Police Pursuits

A law enforcement and public safety issue for Queensland

Dr Gabi Hoffmann

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CMC Vision: To be a powerful agent for protecting Queenslanders from major crime and promoting a trustworthy public sector.

CMC Mission: To combat crime and improve public sector integrity.

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Crime and Misconduct Commission
140 Creek Street, Brisbane, Australia
GPO Box 3123
Brisbane Qld 4001
Tel: (07) 3360 6060
Fax: (07) 3360 6333
E-mail: mailbox@cmc.qld.gov.au

Foreword

Police vehicles in high-speed pursuits of fleeing offenders have been an enduring part of policing, both historically and at present. Unfortunately, many pursuits result in a collision and some result in injury or death. In fact, overseas and Australian research indicates that more people are injured and killed as a result of pursuits than from police use of firearms. Queensland's experience is similar.

The Criminal Justice Commission (CJC) first looked at the issue of police pursuits in 1998. The CJC concluded that pursuits were a high-risk activity requiring a careful review of existing Queensland Police Service (QPS) policies and practices. In particular, the Commission recommended that the QPS tighten its official policy in relation to high-speed pursuits in an effort to reduce the number of pursuits occurring in Queensland.

I am encouraged by the recent steps taken by the QPS to address the risks associated with pursuits. However, an opportunity still exists for the police service to examine the balance between the need for police to act effectively in response to offending behaviour versus the need for police to act in a manner that minimises any risk to public safety.

The recommendations contained in this report are aimed at encouraging the QPS to adopt a more restrictive policy in relation to high-speed pursuits. The QPS has been responsive to Commission research in this area, and I urge them to once again fully consider and adopt the recommendations made on this important issue.

Brendan Butler SC
Chairperson

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Abbreviations

CJC	Criminal Justice Commission
CMC	Crime and Misconduct Commission
ESC	Ethical Standards Command
LAPD	Los Angeles Police Department
OPM	Operational Procedures Manual
PCA	Police Complaints Authority (Britain)
QPS	Queensland Police Service
RCMP PCC	Royal Canadian Mounted Police Public Complaints Commission
SEM	Significant Event Message
STS	State Traffic Support
TDD	Tyre deflation device

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Acknowledgments

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Dr Paul Mazerolle
Director, Research and Prevention
Crime and Misconduct Commission

Summary of key findings and recommendations

Police pursuits constitute a difficult area of policy, as it is necessary to balance the needs of law enforcement with public safety. Overseas and Australian research has confirmed that police pursuits are a potentially high-risk activity and that more people are injured and killed from pursuits than from police use of firearms. In recent years there has been a general movement in many jurisdictions towards increasing control of pursuits and tightening policies to limit pursuits to certain offences.

This report presents an analysis of police pursuits in Queensland from 1997 to 2002, addressing the following key questions:

- How many pursuits does the Queensland Police Service (QPS) engage in per year?
- What are the justifications or reasons for pursuits?
- What is the profile of the typical pursued driver?
- What is the range of positive and negative consequences of pursuits?
- What are the implications for QPS pursuits policy and training?

The data showed that:

- the QPS recorded an average of 630 pursuits a year
- traffic/driving offences were the most common reasons for pursuits, accounting for approximately half of them
- stolen cars were the next most common reason for pursuits, accounting for an additional quarter
- almost all of the pursued drivers were male, and at least three-quarters were under 30 years of age; a substantial proportion were unlicensed and had consumed alcohol or drugs
- eleven people (three fleeing drivers and eight passengers) were killed in pursuits in the last five years; no police officers were killed
- eight out of the eleven people killed were pursued for traffic/driving offences
- two of the people killed were pursued for being in a stolen car
- most people who were injured or killed were not the fleeing drivers
- eleven per cent of pursuits (or one in nine) resulted in injury to one or more people, although most of these injuries were minor
- up to 29 per cent of all people injured were QPS officers
- around 29 per cent of all pursuits resulted in a collision
- there was a significant decrease in the proportion of pursuits that resulted in collisions between 2000–01 and 2001–02

- one in ten pursuits resulted in QPS vehicle damage
- the fleeing driver was charged with an offence unrelated to the pursuit in around half of all cases; the most common charge was drink-driving or unlicensed driving, followed by unlawful use of a motor vehicle
- less than 10 per cent of fleeing drivers were charged with a serious offence, such as break and enter, of which the police officer was unaware at the time of the pursuit.

The Queensland Police Service has taken some constructive steps in recent years to address the risks associated with police pursuits. There are signs of positive change in police culture and attitudes to pursuits, and the recent decrease in collision rates supports this conclusion. However, an opportunity exists for the QPS to further enhance its policy and practices in relation to pursuits, primarily by tightening and clarifying its official pursuit policy.

The recommendations of the report are listed below:

1 That the QPS adopt a more restrictive pursuit policy, at a minimum by prohibiting pursuits for traffic/driving offences.

2 That the concept of 'disengaging' or 'following' be removed from QPS pursuit policy and explicitly disallowed.

3 That the official QPS policy and/or standing orders include the requirement for police vehicles to pull over to the side of the road and stop when a pursuit is terminated.

4 The current policy requires that: 'emergency lights and sirens of the police vehicle, if fitted, are activated when appropriate during the pursuit.' It is recommended that the words 'when appropriate' be deleted, so that lights and sirens are always required unless there are extraordinary reasons not to use warning equipment.

5 That the QPS consider incorporating into its own policy a number of good practice examples from other Australian states.

6 That, wherever possible, directions in relation to the initiation, conduct and termination of pursuits be written in terms of an 'order' to ensure strict compliance with QPS policy and procedures.

7 That all operational police officers be given regular refresher training regarding pursuit policy and practice (e.g. every two years as part of Police Operational Skills Training). Such training courses should include up-to-date research findings on pursuits.

8 That supervisors 'debrief' officers involved in a pursuit soon after the incident, in an effort to provide the officers with feedback on the conduct of the pursuit.

9 That the QPS review the adequacy of current methods and systems used to collect, store and analyse pursuits data to ensure that the data provide accurate information on pursuits.

Part 1: Introduction

A major challenge facing policy makers in the police service today is striking the right balance between two priorities: the need for police to have access to effective law enforcement strategies, and the need for them to consistently act in a manner that minimises any risk to public safety. Police involvement in high-speed pursuits is a case in point.

According to the Queensland Police Service (QPS) Operational Procedures Manual (OPM), section 14.23, a police pursuit is 'an attempt by an officer driving a police vehicle to intercept another vehicle where that officer believes on reasonable grounds that the other driver is avoiding interception'.

Over a two-year period between 2000 and 2002, police in Queensland were involved in over 1200 pursuits. Only a small number of these resulted in death or injury; nevertheless, more people were killed or injured during police pursuits than by any other serious use of force by police.

In 1998, the Criminal Justice Commission (CJC) published the results of a detailed analysis of police pursuits in Queensland resulting in death or serious injury. The CJC concluded that the high risks and costs associated with police pursuits highlighted the need for a thorough examination of the QPS policies and practices in relation to pursuits (CJC 1998). This study was conducted as a follow-up to the 1998 report, and to address concerns expressed by the community about police pursuits. It addresses the following key questions:

- How many pursuits does the QPS engage in per year?
- What are the justifications or reasons for pursuits?
- What is the profile of the typical pursued driver?
- What is the range of positive and negative consequences of pursuits?
- Are there clear and compelling reasons for the QPS to re-examine policy and training related to pursuits?

The role of the CMC

Since 1992 the Criminal Justice Commission (and from January 2002 its successor organisation, the Crime and Misconduct Commission) has monitored all police-related incidents in Queensland resulting in injury or in serious damage to police property, including those involving a police pursuit.

This study is an example of how the CMC discharges its responsibility in relation to its overview of the Queensland Police Service. Specifically, it addresses section 52(2) of the *Crime and Misconduct Act 2003*, which states:

> … the commission may undertake research into —

(a) police service methods of operations; and
(b) police powers and the use of police powers; and
(c) law enforcement by police; and
(d) the continuous improvement of the police service.

Data sources

The data on police pursuits in Queensland presented in this paper are taken from three different sources: QPS State Traffic Support (STS) data, QPS Ethical Standards Command (ESC) files and Crime and Misconduct Commission (CMC) files.

Since 1 January 2000 STS has maintained a database of all reported pursuits by the QPS (QPS policy stipulates that all pursuits must be reported). CMC data consisting of pursuits resulting in injury or death are presented for the years from 1 July 1997 to 30 June 2001. Data consisting of pursuits that resulted in injury or death are presented for the year 1 July 2001 to 30 June 2002 from the ESC files.

Data are presented from all three sources by financial year from June 1997 to July 2002. However, not all data are available from all sources for each year, and each data set contains information about different aspects of reported pursuits in Queensland.

Any injuries that occurred during the arrest of an offender (for example during a struggle with the arresting officer) were not counted for the purposes of this study.

Limitations of the data

Section 2.6.10 of the OPM requires that the CMC and ESC be notified of any serious injury or death from police-related incidents. However, officers may vary in what they consider 'serious', and this can lead to variations in reporting practices.

Although the STS data should be a complete record of all pursuits in which officers engaged, they may also have undertaken some pursuits that they did not report. The STS database is also limited by the information that was available immediately after the pursuit and recorded on the Significant Event Message (SEM) sent to STS. The STS database included all minor injuries; therefore the numbers are not comparable to the CMC or ESC count, which generally included more serious injuries and deaths.

Another limitation is that the STS data do not include injuries caused by collisions that occurred after a pursuit was ordered to be terminated[1], even if the collision occurred a few seconds after the termination. This practice has now changed, with the QPS advising that all injuries, including those that occur after termination, are being recorded. However, for the time period under consideration for this report, the previous recording practices applied.

Another problem relates to the overall reliability of the STS data. For example, there were a few cases where the CMC had been notified of a pursuit resulting in injury, yet there was no record of this pursuit on the STS database. In some other cases, the pursuit itself was recorded on the STS database, but no injuries were listed as having been sustained; this may have been because the information was not recorded on the SEM.

It should be noted that for some analyses the sample size was very small. This was due, in part, to a large number of records missing particular variables of interest, such as the offences with which the driver was charged. The results of these analyses must therefore be interpreted with some caution.

