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First-response police officers working in single person patrols: A literature review

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Acronyms

AIC	Australian Institute of Criminology
CALD	Culturally and linguistically diverse
ICV	in-car video
OH&S	occupational health and safety
PASA	Police Association of South Australia
PFA	Police Federation Australia
SAPOL	South Australia Police Service
WAPU	Western Australia Police Union of Workers
WAIRC	WA Industrial Relations Commission

Executive summary

On 9 July 2009, South Australian Police Brevet Sergeant Jeff Allen was stabbed by a parolee on the Barrier Highway near Yunta, South Australia. Brevet Sergeant Allen was working alone at the time of the incident, sparking renewed debate regarding the risks of deploying single person patrols. As a result, the Australian Institute of Criminology (AIC) was contracted by the Police Association of South Australia (PASA) to undertake a literature review on the issue of single person police patrols both in Australia and internationally. Instead of focusing solely on the relative advantages and disadvantages of single and two person patrols, four specific research questions were investigated:

- What are the challenges faced by first-response police officers when performing their duties solo? Specifically, has the policing environment changed since solo policing was introduced?
- What impact does working alone have on officers being able to successfully perform their duties?
- How are decisions made to deploy single person patrols?
- Are single person patrol strategies in line with community expectations?

In this report, current evidence is reviewed in relation to single person patrols, including any decision-making processes used for developing policies and procedures. In addition, national and international research and policies on single person patrols and any associated risks are investigated. Information was collated from peer-reviewed journal articles, newspaper articles, coronial inquests, opinion pieces, court transcripts and personal correspondence. The AIC primarily relied on publicly available sources for information. As there was not a substantial amount of research available on the topic, police associations in Australia and overseas were invited to provide the AIC any information on the issue. In addition, members of the Australasian Libraries in the Emergency Services were also sent a request by the AIC's JV Barry library to help the AIC locate information on the topic. The AIC also approached police commissioners in each Australian jurisdiction with a request for any information their organisation may have.

The breadth of issues examined for the review meant that some areas were only generally addressed and on occasion, the information available on single person patrols did not provide enough information to answer the specific research questions. As such, many of these questions would benefit from being explored more comprehensively in future research projects.

In general, most relevant Australian research is now around 20 years old and there is almost no contemporary comprehensive Australian research on the topic. Most of the literature examining single person patrols includes a comparison between one and two person patrols in relation to citizen complaints, arrests, efficiency and cost-effectiveness. Furthermore, findings are often mixed and it is difficult to draw firm conclusions regarding single person patrols in Australia in relation to the key research questions. The following is a summary of the literature review findings.

Challenges faced by first-response officers when performing their duties solo

Has the policing environment changed since solo policing was introduced?

It is widely recognised that single person patrols have been in existence since policing was established in Australia. Although there is no clear record of exactly when the practice of single person patrols was introduced in each Australian jurisdiction, in 1990 single person patrols were used as a deployment option by all Australian police forces (Wilson & Brewer 1991a). This literature review has focused primarily on changes since this time.

- Single person patrols are employed across police agencies both nationally and internationally. Even though the practice is widespread, the nature and operation of single person patrol policies differ not only between, but also within jurisdictions. This can vary from being used as a common deployment option for traffic-related duties (such is the case in Victoria), to an outright ban on the practice in Western Australia.
- Over the past three decades, these changes have originated from internal factors, such as shifts in policing strategies and management (Fleming & Rhodes 2004), and from external factors, such as shifts in crime trends and offender characteristics. During this time, there has been a move from reactive and crime response-oriented policing approaches to more of a service-oriented model via community policing practices (Murray 2005).

Changes in crime rates and types of offenders

- Over the last 10 years, there has been an overall decrease in offending across most crime types in Australia (Davis & Dossetor 2010; Roberts & Indermaur 2009).
- Yet while most crime types appear to be decreasing, the number of certain violent offences have either remained stable or have increased (Bricknell 2008).
- Eighty-one percent of assaults against police in Adelaide in 2009 were alcohol-related, as were 77 percent of cases of hindering/resisting arrest (SAPOL 2010a).
- The rate of police contact with intoxicated offenders is not decreasing and police are frequently the first point of contact with mentally ill people entering the criminal justice system (Ogloff et al. 2006). Encounters between police and mentally ill individuals usually involve arrests for misdemeanours or petty crimes, or when individuals have been detained for their own safety and/or the safety of others (Clifford 2010).

The impact of working alone has on officers being able to successfully perform their duties

- However, it is widely recognised that police officers are faced with greater occupational health and safety (OH&S) risks than other occupations regardless of patrol mode (see Brandl & Stroshine 2003; Mayhew 2001). Research has generally focused on two areas of solo policing and police patrols—the effectiveness and safety of the practice, and the perception of single person patrols by police officers. Single person patrols are often considered appealing from an efficiency and cost-effective standpoint, whereas two person patrols are considered preferable from a safety perspective (Johnson 1999; Wilson & Brewer 1991a).

Single person patrols and injury

- Researchers in Australia and the United States have found no statistical difference in safety between the single and two person patrols (del Carmen & Guevara 2003; Wilson & Brewer 1991a). Specifically, officers were assaulted at the same rate regardless of their assignment to single or two person patrols (del Carmen & Guevara 2003; Wilson & Brewer 1991a).
- Although the rate of assault may be similar between the two staffing modes, the likelihood of sustaining injury during an assault was statistically more likely for those patrolling alone compared with those patrolling in pairs (Wilson, Brunck & Meyer 1990). This might indicate that although the rates of assault may appear similar, the severity of injury could be greater for those officers working alone.

- In the United States, there were higher levels of felonious officer deaths among agencies with a higher proportion of single person patrol vehicles (Pate & Fridell 1993). By contrast, it has been found that police assigned to single person patrol vehicles in the United States were less likely to be killed while at work than those in two person patrols (Kaminski 2002).

Resistance

- Even though single person patrols were less likely to be dispatched to some tasks, the level of resistance officers encountered and the numbers of injuries sustained in single person patrols in general did not differ significantly from those encountered by two person patrols (Wilson & Brewer 1991b).
- Levels of resistance faced by police were not influenced by factors such as location (eg rural *cf* urban), officer characteristics, jurisdiction, or the nature of patrol (ie 1 or 2 officers; Wilson & Brewer 1991a). A comparison of use of force incidents found use of force incidents occurred for more two person patrols than single person patrols (Hastings 2007).

Effectiveness/efficiency

- Single person patrols are considered by some as more efficient than two person patrols on the assumption that two single person patrols can cover twice as much area and be available for twice as many calls than one two person patrol car (Bureau of Justice Statistics cited in del Carmen & Guevara 2003). Despite this, the increased efficiency of single person patrols has been questioned, with the effectiveness of most police services (eg number of calls for service handled, total arrest rate) found to be unrelated to the type of patrol staffing mode (Wilson & Brewer 1991a).
- Although two person patrols tended to handle incidents more quickly, overall activity levels were found to be comparable between one and two person staffing (Wilson & Brewer 1991a). In addition, Wilson (1990) found that there were only minor benefits associated with increased police visibility, deterrence and crime detection as a result of the increase in number of cars on the road from single person patrols.

Workplace attitudes to working in single person patrols

- Australian research has identified a preference for two person patrols (Brewer & Karp 1991). Particular concerns from UK officers included that solo work was strenuous, increased the feeling of constantly having to 'watch one's own back', not wanting to engage with potential threats late at night and they considered themselves easy targets (Prissell 2009).
- In the United States, researchers found that police believed the performance levels between one and two person patrols were comparable (del Carmen & Guevara 2003), but two person patrols were considered preferable at night. In areas where police were not as trusted by the public, two person patrols were considered better and were believed to respond faster to calls than single person patrols (del Carmen & Guevara 2003).
- Research also found that although officers expressed resistance to single person patrol modes when asked directly which patrol mode they preferred, some indicated a number of tasks that might be considered appropriate for single person patrols (Brewer & Karp 1991). In addition, some officers have indicated a preference for working alone (Hastings 2007). However, it was cautioned that negative occupational outcomes could be expected among officers who perceived increased dangers resulting from single person patrols and who were still required to undertake these patrols (Brewer & Karp 1991).
- In the United States, researchers investigating police occupational stress identified that working solo and at night without immediate backup could heighten the stress felt by officers (Violanti et al. 2008).

Legislative requirements

- In Australia, the legislative requirement relating to duty of care and providing a safe workplace for employees is unclear about what actions and compliance are required explicitly in relation to single person patrols (Association News 2007).
- Occupational health and safety concerns led to the abolition of single person patrols in Western Australia. The WA Police rely on Regulation 3.3 of the WA OH&S Regulations to provide guidance

regarding a safe work place for employees. This regulation requires the employer to provide reliable means of communication for isolated employees (ie those working alone). As the current WA Police communications and phone system cannot provide reliable means of communication for isolated employees, single person patrols would have been unable to comply with this regulation (WAPU representative personal communication 23 November 2011).

Guidelines and training

- The majority of training techniques and tactics used in training are based on a two person patrol situation. Therefore, a need may exist for the development of operational guidelines specific to each patrol mode; it has been suggested that it is not enough to develop one set of guidelines to cover all modes in all circumstances (Wilson & Brewer 1991a).

Police misconduct, corruption and corroboration

- Whereas much research has been dedicated to single person patrols and its influence on safety and workplace efficiency, its relationship with the corroboration of court evidence, corruption and misconduct has not been adequately explored in the literature.
- Although police misconduct and corruption have been widely researched, studies do not specifically examine patrol mode (ie single or 2 person patrols) as a factor. Instead, research in these areas chiefly examines complaints against the police, types of misconduct and the characteristics of the officer(s) in question.

How are decisions made when deciding to deploy single person patrols?

The extent of single person patrol practices differs between and within jurisdictions in Australia. Research from 1990 indicated that limited evidence existed to show that task ratings were based on systematic investigations, with researchers concluding that taskings were more likely to be based on a consensus arising from knowledge and experience of operational policing, with much of the responsibility for the deployment of single person patrols relying on the judgement of the dispatching personnel (Wilson 1991). However, certain conditions were also used to determine when one officer police cars were tasked. These conditions included:

  - time of day, with increased use of single person patrols during daylight hours;
  - population density, with more densely populated districts or where barriers to travel were prevalent, employed fewer single person patrols; and
  - risk involved in individual taskings which were typically broken down into 'low' and 'high' risk activities (Wilson 1991; Wilson & Brewer 1991a).
- The single person patrol policies reviewed for this report appear to be based on risk-management principles. With the exception of the current WA Police policy, low-risk tasks (often based on a predetermined risk scale) are usually considered suitable for single person patrols (Wilson 1991).
- Depending on the jurisdiction, the decision to deploy a single person patrol can be made by police dispatchers, supervisors and sometimes on the basis of the officer being comfortable about responding alone, usually by making an assessment based on perceived risks.
- There was no Australian research available that has evaluated single person patrol strategies to determine the effects—either positive or negative—were the same after its widespread implementation.
- Only one United States study in San Diego appeared to revisit the adoption of a single person patrol policy that was introduced after a viability assessment was conducted on its feasibility. It was found that the widespread application of single person patrols was eventually abandoned in San Diego due to a corresponding increase in officer mortality over the same period (Prunckun 1990). It is unclear whether the single person patrol policy was directly correlated with the increased mortality rate or whether other environmental or contextual factors were more likely the cause.

Are single person patrol strategies in line with community expectations?

The majority of literature surrounding community expectations of police does not assess the role of single person patrols as a strategy to improve citizens' trust, confidence and satisfaction with police. Community perceptions and expectations of police are often linked to an individual's background, age and experience of contact with police (eg Brown & Benedict 2002; Hinds & Murphy 2007; Skogan 2005). When police interact with people, people expect to be treated with fairness and respect. The quality of police interaction, rather than mode of patrol, appears more relevant in improving people's satisfaction and reducing complaints against police.

Future directions

Due to the paucity of recent Australian research on single person patrols, the topic would benefit significantly from further investigation. Further, any research into single person patrols should be expanded to encompass issues beyond those relating to personal safety and effectiveness and updated to reflect the contemporary Australian policing environment. In addition, many of the international findings on single person patrols would need to be tested in Australia to see if they are applicable to the Australian context.

Despite most research focusing on the activities considered appropriate or inappropriate for single person patrols, there was little comprehensive research on the overall impact on officer effectiveness, beyond factors such as response times and complaints. As the San Diego experience highlighted, it may be worthwhile investigating if the impact of widespread adoption of single person patrol policies results in any negative, positive or unintended consequences.

The literature shows that there is often a difference between police management and operational police perceptions of the merits of single person patrols. Police management often employ single person patrol policies on the basis of factors such as efficiency and finite resources (eg Hastings 2007; Legislative Council of Tasmania 2010) balanced with officer safety concerns; however, many operational police and their associations believe that the risks outweigh any perceived benefits. However, it should not be assumed that management and officers fall neatly into either category, or that the issue has only two distinct and opposing views that are always going to be in conflict. Another issue is whether an officer's wellbeing and perceptions of safety should be overruled in favour of a risk assessment tool that has been primarily designed to focus on response times and community satisfaction for example.

Particular gaps in the available research include:

- how management have made decisions and policies regarding single person patrols;
  - considerations of policing environment, inquiries, OH&S requirements and how policies are delivered in practice;
- how frontline officers perceive single person patrols;
  - if it affects among other things their decision-making processes, safety, efficiency, health and effectiveness;
- community opinion on single person patrols;
  - does it affect feelings of safety, service delivery and whether single person patrols can impact on police members' families and friends;
- how single person patrols can affect the ethics and accountability of officers performing their duties;
- how single person patrols affect corroboration of evidence, opportunities for misconduct and other related factors;
- whether single person patrols are viewed differently or have a differential impact on individuals from Indigenous or culturally and linguistically diverse (CALD) communities; and
- with the practical implementation of single person patrol policies can be affected by location and other resourcing requirements (such as any differences in rural/remote/regional/urban settings and available equipment).

Although the policy has not yet been evaluated, Western Australia provides an example of how police management and a police association can work together to produce a mutually agreed upon single person patrol policy. Despite having to police a vast area with many remote police stations, WA Police was able to create a policy that essentially

phased out single person patrols, with only a few administrative and community duties that were agreed upon between WA Police and Western Australia Police Union of Workers (WAPU) classified as suitable for being performed alone. It can be assumed that the common justifications for the use of single person patrols revolving around efficiency, cost effectiveness and resources were considered.

The practical implementation of this policy has not been flawless; however, the policy development process could be a useful case study for other jurisdictions considering a similar policy. Finally, it would be worthwhile to evaluate the sustainability and effectiveness of the policy in practice and whether it is an appropriate model for other police agencies to consider.

Introduction and overview of single person patrols

Background to the literature review

On 9 July 2009, South Australian Police Brevet Sergeant Jeff Allen was stabbed by a parolee on the Barrier Highway near Yunta, South Australia. Brevet Sergeant Allen was working alone at the time of the incident. The event triggered a renewed interest in the safety of police officers working alone, particularly as working as a single person patrol is a common deployment option for SA police officers.

A motion was passed at the SA Police Association Conference on 21 October 2009 that directed the Association's committee of management 'to investigate the issue of solo patrols locally, nationally and internationally, and to report to delegates accordingly' (PASA personal communication 4 November 2009). To put this in context, Western Australia is currently the only Australian policing jurisdiction to have banned single person patrols, with no frontline officers able to work alone, except for a select number of tasks agreed upon with WAPU. The issues associated with single person patrols were subsequently raised at the 21 June 2010 meeting of Australian Police Associations, where it was unanimously agreed that the matter should be investigated further.

To make informed decisions on single person patrols, PASA, together with the Police Federation of Australia (PFA), sought to examine current issues concerning first-response frontline deployment in relation to officers being deployed solo. Police often deal with potentially volatile situations (eg situations that involve heavily intoxicated individuals, people with mental health problems, or where there is domestic violence). These situations place officers at potential risk of considerable harm, particularly if they are deployed in single person patrols. Of particular concern to police associations is that policies on single person patrols appear to conflict with findings from coronial inquiries, for example where a police officer dies while working alone (eg see Parkinson 2010). The AIC was contracted by PASA to conduct a review of the current literature on single person patrols and to offer suggestions on potential areas for further research in the area.

Parameters of the review

In this report, a review is provided of the current evidence on single person patrols, including the decision-making processes used for developing policies and procedures. Instead of focusing on the relative costs and benefits of single and two person patrols, four specific research questions were investigated:

- What are the challenges faced by first-response officers when performing their duties solo? Specifically, has the policing environment changed since solo policing was introduced?
- What impact does working alone have on officers successfully performing their duties?
- How are decisions made to deploy single person patrols?
- Are single person patrol strategies in line with community expectations?

The AIC conducted an initial exploratory literature review of national and international research and policies on single person patrols and the associated risks. This included:

- reviewing current OH&S policies in South Australia and other Australian jurisdictions;
  - collating information and recommendation from relevant inquests, legislation and other court documents regarding working alone;
- reviewing current single person patrol policy documents;
- reviewing current crime statistics and trends as they relate to solo policing;
- identifying risks associated with policing people with mental health; and
- searching national and international journals, books and online resources on the risks of police working alone.

The literature was gathered over a three month period between August 2010 and October 2010. Sources for the literature included databases available to the AIC, such as Cinch, Informit, AFPD and ProQuest. Key search terms used in combination included *solo*, *patrol*, *first-response*, *risk*, *alone*, *single, officer*, *danger*, *one-up* and *complaints*. A snowball technique was then employed to find further information on the topic, whereby more information was gathered by using relevant sources cited in the literature already found.

Due to the paucity of research available on the topic, particularly in the last 15 years, PFA contacted the eight police associations in Australia and 50 police association contacts from overseas requesting that they forward any relevant information about solo policing to the AIC. Upon completion of the first draft of the literature review, a decision was made by both PASA and the AIC to approach each Australian police agency to provide any additional information. Although this extended the delivery time of the report, it ensured that the report included a more comprehensive exploration of single person patrol practices, particularly within Australia. All Australian state and territory police organisations were approached for information via each jurisdiction's police commissioner in June 2011. As ACT Policing is part of the Australian Federal Police, the request was sent only to the ACT Policing Commissioner.

The AIC also sent a query to all members of Australasian Libraries in the Emergency Services with a specific request to police libraries in each Australian jurisdiction for any available information on any material on single person patrols relating to their jurisdiction, in particular for any relevant policies and procedures on the issue. As a result, information obtained for this review comprised a selection of the following sources:

- peer-reviewed journal articles;
- opinion pieces from police association affiliated magazines;
- correspondence
  - between police officers and police associations;
  - between police associations and police organisations;
- coronial inquests;
- internal police policy memos/documents
- news articles; and
- court transcripts from Austlii databases.

Due to the diversity of information sources, where possible the AIC has been careful to acknowledge the source of the information (in particular if the author(s) have any affiliation with an affected organisation or group) and whether the information provided is based on research or their own opinion or experiences.

Defining single person patrols

Police officers working alone in the course of their duties can be defined differently, depending on the policing jurisdiction and/or literature source. A patrol, as defined by Western Australia Police (2008: 168) is

any foot, mounted or vehicular official duties in which members are deployed to conduct target observations of areas, respond to complaints or perform other tasks for which it can be reasonably expected that those duties may require members to apply or respond by the use of force.

The term *single person patrols* will be used throughout this report. However, terms used in research to describe police officers working alone include *solo policing*, *single person patrols*, *one unit policing* and *one-up patrols*. Where appropriate, these terms have been replaced with *single person patrols* throughout the report for consistency, however, it is recognised that the definitions may vary among the different research conducted.

Limitations of the literature review

There are several limitations that may affect the literature review, some of which have already been addressed above. As many of the current policies are not available from public sources, it was difficult to capture the true nature of single person patrol policies in each jurisdiction and in some cases, the researchers were unable to obtain detailed information on these policies from some Australian jurisdictions. In addition, in some circumstances the researchers could not confirm the current applicability of the policies located. As a result, the information provided offers only a fragmented overview of single person patrol policies in Australia, especially since at least three jurisdictions are in the process of reviewing their current policies.

