

## Quantitative study of attitudes, motivations and beliefs related to speeding and speed enforcement

Walker, Evan <sup>1</sup>, Murdoch, Claire <sup>1</sup>, Bryant, Patricia <sup>1</sup>, Barnes, Ben <sup>2</sup>, Johnson, Bettina <sup>2</sup>

<sup>1</sup>NSW Roads and Traffic Authority; <sup>2</sup>Ipsos-Eureka Social Research Institute

email: evan\_walker@rta.nsw.gov.au

### **Abstract**

Speed has been identified as the most significant behavioural road safety issue in NSW. Accordingly, the NSW Government has introduced a range of initiatives to address the involvement of speed in the road toll. These initiatives include police enforcement, fixed digital speed cameras, speed limit reviews, public education campaigns, 40 km/h speed limits in both school zones and areas of high pedestrian activity and a 50 km/h general urban speed limit and increased speeding penalties. These initiatives have been successful in reducing speeding related road trauma in NSW, resulting in significant reductions in the road toll, especially from 2002 to 2008.

Despite these successes, speeding continues to be a significant issue in NSW and preliminary data from 2009 indicates that it may be contributing to an increase in the road toll this year. Speed surveys conducted annually by the NSW Roads and Traffic Authority also show that despite overall reductions in travel speeds across NSW, a large proportion of drivers continue to speed. A quantitative telephone survey of 1,500 NSW drivers examined a range of speeding issues including circumstances under which drivers most commonly speed, the social acceptability of speeding, motivators for speeding, enforcement methods and the acceptability of speeding in different contexts, for example school zones. The results indicate that despite understanding that speeding is the main contributor to the road toll, speeding is common and is not yet seen as socially unacceptable by many NSW drivers. The study also found high approval for speed enforcement and an understanding and agreement with how speed limits are currently set. The key modifiers of drivers speeding behaviour were found to be enforcement and when driving with family in the car.

### **Keywords**

Speeding, Enforcement

### **Introduction**

Speed has been identified as the most significant behavioural road safety issue in NSW, being a contributing factor in around 40 per cent of fatal crashes and 17 per cent of injury crashes each year. The cost of speed related crashes to the community is significant, both in loss of life and injury to the individual and the financial burden this places on the whole community. From 2003-2007 speed related crashes cost on average the lives of 190 people and lead to another 4,400 being injured each year, resulting in an estimated annual cost to the community of \$917 million.

Accordingly the NSW Government has introduced a range of initiatives to address the involvement of speed in the road toll. These initiatives include 172 fixed digital speed cameras, 65 of these cameras are in school zones) speed limit reviews of major roads and highways, public education campaigns, 40 km/h speed limits in both school zones and areas of high pedestrian activity, a general urban speed limit of 50 km/h and legislative changes increasing the penalties for speeding for novice drivers, and for high range offences.

These initiatives have proven successful with a steady downward trend in the number of speed related fatalities in NSW from 2002-2006 and a dramatic 29 per cent drop in speed related fatalities from 2006-2007. However, more recently, there was an 11 per cent increase in speed related fatalities between 2007 and 2008. In 2009, NSW is experiencing a significant increase in the road toll compared to recent years and preliminary data suggests that speeding is one of the main contributors to the recent increase.

As a response the NSW Government has announced and commenced the introduction of several new initiatives including a review of speeding penalties, point to point enforcement targeting heavy vehicle speeding, a motorcycle Graduated Licensing Scheme and an upgrade of the red-light camera program to digital technology, which will include some combined red-light speed cameras.

It is clear from annual RTA speed survey data that the level of speeding in the community is significant and anecdotally, exceeding the speed limit is seen by most drivers as acceptable and even safe.

To better understand the beliefs and attitudes that lead to this high level of speeding in NSW, the RTA commissioned a large scale telephone survey on NSW driver's attitudes to speeding in late 2008 that was preceded by a smaller scale qualitative focus group based study [1].

This paper summarises the results of this survey which was conducted on behalf of the RTA by Ipsos-Eureka Social Research Institute. The findings of the survey provide insights into drivers' behaviour that will guide policy makers in addressing the recent contribution of speeding to increases in the road toll. The research also aims to set a baseline for speeding attitudes and behaviours in NSW that can be used to measure future shifts in driver's attitudes to speeding.

## **Methods**

The survey sample comprised NSW residents aged 17 years and over whom held a current, suspended or disqualified NSW drivers licence. A further requirement for inclusion in the study was that participants drove on average three or more times per week or had driven on average three or more times per week prior to having their licence suspended or disqualified. No restriction was placed on average number of hours spent driving each week. The sample was stratified by gender, by narrow age categories and by location so that it was representative of NSW driver licensing data.