Structure of this report

After this introduction, Part 2 of the report outlines some of the main themes identified in previous research on pursuits both in Australia and overseas, and summarises current QPS pursuit policy and procedures. Part 3 presents the results of an analysis of QPS and CMC pursuit data and discusses some of the implications of the key findings. Part 4 makes some recommendations aimed at enhancing the current pursuit policy and practices in Queensland; it also outlines a proposal for implementing a limited operational trial and evaluation of a more restrictive pursuit policy.

Part 2: Overview of police pursuit research, policy and practice

The main purpose of this section of the report is to identify key themes emerging from national and international research literature in relation to police pursuits. The bulk of the literature comes from the United States, Canada or the United Kingdom. This creates some difficulties for Australian jurisdictions in trying to translate overseas experience to the Australian context. Despite the limitations inherent in trying to 'import' or learn from overseas practice, the research literature does identify several important issues or themes worthy of consideration by the QPS. This discussion is organised under the following headings:

- Key themes from international police pursuit literature and research
- Overview of Australian police pursuit research and experience
- Current police pursuit policy and procedures in Queensland.

Key themes from international police pursuit research

The dilemma: law enforcement versus public safety

A review of police pursuit research reveals that law-enforcement decision makers throughout the world are struggling to find the right balance between the need for police to be effective in apprehending offenders and the need for them to consistently act in a manner that minimises any risk to public safety. For this reason, police pursuits constitute a particularly difficult area of policy. On the one hand, police are expected to use whatever police powers are reasonable and necessary to enforce the law, including engaging in pursuits to apprehend drivers who flee or fail to stop when directed to do so by a police officer. On the other hand, pursuits can create situations that are far more dangerous to the public than the original offence. This point is perhaps best illustrated by Alpert and Madden (1994, p. 43): 'Perhaps the only thing more dangerous than a drunk driver on the road is a drunk driver being chased by the police!'

Waddington (2001) argued that whatever approach law enforcement agencies take in relation to pursuits, police are going to be 'damned if they do and damned if they don't'. For example, if service policy expressly prohibited pursuits, and an offender coming to the notice of police were to continue driving dangerously and subsequently injure someone, the police department could run the risk of criticism, or legal liability, for not having apprehended the driver and preventing the injury. On the other hand, if the police were to take action and as a result people were hurt, the police could also be criticised for this. In essence, there are no easy solutions that perfectly address all circumstances at all times.

Risks, dangers and potential benefits of police pursuits

The most serious consequences of police pursuits are deaths and injuries. A study evaluating accident and injury rates from numerous published studies of police pursuits in America and Canada found that on average 32 per cent of pursuits resulted in an accident, 11 per cent resulted in personal injury and one per cent resulted in death (Payne & Fenske 1996).

A recent report by the British Police Complaints Authority (PCA 2002) found that the police were involved in 1 per cent of all road fatalities in the UK. In the first nine months of 2002, a total of 35 pursuit-related deaths were reported to the PCA. The Los Angeles Police Department (LAPD) found that pursuit deaths made up 5 per cent of all road fatalities (LAPD 2002); by comparison, drunk drivers contributed to 13 per cent of road fatalities in Los Angeles.

The safety of police officers is another area of concern. Recent data from the USA revealed that police officers are more likely to be killed accidentally in the line of duty than to be killed feloniously (Pinizzotto, Davis & Miller 2002). In 2000, 62 per cent of all officers killed in the line of duty in the USA (n = 135) were killed due to some sort of accident (e.g. car accident, accidental shooting, struck by vehicle while directing traffic). Of all accidental line-of-duty deaths between 1996 and 2000, 64 per cent were due to car or motorcycle accidents (not necessarily pursuits).

Crew and Hart (1999) examined the costs and benefits of pursuits. In particular, they analysed pursuit data from the state of Minnesota, USA, involving 6773 pursuits. They assigned a monetary value both to the costs (each collision, injury or death) and to the benefits (each arrest), in order to test whether benefits outweighed costs overall. The authors found that nearly one in three pursuits resulted in a negative outcome (accident, injury or death) but concluded that the benefits of pursuits far outweighed the costs. However, the conclusions reached by the authors depend heavily on the monetary value that is assigned to the benefit or the cost of a pursuit. For example, the benefit of each arrest (for any offence) was costed at an average of $2.14 million, whereas a death was costed at $3.36 million. Thus it would take only two arrests to outweigh one death. It must be asked, however, whether deaths and injuries can and should be evaluated in this fashion.

The trend towards more restrictive police pursuit policies

An increasingly popular view is that it is not worth risking injury and death to arrest offenders who have committed minor offences or property crimes (e.g. Alpert 1997; RCMP PCC 1999). The following quote, from a Royal Canadian Mounted Police (RCMP) training video, is from a police officer who recounts an actual case of a pursuit of a stolen car, which resulted in the death of the suspect:

> … let's face it, you're driving around a big bullet, and it can kill … To take a human life over a $40 000 vehicle? It's wrong for him to be there, it's wrong for him to be in the stolen vehicle, it was wrong for him not to stop when he was initially instructed to stop, but it cost him his life and it wasn't worth it. We lost in the situation, everyone came out as losers. The members who were involved are all scarred for life, the family certainly has a significant loss in their life, the vehicle we were trying to save — that was a write-off, so what did we gain from it — nothing. (RCMP PCC 1999)

It is often assumed that, if a suspect flees from police, it must be because the suspect has committed a serious offence. However, a United States National Institute of Justice report found that most people fled because they were scared of the consequences of minor offences, and most of these suspects said that they would have reduced their speed and dangerous driving 'when they felt safe' from the police (Alpert et al. 1996).

Recent evidence from the Miami-Dade Police Department in Florida, USA, revealed no negative effects after a restrictive pursuits policy was introduced in 1992, limiting pursuits to 'violent felons only'. The policy was found to have significant public safety benefits, including an 82 per cent decrease in pursuit-related injuries (Alpert 1997).[2] This reduced level of pursuits and injuries has remained stable since the introduction of the new policy. Importantly, there was no increase in the crime rate and no increase in the number of suspects attempting to flee from police.

Similarly, a qualitative study of interviews with patrol officers in a police department with a very restrictive

pursuit policy found no increase in the number of people attempting to flee from officers (Falcone 1994). In contrast, when the Omaha police department in Nebraska, USA, relaxed its pursuit policy in 1993 to permit pursuits for offences that had previously been prohibited, there was a 600 per cent increase in pursuits (Alpert 1997).

The Denver Police Department also introduced a more restrictive policy, restricting pursuits to the apprehension of 'violent felons'. The Denver policy also states that the following conditions are not sufficient to warrant a pursuit:

- the mere act of fleeing, no matter how recklessly
- traffic infractions and licensing violations
- 'driving under the influence', 'careless driving' and 'hit and run' not resulting in serious bodily injury or death
- property crimes including auto theft and joy-riding
- attempted vehicular assault.

In addition to these specific examples, a review of the research literature suggests that there is a trend towards more restrictive police pursuit policies generally. In general, these policies state which offences are serious enough to warrant pursuing (e.g. certain types of offences or offenders) and do not rely heavily on the judgment and discretion of individual officers. Table 1 (next page) summarises the main elements of several of the more restrictive pursuit policies currently in operation in some US police departments.

Overview of Australian police pursuit research and practice

The issue of police pursuits has received little attention from researchers in Australia. The best-known Australian studies are those by Homel (1990) in Western Australia, Brewer and McGrath (1991) in South Australia and the CJC's 1998 study entitled *Police pursuits in Queensland resulting in death or injury*.

High-speed pursuits in Perth

One of the first Australian studies of police pursuits was undertaken in Perth, Western Australia (Homel 1990). This study involved a detailed analysis of 346 pursuits occurring in Perth between 1 January and 30 June 1990. Data from these pursuits were coded by researchers regarding five related components: general details of the pursuit; details of police assisting; the severity of any injuries sustained by police, offenders and third parties; details of the offenders; and the charges preferred. Some of the key findings were:

- Over three-quarters (80%) of all pursuits took place at night.
- The median duration of a pursuit was three minutes, with the longest pursuit lasting 62 minutes.
- Where a reason for initiating the pursuit was given, half (50%) were initiated because of a traffic offence and around a quarter (23%) were for stolen vehicles.
- About one-third (34%) of all pursuits ended in a crash or collision.
- Injuries or deaths occurred in 6 per cent of pursuits, with a total of 8 police, 21 offenders and 3 other people injured during the study.

Homel concluded by suggesting that: 'the general consensus seems to be that a high-speed pursuit is justified on moral grounds only if a serious crime has been known to have been committed' (p. 69). Homel recommended that the Western Australia Police Service trial a restricted police pursuits policy, limiting pursuits to life-threatening situations, and excluding traffic offences and stolen vehicles as reasons for initiating the pursuit. We found no evidence that the WA Police Service adopted this recommendation.

Characteristics of offenders in high-speed pursuits

Brewer and McGrath's (1991) study of pursuits in South Australia focused on developing a profile of offenders involved in high-speed pursuits. The study involved a detailed analysis of all (143) reported high-speed pursuits occurring in Adelaide, South Australia, over the 10-month period between April 1987 and February 1988. The main findings of the study were:

- Nearly 75 per cent of all pursuits examined during the study occurred between 8.00 pm and 4.00 am.
- Traffic violations were the most common reason given by police for initiating a pursuit (96%).
- Most pursuits (80%) resulted in the apprehension of the driver of the pursued vehicle.

