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UNDERSTANDING THE MOTIVATIONS OF FLEEING DRIVERS

Interventions to reduce fleeing driver events

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1. Executive Summary

Purpose

Through the five other tranches of research completed for the Fleeing Driver Action Plan Research Programme, NZ Police have been able to develop a strong evidence base for what factors may motivate drivers to fail to stop for police. This research paper synthesises relevant findings from these previous tranches with international literature and policy to identify possible interventions to reduce this behaviour.

Background

Fleeing drivers present a unique challenge to police, with 3796 events recorded in 2017 (IPCA, 2019). While most pursuits are abandoned, others end in crashes, injury and even fatalities. The Evidence Based Policing Centre was commissioned to undertake six tranches of research into the motivations of fleeing drivers; this report is tranche six and aims to present how this behaviour could be reduced.

Key Insights

- The existing penalties for failing to stop for police in New Zealand are in line with those in place internationally with the exception of a stronger focus on vehicle confiscation and less on custodial sentences.
- New Zealand Police currently have a high apprehension rate for fleeing drivers; slightly more through pursuits than investigations. The experience of Queensland Police with their evade police provisions and focus on post-event investigations suggests that high apprehension rates can be maintained through investigation.
- The research literature on the deterrent effects of punishment suggests that increasing the severity of punishments for failing to stop for police would have little effect on offending. As outlined in deterrence theory, to be effective, potential offenders need to perceive punishment to be swift, certain and severe enough to outweigh the benefits of committing an offence. For fleeing drivers, this appears to be a complicated relationship, as the main motivation given by many is the punishment (for other offences) they believe they may be able to avoid by fleeing.
- One approach previously applied to fleeing driver behaviour is Behavioural Insights; this is the term used for applying evidence about how people make decisions and behave to improve the effectiveness of processes and policy. This evidence-based approach recognises that it is often more effective to encourage positive choice rather than restricting unwanted behaviour with penalties. The challenge for applying a behavioural insights approach directly to the issue of fleeing drivers is that there are limited “touchpoints” at which to influence this behaviour. Previous attempts to apply this approach also lacked insight from the drivers themselves.
- The suggestion of targeting messages to passengers rather than drivers may have some impact as some passengers report more fear, and possibly the ability to influence drivers when they are less rational themselves.
- Enforcing penalties on the owner of vehicles where the offender is not apprehended at the time of the event was also proposed in the work by BIT (2018). This approach is similar to that taken in Queensland where there is a reverse onus on the owner to prove their innocence, rather than police proving their guilt. Applying this approach may mean vehicle owners take a more proactive

approach to monitoring the use of their vehicle, and/or help to identify offenders as part of post-event investigations.

- One of the few interventions offenders identified that is a strong deterrent for failing to stop is the use of the Eagle helicopter. The BIT report (2018) suggested increasing the salience and reducing the predictability of surveillance by Eagle could provide some deterrent effect which was supported by the findings of the research tranches presented here.
- There are ways in which Police and other agencies can influence fleeing driver behaviour outside of punishment for this offending. This may include help with practical needs (e.g. driver licensing or alcohol and drug treatment), or to develop positive relationships between police and potential offenders. Any interventions where individuals feel they receive procedural justice and/or are helped by police could therefore reasonably be expected to increase compliance with police requests and reduce failing to stop events.
- Whilst it could be dependent on the cooperation of media outlets, it would be beneficial to highlight instances where a driver was caught without injury or providing information about the driver themselves including the consequences for fleeing. This could help to avoid a distorted view of fleeing driver events being in the public eye as is currently the case. Alternatively, police could publish statistics on how fleeing driver events are resolved to highlight the number of fleeing drivers apprehended through post-event investigations to help educate potential offenders on their risk; however this would need to be tested with offenders to ensure they see their likelihood of being apprehended is higher than their expectation, otherwise this could backfire.

Recommendations

The findings of the Fleeing Driver Research Programme (and the wider research literature) suggest that the most successful interventions are likely to target:

- Reducing the perception that fleeing is worth the risk through increasing apprehension through other means, and potentially publicising success in this regard
- Improving the relationship between potential offenders and the police and increasing perceived procedural justice
- Preventative measures to reduce other offending (e.g. efforts to increase driver licensing, or drug and alcohol treatment)

These changes will take time to implement, particularly where perceptions need to change; for example, in increasing trust and confidence in police particularly where these perceptions are long ingrained through a lifetime and reinforced by social networks. However, any interventions that increase the perception of potential offenders that they will be identified and held to account even if not apprehended through a pursuit can be expected to have an impact on overall offending (e.g. post event investigations, use of Eagle helicopter, targeting penalties to vehicle owners). Efforts to address contributing factors such as substance use and driver licensing may also prove effective and relatively easy to implement in conjunction with work already in place within NZ Police.

2. Background

What are the most effective mechanisms for interventions to reduce fleeing driver events? How can we better utilise punishments directed at the individual offender (e.g. licence suspensions, fines) or the vehicle owner (e.g. vehicle impounding), or are less punitive interventions more effective? What does the scientific evidence say as to how best to intervene?

Through the five other tranches of research completed for the Fleeing Driver Action Plan Research Programme, NZ Police have been able to develop a strong evidence base for what factors may motivate drivers to fail to stop for police. This evidence base is among the strongest available internationally and includes literature reviews, studies of best practice intelligence? interviewing, interviews and focus groups with offenders and the public, and analysis of existing police data. This research paper synthesises relevant findings from these previous tranches with international literature and policy to identify possible interventions to reduce this behaviour.

This paper is organised into five sections:

- 1) The first section reviews both current policies and penalties in New Zealand and internationally, and how these different approaches appear to influence behaviour.
- 2) Next, we review the relevant theoretical literature on punishment and deterrence as it may relate to fleeing behaviour.
- 3) Previous work has been done by NZ Police and the Behavioural Insights Team (2018) to apply behavioural insights approaches to reducing fleeing behaviour; this Behavioural Insights paper is reviewed in the next section
- 4) Alternative approaches NZ Police are already using that may be better utilised to reduce failing to stop offending are then reviewed.
- 5) The final section reviews the relevant findings from the other research tranches that could inform what strategies may work best to reduce fleeing driver events.

2.1. Existing penalties for failing to stop

Table 1 below outlines the current legal penalties for failing to stop, based on the Land Transport Act 1998, section 52A. Penalties increase with each offence.

Table 1: Existing NZ legal penalties for failing to stop

	Maximum fine	Maximum imprisonment	Licensing sanctions	Vehicle seizure ¹
First offence	\$10 000	N/A	If offender drove dangerously, or exceeded the speed limit, disqualified for 6 months	28 days
Second offence	\$10 000	N/A	Disqualified for 1 year	28 days (mandatory)
Third or subsequent offence	\$10 000	3 months	Disqualified for 2 years	28 days (mandatory)

The last adjustments to these penalties were made in 2017 and primarily focused on increases to the period of disqualification (previously 3 months for first and second offence and one year for third and subsequent). Vehicle confiscation was also made mandatory for second and subsequent offence (IPCA, 2019). It is difficult to quantify the effect of these changes on fleeing driver numbers, given a number of other changes to policy and practice since this period (e.g. better recording of all fleeing driver events, not just pursuits).

2.2. International penalties

Table 2 below highlights the penalties and fines for failing to stop for police in a number of international jurisdictions.

