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# **Editorial Foreword**



Simon Williams, Editor-in-Chief, Police Science

# Policing with Purpose: Insights and Innovations from the Field

#### Dear Readers,

As the Editor-in-Chief of "Police Science," it is with considerable pride that I introduce the Winter 2024 edition. This issue looks back through our archives, where the value of implementing evidence-based practices in policing really comes to life.

#### The Importance of Evidence-Based Policing

In twenty-two years of policing, I have seen at firsthand the transformative power of evidence-based approaches in helping us understand whether, and how, we are making a difference. Just as evidence-based medicine and evidence-based education revolutionised these sectors by turning to the best available scientific research to guide policy and practice decisions, evidence-based policing (EBP) continues to transform policing and law enforcement globally. In policing, the advancement in understanding what works to deliver more effective, efficient, and legitimate policing; politicians, practitioners, academics, and those that bridge the gap – an increasing body of pracademics who have a foot in practical applied policing and another in being curious as to what-works.

Leaders across policing have challenged the status quo, critically examined current practice, and with determination and adaptive leadership driven change leaving failure in the rear-view mirror whilst allowing successes the time to flourish. Taking a precision approach to targeting persistent hot spots of crime and harm, using big data to forecast threat, harm, and risk with greater accuracy, placing procedural justice at the heart of community contact to improve trust, leveraging technology to improve service delivery using body worn video and rapid video response, the list goes on. None of this, though, would have been possible without adaptive leadership and the curiosity to ask questions.

Evidence-based Policing is not about methods. I hear often that leaders in senior positions across Australian policing think EBP is about running randomised control trials. That should be part of the conversation, and I would encourage all police leaders to ask their command teams what responses they are currently testing, but what's more important is understanding the problem using data and evidence and applying a problem-solving lens across this to inform a response – one that has focus on how it's implemented and tracked to ensure fidelity and impact. I have seen in the UK, Australia, and New Zealand that it's possible to do this, and in my experience, it is possible to take an evidence-based approach whilst respecting the complexity of the real-world environment and the lived experience of our people and communities we serve.

In modern day policing, every decision is scrutinised and carries the weight of public trust, so the stakes are high. Using, adopting, or understanding the impact of how we deliver policing using data, evidence, and insight leveraging what works, what looks promising, or what doesn't work has never been so important. Serving our communities with policing responses that are not only effective, but also fair and just is now the expectation no longer the exception. By continuing to lean into evidence-based practices, our policies and responses to crime and disorder can be underpinned by evidence of what worked elsewhere. Where innovative new approaches to problems have worked elsewhere, we should replicate and evaluate them in our own jurisdictions, in the most culturally sensitive and robust way possible, if we don't then like so many interventions that have gone before, they will be doomed to succeed.

#### **Reflections on Our Collective Knowledge**

This issue's focus is a nod to the enduring relevance of some amazing research we have previously published. The team and I have taken pleasure in revisiting papers like Alex Murray's brilliantly written argument for scientific rigour in policing strategy and Renee Mitchell's compelling paper on procedural justice training. The series of selected articles in this edition serves as a reminder that progress and change in policing goes hand in hand with a commitment to learn from and adapt to soundly created applied research.

From policing the front line of family harm and domestic violence to the subtleties of targeting improvement in field intelligence, the papers featured in this edition highlights the breadth and depth that evidencebased policing principles can be applied. The brilliant analysts who delved into further analysis using the New Zealand Crime Harm Index and those who pioneered forward-thinking resource allocation on game nights share a thread—they relied on the best available data to inform their work.

#### A Future Built on Insight

In 2017, Barnes and Hyatt anticipated the discussions we are having today on the ethical use of big data and Gen Al in policing. Their foresight is hugely relevant to current endeavours to integrate new technologies in a safe and ethically manner into our ways of working. The framework referenced in their paper is a useful checklist for embracing a digitally empowered, Gen Al supported future. Responsibly adopting Gen Al could be our most crucial mission yet, as it opens unprecedented possibilities for policing both effectively and empathetically. Adopted in an ethically responsible way, the power of Gen Al, for instance, could enable policing the time to think slow, fast (see Kahneman) and support our people to deliver more personal, human centred policing services.

#### **Global Collaboration**

In the spirit of global progress, I'm thrilled to remind you of the upcoming UK Society of Evidence-Based Policing annual conference and the Global EBP Conference in ANZ. The purpose of these conferences is to build understanding of what works, increase application of evidence-based policing, and build collaborations fostered by these international events. These conferences are invaluable to improving policing through the sharing of what works.

As you turn each page of this Winter edition, I invite you to reflect on the evidence presented in these revisited papers and on the broader narrative — one where your expertise, critical thinking, and dedication to serving our communities as police, practitioners, policy makers and researchers really matters. Let's continue to push the boundaries of what it means to serve our communities, guided using the best available data, evidence, and insight.

With warm regards and best wishes,

Simon Williams Editor-in-Chief, Police Science





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Authors: by Chief Superintendent Alex Murray

# **Executive Commentary**

It is foundational and just as relevant today as when it was released. I think this article really underscores the importance of integrating evidence-based practices in policing. Despite advances, many police strategies still rely on intuition and the status-quo rather than scientific evidence. By leveraging data and research to guide policing efforts, the profession of policing can become more effective and credible. This

# Introduction

Billie Bean is the manager of the Oakland A's baseball team. They are mid table and struggling, but can't get the money to buy the players the scouts identify. The manager turns to a statistician. First, they work out what the problem with their team is, then they look at what solutions are needed. Finally, they scan the market for players that fit those requirements but rely less on the expertise of the scout and more on the verifiable performance of the player. In essence, the statistician, using an algorithm, identifies the players. It draws Billy Bean into an argument with his team of scouts.

Baseball isn't a science, if it was anybody could do it. They don't know what we know, they don't have our intuition, they don't have our experience. There are intangibles that baseball people don't understand. You're discounting what scouts have done for the last 150 years.

The Oakland A's go on to win twenty games in a row. This true story has been made into a film, Moneyball, where Brad Pitt plays Billie Bean. It tells the story about how baseball became evidence based. The methodology has now been widely adopted throughout the sport and is increasingly common in football.

The majority of people join the police because they want to make a difference. We learn on the job from our experience and the experience of our peers. Like the scouts for the Oakland A's we develop a nose for what works and what does not. Unlike Moneyball though, evidence based policing never seeks to replace that experience but instead complement it with a scientific approach about what works and what does not.

A lot of people say a lot of things about policing. We are not short of policy think tanks making recommendations, politicians expressing views, reviews with recommendations following tragedies, charities writing reports, national bodies creating infrastructure or academics publishing articles. A lot of this is invaluable and should be welcomed. The trouble is that real change will not take place in policing unless the police themselves drive that change and design the future for a professional service. ANZSEBP is an organisation that does just that.

ANZSEBP was set up by police officers, open to all and with the sole purpose of encouraging the use, communication and production of applied research evidence. Applied research evidence that will enable officers and police staff to better realise their ambition of making a difference.

This is important, because somewhere from the point we decided

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message remains crucial today as policing agencies continue to face complex challenges, necessitating a balanced approach that values both empirical evidence and professional experience to ensure public trust and safety.

David Cowan, Det. Supt, Victoria Police & President ANZSEBP

to join this great profession and where we are now, some lose sight about what matters. What matters is that we make a difference. But the question is 'how do you know you have made a difference?' The quandary is seen in the narrative of senior officers who will attribute crime reductions to their outstanding leadership and launching of operations. The same leader will tell a different story when crime goes up. It may be socio-economic conditions, police numbers, immigration, poverty, drug markets or the weather, but I have never heard the senior leader say it was down to their poor leadership. We cannot have it both ways. Knowing you have made a difference can be seen in the definition Cloud (2006) gives to integrity:

Having the courage to meet the demands of reality.

This is hugely relevant for policing. We need to push the definition of police integrity beyond not being racist, stealing or abuse of power (Murray, 2013) and engage in the mission of understanding what causes crime, what is the reality of what we actually do on the ground and what is the effect of our actions. There is only one way to do this and that is to adopt an evidenced based approach to our profession.

# **Evidence Based Policing**

The formulation of modern scientific method has been attributed to Karl Popper and taking an evidence based approach to policing puts scientific method at the heart of what we do (Sherman, 1997).

A not-so evidence-based police leader may sound like this

Team, theft of mobile phones is up in the city-centre. It is going to be groups of immigrants working in gangs. So we need to crack down on it, increase the searches and send a strong message that it will not be tolerated.

Those who watch crime figures will know that generally they go up and they go down. An operation normally starts when a crime peaks, crime then goes down (often called regression to the mean). The above police leader can now claim victory when perhaps in reality nothing has happened (apart from perhaps creating a problem around police legitimacy in a hard-to-reach population group).

The evidence based police leader would notice that mobile phone theft is up but would now start working on creating and then trying to disprove hypotheses. Is it immigrants? (What is the evidence?), is it people being targeted because they are drunk in the night time economy? (What is the evidence?), is it people reporting their phones stolen because they need a crime number? (What is the evidence?), is it opportunists? (What is the evidence?). If there is no evidence, you have an intelligence requirement. The police leader hasn't even started working on tactics yet. Perhaps the evidence pointed to four main pubs in the city and victims being people on a night out. What works in these situations? Police presence? Advice notices? Plain clothed officers? CCTV? Well trained door staff? A mix of all? (in which case, which has the greatest impact? Because that is where we should focus our scarce time and money).

If there is evidence about which tactic works then use it. Otherwise you need to employ a testing framework to understand what is most effective. In this example then the evidence-based police leader makes an assessment and decides on hot spot patrol of the four main pubs where the problem is most acute. What then, are the officers actually doing? Are they in the hot spots at exactly the right time and what are they saying to customers? Increasingly it is obvious that what we say we do and what we actually do are profoundly different things. What is equally important as 'what works' is 'what happens'.

A useful synthesis of this approach is Sherman's 'Triple T' approach to policing (Sherman, 2013). The old style of policing is confined to the three 'R's. Random patrol, reactive investigation and responding to incidents. The evidence based approach adopts the three 'T' s. Firstly, using good data we target effectively. In an era of scarce resources we focus on where the greatest problem is. The most prolific offenders, the repeat victims, the crimes that can actually be solved, the cost effective interventions or the highest crime areas. The pareto principle is important here (80% of the effects come from 20% of the causes). The second 'T' is to test tactics. Certain methods enable us to understand whether a tactic we are engaging in is having a desired effect or not (see below). Finally, the third 'T' tracks what is really happening. Are officers doing what was decided? What are the outcomes? The advent of body worn video and GPS proves invaluable in this area. Page 9 Australia & New Zealand Society of Evidence Based Policing Policing isn't a science. If it was anyone could do it.

## Methods

An evidence based approach first understands what the problem is, it then tests a tactic and measures outcomes and outputs. There are different methods to get an answer to the question you are posing and these can be quantitative or qualitative.

Qualitative methods like focus groups, ethnographic research or observation often help understand the 'Why?' type of question. 'Why did you target that house to burgle? Why did you attack that victim?' Quantitative approaches are useful in assisting the 'what?' type of question. Quantitative methods become increasingly useful as data becomes cleaner and data sets more sophisticated. 'Which hot spot shall I target? Which offenders pose the greatest risk? Which crimes shall I file and which ones should I allocate for investigation?'