Most of the information on single person patrols is from research and documents often 20 years old, with only a small amount of research conducted after this time. This problem is compounded by the limited research conducted in Australia. Many studies used in this review are from the United States or the United Kingdom. As such, some of the research findings may not be entirely applicable to the Australian context, nor indeed reflect findings applicable to current Australian police practices or policing environment. Where possible, the origin and/or the source are highlighted to allow for consideration of these factors, especially if international findings may conflict with similar studies in Australia.

Many of the issues raised in relation to each research question, particularly issues surrounding the changing police environment and community expectations of police, are complex and would be worthy of separate investigations. The issues in each question are given a broad overview, although it is recognised that what is raised is only a general summary of the key points.

Structure of the literature review

The literature review is divided into four sections based on the key research questions. The first section addresses the challenges faced by first-response officers when performing their duties alone, more specifically examining if the policing environment has changed since single person patrols were introduced. The second section examines the impact that working alone has on officers successfully performing their duties. The third section addresses how decisions are made when deciding to deploy single person patrols and the fourth section addresses whether single person patrol strategies are in line with community expectations. It is important to note that the questions are interrelated and therefore should not be viewed as mutually exclusive issues. Where information examined in the literature could answer more than one research question, it was addressed in one section thoroughly and then referred to where applicable.

Challenges faced by first-response officers when performing single person patrols

Has the policing environment changed since single person patrols were introduced?

Although there is no current record of when the practice of single person patrols was introduced in each Australian jurisdiction, researchers identified that in 1990, single person patrols were used as a deployment option by all Australian police organisations (Wilson & Brewer 1991a). Single person patrols are not unique to Australia, with the practice being common across the United States, United Kingdom and Canada. There is no uniform application of single person patrols across Australian police organisations as each jurisdiction has developed its own policies. The precise nature of these policies varies and they have often changed over time. However, the types of influencing factors include:

- available research (eg Victoria Police);
- reaction to adverse events while patrolling alone (eg WA Police); or
- based on consultations with management and staff (eg NSW Police).

A more thorough review of current single person patrol policies is available in the third section.

However, single person patrol policies are not implemented in isolation and need to be considered in relation to the current policing environment in which the policies operate. This section will provide a broad overview of the changes and challenges faced by police over the past 30 years. How these have influenced single person patrols will be briefly outlined here, but will be examined more thoroughly in the subsequent sections.

Changes in police management and structure

Policing in Australia and internationally has undergone significant change over the past 30 years. Police reform agendas can often be attributed to a drive to improve efficiency and effectiveness, improving police and community relationships, and the exposure of police corruption and other misconduct offences (see Fleming & Rhodes 2004). In the last 20 years, police agencies have seen a movement towards 'managerialism' (Fleming & Rhodes 2004: 6). This is a product of police being under pressure to demonstrate efficiency and accountability with the finite resources available, often relying on meeting set performance indicators (Fleming & Rhodes 2004). At the same time, there has been an increase in working in partnerships with local communities to improve the relationship between police and the

public (Fleming & Rhodes 2004). In particular, over the last three decades, there has been an attempt to shift from traditionally reactive and action-oriented policing to a service-oriented community model (Murray 2005). This is commonly manifested in community policing.

Community policing is a vague concept that has many different dimensions. Generally, it is considered an inclusive form of policing and can be characterised by high-visibility (often expressed through increased foot patrols), in conjunction with 'problem solving, peacemaking, interagency work and active involvement of community members' (Bartkowiak-Theron & Corbo Crehan 2011: 22). The traditional model of policing draws heavily on paramilitary models, which are characterised by rank-based authority and command and control processes within a hierarchical organisational structure. Conversely, community policing is a contemporary policing approach that is based on encouraging cooperative partnership between the community and the police to address the incidence of crime, antisocial behaviour and social disorder perception through neighbourhood patrols and problem-solving approaches (Murray 2005). In essence, community policing promotes proactive policing rather than the traditional reactive approach (Sarre 1996).

Although the concept of community policing in Australia has been promoted since the 1970s (Sarre 1996), its importance as a strategy to not only improve police services but also to promote more trust and accountability in police was reinforced by many inquiries into police corruption within Australia (eg see 1997 Royal Commission into the NSW Police Force (Wood 1997)). Its importance as a key policing strategy has continued to gain traction, with all Australian police organisations, including South Australia, currently making community policing principles a core function of police operations in varying degrees.

Community policing often requires large structural and procedural changes of police organisations (Weitekamp, Kerner & Meier 2001). These changes are needed to accommodate, among other things, a shift from reactive to proactive policing, the adoption of a decentralised approach to better make use of an officer's local knowledge and discretion (Moore & Trojanowicz cited in Weitekamp, Kerner & Meier 2001), and to promote two-way communication between police and citizens so they can work in partnership to address community crime concerns (Weitekamp, Kerner & Meier 2001). However, Fleming (2011) notes that although policing organisations continue to espouse the practice, as yet no jurisdiction has restructured their agency to adequately accommodate the full community policing paradigm.

In addition, what is yet to be investigated is how (or if) single person patrols fit into this paradigm. A priori, it is possible that single person patrols would be compatible with certain elements of community policing (see Western Australia single person patrol policy in the third section) and would also provide more opportunity to increase police visibility (Wilson & Brewer 1992), therefore improving community satisfaction with police. However, this has not yet been tested. Overall, there is little information on the relationship between single person patrols and community policing. By contrast, and as outlined below, the influence and role of risk management strategies on single person patrol policies is more clearly delineated.

Coincidental to the rise of community policing has been the increased adoption of risk management approaches within Australian police agencies. The management of risk is a significant corporate responsibility of police agencies that must be addressed through policy, selection, training, evaluation and supervision (Wilson 1996). Even though the total elimination of risk is generally recognised as impractical, the identification and management of risks is a more attainable goal (Wilson 1996).

Risk management strategies are sometimes at odds with the views of police unions. A recent example includes the single person patrol risk assessment practices discussed at the Tasmania Government Estimates Committee in 2010. The Acting Commissioner of Police in Tasmania discussed the development of a policy that included room for single person patrols and responses, with the inclusion of a risk management approach. In this instance, the officer attending is required to take a risk management approach, based on the information received over the radio and conditions observed at the scene (Legislative Council of

Tasmania 2010). The South Australian Police Service (SAPOL) has also proposed a risk assessment model of determining police deployment in single or two person patrols in their 'demand management' strategy (SAPOL 2010b).

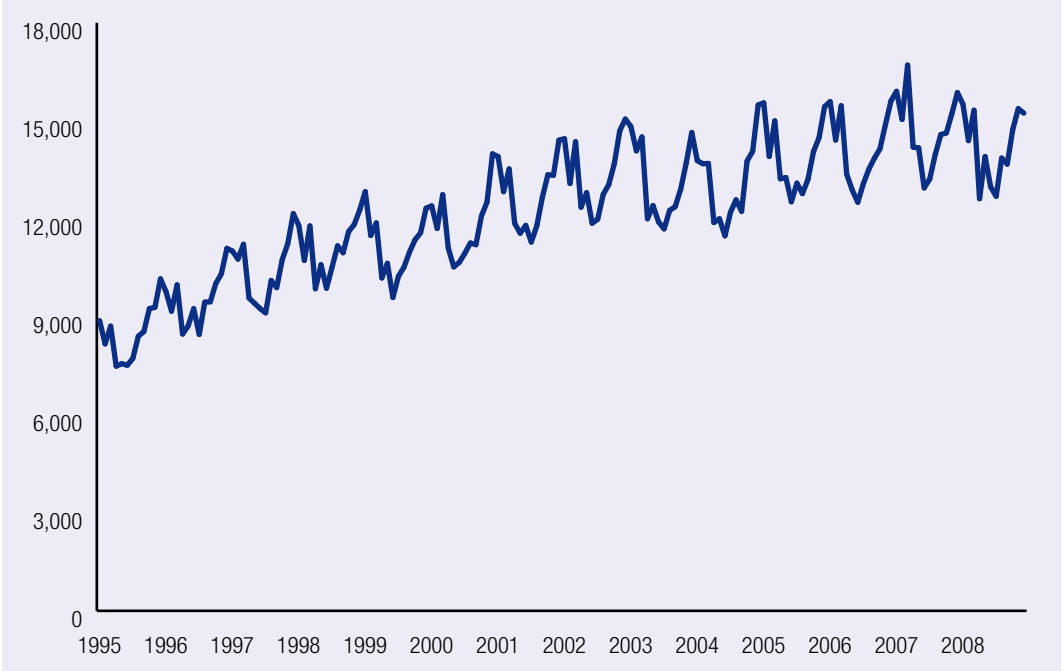
A further change in the policing environment is the increasing proportion of women in policing since the first female officers were appointed in New South Wales in 1915 (Wilkinson & Froyland 1996). In 2006, 23 percent of Australian police were women, almost double the percentage of 1996 (Irving 2009). Australia has also had its first female Police Commissioner, Christine Nixon, who was Victoria Police's Chief Commissioner between April 2001 and February 2009. In Australia from 1996 to 2006, there was a 70 percent increase in women in policing, a much larger increase than the 44 percent increase in England and Wales over the same period (Irving 2009). However, in 2009, Australia had the same proportion of female police officers as England and Wales (23%; Irving 2009). The increasing proportion of female officers has featured in discussions about the deployment of women (Wilkinson & Froyland 1996). Although early expectations of women in policing were that they would not succeed, the research evidence has emphatically rejected this prediction (Wilkinson & Froyland 1996).

Therefore, it is unclear whether the increase in female police officers has made, or should make, a difference to the decision to deploy single person patrols. As Brereton (1999: np) notes

> there are some clear differences in how males and females carry out policing tasks, particularly in terms of how they deal with members of the public, and their propensity to become involved in high risk activities.

These factors would arguably make female officers more likely to be suited to some tasks undertaken in a single person patrol. Indeed, the characteristics often associated with female police officers (eg negotiating and communication skills etc) are characteristics promoted in community policing. However, this does not mean that female officers would be more willing to engage in single person patrol activities than male officers. It should also be noted that research on single person patrols seldom makes a distinction between sexes.

Figure 1 Recorded assaults in Australia, 1995–2008 (n per month)



Source: Bonython & Dossetor 2010

Changes in crime rates and types of offenders

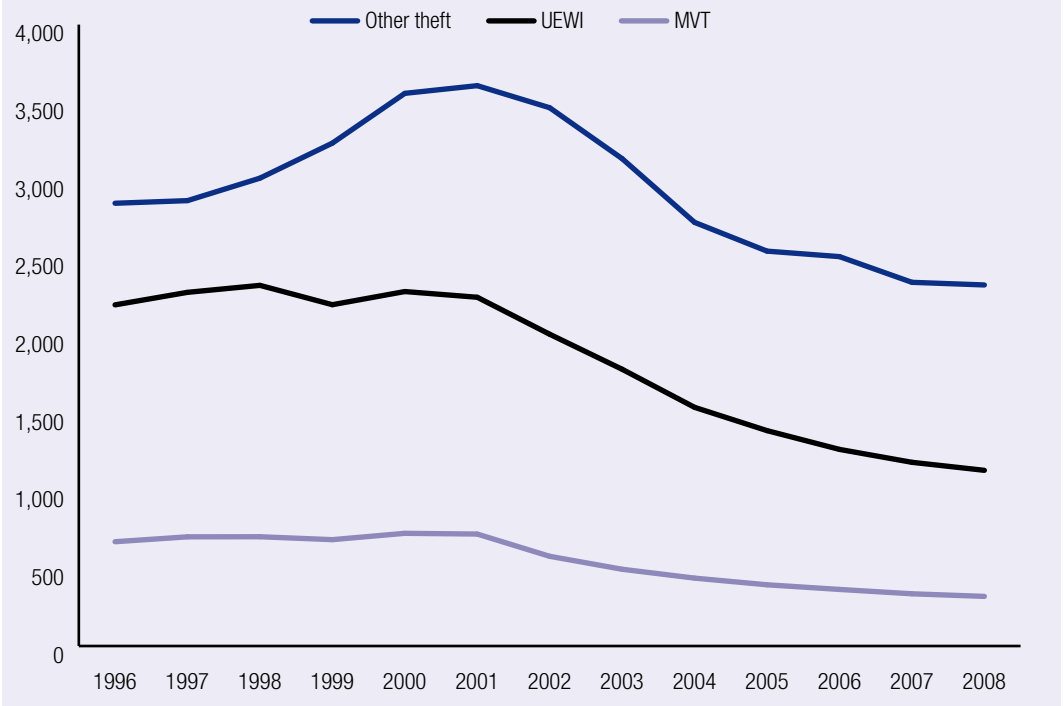
Accompanying the shift in police management and practices over this time has been a change in the level of crime in the community, as well as how the community perceives crime. Contrary to widely held perceptions within the community that crime rates are rising, over the last 10 years there has been an overall downward trend across most crime types (Davis & Dossetor 2010; Roberts & Indermaur 2009). However, within this overall pattern, certain violent offences have either remained stable or increased (Bricknell 2008).

A sample of selected crime types is examined below and illustrates some of the changes in Australia for these offences since the mid-1990s. These crime types were selected based on their higher immediate risk to the officer, the unpredictability of these taskings and the availability of data on these crime types. Analysis of the most frequently reported offences against the person in South Australia indicates that minor assault, other offences, other sexual offences and serious assault were the most common offence types (SAPOL 2009). The three most commonly reported property crime offences reported to police in South Australia in 2008–09 were most likely to be other theft offences, property damage offences and theft from motor vehicles (SAPOL 2009). These trends in reported crime can affect patrolling activities and the patrolling environment.

Assault

The trend in assaults shows an average growth of five percent each year from 1995 to 2008, nearly four times the annual growth of the Australian population in the same period (Bonython & Dossetor 2010). Assault is generally seasonal (see Figure 1), with the number of assaults peaking in the spring and summer months of October to March and is lowest from April to July. In South Australia, a recent

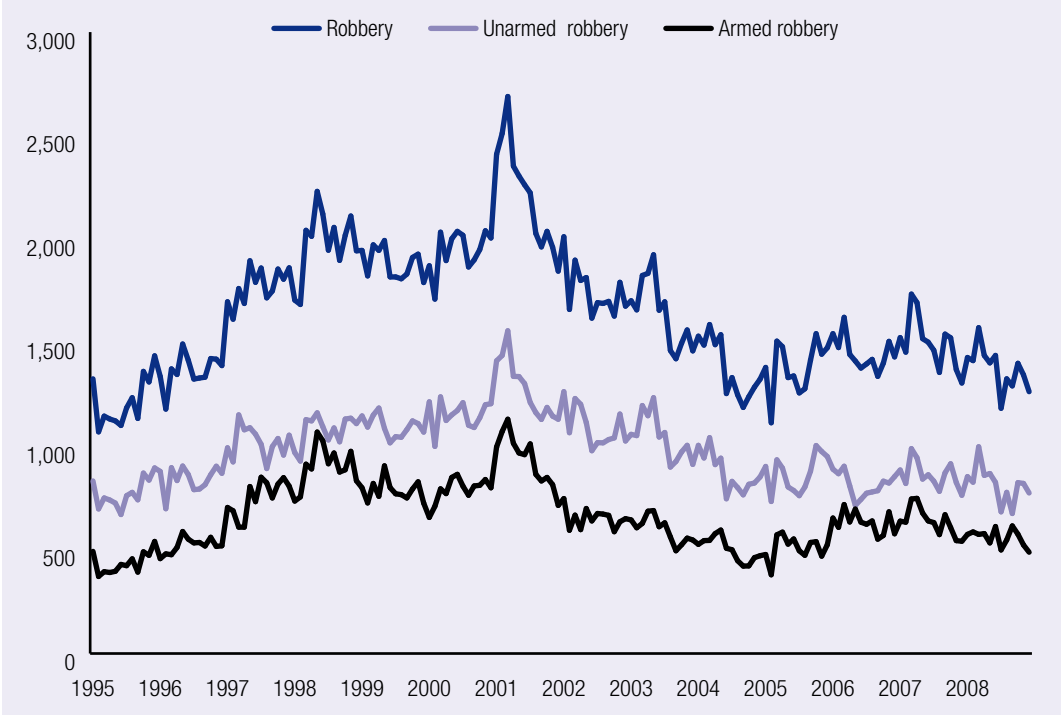
Figure 2 Property crimes in Australia, 1996–2008 (per 100,000 persons per year)



Note: UEWI=unlawful entry with intent; MVT=motor vehicle theft

Source: Bonython & Dossetor 2010

Figure 3 Robbery victims in Australia, 1995–2008 (n per month)



n=16,508

Source: Bonython & Dossetor 2010

police commissioned report reviewed SAPOL data in relation to alcohol and violence (SAPOL 2010a). Police incident reports between 2004–05 and 2008–09 have shown a gradual increase in the number of minor assaults and offences against the person. In the same time period, assaults against police in the Adelaide central business district rose gradually each year from 92 reports in 2004–05 to 122 in 2008–09, with a peak of 160 in the 2007–08 period (SAPOL 2010a). It can be hypothesised that the rise in violent crime types, and more specifically assault, is likely to increase the challenges faced by police officers, especially those patrolling solo.

Property crime rates

In Australia, property crime rates in 2009 were the lowest recorded in the 14 year period since 1996 (AIC 2011). More specifically, the rate of 'other theft' peaked at 3,607 per 100,000 per year in 2001, before declining thereafter. The rate of unlawful entry with intent remained relatively stable from 1996 to 2001 but has since declined and the rate of motor vehicle theft declined by 52 percent between 1996 and 2008, from 671 to 319 (see Figure 2; Bonython & Dossetor 2010).

Robbery

Robbery is defined by the Australian Bureau of Statistics (ABS 2007) as the unlawful taking of property, without consent, accompanied by force or threat of force. Robbery victims can be persons or organisations and is divided into two categories:

- *armed robbery*—robbery conducted with the use of a weapon. A weapon is any object used to cause fear or injury and includes imitation weapons and implied weapons; for example, where a weapon is not seen by the victim but the offender claims to possess one.
- *unarmed robbery*—robbery conducted without the use of a weapon (ABS 2007).

Of the 16,508 robberies recorded nationally during 2008, 59 percent were unarmed and 41 percent were committed with some type of weapon

(Bonython & Dossetor 2010). Robberies fell from 17,996 in 2007 to 16,509 in 2008 and remained substantially lower than incidents recorded in the early 2000s.The number of armed and unarmed robberies peaked in March 2001 (Bonython & Dossetor 2010). While the absolute numbers were different, armed and unarmed robberies follow similar monthly patterns (see Figure 3).

Drugs and crime

The effect of drug use on adult detainees increases the challenges faced by police, with studies in the United States showing more than half of all male arrestees in urban areas are impaired by illicit drugs or psychiatric disorders (Kaminski, DiGiovanni & Downs 2004). Research into the effects of alcohol use on assailants and officer injury has produced mixed findings. Some studies have found that suspects under the influence of alcohol and drugs were no more likely to injure police than those who were sober (Alpert & Dunham 1999) and others have found no relationship between alcohol use by assailants and officer injury (Ellis, Choi & Blaus 1993). Meanwhile, further research has indicated an inverse relationship with sober assailants; that is, some research has found that sober individuals were more likely to injure police than suspects under the influence of alcohol (Kaminski & Sorensen 1995). Finally, other researchers have reported a relationship between alcohol impairment among offenders and use of force by police against offenders, therefore increasing the likelihood of injury for both officer and offender (Garner et al. 1996).

The DUMA program has provided information on the consumption of drugs within Australia since 1999. DUMA involves the quarterly collection of information on drug use and crime from police detainees in selected police stations and watch houses across Australia. Although collection of drug use information from police detainees is voluntary on the detainees part, the information is indicative of drug use among this typically heavy, drug-using population. The following statistics were determined from urinalysis that provides an estimate of recent drug use (within the past 48 hours) by detainees. Figure 4 illustrates the trend of adult male detainees testing positive to selected drugs from four long-term DUMA sites between 1999 and 2008.