Table 2: Existing international legal penalties for failing to stop

		Maximum fine	Maximum imprisonment	Licensing sanctions	Vehicle seizure
Victoria, Australia	First offence	\$9,000	Six months	N/A	N/A
	Second or subsequent offence	\$18,000	Twelve months	N/A	N/A
Western Australia	All offences	\$5,000	Two years	Disqualified for 2 years	N/A
New South Wales	All offences	\$5,000	Twelve months	N/A	N/A
Queensland	All offences	\$20,000	Three years	Disqualified for 2 years	N/A
United Kingdom	All offences	\$10,000	Unspecified	Disqualified for 1 year	Yes, but undefined
Canada	All offences	\$10,000	Five years	Disqualified for 1 year minimum.	N/A

¹ If the offender is identified, or the owner provides information on the identity of the offender, the vehicle may be released sooner to the vehicle owner.

Overall, Queensland, Australia has the highest penalties for failing to stop for police in all but the maximum imprisonment period. As Victoria and Queensland have very similar pursuit policies the biggest difference between these jurisdictions is the penalties for a first offence which are considerably higher in Queensland. Most notably, New Zealand appears to be the only jurisdiction examined that has a defined vehicle seizure penalty for failing to stop, while also generally not applying custodial sentences to this behaviour.

2.3. Effectiveness of pursuit policies

There is a wide range of policy approaches that jurisdictions internationally have taken to how to manage fleeing driver events. While dated, and largely focussed on the United States, Alpert and Lum (2014) present the most comprehensive summary of pursuit policies which suggest that the majority could be described as “restrictive” (pursuits only permitted under very strict circumstances), followed by “judgemental” (based on the risk assessment of the police officer, similar to in New Zealand), with recent shifts generally more to the restrictive end of the spectrum. However, Alpert and Lum (2014) suggest evaluation is lacking as to the effect of policy changes of fleeing driver behaviour; while pursuits may reduce with more restrictive policies, it is less clear whether the number of drivers who attempt to flee changes.

Australian experience

Some states in Australia have recently moved to more restrictive pursuit policies (Gatthey, 2018). The policies of Victoria and Queensland state that a pursuit is not to be commenced unless officers can justify an immediate need to apprehend a suspect because the individual:

- is believed to pose an immediate threat to life
- has committed (or may commit) homicide or attempted murder, or
- has issued threats to kill and has the capacity to carry out the threat (Queensland Police, 2019; Gatthey, 2018).

If a pursuit is initiated, officers are to continually assess the risk, and are to abandon immediately if the pursuit creates an unjustifiable risk to the safety of any individual (public, officers, or the driver). The Victoria Police Association has been critical of restrictive policies arguing that they are too restrictive, remove decision making and risk assessment, leading to officers becoming risk-averse, and enable offenders to terrorise communities (Harbour, 2017).

Some researchers have argued that crime rates would increase if police were restricted or discouraged from engaging in pursuits. However, Alpert and Lum (2014) argue that there is little empirical evidence that more individuals will flee, that crime rates will increase, or that case clearances will decrease should law enforcement adopt more restrictive pursuit policies.

Resolution rates Australia

In place of pursuits, post-event investigations are a key mechanism to bring fleeing drivers to account. As part of developing an investigation policy, New Zealand Police surveyed Australian jurisdictions for data on how fleeing driver events were resolved which is depicted in Figure 1 below. New South Wales and Victoria were unable to differentiate with their data between apprehension through a pursuit or at a later time. However, Northern Territory report similar proportions of fleeing driver events resolved through pursuits (15%) and through subsequent investigation (16%), while Queensland report far

greater success through later apprehension of offenders (12% at the end of the pursuit, 32% later) for an overall better success rate.

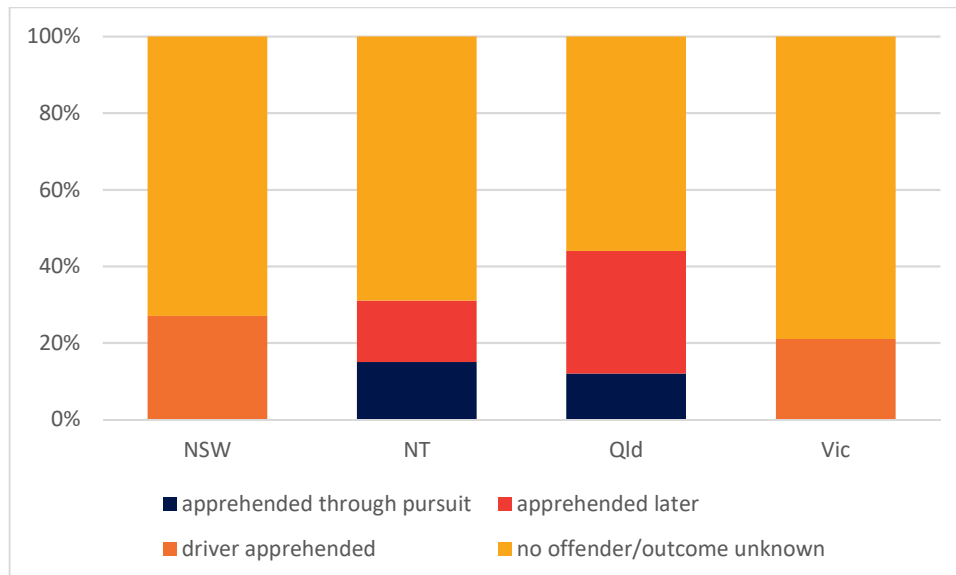


Figure 1: Resolution of fleeing driver events across Australian jurisdictions 2015-2019

Evade Police Provisions

One possible reason for the greater success of Queensland Police apprehending fleeing drivers after the event may be due to the fact that when they introduced more restrictions on pursuits, they also introduced additional “evade police” provisions which include a number of powers to assist in identifying the driver of a fleeing vehicle after the fact. As a core part of an investigation, officers can serve an evasion notice to the registered vehicle owner: the owner is considered to be the driver at the time of the offence and in a reverse onus, is required to provide information to prove their *innocence* (Crime and Misconduct Commission, 2011).² Using a reverse onus is contentious due to shifting the burden of proof from the State to the defendant, although they have been used for other vehicle related offences such as speeding.

From 2006-2010 (following the introduction of both the restrictive policy and the evade police provision), the rate of police pursuits, and pursuit related injuries or damage decreased. Additionally, the proportion of pursuits abandoned, and the proportion of incidents where a driver was later identified increased (Crime and Misconduct Commission, 2011). More recently, data indicates that the number of pursuits engaged in by Queensland Police drastically increased from 2013-2019³. Additionally, the number of individuals apprehended at the time remained stable (between 11% and 16%) and the number apprehended at a later date decreased (39% to 25%). The number of drivers who

² The vehicle owner has four business days to declare: a) the name of the individual they believe was driving the vehicle at the time of the offence, b) whether the vehicle was used illegally/stolen, c) any inquiries they have made to determine who was the driver, and d) whether the vehicle had been sold prior to the offence including when and to whom it was sold.

³ There was a sharp decrease in pursuits during the 2019/2020 fiscal year which could be influenced by the COVID-19 pandemic

evaded police and were unidentified increased; by 2019/2020, 64% of drivers who Queensland Police pursued remained unidentified.