When we move into the area of testing an intervention the Maryland Scale (Sherman, 2007) can be a useful device in deciding how you evaluate what you are doing. It is a scale of the effectiveness of evaluation techniques. Level two describes where much of policing is now and can be termed the 'before and after approach'. You have a crime rate, engage in a tactic, observe the crime rate and then attribute the reduction in crime to your tactic. This is the least effective method of evaluation because so much can affect crime rates outside the tactic you are engaged in. There have been many spurious claims made about the effect of police operations using this method. A better approach is level three, which is the use of a test and control group. Engage in the police tactic in the test area and not in a similar control area. If crime goes down in both test and control you know it is less likely to be as a result of your operation. But to make this evaluation more effective move to level four on the Marvland Scale and have multiple test and control groups and look at averages in the test areas against averages on the control. Finally, there is a problem with picking test and control groups and that is the fact that we inherently want our operation to work. We pick the test areas and the control areas because we know what will work where; this is often referred to as 'selection bias' and can be combatted using randomisation. Level five on the scale then is the randomised control trial (RCT), often referred to as the gold standard in scientific research. If you want to get published in a journal (perhaps like this one) you will need a high level of academic rigor. We in policing, however, do not always operate in the world of journals, so to become more evidence based we can take easy steps like embracing test and control groups when engaging in an operation-that will be much more effective in informing our responses than relying on the unreliable approach of 'before and after'.

To put some perspective on this the following sections use violence and the policing of hot spots as two examples of where an evidence based approach is useful.

## Violence

A well-known Peelian principle is that the measure of success of the police would be the prevention of crime rather than solely its detection. This is where evidence can sometimes become inconvenient. Petrosino et al. (2010) concluded the following from a systematic review of available evidence:

Based on the evidence presented in this report, juvenile system processing appears to not have a crime control effect, and across all measures appears to increase delinquency.

His research suggested that rather than reducing crime-putting young people through the criminal justice system increased it. So the criminal justice system created rather than reduced victimisation. If our job is to prevent crime we have a problem here. Our role is to prevent crime but much of our activity is focused on compiling evidence for Page 10 prosecution that does little more than potentially add to the problem. Acting on this evidence, West Midlands Police in the UK commenced operation Turning Point (Sherman and Neyroud, 2012). Offenders at point of charge were randomly allocated to go to court as usual (the control group) or to be diverted to an offender manager (test). The offender manager would try to understand from the offender why the crime happened (the cause) and then set an action plan to address that cause. If the offender complied with the action plan, after six months they were free to go with no criminal record. Comparisons were then made over time with the frequency of rearrests and harm caused by both the test and control group. Early results appear promising, particularly in the area of violent crime, but it is too early to be commented on here. It is however an example of how a police service focused on reducing crime can test alternative methods of policing in a way that allows for real outcomes to be measured.

Any medical practitioner will tell you that for a treatment to be demonstrated as effective it needs to be replicated again and again. This assists in understanding whether the effect of the intervention is local or universal (often referred to as internal and external validity). This experiment is currently being replicated in Western Australia as well as in another force in the UK.

Domestic violence is also an area of great concern for most police forces, yet it is one of the areas that is full of un-evidenced assumptions of what works and what does not. We all know for example that domestic violence gets worse over time both in frequency and seriousness. We know that arrest is best. We also know that the average complainant will have been assaulted 28 times before they call the police. Recent evidence though has started to unseat these assumptions. Sherman and Harris (2015) demonstrated that arrest and incarceration as opposed to official warnings and staying at home, led to an increase in the death rate (for any cause) by 64% following one trial in Milwaukee. Bland and Ariel (2015) examined 36000 domestic violence dyads (couples) in Suffolk, England and found little evidence in increasing severity and frequency over time: 76% of couples were a one-off call to the police and 80% of the harm was restricted to 2% of all partnerships. Strang and Neyroud (2014) have demonstrated that the 28 assaults before calling the police assertion has been based on unsound assumptions. It is, as they describe, a 'mythical number'.

Rehabilitation for domestic violence perpetrators is still a controversial concept but a recent experiment in Hampshire, England has begun to test in this area. Called Operation CARA, low risk domestic violence perpetrators were randomly allocated to two treatments. The control was a conditional caution that required no reoffending within six months, the test was the same but with the additional requirement that they attended two four hour workshops largely based on the principles of cognitive behavioural therapy. The experiment has been conducted in partnership with Cambridge University and is awaiting publication. The results show a statistically significant reduction on charges by over 50% for those who attended the workshop (compared to control).

Here then, we see how detailed analysis and experimentation has highlighted that all may not be as it seems in how we target violence.

## Hot Spots

We all know that when we police an area, crime moves around the corner. Rarely does a day go by without an officer stating that they conducted an operation in an area, they achieved a grip on crime, but as a result it has increased in the neighbouring area. Evidence around hot spots is now strong and Stockholm prize winner David Wesiburd demonstrated that the concept of 'moving crime around the corner' is largely a fallacy (Weisburd et al. 2006). Instead, and counter-intuitively, there is a 'diffusion of benefit'. His experiment in New Jersey monitored hot spot patrol in high crime street segments. He also analysed data in the surrounding areas where there was no extra police presence. His findings indicated there was more likely to be a diffusion of benefit rather than the displacement of crime. In the spirit of scientific method this has been replicated many times and the Australia & New Zealand Society of Evidence Based PolicingPolicing isn't a science. If it was anyone could do it. most recent systematic reviews in this area show the same to be true (Braga et al. 2014). Interestingly, what you do in hot spots is more important than simply being there-with problem solving being the preferred tactic.

There is no doubt that most police forces do hot spots but what

actually takes place in those hot spots and what the results are would largely be unknown. Superintendent Jo Smallwod from West Midlands Police in partnership with Barak Ariel, Cambridge built a hot spot model where community support officers were used (uniformed, non-warranted officers). Geo-fences were used to cover defined small areas and officers were required to patrol in 15 minute bursts1 three times a day. Groups of hot spots were randomly allocated to test and control. The results (awaiting publication) were positive, indicating a net reduction in crime and incidents of anti-social behaviour in the test areas compared to the control areas (where hot spots are also supposedly targeted). This was also great evidence on the crimereduction effects of community support officers whose purpose is often considered to be solely community engagement.

# Little Ones

Not all experiments have to be like this and not all experiments have to be published, although it does assist the greater good of policing as other police officers can learn from what you have been through. In 2013, satisfaction in my area for victims of vehicle crime deteriorated significantly, largely because we stopped visiting them as a matter of routine. We needed to understand what would work in increasing that satisfaction without reversing the policy. Inspector Ruth Lockyer conducted an experiment where we called back victims of vehicle crime to assist with any further questions they had, but we did this on a random basis using Excel. The officer doing call backs was restricted from active duty. We then measured satisfaction rates between those receiving the call back (test group) and those not (the control). The difference in satisfaction could then be measured against the cost of using an officer in this way. In this case there was a small increase in satisfaction by making the telephone call.

Similarly, the division that I am currently responsible for policing now suffers high rates of theft from insecure vehicles and many neighbourhood officers will try car door handles and inform the owner of the car that the vehicle is insecure. Does this have an effect on the crime rate? We will only find out by ensuring that the tactic is completed in two test areas and not in two controls and comparing the before and after rates. Community Officer Dave Monk is leading on this piece of work.

Neither of these experiments will be published, but assist in making local policy decisions on evidence that, whilst imperfect, is still better than we had before.

# The Society of Evidence Based Policing (SEBP)

We have spoken about how to change policing for the better. Action needs to be taken within policing, by front line officers and leaders who are serving the community every day. The Society of Evidence Based Policing started as a group of officers who recognised that there was an opportunity to make that change through conferences and spreading the knowledge of how to get to what works. Whilst it is essential that external organisations advocate for an evidence based approach or assist in providing some of the infrastructure to enable it to operate, it is only the police themselves who can make transformation happen. This is where SEBP can operate—challenging the prevailing attitudes and practices that police officers use every day. The symbiosis between SEBP and national infrastructure can be seen in relationships that have developed in the UK between

SEBP and the College of Policing. The college provides frameworks for promotion that can stress the importance of evidence, they can provide expert advice, and importantly, they have the capacity to synthesise evidence. For example, the 'What Works' center (http:// whatworks.college.police.uk/Research/Briefings/Pages/default. aspx) provides an understandable synopsis of the evidence around police tactics (in the form of systematic reviews). The acronym EMMIE assists in the translation of this evidence Johnson et al. 2015).

*E*—the overall effect direction and size (alongside major unintended effects) of an intervention and the confidence that should be placed on that estimate "

*M*—the mechanisms/mediators activated by the policy, practice or program in question

*M*—the moderators/contexts relevant to the production/ nonproduction of intended and major unintended effects of different sizes

I- the key sources of success and failure in implementing the policy, practice or program

E-the economic costs (and benefits) associated with the policy, practice or program. (Johnson et al. 2015, p.463)

Recent additions to the 'What Works' centre include the efficacy of cognitive behavioural therapy (CBT) as an offender management tool, the impact of restorative justice and the value neighbourhood watch. The evidence suggests these policies really work. The absence of the use of these tactics in the mainstream is then somewhat surprising and demonstrates where the relationship between SEBP and central policy makers has utility. SEBP has police officers at the heart of its membership and it is these officers who can look at the evidence and start using it. Change in any organisation though is challenging. Much literature identifies that there will be blockages and frustrations. The police service becoming evidence based is not short of obstacles.

# The Challenges

#### 1. Police culture

A senior police officer once referred to EBP as 'academic bullshit'. An analysis of the debate around levels of education needed for policing highlights the strong emotions felt in this arena. It is natural to polarize what you are not. A false dichotomy emerges in the area of EBP: the academic police officer versus the practical police officer, ivory towers versus time on the street, brains versus brawn, common sense versus analysis. The dichotomy is false because a good police leader, like a good doctor, should have the personal experience to be credible. Equally they should not accept the status quo, should be professionally curious and be able to make decisions based on good evidence. To understand what constitutes good evidence and how to commission it must therefore also be a skill for a police leader.

#### 2. The methods war

Most police officers are not trained in research methods. Most academics are and have their preferred method through which they have established their professional reputation. University criminology departments have a penchant for a particular method depending on where their expertise rests. Much has been written about evidence based policing and a significant amount of it has been arguments around methods. Academics who conduct RCTs are coined as 'randomistas' (see Sparrow, 2011 for a comprehensive critique of evidence based approaches). Quantitative measures are deemed unfit for the social sciences. Qualitative academics have been hastily disregarded and don't feature in systematic reviews of evidence. This can be bewildering for a police audience particularly as force areas are situated in localities where partnerships emerge with local universities-who may be for or against an evidence based approach or interpret Page 11 Australia & New Zealand Society of Evidence Based Policing Policing isn't a science. If it was anyone could do it. the meaning of 'evidence' with such relativity that it carries no meaning at all. 'Evidence Based' in some areas has come to mean that a university is involved in evaluation. At its most common and sadly its worst, this means a large scale operation is conducted, a university is often paid to evaluate it and what is provided is a descriptive analysis of what took place with an attempt at analysis that may lean more towards correlation than causation. The report sits on a shelf until a new leader occupies the office and puts it in the bin

There is no easy way around this problem other than the evaluation should be designed at the start of an operation or project and the method should reflect the research question being asked.