Table 1. A comparison of selected USA police department restrictive pursuit policies

Agency	Initiation	Termination
Austin Police Department (Texas)	▸ Pursuit allowed for felony crimes only. ▸ Initiation also depends on weather and road conditions, traffic volume, age and identity of offender.	▸ Pursuit becomes unsafe for officer(s) and/or public. ▸ Ordered by supervisor. ▸ Loss of communications. ▸ Mechanical malfunction.
Boston Police Department (Massachusetts)	▸ Offender has committed a violent or life-threatening felony. ▸ Vehicle being operated in an erratic or dangerous manner which poses threat of harm. ▸ The commission of a minor motor vehicle violation and/or operating a stolen vehicle are not sufficient to meet the above criteria.	▸ Conditions make it unreasonable to continue. ▸ Ordered by superior officer.
Long Beach Police Department (California)	▸ Offender has committed or is about to commit a felony crime. ▸ Driver is so impaired that he/she may cause death or serious injury. ▸ Decision to pursue also depends on weather and road conditions, traffic volume and the location of the pursuit.	▸ Command officer or supervisor orders termination. ▸ Loss of visual contact with pursued vehicle. ▸ Loss of radio communications. ▸ Excessive speed or reckless driving on the part of the suspect's vehicle.
Orange County Sheriff's Department (California)	▸ Offender has committed a serious crime other than a traffic-related offence. ▸ Offender is armed and presents an immediate threat to the community. ▸ Offender is a known felon wanted for a violent crime.	▸ Watch commander directs discontinuance. ▸ Loss of suspect's vehicle. ▸ Decision to continue or terminate also depends on location of the pursuit, whether the identity of offender is known, road and weather conditions, time of day, and volume of vehicular and pedestrian traffic.
Salt Lake City Police Department (Utah)	▸ Offender must have committed a 'forcible crime' felony. ▸ Pursuit allowed only when there is a high likelihood of apprehension. ▸ Decision to pursue also depends on weather and road conditions, volume, type, speed and direction of traffic, and the officer's driving skills.	▸ Pursuit can be terminated at the pursuing officer's discretion. ▸ Futility of the pursuit becomes evident. ▸ Risk of the pursuit outweighs the need for apprehension. ▸ Commander directs that the pursuit be terminated.
St Louis Police Department (Missouri)	▸ Pursuit permitted only if the offence is a felony involving use of deadly force or the threat of deadly force.	No definitive termination guidelines.
Santa Monica Police Department (California)	▸ Pursuit only permitted if the offence is a felony involving use or threatened use of deadly force, a residential burglary has just occurred where the full extent of the crime is unknown, or the offender is believed to have committed a physical or sexual assault. ▸ Officer, prior to the pursuit, must observe that the suspect's driving displays a reckless disregard for public safety where the driving is likely to cause death or serious injury to others.	▸ Pursuit poses a clear and unreasonable danger to officers. ▸ Speeds dangerously exceed normal flow. ▸ Vehicle or pedestrian traffic necessitates dangerous manoeuvring of police vehicle. ▸ Violator can be identified and apprehended at a later date. ▸ Other law enforcement agency traversing jurisdiction and assistance is no longer needed. ▸ Pursued vehicle's location is no longer known. ▸ Supervisor orders a discontinuance of the pursuit.

Sources: Los Angeles Police Department Policy Comparison Chart, 31 October 2002; Boston Police Department pursuit policy, September 1999.

- Most pursued drivers were males (97%) ranging in age from 14 to 51 years (with a mean age of 23 years). Only 45 per cent of the drivers were licensed; an additional 11 per cent held a learners or probationary licence.
- Just over three-quarters (76%) of pursued drivers *who were tested* recorded positive blood alcohol content (BAC) levels, with 64 per cent exceeding the allowable limit.
- Slightly over half of the pursued drivers (55%) had prior convictions.

The main conclusion of the study was that high-speed pursuits usually involve people who represent a high risk on the road under normal conditions. This risk was considered to be inflated with the addition of a high-speed pursuit.

Police pursuits in Queensland resulting in death or injury

The CJC's study of police pursuits resulting in death or injury was undertaken primarily to assist in the development of policies to reduce the risks and costs associated with police pursuits. It involved an analysis of all pursuit notifications received by the CJC between 1992–93 and 1996–97. The main findings of the study were:

- More people were injured or killed in Queensland as the result of police pursuits than through discharge of firearms by police officers.
- Most pursuits occurred on a Friday or Saturday between 6.00 pm and 6.00 am, which are generally the busiest periods for police.
- Those most likely to be killed or injured as a result of a police pursuit were the occupants of the pursued vehicle, whose driver would usually be a relatively young male.
- The most common reasons for police attention to the vehicle were that it breached the traffic laws or had been reported as stolen.
- Police who initiated pursuits were mainly of junior rank, reflecting the fact that operational duties are mainly performed by junior officers.

The CJC concluded that its findings highlighted the need for a thorough examination of existing QPS policies and practices, and stated the case for imposing tighter controls over police pursuit practices in Queensland (CJC 1998). This led to the changes discussed in the following section.

Current police pursuit policy and procedures in Queensland

The QPS has taken a number of very positive steps in recent years to address the risks associated with police pursuits. For example, after the publication of the CJC report in 1998, the QPS and CJC formed a Police Driving Policy and Practice Committee to consider urgent duty driving policy and related issues. As a result of this initiative and others, the QPS has taken various steps to address the risks associated with police pursuits, including:

- revising policy and procedures for urgent duty driving and pursuits (see below)
- introducing tyre deflation devices, which can be laid in the path of a fleeing vehicle to deflate its tyres and bring the pursuit to a safe conclusion
- revising driver training, with a particular emphasis placed on preparing police to deal with the physiological and psychological effects of driving in high-stress circumstances
- introducing a requirement for all pursuit incidents to be recorded
- forming regional 'driver review panels' chaired by a senior officer (Chief Superintendent or Assistant Commissioner), which monitor and review pursuit incidents.

These steps taken by the QPS are commendable. Recently, the Commissioner of Police and other senior officers have been personally emphasising to officers the importance of exercising caution during pursuits, and the inherent risks involved in pursuits. They also emphasise that officers must be able to justify engaging in a pursuit (i.e. they must ensure that the potential risks are outweighed by the gains).

The revised policy outlines official policy, orders and procedures in relation to pursuit and urgent duty driving situations. It was designed to emphasise the risks of pursuits and to ensure that officers balance the potential gains of pursuing (apprehending the offender) with the risks to the public and police.

There are many positive aspects to the QPS's revised safe driving policy. Some of these include:

- statements that the safety of all people is the primary concern
- explicit support for officers who decide to terminate a pursuit

- emphasis on continually assessing the risks associated with the pursuit, including road, weather, visibility, traffic conditions, manner in which pursued vehicle is driven, and public safety
- ensuring that decisions regarding pursuits are based on circumstances that are known, and not merely suspected
- requiring the officers to terminate a pursuit if the pursued driver is identified as a juvenile
- requiring the officers to terminate a pursuit if the offender has been identified and can be apprehended later
- limiting to two the number of police vehicles involved in the pursuit
- ensuring that only marked cars fitted with emergency lights and sirens are used in pursuits, except in extreme circumstances
- placing overall control of pursuits with the communications room supervisor, to ensure that command and control of the pursuit resides with an officer who is not caught up in the 'chase'
- prohibiting the resumption of a pursuit after a termination unless the circumstances have changed significantly
- barring the use of roadblocks or attempting to force the pursued vehicle off the roadway, unless the offender is reasonably suspected of committing violent crimes against the person.

An examination of pursuit policies from other Australian jurisdictions showed that many of these items are common to other states' policies. In particular, most other jurisdictions also emphasise that the primary concern is the safety of all road users (including offenders), that there is to be a continuous risk–benefit assessment, and that the pursuit controller must be someone other than an officer caught up in the chase. In common with the policies of all other Australian states except Tasmania, the QPS policy does not specify or give guidance as to which offences are serious enough to justify the risks inherent in pursuits. This is left up to the judgment of individual officers. The Tasmania Police policy, on the other hand, specifies which offences justify the risks of pursuing and specifically forbids pursuits for traffic breaches and motor vehicle stealing.

Summary

Overseas and national research has confirmed that police pursuits are a potentially high-risk activity and that more people are injured and killed from pursuits than from police use of firearms. In recent years there has been a general movement in many jurisdictions towards increased control over pursuits and tighter pursuit policies to limit pursuits to certain offences. For the most part, these more restrictive policies clearly state which offences are serious enough to warrant a pursuit (e.g. certain types of serious offences or offenders); they do not rely heavily on the judgment and discretion of individual officers.

The issue of police pursuits has received little attention by researchers in Australia, but three of the better-known studies (Brewer and McGrath 1991; CJC 1998; Homel 1990) are discussed in this report. Despite geographic and jurisdictional differences, the main findings of these studies were remarkably consistent. In line with the general trend overseas, two of the Australian studies recommended that consideration be given to introducing more restrictive policies that limit pursuits only to serious offences or life-threatening situations.

This report acknowledges that the QPS has taken a number of very positive steps in recent years to address the risks associated with police pursuits.

The next section presents the results of an analysis of Queensland police pursuit data.

Part 3: Key findings from Queensland's police pursuit data

This section presents the results of an analysis of police pursuits in Queensland using data from three sources: the QPS State Traffic Support (STS) pursuit database; QPS Ethical Standards Command (ESC) files of pursuits resulting in injury; and Crime and Misconduct Commission (CMC) files of pursuits resulting in injury. The STS database contains records of all reported pursuits by QPS officers since 1 January 2000. Data provided by the ESC relating to pursuits resulting in injury or death are presented for the years 1 July 2001 to 30 June 2002, whereas CMC data pertaining to pursuits resulting in injury or death cover the period 1 July 1997 to 30 June 2001.

The reason that three different sources of data are presented is that there was not one complete data set which covered all pursuits and pursuit injuries from 1997 to 2002. As the sampling for these data differed, some results are not directly comparable.

The discussion of the main findings of the analysis is organised under the following headings:

- Number of police pursuits in Queensland
- Duration and speed of pursuits
- Why pursuits occur
- Characteristics of the vehicles and drivers involved in pursuits
- Consequences of pursuits
- Investigations of pursuits involving death and injury.

Number of police pursuits in Queensland

The STS data covered 1259 reported pursuits conducted between 1 July 2000 and 30 June 2002, or an average of 630 per year. A total of 599 pursuits were recorded in 2000–01 and 660 in 2001–02. It is likely that this increase is a reflection of improved recording practices (after the initial requirement since 1 January 2000 to record all pursuits), rather than a real increase in pursuits. This is supported by the fact that when the data were examined by six-monthly periods there was an increase in pursuits between the first and second six-month periods, with numbers remaining relatively stable subsequently. Of all these pursuits, 140 (11%) resulted in an injury.

The ESC files recorded 34 pursuits that resulted in some sort of injury or death during one year (1 July 2001 to 30 June 2002).[3] The CMC database recorded 66 pursuits that resulted in death or injury during the four years from 1 July 1997 to 30 June 2001. This translates to an average of 17 such pursuits per year.

Table 2. Initial reasons for pursuit

Reason	CMC files July 1997 – June 2001 (*n* = 63)	ESC files July 2001 – June 2002 (*n* = 33)	STS data July 2000 – June 2002 (*n* = 1244)
Traffic/driving violation	37	36	25
No number plates	5	3	16
Fail to stop for RBT/licence check	13	3	11
Suspicious vehicle	6	15	9
Stolen vehicle	21	24	29
Fleeing other offence or known/suspected offenders	13	9	7
Other	6	9	4
Total	100	100	100

Notes: 'Other' included not wearing helmet and reported for failing to pay for petrol (CMC, ESC files). In three CMC cases, one ESC case and 15 STS cases the reason for initiating the pursuit was missing. Percentages are rounded and therefore may not add up to exactly 100.