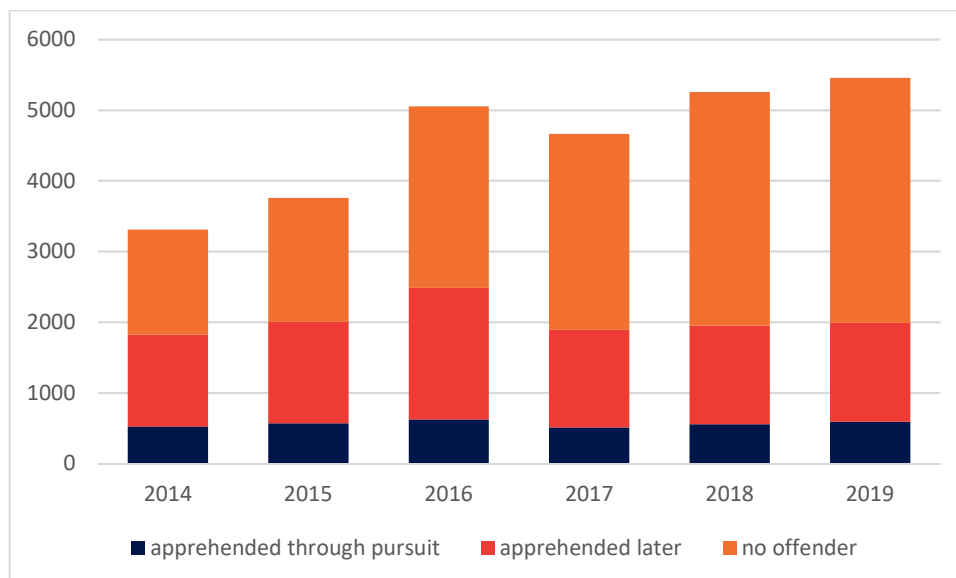


Figure 2: Queensland evade police pursuits resolution

Whilst it is likely that the evade provisions and the associated pursuit policy contributed to the initial decrease in negative outcomes while still identifying offenders, the Crime and Misconduct Commission (2011) suggested that officers were generally not using the provisions as a genuine alternative to pursuing, but instead when a pursuit was not permitted, or after a pursuit was abandoned. It was also noted that the provisions are limited in their usefulness as they cannot be applied to situations where the vehicle was stolen, unregistered, or had false registration plates. In these instances, police must rely on traditional investigative strategies to identify the offending driver.

New Zealand Policy

The NZ Police Fleeing Driver Policy is broader than the pursuit policies in Australia. The overarching principle is that events should be handled in the safest possible manner and that the safety of the public and Police employees takes precedent over the immediate apprehension of a fleeing driver (New Zealand Police, n.d.). Contrary to Australia, NZ Police do not have specific criteria stating when they can pursue. Instead the decision to commence, continue or abandon a pursuit is continually assessed based on the TENR risk assessment tool, and weights whether the seriousness of the situation combined with the necessity for immediate apprehension is greater than the risk/potential harm of pursuing. Recent changes to the policy also emphasise that the use of investigations of all viable lines of inquiry to identify and hold the individual accountable is preferred over a pursuit, or should be conducted after abandonment of a pursuit.

New Zealand Police currently apprehend around 30% of fleeing drivers through post-event investigations, compared to 40% through the pursuit stage. New Zealand has a higher apprehension rate through post-event investigations than Australian jurisdictions (with the exception of Queensland) and a higher apprehension rate overall. These statistics are favourable, and could be publicised to increase offender perceptions of their risk of being apprehended; however it would be recommended

that this be tested with offenders to ensure their existing expectations of being caught are not higher which could cause this to backfire.

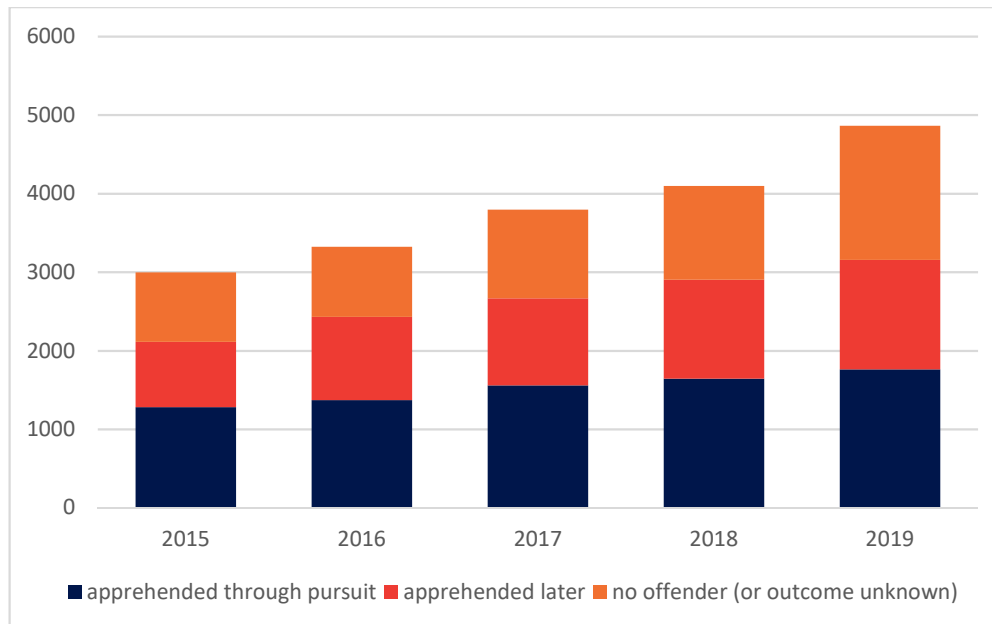


Figure 3: New Zealand failing to stop resolution

Summary

The existing penalties for failing to stop for police in New Zealand are in line with those in place internationally with the exception of a stronger focus on vehicle confiscation and less on custodial sentences. New Zealand Police currently have a high apprehension rate for fleeing drivers; slightly more through pursuits than investigations. The experience of Queensland Police with their evade police provisions and focus on post-event investigations suggests that high apprehension rates can be maintained through investigation. The effect of punishment on fleeing driver decision making is discussed further in later sections.

3. Theoretical perspective

3.1. Deterrence theory

Deterrence theory can be argued to underpin the majority of road policing. As it was originally proposed, deterrence is comprised of three factors: certainty, swiftness, and severity of punishment (Bates & Anderson, 2019).

- **Certainty** refers to the perceptions an individual has about whether they will be caught for an offence.
- The **swiftness** component argues that in order to be the most effective, a punishment needs to occur as soon as possible after an offence.
- **Severity** refers to the idea that the consequence of committing an offence need to outweigh the rewards of the offence.

The general theme within the criminal justice system and the wider New Zealand community is that increasing the severity of a penalty for a particular offence will inherently deter individuals from committing that offence. However, there is no scientific evidence that more severe punishments lead to a reduction in criminal behaviour (National Institute of Justice, 2016), and punishment severity cannot deter on its own (Nagin, 2013). For an individual to even consider the severity of a sanction, they need to perceive a certainty of being caught, and a certainty of receiving the severe sanction.

A key differentiation in deterrence theory is the distinction between *general* and *specific* deterrence. General deterrence refers to the idea that the use of a punishment on one individual will demonstrate to the rest of the public the cost of a particular crime, thereby discouraging others from engaging in similar behaviour. In this sense, general deterrence is concerned with individuals' *indirect* experience of punishment (Stafford & Warr, 1993). Specific deterrence refers to individuals receiving punishments and being deterred from committing criminal behaviour again due to their *direct*, personal experience of punishment (Stafford & Warr, 1993). There are also multiple channels for specific deterrence including preventative (prior to offending), reactive (following offending), direct (police to offender directly) and vicarious (through peers). Ariel, Englefield and Denley (2019) tested preventative specific deterrence through both direct and vicarious channels and showed that preventative action with one offender can have crime reduction impacts across their whole social network.

