS TO SIGNAL TURN OR MOVE TO LEFT OR MOVE FROM RIGHT KERB
M326	OPERATING A HEAVY VEHICLE ON A ROAD CLOSED TO ITS CLASS
M332	ALTERED DISTANCE RECORDER/VEHICLE RE DISTANCE TRAVELLED
M401	DRIVER OR OCCUPANT NOT WEARING A SEAT BELT
M401	DRIVER OR PASSENGER NOT WEARING SEAT BELT
M401	DRIVER OR PASSENGER NOT WEARING SEATBELT
M401	DRIVER OR PASSENGER NOT WEARING SEAT BELTT
M402	FAILED TO ENSURE CHILD 8 TO 15 YEARS USED SEATBELT
M402	FAILED TO ENSURE CHILD 8 TO 15 YEARS USED SEAT BELT
M402	FAILS TO ENSURE CHILD 8 TO 15 YEARS USES SEAT BELT

M402	FAILED TO ENSURE CHILD 8 TO 14 YEARS USED SEATBELT
M403	PASSENGER OF OR OVER 15 YEARS NOT WEARING SEAT BELT
M405	PERMITS CHILD UNDER 15 IN FRONT SEAT NOT RESTRAINED
M407	FAILS ENSURE CHILD OVER 5 AND UNDER 8 YEARS USES RESTRAINT OR SEAT BEL
M407	FAILED ENSURE CHILD OVER 5 AND UNDER 8YRS USED RESTRAINT OR SEATBELT
M408	CHILD UNDER 5 YEARS NOT IN APPROVED CHILD RESTRAINT
M409	FAILED TO ENSURE CHILD UNDER 7 YEARS IN APPROVED CHILD RESTRAINT
M410	FAILED TO ENSURE CHILD AGED 7 YEARS USED RESTRAINT OR SEATBELT
N101	NOISY VEHICLE
N102	NOISY VEHICLE - OWNER OFFENCE
N103	NOISY EQUIPMENT IN A VEHICLE
N201	USED A VEHICLE THAT EMITTED EXCESSIVE SMOKE OR VAPOUR
N201	EMITTED EXCESSIVE SMOKE OR VAPOUR
N301	UNSAFE LOADING OF A VEHICLE
N302	INSUFFICIENTLY COVERED LOAD
N311	PART OF A MOTOR VEHICLE OR LOAD DRAGGING ON ROAD
N318	DANGEROUS CONDITION OF VEHICLE
N321	USED VEHICLE IN MANNER LIABLE CAUSE DAMAGE/INJURY/ANNOYANCE
N321	OPERATED A VEHICLE IN MANNER LIABLE CAUSE DAMAGE/INJURY/ANNOYANCE
N337	FAILED TO DISPLAY INSPECTION CERTIFICATE FOR CNG/LPG SYSTEM
N353	OPERATED MOTOR VEHICLE WITH INSECURE LOAD
N384	EXCEEDED VEHICLE MANUFACTURERS MAXIMUM WEIGHT
N401	UNREASONABLE USE OF WARNING DEVICE
N404	DRIVING ON A FOOT PATH
N411	DRIVER USED A MOBILE PHONE WHILE DRIVING
N510	OPERATED AN OVERHEIGHT VEHICLE OR LOAD WHERE DAMAGE LIKELY
N511	NO MARKINGS ON LONG LOAD DURING DAYLIGHT HOURS
N513	NO LIGHTS MARKING OVERLENGTH LOAD
N518	EXCEEDED MAXIMUM FRONT OVERHANG
N519	HEAVY RIGID VEHICLE EXCEEDED MAXIMUM REAR OVERHANG
N521	OPERATED HMV WITH LESS THAN MINIMUM GROUND CLEARANCE
N524	OPERATED OTHER VEHICLE WITH EXCESS REAR OVERHANG
N525	OPERATED AN OVERWEIGHT VEHICLE ON ROAD
N530	OPERATED AN OVERLENGTH COMBINATION
N531	EXCEEDED MAXIMUM INTER-VEHICLE SPACING
N536	VEHICLE OR LOAD EXCEEDED MAXIMUM WIDTH
N540	FAILED TO COMPLY WITH CONDITIONS ON OVERWEIGHT PERMIT
N542	STANDARD VEHICLE CARRIED DIVISIBLE OVERDIMENSION LOAD
N548	SPECIALIST OD VEHICLE CARRIED DIVISIBLE OD LOAD
N551	OD VEHICLE BREACHED REQUIREMENTS
N558	DISPLAY 'OVERSIZE' SIGN WHEN NOT REQUIRED
N605	OPERATED HEAVY VEHICLE WITH NON-COMPLIANT BOLSTER ATTACHMENT
N623	OPERATED A AGRICULTURAL TRAILER WITH INADEQUATE SAFETY CHAIN
N629	OPERATED HEAVY VEHICLE WITH NON-COMPLIANT DRAWBEAM
N632	OPERATED HEAVY VEHICLE WITH NON-COMPLIANT DRAWBAR
N650	OPERATED HEAVY VEHICLE WITH NON-COMPLIANT LOAD SECURING EQUIPMENT
O104	NO LIGHT ON CYCLE

O105	NO TAIL LIGHT ON CYCLE
O106	NO RED REFLECTOR OR TAPE ON CYCLE
O112	USED A CYCLE ON A MOTORWAY
O114	CARELESSLY RIDING CYCLE ON A ROAD
O116	RIDING CYCLE ON LAWN GARDEN OR FOOTWAY
O117	NO TAIL LIGHT ON MOPED
O126	RODE CYCLE ON LAWN GARDEN OR FOOTPATH
O201	PEDESTRIAN OR OTHER LOITERING ON ROADWAY OR CROSSING
O202	PEDESTRIAN ON A MOTORWAY
O204	CROSSING WITHIN 20M OF PEDESTRIAN CROSSING
O207	PEDESTRIAN FAILING TO KEEP TO FOOTPATH
O209	SUDDENLY ENTERED A PEDESTRIAN CROSSING
O301	PERMIT RIDING ON A VEHICLE IN DANGEROUS POSITION
O302	RIDING ON A VEHICLE IN A DANGEROUS POSITION
O302	RIDING ON A MOTOR VEHICLE IN A DANGEROUS POSITION
O501	FAILED TO WEAR CYCLE HELMET
O503	FAILED TO PRODUCE CYCLE HELMET EXEMPTION FOR INSPECTION
P105	PARKED IN PROHIBITED AREA
P107	PARKED ON BROKEN YELLOW LINE
P107	PARKED IN AREA OF BROKEN YELLOW LINE
P108	PARKED IN AREA RESERVED FOR HIRE OR REWARD VEHICLES
P110	PARKED OBSTRUCTING VEHICLE ENTRANCE
P110	PARKED ACROSS VEHICLE ENTRANCE
P113	DOUBLE PARKING
P114	INCORRECT KERB PARKING - LEFT SIDE OF ROAD
P115	PARKED ON FOOTPATH
P117	INCONSIDERATELY PARKED
P118	PARKED ON A MOTORWAY
P134	PARKED ON ROADSIDE GRASS PLOT
P183	USED MOTOR VEHICLE UNAUTHORISED REGISTRATION PLATE - PARKED VEHICLE
P184	REGISTRATION PLATE NOT EASILY DISTINGUISHABLE - PARKED VEHICLE
P186	FAILED DISPLAY REGISTRATION PLATE IN PRESCRIBED MANNER - PARKED VEH
P187	DISPLAYED OTHER THAN APPROPRIATE REGISTRATION PLATE - PARKED VEHICLE
P188	DISPLAYED OTHER THAN APPROPRIATE LICENCE LABEL - PARKED VEHICLE
P195	USED AN UNLICENSED MOTOR VEHICLE - PARKED VEHICLE
P401	OPERATED AN UNREGISTERED MOTOR VEHICLE - PARKED VEHICLE
P402	OPERATED AN UNLICENSED MOTOR VEHICLE - PARKED VEHICLE
P403	REGISTRATION PLATES NOT AFFIXED IN PRESCRIBED MANNER - PARKED VEHICLE
P404	DISPLAYED OTHER THAN AUTHORISED REGISTRATION PLATE - PARKED VEHICLE
P405	DISPLAYED OTHER THAN AUTHORISED MOTOR VEHICLE LICENCE - PARKED VEHICLE
P410	USED VEHICLE WITH EXEMPTION FROM CONTINUOUS LICENSING - PARKED VEHICLE
P411	CURRENT LICENCE LABEL NOT AFFIXED IN PRESCRIBED MANNER - PARKED VEHICL
P508	PARKED IN A CLEARWAY
P969	PARKED IN AREA RESERVED FOR DISABLED PERSONS
R536	ALLOWED SUBSTANCE TO FLOW ONTO A ROAD
R537	ALLOWED DANGEROUS MATERIAL TO FALL ONTO A ROAD
R541	USED A MOTOR VEHICLE UNDER 3500 KGS IN A PROHIBITED AREA-MANUKAU