The fieldwork for the main survey, which included 1,500 telephone interviews, took place between Tuesday 5 May and Wednesday 17 June. The survey took on average 24 minutes and the response rate was 21 per cent. The main survey was preceded by a pilot survey of 102 telephone interviews was conducted. The results of the pilot study however are not included in the results discussed in this paper.

Prior to commissioning the telephone survey, the RTA also commissioned Ipsos-Eureka to conduct qualitative research [1] to guide the development of the survey instrument for the quantitative study. The qualitative research involved 10 group discussions among non-professional drivers, who drove a car regularly. The groups were segmented by age, gender and geography with groups held both in the Sydney metropolitan area as well as major regional centres. Discussions were conducted between 2 and 12 June 2008.

## **Results**

The sample of survey participants was representative of the profile of NSW driver licence holders, with 71 per cent of the sample from metropolitan areas and 29 per cent from non-metropolitan areas. The sample was divided on gender with males 52 per cent and females 48 per cent. In terms of age, 39 per cent were aged 17-39 years, 39 per cent aged 40-59 years and 22 per cent aged 60 years or more. The majority of the sample was unrestricted licence holders with only 9 per cent holding a provisional licence and 1 per cent having a suspended or disqualified licence.

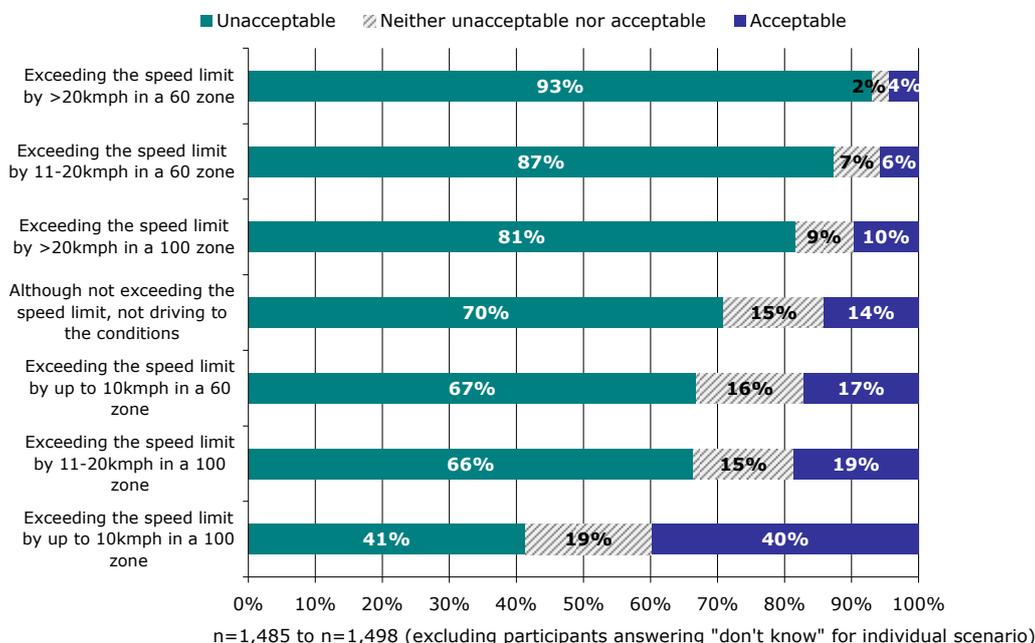
More than a quarter of the sample (28%) reported that in an average week they spent at least 12 hours driving with more than half of the sample driving 6 or more hours a week on average.

Survey participants were asked about their driving history and two per cent reported that they had their licence suspended or disqualified in the last three years, mostly from an accumulation of demerit points. However, the large majority (76%) indicated that they had no speeding offences recorded against them in the last three years.

Of the drivers who had been detected speeding, the majority (63%) were detected speeding by fixed speed cameras. There were a small number of drivers (3%) who reported that they had been a driver in a crash where they were exceeding the speed limit.

The social acceptability of speeding

Participants were read seven scenarios relating to speeding and asked to indicate how acceptable they felt each scenario was. Even in the context of a telephone interview a large number of participants did not rate various speeding scenarios as unacceptable. These results are presented in Figure 1.



**Figure 1:** Perceived acceptability of speeding scenarios.

Low level speeding was seen as acceptable by a large number of participants with only 41 per cent indicating that exceeding a 100 km/h speed limit by up to 10 km/h was unacceptable and around two thirds indicating that exceeding a 60 km/h speed limit by up to 10 km/h was unacceptable. The speeding behaviour viewed as least acceptable was exceeding the speed limit by both 11-20 km/h and more than 20 km/h in a 60 km/h zone with around 90 per cent of drivers reporting both of these scenarios as unacceptable. Participants were however more accepting of 100 km/h speed limits being exceeded by both 11-20 km/h and more than 20 km/h.