Leal, Watson, Armstrong, and King (2009) interviewed 22 drivers (aged 19-45) from Queensland, Australia who had engaged in illegal street racing to see whether vehicle impoundment penalties deterred them. In Queensland, the vehicles of drivers charged with street racing or "hooning" offences are impounded for 48 hours for a first offence, can be impounded for three months for a second offence within three years, and permanent forfeiture of vehicle for a third offence within three years. Despite many participants indicating that they believed that there was a high likelihood of being caught, and that the punishment for a second or third offence was exceptionally severe, participants reported that they often engaged in "hooning" behaviours and they intended to continue. This mentality was largely due to participants believing that they could implement strategies to lessen detection such as: not driving in main streets or areas and driving at nonpeak times, having organised communication with others to receive alerts of police activity, or using another vehicle to scout around for police patrols. There was a perception that if you had been caught once or twice police would recognise your vehicle and pay closer attention to you. For some, this lead to more careful driving to avoid having their vehicle

impounded; however, others believed that the possibility of vehicle impoundment would lead people to flee more often and to flee in a more dangerous manner (including two individuals who claimed that they would rather kill themselves or others via dangerous driving in an effort to keep their vehicle, Leal et al., 2009).

In relation to general offending, Schultz (2014) examined whether individuals' criminal experiences impacted their perception of risk and being detected using longitudinal data taken from the British Offender, Crime, and Justice Survey. Schultz found that individuals who had never committed an offence had the highest perceptions of risk believing that they would be caught if they did engage in criminal behaviour. As individuals started to offend, their perceptions of being caught decreased. Individuals who were actively offending tended to have a slightly higher perception of risk if they had had contact with law enforcement within the previous twelve months. Regression analyses indicated that impulsive offenders react more strongly to signals that it might be 'safe' to offend and lower their perceptions of detection risk, while less impulsive individuals seemed more reluctant to change their belief after offending on a low level. Impulsive individuals did not differ in their reactivity to police contact. While the Schultz (2014) study was unable to make specific policy or legislation recommendations, it does highlight the need for punishment or rehabilitative programmes to focus on individual needs and learning styles of offenders, rather than a "one-size-fits-all" approach.

3.2. Punishment Avoidance

In their reconceptualization of deterrence, Stafford and Warr (1993) introduced the concept of *punishment avoidance*. Punishment avoidance occurs when an individual commits an offence and is either not caught, or is caught but is not punished. It is possible for individuals to experience punishment avoidance directly through their own behaviour, or to experience it vicariously through the observation or experience of others avoiding punishment. The avoidance of punishment is considered to increase the likelihood of offending because an individual's perceptions about the certainty of punishment decreases (i.e. an individual is not punished for an offence, therefore they believe it is unlikely they will be caught and punished if they offend in the future).

Nagin (2013) argues that police can deter crime in two ways. The first is apprehending offenders. In this case, *general* deterrence has failed, but the police and the justice system can possibly have a deterrent effect on the behaviour of that specific individual (or others aware of the penalties given to the individual such as associates). The second way police can deter is when officers instigate initiatives (such as hotspot patrols) that increase the perceptions of an offender that they will be caught, and therefore reduce the chance that a crime is committed in the first place.

Bates, Darvell, and Watson (2017) examined the relationship between young drivers' perceptions of deterrence and their compliance with the Queensland graduated drivers licence system. The authors found that direct or vicarious experiences of legal punishment did not impact the non-compliance behaviour of young drivers with a P1 or P2 license (equivalent of learner's and restricted license in NZ respectively). Interestingly, young drivers in both classes of license who were exposed to higher levels of police enforcement for traffic and speeding offences were less compliant with traffic rules. However, parental enforcement of road rules was shown to have a greater deterrent effect for novice young drivers (P1).

In a study of young drivers in Queensland and Victoria, Australia, Bates and Anderson (2019) found that participants experienced punishment avoidance in three ways:

- 1) actively avoiding police (e.g. driving in less policed areas),
- 2) direct or vicarious avoidance (e.g. being caught by police and let off or hearing about others not being punished), and
- 3) avoidance due to parents taking responsibility for the offending (e.g. parents paying fines).

Additionally, the authors noted that actively attempting to avoid punishment, and experiencing direct or vicarious avoidance encouraged drivers to engage in illegal driving because the drivers believed that there would be no legal consequences for their behaviour.

Summary

The research literature on the deterrent effects of punishment suggests that increasing the severity of punishments for failing to stop for police would have little effect on offending. Where punishments are to have an effect, the offender needs to believe the likelihood of being caught and given the most severe punishment is high. However, previous contact with police and individual differences on measures such as impulsivity also influence deterrence effects. Studies of illegal street racers in Australia suggest that even where the perception of penalties and the certainty of receiving them is quite high, these offenders continue the behaviour, instead focussing their efforts on punishment avoidance (Leal et al., 2009). Fleeing police is one method of attempting to avoid punishment, so where offenders view punishments as too harsh, they are likely to be additionally motivated to both flee, and to force the abandonment of a pursuit by Police. Previous studies of young driver compliance in particular, find a bigger impact of parental than police enforcement, possibly due to more constant surveillance.

4. Behavioural Insights Approach

4.1. What is Behavioural Insights?

There is a large body of research literature on what influences behaviours and decision making. “Behavioural insights” is the term used for the process of providing an accurate and evidence-based understanding of how people behave and their decision-making processes. Many behavioural insights interventions involve small changes (or as they are often referred to, nudges) that can alter behaviour without limiting an individual’s options, or preventing behaviours, but instead encouraging them to make a particular decision or act in a certain way. Research on nudges has shown that when generating behavioural change, it is more effective to encourage positive choice than restricting unwanted behaviour with penalties.

4.2. Behavioural Insights applied to fleeing drivers

In 2018, BIT published a report in conjunction with NZ Police providing insights into potential interventions to target fleeing driver behaviour. The interventions focus on altering a driver’s behaviour *before* a decision to flee is made (upstream interventions) and opportunities after a pursuit to dissuade a driver from fleeing again in the future (downstream interventions). The following sections are all based on the insights and recommendations from this report (Behavioural Insights Team, 2018).

The EAST model

The Behavioural Insights Team (BIT) in the United Kingdom developed four simple principles for applying behavioural insights.

Make an intervention:

Easy

Attractive

Socially desirable

Timely

Targeted messaging

- **Messages in vehicles:** Individuals are heavily influenced by those around them, therefore more could be done to target and change the behaviour of passengers. In-vehicle messages in the form of stickers or permanent markings could encourage passengers to speak out against dangerous driving including failing to stop for police. Research in Kenya highlighted that mortality rates on long distance matatu (minibus) trips decreased after evocative stickers encouraging passengers to speak out against dangerous driving were placed within the vehicles. Messages could also emphasise to the driver the consequences of harm to others, and that the consequences of fleeing are worse than the consequences of stopping. Fleeing drivers are also likely to be passengers in other fleeing events so may translate these messages to their future decision making. However, while potentially useful, there would be challenges in encouraging uptake of this type of intervention by vehicle owners or manufacturers, due to the still relatively low prevalence of fleeing driver events.
- **Messages through licensing process:** Targeted messages could be included in the license suspension process. Specific reissue forms could be given to those who have fled from police; these forms could highlight social norms (e.g. that the majority of people stop for police), and include messages encouraging individuals to stop for police in the future. Since drivers who have been disqualified for over a year are required to re-sit their practical license test, an

additional requirement could be to complete a discussion with test officers about the reasons for their disqualification.