Duration and speed of pursuits

STS data showed that the average pursuit lasted for around seven minutes, with the longest lasting more than four and a half hours. Eighty-one per cent of all pursuits, however, lasted less than ten minutes. The median duration of pursuits (the value where 50% of the times are higher and 50% of the times are lower) was three minutes, which is similar to previous studies (Homel 1990; PCA 2002).

According to the STS database, the average reported maximum speed was 119 km/h, and the median reported maximum speed was 120 km/h. Sixteen per cent of pursuits reached a reported maximum speed of 160 km/h or more, and two per cent of all pursuits reached a maximum reported speed of 200 km/h or more.[4]

Why pursuits occur

According to CMC and ESC data (see Table 2), the most common reason for initiating a pursuit was a traffic or driving violation. If the categories of 'fail to stop for RBT' and 'no number plates' are included in traffic/driving violations, this category accounts for around half of all pursuits. The next most common reason, accounting for approximately one-quarter of pursuits, was that the vehicle was stolen. This is consistent with previous research (Homel 1990). Thus, most pursuits were initiated for relatively minor offences or for a stolen vehicle, either of which could be judged to be not serious enough to warrant placing public safety at risk.

Table 3. Age of pursued driver

Age	CMC files (*n* = 56)	ESC (*n* =
16 or younger	16	2
17–19	21	2
20–29	41	2
30–39	14	1
40+	7	
Total	100	10

Notes: In 10 CMC files and 5 ESC files the age of the driver was not specified. Percentages are rounded and therefore may not add up to exactly 100.

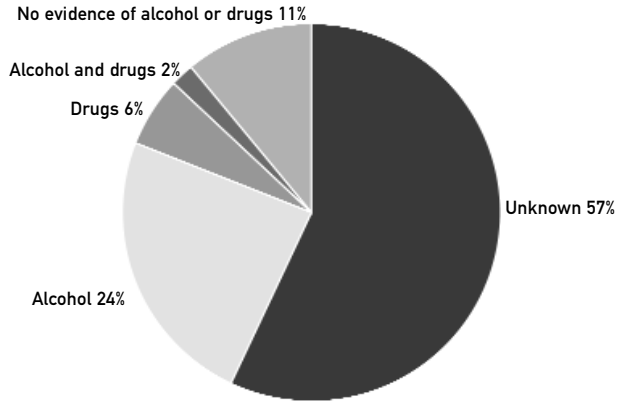
It is important to point out that definitions of what constitutes a serious offence vary, and referring to offences as 'minor' is not intended to trivialise these events. It is also acknowledged that the categories of offences are not homogeneous. For example, some driving offences could have entailed serious risk to the public, making police intervention necessary.

Characteristics of vehicles and drivers involved in pursuits

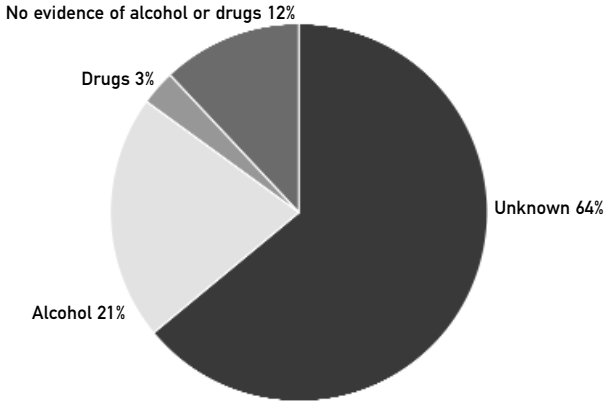
Age and gender of pursued driver

Almost all (over 90%) of the pursued drivers were male, and at least three-quarters of the drivers were under 30 years of age (see Table 3). According to

Figure 1. Had driver consumed alcohol or drugs?



CMC data



ESC data

CMC and ESC files respectively, between 59 and 72 per cent of pursued drivers were under 25 years of age, and 16–28 per cent were juveniles (16 years and under).

Licence status

According to the CMC data, 46 per cent of all the pursued drivers were not licensed (juveniles were by definition unlicensed). However, in a large proportion of cases it was not possible to determine from the file whether the driver was licensed or not. According to ESC data, 44 per cent of drivers were unlicensed, with a similar proportion of cases where it was not possible to determine whether the driver was licensed or not. It is possible that this information is not recorded unless the driver is unlicensed.

Use of alcohol or drugs

As Figure 1 shows, approximately a quarter to a third of all the pursued drivers had consumed alcohol or drugs.[5] However, in the majority of cases this information was not recorded on file[6], and it is therefore possible that the proportion was higher. Brewer and McGrath (1991) found that 76 per cent of drivers *who were tested* had positive blood alcohol content (BAC) readings (but not necessarily over the legal limit).

Type of vehicle

According to STS data, 76 per cent of pursued vehicles were cars and 23 per cent were motorcycles. Three cases involved trucks and four cases were designated as 'other'. Similarly, data from the CMC and ESC files showed that at least two-thirds of pursued vehicles were cars and approximately one-quarter were motorcycles. Other vehicles that were pursued were bicycles (three cases) and a semitrailer. The fact that bicycles were pursued by police gives cause for some concern, as a collision between a police car and a bicycle has the potential to result in serious injury. In two of the three bicycle pursuits the police car collided with the cyclist, and in the third the cyclist collided with a pedestrian.

Gender of police involved in the pursuit

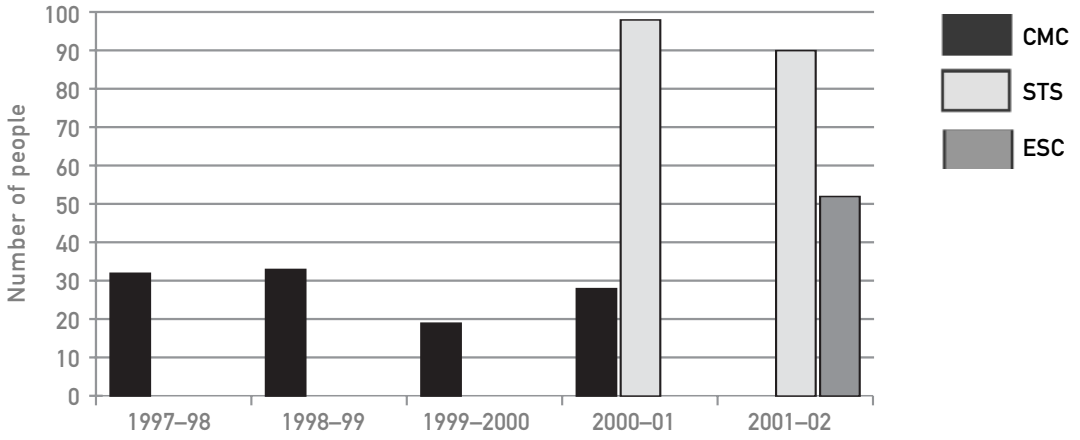
Of the 44 CMC cases where the information was available, the majority of police drivers were male (93%). Of the 21 ESC cases where this information was available 95 per cent were male. It was not possible to determine whether this over-representation was due to the fact that males were more likely to initiate pursuits or that males were more likely to be drivers of a police vehicle generally, or both.[7] The STS database did not record the gender of the pursuing officer.

Consequences of pursuits

Deaths and injuries

Eleven people were killed in the five years between 1 July 1997 and 30 June 2002. This was an average of two or three deaths per year. The majority of those killed were pursued for traffic/driving violations (8 out of 11 people). Two were pursued because the

Figure 2. Number of people injured or killed during police pursuits in Queensland



vehicle was stolen, and one was fleeing from a serious assault (although not the perpetrator of the assault).

Figure 2 shows the numbers of people injured per year according to the different data sources. For example, the STS database revealed that around 90 people were injured per year. According to STS data, 11 per cent of all pursuits (or 1 in 9) resulted in injury or death, and approximately one person was injured for every seven pursuits (i.e. 188 people injured or killed in 1259 pursuits).[8] Most of these injuries were minor, however, and did not require medical treatment. Nevertheless, this injury rate may be conservative, because injuries that occurred after a termination order were not recorded.

The injury rate for the year 2000–01 was 13.6 per cent and the injury rate for the year 2001–02 was 10.1 per cent. This suggests an improvement over these years, which is encouraging.[9]

The ESC files consisted of 34 pursuits in one year (1 July 2001 to 30 June 2002), which resulted in 51 people being injured and one person killed.

The CMC database consisted of 66 pursuits that resulted in death or injury (10 people killed, 102 people injured) in the four years from 1 July 1997 to 30 June 2001. This represents an average of 17 such pursuits per year, resulting in an average of 28 people per year being injured or killed. This means that around 3 per cent of all pursuits (average of 17 out of 630 per year) resulted in an injury or death which was notified to the CMC.[10]

According to the CMC data, there was an apparent decrease in the number of people injured in the year 1999–2000. This coincided with the introduction of the new policy on urgent duty driving and pursuits in January 2000. However, the number of injuries increased almost to the previous levels in the following year (2000–01).

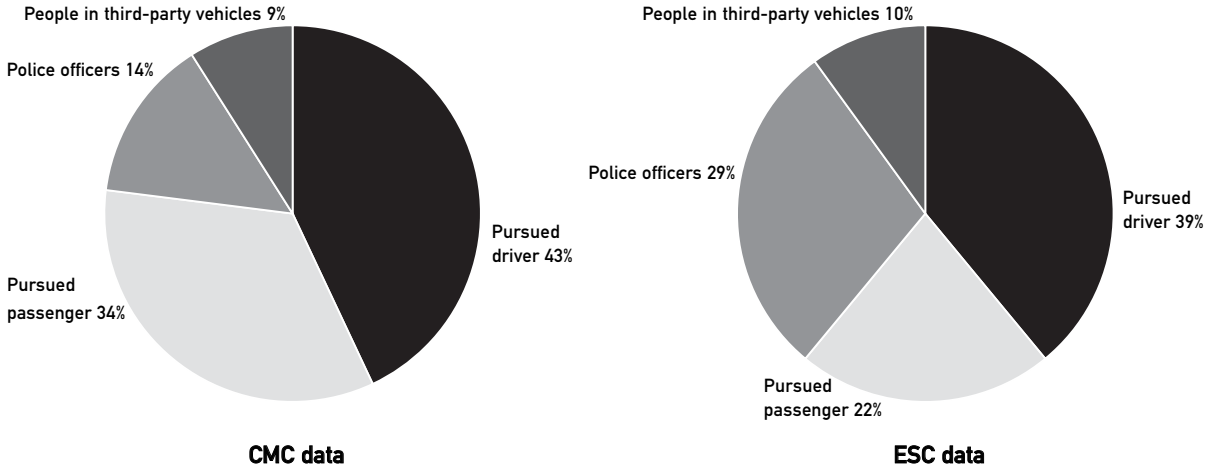
Although more injuries were recorded by the ESC in 2001–02 than by the CMC in previous years, this is likely to be because the ESC was notified of more minor injury pursuits, rather than representing an actual increase in more serious injuries across time. This interpretation is supported by the relatively stable numbers shown by the STS data across the two-year period, and a small, although not statistically significant, decrease in the injury rate across the two years.