The perceived acceptability of speeding differed by gender with women having a significantly lower acceptance of speeding than men, this was particularly the case for speeding in a 100 km/h zone. Metropolitan participants were more accepting of speeding in a 60 km/h zone than non-metropolitan participants and of ‘although not speeding, not driving to the conditions’. The biggest significant difference between age groups was found for the scenario of speeding at up to 10 km/h in a 100 km/h zone. This behaviour was significantly more acceptable to 30-49 year olds when compared to participants aged 50 years or older.

Further cross tabulations of the results found that 54 per cent of males aged 30-49 believe that speeding up to 10 km/h in a 100 km/h zone is acceptable and 25 per cent believe that speeding up to 10 km/h in a 60 km/h zone is acceptable. Overall males and participants aged 30-49 were the most accepting of speeding.

While there appears to be a high level of acceptability for speeding, speed was the factor most commonly mentioned, overall, in the context of factors that lead to road crashes – mentioned by 57% of participants, ahead of drink driving, inattention, inexperienced drivers, and fatigue.

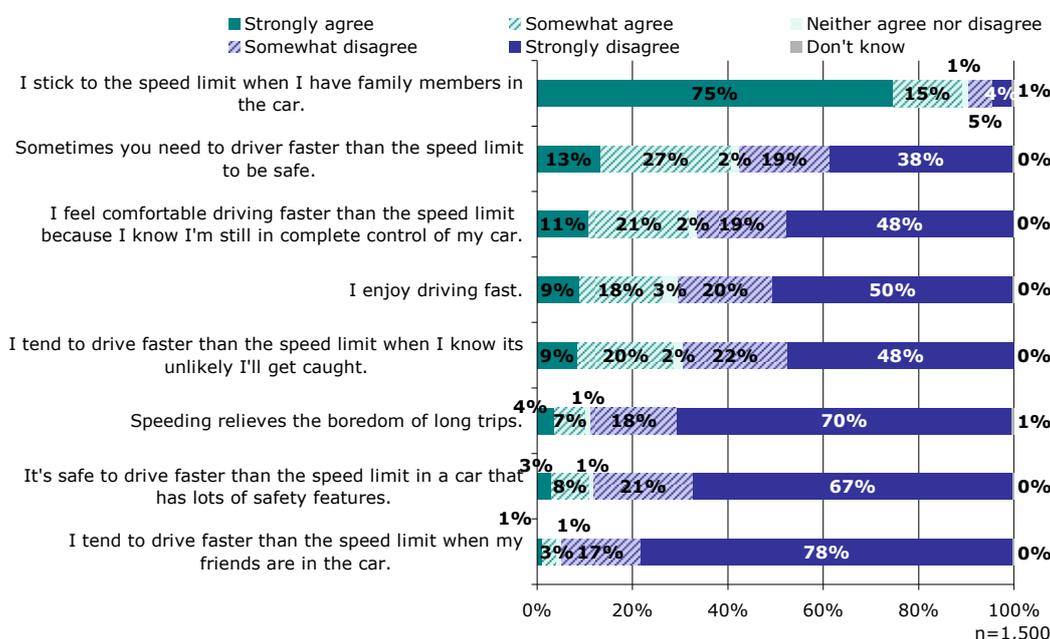
Motivators and modifiers of speeding behaviour

The survey included a battery of 22 attitudinal and behavioural statements. Participants were asked the extent to which they agreed with each of the statements. Key findings from the statements relating to motivators and modifiers of speeding behaviour are presented in Figure 2. Several of these statements reflected factors that were uncovered in the earlier 2008 qualitative research [1], including the role of family as a modifier of speeding behaviour and motivators such as being comfortable speeding because a driver ‘knows’ they are still in complete control of their car.

The survey results supported the previous qualitative findings that family was the key modifier of speeding behaviour, with 90 per cent of participants agreeing with the statement that ‘I stick to the speed limit when I have family in the car’. The level of agreement with this statement did not differ significantly by age, gender or location.

The other key modifier of speeding behaviour was enforcement with 29 per cent of drivers agreeing that they tend to drive faster than the speed limit when they believe it is unlikely they will be caught. Participants aged less than 50 years old were significantly more likely to agree with this statement than participants over the age of 50.