- **Messages through court communications or traffic infringements:** Similarly, many individuals who fled may have previous convictions or outstanding warrants. A behaviourally informed and personalised letter could be sent to those summoned on road charges. By highlighting the consequences of speeding in a tailored letter, BIT and West Midlands Police were able to reduce re-offending by 20% in the following six months (BIT, 2018). Appropriately delivered messaging to prospective fleeing drivers could achieve deterrent effects. For example, targeted messaging to first-time traffic infractions could be delivered by police either on the spot or a follow-up letter that includes information on how many people are caught/ get into accidents, which may have direct and vicarious deterrence effects

Example of Behavioural Insights messaging to fleeing drivers

- If you don't stop and manage to get away from police, they can still identify you by other means and you can be charged
- If you don't stop, you can be penalised \$10 000, lose your car, or even be sentenced
- If you DO stop, you can avoid these penalties

- **Media campaigns:** Public messaging via media campaigns could also be considered although these would need to be careful to not normalise pursuit behaviour. This would need to include restraint being used when highlighting pursuits to the media as extra coverage can increase the likelihood of future incidents occurring. It may also be worth considering media guidelines such as banning or deleting social accounts that post footage of pursuits online.

Penalties and Restorative Justice

- **Targeting the vehicle owner:** Consideration could be given to penalties that would apply to the owner of the vehicle. While fleeing drivers are often not the owner of the vehicle, providing swift and certain penalties that target the vehicle could encourage vehicle owners to ensure high-risk drivers cannot access their vehicle as easily. Proposed penalties range in severity from impoundment with a standard impoundment fee, through to the vehicle being consecrated and destroyed. However, the use of heavier penalties for vehicle owners would need to be robustly tested in order to provide evidence on the trade-offs (e.g. deterrent effect versus the potential damage/employment ramifications of removing the vehicle), and awareness of potential penalties would need to be increased among the general public.
- **Framing of penalties:** Prospect Theory (Kahneman & Tversky, 1979) suggests that due to the associated concept of loss aversion, penalties are much more effective for changing behaviour when framed to emphasise the loss that will be experienced (e.g. the loss of a vehicle or license).
- **Restorative justice:** Young fleeing drivers could be ideal targets for inclusion in restorative justice measures such as iwi panels (more recently through Te Pae Oranga). Currently, these panels are used for adults who have committed low-level offences and aim to change the life trajectory of the offender. However, despite the potential benefits, it is important to ensure

that fleeing from police is not treated as a trivial or minor offence. The potential for use of this type of resolution is discussed further in a later section on alternative interventions.

Increased visibility of the Eagle Unit

- **Increasing salience:** Individuals tend to judge risk based on how easily images of being caught come to mind. It is possible to use this idea of salience to try to increase the visibility of the Eagle Unit. Signage could be added to fleeing driver hotspots highlighting that the Eagle is operating within the area. Emphasising the presence of the Eagle unit could increase an individuals' sense of being under surveillance and therefore increase their perception of being caught.
- **Reducing predictability:** One of the challenges of the use of Eagle is that offenders understand the limits of its normal operating area. However, alterations to that normal operating model may reduce individuals' perception that they can avoid detection by avoiding standard operating areas.

Interventions during a pursuit

Driver interventions are limited during a pursuit which makes changing behaviour in the moment challenging. However, the BIT report offers some possible experimental ideas that could be explored. These include:

- Use of lights only or sirens that start quiet and then become louder to lessen a driver's immediate adrenaline rush
- Use of different coloured lights to avoid automatic reactions to flashing red and blue lights
- Alternatives used in the UK include flashing blue lights, headlights or sounding the horn or siren, or even just pointing and/or using the left indicator.
- Use of alternatives to sirens such as tailored verbal messages (currently considered unfeasible in the context of a pursuit)
- If the driver has been identified, send a message to their phone making it clear that they have been identified (note that while giving the driver this information may be beneficial, it would not be possible during the pursuit given the distracted driving rules).
- Use of predictive mapping so police can pursue from a safe distance

The impact and difficulty to implement of the interventions

As a conclusion to the report, the BIT report authors summarised how impactful they considered each intervention to be, as well as how difficult each would be to implement. The table below is based on the summary of BIT considerations.

Table 3: Interventions summary table (taken from BIT, 2018 p.61)

	Impact	Feasibility
Passenger-directed messages	Moderate	Moderate
Targeting high risk drivers through the suspension process	High	Easy
Behavioural messaging to reduce reoffending	High	Very easy
Making surveillance and the Eagle unit more salient to drivers	Moderate	Easy
Creating “swift and certain” penalties for vehicle owners	High	Difficult
In-vehicle messaging for impounded vehicles	High	Moderate
Adding restorative justice measures to the process	Very high	Moderate
Actively manage social and traditional media reporting of pursuits to prevent attention cascades	High	Moderate
A set of more experimental options influencing driver behaviour during a pursuit, including changing audio and visual cues during pursuit	High	Very difficult

Summary

The challenge for applying a behavioural insights approach directly to the issue of fleeing drivers is that there are limited “touchpoints” at which to influence this behaviour. For example, there is little that can be done in the event to encourage drivers to stop once they have made the decision to flee. However, this approach does give some guidance on how interventions could be framed to prevent a driver making this decision in the future.

The existing research applying this approach to fleeing drivers does not include insight from the drivers themselves, instead being informed from secondary data and police insight. The key findings of tranches 3 and 4 which include primary data from fleeing drivers (and potential fleeing drivers) are discussed in later sections; the feasibility and impact of interventions suggested in this section will be assessed within this lens.

5. Alternative Interventions

The possible reasons for failing to stop are many and complex. NZ Police (and other agencies) have a number of existing alternative interventions that could be used to target current or potential fleeing drivers. A number of these focus on driver licensing, but also may include mental health and drug and alcohol treatment. As road policing is one of the areas where police have the most contact with the public, targeting this area for improving perceived procedural justice would have flow on effects to wider perceptions of police. All these interventions would also help in improving perceptions of police for offenders, seeing them less as an enforcement authority to be avoided and improving perceptions of procedural justice.

5.1. Driver licensing and other assistance programmes

Alternative Ways to Help Interventions (AWHI)

Alternative Ways to Help Interventions (AWHI) is a tikanga-based initiative created by NZ Police. The aim of AWHI is to enable frontline officers to refer individuals directly to service providers for assistance in addressing their specific needs. AWHI is an interactive document with links to a multitude of support agencies and allows an officer to make an instant email referral to a service: the agency can then make direct contact with the individual. The individual has to consent before an officer can make a referral. A challenge is that AWHI requires a police employee in each district to liaise with local agencies and keep all contacts up to date.

Within the context of fleeing drivers, AWHI could serve a number of purposes. Given the high number of fleeing drivers that do not have the correct driver licence, drivers who come to police attention for this, or other reasons can be helped to gain the correct licence through a referral. Referrals can also be made for drug and alcohol treatment and assistance, or other interventions that could prevent fines and other involvement in the justice system. Most importantly, the programme facilitates relationships between police and the public where police can provide help to address the problems behind offending.