R545	CLEANED WINDOWS OF A VEHICLE AT AN INTERSECTION - MANUKAU
R546	FAILED TO CARRY OR FIT SNOW CHAINS ON MILFORD ROAD
R552	CLEANED WINDOWS OF A VEHICLE ON A ROAD - AUCKLAND
R554	UNAUTHORISED ACTIVITY ON A ROAD - HAMILTON
R554	UNAUTHRSD ACTIVITY ON A ROAD - HAMILTON
R555	CLEANED WINDOWS OF A VEHICLE ON A ROAD - WAITAKERE CITY
R558	USED A MOTOR VEHICLE UNDER 3500 KGS IN A PROHIBITED AREA - CHRISTCHURC
R581	USED A MOTOR VEHICLE UNDER 3500KG IN A PROHIBITED AREA - CHCH
R583	USED A MOTOR VEH UNDER 3500KGS IN A PROHIBITED AREA - TAURANGA
R593	DROVE HEAVY MOTOR VEHICLE ON PROHIBITED ROAD - NAYLAND ROAD NELSON
R594	WASHED WINDSCREENS OR OTHER ACTIVITIES AT AN INTERSECTION - HAMILTON
R641	USED A HEAVY MOTOR VEHICLE ON A PROHIBITED ROAD IN MANUKAU
R647	USED SKATEBOARD/ROLLER BLADES IN PROHIBITED AREA - NELSON
R658	USED SKATEBOARD/ROLLER BLADES RECKLESSLY - AUCKLAND
R668	DROVE A HEAVY MOTOR VEHICLE ON A PROHIBITED RD IN WHAKATANE DISTRICT
R669	CLEANED WINDOWS OF A VEHICLE STOPPED ON A RD - ROTORUA
R669	CLEANED WINDOWS OF A VEHICLE STOPPED ON A ROAD - ROTORUA
R673	OPERATED VEHICLE IN BREACH OF CIVIL DEFENCE EMERGENCY BAN OR RESTRICTI
R677	WASHED OR OFFERED TO WASH PART OF A VEHICLE - AUCKLAND
S101	DRIVER FAILED TO WEAR SAFETY HELMET
S103	PASSENGER FAILED TO WEAR SAFETY HELMET
S105	RIDER WORE DAMAGED SAFETY HELMET
S105	DRIVER WORE DAMAGED SAFETY HELMET
S106	PASSENGER WORE DAMAGED SAFETY HELMET
V130	OPTIONAL LIGHTING EXCEEDED VISIBILITY RESTRICTIONS
V131	OPTIONAL LIGHTING EMITTED OTHER THAN DIFFUSE LIGHT
V133	OPTIONAL LIGHTING FLASHING
V136	OPTIONAL LIGHTING CONFUSING AS TO ORIENTATION
V201	STATIONARY VEHICLE NOT DISPLAYING LIGHTS
V202	VEHICLE NOT EQUIPPED WITH HEAD LAMPS
V203	NO FRONT OR REAR LIGHTS DISPLAYED ON TOWED VEHICLE
V204	DISPLAYING OTHER THAN RED OR AMBER LIGHT TO REAR
V206	NO REARWARD FACING SIDE LIGHTS
V207	FAILING TO DISPLAY RED MARKER LIGHT ON GSV
V216	MOTOR CYCLE NOT EQUIPPED WITH HEAD LAMP
V218	NO RED REAR REFLECTORS (NOT HMV)
V222	DRIVING WITHOUT HEAD LIGHTS ON
V226	REAR NUMBER PLATE NOT ILLUMINATED
V227	NO REAR REFLECTOR ON MOTOR CYCLE
V231	DROVE WITHOUT THE APPROPRIATE LIGHTS ILLUMINATED
V232	VEHICLE DISPLAYED OTHER THAN WHITE OR AMBER HEADLAMPS
V234	UNAUTHORISED AUXILIARY LAMPS
V236	DISPLAYED RED LAMP TO THE FRONT
V237	HMV DISPLAYED MORE THAN 6 CAB ROOF LAMPS
V241	REARWARD FACING POSITION LAMP NOT SUBSTANTIALLY RED
V242	MOTORCYCLE OR MOPED FAILED TO USE HEADLAMP OR DAYTIME LAMP DURING DAY
V301	FAILING TO DIP HEADLAMPS FOR OTHER TRAFFIC

V305	NO STOP LAMPS FITTED FIRST REGISTERED AFTER 1.2.77
V308	OPERATED MOTORCAR WITHOUT HIGH MOUNTED STOP LAMP
V311	DAZZLING CONFUSING OR DISTRACTING VEHICLE LIGHTS
V312	POSITION LAMPS NOT ILLUMINATED
V313	HEADLIGHTS OF UNEQUAL COLOUR OR INTENSITY
V314	OPERATED A TRAILER NOT FITTED WITH STOP LAMPS
V405	NO WINDSCREEN WIPER
V406	OBSCURED WINDSCREEN
V408	NO EFFECTIVE REAR VISION MIRROR
V414	TELEVISION RECEIVER FITTED
V417	DEFECTIVE EXHAUST SYSTEM ON MOTOR VEHICLE
V417	DEFECTIVE EXHAUST SYSTEM OR SILENCER ON MOTOR VEHICLE
V420	SIDE OR REAR FACING LIGHTING OBSCURED BY LOAD OR TOWED VEHICLE
V421	NO SPEEDOMETER
V425	NO FLASHING LIGHT DIRECTIONAL INDICATORS
V432	KNOWINGLY USED UNSAFE SEAT BELT
V439	USING WINDSCREEN LIKELY TO DAZZLE OR ANNOY ROAD USERS
V441	OPERATED A NON-COMPLIANT LEFT HAND DRIVE VEHICLE
V442	OPERATED A MOTOR VEHICLE WITH DARKENED WINDOWS
V443	UNLAWFULLY MODIFIED GLAZING ON A MOTOR VEHICLE
V445	OPERATED A MOTOR VEHICLE WITH A DAMAGED WINDSCREEN
V447	OPERATED MOTOR VEHICLE WITH MODIFIED GLAZING
V450	DEFECTIVE OR NO DOOR HANDLE/FASTENING DEVICE
V453	DOOR COULD NOT BE OPERATED BY OCCUPANT
V457	REAR TURN INDICATORS NOT SUBSTANTIALLY RED OR AMBER
V460	UNSAFE INTERIOR FITTING CONTROL OR SURFACE
V480	USED A VEHICLE WITH A FITTING LIABLE TO CAUSE INJURY
V482	COMPONENT OF MOTOR VEHICLE LIKELY TO HOOK PERSON OR VEHICLE
V485	NOISY EXHAUST ON HEAVY MOTOR VEHICLE
V490	UNSAFE HEAD RESTRAINT
V494	NOISY EXHAUST
V495	INEFFECTIVE CHILD RESTRAINT
V504	TRAILER NOT SAFELY SECURED TO CAR
V508	DEFECTIVE STEPS DOOR HINGES HANDLES LOCKS PSV
V515	OPERATED PASSENGER SERVICE VEHICLE WITH UNPLATED ROOF-RACK
V551	TYRE WHEEL HUB AND AXLE ASSEMBLY NOT IN GOOD CONDITION
V554	WHEEL NOT SECURELY ATTACHED TO THE HUB
V555	NON-APPROVED WHEEL SPACER INSTALLED
V556	OPERATED VEHICLE WITH DIFFERENT TYRES ON AXLE
V557	OPERATED VEHICLE WITH A DAMAGED TYRE
V559	OPERATED VEHICLE WHERE TYRE LOAD RATING LESS THAN LOADING CERTIFICATE
V560	OPERATED VEHICLE WHERE LOAD EXCEEDED TYRE RATING
V561	OPERATED VEHICLE WITH A SMOOTH TYRE
V562	OPERATED VEHICLE LIKELY TO CAUSE DAMAGE TO THE ROAD
V563	OPERATED VEHICLE WITH UNSAFE TYRE PRESSURE
V574	INADEQUATE MUDGUARDS FITTED TO VEHICLE WITH TWIN-TYRED REAR AXLE
V590	FACTORY INSTALLED DOOR LOCKING MECHANISMS NOT DISABLE ON PSV