A large number of participants agreed that safety is a motivator for speeding behaviour with 41 per cent of participants agreeing with the statement that ‘sometimes you need to drive faster than the speed limit to be safe’. Metropolitan participants were significantly more likely to agree with this statement than non-metropolitan participants as were older drivers (30 years or older). However when participants who agreed with this statement were asked about circumstances under which they felt that this was the case, they most often reported that it was to complete a typical function of driving with; you’re overtaking (39%), to avoid a collision (21%), to move away from someone driving erratically (21%), you’re being tailgated (16%), you’re along side a heavy vehicle (16%), the flow of traffic is faster than the speed limit (11%) and you’re in merging traffic (5%) were the most common reasons mentioned.



**Figure 2:** Agreement with statements - motivators and modifiers of speeding behaviour.

However, when participants were asked about the extent to which they agreed or disagreed with the statement ‘there’s no such thing as safe speeding’, the majority of participants (73%) agreed with the statement.

Supporting the findings of the earlier qualitative research [1] 32 per cent of participants agreed with the statement ‘I feel comfortable driving faster than the speed limit because I know that I am still in complete

control of the car'. Male participants were significantly more likely than female participants to agree with this statement, while participants aged less than 50 were significantly more likely than participants aged 50 years or older to agree with this statement.

The enjoyment of speeding was also a motivator for speeding with 27 per cent of participants agreeing with the statement 'I enjoy driving fast'. Males and participants aged less than 50 years old were most likely to agree with this statement.

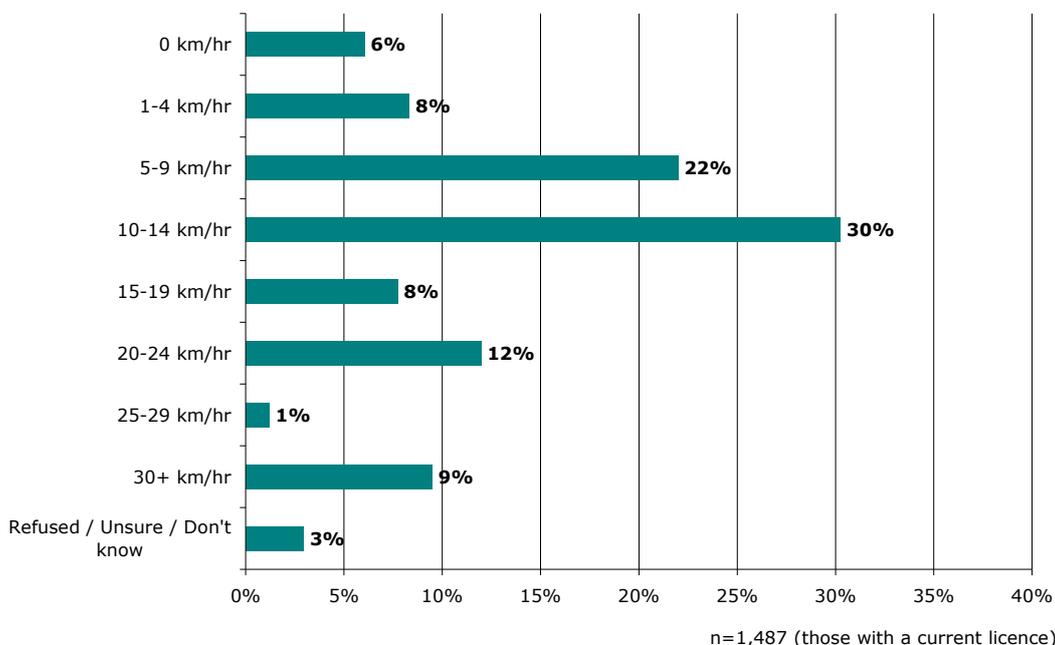
Speeding Patterns

Participants were asked about their actual speeding behaviour including how often they exceed the speed limit, by how much and the circumstances in which they do so. Just over one in ten (12%) participants reported exceeding the speed limit every time they drive with a further 12 per cent reporting that they mostly exceeded the speed limit when they drive. This result means that around one in four drivers admit to frequently speeding, with another third of drivers (34%) admitting to speeding some of the time. A minority of drivers (43%) reported that they rarely (37%) or never (6%) speed. There was also a tendency for males and participants aged less than 50 years to admit to speeding more often, however 19 per cent of females could also be classed as 'frequent' speeders.

This finding is similar to previous Australian research conducted by Hatfield and Job [2] with NSW licence holders that found that 24 per cent of respondents reported that they were likely to speed 'under typical conditions'.

When asked about the average amount that they exceed the speed limit 35 per cent reported speeding between 1-4 km/h over the limit, 45 per cent reported speeding between 5-9 km/h over the limit and 13 per cent 10 km/h or more above the limit. Males tended to report exceeding the speed limit by a larger margin than females and participants aged 30-39 were significantly more likely than other age groups to report exceeding the speed limit by an average amount of 10-14 km/h.