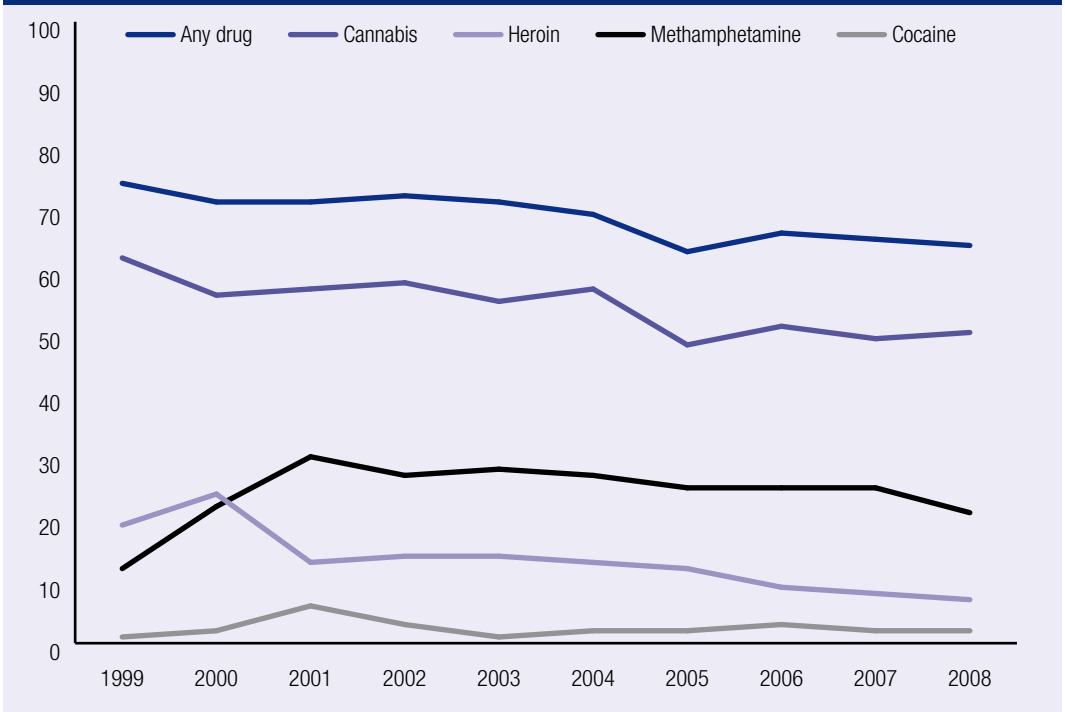
In 2008, 36 percent of adult female detainees and 20 percent of adult male detainees tested positive for benzodiazepines, while cannabis continues to be the most commonly detected drug, with 48 percent of detainees testing positive in 2008 (Gaffney et al. 2010). Consistent with previous years, cocaine use remained low at the DUMA sites with only one percent of detainees testing positive in 2008 (Gaffney et al. 2010). Heroin use varied widely between DUMA sites in 2008, with as many as 48 percent of detainees tested positive for heroin use in Footscray compared with nine percent in Bankstown (Gaffney et al. 2010). In 2008, 21 percent of detainees across all sites tested positive for methamphetamines and in 2008, three percent of detainees tested positive to MDMA (Gaffney et al. 2010).

In addition to the detainees who agreed to be tested and interviewed, a number of detainees declined an interview for a variety of reasons. Police officers and some interviewers also have discretion to not conduct interviews on some detainees, primarily for safety reasons. In 2009, 4.5 percent of detainees were declined for interview due to being a security risk, two percent were considered too intoxicated and two percent were a combination of a security risk and being too intoxicated (DUMA 2010 unpublished data).

Alcohol and crime

Recent research in New South Wales estimated that police spend approximately eight percent of their time dealing with alcohol-related incidents (Donnelly et al. 2007). However, this estimate varied by region. Higher percentages of alcohol-related activity were recorded in regional areas compared with metropolitan local area commands and was affected by type of duties performed (licensing officers would predictably record more hours of alcohol-related activity than others for example; Donnelly et al. 2007). Temporal factors were also significant, with Friday and Saturday nights recording 17 to 18 percent of time spent dealing with alcohol-related activity (Donnelly et al. 2007).
The 2007 DUMA annual report, which focused on detainee alcohol consumption, indicates that half of all offenders detained by police across Australia for disorder and violent offences had consumed alcohol

Figure 4 Adult male police detainees testing positive to selected drugs, at four long-term DUMA sites[a], 1999–2008 (%)



a: Bankstown, Parramatta, East Perth, Southport

Source: Gaffney et al. 2010

in the 48 hours prior to their arrest (Adams et al. 2008). Furthermore, Morgan and McAtamney (2009: 2) found that

> 52 percent of offenders charged by police for an assault had consumed alcohol in the previous 24 hours and 26 percent reported that the consumption of alcohol had contributed to their offending. An additional four percent of offenders detained for an assault were too intoxicated to be interviewed.

The researchers concluded that overall, nearly one-third (30%) of assault charges were likely to be attributable to alcohol. In addition, consuming alcohol contributed to the offending of approximately a third of individuals detained for breaching an Apprehended Violence Order (Morgan & McAtamney 2009).

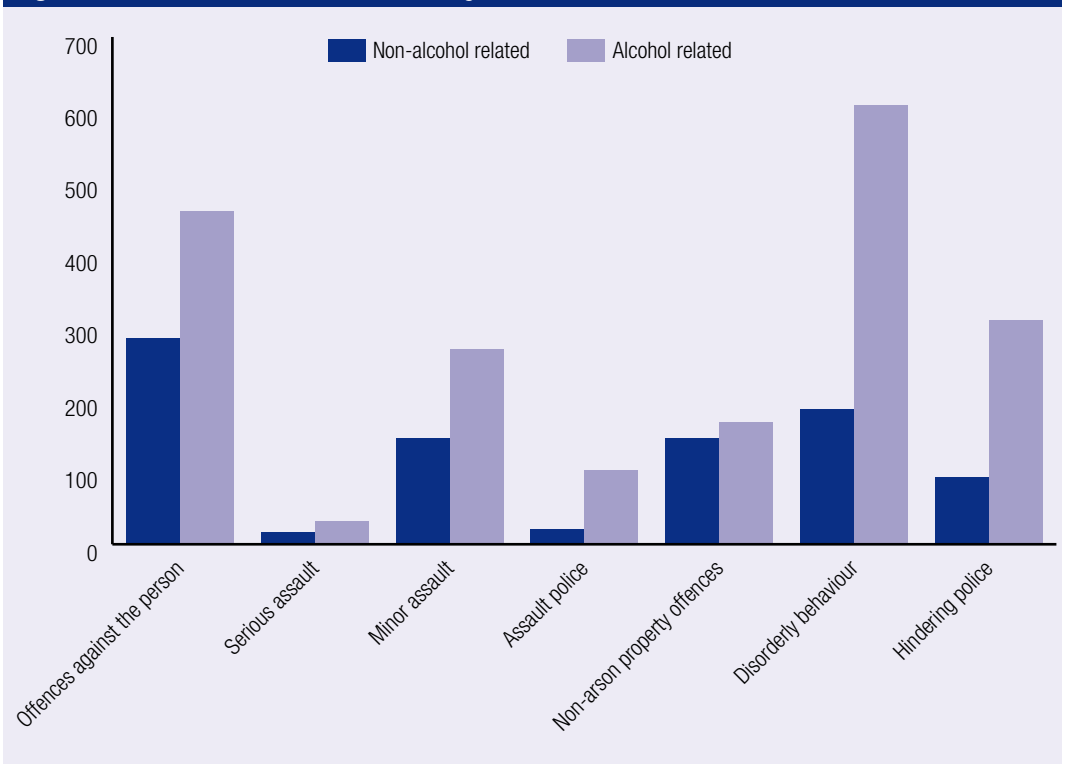
A report into alcohol and violence in South Australia (based on SAPOL data) found that in the 2008–09 reporting period, the Adelaide central business district recorded 126 assaults against police, of which 102 (81%) were alcohol related, as were 309 (77%) of cases of hindering/resisting arrest (SAPOL 2010). In addition, alcohol was involved in 459 (62%) of offences against the person, 32 (65%) of serious assaults, 269 (65%) of minor assaults, 168 (53%) non-arson property damage and 606 (76%) of disorderly behaviour (SAPOL 2010a). The proportion of offences related to alcohol is provided in Figure 5.

Overall, the report concluded that alcohol-related violence has been increasing in South Australia, in particular in Adelaide, which has been partly attributed to the extended late-night liquor trading hours (SAPOL 2010a).

Offences against the person

Although there has been an overall downward trend in offences against the person and property in South Australia, in 2008–09 there were 871 assaults on police. Assaults on police have varied over time. In 2006–07, 862 assaults against police were recorded, while in 2007–08 the figure was 968.

Figure 5 Number of alcohol use and offending in the Adelaide CBD 2008–09



Source: SA Police 2010a

There has also been an overall decrease in offences against property, either reported or becoming known to police, of 8.8 percent from 2007–08 to 2008–09 (SAPOL 2009).

Mental illness

It is estimated that mental illness affects more than one in five adults in the Australian population (Andrews, Henderson & Hall 2001). Beginning in the 1960s and continuing into the 1970s, there was a dramatic shift in the treatment of mentally ill individuals from psychiatric custodial treatment and accommodation to community living and care (Clifford 2010). This deinstitutionalisation has been reflected in all countries in the Western world and saw the closure of long-stay hospitals for the mentally ill and handicapped (MacKinnon & Coleborne 2003). As a result of deinstitutionalisation in Australia, police have been increasingly confronted by the need to respond to problems involving mentally ill individuals in the community (Clifford 2010). At present, strict legal criteria for civil commitment has contributed to increased numbers of mentally ill individuals being caught up in the criminal justice system (Cooper, McLearen & Zapf 2004). In addition, an increase in the use of drugs and alcohol by individuals with mental illnesses has exacerbated the problem (Ogloff et al. 2006).

Police contact with mentally ill people

Although mental illness is a health issue, police are usually the first point of contact with mentally ill people entering the criminal justice system, particularly after business hours (Ogloff et al. 2006) when few mental health services are staffed (Clifford 2010). Encounters between police and mentally ill individuals may involve arrests for misdemeanours or petty crimes, or when individuals have been detained for their own safety and/or the safety of others (Clifford 2010). However, in a small number of situations, these interactions can result in a fatal outcome. Dalton (1998) reports that between 1

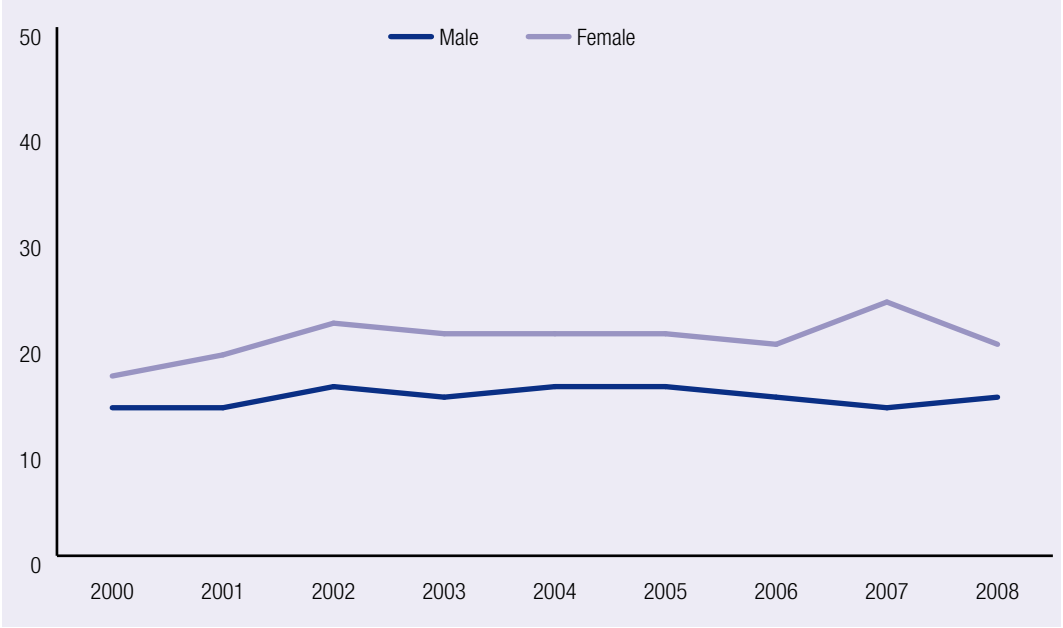
January 1990 and 30 June 1997, 41 people were fatally shot by Australian police. One-third of these people had been diagnosed with mental illness or depression prior to shooting.

Police officers are often concerned about dealing with individuals who appear to be suffering from serious mental or emotional impairment (Kaminski, DiGiovanni & Downs 2004). This concern originates from the increased likelihood of police having to use force when a civilian is in a highly irrational state and their ability to rationalise has been affected. Studies in the United States have shown that more than half of all male arrestees in urban areas are impaired by illicit drugs or psychiatric disorders. Research conducted in North Carolina found calls for service involving 'mentally deranged' people were ranked the most dangerous type of call police were summoned to respond to, based on the number of assaults and injuries to officers (Hirschel, Dean & Lumb 1994). In addition, it has been suggested that attacks by mentally ill persons on police may more often result in police officer injury (Margarita 1980). However, more recently, Kaminski, DiGiovanni and Downs (2004) reported that, even though police indicated that persons with perceived impairment of judgement, mental illness, or under the influence of drugs and/or alcohol *appeared* more threatening and required greater effort to arrest than those who displayed intact judgment, they were actually only mildly problematic for police. In Australia, the Mental Health Workers Alliance (2004) surveyed more than 213 police officers and found that police spent up to 30 hours per week transporting mentally ill people in police vehicles. Seventy-five percent of the respondents considered themselves in danger or at risk because of this work (MHWA 2004).

Police involvement with mentally ill offenders

The rate of mental illness among offenders is between three and five times higher than those reported in the general community (Ogloff et al. 2006). More specifically, 14 percent of male prisoners and 20 percent of female prisoners admitted to having prior psychiatric admission(s) (Mullen, Holmquist & Ogloff 2003). In addition, it is speculated that 'as the prevalence of mental illness increases so too does police involvement in dealing with such cases' (Donohue et al. 2008: 25). In 2003, Queensland Police responded to 17,000 callouts

Figure 6 Adult DUMA detainees who reported being admitted to a psychiatric unit for at least one overnight stay, 2000 to 2010 (%)



Source: DUMA unpublished data [computer file]

across the state relating to mentally ill individuals; a 17 percent increase from 2001 (Office of the Public Advocate Queensland 2005). An analysis of DUMA data has shown that between 2000 and 2008, 20 percent of adult female detainees and 15 percent of male detainees reported being admitted to a psychiatric unit for at least one overnight stay (see Figure 6). Also concerning is research that found that 30 percent of males and 45 percent of females who provided information to the DUMA questionnaire could be classified as having undiagnosed mental illness (Forsythe & Gaffney forthcoming). This signifies that there could be a number of individuals detained by police who are unaware they may be suffering from a mental illness (Forsythe & Gaffney forthcoming).

Although the crime rate is falling, policing remains a difficult and arguably increasingly difficult job. Overall, these trends, coupled with offenders' use of alcohol and drugs and a high prevalence of mental illness among offenders, can all contribute to both the unpredictability of the policing environment and differing demands upon policing activities. Indeed, the changing nature of crime appears to affect the nature of policing, with what appears to be a focus away from low-risk property crime to higher risk violent incidents, as evidenced by increased assaults on the police. Despite these figures, it is also important to recognise that many of the activities single person patrols would conduct would exclude attendance at a scene that might pose obvious risks, such as responding to an alcohol-related assault situation. The following sections will overview many of the factors relating to single person patrols.

The impact working alone has on officers successfully performing their duties

Research typically focuses on two aspects of single person patrols—the effectiveness and safety of the practice and police officer perceptions of single person patrols. In particular, single person patrols have great appeal for police management as they are viewed as being efficient and cost-effective, whereas two person patrols are considered preferable from a safety perspective (Johnson 1999; Wilson & Brewer 1991a). There is also debate about whether the practice of single person patrols is a false economy, an issue that is explored further below (Johnson 1999).

The following section continues to investigate the challenges involved in policing, with a specific focus on research related to single person patrols. This section reviews the available literature on single person patrols and summarises the main arguments used to justify or abolish single person patrols. Importantly, the lack of current research on the topic (with the majority being conducted in the early 1990s or earlier), has limited the ability to confidently apply the findings to the current policing practices.

Safety

In general, research on police working alone is limited, with mixed findings and opinions on its viability and effectiveness. It is widely recognised that police officers are faced with greater OH&S risks than those working in other occupations (eg Brandl & Stroshine 2003; Mayhew 2001). Being attacked or injured on the job by an offender is of primary concern for many officers. For example, in one American study, officers ranked being physically attacked as the third most significant stressor in their work, following killing someone in the line of duty and having a fellow officer killed (Violanti 1994). In addition, officers who were assaulted reported increased levels of alienation and decreased levels of job satisfaction and work-related support (McMurray 1990). Despite this, a US study showed that assaults on officers were a rare event when compared with accidents, including serious injury and death (Brandl & Stroshine 2003). Accidents were responsible for the most serious injuries sustained, the most medical treatment administered and the most days off work (Brandl & Stroshine 2003).

However, in 2009, Fridell et al. (2009) summarised the following eight workplace risk factors identified by the US National Institute for Occupational Health and Safety that are applicable to US police officers:

- contact with the public;
- having a mobile workplace such as a taxicab or police cruiser;

- working with unstable or volatile persons in health care, social service, or criminal justice settings;
- working alone or in small numbers;
- working late at night or during early morning hours;
- working in high-crime areas;
- guarding valuable property or possessions; and
- working in community-based settings.

Even though injuries from assaults are relatively rare, they can have significant long-term emotional and physical effects on victims. In Australia from 1830 to 1999, 187 officer homicides were recorded, with most through shooting (n=114), spearing (n=24; although none since 1933) and stabbing (n=12; Webster 1999). In Australia, approximately one officer per year is killed in the line of duty and many more are injured or assaulted (Mayhew 2001). Estimates have placed assaults on police officers in the range of 10 percent in Australia (Hastings 2007).

The most comprehensive and widely cited study comparing single person patrols and two person patrols was carried out in the United States by the San Diego Police Department and Police Foundation in 1976 (Boydstun, Sherry & Moelter 1977). The study concluded that with the exception of special situations, tactical assignments, need for field training and other temporary conditions, one person units should be the normal patrol unit in the city as single person patrols were safer and more economical than two person patrols. However, the conclusion of increased safety in single person patrols might be erroneously attributed to patrol mode (1 or 2 person) rather than the more likely scenario that single person patrols are naturally sent to more low-risk calls than two person patrols, thereby skewing the findings (Pruncken 1990). Pruncken (1990) contacted the San Diego Police Department to obtain a detailed update of the deployment policy 14 years after its implementation and found that the San Diego Police Department no longer used the methodology outlined in the 1976 study. This is because the police department reported experiencing the highest officer mortality rate of any major city in the United States following introduction of the policy. As a result, the San Diego Police Department deemed that it was safer to deploy two person units. The police department concluded that officer safety was the most important consideration, rather than cost considerations. Furthermore, they determined that single person patrols should be used only in low-risk patrol situations.

In addition, although single person patrols may be used for low priority/risk calls, even these calls can turn violent. In the United States, the FBI Uniform Crime Report indicates that from 1988 to 1997, 688 officers were killed in the line of duty. Three hundred and fifty of these occurred when officers were responding to 'low priority' calls. Of these, 298 officers (86%) were working in single person patrols (Thomas 1999). However, as these numbers are not expressed as rates based on the number of operation modes, it is impossible to draw any definitive conclusions regarding comparative safety between policing modes.

In the mid-1980s, researchers in the United States began ranking police calls for deployment on the basis of 'danger ratios' (Kaminski & Sorensen 1995). Danger ratios for a particular category of call are calculated by dividing the number of call-specific injuries by the number of calls for that activity. These types of call were then ranked on their respective 'danger ratios.' Uchida, Brooks and Kopers (1987) reported 'legal intervention' to be the most hazardous police activity in terms of risk of injury. Legal interventions include executing search and arrest warrants, transporting prisoners, conducting jail searches and backing up officers. Alcohol problems, domestic disturbances and other disturbances were classified as the second, third and fourth most dangerous police activity, respectively. This analysis contradicted the previously held notion that domestic disputes were the most dangerous deployment assignment for police (Kaminski & Sorensen 1995).