V601	INTERFERED WITH A VEHICLE IDENTIFICATION NUMBER
V602	AFFIXED AN UNAUTHORISED VEHICLE IDENTIFICATION NUMBER
V605	INTERFERED WITH A VEHICLE'S CHASSIS OR ENGINE NUMBER
V609	INTERFERED WITH A VIN
V610	OPERATED VEHICLE WITH UNSAFE SEAT
V612	OPERATED VEHICLE WITH SEAT NOT SECURELY ATTACHED
V632	OPERATED UNCERTIFIED UNREGISTERED VEHICLE
V640	OPERATED VEHICLE WITH UNSOUND SEATBELT
V641	OPERATED VEHICLE WITH CUT OR FRAYED SEATBELT
V642	OPERATED VEHICLE WITH UNADJUSTABLE SEATBELT
V650	OPERATED HEAVY VEHICLE WHEN BRAKE NOT IN GOOD CONDITION
V678	OPERATED HEAVY VEHICLE WITH NON-COMPLIANT ANTI-LOCK BRAKING SYSTEM
V703	OPERATED A MODIFIED VEHICLE THAT WAS NOT CERTIFIED
V801	OPERATED AN UNSAFE VEHICLE
X101	SUSPENSION RECORD
Y901	POLICE NON-TRAFFIC PROSECUTION

Appendix E: Supplementary results tables

Table E.1 Number (n) and percentage (%) of offenders with one or more offences during 2005–2015

	Number of offences														
	1 or more	2	3	4	5	6	7	8	9	10	11	12	13	14	15
n	1,683,952	955,620	605,770	418,024	307,951	237,458	189,482	154,918	128,686	108,328	92,376	79,472	69,038	60,256	52,992
%	100	57	36	25	18	14	11	9	8	6	5	5	4	4	3

Table E.2 Number (and percentage) of offences by demographic characteristics for all offences in New Zealand for the years 2005–2014

	Number of offences					
	1	2 to 5	6 to 10	11 to 19	20+	Total
Age group at first offence						
15–18	33,927	75,432	34,650	23,367	14,918	182,294
	(18.61)	(41.38)	(19.01)	(12.82)	(8.18)	(100)
19–25	98,607	136,704	40,268	20,407	9,405	305,391
	(32.29	(44.76)	(13.19	(6.68)	(3.08)	(100)
26–55	435,937	427,567	65,736	18,775	4,941	952,956
	(45.75	(44.87)	(6.90	(1.97)	(0.52)	(100)
56–75	142,424	74,812	4,238	453	40	221,967
	(64.16	(33.70)	(1.91	(0.20)	(0.02)	(100)
>75	17,180	3,155	53	3	0	20,391
	(84.25	(15.47)	(0.26	(0.01)	(0.00)	(100)
Gender						
Male	397,051	468,387	108,707	48,136	23,329	1,045,610
	(37.97	(44.80)	(10.40)	(4.60)	(2.23)	(100)
Female	331,262	249,757	36,369	14,931	5,979	638,298
	(51.90	(39.13)	(5.70)	(2.34)	(0.94)	(100)
Region of birth						
New Zealand	518,562	547,261	120,824	55,787	27,296	1,269,730
	(40.84	(43.10)	(9.52)	(4.39)	(2.15)	(100)
Pacific Islands	28,477	36,889	8,534	2,795	569	77,264
	(36.86	(47.74)	(11.05)	(3.62)	(0.74)	(100)
Australia	12,382	10,951	2,201	1,054	459	27,047
	(45.78	(40.49)	(8.14)	(3.90)	(1.70)	(100)
UK and Ireland	56,696	38,627	3,671	853	249	100,096
	(56.64	(38.59)	(3.67)	(0.85)	(0.25)	(100)
Asia	63,729	46,971	4,781	917	146	116,544
	(54.68)	(40.30)	(4.10)	(0.79)	(0.13)	(100)
North America	7,286	4,686	468	113	38	12,591
	(57.87)	(37.22)	(3.72)	(0.90)	(0.30)	(100)

	Number of offences					
	1	**2 to 5**	**6 to 10**	**11 to 19**	**20+**	**Total**
Africa and Middle East	20,935	17,564	2,576	892	302	42,269
	(49.53)	(41.55)	(6.09)	(2.11)	(0.71)	(100)
Other	20,265	15,213	2,026	656	250	38,410
	(52.76)	(39.61)	(5.27)	(1.71)	(0.65)	(100)
Years licensed at first offence						
less than 1 year	59,502	87,623	31,960	20,663	13,443	213,191
	(27.91)	(41.10)	(14.99)	(9.69)	(6.31)	(100)
1–3 years	70,908	89,154	25,968	14,041	6,597	206,668
	(34.31)	(43.14)	(12.57)	(6.79)	(3.19)	(100)
4–10 years	125,737	146,180	35,415	15,217	5,975	328,524
	(38.27)	(44.50)	(10.78)	(4.63)	(1.82)	(100)
11–20 years	120,867	116,992	19,221	6,026	1,832	264,938
	(45.62)	(44.16)	(7.25)	(2.27)	(0.69)	(100)
>20 years	336,355	256,213	26,922	4,983	767	625,240
	(53.80)	(40.98)	(4.31)	(0.80)	(0.12)	(100)

Table E.3 Time (in months) to first offence and subsequent offences for the first 10 offences in the decade