Other driver licence support

The Blue Light Youth Driver Navigator programme provides support to young people in Bay of Plenty, Waikato, and parts of Auckland to get their driver license. The programme is specifically designed to help those who may not have the means to get their license normally and to remove any barriers that they might face. Young people are referred to the programme by Police, schools or community organisations. The programme:

- offers financial support at all stages of the licensing process
- provides individuals with driving lessons with a certified instructor including defensive driving courses
- provides a warranted and registered vehicle for driving practice and pairs individuals with a community volunteer for weekly driving practice
- assists individuals to ensure that they have all of the correct documentation and identification
- arranges pick up and drop off of individuals at testing centres

The Blue Light Youth Driver Navigator programme aims for safer driving habits to be taught to young people through the licensing system: the hope is that these individuals can then also model good driving

behaviours for their family or peers, therefore hopefully reducing road offences (such as dangerous driving or breach of conditions).

A similar programme in Northland District is Automotivate which uses a whanau ora model to assist with youth and whanau driver licensing.

He Tangata is a partnership between Road Policing and Maori Pacific Ethnic Services (MPES) at NZ Police which uses a kaupapa Maori approach to deliver graduated driver training with the aim of increasing licence levels and reducing reoffending where licence breaches occur.

Effectiveness of licensing programmes

Parents are a primary influence of youths learning to drive, and parental influence can start from an early age as children observe their parents' driving. There can at times be a clash in which youth are taught good driving skills by their parents, but they observe their parents' bad driving behaviours such as speeding (Papakosmas & Noble, 2011). There is some evidence that interventions focussing on enhancing parental oversight of young drivers can positively influence driving behaviour (Peek-Asa, 2009; Curry, Peek-Asa, Hamann, & Mirman, 2016). Alternatively, a review by the New Zealand Transport Agency suggests that interventions in schools that recognise the underlying motivations and expected outcomes of risky or antisocial behaviour and address these may be the most successful in improving young people's driving behaviour and decision making. Additionally, programmes need to address a broad range of other factors such as the influence of social norms, the self-belief of young people to adopt certain behaviours, a young person's social skills, and teach adaptive coping strategies.

5.2. Alternative resolutions and assistance

Te Pae Oranga

Te Pae Oranga was first implemented in 2013 and is continuing to grow. This model uses iwi panels to address offending and harm caused by low-level offenders, while directing offenders to support services rather than the criminal justice system. Evaluations suggest future offending harm is reduced, and participants value the support they receive from police and other agencies, while still being held to account for what they have done. A large amount of the offending processed through these panels is traffic-related; while failing to stop may be considered too serious an offence to be dealt with through Te Pae Oranga, previous offending that may motivate future fleeing behaviour could be. If offending drivers have previous positive interactions with police they may be less likely to flee in future. This type of restorative justice approach has been shown in the literature to be cost-effective and to have an impact on reoffending (Sherman, Strang, Mayo-Wilson, Woods & Ariel, 2015).

Other district initiatives

Within districts, there are a number of initiatives that improve relationships between Police and both offenders and the general public, particularly youth. These are just a sample highlighted in the 2020 Evidence Based Policing Problem-Oriented Policing Awards, but include:

- Te Huringa o te Tai nga Wahine (Counties Manukau District) reducing offending by young Maori and Pasifika girls
- Te Ara Oranga (Northland District) in which Police work with DHB staff to refer methamphetamine users to health care while targeting dealers.

- The Soul-way Project (Central District) where the Levin community and police worked to increase safety in a local park, regenerating the area.

Focussed deterrence strategies

Many of the interventions outlined above would fall into the overall category of focussed deterrence strategies which “seek to change offender behavior by understanding underlying crime-producing dynamics and conditions that sustain recurring crime problems and implementing an appropriately focused blended strategy of law enforcement, community mobilization, and social service actions” (Braga, Weisburd & Turchan, 2019). Some of these strategies focus on high risk offenders and while they emphasise the sanctions they will face for future offending, they also offer support to avoid this offending, tailored to the individual, or group of similar individuals. In their systematic review, Braga et al (2019) find strong benefits of programmes targeted at high risk offenders, particularly youth. They recommend programmes that take an approach that includes enforcement, social service and opportunity provision, and community-based action and particularly where procedural justice is emphasised.

Summary

As noted in the section on Behavioural Insights, there are ways in which Police and other agencies can influence fleeing driver behaviour outside of punishment for this offending. For many offenders there may be practical needs underlying their offending (further discussed in the next section) that could be addressed either before they offend in the first place or following a first offence that could help to reduce reoffending. Tranche 1 of the Fleeing Driver Research programme also highlighted that the relationship individuals have with the police could make them more willing to flee when signalled to stop. Any interventions where individuals feel they receive procedural justice and/or are helped by police could therefore reasonably be expected to increase compliance with police requests and reduce failing to stop events.

6. Insights from Fleeing Drivers

The key insight missing from previous work examining possible interventions to reduce fleeing behaviour is information from the offenders (and potential offenders) themselves. Previous tranches of the fleeing driver research programme included interviews with drivers who had fled police, or been passengers in a fleeing driver event (Tranche 3; Cording, Gore, Westerman & Kaiwai, 2020a), as well as focus groups with both offenders and the general public (including young people) on the impact of media on perceptions and behaviour (Tranche 4; Cording, Gore, Westerman & Kaiwai, 2020b).⁴ The key findings from these tranches that may affect intervention approaches are summarised below.

6.1. Punishment

Fleeing is worth the risk

Many fleeing drivers (and most of the general public) are not aware of what the current penalties for failing to stop are (Cording et al., 2020a, b). However, even for those that are aware, the influence of punishment appears to be complex. A large proportion of fleeing drivers interviewed by Cording et al. (2020a) reported that their main motivation for fleeing police was to avoid punishment for another illegal activity. They therefore perceive fleeing as a risk worth taking, primarily because they consider their odds of escaping penalty to be good (either because of previous successes or hearing stories of others' success). However, part of this calculation is that the risk is worth taking even if they are caught, as they perceive any additional penalty from fleeing to be insignificant on top of what they may receive for their other offending. For example, if they were fleeing due to offences that may attract a custodial sentence, fines or loss of their vehicle are not considered significant and therefore worth the risk. This perception is particularly strong for young offenders who face less serious consequences in the youth justice system than the adult system, to the point where young people take the blame for offending in which they were a passenger to avoid penalties for friends and family who are older.

The influence of punishment on motivations to flee police is therefore complicated. On the one hand, the punishments in place for failing to stop are perceived as light, particularly in comparison to those for any other offences that may have been the initial motivator to flee. On the other, punishments perceived as harsh for concurrent offending are a major motivator for fleeing in the first place; therefore, higher punishments for failing to stop may add to the incentive to continue fleeing police after an event has commenced.

Increasing certainty of being caught after a pursuit

There is a perception from fleeing drivers that police need to physically catch them during a pursuit to be able to successfully pursue charges; that if police found them later after subsequent investigation they would be unable to prove they were driving at the time (Cording et al., 2020a). A small number of participants reported that the one thing that would mean they stop fleeing during a pursuit would be if they thought there was strong enough evidence of who they were (i.e. a police officer was close enough to physically see who was driving). These findings would suggest that increasing the certainty of individuals being held accountable, for example through alternative investigations may change their

⁴ For a full description of the methods and recruitment of these studies, please see Cording et al., 2020a and b

calculation of the risk benefit of fleeing. Just as offenders learn of, or experience, successes in evading police, they will learn of other ways in which police bring offenders to account.