#### 3. Inertia

Another trait of police culture, some would say, is a certain amount of organisational arrogance. This can be seen in the response you often receive when presenting evidence, 'I know that, we do it all ready' (think especially about procedural justice or hot spots as an example). It's only when you challenge that, using observational methods or test and control groups, that we find out that what we know happens actually does not. There are three reasons why good evidence is not replicated or adopted in another police area and I ask you to consider how many times you have heard the following:

- a. 'We do it already'
- b. 'We did that and it didn't work'
- c. 'It's different here'

Some have noted that there is a correlation between these rejections and the size of the force in question, but that is just an assertion and would need to be tested.

When officers are faced with the above challenges and meet reactions like this, the easiest thing to do is to continue doing what is expected, what you have always done. Stepping out and exposing your reputation and career is difficult. Chief Ed Flyn of Milwaukee (who authorised the first randomised control trial testing warnings versus arrests) once stated:

Failing conventionally is always the safest option.

If crime goes up, a leader more senior than you will look at what you did—if you did everything that leader would have done then you are okay. If you did something different, even something based on evidence, and crime rose—then that is where you become exposed.

This is where organisations like SEBP can assist. Senior management support can be built and space provided to experiment with concepts and new ways of working.

There are a number of things that a police officer of service can do right now to become more evidence based.

1. If you want to deal with a particular problem—first look at what the good evidence is out there. The University Of Queensland has set up the first global policing database (which is still being developed) but can be found at http://www.gpd.uq.edu.au/search.php

2. Get research under the belt. Start simple. Are you about to launch an operation? Try testing whether it really has the outcome you are aiming for.

3. Build partnerships with local academics. We have spoken about how they have the expertise in methods. At the same time we have the data and exposure. There is a great symbiosis where we exchange access for their methods. Academics are more than ever remunerated for demonstrating impact. No money needs to change hands.

4. Statistics. None of us really like it but it is important and there needs to be analysts within your force area who do understand and can teach others about it. Page 12

5. Foster the right culture. Try to end the argument between university versus school of life. Recognise utility in both experience and evidence based approaches.

6. Define best practice. A force that requires an evidence based approach to claims of crime reduction will enforce rigorous standards. Control groups will become the norm and the force will have more integrity around the claims it makes around reductions.

## Conclusion

Australia and New Zealand have some of the best police officers in the world and will continue to operate well, with or without adopting an evidence based approach. The important question though is whether that is enough. Is there space amongst years of valuable experience and much common sense for policy decisions made on blending those skills with empirical data and solid evaluative methods? If there is, how should this evidence based approach be inculcated into the DNA of an organisation to the extent that it becomes second nature? Hopefully, this short article has articulated that there is space for this approach, that we do not know everything, that some activity we are engaged in right now is harmful and that the communities we serve should accept only the best. It has also indicated that it will be far from easy. Some will adopt an evidence based approach-find it difficult and revert to what has always been done. Others will criticize from the margins. Some though will become evidence based. They will make gains that no doubt will appear marginal but when aggregated, provide the difference between success and failure. It is those officers who will do more than most to professionalise what we do.

If SEBP stands for anything it is to encourage police officers and staff to start building evidence in the work place now. Evidence needs to go from being fringe to mainstream. I look forward to the day when SEBP no longer exists, in the same way that evidence based medicine seems somewhat anachronistic.

#### End Notes

1. Demonstrated by Koper (1995) as being the most effective time an officer could spend in a hot spot

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# Understanding Family Harm: Through the lens of the New Zealand Crime Harm Index

Authors: by Renee Looc, Priya Devendran & Simon Williams, Evidence Based Policing Centre, New Zealand Police

## **Executive Commentary**

Family Harm remains a significant component of police demand, and the evidence clearly highlights the long-term impact on children and young people of exposure to domestic violence, the impact of violence on women and girls, and the substantial and ongoing efforts to find ways to improve the police service to victims (most obviously leveraging technology in new and innovative ways). This well evidenced piece stands out because it effectively uses the NZ crime harm index as the basis of an evidence-based approach to determine 'seriousness'; it

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provides a clear evidence-based analysis around victims and offenders - with a sharp focus on those most at risk; and it offers the practical insights into reoffending risk for first time offenders. While this is one of several research studies in recent years, it is a relevant and practical review that, in combination with other studies, is helping to inform the ongoing development of the NZ Police response to family harm.

R. Mark Evans OBE, Deputy Chief Executive, Future Policing, New Zealand Police & Vice President ANZSEBP

# Introduction

New Zealand has one of the highest rates of sexual and domestic violence in the developed world, with police responding to a family violence incident every four minutes. Family violence is estimated to cost the country between NZ\$4.1bn and \$7bn a year (https://www.theguardian.com/world/2020/may/11/new-zealand-domestic-violence-services-to-get-200m-as-lockdown-takes-toll). The prevalence and cost of family harm highlights the pervasive nature of this phenomenon, with implications for individuals and populations. The imperative to address family harm is clear, although more can be done to better target this phenomenon. Research can support this agenda by identifying where and to whom resources should be targeted, enabling an efficient and effective use of resources as it relates to family harm interventions.

To be sure, family harm intervention and prevention strategies have had success when they have been utilised to target the most serious victims and offenders. Yet, there are different ways to define "seriousness", although this has been measured predominantly by observations of crime counts. While the importance of identifying serious victims and offenders based on crime counts cannot be underestimated – a crime count analysis has progressed significantly towards the production of objective evidence relating to different volumes of crime associated especially with predictable and preventable targets, such as repeat offenders, repeat victims and crime hot spots (Dudfield et al. 2017, pg. 40) – a fundamental limitation of this approach is that it assumes all crimes are equal in the harm they cause, a premise "rejected by virtually every known system of criminal sentencing" (Dudfield et al. 2017, pg. 40). Indeed, evidence relating to family harm has consistently shown that there is a disproportionality between crime counts and crime harm – most family harm victims and offenders that are prioritised on volume often cause/experience low-levels of harm (Barnham et al., 2017). There is thus not only a limitation in the fairness of how a crime count approach defines crimes, but as Sherman et al. (2016, pg. 171) assert, there is also the potential for such approach to "foster distortion of risk assessments, resource allocation, and accountability".

There is no doubt therefore that how "seriousness" is defined has implications for how to fairly and effectively allocate resources. To this end, scholars such as Sherman et al. (2016) argue that utilising a harm-based approach (i.e., measuring the severity of harm caused by crime), can overcome the limitations identified above. Appropriately targeting family harm based on this approach would thus not only be an effective use of resources, but might succeed in attaining 'big effects' in the prevention of family harm.

## **Purpose of research**

This research sought to understand family harm offence and incident data from 2016-2020 from a harm-based perspective. Findings from this research aims to support police decision-making about responding to and reducing family harm in New Zealand. This research provides an analysis of overall family harm trends, as well as specific family harm patterns as it relates to victims, offenders, and locations.

## Methodology

This study utilised police data from New Zealand Police, over a five year period from 2016-2020. To be included in the analysis, the incident in question had to meet the following criteria: (1) the occurrence had a Family Violence flag (2) was a Family Harm Investigation (an Investigation has been entered using the 5F OnDuty app) or (3) was one of a set of specific codes which relate to family harm (such as 5F or 1545). Table 1 highlights the proportion of cases over the observed 5 year period that met the above specified inclusion criteria.

#### Table 1: Proportion of cases over 5 years that met inclusion criteria for analysis (see on next page)

The New Zealand Crime Harm Index (NZ CHI) was used to measure crime harm for family harm trends, as well as harm patterns relating to victims, offenders, and locations. The NZ CHI provides a weighting for each offence based on a proxy for the relative harm it causes, expressed as an

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	2016	2017	2018	2019	2020
Total FH occurrences	123,837	127,077	137,779	158,350	175,998
Was a FHI	96%	96%	96%	96%	97%
Had FV flag applied	96%	96%	96%	96%	96%
	2016	2017	2018	2019	2020
Was a 5F (or 1D)	60%	62%	67%	64%	62%
Was a FH offence	33%	31%	27%	30%	32%

# Table 1: Proportion of cases over 5 years that metinclusion criteria for analysis

estimation of the minimum number of days in prison a first-time offender would serve for the offence. The higher the value derived, the more harmful crime harm is deemed to be.

# **Findings: Overall trends**

**Family harm demand has been increasing over time.** Figure one highlights that reported family harm incidences has increased by an average 11% every year since 2018. It is unclear whether this reflects an increase in actual instances of family, or an increase in recording of family harm due to the easier recording method (launch of the 5F OnDuty app).





#### Figure 1: Overall family harm trends

In 2020, harm reduced slightly. Figure two illustrates that whilst the increase in reported family harm incidences coincided with an increase in recorded harm since 2018, in 2020 harm reduced 8% from 2019 (even though volume still increased 11% that year). While the reasons for this cannot be determined without further investigation, a decrease in harm at the same time as an increase in recorded family violence incidents might suggest the following: (1) an increase in lower-harm family violence incidents or (2) victims are experiencing less harmful forms of family violence. More analysis would be needed to determine the cause of the observed data changes in the current context.

#### Figure 2: crime harm trends from 2016-2020

# Findings: People <u>Victims</u>

A high proportion of harm is attributed to a few victims. Figure 3 illustrates that in 2020, 1.7% of family harm victims suffered 50% of crime harm.

#### Figure 3: Proportion of harm attributed to victims

Female victims accounted for a larger proportion of harm compared to males. Figure 4 highlights that across all age breakdowns, adult female victims accounted for the largest proportion of harm in all percentile categories. Adult females made up the largest proportion of harm in the upper 25% percentile, compared to the middle and lower percentiles.

Victims in the upper 25% had the largest disparity between its largest crime type by volume, and the harm experienced from it. Figure 5 illustrates that physical assaults accounted for the largest proportion of offences experienced by individuals in the top 25 and 50 percentiles of most harmed individuals,

whilst property damage accounted for the largest proportion of offences for those in the lower 25 percentile. Figure 5 also demonstrates that the largest disparity between crime type by volume and harm is observed for victims in the upper 25 percentile. Whilst those in the top 25 percentile experienced the highest percentage of physical assaults, the harm experienced by these individuals from this crime type accounted for only 19% of total harm experienced. Conversely, these victims experienced the most harm from sexual assaults, even though this crime type only accounted for 16% of total crime type by volume.

Continued on next page



#### Figure 5: Victimisation crime harm versus volume

The first month poses the highest risk for re-victimisation. Among victims who first reported to Police in 2019, 22% reported a repeat victimisation within a month of their first family harm victimisation, and 40% within a year (figure 6).



## Offenders

A high proportion of harm is attributed to a few offenders. Figure 7 illustrates that in 2020, 1.7% of family harm offenders committed 50% of crime harm.



# Figure 7: Proportion of harm attributed to offenders

Male offenders accounted for a larger proportion of harm compared to females. Figure 8 highlights that across all age breakdowns, adult males accounted for the largest proportion of harm across all percentile categories. Adult males made up the largest proportion of harm in the upper 25% of most harmful offenders, compared to the middle and lower percentiles.