Participants were also asked about the maximum amount that they exceeded the speed limit, with these levels of speeding presented in Figure 3.



**Figure 3:** Reported maximum margin by which the speed limit is exceeded at any time.

The most concerning result is that for the largest proportion of participants, 30 per cent, the maximum amount they exceeded the speed limit does not constitute low level speeding, but rather speeding 10-14 km/h over the limit. These results reveal that a significant number of participants engage in what could be considered as higher level speeding with 38 per cent admitting to exceeding the speed limit by a maximum margin of between 10 and 19 km/h and 21 per cent by 20 km/h or more.

These circumstances that drivers were most likely to exceed the speed limit were presented in the 22 attitudinal statements and were based upon circumstances that were identified in the qualitative research [1] as those in which drivers typically reported exceeding the speed limit.

The main circumstance in which participants agreed that they commonly exceed the speed limit is where they speed accidentally. However, while 82 per cent of participants agreed with the statement 'I speed accidentally, not realizing I have crept over the speed limit', this does not mean that their speeding behaviour is mainly or predominantly accidental. As other results have demonstrated, the self-reported behaviour particular of males and participants aged less than 50 years old indicates that their speeding is deliberate, regular and at a level that could not be regarded as accidental.

Other statements relating to speeding patterns that attracted a high level of agreement from participants included 'I briefly travel faster than the speed limit to get around other drivers' (69%), 'I tend to drive faster than the speed limit on the open road where I can see well in front of me' (52%), 'I tend to drive faster than the speed limit when I am running late' (49%), 'I tend to drive faster than the speed limit on roads with which I am very familiar' (44%), 'I sometimes drive faster than the speed limit to get away from someone who is tailgating me' (34%) and 'I tend to drive faster than the speed limit when there aren't many cars on the road' (30%).

Again males were more likely than females to agree with most statements. Interestingly there were significant differences between participants aged over 50 and those aged less than 50, with younger participants much more likely to agree with statements relating to circumstances where they speed deliberately compared to statements where they speed accidentally or because they feel pressured to.

#### Understanding of speed enforcement and attitudes to enforcement measures

In order to measure perceptions of speed enforcement, participants were read out three speed limits and asked how many kilometres per hour they felt they could drive over the speed limit and be pretty sure that they would not get booked for speeding, even if they were to pass a speed camera or police.

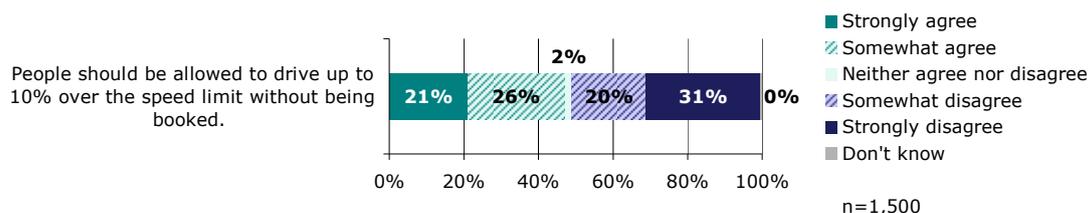
The results differed significantly between speed limits with 66 per cent of participants believing that they would get booked for any amount over the speed limit in a school zone, compared with only 28 per cent for a 60 km/h speed limit and 19 per cent for a 100 km/h speed limit. The majority of participants believed that there was some margin that they could exceed both 60 km/h and 100 km/h speed limits and be pretty sure that they would not get booked.

A large proportion of participants, 38 per cent for 60 km/h and 39 per cent for 100 km/h limits, reported that they could driver 5-9 km/h over the speed limit and be "pretty sure" that they would not get booked. Twenty two per cent of participants believed that they could drive 10-14 km/h over a 100 km/h speed limit and not be booked. It is clear from these results that drivers believe that low level speed enforcement changes by speed limit.

Data analysis also revealed a significant positive correlation between the amount by which drivers believed they could go over a particular speed limit (60km/h versus 100km/h) and be "pretty sure" that they would not get booked, and perceived acceptability of exceeding that same speed limit. For both 60km/h and 100 km/h speed limit zones, those who thought they could travel 10-14 kilometres per hour over the speed limit were significantly more likely to view exceeding that speed limit as acceptable than were drivers who felt they could not exceed the speed limit by so large a margin.

A statement directly relating to low level speeding enforcement was included in attitudinal statements that participants were asked. Over one third of drivers (34%) agreed with the statement that ‘I drive only a few kilometres per hour over the speed limit because I know I can’t be booked for speeding’.