	Time to next offence								
No. of offences	**1–2nd**	**2–3rd**	**3–4th**	**4–5th**	**5–6th**	**6–7th**	**7–8th**	**8–9th**	**9–10th**
All offences									
2 Offences	46.57								
3 Offences	31.21	33.56							
4 Offences	23.82	24.47	26.75						
5 Offences	19.19	19.54	20.47	22.03					
6 Offences	16.04	16.12	16.79	17.57	18.55				
7 Offences	13.53	13.58	13.84	14.54	15.37	16.85			
8 Offences	11.97	11.95	11.61	12.10	13.13	13.75	14.92		
9 Offences	10.75	10.69	10.35	10.40	10.91	11.64	12.52	13.93	
10 Offences	9.72	9.93	9.62	9.23	9.58	9.93	10.66	11.81	12.24
Offences not leading to suspension									
2 Offences	46.85								
3 Offences	31.69	33.70							
4 Offences	24.60	24.93	26.75						
5 Offences	20.38	20.45	20.93	21.80					
6 Offences	17.48	17.53	17.85	18.16	17.93				
7 Offences	14.76	15.26	15.54	15.76	15.53	15.53			
8 Offences	12.97	13.52	13.56	13.84	13.92	13.41	13.28		
9 Offences	11.71	12.22	12.30	12.43	12.37	12.00	11.79	11.81	
10 Offences	10.13	10.87	11.41	11.43	11.50	11.50	10.98	10.78	9.93

Appendix F: Survey invitation email

Dear [Mr/Ms/Mrs/Dr Surname],

Research Project Title: Effectiveness of Licensing Points on Driver Behaviour

We are writing to let you know about a research project that you have the option to take part in. The research is being conducted by Colmar Brunton for the University of NSW in Australia, on behalf of the New Zealand Transport Agency. We are contacting you because you are a member of the Colmar Brunton research panel.

Our client would like to provide you with some more information about this research.

The research is about how motorists respond to Licensing Points (i.e. demerit or merit points), and whether the systems offer effective deterrents and/or incentives to encourage safe driving behaviour.

We are looking for people who want to take part in this research and who:

- Are at least 17 years old
- Hold a NZ restricted or full licence to operate a car or motorcycle

Taking part in research is always optional. If you decide to take part you will be asked to complete an on-line questionnaire at a time that is convenient to you by using the links at the end of this email. The questionnaire would take about 15 minutes to complete.

You would receive 10 FlyBuys points as compensation for your time and effort.

If you would like more information please contact:

Name:	Dr Julie Hatfield
Email:	j.hatfield@unsw.edu.au
Phone:	0481 511 434
Website:	http://www.tars.unsw.edu.au/

If we have not heard from you in 1 week we will send another email to remind you about our research.

Taking part in research is voluntary. You may choose not to take part. If you decide not to take part in this research, your decision will have no effect on your relationship with the New Zealand Transport Agency, The University of New South Wales, or Colmar Brunton.

This research has been reviewed and approved by The University of New South Wales Human Research Ethics Committee. If you have any complaints or concerns about the research project please email humanethics@unsw.edu.au or phone +61 2 9385 6222 quoting the following number HC15618.

Thanks for your time and your views!

Julie Hatfield

Senior Research Fellow
Transport and Road Safety Research
The University of NSW

with Colmar Brunton

To start, just [click here] or copy and paste the link below into your browser. [link]

Appendix G: Survey questionnaire (programming guide)

You have been invited to take part in a research study by the University of New South Wales in Australia, on behalf of the New Zealand Transport Agency .

What is the research about?

The research is about how motorists respond to LPSs, and whether the systems offer effective deterrents and/or incentives to encourage safe driving behaviour. An example of a licensing point system is the New Zealand licensing point system.

You have been invited to take part in this research because you are a member of the Colmar Brunton panel.

To participate in this research you must:

- be at least 17 years old
- hold a New Zealand restricted or full licence to operate a car or motorcycle.

Do I have to take part in this research?

Taking part is voluntary. Your decision will not affect your relationship with the New Zealand Transport Agency, the University of New South Wales, or Colmar Brunton.

What does participation in this research require?

The questionnaire should take about 15 minutes to complete. It asks about your thoughts on, and knowledge of, the NZ licensing point system, as well as your personal characteristics and motoring habits. The majority of the questions require you to simply click on your desired response; a few may require you to type an answer within a box.

What if I want to withdraw from the research?

If you decide you no longer wish to participate, you may stop completing the questionniare and send us an email to let us know you want the answers you have already given to be deleted.

What will happen to information about me?

The answers you give us will be combined with answers from other participants and the results will be summarised in a report for the New Zealand Transport Agency about how drivers respond to the NZ licensing point system. The information you give us will not be used for any other purpose. You will not be able to be identified in any way. Your responses will be completely *anonymous*.

So that your views can be included, we need you to finish the survey by ***[insert month end date]***

Will I be paid to participate in this research?

If you are a Colmar Brunton panel member you would receive 10 FlyBuys points as compensation for your time and effort.

If you wish to proceed to the on-line questionnaire please click ">" below.

[>]

S1 Do you hold a car, motorcycle or heavy vehicle driver licence?

Please select all that apply

Yes – car	1	
Yes – motorcycle	2	
Yes – heavy vehicle	3	
None of these **(single code only)**	4	**CLOSE**

CLOSE TEXT: Thank you for your time, unfortunately for this survey we need to speak to people who hold a driver licence.

ASK IF S1=1

S2 Is your car licence...?

Please select one only

Full	1	
Restricted	2	
Learner	3	

ASK IF S1=2

S3 Is your motorcycle licence...?

Please select one only

Full	1	
Restricted	2	
Learner	3	

ASK IF S1=3

S4 Is your heavy vehicle licence...?

Please select one only

Full	1	
Learner	2	

IF S2=3 AND S3=3 AND S4=2 THEN CLOSE

CLOSE TEXT: Thank you for your time, unfortunately for this survey we need to speak to people who hold certain types of driver licence.

Q1 Which of the following age groups do you fall into?

Please select one only

17-19	1
20-24	2
25-34	3
35-44	4
45-54	5
55-64	6
65-74	7
75 or older	8
Prefer not to say	9

Q2 Are you…?

Please select one only

Male	1
Female	2
Prefer not to say	3

Q3 How would you best describe your ethnicity?

Please select all that apply

New Zealand European	1
Other European (including Australian, English)	2
New Zealand Maori	3
Cook Island Maori	4
Other Pacific Islands	5
Chinese	6
Indian	7
Other Asian	8
Prefer not to say	9

Q4a Please tell us where you live

Please select one only

Auckland	1
Christchurch	2
Dunedin	3
Gisborne	4
Hamilton	5
Invercargill	6
Napier/Hastings	7
Nelson	8
New Plymouth	9
Palmerston North	10
Rotorua	11
Tauranga	12
Wanganui	13
Wellington	14
Whangarei	15
Other town or city in North Island	16
Other town or city in South Island	17
Rural area in North Island	18
Rural area in South Island	19

ASK Q4b IF Q4a>15, OTHERWISE SKIP TO Q5

PROG NOTE: SHOW CODES 1 TO 7 IF Q4a=16 OR 18, SHOW CODES 8 TO 14 IF Q4a=17 OR 19

Q4b Which province do you live in?

Please select one only

Northland	1
Auckland	2
Waikato	3
Bay of Plenty/Gisborne	4
Hawkes Bay	5
Taranaki	6
Manawatu/Wanganui	7
Wellington	8
Tasman	9
Nelson	10
Marlborough	11
West Coast	12
Canterbury	13
Otago	14
Southland	15

Q5 Do you drive a car or ride a motorcycle in your job (other than commuting to or from work)?

Please select one only

Yes	1	
No	2	**GO TO Q7**

Q6 In what capacity do you drive a car or ride a motorcycle for work?

Please select all that apply

Taxi driver	1
Motorcycle courier or courier driver	2
Postal delivery services motorcycle rider	3
Truck driver	4
Emergency services driver	5
Bus driver	6
Other (please specify)	7

ASK IF S2=1 OR S3=1 OR S4=1

Q7 How old were you when you got your first full licence?

Please select one only

15-16 years old	1
17-19 years old	2
20-24 years old	3
25-34 years old	4
35 years or older	5
Prefer not to say	6

ASK IF S2=1 or 2 OR S3=1 or 2

Q8 How old were you when you got your first restricted licence?