Continued on next page

#### Understanding Family Harm: Through the lens of the New Zealand Crime Harm Index



#### Figure 8: Offender harm by gender

The largest disparity between crime type by volume and crime type by harm is observed for offenders in the upper 25 percentile who committed sexual assault. Figure 9 illustrates that physical assaults accounted for

the largest proportion of offences experienced by individuals in the top 25 and 50 percentiles of most harmed individuals, whilst property damage accounted for the largest proportion of offences for those in the lower 25 percentile. Figure 9 also demonstrates that the largest disparity between crime type by volume and harm is observed for offenders in the upper 25 percentile. In this group, sexual assault accounted for 6% of crime by volume, but accounted for 39% of total harm, the largest volume versus harm disparity across all percentile groups.





The first month poses the highest risk for re-offending. Among 2019's first-time offenders, 32% re-offended within a month of their first family harm offence, and 45% within a year (figure 10).





Results are cumulative, i.e. those who re-offended within 3 months are included in the group who re-offended within 6 and 12 months, etc.

## **Findings: Places**

For every additional 1,000 residents with a station boundary, volume of offences, crime harm and demand all increased 2%. There are some stations that experience a disproportionate amount of family harm for its population size. Figure 11 indicates that Eastern ranks highest for total crime harm and demand and for total volume of offences, per 100,000 of its population, demonstrating that it experiences a disproportionate amount of family harm for its population size.

National	H 1	Harm per 100,000		Family Harm with Offences: Crime Harm		Volume per 100,000		Family Harm with Offences: Volume		Demand per 100,000		Demand (including incidents)	
	Rank	38,085	Rank	1,936,177	Rank	1,123	Rank	57,083	Rank	3,462	Rank	175,996	
Northland	4	48,759	11	90,716	7	1,165	9	2,167	2	5,666	10	10,542	
Waitematā	12	20,326	8	131,728	10	588	7	3,811	11	2,249	8	14,572	
Auckland City	11	21,477	9	103,654	12	397	11	1,915	10	2,261	9	10,910	
Counties/Manukau	2	52,973	1	327,250	4	1,655	1	10,226	4	4,520	1	27,926	
Waikato	6	43,792	6	178,874	5	1,504	5	6,142	5	4,382	3	17,897	
Bay of Plenty	3	49,339	3	198,684	3	1,687	3	6,795	6	4,196	5	16,896	
Eastern	1	62,399	7	143,143	1	2,344	6	5,378	1	6,356	7	14,581	
Central	5	47,495	5	184,773	2	1,692	4	6,583	3	4,688	2	18,240	
Wellington	7	40,900	2	217,768	6	1,281	2	6,821	7	2,836	6	15,101	
Tasman	8	32,904	12	65,074	8	838	12	1,658	8	2,744	12	5,427	
Canterbury	9	30,297	4	193,828	11	544	8	3,479	9	2,679	4	17,142	
Southern	10	28,788	10	100,686	9	603	10	2,108	12	1,933	11	6,762	

#### Understanding Family Harm: Through the lens of the New Zealand Crime Harm Index

#### Figure 11: Crime harm by stations and population size

Ambient population was also associated with family harm. For every 1,000 additional businesses in a station boundary, volume of offences increased 2%, crime harm increased 2%, and demand increased 4%. Non-crime incidents were also more likely to occur in communities with higher ambient populations.

Station boundaries with high deprivation, and those with higher inequality, experienced more family harm. For every increase of 1 in average deprivation across a station boundary, the volume of occurrences with a family harm offence increased by 51%, whilst the amount of harm generated increased by 35%. In addition, for every increase of 1 in variation of deprivation within a station boundary, the volume of occurrences with a family harm offence increased by 35%. In addition, for every increase of 1 in variation of deprivation within a station boundary, the volume of occurrences with a family harm offence increased by almost 3 fold, and the amount of crime harm generated more than doubled.

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# Procedural Justice Training: The Elixir Vitae or a Cure that can Harm?



#### Renée J. Mitchell

Renée J. Mitchell has served in the Sacramento Police Department for eighteen years and is currently a Police Sergeant. She holds a Bachelor of Science in Psychology from the University of California, Davis, a Master of Arts in Counseling Psychology from the University of San Francisco, a Master of Business Administration from the California State University, Sacramento, and a Juris Doctorate from the University of the Pacific, McGeorge School of Law, where she was awarded an academic scholarship. She was the 2009/2010 Fulbright Police Research Fellow where she attended the University of Cambridge Police Executive Program and completed research in the area of juvenile gang violence at the London Metropolitan Police Service. She is the President of the American Society of Evidence-Based Policing. You can find her TEDx talks "Research not protests" and Policing Needs to Change: Trust me I'm a Cop where she advocates for evidence-based practices in policing. She is a Police Foundation Fellow, a member of the George Mason Evidence-Based Policing Hall of Fame and is currently a Jerry Lee Scholar in the Institute of Criminology, at the University of Cambridge. She recently successfully defended her dissertation, "The Sacramento Hot Spots Policing Experiment: An Extension and Sensitivity Analysis".

# **Executive Commentary**

All police organisations continue to grapple with effective ways to bring the principles of procedural policing to life - in the classroom and on the street. I particularly value the insights into the harm caused by ineffective or inappropriate training programmes. Too often material is rolled out quickly, with no/limited understanding of context or culture and a failure to understand the long-term damage that poor training can cause. There are several other observations in this piece that also resonate; the observation that, "Training is policing's leech. We rarely evaluate, we rarely obtain structured feedback on outcomes measured on the street, and thus we never understand whether training is achieving our intended goals"; the emphasis on the value of scenario-based training as compared to lecture based classroom sessions; and the need to

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test and trial before scaling up initiatives (and the use of structured, well understood evidence-based methodologies to do that). While the article is specifically about procedural justice, the principles, insights, and observations are true of all police training (as the article concludes). While I think policing has made progress in lifting the importance of evaluation, building more contemporary training models, and improving feedback loops, the observations remain as relevant today as when they were drafted. An excellent piece.

R. Mark Evans OBE, Deputy Chief Executive, Future Policing, New Zealand Police & Vice President ANZSEBP

# Introduction

When citizens are treated in a procedurally just manner by the police, they are more likely to corporate with law enforcement and have better perceptions of police (Tyler and Sunshine, 2003). Unfortunately, there is no evidence yet that procedural justice training changes officer behavior towards the public. In other words, while procedural justice is generally accepted as a good thing, how to get officers to behave in a more procedurally just manner is still unknown.

Notwithstanding this important knowledge gap, agencies around the world are now rushing to train officers on the dimensions of procedural justice; The Chicago Police Department (CPD) is a prime example. Beginning in July 2012, CPD— in conjunction with researchers from Yale University developed a procedural justice training course in just four months, and then delivered it department-wide to 9,000 sworn employees over another 16 months (Sedevic, 2012). As the training was being implemented, researchers were tasked with evaluating its effect on officer attitudes. of the four dimensions of procedural justice1; however, it did not demonstrate a causal link between the training and behavioral changes on the street (Skogan, Van Craen, and Hennessy, 2015). Skogan et al., (2015) also completed a secondary analysis evaluating whether attitude shifts were maintained over time; they determined that neutrality, voice, and respect did not decay over time, but officers still remained unwilling to trust the public. There was no empirical evaluation completed to determine if the training altered police behavior in the field or if the training improved the public's perception of the police. Despite the preliminary nature of these findings, agencies worldwide have

the training and improving attitudes in three

been employing versions of the Chicago" "Model to teach procedural justice training, often at significant costs to taxpayers.

This is not to say that the training has not changed behavior; rather, the capacity of a single training regime to change behaviors on the street is as yet unknown. This however has not stopped agencies from around the globe from using the Chicago Model to teach procedural justice training in their organizations. At the time of writing, these agencies are spending significant funds without understanding whether the training improves police behavior, improves public perception, or worse has the possibility to reduce morale and police proactivity, and potentially creating a backfire effect negatively affecting officer's behavior towards the public. The theory of procedural justice is soundly supported through the research, yet the mechanisms to achieve increased procedural justice action are not. It is premature to invest heavily in training without evidence that it achieves the organizational goals.

As the example above suggests, procedural justice (PJ) is increasingly viewed as a panacea to the current police legitimacy crisis in the U.S. Although the ideas behind procedural justice have a solid empirical foundation (Mazerolle, Bennett, Antrobus, and Eggins, 2012; Mazerolle, Bennett, Davis, Sargeant, and Manning, 2013; Sunshine and Tyler, 2003; Tyler, 2006), procedural justice training itself has not been so sufficiently tested – that is, subjected to rigorous, independent evaluation within and across multiple sites.

As such, it is premature to warrant mass reliance on this form of training as a solution

Their evaluation demonstrated a link between

to what may arguably be a larger set of social problems. I will argue here that we should not be scaling up the training for mass dissemination across the police profession until we have a substantial base of empirical" "knowledge that supports procedural justice training, not just procedural justice theory.

Of course, the horse may have already bolted. The first year report on the President's Task Force on 21st Century Policing stated that 80,000 officers in the U.S. have already been trained in fair and impartial policing and procedural justice (COPS office, 2016)). These officers have been trained in a course that has unknown outcomes for officer behavioral changes, public safety, police proactivity or public perception.

We have already acknowledged in the criminology literature that interventions can cause harm: "to modify human behavior... have the power to bring about unintended harmful consequences" (Zane et al., 2015: p. 1). Anecdotal evidence, as explained later, does suggest some caution, and procedural justice training may need a more sound footing in empirical research to ensure improvement rather than harm before procedural justice training is delivered worldwide.

In this essay, I draw on my own experiences as a procedural justice trainer in two large

U.S. agencies. These experiences are, as I show, highly illustrative of how police training is often delivered under real world conditions. I also draw on the Society for Prevention Research (SPR) standard for scaling up evidence based interventions, which provides useful guidelines for determining whether it is appropriate for an intervention to be scaled up to a larger population beyond the initial testing sample (Flay, Biglan, Boruch, Castro, Gottfredson, Kellam, Moscicki, Schinke, Valentine, and Ji, 2005; Gottfredson, Cook, Gardner, Gorman-Smith, Howe, Sandler, and Zafft, 2015). Employing the SPR standards as a guiding framework, I will argue that there is insufficient research evidence on procedural justice training to justify a larger roll-out and that evaluative research in this area is urgently needed.

# On leeches, and the black box of police training

While there has been little research on whether procedural justice training is an effective tool for improving police-citizen interactions, in reality there is little research to date on the impact of any police training. Policing has done a poor job of evaluating any of its training methods, from academy training and in-service training, to specialized training such as Crisis Intervention Training, Implicit Bias Training, or Diversity Training (to mention just a few examples). Policing as a profession continues to create new training programs to address contemporary problems without ever firmly establishing whether the training is the appropriate solution.

The situation is reminiscent of blood- letting —a long-trusted remedy to myriad ailments and a bulwark of the medical establishment (it would be difficult to argue the medical field was a profession until recently) irrespective that it didn't actually work. For the majority of the history of human medical interventions, if the patient survived then obviously the treatment worked, and if it didn't then they were too far gone for blood- letting to have worked.

The medical field continued to argue and defend blood-letting for centuries absent proper evaluation and feedback, harming patients through the millennia (Syed, 2015).