Eagle helicopter

One of the most specific deterrents identified by offenders was the Eagle helicopter. Offenders suggested that knowing they are being followed by the helicopter significantly reduced their perception that they could evade police (Cording et al., 2020b). Participants in the Canterbury focus groups also identified that during the recent Eagle trial in the district, they were not only less likely to flee, but to even engage in activities that may attract police attention at all (Cording et al., 2020b). The effect on offending may not remain as drastic over time as drivers become more accustomed to the way in which the helicopter operates. However as noted in the earlier section on Behavioural Insights, there may be ways to increase the unpredictability and salience of the helicopter to influence offending. While not specifically identified by offenders, other surveillance technology (e.g. CCTV, dashboard cameras, GPS tracking) may be used to a similar effect, particularly if the salience and effectiveness of these strategies are communicated to potential offenders.

Not thinking of consequences

While the interview findings suggest some rational consideration of the risks and benefits from fleeing drivers, there will still be a large proportion of those who flee who do not consider the consequences at all. For many of those who flee, failure to stop for police is an automatic reaction to police presence, rather than a conscious decision. Individuals in the interviews reported feeling panic, or fear, and that their primary thought was to escape (Cording et al., 2020a). Additionally, being under the influence of drugs or alcohol further created an intense need to escape as well as leading to drivers largely disregarding the safety of themselves or others. Interestingly, in the focus groups, the idea of panicking and fleeing without any other motivation was applied to younger people by older people but was not something that young people endorsed themselves (Cording et al., 2020b).

A few drivers and passengers reported being terrified of being hurt or hurting others, however, many do not consider any consequences of fleeing nor were they worried about others in the immediate vicinity until after the pursuit had concluded. Some mentioned that hearing about a person who had died in crash during a pursuit, especially if it was someone they knew, was a turning point for them to stop fleeing. Some participants also reported adverse childhood experiences which contributed to a general pattern of maladaptive coping strategies, and apathy for their own wellbeing or the outcomes of a pursuit (Cording et al., 2020b).

Influence of substance use

Substance use (both drug and alcohol) is commonly identified as a motivating factor in fleeing police, both due to the effects of the drug on decision making and fear of consequences if caught (either under the influence of, or possessing, drugs or alcohol). Efforts to assist in drug or alcohol treatment, and the recent health approach to managing possession could assist with this. It should also be noted that those under the influence at the time of being signalled to stop will have particularly flawed decision making and may make even more risky decisions during a pursuit.

6.2. Peer influences

Encouragement of fleeing

As with many other risky behaviours, fleeing drivers are influenced by members of their peer group, particularly in relation to wanting to appear strong in front of others cheering them on. There also appears to be some competition within peer groups for who can perform the best in evading police (e.g. how many police vehicles they can evade). These influences may not be directly present in the vehicle during a pursuit but through other social interactions both before and after an event.

However, another form of influence that was not expected from previous literature is that fleeing drivers appreciate the assistance that others in the vehicle can provide during the event. This support includes providing driving advice (e.g. routes to take, behaviours to engage in), or even taking over driving if the initial driver became fatigued.

Discouragement of pursuits

While many fleeing drivers suggest peers encourage their engagement in pursuits, the results of interviews with passengers suggest they may also be a path to influence drivers to stop due to passengers reporting more fear of consequences including crashes and injury than drivers (Cording et al., 2020a). Passengers also mentioned that they often told the driver to stop as a result of safety fears; while drivers tend to continue fleeing despite these requests, many reported pulling over to let passengers out before continuing.

6.3. Media influences

Traditional media

The results of the Tranche 4 focus groups (Cording et al., 2020b) show that overall, traditional media reporting does not play a prominent role in public perceptions of police pursuits and fleeing drivers. The general perception of both the public and offenders was that media reporting was biased towards reporting pursuits which had a negative outcome (e.g. injury, crash or death) and told sensationalised versions of events. This notwithstanding, a small group of fleeing drivers did suggest some reinforcement effect of seeing events they were involved in in the media. The general public would find it useful to have more coverage of success in this space, such as when a pursuit was avoided or an offender brought to account through other means (Cording et al., 2020b).

Social media

Sharing stories and images on social media was not given as a primary motivation for fleeing from police; instead, the majority of individuals believed that social media attention (especially posting videos online) was a bad idea as it could lead to being identified or arrested (Cording et al., 2020a, b). Engagement with this material was overall low, and not perceived favourably (Cording et al., 2020b). However, participants did report some reinforcement of the behaviour where they perceived increased status amongst their peers when stories of events were shared amongst those involved in similar activities via word of mouth or by showing videos on phones. The only common use of social media related to fleeing driver events was the public using this medium to find out more about local events that had occurred, in particular eyewitness accounts on local Facebook pages (Cording et al., 2020b). The public also emphasised the popularity of Police social media for information and “good news stories” (Cording et al., 2020b).

6.4. Perceptions of police

One of the strongest themes through the fleeing driver interviews was that the actual act of fleeing police is not a motivator for the majority of offenders; they do not seek to be chased; however, they also showed a strong intention to never stop for police if signalled. Often, this is due to wanting to avoid punishment for co-occurring offending, but this appears to be magnified by negative perceptions of police. These perceptions are sometimes based on previous interactions, or stories from family and friends, and can be related to fear of consequences, perceived procedural injustice, or generally anti-authority attitudes (Cording et al., 2020a).

Maori and Pasifika participants in particular identified previous negative experiences with police (or those of others they know) as a primary motivator for failing to stop. These results align with those in Tranche 1 which highlighted these groups may have particularly negative perceptions of police and show lower levels of trust and confidence (Mora & Jones, 2019). Efforts from police (highlighted earlier) to increase engagement and positive interaction with Maori and Pasifika (and other target populations such as young people) are therefore encouraged to improve relationships and reduce the perceived “us versus them” mentality that is reported by many fleeing drivers. The participants in the Tranche 4 focus groups highlight the need to “look past the fleeing” to address background issues that may affect both the individual and the community.

Summary

The interviews suggest that the influence of punishment is complex; punishments for fleeing are perceived as light, however punishment avoidance for other offending is a strong motivator for fleeing in the first place. The research suggests increasing certainty of apprehension (including at a later time) and of receiving consequences for offending would have greater impact on offending than increases in penalties. The interviews also reinforced the benefits of interventions to target root causes such as substance use and abuse. Were any information campaigns to be launched, these may gain more traction with passengers than drivers. An easy to implement intervention that the qualitative research indicates would have an impact on behaviour is use of the Eagle helicopter in new, and more unpredictable, ways.

7. Conclusions

This report combines both the findings of all five other tranches of the Fleeing Driver Research Programme with relevant literature to examine the possibilities for interventions to reduce fleeing driver behaviour in New Zealand.

The first section of the report related to the influence of punishment on this behaviour, in particular how deterrence theory and the experience of other jurisdictions could inform how punishment could be applied. As outlined in deterrence theory to be effective, potential offenders need to perceive punishment to be swift, certain and severe enough to outweigh the benefits of committing an offence. For fleeing drivers, this appears to be a complicated relationship, as the main motivation given by many is the punishment they believe they may be able to avoid by fleeing. Rather than increasing the severity of punishment for failing to stop, the findings of the research programme would suggest increasing the certainty of apprehension, and of receiving additional penalty for fleeing over that for co-occurring offending would have the greatest effect on this behaviour. Increasing the apprehension of offenders through post-event investigation would help to shift the perception that fleeing is worth the risk. Offender experience with punishment avoidance (both themselves, and vicariously through others) needs to be changed to perceive apprehension as more likely to occur.