Please select one only

15-16 years old	1
17-19 years old	2
20-24 years old	3
25-34 years old	4
35 years or older	5
Prefer not to say	6
Never had a restricted licence	6

Q9 Is your licence currently...?

Please select one only

Active	1
Limited (to avoid extreme hardship from suspension or disqualification)	2
Suspended	3
Disqualified	4
Under special conditions (e.g. alcohol interlock licence, zero alcohol licence)	5
Under a driver licence stop order (due to expiry or non-payment of fines)	6

PROG NOTE: IF POSSIBLE CAN WE PLEASE ASK Q10 AND Q11 ON THE SAME PAGE

Q10 How many licensing points do you currently have on your licence? If you do not have any licensing points please type 0 in the box below.

Please type in

xxxx

PROG NOTE: MUST BE A WHOLE NUMBER BETWEEN 0 AND 9999

Q11 How certain are you about the number of licensing points currently on your licence?

Please select only one

Completely certain	1
Very certain	2
Not that certain	3
Not at all certain	4

Q12 What is the maximum number of points you have ever had on your licence at any one time? If you have never had any licensing points please type 0 in the box below

Please type in

xxxx

PROG NOTE: MUST BE A WHOLE NUMBER BETWEEN 0 AND 9999

ASK Q13, Q14 AND Q15 IF Q10≠0 OR Q12≠0. IF Q10=0 AND Q12=0 GO TO Q16

Q13 Which of the following behaviours have you ever received licensing points for?

Please select all that apply

Driving or riding while over the legal blood alcohol limit	1
Exceeding the speed limit	2
Using a mobile phone while driving or riding	3
Driving between 10pm and 5am without a supervisor	4
[ASK ONLY IF S1=2] Not wearing a helmet	5
[ASK ONLY IF S1=3] Producing a log book with omissions	6
Other	7

Q14 Has your licence ever been suspended because you reached the licensing point threshold?

Please select one only

Yes	1	**GO TO Q15**
No	2	**GO TO Q16**

Q15 How many times has your licence been suspended because you reached the licensing point threshold?

Please type in

xxx

PROG NOTE: MUST BE A WHOLE NUMBER BETWEEN 0 AND 999

Q16 Has your licence ever been suspended for a reason other than reaching the licensing points threshold?

Please select one only

Yes	1	**GO TO Q17**
No	2	**GO TO Q19**

ASK Q17 AND Q18 IF Q14=1 OR Q16=1 ALL OTHERS TO Q19

Q17 While your licence was suspended did you…? Remember that your answers are anonymous.

Please select one only

Completely stop driving and riding	1
Continue driving and riding but more cautiously	2
Continue driving and riding exactly as before	3

Q18 When your licence was reinstated did you drive a car or ride a motorcycle…?

Please select one only

More carefully than before	1
About the same as before	2
Less carefully than before	3

Q19 Next we would like to know how likely you think you are to be caught if you were to do any of the following...

Please select one in each row

PROG: RANDOMISE STATEMENTs

	Very likely	Quite likely	Not that likely	Not at all likely	Don't know
i. drive or ride while over the legal blood alcohol limit	1	2	3	4	5
ii. exceed the speed limit by 10km/hr or less	1	2	3	4	5
iii. exceed the speed limit by more than 20km/hr	1	2	3	4	5
iv. use a mobile phone while driving or riding	1	2	3	4	5
v. drive or ride while your licence is suspended	1	2	3	4	5
vi. **[ASK ONLY IF S1=1 AND S2=2]** drive between 10pm and 5am without a supervisor	1	2	3	4	5
vii. **[ASK ONLY IF S1=2]** not wear a helmet	1	2	3	4	5
viii. **[ASK ONLY IF S1=3]** produce a log book with 1-5 omissions	1	2	3	4	5

Q20 The next set of questions will help us understand how much people know about the New Zealand licensing point system. Please answer to the best of your knowledge. Even if you are not sure we would like you to make your best guess.

How many points do you think you can have on your licence before it is suspended?

Please type in

xxxx

PROG NOTE: MUST BE A WHOLE NUMBER BETWEEN 0 AND 9999

Q21 How long do you think it takes for licensing points to expire?

Please type in

XX years	XX months

PROG NOTE: ONE OR TWO NUMBERS FOR YEARS AND MONTHS, RANGE FOR YEARS 0-99 AND MONTHS 0-12

Q22 For how long is your licence suspended when you reach the licensing point threshold? Again, if you are not sure please type in your best guess.

Please type in

XX years	XX months

PROG NOTE: ONE OR TWO NUMBERS FOR YEARS AND MONTHS, RANGE FOR YEARS 0-99 AND MONTHS 0-12

Q23 How many licensing points do you think you would get for....

Please type in an amount for each infringement

		Don't know
i. driving or riding with blood alcohol between 50mgs and 80mgs	XXX	1
ii. exceeding the speed limit by 10km/hr or less	XXX	1
iii. exceeding the speed limit by more than 20km/hr but not more than 30km/hr	XXX	1
iv. using a mobile phone while driving or riding	XXX	1
v. **[ASK ONLY IF S1=1 AND S2=2]** driving between 10pm and 5am without a supervisor	XXX	1
vi. **[ASK ONLY IF S1=2]** not wearing a helmet	XXX	1
vii. **[ASK ONLY IF S1=3]** producing a log book with 1-5 omissions	XXX	1

PROG NOTE: MUST BE A WHOLE NUMBER BETWEEN 0 AND 9999

Q24 Do licensing points apply to offences detected by a safety (speed) camera?

Please select one only

Yes	1
No	2
Don't know	3

Q25 How can you find out how many licensing points you currently have?

Please select all that apply

Call the New Zealand Police	1	
Call the New Zealand Transport Agency	2	
Look it up on the New Zealand Transport Agency website	3	
None of the above **[Single code only]**	4	
Don't know	5	**GO TO Q27**

Q26 How often, if ever, have you found out your points balance?

Please select one only

Never	1
Once	2
More than once	3
Don't know	4

Q27 Which of the following statements best describes your attitude to receiving licensing points?

Please select one

I don't care how many licensing points I have and I will never change my driving or riding behaviour to avoid them	1	
I don't mind having a few licensing points, but I will change my driving or riding behaviour when I have a few to avoid getting any more	2	
I don't like having any licensing points and avoid driving in a way that would result in receiving any	3	**GO TO Q29**

Q28 How many points would motivate you **not to**...

Please type in an amount for each infringement

		No amount would motivate me	Don't know
i. drive or ride with blood alcohol between 50mgs and 80mgs	XXXX	1	2
ii. exceed the speed limit by 10kms/hr or less	XXXX	1	2
iii. exceed the speed limit by more than 20kms/hr but less than 30kms/hr	XXXX	1	2
iv. use a mobile phone while driving or riding	XXXX	1	2
v. **[ASK ONLY IF S1=1 AND S2=2]** drive between 10pm and 5am without a supervisor	XXXX	1	2
vi. **[ASK ONLY IF S1=2]** not wear a helmet	XXXX	1	2
vii. **[ASK ONLY IF S1=3]** produce a log book with 1-5 omissions	XXXX	1	2

PROG NOTE: MUST BE A WHOLE NUMBER BETWEEN 0 AND 9999

Q29 How big a problem would it be for you to have your licence suspended?

Please select one only

A big problem	1
A bit of a problem	2
No problem at all	3

Q30 Below is a list of possible changes that could be made to licensing point systems. How strongly, or not, would you support each of these?