Training is policing's leech. We rarely evaluate, we rarely obtain structured feedback on outcomes measured on the street, and thus we never understand whether training is achieving our intended goals. Of the studies on police-citizen interaction training, I was able to find three relating to procedural justice training. CPD evaluated the effects of their training on the attitudes of their officers. This is however an output measure and not an outcome. Arguably, the citizens of Chicago want their officers to demonstrate procedurally just behaviors on the street, enhancing citizen-police communications.

The evaluation indicated that officer attitudes (as reported by the officers) changed, but not necessarily that their behavior changed. Similarly, Detroit PD evaluated the effects of a victim sensitivity course on public perceptions, and Greater Manchester Police evaluated a customer service training course and the effects on citizen's perceptions (Rosenbaum, 1987; Wheller, Levin, Quinton, Fildes, and Mills, 2013). Of the three evaluations only one, the Greater Manchester study showed any improvement in the public's perception of the trained officers." "Procedural justice is the notion that when police interact with the public in a manner that flows through certain key elements, the interaction can be perceived positively by the citizen. The notion of procedural justice has a flow. When officers make contact, citizens evaluate the officer on the four elements of procedural justice, did the officer take the time to listen to them (voice), did the officer treat them with dignity and

respect (respect), did the officer make a fair and impartial decision (neutrality), and was that decision based on trustworthy motives (trust) (Tyler, 2006). Citizens then decide whether this contact was conducted in a fair way.

This can be contrasted to those situations in which people feel they were not treated fairly, and that the police are therefore partial, biased and/or corrupt (Skogan, 2006). Fairness is determined by the process in which they were treated based on the four elements rather than the outcome they receive (Sunshine & Tyler, 2003). When citizens determine that they were treated in a fair manner they perceive the police as legitimate. Police legitimacy is the citizens' belief that authorities are entitled to be deferred to and obeyed (Tyler, 2006). This causal process has led both academics and police executives to believe training officers in the dimensions of procedural justice will lead to improved police legitimacy, although this assumption has yet to be established. Chicago PD was the first agency to study the effects of procedural justice training on the attitudes of the police officers.

The training procedural justice training from Chicago PD was created hand in hand with procedural justice researchers Tom Tyler and Tracey Meares of Yale University, and constructed from the research that supports procedural justice theory (Sedevic, 2012). The training course was developed by two officers from the Education and Training Division first piloting the program then using feedback from the officers to finalize the training. Ten instructors were chosen for their credibility within the organization and were trained to teach the procedural justice course. These instructors received in-depth instruction on the research that supported the procedural justice tenets fortifying their knowledge as instructors. Chicago PD began instruction of July 2012 completing training of 9,000 sworn personnel over 16 months.

The goals of the training were to improve officers understanding of "the core components of procedural justice and legitimacy in order to build better relationships with the communities they serve" yet community relationships remains an unmeasured or unreported outcome of CPD's training (Sedevic, 2012). While the" "training was being implemented two studies were analyzed. One looking at effects of the training on recruits' attitudes and the other determining whether the effects of the attitude shift lasted over a period of time. Skogan et al. (2015) examined the survey data, finding that overall the recruits' attitudes improved over all four dimensions of procedural justice:

voice, respect, neutrality, and trust, with trust improving the least.

When the recruits and a control group (who had not yet attended training) were surveyed over the course of several months, the attitude shift lasted for all but trust. Trust improved the least in response to the training and did not last beyond the immediate effects of training. Skogan et al. (ibid., p.332) warned researchers did not have data to connect the survey data to personnel records, thus there was no way to determine if the training had any impacts in shifting 'on-the-job' behavior.

Although the Chicago training demonstrated shifts in officers' attitudes, it did not measure whether there was a causal link between the training and a shift in the public's perception of the police.

Further examples illustrate this problem. For example, the California Partnership for Safer Communities (CPSC) used survey responses from fifty-five law enforcement leaders who attended a Principled Policing course (a combined procedural justice and implicit bias one-day course) as support for the effectiveness of the training. CPSC used survey data from officers stating they viewed the course as "excellent" or "very good" as an outcome measure to demonstrate the effectiveness of the course. This is a flawed assumption.

There is no research that shows there is a causal relation between enjoying a class and behavioral change. CPSC uses officer appreciation of a course as evidence that procedural justice training is a valuable tool for increasing community engagement, yet offer no evidence that improved community engagement -as an outcome-actually exists. CPSC claims that the procedural justice training is useful "for building officers' ability to employ the principles of procedural justice to increase public trust and confidence in police", yet offer no outcome measures that test the public's level of trust in the police before procedural justice training was implemented before and after the training (Stanford SPARQ and California Department of Justice, 2016).

By way of contrast, the Detroit Victims Experiment did explore this link. In this study—a randomized controlled trial focusing on officer training—Rosenbaum (1987) trained officers to be more sensitive to the needs of victims.

Survey results showed the officers had more favorable attitudes, perceptions, and intentions towards the victims than the control group, but the victims' attitudes towards the criminal justice system did not demonstrate a difference between the trained officers and untrained officers.

This left Rosenbaum to conclude that "Neither victims' confidence in police effectiveness nor their satisfaction with police services was changed as a result of interaction with a trained police officer" (Rosenbaum, 1987, p. 513). Even though the officers' attitudes towards victims improved and they stated they felt greater empathy, understanding, and less judgment, it did not translate into meaningful change in the public's perception of the police. Further, the study failed to provide any proof that immediate shifts in attitudes translated into longer-term behavioral changes.

The only study to show a causal link between officer training and public perception was not a randomized controlled trial on procedural justice, but a training that focused on officer's communication skills and rapport building with crime victims.

Wheller and colleagues (2013) demonstrated an effect between training helping Greater Manchester police officers build rapport with the public through, showing empathy, giving positive acknowledgment, and using signposting (among other communication techniques). Rather than teaching the dimensions of procedural justice, Greater Manchester attempted to teach officers how to bring about feelings of police legitimacy through skill building. These methods were intended to reflect procedural justice dimensions by making the citizen feel listened to and understood.

The citizen's overall perception of the interaction was slightly more positive with officers who had been trained compared to untrained officers. Yet for all this effort, and positive perceptions of the interaction, there was no statistical significance for the citizens' willingness to cooperate and satisfaction with the way they were treated or the service provided. There will have been some cost involved, given that the Greater Manchester training program was run for 2-3 days for each treatment group. Additionally, two of the three training groups received a scenario-based component. In the end the researchers noted an improvement in just 1 in 10 officers.

# How do we start improving training?

Of the little we do know about police training, it is evidence that scenario-based training has

a higher impact on learning than lecture-based training (Louis, Marks and" "Kruse, 1996). Lecture-based teaching is the weakest mode of teaching for impact on skill attainment, application, and problem solving. Indeed, studies of adult education courses showed that theory presentation or lecture only has 15% impact on skill attainment, whereas practice and low risk feedback or scenariobased training has an 80% impact.

The highest impact on skill attainment is individual coaching, study teams, or peer visits with a rate of 90% impact on skill attainment. Based on my own experiences, as both trainer and course attendee, much of police training remains stuck in the PowerPoint lecture format which has been shown to have the lowest impact on skill attainment. The Chicago model taught five modules in a lecture-based learning environment using class activities to promote class participation. Detroit was taught in the same lecture-based environment. The trainers did not have students perform in scenarios or obtain feedback. The Greater Manchester training did have a scenariobased component for two of its three training sessions; however the training produced only a slight improvement in the public perception (Wheller et al., 2013). And even though Chicago added a scenario component, none of the police training on procedural justice, communication, or victim sensitization training has yet to show improvements in the public's perception of the police (Louis et al., 1996). If the goal of procedural justice training is to have an impact on police behaviors, then there remains a clear need to identify appropriate techniques, test and track those techniques in order to most effectively and efficiently deliver training.

Fortunately, a standard that could be applied does exist. Procedural justice training qualifies as an intervention under the standards of the Society for Prevention Research (SPR) because the intention of the training is to change human behavior. The Society for Prevention Research (SPR) advocates for prevention interventions to meet a standard of "tested and efficacious" or "tested and effective" before interventions are scaled up for mass dissemination. Efficacy trials are studies of interventions implemented under optimal conditions, usually monitored by researchers or supervisors assuring proper application of standards. Alternatively, effectiveness trails are interventions implemented under real world conditions.

An example would be the current state of procedural justice instruction where "train the trainer" courses are delivered, then the trainers teach the course absent any monitors to determine whether the training is delivered in the manner in which it was intended. SPR advocates for the implementation of both efficacy and effectiveness trials before any intervention is scaled up for mass dissemination. SPR promotes this standard based on the premise that interventions can" "have harmful effects, no effects, or costprohibitive effects and interventions should reach a standard before we waste valuable resources implementing them.

Evidence Based Interventions (EBI) are interventions that have been tested in research to provide "statistically and practically meaningful improvements in health and wellness or a reduction in disease" (Gottfredson, 2015, p. 894). The original article (Flay et al., 2005), which created the foundational SPR standards, suggested that problem solving be addressed through the following process: developing an intervention for the problem, creating a small pilot testing the intervention, efficacy testing of the intervention, effectiveness testing of the intervention, and finally broad dissemination. "Scaling up" as defined by SPR means to expand the intervention to a broader population to increase the impact of the intervention. Scaling up is only recommended after an intervention has gone through the process of becoming an EBI.

Once an intervention has been piloted with a small sample, then the intervention should be subjected to an efficacy trial. To trial an intervention SPR recommends a statement in the form of "Intervention X is efficacious for producing Y outcomes for Z population at time T in setting S" (Gottfredson et al., 2015, p. 896). Efficacy testing is testing the intervention under the best environment possible.

This stage of development requires the oversight of program managers, researchers, and practitioners to ensure that the intervention is administered and delivered in the way it was originally intended. For example, in the case of training program managers could verify that the training materials were covered in the same manner as in the pilot by sitting in on the classes as they were being taught. If there were multiple trainers then every trainer would be evaluated to determine consistency of delivery. Researchers would establish protocols for collecting outcome measures, the measures would be linked to the goals of the training, and the measures would be recorded using a tracking tool. The parameters of the research design would be established prior to commencing the trial, rigorously implemented, and then constantly confirmed through meticulous oversight.

Alternatively, an effectiveness trail could be studied under conditions that occur in the real world. Effectiveness trials are expected to be "delivered under the same types of conditions as one would expect in community institutions" (Gottfredson, 2015, p. 899). In the U.S. police training is usually conducted in-house, an agency may host a training for local agencies, or a state agency such as a Police Officer Standards and Training (P.O.S.T.) organization might host a training course. In the case of procedural justice training it appears that most U.S. agencies are delivering in-house training.

To evaluate police training SPR suggests the trial should have the manuals, the training and proper support in place before running the effectiveness trial. The environment during the trial should also be similar to what is expected for a scale up. Finally, a cost benefit component should be employed when the effectiveness testing is complete.

Testing under real world conditions to examine if an intervention is effective and cost beneficial is at the core of practically meaningful improvements, and the goal of EBIs. If you cannot achieve effectiveness under real world conditions then it is likely that taxpayer's monies are not being well spent. As a result, the reason SPR advocates for EBIs to be scaled up only when they have met effectiveness standards is because the observed outcomes are likely to translate to outcomes of practical significance. This last stage is important, because this is where the rubber meets the road. Without a final translation into measurable change in outcomes, it is hard to justify the expense of public dollars on training that doesn't appear to have any affect.