Another study, conducted in the United States in North Carolina by Hirschel, Dean and Lumb (1994) ranked the type of call based on the ratio of assault and injury to police. The 10 types of calls ranked from most likely to least likely to result in an officer assault were 'mentally deranged' (most likely), handling prisoners, other arrest, domestic disturbance, general disturbance, robbery, other, suspicious persons/circumstances, traffic and burglary (least likely). Offences not placed in any

of the police activity category such as rape, damage to property and larceny, were allocated to 'other arrests'. In a US study on predictors of police victimisation, it was found that officers are at greater risk of victimisation when they deal with an individual impaired by either drugs or alcohol, when they encounter the individual at night, when it is a police initiated encounter, when bystanders are present and when the officer knows the location is dangerous (Rabe-Hemp & Schuck 2007).

Assaults on police

As already indicated, the research evidence is mixed in relation to officer safety and police deployment policy. In examining officers' risk of assault in the workplace, Fridell et al. (2009) identified several studies that found that the highest numbers of assaults on police in the United States are among officers who are alone at the time of assault. However, it has been suggested that this elevated number may be a reflection of the large proportion of officers assigned to single person patrols in the United States, rather than an increased risk by assignment type per se (Pate & Fridell 1993).

In 2008, of those US law enforcement officers assaulted in the line of duty, the largest percentage of officers assaulted (33%) were responding to disturbance calls (family quarrels, bar fights and so on), while the second highest percentage of officers assaulted were attempting other arrests (15%). Officers assaulted while handling, transporting, or maintaining custody of prisoners was the third most likely to result in officer assault (13%). Of the US law enforcement officers who were assaulted and were in one person vehicles, 60 percent were assisted by fellow officers and 40 percent were unassisted and alone (FBI 2009). Law enforcement officers assaulted alone and unassisted were handling a traffic pursuit/stop (31%), responding to a burglary in progress, or pursuing burglary suspects (29%; FBI 2009).

Pate and Fridell (1993) examined the level of victimisation in proportion to the patrol assignment (1 person patrol or 2 person patrol) across 56 large United States cities, controlling for crime rates and other community variables. They found higher levels of felonious killings among agencies that deployed a higher proportion of single person vehicle patrols.

More recently, the US Uniform Crime Report (FBI 2009) provided information on law enforcement officers killed and assaulted in the line of duty. The report revealed that 62 percent of the law enforcement officers assaulted were assigned to one person vehicle patrols, 19 percent were assigned to two person vehicle patrols, five percent were assigned to detective/special assignment and 15 percent were assigned to 'other' assignment. Of the 154 law enforcement officers feloniously killed between 2000 and 2009, and who were alone and unassisted in single person patrols, 49 officers were involved in a traffic pursuit/stop, 31 in an ambush situation, 25 officers were investigating suspicious person/circumstance and 21 were in an arrest situation (FBI 2009).

Conversely, a US study found that police assigned to single person patrol vehicles were less likely to be killed while at work than those in two person patrols (Kaminski 2002). That is, fewer police homicides occur where single person patrols are deployed than where two person patrols are deployed. In addition, Australian and US researchers have found no statistical difference in safety between the two staffing modes, reporting that officers were assaulted the same number of times regardless of their assignment to single or two person patrols (del Carmen & Guevara 2003; Wilson & Brewer 1991a).

Clearly, the research evidence is mixed in relation to police safety and officer deployment policy. These results must be considered in the context of the different tasks that officer patrols respond to. Consideration must also be given to the applicability of the findings to other jurisdictions. Single person patrols are more likely to be deployed to low-risk calls, which may affect the rates of officer injury. It is also noteworthy that the likelihood of sustaining injury during the assault is statistically more likely for those patrolling alone compared with those patrolling in pairs (Wilson et al. 1990).

Resisting arrest

Resistance encountered by patrol officers is often factored into research examining the level of danger associated with police patrolling. Resistance can include verbal and/or physical actions. Research conducted by Wilson and Brewer (1991b) on patrol teams in South Australia and New South Wales

reported that police encountered physical resistance in 16 percent of their patrol activities and in an additional 15 percent of taskings, officers encountered verbal argument with the potential to escalate to physical resistance. The likelihood of resistance varied with time of day, with increased resistance associated with the busier afternoon and night shifts, and the likelihood of greater numbers of civilians at these times (Wilson & Brewer 2001). Of the taskings that involved physical resistance, seven percent resulted in officers sustaining injury. The type of injury differed in severity, with most injuries involving simple abrasions or bruises (Wilson & Brewer 2001).

Australian research has indicated that although single person patrols were less likely to be dispatched to some taskings, the level of resistance officers encountered and the numbers of injuries sustained in single person patrols in general did not differ significantly from those encountered by two person patrols (Wilson & Brewer 1991b). The researchers argued that the level of resistance for officers on patrol was more dependent on the task being undertaken than on any other variable (Wilson & Brewer 1991b). By analysing offender resistance at police callouts, it was found that the level of resistance faced by police was not influenced by factors such as location (eg rural/urban), officer characteristics (eg age, gender, experience), jurisdiction, or the nature of patrol (ie 1 or 2 officers; Wilson & Brewer 1991a).

Regardless of whether one or two person patrols are in attendance, the potential for escalation from verbal resistance to physical violence is possible. For instance, Wilson and Brewer (1991b) found that officers in single person patrols appeared to be subjected to verbal abuse or approached the verbal abuse level in 13 of the 32 taskings an officer would have to attend. Even verbal abuse is of concern due to the potential of the situation escalating to violence (Wilson & Brewer 1991b). Two taskings—a request for urgent backup and a hotel brawl in progress—had an average level of resistance that was more severe than verbal abuse and argument and therefore would be advisable to have two person patrols for the sake of caution (Wilson & Brewer 1991b). As such, the authors suggested that time of day should be used to determine whether the taskings should be classified as either appropriate or inappropriate for single person patrol duties (Wilson & Brewer 1991b).

Other research has found that single person patrols are less likely to be involved in incidents of resistance than two person patrols (Boydstun, Sherry & Moelter 1977; Wilson & Brewer 2001). However, after raising this argument, Wilson and Brewer (1991b) also found no significant differences between patrolling modes and likelihood of contact with an offender. Johnson (1999) has speculated that two person patrols are more likely than single person patrols to use arrest as the method of resolving disputes (Johnson 1999). However, in an Australian study, it was found that in 28 of the 32 tasking activities the patrol mode, either single person or two person, did not affect the method of tasking resolution (Wilson & Brewer 1991b). Two of the four activities, hotel brawls and request for urgent backup, resulted in significantly more arrests and reports for two person patrols. Of the remaining two activities, the results were less clear cut. Single person patrols were more likely to arrest and warn more suspects than two person patrols when undertaking the 'detainment of an intoxicated person', whereas two person patrols were more likely to make an arrest, or indeed report that no offence had been detected for 'domestic arguments' (Wilson & Brewer 1991b: 22).

Use of force

Examination of use of force is also used in research as an indicator of officer safety, although the rate of incidents involving use of force are low in relation to the number of contacts with the community. A comparison of use of force incidents in New South Wales and South Australia for single person and two person patrols was conducted by Hastings (2007), with more use of force incidents occurring for two person patrols than single person patrols. The rate of reported use of force incidents by single person patrols remained relatively stable between 2000–01 and 2004–05, with approximately 0.02 reported incidents per 100 patrols, while rates for two person patrols ranged from 0.08 to 2.97 reports per 100 patrols. This finding was attributed to three explanations. These are:

- single person patrols are less likely to be tasked to incidents considered to be high risk. This would intuitively result in two person patrols being involved in incidents that had a higher probability for the need to use force;

- an officer working on their own may be more likely to try and avoid a physical confrontation, such as talking their way out of it, than two person patrol; and
- an officer may be more reluctant to back down from a risky situation in front of their colleague than an officer working alone (Hastings 2007).

Hastings (2007) indicated that the mode of patrol is a less significant indicator of officer safety than the type of calls officers are deployed to. Hastings (2007) also concluded single person patrols were no less safe than two person patrols when safety controls such as rostering, policies, training and equipment are suitable.

Effectiveness and efficiency considerations

Deployment of officers in one and two person patrols varies both between and within jurisdictions in Australia and overseas (Rich 1984). Given finite funding and labour resources, operational effectiveness cannot be ignored. It has been suggested that single person patrols are more efficient than two person patrols because it is argued that two single person patrols can patrol twice as much area and be available for twice as many calls than one two person patrol car (Bureau of Justice Statistics in del Carmen & Guevara 2003). In addition, solo patrol cars can be implemented almost immediately at half the cost (Boydstun, Sherry & Moelter 1977), with no additional recruitment ('A quick fix: One-man patrol cars' *The New York Times* 24 September 1990 http://www.nytimes.com/1990/09/24/opinion/a-quick-fix-one-man-patrol-cars.html). However, these assessments of cost are foreign and were made over 20 years ago. No extensive or recent research was found on the cost and efficiency of single person patrols in Australia.

Wilson and Brewer (1992) noted increasing single person patrols potentially results in more cars on the road, which is likely to provide beneficial impacts in terms of increased police visibility, time spent on preventative patrol (and therefore the likelihood of detecting a crime in progress), the average area covered by patrol and the average length of patrol time. This must then be weighed against possible negative impacts, including the probability of effecting an arrest, job satisfaction and assaults and injuries to police officers. Despite these findings, Wilson (1990) found that the effects of increased police visibility, deterrence and crime detection as a result of the increase in number of cars on the road was so small that it justified only minor consideration. One difference between the two staffing modes was that two person patrols were reported to produce more traffic citations and citizen complaints (Wilson & Brewer 1991a).

In any patrolling evaluation, Wilson and Brewer (1992: 444) recommended incorporating factors such as:

> ...issues of effectiveness (type, quantity, and quality of patrol activity), efficiency (the relationship between patrol activity and cost), safety of patrol officers, and attitude and preference of the patrol officers for the various modes.

The increased efficiency of single person patrols has been questioned. A large investigation into one and two person patrols in Australia conducted in 1991 found that single person patrol staffing work levels were comparable to two person patrols (Wilson & Brewer 1991a). More specifically, the effectiveness of most police services (eg number of calls for service handled, total arrest rate) was not affected by the patrol staffing mode. Although two person patrols tended to handle incidents faster—which was also found earlier in the United States (see Chelst 1981)—overall activity levels were found to be comparable between one and two person staffing (Wilson & Brewer 1991a).

An argument raised against single person patrols is that they may be an inefficient use of resources as they are more likely to require backup than two person patrols and therefore could be considered a 'false economy' (Johnson 1999). On the other hand, it has been suggested there is little evidence to support this assertion because the vast majority of incidents require no more than one officer (Bailey 2008). Survey results from operational officers indicated that genuine emergencies occur relatively infrequently, with 47 percent of surveyed respondents not dealing with any during their last shift and a further 35 percent reporting that at most there were

only one or two genuine emergencies during their shift (Bailey 2008). Furthermore, of the incidents attended, 35 percent of police officers indicated that none of the incidents required more than one officer, with an additional 46 percent claiming only one to three incidents needed two or more officers.

A British study into the impact of single and two person patrols pursuing burglars found no difference in the success of catching burglars between the two modes after differences in response times and stage of the burglary were taken into account (Blake & Coupe 2001). The report authors recommended greater deployment of single person patrols to increase the likelihood of catching burglars in the act as the nearest available unit could be closer to the burglary scene, resulting in decreased response times. Earlier, Kessler (1985) found that two single person patrol cars arrived at incident scenes faster than one two person patrol car and thereby increased efficiency in response times. One explanation for this finding was the effect of peer pressure among officers (Wilson & Brewer 1992).

Workplace attitudes to working in single person patrols

From the police officer's point of view, opinion on single person patrols is mixed, but the majority of frontline officers interviewed in the United Kingdom did not like the concept (Prissell 2009). Particular concerns included that it was strenuous, a feeling of constantly having to 'watch one's own back', not wanting to engage with potential threats late at night, and that they considered themselves easy targets (Prissell 2009). As well as possible apprehension about facing danger alone, there is also the more indirect concern after a dangerous incident of them not sharing the incident with another officer (Lindsey & Kelly 2004).

In the United States, a study was conducted on police officers' perceptions of one and two person patrols regarding performance, applicability, effectiveness and safety issues (del Carmen & Guevara 2003). The researchers found that police believed the performance levels between one and two person patrols were comparable. However, two person patrols were considered preferable at night and in areas where police were not as trusted, were seen as more observant and were believed to respond faster to calls than single person patrols. They also found that officers did not consider that two single person patrols were twice as effective as one two person car, nor did they agree that they were more likely to be injured in a two person car than a one person car (del Carmen & Guevara 2003).

Research on Australian officers' attitudes to single person patrol focusing on success, anxiety and patrol situation found a preference for two person patrols, a finding which is similar to research in the United Kingdom and United States (Brewer & Karp 1991). In Australia, even though most police officers (82%) surveyed preferred two person patrols for the 30 identified tasking situations described, the remaining 18 percent of officers indicated preferring single person patrols for an average of 10 identified situations (Wilson & Brewer 1991a). Prior experience of single person patrol was not associated with a higher frequency of single officer preference; however, officers with less than two year's experience were associated with a greater preference for single person patrol (Wilson & Brewer 1991a).

Expectations of likely success has been used as an indirect measure of officer attitudes to patrol mode as it has been shown that this correlates with preference for working alone or in a group (Vancouver & Ilgen 1989). Officers with single person patrol experience indicated more patrol activities with high expectations of success and 'normal' anxiety levels. In other words, although officers expressed resistance to single person patrol modes when asked directly which patrol mode they preferred, they indicated a number of tasks they considered they could perform successfully within normal levels of anxiety, which single person patrols may be able to undertake (Brewer & Karp 1991).

In Australia, researchers have noted that officers prefer the two person patrol model, considering it to be both safer and more effective despite some research suggesting otherwise (see above). Furthermore, negative occupational outcomes can be expected among officers who perceive increased dangers resulting from single person patrols and who are required to undertake these patrols (Brewer & Karp 1991).

Anecdotally, an officer with experience working as a single person patrol indicated that single person

patrol work could lead to a degree of loneliness, although this feeling usually subsides overtime (NT Police representative personal communication 4 Aug 2011). The officer raised concerns that when working alone an officer has to be well versed in legislation, general orders and police policies and procedures as officers did not have the luxury to 'bounce' ideas or seek assistance from a partner and sometimes radio or phone communication is not always a viable alternative. To overcome the boredom that can accompany working alone, the representative mentioned that 'you will often find yourself doing more traffic apprehensions or attending as secondary vehicle to an incident and rendering assistance wherever possible' (NT Police representative personal communication 4 Aug 2011). It was also suggested that single person patrols have the potential to negatively impact an officer in the following situations:

- knowledge that some prosecutors will not proceed with matters in court if the defendant pleads not guilty as there is a perception that the judicial system is more likely to believe a defendant before a police officer;
- uncertainty around knowing when help will arrive if an incident becomes violent; and
- being unable to attend urgent jobs that could reduce the likelihood of harm to victims or people (NT Police representative personal communication 4 Aug 2011)

These are, of course, anecdotal accounts. Despite this, they offer a degree of insight into areas that have not been explored in available single person patrol literature and therefore warrant future exploration.

Single person patrols were trialled in certain parts of urban Sydney between February and July 1993 (Gibson 1995). A study of the trial found that officers who were on single person patrols reported increased job satisfaction and personal confidence (Gibson 1995). In Victoria, Parkinson (2010) reported that Traffic Management Unit and Regional Traffic Tasking Unit officers regularly patrolled alone and in many cases preferred to do so. Research has also indicated that members were happy to work in single person patrols for traffic duty as long as certain conditions were met (Hastings 2007). These included choosing to work in single person patrols primarily in daytime hours and that the decision to work alone was theirs and not decided for them. This would involve rostering sufficient officers on duty to enable two person patrols. In addition, it was noted that management/supervisor concerns about safety would take priority over an officer's choice for working as a single person patrol.

As noted above, the perceived benefits of single person traffic patrols in Victoria include increasing the police unit's productivity and the amount of road that can be covered (Hastings 2007). This patrolling mode was determined by the officer in charge of the shift and in regard to the preference of the officer.

Stress

Policing is recognised as one of the most stressful occupations (Sheena et al. 2005). A substantial amount of research over the least three decades has found police officers are at risk of physical health problems, burnout and psychological issues, as well as smoking, suicidal thoughts and alcohol abuse (Adams & Buck 2010). As well as experiencing many of the stressors normal to most workplaces (balancing work and family, excessive workload, lack of control and lack of support), police are also required to interact with hostile suspects and offenders and emotionally distressed victims (Adams & Buck 2010). As such, the minimisation of stressful situations for police is considered paramount. However, there is limited information on whether being deployed in single person patrols can add to this stress, or if it has no significant impact.

A recent study (Violanti et al. 2008) looked at psychological, physiological and subclinical measures of stress, disease and mental dysfunction among officers in Buffalo, New York Police Department in the United States, called the Buffalo Cardio-Metabolic Occupational Police Stress. The researchers identified that working solo at night without immediate backup could heighten stress (Violanti et al. 2008). However, no Australian police jurisdiction contacted for this report identified the deployment of single person patrols at night time.

In addition, facing unpredictable tasks can increase levels of stress for police officers dealing with operational situations, which is a key risk factor of psychological distress (Dollard, Winwood & Tuckey 2008). In 2005, PASA and the University of South Australia launched a project to examine resources,

work demands and psychological wellbeing of frontline police officers in regional and metropolitan South Australia (Dollard, Winwood & Tuckey 2008). This study found that nearly 20 percent of constables and 19 percent of sergeants showed levels of psychological distress high enough to warrant support from a mental health professional. These rates were also twice as high as the national population. As well as serious health effects, psychological distress may also lead to stress compensation claims. Twelve percent of officers surveyed stated that they had put in a worker's compensation claim for stress at least once (Dollard, Winwood & Tuckey 2008). Additional organisational and productivity consequences of these high levels of psychological distress were identified, including lower levels of job satisfaction and engagement, and increased risk for turnover. One of the key risk factors or demands associated with psychological distress was 'stressfulness of operational incidents (Dollard, Winwood & Tuckey 2008). Despite this, there was no indication in this study of whether patrol mode contributed (either positively or negatively) to increasing the stressfulness of operational incidents and how officers in single person patrols cope with unpredictable tasks compared with other patrol modes.

Legislative requirements

Policing, like all professions, is subject to laws regarding workplace OH&S. The legislative requirement relating to duty of care for employers, although specified, remains unclear for actions and compliance required in relation to single person patrols (Association News 2007). Under the *Workplace Health and Safety Act 1995,* employer duties are in s 9, which states that the employer is to

> ensure as far as reasonably practicable that the employee is, while at work, safe from injury and risks to health and, in particular, must
>
> (a) Provide and maintain so far as is reasonably practicable–
>
> (ii) a safe working environment; and
>
> (iii) safe systems of work; and…
>
> (c) provide any information, instruction, training and supervision reasonably necessary to ensure that each employee is safe from injury and risks to health.

There are limited examples of the application of legislation in relation to officer patrolling mode in Australia, however the issue was raised in NSW v Fahy 2007. In this case, an officer was claiming damages for developing Post Traumatic Stress Disorder after being left unassisted with a seriously injured man during the course of her duties. The NSW District Court awarded her damages for negligence

> due to being unreasonably left in a traumatic situation without the support of a fellow police officer, and her injury was in consequence of a breach of duty by her employer to take reasonable care for her safety (NSW v Fahy 2007: np).

Despite this, the State successfully appealed to the High Court in relation to liability and the Court allowed the appeal. The case was appealed on the grounds that Ms Fahy had failed to establish that the State breached its duty of care and that it was not sufficient merely to allege that the State should have instructed police officers working in pairs, that they should whenever possible remain together and that they should provide psychological support to each other during traumatic incidents.