Please select one in each row

PROG: RANDOMISE STATEMENTS

	Strong support	Some support	No support	Don't know
i. Double the points for offences during a holiday period	1	2	3	4
ii. Points stay on your licence for longer	1	2	3	4
iii. An email or a text to let you know when you are half way to your points threshold	1	2	3	4
iv. An online facility where you can check the number of points on your licence	1	2	3	4
v. A longer suspension period after reaching the points threshold	1	2	3	4
vi. Attending a road safety course before your licence is reinstated	1	2	3	4

Q31 Finally we have two more questions about you.

What was the last level you **completed** in your formal education?

Please select one only

Primary school	1
Secondary school	2
Tertiary certificate/diploma (including trade qualifications)	3
Bachelor's degree (or equivalent)	4
Postgraduate certificate or higher (including Honour, Post-graduate diploma, Masters and PhD)	5
Something else	6
Don't know	7
Prefer not to say	8

Q32 Which of the following groups does your total household income from all sources before tax fall into?

Please select one only

Under $20,000	1
$20,000 - $39,999	2
$40,000 - $59,999	3
$60,000 - $99,999	4
$100,000 - $149,999	5
$150,000 or more	6
Don't know	7
Prefer not to say	8

ASK Q33 IF Q4=14 OR IF Q4B=7

Q33 The University of New South Wales may conduct further focus group research about the licensing point system in New Zealand. Would you be interested in being contacted with an invitation to participate in this research?

Yes	1	
No	2	**GO TO END TEXT**

Q34 Thank you! Your contact details provided here will be passed to the University of New South Wales to enable them to carry out further research, please remember **the details you provide on this page will be completely separate to your survey responses,** your survey answers are anonymous and will not be attributable to you in any way.

Please type in

Name	
Contact phone number	
Email address	

That's the end of the survey, thank you very much for your time. Your responses are completely anonymous and we won't report the results in any way that could identify you as an individual.

As mentioned at the start 10 FlyBuys points will now be awarded to your account. The points will be credited to your FlyBuys account in approximately 14 working days from this date.

You may now close your browser.

Appendix H: Survey reminder email

Dear [Mr/Ms/Mrs/Dr Surname],

Research Project Title: Effectiveness of Licensing Points on Driver Behaviour

Recently an email was sent to you inviting you to take part in the above survey that is being conducted by Colmar Brunton for the University of NSW in Australia, on behalf of the New Zealand Transport Agency. The email gave information about the survey.

This is just a friendly reminder that the final date for completion is [*date*], however this survey may close earlier if our target number has been reached.

The survey takes approximately 15 minutes to complete and to compensate for your time and effort you would receive 10 FlyBuys points.

Remember that taking part in research is voluntary. If you decide not to take part in this research, your decision will have no effect on your relationship with the New Zealand Transport Agency, The University of New South Wales, or Colmar Brunton.

Thanks for your time and your views!

Julie Hatfield

Senior Research Fellow,

Transport and Road Safety Research,

The University of NSW

with Colmar Brunton

To start, just [click here] or copy and paste the link below into your browser.

[*link*]

Appendix I: Focus group invitation email (to survey respondents)

Dear ,

Research Project Title: Effect of Licensing Points on Driver Behaviour

Thank you for your interest in to participate in focus group research about the demerit point system in New Zealand that is being conducted by the University of NSW in Australia, on behalf of the New Zealand Transport Agency.

You are eligible for one of our focus groups, and we are pleased to invite you to participate.

Attached you will find a Participant Information Statement and Consent Form that provides detailed information about the discussion group session. This information is intended to help you to decide whether you wish to participate. Please read it carefully, and ask questions about anything that you don't understand or want to know more about by contacting Dr Julie Hatfield (j.hatfield@unsw.edu.au).

The discussion group session will be held in Wellington. It will last about 1 hour, and you will be offered a voucher to the value of NZD80, as compensation for your time and effort.

If you are willing to attend please reply to *this email* (a.purvis@unsw.edu.au) within 5 days indicating when you are able to attend by completing the table below. Please type "Yes" or "No" in each cell, and we will set a single session based on responses from all participants.

	Morning 10am to 11am	Afternoon 1:30pm to 2:30pm	Evening 5:30pm to 6:30pm
Monday 19 September			
Tuesday 20 September			
Wednesday 21 September			
Thursday 22 September			
Friday 23 September			

If you reply we will send you an email to let you know when and where to attend. We will send you a reminder email the day before the discussion group session. If things change and you are no longer able to attend please send us an email (at this address) to let us know.

If you do not reply within 5 days of the date of this email, we will need to replace you with another participant (because of the tight timelines for this project).

Kind regards

Appendix J: Focus group participant information statement and consent form – young driver group

TARS Research

TRANSPORT AND ROAD SAFETY (TARS) RESEARCH | THE UNIVERSITY OF NEW SOUTH WALES | UNSW SYDNEY NSW 2052 AUSTRALIA
T +61(2) 9385 5774 | F +61 (2) 9385 6040 | Email: tars@unsw.edu.au |
http://www.tars.unsw.edu.au |ABN 57 195 873 179 | CRICOS Provider Code 00098G

UNSW AUSTRALIA

PARTICIPANT INFORMATION STATEMENT AND CONSENT FORM

Young Driver Focus Group
Effect of Licencing Points on Driver Behaviour
Professor Ann Williamson

The study is being carried out by the following researchers:

Role	Name	Organisation
Chief Investigator	Professor Ann Williamson	UNSW
Co-Investigator/s	Professor Teresa Senserrick Dr Julie Hatfield Dr Soufiane Boufous Ms Lori Mooren Adjunct Professor Soames Job Dr Chika Sakashita	UNSW UNSW UNSW UNSW Global Road Safety Solutions Global Road Safety Solutions
Research Funder	The New Zealand Transport Agency	

What is the research study about?

You are invited to participate in a discussion group session that is being conducted by the University of NSW in Australia, on behalf of the New Zealand Transport Agency. The research is about how motorists respond to Licencing Points (i.e. demerit or merit points), and whether the systems offer effective deterrents and/or incentives to encourage safe driving behaviour.

You have been invited because you indicated an interest in being contacted with an invitation to participate in focus group research about the demerit point system in New Zealand, and you:

- Are aged 17, 18 or 19
- Hold a restricted NZ licence to operate a car
- Are not a professional driver
- Live in Wellington

Do I have to take part in this research?

Participation in this discussion group session is voluntary. If you don't wish to take part, you don't have to. Your decision will not affect your relationship with The University of New South Wales or the New

Zealand Transport Agency. This Participant Information Statement and Consent Form tells you about the discussion group session. Knowing what is involved will help you decide if you want to take part. Please read this information carefully. Ask questions about anything that you don't understand or want to know more about.

If you decide you want to take part in the discussion group session, you will be asked to:

- Sign the consent form when you attend the discussion group ;
- Keep a copy of this Participant Information Statement.

What does participation in this research require, and are there any risks involved?

If you decide to take part in the discussion group session, you will be asked to participate in a discussion with a small group of similar motorists at the time, date and place given below.

Time	To be decided
Date	During the week beginnng 19th September 2016
Location	At a meeting room in Wellington

The discussion will be about how drivers respond to the New Zealand demerit point system. The discussion will be guided by at least two facilitators, who will pose questions to prompt discussion. The whole session is expected to last around one hour. The discussion will be audio-recorded so that the research team can listen to it to identify key messages.

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in the discussion group session.

Will I be paid to participate in this research?

You will be compensated for your time and effort, any reasonable travel, parking, meals and other expenses associated with the discussion group session with a Prezzy card to the value of 80NZD to be provided at the end of the discussion session.

What are the possible benefits to participation?

By participating you will be contributing to understanding of the human, cultural and socio-economic factors that may influence the effectiveness of Licencing Points.

What will happen to information about me?