SPR created these standards to generate protocols that ensure interventions are effective, cost beneficial, and improve outcomes for the majority of a population. Police interventions are always created on the taxpayer's dime. Police training is expensive, especially when policy mandates that officers receive training. The cost of paying an officer for a day of work while at training is a drain on resources and should not be taken lightly, especially when considering that training budgets are often the first to be abandoned when city finances are in crises. SPR standards are the embodiment of what we as academics, practitioners, and pracademics (professional practitioners trained as researcher academics) should be striving for, yet as any practitioner knows this is not what

training looks like in the real world. In the real world, law enforcement training is often not well thought out, not implemented perfectly, and usually delivered by the most available person rather than the most qualified person. This will unfortunately be demonstrated in the following case study.

# The Reality of Police Training: It Ain't Pretty but it's True

Like most police training, procedural justice training has yet to be evaluated under real world conditions. Real world conditions in policing could involve a lot of possible scenarios, most of which involve trainers who are not necessarily substantive experts" "in the subject I their own right. In other words, they are hired guns, brought in to teach a subject they have to research for the training rather than intrinsically know. Examples could include unwilling trainers who were pressured to train by executive management, trainers who lack street credibility, trainers who enjoy teaching however do not understand the material they are teaching in a meaningful and robust way. In rare cases, real world trainers understand the material in a substantial way, love to teach and excel at teaching. Most often real world training is put together by police officers with no curriculum building experience, no adult education training, and no understanding of the broader goals of the organization for the topic they are teaching. Rarely do police agencies have the resources like Chicago Police Department to dedicate to building a training program that achieves specific organizational goals. The training unit in most police departments is usually tasked with organizing, implementing, and delivering the annual training often while being understaffed and undertrained themselves in curriculum building or adult education. Furthermore, executive management often institutes training based on what other agencies are doing rather than in pursuit of concrete internal organizational goals.

In this section, I draw on my own experience of procedural justice training within two different police organizations. The first used the Chicago procedural justice training and adapted it to the organization. An officer with no experience or understanding of procedural justice was tasked with compiling a train-the-trainer training course which would be delivered to selected officers within the organization. In turn these officers would conduct the training for the rest of the organization. The CPD model was largely followed, and the only change made to the CPD training model was the inclusion of local context. The Chicago model consisted of 5 modules with the following content/themes: 1. an introduction to procedural justice and police legitimacy, 2. police cynicism, 3. procedural justice concepts and research, 4. racial issues and local history, and 5. a review of the course material (Skogan et al., 2015).

The procedural justice course was incorporated into the organization's annual mandatory 40-hour in-service training. Training officers were suggested by the training unit based on credibility in the organization and approved by the training department's captain. The officers on the list were contacted to see if they were "The final list of interested in teaching." procedural justice trainers consisted of a mix of 20 officers and sergeants from a variety of backgrounds and teaching experiences, as well as 5 citizens to teach module 4 on race and local history. Of the police trainers, one had never taught a training course before. The only training each of the trainers received was attending a day of the training taught by another agency who had attended the Chicago train-the- trainer course and had been teaching in their own organization for the last year. Although not involved in the training or coordination, I was viewed as someone knowledgeable on procedural justice. Some of the trainers therefore also attended the first session I led because the group viewed me as knowledgeable on procedural justice theory and wanted to watch me present the course to give them a better understanding of the research background on procedural justice. The first day of training was a perfect real world example of what really happens during police training.

The first day of implementation was difficult. Our most inexperienced instructor started the day off stating, "I know it's going to be rough sitting here listening to us talk about procedural justice for 7 hours, but let's make the best of it." This set the stage for the rest of our day, suggesting from the beginning that the training was not going to be useful. Arguably, it was not the instructor's fault. He was inexperienced, having never been taught classroom management skills, and was trying to relate to the group as an officer not realizing his statements could influence the class in a negative way. Problems were compounded by the fact that this class was filled with veteran officers each with between 10-25 years of experience. After only 2 hours of teaching, during a questions and answer session one of the sergeants in the room stated, "I find this class insulting." At this point all of the

body language in the classroom reflected one of defiance; arms crossed, no eye contact, and after the statement was made the room collectively held their breath waiting to see what would happen. At that point an officer, who was running late due to court, walked into the classroom. As he walked in he pulled back physically and stopped, made eye contact with me, and said, "Wow" sensing the tension in the air. As he sat he said, "I don't know what you guys are talking about but this is going to be great".

Instead of responding defensively, we treated the students in a procedurally just manner. We opened up the discussion to let the class air their complaints (voice). We wrote down their exact words on the board paraphrasing them to make them feel listened to and understood (dignity and respect). We made no judgments about their comments (neutrality).

And the classroom began to breathe again, lowered their voices, and took on a more relaxed posture (trustworthiness). After lunch we had the late student discuss what he observed in the classroom. He noted that the class was tense when he walked in, and stated that "it was like walking into a wall" (which was why he actually physically stopped).

He then said once the class was allowed to express their frustration, anger, and dissatisfaction with the course all of the tension left the classroom. Using this situation as a learning moment, we discussed how we (as instructors) modeled the dimensions of procedural justice by treating the class in a procedurally just manner.

The students observed what procedural justice looks like in action when they were in a situation where they felt they were being treated unfairly. Although they agreed the class turned around after they felt listened to, they still did not see why they needed to go through a full day of training. The day finished with the students being less resistant to the course, but it was undoubtedly a rough beginning.

Throughout the year following this session, feedback received from the other trainers was largely indicative of the poor beginning reflecting how the officers retained negative feelings about the training. For a considerable time afterwards, I would get stopped in the hallway by officers expressing their opinions of the course. The sentiment seems to be the same overall feeling that, 'if we are not doing anything wrong then why do we have to go to this training?' The officers feel the training was punishment for how officers were acting in other parts of the country and they found it very defeating. Other officers commented, "This course is the pussification of policing" and "This is a good course for recruits, but not for seasoned officers". Others told me "I will use this with normal citizens, but not suspects" and "This class is minor leagues: we are a professional organization, this training should be at the major league level".

At the second organization, many of the same problems were manifest. While organizational leaders deemed procedural justice a top priority for their organization, the executive message of support for procedural justice was never in place. The second organization developed their own training course based on communication skills that supported procedural justice outcomes, but it was not modeled after CPD. Like the first organization, they wanted to adopt the training from a credible source, recruit enthusiastic credible trainers, and develop a good course; but even with this mindset the training was discontinued after outside trainers piloted the first multi-session course once officers aired their displeasure with the instruction. Executive managers had good" "intentions that did not get translated into practical support and ultimately negated much of the potential benefit of procedural justice within the department.

While these examples are personal and anecdotal, they highlight a scenario familiar to many involved in police training. Officers responsible for training are frequently required to create and manage training in subject areas with which they are unfamiliar, in situations with which they do not agree, and often to colleagues who view training in areas they perceive as peripheral to their day-to-day role very negatively. The officers comments from the first organization indicate a possibility that the training not only did not have the desired outcome, but that it could have created a negative 'backfire' effect where officers respond negatively and reject the training principles.

# Where should procedural justice training go next?

Policy, just like knowledge, is a difficult bell to unring, and there has been a rush to implement untested procedural justice training. Worse, we do not have the empirical knowledge on procedural justice training to know if the effects are positive, neutral, or deleterious. We know from Joan McCord's (2005) seminal research, 'Cures that Harm', that often well intended interventions don't have the behavioral outcomes the researchers seek. McCord reviewed five different interventions that had detrimental effects on the participants.

The five interventions were the Cambridge-Somerville Youth Study, Scared Straight, court volunteers, group interaction training, and an activities program. All these programs were intended to improve criminal justice outcomes and improve behaviors in people involved in the criminal justice system, yet none of them did. To this day, Scared Straight and D.A.R.E. are two programs that have become institutionalized in policing even though they have been repeatedly found ineffective in empirical studies (Hansen and McNeal, 1997). To date, the impacts of procedural justice training have not been fully vetted against the recommendation of SPR, but with the anecdotal information above, we should retain an open mind to possible negative outcomes.

Police training in the real world often looks exactly as described - messy. The experiences described above (while acknowledged as anecdotal) suggest that procedural justice training is reflective of fairly standard real world conditions. Absent training by the Chicago originators -an unrealistic proposal for most police department - procedural justice training has most likely not yet meet either the efficacy or effectiveness standards to begin scaling it up" "for mass dissemination. And just to reiterate, there is limited research on police training and public perception and no research on procedural justice training effects on officer behavior or public perception (Rosenbaum, 1987; Skogan et al., 2015; Wheller et al., 2013). So where next?

Research should be conducted to determine if the training can (1) affect officer behavior and (2) if these behavioral changes can affect the public's perception of police legitimacy. Once this is demonstrated then effectiveness trials should be run under real world conditions to establish how to achieve these outcomes through different approaches to training. By this I mean, how should training be conducted at the police agency, or in the academy, or by the state training agency in the manner in which they regularly run training? There is no reason to adopt training that has only been shown to be efficacious in optimal conditions (such as with the source academics highly experienced with the area) when most police training is performed under less than optimal conditions. In fact, this approach would seem appropriate for all existing police training and not just procedural justice. The lack of evidence that training within the law enforcement world is effective

at all is a demonstrable gap in attempts to professionalize policing.

To meet the SPR standard procedural justice training should be tested on two levels. efficacy and effectiveness. The Chicago model of procedural justice training was evaluated using a quasi-experimental design which is a level 4 design based on the Maryland Scientific Methods Scale (Farrington, Gottfredson, Sherman, and Welsh, 2002), though the dependent variable was not necessarily the outcome variable that police leadership might have selected. Skogan and colleagues' (2015) research design allowed for a rigorous evaluation of whether the training changed officer's attitudes towards the four dimensions of procedural justice but their evaluation did not make a determination as to whether changes in attitude led to a change in police behavior.

Furthermore, it was not possible to determine the next step - if behavioral changes had been successfully made, if those changes had any effect on the public's perception of police legitimacy. The SPR standard of "Intervention X is efficacious for producing Y outcomes for Z population at time T in setting S" is met if the outcome we are seeking from the officers is public attitude shifts. If police are actually looking to improve public perception, then the Chicago training has not yet met the efficacy standard. Even if one day we can show empirical support for procedural justice training, past practice shows training will not be delivered as it was intended. For this reason alone police need to implement effectiveness trials before scaling up.

Training cost millions of dollars annually when we take into consideration the number of police agencies and officers across the United States and in the world. Police leaders and policy makers have an obligation to be good stewards of taxpayer's monies. As a result, there is an obligation to spend money on training only when effectiveness can be demonstrated, or the least implement an evaluation of new training. The SPR standard is predicated on research making it a valuable framework to evaluate police training programs before they are translated into a broad policy. This is the standard towards which policing should strive-not just for procedural justice training-but for all police training.

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#### End Notes

1 Neutrality – consistency and evenhandedness in decision making, Voice – Giving citizens the opportunity to express their opinions about a problem, Respect – treating citizens with dignity, acting politely, Trust – when officers treat citizens as if they can be trusted. Trust was the dimension that did not improve.