An example of the application of legislative requirements to single person patrols is illustrated by WA Police. In accordance with WA State legislation, s 19 of the *Occupational Safety and Health Act (OSH) 1984* requires the employer to provide a safe place of work for employees. In relation to working alone, WorkSafe (part of the Department of Commerce, the Western Australian State Government responsible for the administration of *the Occupational Safety and Health Act 1984,* see http://www.commerce.wa.gov.au/WorkSafe/) released a Working Alone Guidance Note (WA DoC 2009). Although police officers are not specifically mentioned in regulation 3.3, the WA OH&S Regulations is used to provide guidance. Regulation 3.3 requires the employer to provide reliable means of communication for isolated employees (those working alone). As the current WA Police communications and phone system do not provide reliable means of communication for isolated employees, there is a need to develop a matrix of duties that are considered reasonably safe to be performed by a police officer working alone (Safety Officer WA Police Union personal communication 20 September 2010).

Guidelines and training

The overwhelming majority of training techniques and tactics used in police training are based on a two person patrol situation. Therefore, a need exists for the development of operational guidelines specific to each patrol mode, as it is insufficient to develop one set of guidelines to cover all modes in all circumstances (Wilson & Brewer 1991a). An example is apparent in Ireland, with health and safety regulations requiring Gardaí police officers to place a prisoner in the back of a car and to have a second police officer sitting directly behind the driver to ensure the officer driving is not attacked ('Attacks on gardai spark demand to end one-man patrols' *Irish Independent* 1 May 2008. http://www.highbeam.com/doc/1G1-178472475.html). These operational guidelines must incorporate information on taskings, environmental conditions and officer and offender characteristics. Therefore, in Ireland it is not possible for single person patrols to make arrests and drive back to the station ('Attacks on gardai spark demand to end one-man patrols' *Irish Independent* 1 May 2008. http://www.highbeam.com/doc/1G1-178472475.html 2008).

How are decisions made when deciding to deploy single person patrols?

In 1990, single person patrols were identified as a patrol option available in all Australian police organisations, in addition to a large number of American jurisdictions (Wilson & Brewer 1991a). The extent of this operational practice has differed dramatically between locations and shifts. Identified variables have been used in an informal manner to determine the circumstances that single person patrols would be deployed in and these have included time of day, population density and rated risk of the tasking (Wilson & Brewer 1991a).

With the exception of Prunckun (1989), who examined the patrol deployment practices within all Australian forces, prior to 1990 there was limited research available to examine the efficacy of solo deployment practices in Australia. According to Prunckun (cited in Wilson 1991), the Australian Federal Police reported deploying single person patrols in daylight hours and two person patrols at night when the risk was considered greater. This decision was based on operational knowledge, rather than on empirical data. Queensland Police reported the policy was to maintain two person patrols, although there was flexibility to allow for single person patrols on the basis of manpower or other organisational considerations. NT Police reported a similar policy, with single person patrols deployed only to tasks considered low risk. The WA Police reported using single person patrols on functions considered to be low risk by the appropriate regional or divisional officer or officer in charge of a branch, section, station or squad. Three person patrols concentrated on high-risk assignments and 'trouble spots'. Single person patrols were reported to be used for traffic and in low-risk functions (Prunckun1989).

At the time of Prunckun's 1989 review, WA Police reported that they employed two person patrols in the following high-risk functions—mobile patrol of capital area, suburban night patrol, metropolitan plain clothes patrol, highway patrol, heavy haulages and foot patrols in inner city Perth. Victoria Police adopted a policy of assigning two person patrols to high-risk patrols, while single person patrols were assigned to tasks that were considered low risk. However, what constituted low and high-risk patrols was not explained in the available literature. The general policy also assigned officers to work in pairs during hours of darkness and in pairs during daylight hours where resources permitted this (Prunckun 1989). After an examination of the assignment of patrol modes, Prunckun (1989) recommended that SAPOL adopt single person patrols in low-risk patrol functions, with these exact functions being determined by a risk analysis model. It must be noted that this review is now more than two decades old and a more recent overview of current single person patrols nationally could not be located.

Currently, most jurisdictions have informal practices implemented on a case-by-case basis, but others have specific policies such as Western Australia and New South Wales (Association News 2007). For example, in Western Australia, all operational officers are now required to work in teams of at least two, even in outstations (WAPOL 2008).

In the early 1990s, single person patrols were routinely deployed to tasking classified as 'low risk' (Wilson 1991). Activities defined as 'low risk' were generally those in which there was either no offender involved or no offender contact at all (Wilson 1991). Limited evidence existed to show these task ratings were based on systematic investigations. Instead, these taskings were more likely to be based on a consensus arising from knowledge and experience of operational policing; with much of the responsibility of deployment of single person patrols relying on the dispatching personnel (Wilson 1991). Furthermore, the nature and extent of operational guidelines relating to single person patrols varied widely from force to force and the extent of deployment is substantially affected by constraints on manpower (Wilson 1991). Certain conditions to determine when one person police cars were tasked included:

- time of day (increased use of single person patrols during daylight hours);
- population density (more densely populated districts or where barriers to travel were prevalent, employed fewer single person patrols); and
- risk involved in individual taskings which are typically broken down into 'low' and 'high' risk activities (Wilson 1991).

As already outlined, another consideration is that the nature of police work is unpredictable. Routine tasks, or tasks rated as 'low risk', can prove life-threatening, especially when officers deal with individuals affected by alcohol, drugs, and/or suffering from mental illness (Prenzler 2010). In Queensland, an in-depth case study was conducted on the findings of an inquest into the 2007 death of Constable Brett Irwin who was shot while executing a warrant at 10.30 pm to a known violent offender (Prenzler 2010). Constable Irwin was executing the warrant as part of a two person patrol. During the Inquest, police testified that warrants were commonly executed during the night 'without any adverse consequences' (Office of the State Coroner cited in Prenzler 2010: 427). This practice was not supported by the Coroner, who indicated it could be a result of 'risk normalisation', where risky (or potentially risky) activities can become normalised as not threatening. This could result in complacency (Office of the State Coroner in Prenzler 2010).

After reviewing the circumstances surrounding Constable Irwin's death in the Inquest report, Prenzler (2010: 10) concluded:

> the key general lesson is that in many locations police need to take a far more cautious approach to their work, including with tasks that are often considered routine and which may be completed many thousands of times without harmful consequences

This study highlighted that risks are present for both single and two person patrols, even for routine activities not usually considered a high risk. Although not specifically related to single person patrols, this conclusion has implications for decision-making processes surrounding their deployment. For example, as the second section illustrated, most findings from single person patrol research that support the practice in certain circumstances rely on the infrequency of safety issues occurring on low-risk/routine activities to continue the practice.

Overall, the available literature on current single person patrol policies is piecemeal and was unavailable for most jurisdictions. In many cases, it was unclear if the information available related to current policies and therefore was still relevant. In addition, many of the tasks are often at the discretion of the dispatcher to assess whether a task should be deployed as a single patrol. However, there was little information available on how dispatchers are trained to make such decisions and few studies exist that explore how accurate assessments are in relation to risk after the introduction of the single person patrol policy. To try to overcome these limitations, information provided from the different police jurisdictions as part of the AIC request was used to update the available information on the different single person patrol policies in Australia. A summary of this information is provided below for each jurisdiction.

South Australia

As mentioned above, in 1989 it was recommended that SAPOL adopt single person patrols in low-risk functions, based on a risk management strategy. It is unclear how this recommendation was enacted; however, in 2010 SAPOL proposed a new 'demand management' strategy to manage public requests for police services (SAPOL 2010b). This strategy, which at the time of writing had yet to be implemented, is also based on a risk management approach.

In short, the demand management strategy focuses on three different areas—call management, front station and patrol deployment. Of particular relevance to single person patrols are the recommendations to changes in call grading and development of a dedicated Police Service Desk (PSD), which affect both the call management and patrol deployment areas. To develop the model, SAPOL undertook an analysis of the nature and extent of incidences across South Australia and compared the current priority rating allocated with the grade that could be allocated, based on a proposed new method of grading calls (SAPOL 2010b). The main concern raised in the report was that many patrol taskings are incorrectly graded as emergencies (SAPOL 2010b). Four call grades were proposed (see below) and each grade has the potential for single person patrol deployment. In general, single person patrols are used as support to the primary two person patrols deployed. Each grading is risk assessed and resources allocated appropriately to best meet community needs.

Grade 1—emergency that requires immediate time critical police attendance (0–15 mins). These make up approximately seven percent of incidents police are called to (SAPOL 2010b: np).

Grade 2—prompt response required, with a degree of urgency or importance linked to initial attendance (0–30 mins). These make up approximately 58 percent of incidents police are called to.

Grade 3—police attendance required with needs met through managed police response (0–24 hour service level). These make up approximately 29 percent of incidents police are called to.

Grade 4—Advice or information most likely response so patrol attendance is not required. These make up approximately six percent of incidents police are called to (SAPOL 2010b: np).

Table 1 summarises the types of offences that characterise each callout grade. Overall, the demand management framework proposes that the single person patrol perform the duties of a 'one stop shop' of 'end to end service for the customer' (SAPOL 2010b: np). Duties are those required of an operational patrol officer and if a single patrol officer is on duty and available they can be used as a follow up dispatch vehicle for incidences within their scope of experience. Specified duties of single person patrols are identified as:

- attending report type offences;
- providing victim support and assistance;
- commencing initial assessments and investigations;
- interviewing witnesses and considering solvability factors; and
- completing typing, attending court and conducting follow-up enquiries (SAPOL 2010b: np).

Overall, it was determined that during any rostered shift, individual officers could be deployed either in one or two person patrols once factors such as experience and skill level has been assessed by the patrol supervisor (SAPOL 2010b). There is no indication of how dispatchers or patrol supervisors are trained to make assessments in dispatching single person patrols beyond the grading levels. This does not necessarily mean that such guidelines or training do not exist, only that the researchers were unable to locate any such training material for the purposes of this report.

The opportunity for SAPOL staff to provide feedback on the proposed strategy was available until 26 April 2010, but this feedback was not available for this report. As such, it is difficult to gauge how this new structure has been received by SAPOL officers or the community. Anecdotally, concerns have been raised by PASA on behalf of members. For example, a newspaper reported on 22 July 2010 that a SA police officer had been threatened with a gun while working alone. This prompted a reaction from a number of readers, who wrote to the paper outlining their concerns about single person patrols, including their desire to have them abolished (Robertson & Kyriacou 2010).

Table 1 Proposed appropriate tasks for each call grading level for South Australia Police

Grade 1	Grade 2	Grade 3	Grade 4
Danger of life	Risk to welfare of human or animal	Attendance time not critical to apprehending offender	Caller only requires advice or information
Use or immediate threat of use of violence	Likelihood of continued risk to the security of property	Crime has been committed and police required according to SAPOL policy	
Serious harm to a person	Likelihood of detection, prevention or apprehension in relation to a crime	A higher level of service can be provided by a pre-arranged police response time	
Serious damage to property including animals	Offender detained but not violent		
For allegations of criminal misconduct:	Road collision where minor injury or serious road obstruction exists		
The crime is or is likely to be serious and in progress	Serious crime and risk that vital evidence may be lost or destroyed		
Offender has been disturbed at the scene of a serious crime and reasonable prospect that offender would be apprehended by immediate police response	Suspicious activity not involving a threat to any person		
Offender detained and poses (or likely to pose) a risk to other persons	Distressed informant/victim		
For vehicle collisions:	Sudden deaths		
Likelihood of serious injury to anyone and no medical assistance currently provided	**Assisting at-risk individuals that may include but not limited to:**		
Road/traffic obstruction exists that could result in serious danger to other road users	Elderly, frail or very young		
	Physical or mental health impairment		
	Of another race and find themselves in difficult circumstances		
	Known VIP or person at risk (eg domestic violence victim		
	Disturbance where police required to standby and prevent immediate breach of peace		

Source: SAPOL 2010b

New South Wales

At the time of writing, the NSW Police Force is also engaging in a review of the deployment of first-response officers in single person patrols. As the review is ongoing, information on their policy is not currently available. From available literature, New South Wales developed a Single Unit Policing policy and guidelines in 1993, although these have been updated at least once since that time (Association News 2007).

Single person patrols were trialled in urban Sydney areas in 1993, with one study (Gibson 1995) reporting increased job satisfaction and personal confidence among officers who were working solo. As such, single person patrols during daylight hours have been an option for NSW commanders since 1995. This option can be given to officers based on discretion and an assessment of suitability, including an assessment of current station capabilities (Gibson 1995).

Single person patrols can be implemented following consultation between Local Area Commander and Police Association officials, and taking into consideration high-risk areas, radio communication black spots and minimum staffing provisions of the guidelines. Single person patrols can only be deployed during daylight hours and only appropriate officers are to be deployed. The determination of appropriate officers is based on maturity, ability, judgement, communication skills and capacity to respond to taskings (Gibson 1995). The policy also provides a list of tasks that cannot be undertaken by single person patrols. Table 2 illustrates the types of tasks that are considered suitable or unsuitable for single person patrols.

However, at present, there is no further research available on the adoption of this option across other NSW local area commands and whether it produced similar results to the pilot study.

Western Australia

Single person patrols are no longer an available option for WA Police officers and there are no longer single person police stations in Western Australia. The current policy states that '…throughout Western Australia members are not to be rostered, directed or encouraged to work alone' (WAPOL 2008: 169). Many of the concerns regarding officer safety were primarily (although not exclusively) related to officers working alone in country stations (eg see *Western Australian Police Union of Workers v The Hon. Minister for Police* (2001), WAIRC 02216).

Historically, WA's policy on single unit policing titled *Police Officer's Safety* was established in 1984 as a result of a number of instances of assaults on officers working alone in regional areas. The

Table 2 Tasks considered suitable and unsuitable for single person patrols in New South Wales

Suitable tasks	Unsuitable tasks
• juveniles in shopping complex	• brawls
• complaints regarding excessive noise	• crowds assembled in hotel car parks
• barking/savage dog and property damage	• detaining intoxicated persons
• traffic violation/accident	• assisting to remove a trespasser
• shoplifting or fraud incident	• mentally ill person
• person loitering	• domestic argument
• missing person report	• conveying prisoners to hospital
• chemical/gas spill	• assault in street
• burglar alarm sounding	• motor vehicle theft in progress
• bomb threat	• incident-shots fired
• sexual assault	• burglary in progress
• injured animal on road	• armed hold-up in progress
	• transferring prisoners between institutions

Source: Association News 2007; Gibson 1995

Table 3 Duties that can be performed by a single officer

Administration runs (ie mail taking items for repair, collecting stores)	Prosecutors travelling to court	Police witnesses attending court
Witness, complaint statements/summons	Community policing	PCYC duties
Duties associated with internal investigations	Cold crime scene attendance by District Field Intelligence Officer	Commuting to and from work in a police vehicle
Conveyance of drugs and property in the metro area	Conveying for service or repairs	Purchasing
Crime administration	Juvenile justice and crime prevention	Inspectors conducting Hub meetings and station visits
OIC travelling to/from appointments	Training officer	Low-risk post-crash investigations
Attending the mortuary	Low-risk sudden death inquiries	Roadside assistance re breakdown
Attending training	Attending disciplinary hearings, interviews	Visiting hospitals

Source: WA Police representative personal communication 2010

issue was heard by the WA Industrial Relations Commission (WAIRC), which subsequently recommended that if an officer did patrol solo, especially at night, back-up should be made available by management (Armstrong 2010). In 2001, the deployment of single person patrols was raised by Western Australia Police Union of Workers (WAPU) members working in single person stations, particularly in relation to WA Police's duty of care to officer safety and welfare. WAPU applied to WAIRC on behalf of its members pursuant to s 44 of *the Industrial Relations Act 1979* (see *Western Australian Police Union of Workers v The Hon. Minister for Police* 2001). Although the case was dismissed, WAIRC recommended that there should be continued auditing conducted by middle level managers to ensure officers working in single police stations were properly supported and supervised (*Western Australian Police Union of Workers v The Hon. Minister for Police* 2001).

In 2003, WA Police officer duties were included under the *Occupational Safety and Health Act 1984* and after this, WAPU applied pressure on the WA Police and state government to develop a single person patrol policy (Armstrong 2010). In 2006, the issue of single person patrols was again highlighted when Sergeant Shane Gray was assaulted by a dangerous fugitive while patrolling alone. Sergeant Shane Gray was seriously injured, but survived the attack after fatally shooting the attacker in the chest (Armstrong 2010).

As a result of this attack and the highly publicised Inquest into the death of William John Watkins (Sergeant Gray's assailant), the policy was updated and renamed *Single Officer Patrols*. The policy stated that

> in regional Western Australia members are not encouraged nor expected to patrol alone when they are travelling more than 10 kilometres from a town or town site either during the day or at night. In addition, members are not encouraged nor expected to patrol alone after hours of darkness anywhere in Western Australia (Hope 2009: 17).

The coroner for the inquest into Sergeant Gray's assailant recommended that WAPU and WA Police collaborate to restrict the use of single person patrols to instances where circumstances required officers to work alone and the need to use force was extremely unlikely (Hope 2009).

In 2008, WAPU and WA Police agreed on a single person patrol policy where members could not be directed or rostered to patrol alone. The policy was formally introduced on 9 April 2008 via the WA Police Manual, Policy # PA-1.2.2 Single Officer Patrols (WAPOL 2008). The WA Police rely on Regulation 3.3 of the WA Occupational Safety and Health Regulations to provide guidance regarding a safe work place for employees. This regulation requires the employer to provide reliable means of communication for isolated employees (ie those

working alone). As the current WA Police communications and phone system cannot provide reliable means of communication for isolated employees, single person patrols would have been unable to comply with this regulation and therefore was another catalyst for the ban (WAPU representative personal communication 23 November 2011).

This policy was the first of its kind in Australia and as a result, there are no single officer police stations in the state (Armstrong 2010). Although WA Police has banned single person patrols, WA Police together with WAPU identified 24 *duties* (not patrols) that can be performed by solo officers. These duties primarily relate to crime prevention, community policing and administrative activities (see Table 3).

Currently, all WA police stations should be staffed by a minimum of two officers. If the station has only two officers, the officers are encouraged to take annual leave together. If this occurs, the station will be closed for the duration of the leave period and a neighbouring station will attend any calls to that area if necessary. However, if the officers are unable to take leave concurrently then a relief will be provided. If a relief is not available, the remaining officer is detailed to police the subdistrict with an officer from a neighbouring station, but patrolling alone is not allowed (WAPU representative personal communication 23 November 2011).

Since the policy's introduction, there have been a few cases where officers have been left to work alone in remote areas (WA Police representative personal communication 9 June 2008). Both WAPU and management have since liaised to address this; however, the overall policy has yet to be evaluated for its effectiveness.

Victoria

Currently, Victoria Police allows officers who perform traffic duties to work alone. In 2005–06, Victoria Police undertook a review of single person patrols for traffic duties and concluded that when assessing risks to officers, the type of duty performed was a more important consideration than mode of patrol (Hasting 2007). There was also a preference among officers for flexibility to work either by themselves or as part of a two person patrol, depending on whether the duty was deemed safe via a risk assessment. The review included an examination of Victoria Police data, a literature review and a number of focus groups and forums with police personnel. The review identified an increased likelihood of rostering two person patrols during night and single person patrols during daytime hours in Victoria (Hastings 2007). Generally, preference for two person traffic duty patrols occurred during night-time hours and has been ascribed to three factors:

- Night-time is generally associated with higher alcohol consumption. This leads to a preference for two-up policing as alcohol is indicated as a causal factor for violence. Also, officers frequently stated that when they obtained a positive preliminary breath test and had to take the motorist back for an evidentiary breath test they were vulnerable as the motorist could not be handcuffed and the officer must focus on driving and not restraining the motorist if they become aggressive. They are also more vulnerable to resistance when the motorist is out of the car.
- The increased likelihood of surveillance (more witnesses), assisted by greater visibility, acts as a deterrent for violent acts. At night-time, the lack of visibility and fewer witnesses minimises the deterrent effect.
- During night-time hours there are fewer patrols, which underscores the need for greater partner backup.