Who was killed and injured?

The majority of people injured or killed during pursuits were not the offending drivers. Of the eleven people killed, three were the drivers of the pursued vehicles, while the remainder (8 people) were passengers in the pursued vehicles. No police officers or people in third-party vehicles were killed as a result of a pursuit occurring between 1 July 1997 and 30 June 2002.

Figure 3 shows that fleeing drivers made up around 40 per cent of those injured.[11] People in third-party vehicles made up around 10 per cent of the injured, while police officers made up 14 per cent of the

Figure 3. Who was injured?



injured according to CMC data or 29 per cent according to ESC data (although most of these injuries were minor and did not require medical treatment). It can be expected that police officers would be less likely to receive serious injuries, because officers are likely to be more skilled drivers, familiar with the vehicle, not be under the influence of alcohol or drugs, and to be wearing seatbelts. According to STS data, 19 per cent of people injured were police officers. However, there were some inconsistencies with the recording of who was injured. It is unclear exactly how many were police officers and how many were other people. The 19 per cent figure, therefore, may be a conservative count.

In summary, the analysis of the data revealed that a considerable number of pursuits resulted in injury, and the majority of the people who were injured or killed were not the offending drivers. Injuries to police officers attributed to pursuits may present an important workplace health and safety challenge for the QPS. In the USA, as mentioned earlier in this report, police officers are more likely to be killed as a result of some type of accidental death in the line of duty than to be killed feloniously; and car and motorcycle accidents are the most common types of accidents to result in death (Pinizzotto, Davis & Miller 2002).[12]

Collisions

The CMC and ESC databases recorded pursuits that resulted in injury; thus they all involved some form of a collision. Not all pursuits, however, end in a collision; according to STS data, 29 per cent of pursuits involved collisions (as measured by some sort of recorded vehicle damage).[13] Among those pursuits that resulted in vehicle damage, police vehicles were damaged in 35 per cent of cases. This corresponded to one in ten pursuits overall that involved recorded damage to a QPS vehicle. There was a statistically significant decrease in the collision rate from 2000–01 (33.2%) to 2001–02 (26.5%)[14], which is an encouraging result. This is most likely due to the increasing emphasis that the QPS has placed on safety during pursuits.

According to CMC and ESC files, reported in Table 4 (next page), the most common type of collision was one in which the pursued vehicle was involved in a single-vehicle accident; this occurred in around 60 per cent of injury pursuits.

Collisions with third-party vehicles occurred in 16–18 per cent of injury pursuits. In approximately one-quarter of injury pursuits the police vehicle and the pursued vehicle collided with each other (sometimes because the pursued driver deliberately rammed the police car).

Table 4. Types of collisions

Type of collision	CMC files (*n* = 65)	ESC (*n* =
Pursued vehicle in single-vehicle accident	60	5
Pursued vehicle collided with third-party vehicle	14	1
Pursued vehicle collided with pedestrian	0	
Police vehicle in single-vehicle collision	8	
Police vehicle collided with third-party vehicle	2	
Police vehicle collided with pedestrian	0	
Police vehicle collided with pursued vehicle	28	2
Police vehicle collided with other police vehicle	0	

Notes: There was only one incident where a pursued vehicle collided with a pedestrian. In this case, the pursued vehicle was a bicycle. Percentages add up to more than a hundred because multiple collisions can occur during a single pursuit. One ESC and one CMC case had this information missing.

Table 5. Apprehension of driver in pursuits involving collisions

Driver apprehended	CMC files July 1997 – June 2001 (*n* = 66)	ESC July 2001 – (*n* =
Driver apprehended at the scene	71	
Driver escaped but apprehended at a later date	17	
Driver escaped	8	
Driver killed	5	
Total	100	

Note: The category of 'driver escaped' included the driver escaping on foot (abandoning the vehicle) or in the vehicle. Percentages are rounded and therefore may not add up to exactly 100. In two ESC cases this information was missing.

Apprehensions and charges

The data in Table 5 show that, according to CMC and ESC files, the driver was apprehended at the scene in most cases, and in an additional 5 per cent of cases in the CMC files the driver was killed during the pursuit. The fact that there were cases where the driver initially escaped from the pursuit but was apprehended at a later date (see Table 5) indicates that it is possible to apprehend some offenders without catching them during the pursuit. It is also possible that some of the drivers who did escape were subsequently apprehended but these details were not recorded. Nevertheless, as all the cases in the CMC and ESC files involved collisions, CMC and ESC data are biased towards driver apprehensions. It could be speculated that apprehensions would be less likely in pursuits that do not end in collisions.

Charges unrelated to the pursuit

One of the arguments commonly advanced in support of police pursuits is that if a driver flees it must be because they are guilty of a more serious offence, unknown to the officer at the time of initiating the pursuit, and therefore it is important to apprehend them. QPS pursuit policy explicitly states that a pursuit must be justified on the basis of known circumstances and not on suspicions. However, it is a common belief among officers that a fleeing suspect could be hiding something serious.

In an attempt to test this argument the CMC and ESC files were examined to find out whether the driver was subsequently charged with any offence that was not related either to the initial knowledge

Table 6. Charges unrelated to the pursuit

Most serious offence	CMC files (*n* = 66)	ESC (*n* =
Unknown	33	2
No offences that were unrelated to pursuit	24	2
Drink-driving/disqualified driving/unlicensed driving	14	1
Unlawful use of motor vehicle	9	1
Break and enter	6	
Possess tainted property/stealing/receiving/theft	5	
Possess drugs/drug offences	2	
Armed robbery/robbery with violence	2	
Warrants (outstanding fines/unknown type)/fail to appear	6	
Total	100	10

Note: Percentages are rounded and therefore may not add up to exactly 100.

officers had at the beginning of the pursuit or to any events that occurred during the pursuit.[15]

Data reported in Table 6 reveal that the driver was charged with an offence unrelated to the pursuit in around half of all cases. The most common charge (14–18% of cases) was drink-driving or unlicensed driving. The next most common charge (9–15% of cases) was unlawful use of a motor vehicle. Six per cent of drivers were charged with the comparatively more serious offence of break and enter, and one driver in each sample was charged with armed robbery or robbery with violence. Due to the small sample sizes, care must be taken when interpreting the results.

Previous results showed that on average one person was injured for every 7 recorded pursuits, or 11 per cent (1 in 9) of pursuits overall resulted in injury to a person. The above data showed that less than 10 per cent of pursued drivers were charged with a comparatively more serious offence such as break and enter or armed robbery (one case of robbery was observed in each sample).

Use of tyre deflation devices

Tyre deflation devices (TDDs) have become generally available for QPS officers since early 2002. These are placed in the path of the pursued vehicle; when the vehicle passes over them, spikes pierce the tyres and deflate them, bringing the pursuit to a conclusion.

A database of TDD deployments maintained by the QPS Operational Research and Advisory Unit recorded 27 instances of TDD use from 1 January 2002 to 31 October 2002. During this time the STS database recorded 556 pursuits overall, which means that TDDs were used about 5 per cent of the time.[16] The data also showed that the target car engaged (drove over) the device in 85 per cent of all cases where a TDD was deployed (23 deployments). Of these, no tyres were deflated in one case, one tyre was deflated in six cases, and in the remaining 16 cases (70%) two or more tyres were deflated. Over three-quarters (78%) of cases where TDDs were used resulted in the apprehension of an offender.

Abandoned pursuits

According to the STS database, 46 per cent of all pursuits were abandoned. The rate of abandoned pursuits in 2000–01 was 43.2 per cent and in 2001–02 it was 48.2 per cent; this suggests an improvement over these years, which is encouraging to note.[17]

However, it should be noted that examining the recorded reasons for abandonment more closely revealed that the number of abandoned pursuits was overstated. For instance, one of the reasons was coded as 'offender decamped on foot'; and another category was 'crashes'. In both cases, it seems that these should not be considered an abandonment of a pursuit, but rather the conclusion to a pursuit. In all, these categories accounted for 20 per cent of recorded 'abandoned' pursuits. This suggests that fewer pursuits are being abandoned.

Table 7. Investigation outcomes of finalised files

Investigation outcome	CMC files (*n* = 66)	ESC (*n* =
Disciplinary action for misconduct	5	
Disciplinary action for breach of discipline (BOD)	2	
Correction/chastisement/managerial guidance	8	1
Not substantiated/no suspicion of misconduct	88	8

Note: One CMC file involved both BOD and misconduct hearings, therefore percentages may add up to more than 100. At the time of data collection, seven ESC investigations were not yet completed.

Investigations of pursuits involving death and injury

The data in Table 7 show the outcomes of finalised investigations into pursuits resulting in death or injury. The results reveal that in the great majority of cases there was no disciplinary action taken. Three of the 66 cases (5%) in the CMC files resulted in recommendations for misconduct hearings and breach of discipline proceedings, while another five cases (8%) resulted in correction or managerial guidance. Eleven per cent of the ESC files resulted in some sort of managerial guidance or intervention. Overall, these results suggest that the majority of pursuits are conducted within current policy guidelines.

NSW coroner's recommendations regarding the 'Wade Monckton' pursuit

In February 2001 the potentially serious consequences of police pursuits were illustrated by the case of Wade Monckton, who was killed during a police pursuit which commenced in Queensland and crossed into New South Wales.