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# Operation Safer Hotels: An Inn-Telligence Gathering Strategy at Perth Hotels

Authors: by Jesse Parmar, Rhett Wilkinson, Simon Williams and Geoffrey Barnes

## **Executive Commentary**

This article on procedural justice training targeting intelligence gathering form the community, which is an important topic, is valuable because it's a replication study which sadly are rare, and I was a big fan of the original study in Queensland because it was an actual field trial, it was police led and it delivered tangible outcomes. The fact that the outcome was improved intelligence is also really appealing.

## Abstract

**Objectives.** To test the effect of police engagement strategies in increasing both the quantity and quality of intelligence reports from the hotel community in the Perth metropolitan area.

**Methods.** The study employed a randomised experimental design in which 126 hotels were matched into triplets based on size, CAD demand (calls for service) and quality (based on online reviews). Hotels within each triplet were then randomly allocated to one of three groups: a control group, Treatment Group 1 or Treatment Group 2. The control group received business-as-usual policing. Treatment Group 1 received personal engagement from a police officer, using a procedurally-just checklist. This group was provided with: literature on drug related behaviour, a dedicated Operation Safer Hotels phone number and a monthly email outlining positive interaction and outcomes of reporting. Treatment Group 2 received a letter outlining the Operation and the literature on drug related behaviour. Key outcome measures included intelligence reports, recorded offences, crime harm (as measured by the WA-CHI) and quantity of drugs seized.

**Results.** Compared to the control group, Treatment Group 1 provided three times as many intelligence reports, nearly three times as many drug related intelligence reports, four times the number of offenders identified from a 39% increase in reporting, and had a greater quantity of drugs seized from those offenders.

**Conclusions.** The findings suggest that face-to-face, procedurally just engagement that includes feedback and regular contact with members of the hotel community has a positive impact on uncovering hidden offending; specifically drug related offending taking place on hotel premises.

# Introduction

A pioneer of forensic science in the 1920s, Dr Edmond Locard, formulated the basic principle, best described as "every contact leaves a trace" (Sutherland, 2017; Walls, 1968). In other words, an offender will bring something to the scene of a crime and leave with something from it. We know this is the case with finger prints, foot marks, broken glass and even CCTV footage. However, this principle could equally apply to the everyday contacts we, as police officers, have with members of the public.

Building relationships takes time, involves contact with others and every time we communicate we leave behind a trace. These traces or First Published in Police Science Vol.3 No.2 Summer Edition 2018

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impressions matter. They can mean the difference between the public trusting the police, having the confidence to contact us or turning a blind eye and carrying on as normal. In the case of intelligence, often referred to as the life-blood of policing (Cooper & Murphy, 1997), this paper adds to the growing evidence base that the manner of police contact matters and can contribute to improving both the quantity and quality of intelligence received form the community.

The inception of intelligence-led policing heralds back to the late 1980s (Ratcliffe, 2003). In the decades subsequent, "intelligence has become embedded in the vernacular of academics and senior policing personnel, and is often a key component of policing strategic directions (Parliamentary Joint Committee on Law Enforcement, 2013; Peterson, 2005). The plethora of forums, conferences and textbooks on the subject of intelligence-led policing further typifies the utility and the ever-expanding uptake of the strategy (Organisation for Security and Co-Operation in Europe, 2017; U.S. Department of Justice, 2009). However, despite the frequent use of the phrase, there remains considerable misunderstanding over what intelligence actually means.

Whilst there are a number of different of definitions of the term intelligence, all definitions frame intelligence as a "value added product" utilised with an aim to "facilitate crime reduction and prevention through effective policing strategies" (Ratcliffe, 2003, p. 3). Intelligence is more than just raw information; it is information given context and meaning relevant to a policing issue at hand. As such, intelligence is best utilised as a core (if not central) component in police's "decision making apparatus" (Ratcliffe, 2003, p. 1).

Consistent with this definition of the term, intelligence continues to be gathered, developed and employed in order to address many contemporary policing issues. These issues range from human trafficking and counter-terrorism to the sale and distribution of illicit drugs (Australian Criminal Intelligence Commission, 2017a).

Irrespective of the array of contexts in which intelligence-led policing can be applied, at its core, intelligence-led policing principally centres on four key aims (National Criminal Intelligence Service, 2000), namely:

- Targeting offenders
- The management of crime and disorder hot spots
- The investigation of linked crime series and incidents
- The application of preventative measures, including working with local partnerships to reduce crime and disorder.

#### Operation Safer Hotels: An Inn-Telligence Gathering Strategy at Perth Hotels

Consistent with these four key applications, intelligence-led policing has sizeable benefits for police not just in the context of macroscopic, global or national issues, but also in addressing local policing issues.

As per the above aims, intelligence-led policing has a theoretical application in the creation of "local partnerships" and in the "management of crime and disorder hot spots" (National Criminal Intelligence Service, 2000, p. 14). In the context of local policing measures, two question arise. Firstly, what is the best means by which to gather intelligence at a local level? And secondly, how actionable will that intelligence be?

Operation Safer Hotels sought to investigate these questions. Anecdotally, intelligence officers in Perth, Western Australia (WA) felt that there was an "intelligence gap" concerning law enforcement's understanding of criminal activity occurring in metropolitan hotels and short-stay apartment locations. This perceived intelligence gap is illustrated in Figure 1.

#### Figure 1:

The Intelligence Gap in Hotels and Short-Stay Accommodation



In order to establish how best to address this intelligence gap, WA Police's State Intelligence Operations, in partnership with the Evidence Based Policing Division, instigated a randomised control trial, Operation Safer Hotels. The Operation was, from the outset, explicitly an intelligence gathering operation. In contrast to other police-led operations, Safer Hotels did not aim to directly drive down recorded crime, but instead to investigate how intelligence reporting from members of the public could be enhanced.

Firstly, Safer Hotels sought to better understand what criminal activity was actually occurring in hotel premises. Secondly, in addressing this intelligence gap, Safer Hotels sought to ascertain the "best" means of engagement. Does a simple letter to hotels suffice to improve intelligence reporting? Alternatively, is face-to-face engagement with hoteliers more effective in reducing this intelligence gap? And finally, how do these two methods compare to current police practice in terms of intelligence gleaned from the community.

Irrespective of whichever engagement strategy was employed, both methods sought to instigate a third-party policing (TPP) partnership with relevant hoteliers. TPP is any attempt by law enforcement to "persuade or coerce other regulators or non-offending persons", in this case hoteliers, "to take some responsibility for preventing crime or reducing crime problems" (Mazerolle, Higginson, & Eggins, 2013, p. 2). Numerous studies have reiterated the sizeable benefits of TPP and, accordingly, the strategy has been cited as one of the eight key policing innovations of the 21st century (Weisburd & Braga, 2006, cited in Mazerolle et al., 2013). For WA Police, the application of TPP in an experimental framework, within the context of hotel engagement, represented an innovative approach to partnership building and intelligence gathering practices.

Whilst Operation Safer Hotels was envisioned as an intelligence gathering operation, there were a number of alternate benefits that could potentially arise from the experiment. Previous literature on the topic of proactive engagement with members of the community has found that the engagement often yields alternate, largely intangible, dividends in improving attitudes towards police, particularly in the area of police legitimacy (Tyler & Jackson, 2014). Thus, a proactive partnership often leaves members of the community with greater levels of trust and confidence in police, which translates into a greater willingness to report criminal activity. Accordingly, the experiment also examined the degree to which the intelligence received was actionable. Specifically, did the intelligence received during the Operation translate to a higher count of associated offences, offenders identified and contraband seized?

# Methodology

Operation Safer Hotels sought to replicate the Queensland Police experiment, Operation Galley (Morton, M, Luengen, & Newman, 2018). Accordingly, the experimental design, randomisation process and engagement strategies employed in Safer Hotels are largely synonymous with those utilised in Galley.

# **Hotels and Randomisation**

The experiment began with identifying 126 hotels, motels, selfcontained apartments, resorts and backpacker hostels (hereafter referred to as "hotels" for simplicity) from the Perth metropolitan area. The majority (n = 56) were from the central business district located within the Central Metropolitan policing district.

Each of the 126 hotels was then ranked according to three metrics:

a) The size of the hotel (in terms of maximum occupancy)

b) Total Computer Aided Dispatch (CAD) tasks at the hotel in the one year preceding the experiment

c) The "quality" of the hotel (based on online reviews).

Having matched hotels as per these rankings, the hotels were grouped into triplicates. This process ensured the hotels within each triplicate were theoretically similar in terms of scale, previous policing demand and clientele. Hotels within each of the triplicates were then randomly allocated into one of three groups, each of which was targeted via a different engagement strategy.

# **Engagement Strategies**

## Treatment Group 1-Personal Engagement

Hotels allocated into Treatment Group 1 received personal, faceto-face, engagement of management by intelligence officers. In meeting with relevant hotel managers and security personnel, officers used a locally developed "cookbook" that provided a checklist for officers during each conversation. This checklist covered the four key elements of procedural justice described by M et al. (2014);

#### Operation Safer Hotels: An Inn-Telligence Gathering Strategy at Perth Hotels

specifically, demonstrating WA Police Force core values of respect, explaining our motives in "doing the right thing" by disrupting criminality, encouraged hoteliers to report suspicious behaviour by stressing they have a voice and we are listening, and providing transparency through regular feedback of outcomes. Officers made the deliberate effort to frame these meetings as the beginnings of a partnership in which police personnel and hoteliers could work together to make their hotels a safer, and hence more desirable, place for customers and staff.

Hoteliers were also provided pamphlets that informed staff as to the signs of suspicious drug-related activity and provided the contact number of an intelligence officer. The intended dividends of a direct contact number were primarily twofold. Firstly, via this number hoteliers had 24-hour access to an intelligence officer who remained their point of contact throughout the experiment. Secondly, in providing a direct contact number, hoteliers could forge a working relationship with an intelligence officer, mitigating any perceived barriers to reporting suspicious behaviour. Via this personal contact, officers hoped to better strengthen ties with the hotel community and bolster that community's confidence in WA Police. It was postulated that this direct and personal access would allow hoteliers to report intelligence to WA Police with added confidence that the information would be actioned."

## Treatment Group 2-Letter Engagement

Hotels allocated to Treatment Group 2 received a letter and no personal engagement from any officers beyond business-as-usual policing (responses to calls for service). The letter mailed to hotels contained similar information to that conveyed at the face-to-face meetings, likewise encouraging hoteliers to report suspicious drugrelated criminal activity and reminding hotel staff of their statutory duty to do so. In addition, the letter also included the information pamphlets provided to hotels in Treatment Group 1, but instead of being given the contact number of an intelligence officer, hotels in Treatment Group 2 were provided the contact number for Crime Stoppers.

#### **Control Group**

Hotels allocated to the control group received no engagement whatsoever, in person or via a letter, outside of business-as-usual policing.

#### **Timeframes and Periodic Engagement**

The experiment was a blind design. Accordingly, intelligence officers were not aware which hotels had been allocated to Treatment Group 2 or the Control Group. The experiment phase of Safer Hotels began in December 2017 for a period of six months, during which time hotels in both treatment groups were engaged twice. Over a 16-day period (3rd December–19th December 2017), intelligence officers personally engaged with hotel staff from all hotels in Treatment Group 1 and letters were sent recorded delivery to the manager at each hotel in Treatment Group 2.