In addition, Hastings (2007) discussed the nature of duties to be performed. Drink driving enforcement, as well as attending a collision, were noted as duties requiring two officers. In the case of drink driving, two person patrols were preferred due to the likelihood of the motorist having to leave their car and the vulnerability to resistance if the officer was alone. Collision scene investigations require two officers as the circumstances can be unsafe for one officer to carry out investigations that are reliant on road conditions, speed limit and weather conditions (Hastings 2007). This is reflected in 'shift data', which shows that the majority of single person patrols are conducted in morning shifts, with few being conducted in the twilight and night-time hours (Hastings 2007).

As a result of this review, Victoria Police has been progressively introducing In-Car Video (ICV) systems

into Traffic Management Unit vehicles in rural areas to provide visual and audio corroboration. It is also intended to improve officer safety (Chief Commissioner personal communication December 2009). The ICV system includes forward and rear view cameras and two wireless microphones. The ICV equipment is triggered automatically by any of the following actions:

- activation of:
  - red/blue flashing lights and the siren;
  - siren only;
  - wireless microphone;
- if the vehicle is involved in a serious collision;
- it the vehicle is subjected to a predetermined G force acceleration or deceleration; or
- manually pressing the record button (Chief Commissioner personal communication December 2009).

However, it is important to note that this review was undertaken in relation to single person patrols for traffic duties only, as all other types of duties were outside the scope of the review.

Use of CODE 4

In Victoria, 'CODE 4' involves officers reporting their location and details of the vehicle they are pursuing prior to intercepting the vehicle. This practice is considered to increase officer safety because it alerts other police officers to the officer's location and the likelihood of that officer requiring assistance. However, Hastings (2007) indicated that this process occurs in only about one in 10 intercepts by Victoria Police. An officer's preparedness to use this process is reduced due to a limited amount of air time on the radio and the practicalities of using CODE 4 for every 'minor traffic intercept' (Parkinson 2010). Officers indicated that when they used CODE 4 it suggests to other officers that something about the intercept has made them wary.

Tasmania

Tasmania Police have adopted the *Single Member Response Model*. A 2010 parliamentary estimates committee transcript summarised that the current policy on single person patrols in Tasmania have been adopted for certain situations in order to 'maximise…[police] visibility and also…[police] effectiveness and efficiency (Acting Commissioner of Police Darren Hine, Legislative Council of Tasmania 2010: 8). The Minister for Police and Emergency Management in Tasmania indicated that single person patrols are an option for Tasmania Police, stating that from a staffing perspective it is not viable to always have two person patrols.

Tasmania's single person patrol policy was altered following the shooting of a sergeant in 2006 (Legislative Council of Tasmania 2010). The current policy allows for deployment of single person patrols within a risk management approach (Tasmania Police 2009: clause 1.2); however, single person patrols are not intended for deployment in high-risk situations (Legislative Council of Tasmania 2010). A risk assessment should be made prior to attendance at the scene and all relevant information must be considered. The assessment will be made by radio dispatch personnel when practicable or at the request of the attending officer (Tasmania Police 2009: clause 1.4). This process includes consideration of the available intelligence holdings in relation to the address and persons involved. The risk assessment made may recommend one of the following actions (although this list is not exhaustive):

- attend and deal with the incident;
- wait nearby until backup arrives;
- conduct surveillance of the premises or incident from a safe distance; or
- conduct reconnaissance of the incident location or premises to assist with deployment of additional personnel (Tasmania Police 2009: clause 1.5).

In general, routine traffic patrols are conducted by single person patrols and there is the potential for an officer to be called to any incident (Legislative Council of Tasmania 2010). A key argument raised about single person patrols is that not all risks can be eliminated, but that training and other measures are in place to reduce the risks officers face when working alone (Legislative Council of Tasmania 2010). This includes training officers to expect the unexpected. It was highlighted that the single person patrol policy is raised in initial police training for officers and that equipment should be available

to help diffuse a situation if it becomes violent (Legislative Council of Tasmania 2010). The response model states that, where possible, the following equipment should be made available to an officer working alone:

- a firearm;
- a bullet resistant vest (with the exception of foot patrol, motorcycle and vessel duties);
- OC (Capsicum) Spray;
- a baton; and
- a radio (Tasmania Police 2009: clause1.6).

In Tasmania, the police radio is one of the key tools available for police working in either single or two person patrols. It helps them to stay in contact with other police and to assess potentially dangerous situations. To support this, the 2010 Tasmanian police budget included funding for an automatic vehicle location project. All operational vehicles will soon have automatic vehicle location installed as part of the scheme. Automatic vehicle location works by using global positioning system technology to obtain the exact location of patrol cars at any time, particularly when an officer is out of radio contact (Legislative Council of Tasmania 2010). This measure was suggested as part of a suite of risk management strategies to assist officers when patrolling alone (Legislative Council of Tasmania 2010).

In addition, an officer working alone is required to assess a situation based on information relayed by the dispatcher on the radio and the conditions observed at the scene. The officer has the option to withdraw from a scene if they believe that it is too dangerous (Legislative Council of Tasmania 2010). In such cases, the policy specifically states that single patrol officers who withdraw from a scene until additional help arrives will obtain full support of senior officers if the decision by the officer is later questioned (Tasmania Police 2009). Specific training is given to officers in single officer stations, although it is not specified what this training entails. However, the training package offered to officers, subject to transfer to a one or two person station, was developed and maintained by the Operational Skills Unit at the police academy and is conducted by trained personnel (Tasmania Police 2009).

Regardless of these provisions, the policy allows for each incident to be individually assessed for its suitability to have a single member response. Officer safety is the primary concern and if there is any doubt that an officer will be safe then supervisors, duty officers or officers themselves should request additional units to assist (Tasmania Police 2009). *The Single Member Response Model* requires divisional inspectors, duty officers and supervisors to ensure that officers are aware of this policy, actively monitor compliance with its provisions and make sure that the incident tasking is in keeping with the spirit and intent of the policy (Tasmania Police 2009).Table 4 provides a list of tasks that have been identified as circumstances that would not be suitable for a single member response.

The Acting Commissioner suggested that it would be an inefficient use of resources to deploy more than one person for all situations, as many issues are routine matters, such as obtaining witness statements (Legislative Council of Tasmania 2010). He proposed that eliminating single person patrols would result in fewer patrols and that it would significantly reduce police visibility, thus impacting on community confidence in police (Legislative Council of Tasmania 2010).

However, recently in Tasmania, an officer working alone shot and killed an alleged offender after attending a domestic disturbance callout. The

Table 4 Examples of tasks that are unsuitable for single member response in Tasmania Police

Incidents involving serious violence or weapons	Conducting arrests	Attending alarms or reports of a crime in progress
Attending disturbances or family violence incidences	Operational exigencies (eg urgent searches, attendances at disturbances and so on)	Incidences with a pre-determined level of response (eg operational orders, contingency plans, prisoner transfer) where risk assessments indicate the need
Specialist roles where the need is clearly established	Protection against false allegations	Supervision and training purposes

Source: Tasmania Police 2009

deceased allegedly attacked the officer, forcing the officer to shoot, even though the officer had previously used 'OC' spray on the attacker (Smith 2010). As a result, Tasmania's Integrity Commission is monitoring the investigation into the shooting and the coronial inquest will focus on Tasmania's single person patrol policy and the use of tasers in the state (Smith 2010). The shooting reinforced Tasmania Police Association's opposition to single person patrols, although the Police Commissioner has ruled out a ban on single person patrols (Smith 2010).

Northern Territory

There are no specific standard operating procedures at the Joint Emergency Communications Centre for frontline officers working in single person patrols in NT Police. The decision to dispatch single person patrols is based on a 'common sense' assessment that considers factors such as:

- *Nature of incident*—if an incident has the potential to become violent, an officer is unlikely to be deployed alone. However, there is also consideration given to the nature of the incident in relation to the ability of NT Police to dispatch a secondary patrol in a timely manner.
- *Incident location*—single person patrols are not dispatched into areas with known communication issues or that are known trouble spots (eg pubs where patrons are known to be anti-police, even if it is a minor inquiry). In addition, the distance required to travel to a location is also considered, particularly in relation to fatigue. For example, it would not be appropriate to send a single officer to an incident in the early morning that requires a high degree of travel to and from the location.
- If an arrest is possible (most single person patrols are conducted in sedans so for safety reasons it is not possible to secure the person in the rear of a cage).
- Environmental factors (NT Police representative, personal communication 5 Aug 2011).

Even if there are situations where a single person patrol is considered inappropriate, it was suggested that there have been occasions where an officer who has volunteered to attend a risky situation, such as coming to the aid of a vulnerable victim, will attempt to reduce conflict or confrontation that the victim may have been experiencing (NT Police representative personal communication 5 Aug 2011).

Australian Capital Territory

Australian Federal Police (ACT Policing) policy and operational principles do not advocate the use of single member patrols for routine patrols or response duties. The current policy indicates that all patrols and responses are carried out by two officers per vehicle; with the nature and type of incident determining how many vehicles are deployed (ACT Policing representative personal communication 3 Aug 2011). Single person patrol deployment decisions are based on the *Practical guide: Deployment of single member patrols* guide. This guide outlines that 'operational patrols and investigative enquiries will not, where a sworn member may be exposed to operational risk as a matter of course, be conducted alone' (ACT Policing representative personal communication 3 Aug 2011). Single member patrols can be dispatched to a 'priority one' or 'priority two' incident as support for a two person patrol, but the officer must wait for the arrival of additional officers in the vicinity of the targeted location. Priority one and priority two situations and how these are determined were not specified in the information provided for the purposes of this research. It was also noted that these guidelines are currently under review, so this policy may change depending on the outcome of the review.

Queensland

In addition to Prunckun's (1989) summary mentioned earlier, the only available information on single person patrols in Queensland was from the mid-1990s. In a 1996 review on the Queensland Police Service, it was suggested that single person patrols should be considered to provide more efficient and reactive services to the community (Queensland Police Service Review Committee 1996). Research highlighting that officers are no more effective in one or two officer motorised patrols has been

cited in Queensland police resource management documents, although the concept is not expanded in these documents (Fitzgerald 1989; Queensland Police Service Review Committee 1996). A Queensland Police Union representative confirmed that single person patrolling is currently an option in Queensland. In general, the union is opposed to most single person patrol duties with the exception of single officer stations, motorcycle police and dog squad members (Queensland Police Union representative personal communication 6 September 2011). However, the union highlighted single person patrols are rare in Queensland Police (Queensland Police Union representative personal communication 6 September 2011). Despite this, it is unclear what specific policies have been adopted.

Summary

The nature and extent of Australian and international operational guidelines relating to single person patrols varies widely from location to location, with the extent of single person patrol deployment affected by constraints on staffing (Wilson 1991), time of day, population density and risk involved in individual taskings, which are typically broken down into 'low' and 'high' risk activities. Single person patrols are routinely deployed to taskings classified as 'low risk' (Wilson 1991); however, there is limited evidence to demonstrate that task ratings are based on systematic investigations, instead they are more likely to be based on a consensus arising from knowledge and experience of operational policing. Therefore much of the responsibility of deployment of single person patrols relies on the dispatching personnel (Wilson 1991). While a number of jurisdictions indicated that relevant training is provided to dispatching personnel, it is unclear from the documentation provided what this training includes and how often it is undertaken.

Are single person patrol strategies in line with community expectations?

A key gap in the single person patrols literature is whether current practices are in line with community expectations of police. The concept of community expectations that is used in this literature review can be viewed through three related perspectives:

- what the community expects of police in relation to responding to a citizen's request or callout;
- what the community more generally expects of its police in regards to ethics and accountability; and
- whether the mechanisms and procedures that police management have in place to protect the police while performing their duties meet community standards.

To try to answer these questions, literature on community satisfaction with police and community expectations of police were investigated, and whether solo policing plays a role in improving community perceptions of police services. It is worth noting that although community expectations of police services and their overall satisfaction of these services appear related, the two are not correlated—in other words, low expectations of police should not be interpreted as low satisfaction with their services (Reisig & Stroshine Chandek 2001), just as satisfaction with and confidence in police are different concepts (Myhill & Quinton 2010).

Citizen satisfaction with police and attitudes towards the police have been well documented, particularly in the United States. However, studies rarely use single or two person patrols as a variable. Anecdotally, it has been suggested that single person patrols improves the general relationship between the police and the public and aids in the effectiveness of community policing (Bailey 2008). Information provided by members of the public has a substantial effect on crime detection success, with some estimates suggesting that in the United Kingdom 'less than 25 percent of crime is solved by real detective work' (Bailey 2008: 54). In the United Kingdom, it was found that police primarily patrol in pairs that can result in police interacting and talking more with each other than community members during the course of a patrol (Bailey 2008). Therefore, single person patrols might encourage officers to interact and engage more meaningfully with the public, establish communication and trust and lead to a higher degree of public confidence in the police, which are all core components of community policing (Bailey 2008). In addition, it has been proposed that single person patrols are more favourable than two person patrols if an area is trying to increase police visibility and respond more effectively to community needs (eg see Legislative Council of Tasmania 2010). However, available research indicates that these assumptions have yet to be tested in Australia.

Various factors have been found to influence citizen satisfaction or confidence with police, which have little to do with police patrol mode, with most studies of public confidence in police focusing on demographic, attitudinal and contextual factors (Jang, Joo & Zhao 2009). Table 5 summarises some of the key factors of satisfaction, attitudes and confidence with police by citizens. Overall, the influence of certain variables differs among studies. A 2001 review of more than 100 articles of perceptions and attitudes towards the police found that an individual's age, police contact experience, residence neighbourhood and racial background were consistently supported as key influences, but how they interact with each other and with other factors is still unknown (Brown & Benedict 2002). In Australia, the impact of race needs to be further investigated (Hinds & Murphy 2007). However, a 2005 study in the United States suggested that police actions at the scene (such as showing courtesy, explaining what is going on) is a major determinant of citizen satisfaction with police, more so than a citizen's personal characteristics such as the race, age and linguistic capabilities (Skogan 2005).

Confidence in police has also been linked to increases in feelings of safety (Nofzieger & Williams 2005). Positive encounters with police were found to increase citizen confidence (eg Nofzieger & Williams 2005), as does how a citizen perceives the level of engagement, fairness and effectiveness of police behaviour within the community (Stanko & Bradford 2009). Irrespective of this, levels of satisfaction naturally varies between citizens, with those who initiate contact with police (eg for assistance) generally having higher satisfaction levels than those where police have initiated the contact, such as pulled over for a traffic stop (Skogan 2005). Satisfaction levels can also vary depending on the circumstances. For example, satisfaction can be influenced by a positive or negative experience in citizen-initiated police encounters (eg positive experience produces positive attitudes of police), but negative police initiated contacts did not appear to negatively impact attitudes, most likely as a result of citizens having low expectations of these encounters in the first place (Rosenbaum et al. 2005). Predetermined attitudes towards police were also a factor, which are often shaped by indirect vicarious experiences (eg a neighbour's or relative's experience with police, or media reports), therefore affecting expectations of police services (Rosenbaum et al. 2005). A review of available evidence on citizen confidence in policing found that effective strategies for maintaining confidence include policing activities associated with 'service-oriented' models, such as visible patrols, procedural fairness, community policing and problem solving (Myhill & Quinton 2010).

Table 5 Influences on satisfaction with police

Positive—personal safety in one's neighbourhood, police effectiveness in fighting crime, existence of community policing in neighbourhood *Negative*—mass media coverage of police misconduct; perception of police misconduct *Overall*—race (but varies between race and when certain variables interact eg demographic)	Witzer & Tuch 2005 (US)
Lower confidence with the police by individuals who had higher levels of acceptance of deviant behaviour has also been found	Jang, Joo & Zhao 2009 (US)
What an officer did at a scene (polite, explained what was going on) influenced satisfaction	Skogan 2005 (US)
Positive—citizens can exercise their voice, police perceived as being unbiased, objective and neutral in handling pursuits and decision making, citizens treated with dignity and rights acknowledged, and show concern for the citizen's welfare	Skogan & Frydl 2003 (US)
Trust in police influenced by citizen's perceived fairness of procedures when exercising authority	Tyler 2005 (US)
Attitudes affected by race, type of encounter, indirect vicarious experiences (eg by relatives or friends, or by media reporting)	Rosenbaum et al. 2005 (US)
Procedural justice/legitimacy of police	Hinds & Murphy 2007 (Aust)
Race, formal education, home ownership, income, police behaviour when in contact with citizen; procedural justice	Frank, Smith & Novak 2005 (US)
Positive—perceived decrease in crime, positive encounter with police	Nofzieger &Williams 2005

Citizens' expectations around certain police behaviours and functions have been investigated in various studies, including what citizens want of their police more generally. However, this has been rarely undertaken in the context of single person patrols. It has been suggested the greater police visibility via vehicle patrols can have a negative effect on community members (Salmi, Gronroos & Keskinen 2004). Research found respondents who saw more police on foot patrols were less afraid of property crime than those who reported seeing the police more often in patrol cars (Salmi, Gronroos & Keskinen 2004).

Overall, studies indicate that police–community engagement, respect for citizens and fairness are often the most important considerations for the community. The recently introduced NSW Police Force Customer Service Program advocates increased police visibility and greater community engagement strategies to improve satisfaction with police (Burn 2010). Recent New Zealand research found (among other things) that what the public wanted and expected from their police was that they had more staffing options, more community engagement, especially police 'walking the beat' more, being more active, visible and approachable in the community (McCardle & Webb 2010). Anecdotally, an NT officer with single patrol experience noted that prompt attendance to a callout appears to be a greater community expectation than the number of police who attend, yet he will often receive comments asking where his partner is, or is questioned whether he is working alone. Therefore, he perceived that there is probably an expectation that two officers will attend, but also noted that these comments could also be asked out of concern for the officer's wellbeing when working alone (NT Police representative personal communication 5 Aug 2011). He also noted in some instances of individuals trying to take advantage of a situation by escalating the aggression or violence when they learn the officer is working alone, although this is not the norm (NT Police representative personal communication 5 Aug 2011). However, as these observations are anecdotal they require a more thorough investigation to determine if this is observed more broadly.

In Germany, a survey about expectations of police found that most respondents supported the adoption of community policing and problem-oriented policing methods (Weitekamp, Kerner & Meier 2003). Community policing has been linked to increased satisfaction with police (Witzer & Tuch 2005) and was promoted as a key policing strategy in the Queensland Fitzgerald Inquiry into police corruption (Fitzgerald 1989), although it should not be seen as a panacea to preventing corruption (Newburn 1999). In Western Australia's current single person patrols, policy community policing is considered an appropriate activity for a single officer. However, information was not available on what activities WA Police define as community policing.

Measuring the levels of police complaints is another key indicator of satisfaction with police. As previously mentioned, it was suggested that two person patrols were subject to more complaints than single person patrols and had higher rates of injuring citizens during an encounter (Johnson 1999; Wilson & Brewer 1991a). It has been suggested that police subculture, officer overconfidence as a result of having constant backup at hand and citizens' reactions might contribute to higher resistance, more complaints and citizen injuries among two person patrols (Johnson 1999).

Despite this, current literature on reducing citizen complaints against police does not suggest increasing single person patrols as a possible strategy to achieve this. Politeness/courtesy when interacting with a citizen was shown to be a positive influence on police satisfaction in many studies (Frank, Smith & Novak 2005; Skogan 2005; Skogan & Frydl 2003), as was perceived fairness in the way police exercised their authority (Frank, Smith & Novak 2005; Hinds & Murphy 2007; Skogan 2005; Skogan & Frydl 2003; Tyler 2005) and perceptions of police performance and legitimacy (Hinds 2009). Many citizen complaints are seen to be the result of an individual perceiving the officer as treating them disrespectfully (Johnson 2004; Ransley, Anderson & Prenzler 2007). Training officers in communicating more effectively in a courteous manner with citizens (eg Frank, Smith & Novak 2005; Johnson 2004) and emphasising the importance of procedural justice were suggested solutions (Gilmour 2010; Hinds 2009; Hinds & Murphy 2007; Johnson 2004).