According to the New South Wales coroner's findings, Monckton was a probationary-licence driver who was stopped for a roadside breath test and registered a blood-alcohol level of 0.06. The police officers who tested Monckton took his driver's licence and therefore knew who he was and where he lived. When Monckton fled in his car, the officers gave pursuit. In addition to the fact that Monckton was under the influence of alcohol and a teenager with a provisional licence, there were other risk factors in the pursuit. For example, it was night time, the roads were wet, and the pursuit was conducted at speeds well above the posted speed limits.

The pursuit moved into New South Wales and a Queensland police sergeant ordered that it be terminated. The officers stopped the pursuit and then drove towards Monckton's residence. The officers subsequently saw Monckton's car again and pursued him. Although the Queensland police sergeant ordered the officers to return to Queensland, the pursuing officers did not hear this instruction because they had switched to a New South Wales radio frequency. The coroner found that the officers were still in pursuit in New South Wales when Wade lost control of his car and collided head-on with a truck. He was killed instantly, and the truck driver was injured.

The New South Wales coroner investigating the death of Wade Monckton made a number of recommendations regarding police pursuits. In particular, it was recommended that the adoption of a national Safe Driving Policy should be placed on the agenda of the Australian Police Commissioners Conference. The coroner also recommended that police services provide further training to police officers in relation to pursuits and urgent duty driving — in particular, that statistics on fatalities and injuries be incorporated into any training course; and the subject of Wade Monckton's inquest be used as part of any training course. Furthermore, the coroner suggested that the Safe Driving Policy definition of 'pursuit termination' should include 'ceasing to pursue and not following'.

It may be worth considering that, while there is appeal in the concept of a national Safe Driving Policy, attempting to obtain agreement among jurisdictions is likely to be a formidable task, which could delay action and potentially result in a *common* standard rather than the *best* standard. Furthermore, if common agreement is reached and one state subsequently wishes to change (e.g. to improve or

raise) standards, this also could be hampered or slowed by the agreement to adhere to a national policy. The efforts to improve policy should not be postponed by any attempt to obtain agreement among all jurisdictions. National standards should be *minimum* standards, but should not hamper jurisdictions from exceeding these.

Summary

The results of this study were drawn from three main data sources: the QPS STS pursuit database, QPS ESC files of pursuits resulting in injury or death, and CMC files of pursuits resulting in injury or death.

The key findings in relation to pursuits were as follows:

Frequency, duration and speed of pursuits

- A total of 599 police pursuits were recorded as occurring in 2000–01 and 660 pursuits were recorded in 2001–02, which is an average of 630 per year. The increase is most likely a reflection of improved recording practices, rather than a real increase in the number of pursuits occurring in Queensland.
- The average pursuit lasted about seven minutes, with the longest lasting over four hours. The average reported maximum speed was 119 km/h with 16 per cent of pursuits reaching speeds of 160 km/h or more.
- Most pursuits in Queensland were initiated for relatively minor offences or for a stolen vehicle.

Characteristics of the drivers involved in pursuits

- Almost all of the pursued drivers in Queensland were male, with at least three-quarters of the drivers being under 30 years of age.
- Nearly half all the pursued drivers were not licensed at the time of the pursuit. Approximately a quarter to a third of the drivers had consumed alcohol or drugs.

Consequences of the pursuit

- Eleven people (three fleeing drivers, eight passengers) were killed in pursuits in the last five years. Eight out of the 11 people killed were pursued for traffic offences. Two of the people killed were pursued for being in a stolen car.
- Eleven per cent of all pursuits (or one in nine) resulted in injury to one or more people, although most of these injuries were minor. Most people who were injured or killed were not the fleeing drivers. Over a quarter (29%) of the people injured were QPS officers.
- Twenty-nine per cent of all pursuits resulted in a collision. However, there was a significant decrease in the percentage of pursuits that resulted in collisions between 2000–01 and 2001–02. It was also found that one in ten pursuits resulted in damage to a QPS vehicle.
- In most pursuits involving a collision, the fleeing driver was apprehended.
- The study found that the fleeing driver was charged with an offence unrelated to the pursuit in around half of all cases. The most common charge was drink-driving or unlicensed driving, followed by unlawful use of a motor vehicle. Six per cent of drivers were charged with the comparatively more serious offence of break and enter.
- The use of tyre deflation devices (TDDs) is still relatively rare (5% of cases). However, over three-quarters (78%) of all cases where TDDs were used resulted in the apprehension of an offender.
- Nearly half (46%) of all pursuits were recorded as abandoned. However, when the reasons for abandonment were examined more closely, several coding or recording issues were identified which overstated the number of abandoned pursuits.

Investigations of pursuits involving death and injury

- The majority of pursuits seem to be conducted within current policy guidelines.
- As a result of the death of Wade Monckton, who was killed during a police pursuit originating in Queensland, the New South Wales coroner recommended that the adoption of a national Safe Driving Policy should be placed on the agenda of the Australian Police Commissioners Conference. However, amendments or improvements to QPS policy should not be potentially delayed by attempting to obtain agreement among all Australian police jurisdictions. The coroner also recommended that police services provide further training to police officers in relation to pursuits and urgent duty driving.

Part 4: Conclusion

Enhancing QPS policy and practice

This section of the report discusses ways that pursuit policy and practice in Queensland could be enhanced. It presents a number of recommendations aimed at helping the QPS manage the risks associated with police pursuits, and concludes by outlining a proposal for a limited operational trial and evaluation of a more restrictive pursuit policy.

Overseas and Australian research has confirmed that police pursuits are a high-risk activity, and more people are injured and killed from pursuits than from police use of firearms. In recent years there has been a general movement in many jurisdictions towards increasing control of pursuits and tightening policies to limit pursuits to certain offences. In some cases these policies clearly state which offences are serious enough to warrant a pursuit and do not rely heavily on the judgment and discretion of individual officers.

This study shows that law-enforcement decision makers in Queensland and elsewhere face real challenges in balancing the need for police to be effective in apprehending offenders against the need for police to consistently act in a manner that minimises any risk to public safety. For this reason, the issue of police pursuits remains a particularly difficult area.

As has been documented in this study, the QPS has taken numerous steps in the last five years to address the risks associated with pursuits, and collision rates have decreased accordingly. There are signs of constructive change in police culture and attitudes to pursuits. Senior officers have shown leadership by emphasising the importance of safety, both to police officers and to the public, and it seems this has had significant results.

In addition to the progress already made, the QPS could further enhance its pursuit policy and practice in a number of key areas. They include:

- tightening and clarifying the official QPS policy in relation to the conduct of pursuits
- enhancing current training for police officers in relation to pursuits
- improving supervision of pursuits
- addressing issues in relation to compliance monitoring and data collection.

Policy issues and implications

Initiation of a pursuit

One of the key questions regarding police pursuits is determining which offences are serious enough to warrant the risks of pursuing the offender. Pursuits can

involve significant costs for the QPS and the public, quite apart from those costs associated with injuries and deaths. The data showed that, consistent with previous studies (Homel 1990; Payne & Fenske 1996), around 29 per cent of all pursuits involved a collision (as measured by some sort of recorded vehicle damage). One in ten pursuits overall involved some damage to a QPS vehicle.

This study showed that less than 10 per cent of drivers were charged with committing a comparatively more serious offence, such as break and enter, which was unknown at the time of the pursuit. The data also showed that 11 per cent of all pursuits resulted in injury, although most of these were minor. The central dilemma is whether the benefit of apprehending an offender is worth the potential cost of an injury during a pursuit.

There will inevitably be disagreement over what constitutes a serious offence. Some people may think that vehicle theft is serious enough to warrant a pursuit. The CMC data showed that a substantial proportion of the drivers pursued were in a stolen vehicle, which may or may not have been the initial reason for the pursuit. However, the question remains whether a property offence such as this justifies putting people's safety at risk, particularly as the data also showed that the majority of people who were injured or killed in a pursuit were not the fleeing drivers. Further, there may be additional costs that cannot be so easily quantified. For example, the grief experienced by the family members of those who are killed or injured in pursuits, and the trauma that police officers may experience if someone is killed during a pursuit, could also be considered costs.

It is impossible to know definitively what the outcomes of various courses of action will be when judgments and decisions need to be made under circumstances of uncertainty. It will never be possible to get these decisions right 100 per cent of the time. However, a reasonable solution is to ensure that decisions and policy are based on the principle of minimising harm as much as possible. Results from the Miami-Dade Police Department, as discussed earlier in this report, suggest that the adoption of a more restrictive pursuit policy would be the most effective way of achieving this.

The view of the CMC is that the policy recently adopted by the Tasmania Police may provide an appropriate model for the QPS to emulate. For instance, rather than leaving the decision about which offences are serious enough to warrant a pursuit to the judgment of individual officers, the Tasmania policy specifies which offences justify the risks of pursuing. It also specifically forbids pursuits for traffic breaches and motor vehicle theft.

Although some overseas jurisdictions have adopted extremely restrictive policies (i.e. limiting pursuits to violent offenders only), the data from this study show that prohibiting pursuits for traffic offences would reduce the number of pursuits by about 50 per cent. If stolen vehicle pursuits were prohibited as well, this would lead to a further reduction of around 25 per cent.

Recommendation 1

That the QPS adopt a more restrictive pursuit policy, at a minimum by prohibiting pursuits for traffic/driving offences. A limited operational trial of this could be established in one or two districts.

Pursuit 'termination' and the concept of 'disengaging'

The current QPS policy contains two important terms, 'disengaging' and 'abandoning' , which should be clarified.

Disengaging (or following) is defined as 'allowing the pursued vehicle to draw away but continuing to follow the pursued vehicle to further reduce risks arising from a pursuit … the pursuit controller may direct the pursuing unit(s) to allow the pursued vehicle to draw away … re-engagement may be considered when appropriate'.

Abandoning (or terminating) a pursuit, on the other hand, is defined in the following way: 'All police drivers engaged in a pursuit or urgent duty driving to assist with that pursuit must immediately slow the police vehicle to comply with relevant speed and other traffic control requirements, turn off all emergency warning equipment and resume normal patrol or other relevant (pre-pursuit) duties'.

Use of the term 'disengage' permits officers to continue to follow the pursued vehicle, whereas 'terminate' means that they are not allowed to follow. This distinction is confusing and problematic because

it blurs the boundaries between pursuing and abandoning a pursuit. Allowing the possibility of 'following' but not 'pursuing' a vehicle means that there is a ready-made excuse for officers if they disobey a termination order. In some cases 'following' could even be more dangerous than pursuing, because the police vehicle could be travelling at speed without warning equipment being activated. As well, this distinction is illusory to a pursued person. It serves no purpose if the pursued driver is unaware of it and continues to drive dangerously as a reaction to police engagement.