Participants were also presented with the statement that people should be allowed to drive up to 10 per cent over the speed limit without ‘being booked’. The results of this question are presented in Figure 4. Overall, a slight majority (51%) of participants disagreed with this statement, with the majority of those who disagreed, strongly disagreeing. Males were significantly more likely to agree with this statement and participants aged 30-49 were significantly more likely to agree with the statement than those aged 50 years old or more, supporting earlier results that show that both of these groups see speeding as more acceptable.



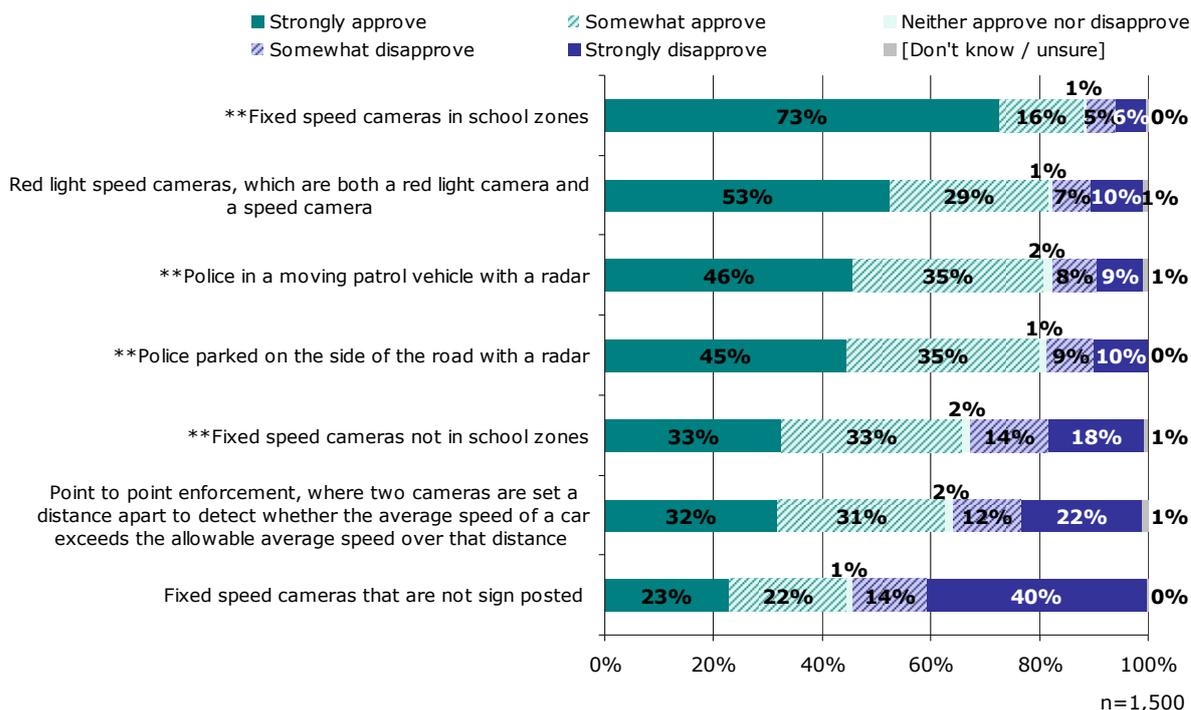
**Figure 4:** Level of agreement with statement ‘people should be allowed to drive up to 10% over the speed limit without being booked’.

When considering four types of enforcement currently used in NSW, 89 per cent of participants reported approving of fixed speed cameras in school zones, with 73 per cent strongly approving of this measure. Eighty one per cent approved of police using a radar in a moving police car, 80 percent approved of police parked on the side of the road with a radar and 66 per cent approved of fixed speed cameras not in school zones. While females were significantly more likely to approve of most of these enforcement measures, the approval level was still high for males.

The majority of participants also indicated either that the current level of enforcement by both police and fixed speed cameras should stay the same or else increase. Indeed more than half of all research participants (54%) indicated that they thought speeding enforcement by police should increase and more than one in four (27%) indicated that they thought speed camera enforcement should be increased. Interestingly, drivers aged 21-24 years were significantly less likely to support an increase in police speed enforcement.

This finding is not unique to this study of NSW drivers as research involving respondents from all Australian states conducted in 2003 [3] also found that the majority of respondents believed that the amount of speed camera enforcement should either increase or not change.

When asked about other initiatives not yet used in NSW, 82 per cent of participants reported approving of red-light speed cameras and 63 per cent of participants supported the use of point to point enforcement. However, only 45 per cent of participants approved of speed cameras that are not signposted. Non-metropolitan drivers were more supportive than metropolitan drivers of both point to point enforcement and red-light speed cameras. The combined results on approval of enforcement initiatives are presented in Figure 5.