In the United States, a study of police complaints after new policing strategies were introduced found

that in New York City, two precincts had a decrease in complaints (compared with the other city precincts that recorded an increase in complaints) and this was most likely due to the two precinct commanders changing precinct culture to take citizen complaints seriously and to emphasise 'respectful' policing (Davis, Mateu-Gelabert & Miller 2005). Using complaints data in conjunction with crime mapping to identify potential areas with many complaints and then develop strategies to reduce them within a police unit is also suggested as a potential measure (Ede, Homel & Prenzler 2002).

Do police mechanisms and procedures meet community standards?

Another measure to examine whether single person patrols are in line with community expectations is to review the mechanisms and procedures that police management have in place to protect officers when performing their duties alone. However, the general absence of information on current mechanisms and procedures used to implement single person patrols means that it is not possible to comment on this question with much authority. In the absence of such information, coronial inquest findings could (arguably) be used to gauge what the community expects in relation to single person patrols. In Prenzler's (2010: 2) summary of earlier research by Pelfrey and Covington he notes that

> in most advanced democracies, inquests are considered to be highly independent and objective in their approach and capable of countering defensive biases by government departments and corporations.

Therefore, findings from inquests could provide a more objective view of community expectations of officer patrol conditions than police management, police officers and police unions alone.

Most inquest recommendations regarding single person patrols often look to restrict and tighten the practice, rather than expand its application. This could suggest that in most cases, single person patrol policies may not be what the community (via the courts) expect in most circumstances. As raised earlier, the 2007 inquest into the death of William John Watkins in Western Australia recommended limiting the number of single person patrols in all but exceptional circumstances and only when the use of force is extremely unlikely (Hope 2009). This recommendation was subsequently adopted by WA Police.

The coronial inquest into the death of Victorian police officer Senior Constable Anthony John Hogarth Clarke, who was killed by an offender while working alone, led to four recommendations, of which two specifically related to single person patrols (Parkinson 2010). Senior Constable Clarke was shot and killed while performing a traffic interception while patrolling solo. The offender used the Senior Constable's own service revolver killing Senior Constable Clarke before turning the gun on himself. The inquest was held to investigate and make recommendations relating to the processes and procedures that contributed to the death of Senior Constable Clarke. The coronial inquest highlighted the risk involved in intercepting targets at night, in the dark, in a country or remote area, with the involvement of alcohol and no other officer present to immediately assist of call for backup in the event of difficulties (Parkinson 2010). In addition, the inquest found that a solo officer is unable to supervise the process adequately and is vulnerable to random attack (Parkinson 2010). The two relevant recommendations were:

- the practice of working one-up be abolished in circumstances involving high risk activities such as drink driver, late night and remote area intercepts and that
- a risk assessment tool be developed to assist supervisors to determine whether one or two up manning is appropriate in other circumstances (Parkinson 2010: 36–37).

Consequently, Victoria Police have adopted a risk assessment tool and limit patrols in certain high-risk activities (see the third section of this report), but it is unclear how this is being implemented in practice. However, even if certain recommendations have been made, police do not always adopt them for managerial reasons. For example, the Tasmania Police Assistant Commissioner highlighted that although they were aware of the recommendation in the Clarke inquiry to abolish single person patrols

in certain circumstances, this would not be adopted by Tasmania Police for efficiency and cost reasons (see Legislative Council of Tasmania 2010).

The Watson and Clarke examples illustrate how inquests can be used as a proxy to gauge whether police management have the appropriate mechanisms in place for officers performing their duties alone. They have also allowed jurisdictions to consider a change in police practices to adopt practices that align with community standards. Contrary to some of the available literature, neither inquest has recommended that single person patrols be expanded, although there is agreement that if single person patrolling is undertaken that it should be for low-risk and/or community policing duties.

Evidence corroboration, corruption and misconduct concerns

Whereas much research has been dedicated to solo policing and its influence on safety and workplace efficiency, its relationship with the corroboration of court evidence, corruption and misconduct has not been well explored in the literature. These factors are raised here as it could reasonably be assumed that the community would have high expectations of police behaving ethically and accountably, particularly in relation to the amount of discretionary power police possess (Ransley, Prenzler & Anderson 2007).

In both Australia and the United States, public perceptions of police legitimacy are considered critical to the police being able to perform their duties effectively (Hinds 2009; Hinds & Murphy 2007). Recent Australian studies have shown that legitimacy is associated with the presence of procedural justice (Hinds & Murphy 2007) and that people's perception of police performance, police legitimacy and police use of procedural justice is possibly more influential in shaping satisfaction than simply contact with the police (Hinds 2009). A perceived lack of accountability can negatively influence police legitimacy (Chermak, McGarrell & Gruenewald 2005). It is suggested that improving police legitimacy can be achieved through promoting procedural justice through process-based policing models (Hinds & Murphy 2007). Process-based policing model frameworks focus on improving a citizen's perceptions of procedural justice and police legitimacy through improving their opinion of the quality of treatment they get from police and their opinion on the quality of police decision making, which should then encourage citizens to follow the law and improve trust in police resulting in improved citizen compliance and cooperation with police (Reisig, Bratton & Gertz 2007).

Police misconduct and corruption have been widely researched, however, studies do not look at patrol mode (ie single or 2 person patrols) in this research. Instead, research in these areas chiefly examines complaints against individual police officers (see above), types of misconduct and the characteristics of the officer(s) in question. Civil litigation complaints against police in Australia generally involve allegations of abuse of use of force and police corruption (Ransley, Prenzler & Anderson 2007), which is similar to complaints findings internationally. A review of factors that contribute to deadly force liability in the United States suggested that organisational factors can be influential, with management principles such as hierarchy of authority, communication and division of labour being cited as areas where bad practices can lead to 'bad' shootings (Lee & Vaughn 2010).

Another focus for complaints literature is on the characteristics of the officers involved. These often review complaints in excessive use of force cases. Common characteristics identified among officers investigated for use of force or violence allegations include being young (Brandl, Stroshine & Frank 2001), less experienced (Lersch 2002), male (Brandl, Stroshine & Frank 2001), middle and lower ranked officers (McElvain & Kposowa 2004; Herzog 2000), and police involved in operational and/or investigative functions (Herzog 2000). One study found that greater arrest activity was also linked to excessive force complaints (Brandl, Stroshine & Frank 2001) and that sometimes complaints may be indicative of greater officer productivity (Lersch 2002; Terrill & McClusky 2002). Many of these factors are recognised as being interrelated; for example, younger officers are more likely to be in lower ranks and involved in duties that bring them into contact with police than more senior officers (Herzog 2000).

To reduce complaints, more focus on training and mentoring new officers is often suggested (McElvain & Kposowa 2004).

Peer groups within the police service have been recognised as an influential factor in police corruption, although peer group association could either support or discourage corrupt practices (Caless 2008; Newburn 1999). In an opinion piece, Johnson (1999) speculates that when working alone, an officer feels less pressure to conform to the stereotype of the subculture, while the presence of a second officer may magnify the subculture. As various commissions into corruption and misconduct have indicated (eg Wood Royal Commission in NSW; Fitzgerald Inquiry in Queensland; Knapp Commission in New York), a culture of secrecy can often exist among police and the loyalty expected to fellow officers can keep police officers silent on reporting or engaging in corruption (Caless 2008), although it is recognised that police culture itself is not the source of corruption (Wood 1997).

Mode of patrol (single person vs 2 person) was not examined as a participatory factor in reporting or encouraging corruption; however, some recommendations suggest certain duties that should be conducted by more than one officer. In New South Wales, the Wood Royal Commission (Wood 1997) recommended that a second officer must be present when an officer is interviewing an informant of the opposite sex. Another related oversight measure included the use of civilian observers when large amounts of cash or drugs is expected to be encountered, but this does not affect whether the patrol is single person or multiple officers. Tighter supervision is a measure suggested to reduce corrupt practices, although the nature of police work makes this difficult at times (Newburn 1999). One of the outcomes from the Knapp Commission in New York was to increase corruption control powers of field commanders, with corruption-prone patrol tasks being subject to a policy of supervisory presence at these arrests (Newburn 1999). Despite this, none of these recommendations are indicative of whether working alone could heighten or reduce the opportunity for corrupt behaviour.

Not every situation where police need to corroborate evidence relates to corruption. Among the challenges associated with implementing single person patrol is the absence of corroboration. This can be important for testimony in court and may impact on the success of prosecution in the court case (Wilson & Brewer 1991a). Unfortunately, there is little information available regarding an officer's ability to corroborate evidence or statements taken when responding alone. The limited research found was isolated to corroboration of evidence in relation to police corruption, with no literature located that dealt with whether police who worked alone were either adversely or positively affected in their work when having to present their findings in court or in any other forum.

At best, the available literature only appears to provide advice on how to avoid being the subject of false or vexatious complaints, or how to reduce the likelihood of officer's evidence and procedures being called into question through various recording devices, thorough record keeping and using Closed Circuit Television footage for example (Van Straaten 2004). However, one police representative contacted for this research indicated that when working alone, an officer is often aware that that if an allegation is made against that officer that they may be perceived to be at fault until proven otherwise (NT Police representative personal communication 4 August 2011). As such, this can impact on the way an officer performs their duties. In addition, NT police officers working alone now carry recording devices to avoid vexatious complaints being made. Vexatious complaints were anecdotally considered most common when an officer is issuing a traffic infringement notice (NT Police representative personal communication 4 August 2011).

Summary

Despite an extensive review of current policing literature, this report is unable to comprehensively answer the question of whether the mechanisms and procedures that police management have in place to protect police while performing their duties for single person patrols meet community standards. The lack of information available on this issue is not just relevant to single person patrols, but for answering the question of whether procedures meet current community standards for all police actions. Many decisions on whether to deploy first-response

officers in single or two person patrols are subject to policies that are usually based on arguments of efficiency, safety and cost effectiveness. There is also little evidence of whether police themselves, or the general community, have been consulted. However, as previously outlined, this could be the result of the researchers not having access to documents on how decisions were made.

In summary, community perceptions and expectations of police are often linked to a person's race, age and contact with police. Attitudes are often predetermined based on vicarious and other experiences of citizen-police contact, and satisfaction with police is linked to police legitimacy and perceived procedural fairness/justice when conducting police work. When citizens encounter the police, they expect to be treated with fairness and respect, which were two conditions that were reflected in most of the Australian and international research. Police interaction, rather than mode of patrol, appears more relevant in improving satisfaction and reducing complaints against police.

However, it is also important to note that community expectations of police have not been examined in regards to the difference between reactive, response policing tasks and tasks undertaken as part of community policing. Therefore, there may be differing and possibly contradictory expectations of what the community expects of their police and their services depending on the task or duty performed. As important as the question is regarding whether single person patrol policing by frontline officers is in line with community expectations, there simply is not enough evidence available to draw any conclusions.

Conclusion and recommendations

The purpose of this literature review was not to support or discourage the implementation of single person patrols, but to understand the multitude of factors that influence its delivery. To avoid reporting solely on efficiency and safety considerations, the research questions also attempted to look at single person patrols in a broader context. The four research questions were:

- What are the challenges faced by first-response officers when performing their duties solo?
  - Specifically, has the policing environment changed since solo policing was introduced?
- What impact does working alone have on officers successfully performing their duties?
- How are decisions made when deciding to deploy single person patrols?
- Are single person patrol strategies in line with community expectations?

An attempt was made to address each question separately; however, it is evident that the questions are not mutually exclusive. In particular, the first three questions are inextricably linked and these factors inform the decision-making process behind the use (or otherwise) of deploy single person patrols.

Overall, there has been limited research on single person patrols and policing in Australia. The majority of research on single person patrols was conducted in the 1980s in the United States and the 1990s in Australia. As such, the research needs to be updated, with a greater focus on any issues that are specific to the contemporary Australian environment and the context of solo work.

Most of the literature exploring single person patrols includes comparisons between one and two person patrols. These tend to compare citizen complaints, arrests, efficiency and cost-effectiveness. Findings are often mixed on these factors, as well as how police themselves feel about single person patrol duties. Therefore, it would be worthwhile to update these earlier findings, especially to see if any follow-up work has been conducted after single person patrols have been introduced more widely.

Has the policing environment changed since solo policing was introduced?

As highlighted in the first section, the policing environment is in a perpetual state of change as a result of both internal and external influences. The characteristics of much of this reform include a shift away from more traditional reactive policing

strategies towards a more proactive, community-focused framework with community policing, greater focus of managerial concerns such as performance indicators, efficiency and accountability of resources and the adoption of more risk management approaches.

Any reform within the police service is often characterised by unintended consequences that affect the long-term effectiveness of the reforms (Fleming & Rhodes 2004). Often community policing can be at odds with efficiency and other priorities (Fleming & Rhodes 2004). It has not been possible to explore if these shifting police organisational paradigms have had unintended consequences on how and when single person patrols are deployed. For example, the increased visibility of police officers promoted through community policing is considered important for improving community engagement and satisfaction with police, but how does this affect the wellbeing of an officer working alone? This is not to suggest that officers are put at risk with community policing strategies—indeed, it could be assumed that this is extremely unlikely. However, as there is a dearth of conclusive evidence on how different policing practices affect single person patrols, at present it is not possible to draw any firm conclusions.

Outside internal police management, there have also been changes in the policing environment that have the potential to affect the types of duties that police perform. Positively, crime rates in general appear to be decreasing, although many violent crimes have been steadily increasing over the past decade. In South Australia in particular, the rate of recorded alcohol-related crime is increasing (SAPOL 2010a). There is also increased recognition that police are often the first point of contact for individuals suffering from a mental illness entering the criminal justice system. Whereas it is unlikely for an officer to be dispatched alone to situations involving alcohol or mentally ill offenders, there is still the possibility that officers may feel compelled to intervene (as the NT Police representative indicated).

Dealing with the changing police environment

At present, it could be concluded that most Australian police agencies try to deal with the variable and unpredictable nature of police work by employing risk management frameworks. Indeed, better risk management procedures have been suggested as ways to reduce police deaths and injuries (Prenzler & Allard 2009). It appears that single person patrols are no exception, with most Australian single person patrol policies using a risk management framework. This is evident in the various situations that police face that require a response that has been assessed in accordance to a risk management response. It could be argued that such frameworks are adequate tools to assess changes in the policing environment as documented above. Most of the factors identified as high-risk activities—dealing with a mentally ill offender, patrolling at night, policing alcohol-related violence—are not considered suitable for single person patrols. Risk assessments are generally conducted based on a predetermined risk scale, which is generally informed by previous research findings or an analysis of police data (eg South Australia). Supervisors, dispatchers and the responding officers also have a degree of discretion when responding to a callout, although this varies by jurisdiction.

Wilson and Brewer (1992) recommended that decisions related to single person patrols should be reviewed regularly so that any changing influences can be identified, such as crime characteristics, city layout or technology. It appears that no research was available on how well the single person patrol risk assessments work in practice in any Australian jurisdiction and whether Wilson and Brewer's (1992) suggestion for routine reviews of single person patrols in relation to changes in the environment have been adopted by police agencies. From the available evidence, it appears that fatal or near fatal incidences were the primary impetus for reviewing single person patrol policies in some jurisdictions (eg Western Australia, Tasmania). In addition, it can be speculated from the policies available to

the researchers that the risk assessment tools are designed more for assessing risks within the external environment and do not appear to factor in changes in overall police management and operational structure.

Emerging technology

Changing technologies and equipment are other factors that should not be discounted in the application of single person patrol policies. As Prenzler (2010) notes, advances in technology and improved procedures have seen a decline in police fatalities since the 1960s. Although it was not raised as a separate point in this review due to time constraints, its importance as an influential factor in the development of policies is evident throughout the review. In Western Australia for example, the WA OSH regulations that require the employer to provide reliable means of communication for isolated employees (those working alone) influenced the ban on single person patrols in Western Australia. In addition, agencies such as Tasmania Police indicated that (for example) equipping an officer with a firearm, baton, OC spray and AVL in the patrol car make single person patrols more viable, especially when deploying more officers is not feasible. ICV systems have also been installed in Victorian patrol cars to assist officers who work alone. Therefore, it could be worthwhile to investigate the influence of these emerging technologies on single person patrol decisions in more detail.

What impact does working alone have on officers successfully performing their duties?

As identified above, single person patrols are not applied to every aspect of police work and are usually employed within a risk management framework. As such, taskings considered dangerous (eg at night, dealing with violent offenders or situations) would not be considered appropriate for single person patrols. At present, the available research indicates that there is not much difference between performance of single person patrols and two person patrols. However, most police are wary of single person patrols (eg Wilson & Brewer 1991a). It has been suggested that single officers may deal with interactions with members of the public in a qualitatively different way to officers working together (Wilson & Brewer 2001). There is also evidence that officers in single person patrols are subject to fewer complaints than two person patrols, although much research attributes this to two person patrols being more likely to attend riskier situations than single person patrols.

Despite most research focusing on what activities could be considered appropriate or inappropriate for single person patrols, there was not a lot of in-depth research on the overall impact on officer effectiveness broader than factors such as response times and complaints. As described in more detail below, more research is needed to find out how this impacts on police not just in regards to their effectiveness in performing their duties, but the impact on their feelings of safety and wellbeing.

How are decisions made when deciding to deploy single person patrols?

Developing single person patrol policies

It was difficult to obtain a comprehensive overview of how decisions are made for the deployment of single person patrols in either Australia or internationally. Single person patrol policies vary among Australian jurisdictions and not every jurisdiction has specific policies (eg NT Police). Most information available indicates that police agencies implement their policies based on efficiency and resource demands. Safety was also raised and research that single person patrols were no less safe than working in two person patrols was often cited (eg Hastings 2007). It is likely that such references were to research conducted by Australian researchers Wilson and Brewer (2001, 1992, 1991b, 1991a).

The development of single person patrols policies often involved consultations with police personnel. In some cases, police officers have been consulted about single person patrols (eg the South Australia demand management strategy feedback sheet and Victoria Police consultation with Traffic Management staff) and police associations have been apprised of the plans (eg PASA). Moreover, in some cases, police associations have been active participants in the development of the policies (eg WAPU).

Irrespective of this, it appears that in most cases it is not clear how feedback has been incorporated into the resulting policies. In addition, even if these processes are in place, one significant event such as the serious injury of an officer in Western Australia while working alone could be the catalyst for changing single person patrol policy.

When reviewing the available sources, it is crucial to keep in mind that not all information that informed each jurisdiction's single person patrol policies was able to be reviewed. Nevertheless, within the single person patrols literature, it is clear that even when consultations have taken place, there is often a disconnect between police management employing single person patrol policies and many operational police and their associations belief that they are simply not worth the risk. However, it should not be assumed that management and officers fall neatly into either category, or that the issue has only two distinct and opposing views. Studies have shown that some officers are content and sometimes prefer to work alone (eg Hastings 2007; Wilson & Brewer 1991a), others have opposed it (eg Prissell 2009) and there are others who are not opposed to the practice if certain conditions are met (eg Hastings 2007).

In light of these opposing opinions, the position of police associations should not be discounted. In Australia, the police are considered to be one of the most highly unionised professions, with an estimated 99 percent of approximately 50,000 police officers affiliated with an employee agency in 2006 (Burgess, Fleming & Marks 2006). As such, it is noteworthy that all eight Australian police associations have indicated through the PFA that they oppose the use of single person patrols in most circumstances. Equally, it would be inaccurate to suggest that police management are not concerned with officer welfare in relation to single person patrols. Therefore, reviews of single person patrol policies would benefit from a balanced appraisal of the issue from both management and officers and the relevant police association(s) and the reasons behind why certain factors were (or were not) considered in their single person patrol position.

Single person patrol policies in practice

Where single person patrols existed, the decision to deploy an officer was usually made by the police dispatcher, often using a risk assessment tool to determine the callout grade and subsequently whether one or two officers were required to attend a call. It was unclear what measures jurisdictions have taken (such as the level of training for dispatch operators) to put these policies in practice beyond general references to training being provided (eg Tasmania Police). Nor was there any evidence available on how well single person patrol policies are being implemented from cost-effectiveness, efficiency and safety perspectives, each of which are usually the reasons for employing single person patrols.