By signing the consent form you consent to the research team recording the discussion group session. The audiotaped digital recordings are for the purposes of the research. After the discussion group session we may transcribe the digital recordings. We will store the digital recordings and/or the transcription for seven years on password-secured servers at UNSW. The digital recordings and/or the transcription will only be used for the purpose of this research and will only be disclosed with your permission.

Only members of the research team will listen to the recordings. Even if your first name is mentioned during the discussion we will not be able to identify you, because we will not keep any information about you after the discussion group session.

It is anticipated that the results of this research will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that you will not be individually identifiable.

How and when will I find out what the results of the research are?

You have a right to receive feedback about the overall results of this study. With permission from the New Zealand Transport Authority, we will send a 1 page summary of the study results to your email address after the study is finished.

What if I want to withdraw from the research?

If you consent to participate in the discussion, you are free to stop participating at any stage or to refuse to answer any of the questions. However, it will not be possible to withdraw your individual comments from our audio records because we will not be able to identify you.

What should I do if I want to participate or if I have further questions about my involvement in the research?

If you want to participate or would like any further information concerning this research or if you have any problems which may be related to your involvement in the research, you can contact the following member/s of the research team:

Research Team Contact

Name	Dr Julie Hatfield
Position	Senior Research Fellow
Telephone	0481 511 434
Email	j.hatfield@unsw.edu.au

What if I have a complaint or any concerns about the research?

If you have any complaints about any aspect of the research, then you may contact:

Complaints Contact

Position	Human Research Ethics Coordinator
Telephone	+ 61 2 9385 6222
Email	humanethics@unsw.edu.au
HC Reference Number	HC15618

Consent Form – Participant providing own consent

Declaration by the participant

- I have read the Participant Information Sheet or someone has read it to me in a language that I understand;
- I understand the purposes, study tasks and risks of the research described;
- I have had an opportunity to ask questions and I am satisfied with the answers I have received;
- I freely agree to participate in this research as described and understand that I am free to withdraw at any time during the project and withdrawal will not affect my relationship with any of the named organisations and/or research team members;
- I understand that I will be given a signed copy of this document to keep;

Participant Signature

Name of Participant (please print)	
Signature of Research Participant	
Date	

Declaration by Researcher*

- I have given a verbal explanation of the research, its activities and risks and I believe that the participant has understood that explanation.

Researcher Signature*

Name Researcher (please print)	
Signature of Researcher	
Date	

+An appropriately qualified member of the research team must provide the explanation of, and information concerning the research study.

Note: All parties signing the consent section must date their own signature.

,

Appendix K: Focus group follow-up email - young driver group

Dear ,

Research Project Title: Effect of Licensing Points on Driver Behaviour

We recently sent you an email inviting you to participate in a discussion group session that is being conducted by the University of NSW in Australia, on behalf of the New Zealand Transport Agency. The research is about how motorists respond to Licensing Points (i.e. demerit or merit points).

You were invited because you participated in the survey component of this research and indicated an interest participating in this focus group research, and you:

- Are aged 17, 18 or 19
- Hold a restricted NZ licence to operate a car

We did not receive your available times, but now that we have now scheduled a focus group session, **we would like to give you a final opportunity to participate**.

The discussion group session will be held

At Conference Room 3, Level 1 St Andrew's on the Terrace

30 The Terrace, Wellington

On Thursday 22 September 2016

At 10am – 11am

You will be offered refreshments and a Prezzy card to the value of NZD80, as compensation for your time and effort.

Attached you will find a Participant Information Sheet that provides detailed information about the discussion group session. This information is intended to help you to decide whether you wish to participate. Please read it carefully, and ask questions about anything that you don't understand or want to know more about by contacting Dr Julie Hatfield (email: j.hatfield@unsw.edu.au; phone: 61 481 511 434).

If you are eligible and available to participate please reply to this email to let us know.

Finally, we have room for a few more participants, so if you have a friend who, like you,

- Is aged 17, 18 or 19
- Holds a restricted NZ licence to operate a car

please ask them to contact me if they are interested in participating in the focus group (j.hatfield@unsw.edu.au)

Kind regards,

Julie

Appendix L: Focus group advertisement – young driver group

Researchers from The University of NSW (Australia) [UNSW] are seeking young drivers to participate in focus group discussions that they are conducting on behalf of the New Zealand Transport Agency. The discussion will be about how drivers respond to Licensing Points (i.e. demerit or merit points).

In particular the UNSW researchers are seeking people who

- Are aged 17, 18 or 19
- Hold a restricted NZ licence to operate a car

The focus group session will be held in Wellington on Thursday 22nd September at 10:00am. It will last about 1 hour, and participants will be offered a Prezzy card to the value of NZD80 as compensation for their time and effort.

If you are eligible and interested in participating in this session, please contact Dr Julie Hatfield (j.hatfield@unsw.edu.au). She will send you a Participant Information Statement that provides detailed information about the discussion group session, to help you to decide whether you wish to participate.

If you have friends who may be eligible and interested please ask them to contact Dr Julie Hatfield (j.hatfield@unsw.edu.au).

Appendix M: Focus group confirmation email - young driver group

Dear ,

Research Project Title: Effect of Licensing Points on Driver Behaviour

Thank you for your interest to participate in focus group research about licensing points that is being conducted by the University of NSW in Australia, on behalf of the New Zealand Transport Agency.

I am pleased to let you know that we have scheduled a discussion group at a time that you indicated you are available:

At Conference Room 3, Level 1

St Andrew's on the Terrace

30 The Terrace, Wellington

On Thursday 22 September 2016

At 10am – 11am

You will be offered refreshments and a Prezzy Card to the value of NZD80 as compensation for your time and effort.

Please respond to this email to let us know whether you are still able to make it to this session.

We have room for more participants, so if you have a friend who, like you,

- Is aged 17, 18 or 19
- Holds a restricted NZ licence to operate a car

please ask them to contact me if they are interested in participating in the focus group (j.hatfield@unsw.edu.au)

We will send you a reminder email the day before the session.

Kind regards,

Julie

Appendix N: Focus group reschedule email - professional driver group

Dear ,

Research Project Title: Effect of Licensing Points on Driver Behaviour

Thank you for your interest to participate in focus group research about licensing points that is being conducted by the University of NSW in Australia, on behalf of the New Zealand Transport Agency.

Unfortunately we have had to schedule the session at a time for which you did not indicate that you are available. The discussion group session will be held:

At Conference Room 1, Level 2

St Andrew's on the Terrace

30 The Terrace, Wellington

On Thursday 22 September 2016

At 5:30pm – 6:30pm

If things have changed and you are now able to attend at this time please reply to this email to let us know. We would really like you to be involved.

If you are unable to attend, apologies that we could not involve you at this time, and thank you once again for your interest.

Kind regards,

Appendix O: Focus group reminder email: young driver group

Dear ,

Research Project Title: Effect of Licensing Points on Driver Behaviour

Thank you for confirming your willingness and availability to participate in a discussion group for this research project that is being conducted by the University of NSW in Australia, on behalf of the New Zealand Transport Agency.

This is a polite reminder that the discussion group session will be held tomorrow:

At Conference Room 3, Level 1

St Andrew's on the Terrace

30 The Terrace, Wellington (see map attached)

On Thursday 22 September 2016

At 10am – 11am

You will be offered refreshments and a Prezzy card to the value of NZD80, as compensation for your time and effort.

If you are no longer able to attend please reply to this email to let us know.

Kind regards,

Appendix P: Focus group structured discussion protocol - young driver group

- Thank participants for being willing to take part
- Introductions
- Information from Information Statement
- Consent Forms for signature
- 'Housekeeping' (toilets etc)

In New Zealand, and quite a few other countries, licensing points are used as a way of encouraging motorists to stick to the road rules and make safer choices. In New Zealand certain driving offences incur demerit points. Under the New Zealand demerit point system, if you accumulate 100 or more demerit points in any two-year period, your licence can be suspended for three months.