**Figure 5:** Opinion of safety initiatives used in other areas (plus currently in NSW, for comparison). (\*\* are those initiatives currently in use in NSW)

Participants were also asked specific questions about the NSW fixed speed camera program. When asked about camera accuracy a slightly higher proportion of participants reported being confident that cameras are accurate (53%) than reported not being confident (43%). Younger drivers were more confident than older drivers in the accuracy of speed cameras. When those participants who reported being not confident in speed camera accuracy were asked why, the most common response (41%) was because of media reports about speed camera inaccuracy. Participants were also asked about speed camera signage with 85 per cent reporting that they were satisfied with the number and positioning of signs for fixed speed cameras.

Participants were also asked about the extent to which enforcement discourages them from speeding, 61 per cent reported that police with a radar strongly discourages them from speeding and 56 per cent reported that fixed speed cameras strongly discourage them from speeding.

Participants were also asked about the relative deterrence value of fines versus demerit points. A slightly larger proportion of participants reported that demerit points were the greater deterrent (42%), than reported that the risk of receiving a fine was the greater deterrent (33%). Males, higher income earners and those who spent more than 12 hours per week driving were all significantly more likely to report that demerit points were the greater deterrent to speeding.

However participants who had not had a speeding offence recorded against them in the previous three years were significantly more likely than those who had to report that the risk of receiving a fine was a greater deterrent to speeding than demerit points. In contrast, demerit points were revealed as a far greater deterrent for those who had already lost some in the preceding three years. Forty eight percent of participants who had been caught for speeding once in the previous three years reported that demerit points were the greater deterrent. This figure rose to 63 per cent among those who had been caught twice, and to 72 per cent for those who had been caught three or more times, showing that not surprisingly as drivers accrue demerit points, the deterrence value of this sanction increases.

### Attitudes to speed limits and understanding of how they are selected

Participants were asked what they thought the general urban speed limit was. While 57 per cent of participants correctly identified 50 km/h as the general urban speed limit, more than one in three (35%), mistakenly thought that it was 60 km/h. Knowledge of the general urban speed limit differed significantly with age; while 70 per cent of 17-24 year olds correctly answered 50 kilometres per hour, only 48 per cent of participants aged 60 years or more could do so.

Participants were also asked what criteria they thought are used for selecting speed limits. Three of the four most frequently mentioned criteria relate to how built up the area is that the road passes through (43% mentioned this generically), including whether there are school children (27%) or other pedestrians (23%) around. Driving conditions, including the condition of the road (26%) and usual traffic volumes (18%), also featured strongly. A review of a roads crash history was mentioned by only one in ten participants.

Acceptance of speed limits was also explored in the survey and was found to be high. Participants were read out a total of seven different speed limits including 40 km/h school zones and 40 km/h speed limits in areas of high pedestrian activity and for each one asked whether they thought the speed limit was too fast, too slow or about right. For those zones not accompanied with a description of the type of area the speed limit would apply to, participants were asked to comment in terms of the types of roads to which that speed limit usually applies.

Satisfaction with speed limit zones was highest for 60 kilometre per hour speed limit zones (88% of participants reporting that that speed limit was ‘about right’ for the types of roads to which it usually applies), and lowest for 110 kilometre per hour zones (75%). Detailed findings on the acceptance of speed limits are presented in Figure 6.