Although risk assessments are being used to determine whether to deploy single person patrols, there is also limited evidence on how well this is being done in practice. However, there is some evidence that risk assessments can play an important role in officer safety more generally. Even though policing is generally recognised as being a more dangerous occupation than many others, the risk of serious injury or death from police duties is still low. Coincidental to the shift towards a risk management framework for many aspects of policing, including for single person patrols, has been a steady decline in officer deaths since the 1960s (Prenzler & Allard 2009). More thorough and stringent risk management procedures have also been recommended as a way to reduce officer injury and death (eg see Prenzler 2010). Thus, on many levels the use of such frameworks has arguably played a part in lowering the risks associated with some key aspects of police work. However, the issue that has yet to be addressed is what level of risk is acceptable when dispatching single person patrols and whether an officer's wellbeing and perceptions of safety should be overruled in favour of a risk assessment tool that has been primarily designed to focus on, for example, response times and community satisfaction.

Perceptions of safety are often used as a key indicator of community satisfaction with police (see the *National Survey of Community Satisfaction with Policing* NSCSP findings in SCRGSP 2010). As the first section highlighted, even if there is not a great risk to an individual, the individual's perception of safety is not always related to the relative risk. However, a key gap in research is the influence of police perceptions of safety on the job, in particular when operating as a single person patrol. It could be argued that police feelings of safety should be given as much credence as the general public when performing their duties. The impact of not feeling safe may affect the way police conduct their duties and potentially impact on officer wellbeing. It could be speculated that even if the research has shown that police are no more/less safe performing their duties in a single person patrol, a more important variable could be whether they perceive themselves as being safe. Limited research has indicated that working alone influences the feelings of safety among police officers (Boydstun, Sherry & Moelter 1977; Brewer & Karp 1991), although this area could warrant further investigation by broadening research to include the factors mentioned above.

In short, there is limited evidence about the impact of widespread adoption of single person patrols. Most studies reviewed used only a small sample of cases and often in only certain patrol circumstances that makes comparing single person and two person patrols difficult due to the different tasks assigned to the two patrol types. In the majority of cases, the adoption of single person patrols had not been revisited for an evaluation of its effectiveness to see if the effects (either positive or negative) were the same.

Even though it appears that single person patrol policies only undergo significant review after an officer is wounded or killed, it is still unreasonable to expect police management to anticipate every situation and assess risk accurately every time, regardless of whether it is in relation to single or two person patrols, as police often deal with unexpected occurrences. However, it may be worthwhile investigating whether police are or should be reviewing their single person patrol policies more regularly (as Brewer & Wilson 1992 suggest) and not just when officers are injured. This may already be happening, although in the absence of any publicly available literature, it is difficult to confirm this.

Only one study appeared to revisit the adoption of single person patrols. This study, based on a viability assessment of single person patrols, did not result in positive findings. Of particular concern, was the San Diego Police Department's widespread application of single person patrols, which was eventually abandoned due to a corresponding increase in officer mortality over the same period (Prunckun 1990). It must be cautioned that it is unclear whether single person patrols were the primary factor behind the mortality rate or if other environmental/contextual factors contributed to this phenomenon. In addition, this is one study only and was undertaken in the United States. Despite this, the broad findings highlight the need to assess whether universal application of certain single person patrol policies is appropriate. This is not to imply that current Australian practices of single person patrols have or will have such a negative effect on an officer's safety. There is simply not enough research that has conducted follow-up evaluations to determine whether the policies adopted are working and whether they are producing unintended or unexpected effects (either positive or negative).

Are single person patrol strategies in line with community expectations?

As there was virtually no information available on community expectations of single person patrols it is impossible to give a definitive comment on this topic. Beyond the one study that showed that solo officers were subject to fewer complaints than two-up patrols (Wilson & Brewer 1991a), the research on the issues of improving community satisfaction, addressing expectations of police and reducing police complaints does not generally consider the impact of single person patrols. Whereas some literature supports single person patrols as a means of reducing complaints, there was little evidence of how this works in practice. Conversely, no data were available to suggest that abolishing single person patrols would help improve satisfaction with police, therefore suggesting the need for further research into this area.

The coronial inquests into the cases of William John Watkins in Western Australia and Senior Constable Clarke in Victoria highlighted the dangers and risks officers face and the need to exercise great caution

when deploying police patrols. In Senior Constable Clarke's case, although not all recommendations were adopted, it could not be said that police management have dismissed the findings and recommendations of the inquests, as other factors (such as resourcing) can hamper the ability of police management to implement widespread changes. However, the recommendations can be used to gauge what the community could see as the ideal response to these situations.

Although community expectations are important, it should not be interpreted as the main consideration when reviewing single person patrol policies. It has been argued that police often face a paradox when it comes to community expectations—the public can complain of inefficiency and demand more police, yet at the same time have little understanding of police work and can often expect police to conduct non-urgent work and work outside the scope of policing (Fleming & Rhodes 2004). There may also be conflicting community expectations when an officer engages in reactive policing duties compared with community policing duties. In addition, factors that are used to measure community satisfaction of police services can be flawed. For example, an indicator like fast response times to callouts, that police use to measure police performance and community satisfaction, may not be appropriate (Fleming & Rhodes 2004). This is because they may only reflect how fast police arrive rather than what impact that quick arrival has on crime outcomes. Such an indicator may pressure officers to conclude situations quickly in order to record better times when reporting on a performance indicator (Fleming & Rhodes 2004). This is only one example, however, it suggests that consideration of such factors would also be relevant when using efficiency/performance indicators as measures to compare single person patrol effectiveness with two person patrols, as researchers have used such indicators in the past.

A neglected area of research is the impact single person patrols has on corroborating evidence not just in relation to corruption issues, but when police present evidence in general. No research could be located on this issue (not including the limited reference to having supervisory presence in some situations as mentioned in the Wood Royal Commission and Knapp Commission). Yet it could potentially play a significant role in how police conduct their duties and may also have resourcing implications. Indeed, it was suggested that this is a factor that can influence patrolling alone. It may be the case that it has little bearing on police resources, but the absence of research in the area makes it difficult to assess.

Directions for future research

At the very least, any research into single person patrols should be broadened to encompass the issues beyond those relating to personal safety and effectiveness to take into consideration the current police environment and other relevant issues. A deeper exploration into the issue of community expectations was not possible due to time and resource constraints. However, the current dearth of evidence available on the opinion of the public on the mechanisms and procedures used to determine police functions in general could suggest that any further investigation into the literature sources with such a specific topic as single person patrols could prove futile. As such, this and other research might be better investigated by surveys, interviews or other methods that specifically set out to investigate the issue.

Most research on the topic is dated and needs to be updated in relation to the contemporary Australian policing environment. Particular gaps in the available research include:

- how management have made decisions and policies regarding single person patrols;
  - considerations of policing environment, inquiries, OH&S concerns and how policies are delivered in practice;
- how common single person patrols are in practice;
- how frontline officers perceive single person patrols;
  - if it affects (among other things) decision-making processes, safety, efficiency, health and effectiveness;

- community opinion on single person patrols;
  - how it affects feelings of safety, service delivery, perceptions of procedural justice and whether single person patrols can impact on families and friends;
  - how community expectations of police regarding single person patrols vary depending on whether the duties performed are responsive, reactive policing compared with community policing duties;
- how single person patrols can affect the ethics and accountability of officers performing their duties;
- how single person patrols affect corroboration of evidence, opportunities for misconduct etc;
- whether single person patrols are viewed differently or have a differential impact on individuals from Indigenous and CALD communities;
- whether the practical implementation of single person patrol policies are affected by location and other resourcing requirements (such as any differences in rural/remote/regional/urban settings and available equipment).

With at least one Australian jurisdiction (Western Australia) introducing a policy of not allowing first-response officers to patrol alone, the opportunity exists for research to conduct (where possible) pre/post testing of the policy on some of the key issues raised above and to compare where possible across other jurisdiction(s) on factors such as police attitudes to single person patrols and policies. These research gaps and suggestions are defined more broadly below.

Updating single person patrol research and the applicability of current research to the Australian context

Compared with research into other policing concerns such as alcohol and drugs, mental illness and the effect on public satisfaction with police, it is clear that single person patrols is an under-researched area. As a result, there is limited research into how common single person patrols are across Australia more generally. Therefore, it might be beneficial to undertake an activity analysis on the practice to obtain an overview of the extent and nature of the practice. Since the majority of key Australian studies on the issue were conducted in the early 1990s, police management structures and the environment have undergone significant shifts. These studies, particularly the factors identified in earlier studies that affect decisions on single person patrols (eg safety, efficiency, effectiveness) would benefit from being revisited, especially in areas where widespread adoption or cessation of single person patrols have occurred.

There was some previous research on the impact of contextual and other factors on single person patrols (eg rural vs urban), with only type of callout being considered a significant impact. However, it might be worthwhile updating this research in relation to how the application of the single person patrol policy differs (if at all) among different geographical locations and even between locations. In addition, it could be useful to see if different populations such as indigenous, CALD, rural/remote communities have different expectations or experiences with single person patrols.

Decision-making processes behind single person patrol policies and practices

There is a clear need to obtain a more comprehensive overview of how decisions are made in creating policies regarding single person patrols. The current review offers only incomplete examples across Australia and therefore caution must be exercised when interpreting these policies. Without a complete understanding of these processes, it is hard to assess not only whether they are being implemented as intended, but whether the rationale of implementing single person patrol polices are based on current and available evidence. This includes how the opinions and feedback from police officers and relevant police associations have been taken into consideration, as well as the weight given to cost, safety and efficiency factors. How OH&S policies are applied to single person patrols is another area of potential research, including whether they provide enough guidance for decision makers when developing the policies.

From the available sources, it appears that often the decision to deploy in single or two person patrols relies on the judgement of the dispatcher based on information made available to them, although this decision may also be subject to the assessment of the patrol supervisor (eg South Australia) and the officer's own assessment of the situation (eg Tasmania). Research into how this works in practice is currently missing from single person patrol literature, yet is an extremely important part of implementing the policy. This could include research on unpredictability of taskings such as examining the type of call and whether the type of call is different to what the officer is tasked to and also the proportion of taskings that are escalated and the characteristics of these call types. In order for more research into these factors to occur, police organisations would need to support the research and be willing to allow access to documents relating to these policies (provided they exist). It may also include interviewing key police personnel involved in making these decisions.

Another dimension that should be investigated is how emerging technologies and equipment shape single person patrol policies. Despite certain advancements such as global positioning systems in patrol cars, the increasing use of ICV system footage, equipping police with OC spray and/or tasers and the use of recording devices being advocated as ways to protect police when undertaking their duties (particularly for single person patrols), their effectiveness to mitigate the risks for patrolling alone has not been explored. In addition, it would be useful to study whether police officers view these measures as adequate or reassuring when patrolling alone.

Whether single person patrol deployment affects an officer's actions and decision-making processes while performing their duties

Little research has been done to examine whether single person patrol deployment affects how an officer makes decisions when responding to a callout. It was suggested that high resistance experienced by two person patrols may be due to single person patrols having less contact with the offenders in these taskings, such as standing back or being slower to respond (Wilson & Brewer 1991b). However, more could be known about these factors and anything else that may influence their decisions.

There is scope to conduct a more in-depth analysis of what police think about single person patrols and how it affects their decisions while working in a single person patrol. The analysis should also update previous research on their opinions about safety and effectiveness, and potentially revisit the analysis conducted on the expected success and anxiety of officers working alone to see if there have been any changes (see Brewer & Karp 1991).This could be done by designing a survey to address these areas to obtain opinions from a broader police audience and supplemented by consultations with a number of police representatives. Depending on resources, such a survey could be done in one or more jurisdictions. Findings could be analysed for differences in responses on particular questions between for example rural/urban officers, rank and jurisdiction. If more than one jurisdiction is included, it would provide an opportunity to see if perceptions of single person patrols differ, with the potential to compare satisfaction/dissatisfaction with their jurisdiction's policy on the issue.

Community expectations and single person patrols

- How single person patrol policies align with community expectations warrants a more thorough investigation. What the community expects may vary depending on whether it is community policing or reactive, response policing, and therefore the findings may show contradictory expectations. It may be worthwhile exploring community (and even police) expectations with this distinction in mind.
- Comment has been made how increasing single person patrols may improve police visibility and through this, increase perceptions of safety within the community (Wilson & Brewer 1992). However, Wilson (1990) found the effect of increased police visibility as a result of an increase in number of cars on the road was so small that it justifies only minor consideration. In addition, the medium by which policing is delivered has also been found to

be related to crime concerns with greater vehicle patrols actually having a negative effect on community crime concerns (Salmi, Gronroos & Keskinen 2004).

- Despite this, no research was identified that specifically sought public opinion on single person patrols. Of particular interest to research would be to gauge among other things what the community expects when calling police for help (such as 1 or more officer, or 2 single person patrol officers) for a range of situations, in what circumstances do they consider it acceptable, whether patrol mode affects their feeling of safety and if they think police service delivery is affected by this. If this research is conducted, much thought would need to be given to obtain the most representative sample from the population, particularly if perceptions from more than one jurisdiction are required.

Single person patrols and its relationship to corroborating evidence have also been under-researched. This is arguably an extremely important consideration, as it could potentially influence perceptions of police accountability and legitimacy. To do this, it might require looking at court cases and interviewing police on their experiences of working alone and its impact when they provide evidence. However, it would provide much needed research on such an apparently overlooked consideration when developing single person patrol policies.

The effect of single person patrols on the wellbeing of families is another potential area of research. Such impacts could be considered important considerations when determining single person patrols, yet little has been done to investigate this specifically in relation to single person patrols.

Using the Western Australia Police Service single person patrol policy as a case study

There has been no thorough investigation of single person patrols and their impact on officer safety, efficiency and effectiveness completed in Australia since the 1990s. Many police associations are currently encouraging a reassessment of single person patrols by police organisations.

Western Australia is presently unique in having essentially ceased single person patrols in 2008. A vast jurisdiction with a population of 2,245,057 people (WAPOL 2010), as of June 2010, there were 3,732 police officers in Western Australia, with 160 police stations covering 2,531,573 square kilometres. Of these, 2,523,469 square kilometres (and 123 police stations) are in regional areas (WAPOL 2010). While the experiences and environment of WA Police would not necessarily reflect precisely the policing experiences of other Australian jurisdictions, the WA Police experience of ceasing single person patrols, the lessons learned and the experiences of operational police members would seem to be a useful starting point for a much needed update on single person patrols in Australia.

Despite having to police a vast area with many remote police stations, WA Police, with the agreement of WAPU, has been able to create a policy that has essentially removed single person patrols, with only a few administrative and community duties being conducted alone. Developing a better understanding of the process of how police management and the WAPU worked together to produce a mutually agreed single person patrol policy could in itself prove to be a valuable lesson for other jurisdictions.

However, some caution is required as the WA single officer patrol policy has yet to be formally evaluated. Its viability, and the process by which issues such as cost, effectiveness, efficiency, safety, the need for policing flexibility to deal with emerging contextual changes have been managed, have yet to be tested. Further, it is unclear how effective the policy is 'on the ground' and there is a need for demonstrable evidence of success, together with an assessment of the policy from the perspectives of WA Police management, WAPU and police officers. For example, there is a need to determine the extent to which the policy has been followed and in what contexts; there is some anecdotal evidence that the policy has not always been followed (WAPU representative personal communication 9 June 2008). Overall, it would be unwise to adopt such widespread policy change in other jurisdictions without first evaluating whether the WA policy operates effectively in practice, and subsequently, whether the findings are applicable to each jurisdiction's local policing context.

Any evaluation of the WA policy would clearly require the support of the WA Police. Should an evaluation be supported, a number of issues could be explored by comparing data prior to the ceasing of single person patrols and the subsequent years during which the policy has been in force:

- *Complaints against police*—an assessment of any changes in the nature, types and frequency of complaints.
- *Public satisfaction*—satisfaction with police service provision, changes in the public or community's perceptions of safety, changes in community perceptions of the effectiveness of police responses, assessment of community awareness of the changes in police patrols—that is, has the public noticed a difference in policing?
- *Costs*—estimating the increased cost of police operations as a result of ceasing single person patrols. If increased funding has been required with the cessation of single person patrols, has this been offset by increased revenue, or has the increased cost led to reductions in other policing services? If so, what has been the effect on overall service delivery?
- *Safety*—assessment of any impact (positive or negative) on officer safety and wellbeing since the introduction of the ban on single person patrols? Changes to the nature and types of reported injuries sustained by police and/or alleged offenders or members of the public. In essence, have there been any OH&S implications since the introduction of the policy?
- *Efficiency*—assessment of changes in police response and arrest rates
- *Police satisfaction*—are police officers satisfied with the single person patrol policy? Does this policy make them feel safer at work and/or less stressed? Does the policy work well in practice (police member perceptions)? Has the change in policy affected other areas of police work or life outside of work (eg are family members happier now that members do not patrol alone, or has there been no impact?)

Some of the information required (eg complaint numbers) could be sourced from available publications, such as annual reports. However, as some of the key performance indicators used by police when comparing single and two person patrols (eg police response times) may not be appropriate measures of satisfaction and efficiency (Fleming & Rhodes 2004), further work will be required to develop more appropriate evaluation measures.

A more powerful evaluation model would involve a comparison of WA Police's experiences with one or more other jurisdictions' experiences of single person patrols. Clearly, the findings of such an evaluation would need to be interpreted by taking into account the crime and population context of each jurisdiction and be cognisant of the different laws and operational policing structures in operation. For example, to use Western Australia once again, WA Police has adopted a 'frontline first' policy that emphasises increased visibility of police through community policing (WAPOL 2010). This operational focus could:

- be a significant factor in the success or otherwise of their single person patrol policy; or
- affect some of the factors used to measure the influence of WA's single person patrol policy, such as number of complaints.

Factors that can influence future research into single person patrols

As with any research, pursuing one or more of the research issues identified in this report will be dependent on the financial and other resources available, the level of support of police agencies to undertake such a project and accessibility of available police data.

A first option for improving the current understanding of the issues and factors associated with the use of single person patrols would be to conduct more in-depth examination of secondary data sources, which was not possible for this report. This could include a more thorough examination of court cases and transcripts of cases that involved a single person patrol, annual report data, or approaches to police agencies to request access to information on a specific topic relating to single person patrols (eg cost effectiveness, safety etc) although there is no guarantee that such access will be approved.

Overall, given the general paucity of information on single person patrols, directing resources towards developing new primary research projects designed to specifically address some of the many gaps identified in this review may prove more fruitful in significantly improving knowledge of the effectiveness and safest application of single person patrols in Australian policing contexts.

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Appendix

Appendix 1: Sample letter sent to police jurisdictions

Australian Government
Australian Institute of Criminology

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Facsimile +61 2 6260 9299
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Canberra ACT 2601 Australia
www.aic.gov.au

28 June 2011

Commissioner Karl O'Callaghan APM
Western Australia Police Service
2 Adelaide Terrace
EAST PERTH WA 6004D

Dear Commissioner O'Callaghan

Information request- First response officers in single person patrols report

The Police Association of South Australia (PASA) has engaged the Australian Institute of Criminology (AIC) to conduct an extensive literature review about the deployment of first response officers in single person patrols. The key questions explored in the review are:

- What are the challenges faced by first-response police officers when performing their duties alone?
- What impact does working alone have on officers successfully performing their duties?
- How are decisions made when deciding to deploy single person patrols?
- Are single person patrol strategies in line with community expectations?

As part of this work, the AIC is also seeking input from a range of stakeholders, including police associations located elsewhere in Australia and overseas, and Australian law enforcement agencies. I am writing to request any available documents that might help address the research questions outlined above.

In the first instance, the findings and recommendations from this literature review will be used to inform PASA's position and approach to first response officers working alone, although they may also be used to inform future law enforcement practice beyond South Australia.

I would appreciate your assistance in forwarding this letter to an appropriate key contact person in your agency who might be able to assist the AIC in this matter. In order to finalise the report by the end of August, receipt of any relevant information by **8 August 2011** would be appreciated.

Please contact the key project leader Jessica Anderson (Research Analyst) (jessica.anderson@aic.gov.au, (02) 6260 9223 (Mon-Wed)) if you have any questions or require further clarification.

Thank you for considering this request.

Yours sincerely,

(Dr) Adam Tomison
Director