According to CMC files, in the last five years there were two cases of pursuits resulting in deaths where the pursuit had been ordered to be terminated yet the officers continued to follow the target vehicle and recommenced the pursuit. Both target vehicles crashed, killing the driver in one case and the passenger in another. In another of the CMC files examined, the communications supervisor in one pursuit repeatedly allowed police to pursue, then disengage yet follow, then pursue, then follow, then pursue again. It was not clear from examining this file what the difference was between following and pursuing.

The CMC believes that the QPS should give consideration to explicitly disallowing the concept of 'disengaging' or 'following'. In addition, a statement similar to that used in the NSW policy should be included in the policy governing pursuits (i.e. a pursuit is deemed to continue if officers follow or attempt to maintain contact with the target vehicle). It is also suggested that the QPS policy include the requirement for police vehicles to pull over to the side of the road and stop when a pursuit is terminated, as recommended by the British Police Complains Authority report (PCA 2002). Such a requirement was recently raised by the QPS Police Commissioner during a radio interview (7 July 2003). This, and the explicit disallowing of 'following', should ensure that there is no confusion as to whether or not police are pursuing an offender.

Recommendation 2

That the concept of 'disengaging' or 'following' be removed from QPS pursuit policy and explicitly disallowed. A statement similar to that used in the NSW policy should be included (i.e. a pursuit is deemed to continue if officers follow or attempt to maintain contact with the target vehicle).

Recommendation 3

That the official QPS policy and/or standing orders include the requirement for police vehicles to pull over to the side of the road and stop when a pursuit is terminated.

'Catching up' to offenders

The RCMP policy relating to pursuits refers to two types of pursuits — routine and hazardous. 'Hazardous' pursuits are those where the driver has been signalled by the police to stop and has deliberately chosen to flee in order to avoid apprehension. Police officers have subsequently given chase using emergency equipment such as sirens and flashing lights to alert the public to potential danger (RCMP PCC 1999, p. 2). 'Routine' pursuits, on the other hand, are those where police officers exceed speed limits and violate other traffic regulations without the use of sirens and flashing lights. This type of police pursuit is employed in a variety of instances, such as catching up to speeding cars in order to record or 'clock' their speed, intercepting and stopping vehicles for occupant checks, and apprehending other law breakers (RCMP PCC 1999, p. 5).

The RCMP PCC report goes on to say that the rationale generally given for not using sirens or flashing lights in carrying out a 'routine' pursuit is that doing this at some distance will warn the subject, who will 'rabbit' or bolt in an attempt to outrun the police. Not surprisingly, this is referred to as the 'rabbit' theory. However, the same report also states that there is no demonstrated validity to the belief that suspects are more likely to flee if warning equipment is used from a distance, and a number of court rulings have found that violation of traffic laws while conducting a pursuit without emergency equipment can constitute negligence.

If a police car is speeding and violating road rules this creates a risk to other road users. Therefore, this heightened risk needs to be mitigated by the use of warning equipment. As Geoffrey Alpert stated in the RCMP PCC report (1999, p. A2/6): '…police officers are granted immunity from traffic regulations to protect lives, not to place them at risk'.

Recommendation 4

The current policy requires that: 'emergency lights and sirens of the police vehicle, if fitted, are activated when appropriate during the pursuit.' It is recommended that the words 'when appropriate' be deleted, so that lights and sirens are always required unless there are extraordinary reasons not to use warning equipment.

Other amendments

There are some additional good practice elements in other Australian states' policies that the QPS could usefully include in its own policy. These are listed under Recommendation 5.

Recommendation 5

That the QPS consider incorporating into its own policy a number of good practice examples from other Australian states. These are:

- **maximum allowable speed of 140 km/h (WA)**
- **requirement to have two officers in the pursuing car unless there is a hands-free radio (WA)**
- **automatic termination of a pursuit if the target vehicle travels on the incorrect side ofthe road, or extinguishes its lights at night, or the target vehicle 'approaches a stop sign or lights at a speed or manner which suggests the intersection will be negotiated dangerously' (WA)**
- **requirement for school zone speed restrictions to be adhered to (Tas.)**
- **automatic termination if there is loss of radio communication; automatic termination if the pursued vehicle enters an area that is a known radio 'black spot'. Officers are required to familiarise themselves with these 'black spot' areas (NSW)**
- **statement that a pursuit is deemed to continue if officers follow or attempt to maintain contact with the target vehicle (NSW).**

The QPS policy is relatively complex and long, yet vague on some details about variables that may be relevant to a pursuit (such as traffic conditions, and the manner in which the pursued vehicle is being driven). The QPS policy states that such variables must be taken into consideration when deciding whether to pursue or not, but does not say how these variables are to be considered. This is left to the discretion of the individual officer and could result in a variety of interpretations. Ideally the policy should be simple and clear for officers to read and understand, provide specific directions, and not be open to individual interpretation. Previous studies have demonstrated that it is important to have a clear pursuit policy which does not rely heavily on individual officers' judgment and discretion (RCMP PCC 1999). It is undesirable to have scope for different individuals to interpret the same policy in a number of different ways.

Policy structure

The structure of the QPS OPM consists of Policy, Orders, Procedures and general text. The terms are defined at the beginning of the manual, and the required levels of compliance are specified. For example, policy is defined as: '…the Service attitude regarding a specific subject [which] must be complied with under ordinary circumstances. Policy may only be departed from if there are good and sufficient reason(s) for doing so. Members may be required to justify their decision to depart from policy.' Orders are defined in the following way: '…an order requires compliance with the course of action specified. Orders are not to be departed from.'

Police pursuits represent an area of high risk for the QPS and the community. The CMC is of the view that, wherever possible, direction in relation to the initiation, conduct and termination of pursuits should be written in terms of an 'order' to ensure strict compliance with QPS policy and procedures.

Recommendation 6

That, wherever possible, direction in relation to the initiation, conduct and termination of pursuits be written in terms of an 'order' to ensure strict compliance with QPS policy and procedures.

Police officer training

Policy changes alone will not have a sufficient effect on police pursuit practices unless the changes are also accompanied by officer training, appropriate supervision and a change in police attitudes.

All QPS recruits are provided with driver training. This training consists of technical driving skills as well as theory components regarding the policy on pursuits and urgent duty driving, and the physiological and psychological changes that can affect an individual during times of stress such as a pursuit. The aim of this information is to make officers aware of how their bodies and minds may react during a pursuit.

At present, the QPS does not offer refresher training for its officers, other than for those who have been identified as requiring remedial driver training, or in some individual areas that have conducted their own training courses. The importance of refresher training has been emphasised in past research on pursuits (Hill 2002; Pinizzotto, Davis & Miller 2002; RCMP PCC 1999). Police officers are given a considerable amount of training in the use of firearms, yet police are far more likely to participate in a pursuit than to use a firearm. It is important, therefore, that officers are trained thoroughly in pursuit driving, decision making and liabilities regarding pursuits (RCMP PCC 1999). Pinizzotto, Davis & Miller (2002) and the RCMP PCC (1999) similarly stated that weapons proficiency training is continually reinforced yet driver training is rarely augmented by in-service training, and that this situation needs to change. Previous research showed that training was a key issue in decreasing the number of officers killed in felonious line-of-duty deaths in recent years in the USA (Pinizzotto, Davis & Miller 2002).

Ideally, training should not be a one-time event but be updated regularly. This should occur irrespective of which policy on pursuits is adopted. The RCMP PCC (1999) reported on an Advanced Driver training course which was given to the Delta, British Columbia police department. For two years after this training there were no officer-responsible accidents during pursuits or urgent duty driving. After two years without subsequent training, officer-responsible accidents resumed. This demonstrated the need for refresher training in the skills and attitudes involved in urgent duty and pursuit driving.

The RCMP PCC report, however, also raised the concern that giving training only in the technical aspects of driving may actually increase the likelihood that officers will engage in pursuits. The reason put forward was that an officer who feels competent and safe driving at high speeds may be more likely to do so. Consistent with this view, Homel (1990) found that pursuit-trained drivers had more accidents than their untrained counterparts because they were more likely to keep pursuing even when other motorists had to take evasive action or the offenders attempted to ram the police car. Hill (2002) similarly criticised agencies that provide training only in how to pursue, and not when to pursue.

This raises the issue of police officers basing their decisions to pursue on how safe they feel and how likely they think it is that they, rather than the offender, will crash. Risk assessments should be conducted on the basis of how likely the suspect is to crash. The suspect is likely to be unlicensed, intoxicated and in a reckless state; it is the suspect, therefore, who is likely to crash and cause injury. It follows that it is very important to provide training in judgment and decision making regarding pursuits.

A study by the United States National Institute of Justice (Alpert 1997) evaluated police recruits' attitudes towards pursuits before and after they had undergone training in pursuit decision making. The study showed that recruits were substantially less willing after the training to engage in pursuits for a variety of offences. Clearly, appropriate training can have an impact on attitudes. In a survey of police officers' and supervisors' attitudes to pursuits, Alpert (1998) found that the need to apprehend the offender was the most important factor for both groups, with the need to apprehend and the risk to the public weighted approximately 75 per cent to 25 per cent respectively in decisions of whether or not to pursue. Training could be used to help balance the consideration given to public safety.

Another aspect missing in most pursuit training was that of pre-incident decision making (Martin 2001). This includes training officers to decide before they attempt to stop an offender whether or not they will initiate a pursuit if the offender flees.

As Falcone (1994) pointed out, a critical aspect of compliance with a restrictive pursuit policy is its acceptance within the organisation's value system. For this to happen, the members of the organisation

must fully understand the policy and its benefits, and this requires appropriate training and supervision. The training should include pursuit statistics and information, such as the fact that most pursued drivers appear to be fleeing because they are scared of the consequences of minor offences, not because they have committed serious crimes. Training can also be provided to dispel the central myth that, if pursuits are restricted, law enforcement will suffer. Appropriate training can replace such beliefs and attitudes with a professional ethos, and well-informed and considered decision making.

Recommendation 7

That all operational police officers be given regular refresher training regarding pursuit policy and practice (e.g. every two years as part of Police Operational Skills Training). Such training courses should include up-to-date research findings on pursuits.