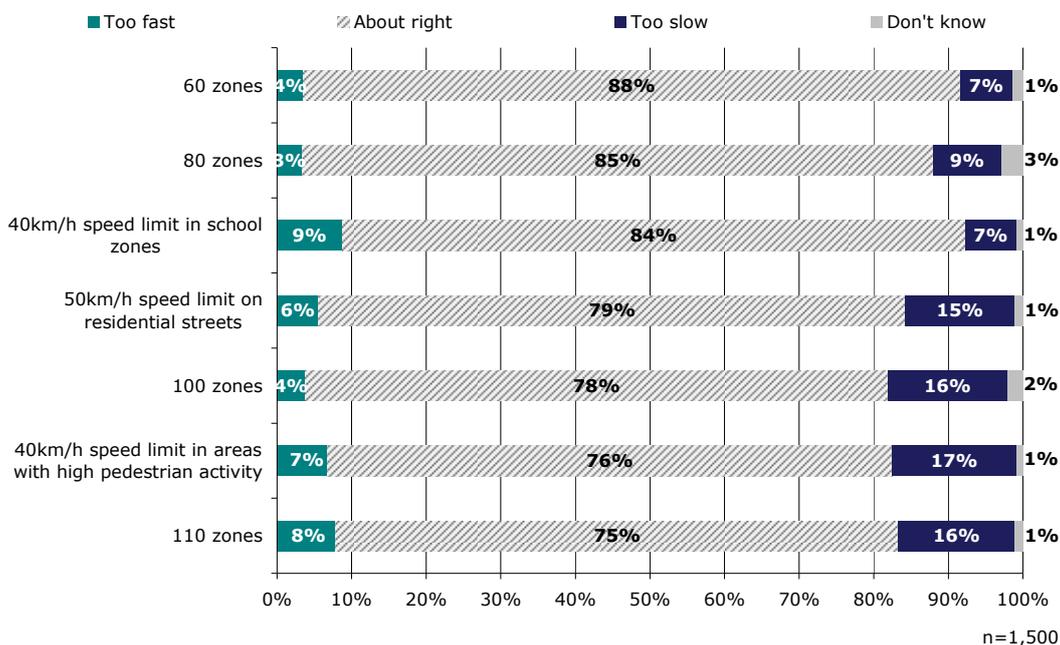


Figure 6: Perceived appropriateness of speed limits.

### Conclusion

This study has found that despite understanding that speeding is the key factor in motor vehicle crashes, speeding is common and is not yet seen as socially unacceptable (except in extreme cases), with NSW drivers reporting speeding in a wide variety of situations and justifying their speeding behaviour in a wide variety of ways. While survey participants did not report usually speeding by a large amount, with the

most common 'average' level of speeding 5-9 km/h over the limit, 30 per cent admit to a maximum amount of between 10-14 km/h over the limit and almost one in five drivers engage in high level speeding more than 20 km/h over the limit.

As with previous research findings about NSW drivers [2], the study found that the male drivers surveyed and those under the age of 50 years are more likely to speed. Further, the study also found that these drivers speed at a higher level, speed more often and are more likely to see speeding as acceptable. It is clear from these results that speeding messages directed to drivers need to be primarily targeted at males aged 17-49 years.

There is a clear link between drivers' acceptance of speeding and their self reported speeding behaviour, with a significant positive correlation found between the two. Research participants who reported speeding at an average of less than 10km/h over the speed limit were significantly more likely to view speeding as unacceptable than participants who reported usually exceeding the speed limit by a larger margin. When considering that research has shown that a small reduction in average speed leads to more substantial reductions in fatal and serious injury crashes [4], shifting what drivers consider to be an acceptable level of speeding will be crucial in reducing the road toll.

While a large number of drivers agree that sometimes they need to speed to be safe, typically when overtaking, around three in four drivers say that they agree, at least to some extent, with the statement 'there's no such thing as safe speeding'. This result may indicate that 'speeding to be safe' is more likely a rationalisation of speeding rather than a strong belief.

Two key motivators of speeding, which younger and male drivers were more likely to agree with, were that they 'feel comfortable driving faster than the speed limit because I know that I am still in complete control of the car' and they 'enjoy driving fast'. Both of these motivators were also identified in recent Canadian research [5] on driver attitudes to speeding and speed management, however the Canadian research found that 'enjoying driving fast' is linked to more extreme instances of speeding. Both of these attitudes reveal an internal motivation for speeding that gives little consideration to the threat presented by external factors, such as other drivers or an unpredictable change in the road environment. Addressing these attitudes may prove productive in education messages.

The research found that a key modifier of speeding was family, with a majority of driver's claiming that they are more likely to stick to the speed limit when they have family members in the car, suggesting that, at some level, they realise that speeding is not truly acceptable, or safe. These modifying effects of family are supported by research conducted in Victoria [6] that found that vehicles with single vehicle occupants were significantly more likely to speed and speed excessively than those with two or more occupants. Considering these results a social marketing campaign that is able to extend the modifying effect of family or other vehicle occupants, to situations where drivers are driving alone, may reduce the level of speeding in the community.

The results of this research reinforce the fact that speed enforcement plays a crucial role in modifying speeding behaviour. It therefore seems clear that increasing the perceived frequency of speed enforcement activities, and hence the perceived likelihood of drivers being caught, will further discourage drivers from speeding. A similar argument can be made about changing people's perceptions of low level speeding enforcement as it seems likely that people are adjusting their speeding behaviour to fit within their assumptions of the level of speeding that would be detected and/or enforced.

There is, however, strong community support for speed enforcement with the majority of drivers indicating that they approve of the current enforcement initiatives used in NSW as well as initiatives, such as red-light speed cameras and point to point enforcement, that are already implemented in other jurisdictions. Approval is strongest for speed cameras in school zones followed by police radar enforcement and the study also found some support for an increase in speed enforcement.

The introduction of RBT has shown that a sustained commitment to enforcement can make a behaviour less socially acceptable [7]. With the level of support for speeding enforcement already high in the community, building on this support to further increase speed enforcement should provide gains in

reducing the social acceptability of speeding in NSW and consequently reduce drivers speeding behaviour and the number of speed related crashes.

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