A Behavioural Insights approach has also been applied by previous researchers (BIT, 2018) to suggest possible interventions for police. These proposed interventions can now be examined in light of the findings from offenders themselves. The suggestion of targeting messages to passengers rather than drivers may have some impact as some passengers report more fear, and possibly the ability to influence drivers when they are less rational themselves. The BIT report also suggested communicating to drivers where they have been identified during a pursuit to encourage them to stop; the only time offenders suggested they would stop during an event was where they felt they had been identified, so this suggestion has potential.

Enforcing penalties on the owner of vehicles where the offender is not apprehended at the time of the event was also proposed in the work by BIT (2018). This approach is similar to that taken in Queensland where there is a reverse onus on the owner to prove their innocence, rather than police proving their guilt. Applying this approach may mean vehicle owners take a more proactive approach to monitoring the use of their vehicle, and/or help to identify offenders as part of post-event investigations. The use of alternative resolutions was suggested by these researchers and is supported by the other research tranches in the context of ways police can improve relationships and perceptions prior to, or post, fleeing events.

One of the few interventions offenders identified that is a strong deterrent for failing to stop is the use of the Eagle helicopter. The BIT report (2018) suggested increasing the salience and reducing the predictability of surveillance by Eagle could provide some deterrent effect which was supported by the findings of the research tranches presented here. Whilst it could be dependent on the cooperation of media outlets, it would be beneficial to highlight instances where a driver was caught without injury or providing information about the driver themselves including the consequences for fleeing. This could help to avoid a distorted view of fleeing driver events being in the public eye as is currently the case.

Recommendations

As an outcome of the Fleeing Driver Research Programme, NZ Police now have a far greater understanding of what motivates fleeing drivers. There appears to be little to no evidence that fleeing drivers show intent to engage police in a pursuit. However, many indicate that they will likewise never stop when asked to by police due either to the situation they are currently in (e.g. they are trying to conceal an offence), their general perception of police (e.g. fear or disrespect for police), or both. Therefore, the most successful interventions are likely to target:

- reducing the perception that fleeing is worth the risk through increasing apprehension through other means, and potentially publicising success in this regard
- improving the relationship between potential offenders and the police and increasing perceived procedural justice
- preventative measures to reduce other offending (e.g. efforts to increase driver licensing, or drug and alcohol treatment)

These changes will take time to implement, particularly where perceptions need to change; for example, in increasing trust and confidence in police particularly where these perceptions are long ingrained through a lifetime and reinforced by social networks. However, any interventions that increase the perception of potential offenders that they will be identified and held to account even if not apprehended through a pursuit can be expected to have an impact on overall offending (e.g. post event investigations, use of Eagle helicopter, targeting penalties to vehicle owners). Efforts to address contributing factors such as substance use and driver licensing may also prove effective and relatively easy to implement in conjunction with work already in place within NZ Police.

References

- Alpert, G., & Lum, C. (2014). The Impact of Research on Pursuits Policies. In *Police Pursuit Driving: Policy and Research*. SpringerBriefs in Criminology, 43-51. DOI: 10.1007/978-1-4939-0712-0_4
- Ariel, B., Englefield, A., & Denley, J. (2019). "I heard it through the grapevine": A randomised control trial on the direct and vicarious effects of preventative specific deterrence initiatives in criminal networks. *Journal of Criminal Law and Criminology*, 109(4), 819-868.
- Bates, L., & Anderson, L. (2019). Young Drivers, Deterrence Theory, and Punishment Avoidance: A Qualitative Exploration. *Policing*, 0(0), 1-14. DOI: 10.1093/policing/paz075
- Bates, L., Darvell, M., & Watson, B. (2017). Young and unaffected by road policing strategies: Using deterrence theory to explain provisional drivers' (non)compliance. *Australian & New Zealand Journal of Criminology*, 50(1), 23-38. DOI:10.1177/0004865815589824
- Behavioural Insights Team (2018). Applying behavioural insights to bail and fleeing drivers. *Report for NZ Police*. Wellington: Behavioural Insights Ltd.
- Cording, J., Gore, A., Westerman, A., & Kaiwai, H. (2020a). *Understanding the motivations of fleeing drivers: Individual factors*. Report for NZ Police. Christchurch: University of Canterbury.
- Cording, J., Gore, A., Westerman, A., & Kaiwai, H. (2020b). *Understanding the motivations of fleeing drivers: Media Influences*. Report for NZ Police. Christchurch: University of Canterbury.
- Crime and Misconduct Commission. (2011). *An alternative to pursuit: a review of the evade police provisions*. Crime and Misconduct Commission (June 29 2011), Brisbane, Queensland. Retrieved from <https://www.ccc.qld.gov.au/publications/alternative-pursuit-review-evade-police-provisions>
- Gathey, M. (2018). Police pursuits: How New Zealand compares to Australia. Retrieved from <https://www.stuff.co.nz/national/102180147/police-pursuits-how-new-zealand-compares-with-australia>
- Harbour, J. (2017). Queensland Police pursuit policy changes may make life harder for cops, says union. Retrieved from <https://www.goldcoastbulletin.com.au/news/crime-court/queensland-police-pursuit-policy-changes-may-make-life-harder-for-cops-says-the-union/news-story/b4ca2bbb936d42e3e40c7cbdb3cecd95>
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263-291.
- Leal, N., Watson, B., Armstrong, K., & King, M. (2009). "There is no way in hell I would pull up": Deterrent and other effects of vehicle impoundment laws for hooning. In R Grzebieta & D McTiernan, (Eds.) *Proceedings of the 2009 Australasian Road Safety Research, Policing and Education Conference*. Roads and Traffic Authority of New South Wales, Australia, pp. 217-225.
- Mora, K., & Jones, R., (2019). Understanding the motivations of fleeing drivers: Literature review of youth motivations. Wellington: Evidence Based Policing Centre, NZ Police.
- Nagin, S. (2013). Deterrence in the Twenty-first Century: A review of the Evidence. In M Tonry (Ed) *Crime and Justice: A Review of Research*, 42, Chicago, University of Chicago Press.

National Institute of Justice. (2016). Five Things about Deterrence. Retrieved from <https://www.ncjrs.gov/pdffiles1/nij/247350.pdf>

New Zealand Police. (n.d.). Fleeing driver policy. Retrieved from <https://tenone.police.govt.nz/pi/fleeing-driver-policy>

New Zealand Transport Agency (2017). *Good Practice in Road Safety. Research summary: Effective community and school-based road safety for young people*. Wellington, New Zealand.

Queensland Police. (2019). Operational Procedures Manual Public Edition, Chapter 15 Issue 72. Retrieved from <https://www.police.qld.gov.au/sites/default/files/2019-10/OPM%20-%20Chapter15%20-%20Driving%20of%20Service%20Vehicles.pdf>

Sherman, L.W., Strang, H., Mayo-Wilson, E., Woods, D.J., & Ariel, B. (2015). Are restorative justice conferences effective in reducing repeat offending? Findings from a Campbell Systematic Review. *Journal of Quantitative Criminology*, 31, 1-24.

Stafford, M., & Warr, M. (1993). A Reconceptualization of General and Specific Deterrence. *Journal of Research in Crime and Delinquency*, 30(2), 123-135.