Supervision of pursuits

In addition to receiving appropriate training to augment policy changes, officers need to be supervised appropriately and held accountable for abiding by the policy. As Alpert (1998) argued, policies that are inconsistent with police officers' attitudes require strong supervision or they will be ignored or bypassed. Falcone (1994) found that there was considerable under-reporting of pursuits, particularly if the department had a restrictive policy.[18] This was not done by blatantly violating procedures, but rather by officers defining pursuits somewhat differently from the way they are defined in the policy, thereby justifying to themselves their lack of reporting. (This also suggests a lack of training.)

According to QPS policy, pursuits are monitored and 'controlled' by the duty officer or officer in charge in the communications room. This practice allows for a more objective assessment of the incident, and was implemented by the QPS to ensure that pursuits are supervised appropriately and that the best possible decisions are made during pursuits. This aspect of the policy ensures that an officer who is somewhat removed from the emotional and potentially volatile incident can make the decision whether or not to terminate a pursuit. (However, officers in the pursuing vehicle can also make the decision to terminate at any time, without any prior approval.)

The amount or type of supervision provided may depend on the individual officer in the communications room. According to information in CMC pursuit investigation files, some supervisors did little more than listen in on the pursuit. In one case, which resulted in an accident involving serious injuries to juveniles (who were known to the pursuing officers), the supervisor stated that he thought the officers at the scene were more qualified to make judgments regarding the chase than he was. This statement shows a lack of understanding of current policy and the reasons behind it, and demonstrates a need for more training. The British Police Complaints Authority report found that, in many pursuits, decisions were made by the police vehicle occupants with little or no input from the control room (PCA 2002).

It is important that when supervisors are monitoring a pursuit they do more than just listen in, by actively requesting relevant information on which they can make a decision whether or not to terminate. Such information includes the reason for the pursuit, whether the driver or passengers in the fleeing vehicle have been identified, speeds of the vehicles, visibility, traffic, road and weather conditions. The PCA report (2002) stated that it was very important for the pursuing officers to provide adequate commentaries. This report found that a continuing risk assessment during the pursuit occurred in very few incidents, and there was a lack of supervision from the control room. It recommended that training courses be given in the provision of commentaries during pursuits.

The ability of supervisors to 'control' a pursuit also reflects the limits of police radio communications systems. Some CMC files showed situations where pursuit controllers were unable to 'break in' to the radio traffic during an incident involving several police vehicles. At other times officers may be unable to hear instructions from the pursuit controller due to radio 'noise' or 'dead spots'. The PCA report (2002) also raised the issue of poor radio quality and its effects on communication with the control room. The New South Wales police pursuit policy requires an automatic termination of any pursuit if there is a loss of radio contact. This policy also specifies that officers are to familiarise themselves with known

radio 'black spots' and to terminate any pursuits that enter such areas. As stated previously in this report, it is recommended that the QPS adopt this requirement.

Another situation that is difficult for supervisors to control is one in which police vehicle crews other than the primary and back-up vehicles remain in a 'chain' of pursuing vehicles (contrary to QPS policy), simply by maintaining radio silence or by advising that they are only 'following'. Some of the collisions resulting in injury in the 2001–02 files involved police vehicles that were not technically in pursuit, yet were speeding to catch up to or join in with a pursuit. These factors suggest that 'controllers' of pursuits are not as much in control as necessary.

In addition to supervising pursuits, senior police can reinforce QPS policy and professional practice by 'debriefing' officers involved in a pursuit soon after the incident. The purpose of the debrief should be to ensure that pursuits are conducted only if the circumstances truly justify the serious risks. Debriefs are not specifically required by QPS policy. However, the policy does require each QPS region to have a Driver Review Panel, which reviews pursuit incidents, police vehicle accidents and red light camera and speeding camera violations by police vehicles. Each panel is convened by a Chief Superintendent or, in the case of an incident resulting in serious injury or death, the regional Assistant Commissioner. The purpose of the panel is to examine all aspects of the driving of police vehicles, undertake a thorough examination of the circumstances of pursuits, satisfy themselves that all issues raised in the pursuit policy regarding the justification for the pursuit have been taken into consideration, and initiate any remedial action as soon as practicable.

The CMC examined all panel reports after the first 12 months of their operation. A number of inconsistencies in the panels' approaches were found between the regions. Another concern was the fact that there were long delays (up to several months) between the actual incident and the provision of advice or sanctions to the officers involved. These delays may be difficult to avoid, especially given the need on occasion to conduct an investigation. However, the lack of immediate feedback for officers involved in pursuits weakens the effectiveness of the panels as a source of information to reinforce policy and professionalism, recognise and reward appropriate and restrained behaviour, and impose sanctions if necessary.

In summary, an immediate debrief may provide an appropriate tactical response, and the panels may provide a wider-ranging response, with an emphasis on trends and patterns as well as any specific issues of concern.

Recommendation 8

That supervisors 'debrief' officers involved in a pursuit soon after the incident in an effort to provide the officers with feedback on the conduct of the pursuit.

Compliance-monitoring and data-collection issues

The collection of data regarding police pursuits could be improved. The creation of the STS database was a constructive move which now allows trends in pursuits to be monitored. However, some of the variables of interest in evaluating pursuits are not captured (such as whether a collision occurred, which vehicles were involved in a collision, all the people who were injured, whether the driver was apprehended, and what the driver was charged with). Ideally, these variables should be included to enable the QPS and CMC to monitor these important aspects of police pursuits. It may also be appropriate to define the term 'serious injury' more specifically, so that there is greater consistency in reporting these types of pursuit injuries to the ESC or CMC.

The CMC is of a view that it may be timely to review the adequacy of current data collection methods and systems, to ensure that the data which inform the QPS and other decision-makers presents an accurate picture of pursuits to both police officers and the public.

Recommendation 9

That the QPS review the adequacy of current methods and systems used to collect, store and analyse pursuits data to ensure that the data provide accurate information on pursuits.

Future directions

This report has demonstrated the high-risk nature of police vehicle pursuits, and has identified some important issues to be considered. Although recent technological advances such as tyre deflation devices (TDDs) provide useful options for terminating some pursuits, changes in policy are likely to have the greatest impact on the safe conduct of pursuits.

The QPS recently introduced the use of tyre deflation devices. This is a useful tactical option, but often cannot be used because pursuits generally last only a few minutes, as the data presented in this report show. TDDs need to be placed safely in an area where the pursued vehicle will drive over them, and this requires careful coordination.

Articles in the *Queensland Police Union Journal* (Jose 2001a, 2001b) have expressed concern regarding training in TDDs. The death of an officer applying a TDD in New South Wales emphasised that the laying of TDDs can be a potentially dangerous activity. Thus, although these devices will be useful and effective in certain cases and are a very important addition to the options available during a pursuit, they cannot be expected to have a major impact on pursuits generally. Other technological options (such as remote engine immobilisers, and the use of helicopters — which are currently cost-prohibitive), while providing useful options, are not likely to impact substantially on pursuits in the same way that a change in policy and practices could.

As has been documented in this report, there is a general movement in many jurisdictions towards increasing control of pursuits and tightening policies to limit pursuits to certain offences. Although the QPS has taken numerous constructive steps to address the risks associated with pursuits, an opportunity exists for the Service to further reduce the social and financial costs associated with police pursuits. In particular, the Commission recommends that the QPS adopt a more restrictive pursuit policy. An operational trial of this could be established in one or two districts. The purpose of the trial would be to determine whether the introduction of a restrictive pursuit policy has a negative impact on the operational effectiveness of police or results in some positive benefit for the police service and the community, such as lower injury and fatality rates. The CMC is committed to working with the QPS to establish and evaluate such a trial.

Endnotes

1 'Terminated' is defined as either the police driver calling off the pursuit over the radio, or the designated 'pursuit controller' supervising the incident directing the police driver over the radio to terminate the pursuit. A pursuit may be considered as terminated even if the police driver in the pursuing vehicle does not comply with the order (e.g. because the driver has not heard the order).

2 Miami-Dade uses helicopters to assist in pursuits of offenders. However, the documented decrease in pursuits and injuries cannot simply be attributed to the use of helicopters, as helicopter-assisted pursuits must still be conducted by a vehicle on the ground until a helicopter can take over; all these pursuits must therefore be within the 'violent felons only' pursuit policy.

3 The ESC data set included two cases where police vehicles that were not part of the official pursuit were speeding to catch up to the pursuit and collided with another car (in one case a third-party vehicle; in the other case another police vehicle that was also trying to catch up to the pursuit).

4 There were no data available regarding the speed zones in which the pursuits were taking place.

5 This does not necessarily mean that the driver was over the legal blood alcohol content limit — just that there was some information on the file indicating that the driver had consumed alcohol.

6 Information regarding consumption of alcohol or drugs is most likely to be recorded on the file if the driver was clearly impaired in some way.

7 In 2002 the percentage of all female officers in the QPS was 20%. The percentage of female constables and senior constables (the ranks most likely to be conducting operational and general duties assignments) was 26% (QPS 2002).

8 The difference in numbers is due to the fact that one pursuit can result in more than one person being injured.

9 The difference was not statistically significant: chi-square = 3.42, p = .06

10 While these numbers were taken from averages across different periods, this result was confirmed by analysis of one year's data (July 2000 to June 2001) for which information was available from both STS and CMC data sets. STS recorded 599 pursuits and the CMC was notified of 18 injury pursuits (3% of the total).

11 The STS database does not distinguish between fleeing drivers and passengers.

12 Note, however, that these car or motorcycle accidents were not necessarily from a pursuit.

13 The STS database records whether there was damage to any vehicle in the pursuit. If there was any recorded damage to a vehicle (offender's vehicle, QPS vehicle, or other) this was counted as a collision for the purposes of this analysis. The STS database records damage to any other property such as a fence or a light standard. However, this is recorded in text only, and therefore could not be analysed numerically. There were also numerous entries for property damage where there was no recorded damage to any vehicle. Therefore, the count for collisions reported here may be conservative.

14 Chi-square = 6.60, p = .01

15 The STS database does not record charges.

16 According to the STS database, TDDs were deployed in 15 recorded pursuits between January and October 2002, which is substantially fewer than were recorded by the QPS Operational Research and Advisory Unit.

17 However, this difference was not statistically significant. Chi-square = 3.11, p = .08

18 This does not lessen the reported success of the Miami-Dade department's policy. Injury data would not be subject to the same under-reporting problems. Pursuits not reported are those that do not have obvious negative outcomes such as collisions or injuries (Payne 1997).

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