We would like to get an understanding of what you think of the current demerit point system, and how it affects your driving. We will ask various questions to prompt discussion. There are no right or wrong answers. We just want to hear your thoughts.

- What do you think the demerit points system as a way of encouraging motorists to follow the road rules?
  - Does it work?
  - Is it fair?
  - What (else) is good?
  - What (else) is bad?
- Does the possibility of getting demerit points encourage *you* to stick to the road rules?
  - Why? Why not?
  - Does it depend on how many demerit points you already have?
  - Is it the same for all behaviours, like speeding, driving while over the legal alcohol limit?
- Do you think there are any ways of avoiding getting demerit points?
  - What strategies could you use? How effective are these strategies?
- Do you think that there is a real possibility of you losing your licence because of reaching the demerit point threshold?
  - Why/why not?
- Would it be a big problem for you if your licence got suspended?
  - Why/why not?
  - Would you stop driving (if your licence got suspended)?
  - If no, would you drive more carefully (if driving while suspended)?

- Under the current demerit point system demerit points do not apply to speeding offences that are detected by a camera instead of Police. Why do you think this is?
  - If anyone mentions swapping or trafficking points: have you ever heard of this happening? Have you done it? Would you?
- Would you drive differently if demerit points applied to camera-detected offences?
  - How?
  - Why?
  - Do you think applying demerit points to camera-detected offences would be good or bad? Why?
- At the moment New Zealand has a threshold of 100 demerit points. Some countries have a threshold of 12 points, but motorists get fewer points per offence. So for example, instead of getting 20 points for exceeding the speed limit by 20 km/h, a motorist in a '12 point threshold system' might get three demerit points. Would you drive differently if New Zealand had a '12 point threshold system' (compared to now)?
  - How?
  - Why?
  - Do you think a '12 point threshold system' would be good or bad? Why?
- In some countries the number of demerit points applied to some offences are doubled during holiday periods (when there are often a lot of serious crashes). Would you drive differently if this were the case in New Zealand?
  - How?
  - Why?
  - Do you think a "double demerit point periods" would be good or bad? Why?
- In the current system in New Zealand, demerit points stay on your licence for 2 years after you get them. In some countries demerit points stay active longer; for example 3 years. Would you drive differently if this were the case in New Zealand?
  - How?
  - Why?
  - Do you think having demerit points be active for a longer period would be good or bad/ Why?
- Do you think it is important for motorists to be kept informed about the number of points on their licence?
  - Why? Why not?
- There are different approaches to keeping motorists informed. Some countries have a website that can be checked. Some have telephone number that can be called. Some send a letter when a motorist has used up a certain proportion of their points. An email or sms could also be used. How do you think motorists should be informed?
  - For website: How often do you think you would use a service like that?
  - For telephone: How often do you think you would use a service like that?
  - For a letter: when do you think it should be 'triggered'?

  - For email/sms: When do you think it should be 'triggered'?
  - Do you see any problems with any of the methods of keeping motorists informed?
  - Do you think motorists should pay a fee to cover the expenses of keeping them informed?
- In the current system in New Zealand, if you reach the demerit point threshold your licence can be suspended for three months. Some countries have a longer suspension period; for example six months. Would you drive differently if this were the case in New Zealand?
  - How?
  - Why?
  - Do you think a longer suspension period would be good or bad? Why?
- Currently in New Zealand, people who are caught driving with a suspended licence can have the vehicle they are driving impounded. Do you think this is good or bad?
  - Why?
- Currently in New Zealand the same demerit point system applies to all motorists. In some countries the demerit point system is made more strict, or more lenient, for particular groups of motorists.
  - Would you drive differently if New Zealand had a lower demerit point threshold for people with restricted licences?
    - How?
    - Why?
  - Do you think having a lower demerit point threshold for people with restricted licences would be good or bad?
    - Why?
    - What if novice drivers could build up to a standard threshold by driving offence-free?
  - What would you think of having a longer suspension period for people who have already had their licence suspended in the last five years?
    - Could it be good? Why?
    - Could it be bad? Why?
    - What about for people who have had their licence suspended more than once in the last 5 years?
- Other than a demerit point system, what would encourage you to stick to the road rules?
    - Sometimes people suggest that rewarding motorists for offence-free driving would encourage them to stick to the rules. A reward might be a reduced licence renewal fee, or an increased demerit point threshold. Would you drive differently if New Zealand rewarded motorists for 'good behaviour'?
    - How long should you have to drive without offending in order to be rewarded?
    - How would you feel about people getting the reward because they weren't on the road very much and so had no offences?
    - What are appropriate rewards?
- Do you have any suggestions for improvements to the demerit point system in New Zealand?
- Are there any other comments you would like to make about today's topic or discussion?

- Is there anything you would like to ask about our discussion today?

Thank you for your participation and offering us insights and better understanding of what you think about the demerit point system in New Zealand. Please remember to keep the Information Statement that you were given at the beginning of the session, because it tells you who to contact if you have any queries or complaints later on.

Appendix Q: Focus group showcards - young driver group

General description of offence	Demerit points
Exceeding the speed limit by not more than 10 km/h	10
Exceeding the speed limit by more than 10 km/h but not more than 20 km/h	20
Exceeding the speed limit by more than 20 km/h but not more than 30 km/h	35
Exceeding the speed limit by more than 30 km/h but not more than 35 km/h	40
Exceeding the speed limit by more than 35 km/h	50

General description of offence	Demerit points
Driver uses mobile phone while driving a vehicle	20
Driving between 10 pm and 5 am without a supervisor	35
Person under 20 driving or attempting to drive with excessive breath alcohol or blood alcohol concentration	50
Driver fails to give way at pedestrian crossing	35
Unsafe passing	35
Driver fails to stop at stop sign	20
Driver fails to give way at give-way sign	20
Drive too close to vehicle in front	20

Appendix R: Glossary

ACC	Accident Compensation Corporation
BAC	blood alcohol content
Demerit point system	A licensing point system in which accruing points above a specified threshold within a specified period of time may result in licence suspension.
DPS	demerit point system (see above)
Driver disqualification	A driver is disqualified when they are not allowed to hold or obtain a licence.
GDLS	graduated driver licensing system
Licence suspension	A licence is suspended when it is made temporary invalid.
Licensing point allotment	In a PPS, the initial number of points held on a licence and which being lost due to offending may result in licence suspension.
Licensing point lifetime	In a DPS, the length of time that demerit points remain active on a licence. In a penalty point system, the length of time before penalty points are restored to a licence.
Licensing point system	Adjunct to monetary penalty systems in which specified offences are associated with licensing points and a certain number of licensing points within a specified period of time may result in licence suspension. May be a DPS or a PPS.
Licensing point threshold	In a demerit point system, the number of points which having accrued on a licence due to offending may result in licence suspension.
Licence reinstatement	Revalidating a licence after a suspension.
LOWESS	Locally weighted scatterplot smoothing (a citation is given in Benedettini and Nicita 2009)
LPS	licensing point system/s (see above)
Multiple offender	Motorist who has incurred at least two offences.
NHTSA	National Highway Traffic Safety Administration (USA)
Passing on licensing points	Persuading, coercing or paying another individual, such as a family member or friend, to falsely admit to being the driver at the time of an offence and so to receive the associated demerit points.
Penalty point system	A LPS in which points are deducted from an initial allotment and when none remain a licence suspension may occur.
PPS	penalty point system (see above)
SD	standard deviation
Suspension period	The length of time that must elapse before a suspended licence may be re-instated.
Transport Agency	New Zealand Transport Agency
UNSW	University of New South Wales