In April 2018 (halfway through the trial) hotels in Treatment Group 1 and Treatment Group 2 were "re-engaged". In this, the letter mailed to Treatment Group 2 hotels was re-sent to hoteliers. Concurrently, intelligence officers re-visited the hotels in Treatment Group 1. In meeting again with hoteliers, officers sought to build upon their existing relationships by answering any questions or addressing any of their concerns.

Over the course of the experiment, officers would, on a monthly basis, email hoteliers within Treatment Group 1. Emails would provide feedback to the hoteliers on the various means in which officers were able to operationalise the intelligence received from hotels and thank hoteliers for their continued engagement in the trial. This feedback provided hoteliers with a story, outlining the real impact calls to the Safer Hotels team had in apprehending offenders involved in criminal behaviour within the hotel community.

# Operation Safer Hotels sought to test the following hypotheses.

Targeted engagement of hotel staff, encouraging the reporting of suspicious drug-related behaviour, will lead to:

- An increase in intelligence reporting (Hypothesis 1)
- An increase in the number of associated offences (Hypothesis 2)
- An increase in the severity of associated offences (Hypothesis 3)
- An increase in the number of identified offenders compared to a control group receiving no engagement (Hypothesis 4)."

#### Data

Three principle metrics were employed in assessing the efficacy of the various engagement strategies.

#### 1. Intelligence

Intelligence data was drawn from WA Police's State Intelligence portal, IDM. The intelligence reports were identified via automated searching for hotel names and variations thereof. In some instances, the exact detail of highly caveated information/intelligence would not be accessible to the analyst team. However, to minimise the threat of these sensitive reports to internal validity, care was taken throughout to identify their existence to ensure accurate recording of intelligence received from each hotel across all three groups.

Recorded Offences: Data pertaining to criminal offences/incidents was derived from the WA Police Incident Management System (IMS) based on location matching.

#### 2. The Severity of Recorded Crime

Alongside the count of offences, the Western Australian Crime Harm Index was used to provide a metric for the severity of criminal offences (House & Neyroud, 2018).

#### 3. Drugs Seized

Like the offences data, the quantities of drugs seized was also derived from IMS. The quantities of drugs seized were crossreferenced against approximate, street-value price of the drugs from the latest Illicit Drug Data Report from the Australian Criminal Intelligence Commission (2017b).

# Findings

The experiment began with 126 hotels grouped into 42 triplicates. However, in the course of the experiment, two hotels closed. Both hotels were incidentally from the same triplicate. Accordingly, the entire triplicate was removed from the dataset. As a result, the analysis below is predicated on the 123 hotels left in the experiment, grouped into 41 triplicates.

Operation Safer Hotels was explicitly an intelligence gathering' operation. Accordingly, the total count of IDM intelligence reports received relating to the targeted hotels was the principle metric by which the success of the operation was adjudicated. A significant difference was found in the total number of intelligence reports received from the hotels across the three engagement strategies (F(1,120) = 3.150, p = .046). Post-hoc testing (Tukey's HSD) found that the statistically significant difference was between the count of intelligence reports from personally engaged hotels and the control group. In this, hotels that had received personal engagement from officers were associated with over three times as many intelligence reports compared to hotels that received business as usual engagement.

In addition, there were also substantial differences in the overall count of intelligence reports between treatment groups and the control group. Hotels from Treatment Group 1 reported over twice as many IDM reports (41 reports) compared to the Treatment Group 2 hotels (20 intelligence reports), while the control group provided 13 intelligence reports (See Figure 2). However, the only statistically significant difference was the aforementioned difference in the count of intelligence reports between Treatment Group 1 and the control group.

Exclusively analysing drug-related intelligence reports (this time at a 10% level of significance) hotels from Treatment Group 1 also recorded nearly three times as many intelligence reports compared to hotels from the control group and over twice as many reports compared to hotels that received a letter only (F(1,120) = 2.500, p = .086).

#### Figure 2:







The above findings demonstrate the efficacy of personal engagement with hoteliers. Further, these findings are entirely consistent with the findings of Operation Galley, reiterating the efficacy of personal engagement to encourage intelligence reporting.

In line with the theoretical framework surrounding police legitimacy and the aims of the experiment, hoteliers were more willing to report crime to the police. In this, hotels that had been personally engaged by officers were associated with a higher number of recorded offences. Specifically, over twice as many offences were recorded relating to Treatment Group 1 hotels compared to hotels from the control group. Furthermore, in terms of crime harm (House & Neyroud, 2018), over three times as much "harm" was recorded from hotels in Treatment Group 1 compared to the control group.

Differences in the count of offences and corresponding crime harm, whilst sizeable, were not statistically significant. Consistent with the literature on spatial criminological studies, a "power few" phenomenon emerged when analysing the rates of criminal activity (Sherman, 2007). In this experiment, criminal activity was concentrated at a small number of hotels. Specifically, just five hotels (out of the sample of 123) were responsible for over half of all offences analysed and just 34 hotels (27% of the sample) were responsible for all offences (Figure 4).

While this affected the outcomes of the statistical analysis, it remains clear that the hotels that had been personally engaged by intelligence officers were overall associated with the identification of substantially more offences than hotels from Treatment Group 2 or the control group.

The quantitative differences in intelligence resulting from each engagement strategy were also associated with an apparent qualitative difference in the utility of intelligence received. In terms

Figure 4: "Power Few" Count of Offences by Hotel



of the approximate values of drugs seized from hotels during the experiment period, approximately \$11,000 worth of drugs were seized from hotels in Treatment Group 1 compared to approximately \$5,500 worth of drugs seized from Treatment Group 2 hotels and only a few hundred dollars' worth of prescription medication seized from control group hotels.

In addition to drug seizures, over four times as many offenders were identified at Treatment Group 1 hotels compared to the control group, and twice as many identified compared to Treatment Group 2. Herein, it is worth noting that there were 39% more criminal incidents associated with hotels from Treatment Group 1 (compared to the control group) but 400% more identifications. These results reiterate not just a difference in the quantity of intelligence, but a difference



in the quality of the intelligence received subsequent to personal engagement; intelligence which appears to be comparably more operationally actionable.

# Discussion

Consistent with the findings of Operation Galley, Operation Safer Hotels empirically demonstrates the positive effects of proactive engagement with hoteliers and their staff to encourage intelligence reporting. The Operation suggests that hotel staff, having received personal engagement, are both more cognisant of the signs of suspicious criminal activity and, thereafter, more willing to report criminal activity to police. In effect, via personal engagement, hotel staff have been encouraged to take up a role in the form of third party policing; the dividends of which are clearly apparent. While the use of a letter has less resourcing impact, the impact of personal engagement was found to be consistently worth the effort expended in making personal contact.

There are a number of points that bear further attention. Firstly, across all engagement strategies, there was a clear demonstration of the power few effect, wherein a small number of hotels were responsible for all associated offences. Specifically, just 27% of the hotels in the dataset were associated with any offence whatsoever1. The realisation of this power few suggests that actual criminal activity may be concentrated at a select number of hotels.

This provides avenues for specified targeting of hotels. For example, further analysis could seek to identify one or more particular factors that could serve as indicators of likely criminal activity at a hotel. Correlation analysis between total CAD activity at the hotel and the average price of a room, hotel reviews, and size of the establishment has so far yielded negligible results. However, it is worth noting that a number of the high-crime hotels involved in Safer Hotels are situated near a highway, freeway or major road network."

The reliability of this association warrants further analysis. However, preliminary analysis does suggest that the comparable accessibility of the hotel may be a factor in the level of criminal activity in the hotel.

Alternatively, it is possible that certain characteristics of the staff or business arrangements within the power few hotels led to these establishments being more inclined to engage with officers and subsequently make reports of suspicious behaviour. For example, further research may find that the presence of single or multiple managers, and/or specific security staff or arrangements, may make some establishments more "rewarding" to engage than others. This also makes it possible to conclude that our intelligence gap relating to true criminal activity at some hotels remains, and there is room for further innovation in the development and assessment of targeting strategies for these establishments.

The benefits of the personal engagement strategy were achieved within the existing resources of the intelligence unit that led the Operation. The Operation did not generate any negative reaction from hoteliers or the hoteliers' professional body, the Western Australian Hotels Association and the Operation was, in fact, largely welcomed by hoteliers. Finally, it is clear that police contact with the community matters, as does the type of contact we choose. In an intelligence gathering environment, every police contact does indeed leave a trace.

#### End notes

Of the 27% of hotels that were associated with an offence, the spread of the hotels was largely consistent across the engagement strategies – 10 were from Treatment Group 1, 10 were from Treatment Group 2 and 14 were from the control group.

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# Exploring Police Demands for Violent Behaviour on State of Origin Game Nights

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## **Executive Commentary**

As the topic of domestic, family, and sexual violence remains of national interest, this article considers if we can predict when crimes are more likely to occur. This article is as relevant today as it was in 2019 as police agencies are considering where to deploy scarce resources to prevent

# Abstract

Since its inception in 1980, the popularity and engagement with State of Origin has grown to become one of the key events on the Australian sporting calendar. The heightened competitive environment associated with the State of Origin series is often accompanied with violent behaviour among fans, when compared to standard rugby league season games. In anticipation of an increase in alcohol consumption, crowd disturbances, reported assaults and emergency department presentations, which are commonly reported nationally and internationally following sporting games, Queensland emergency services typically deploy additional staff on State of Origin game nights. Little research, however has explored the relationship between State of Origin game nights and trends in violent behaviour (such as assaults and domestic violence) in Queensland. Using police calls for service data and police reported offence data, the presentation explored the effect of game nights on assaults and domestic violence in Queensland, and the influence of game outcomes on policing demands. The findings of which have informed strategic decisionmaking of police resources on State of Origin game nights.

## Introduction

The State of Origin is an annual, best-of-three, National Rugby League (NRL) football series, played between the Australian States of New South Wales (NSW) and Queensland. It is generally played at stadiums in NSW or Queensland's State Capital, and unlike other NRL games, is typically played on a Wednesday night. Almost 40 years since its inception, it has arguably become one of the largest sport followings in the country (Dimitrov, 2008) and is often accompanied by player and spectator violence and the use of emotive, war-like or militaristic reporting language by media outlets (Hutchins, 1997).

With regards to the relationship between sport and spectator violence, there is a general consensus in international studies supporting a relationship between contact sports and violence (see Abudato, 2015; Card & Dahl, 2011; Kirby, Francis & O'Flaherty, 2014; Ostrowsky, 2014). Across most studies, the consumption of alcohol remains a consistent factor in sport-related violence and as such its effect should be considered in conjunction with the sport-violence nexus. Factors such as use of illicit substances, associating with deviant peers, weather and other social or psychological factors are also believed to contribute to the relationship between sport and violence, making the relationship multifaceted rather than strictly causal (Adubato, 2015; Ostrowsky, 2014; Scholes-Ballog et al., 2015).

Further, when discussing sport and violence, the culture surrounding team sports such as football is often commented upon (Palmer, 2011; Kirby, Francis & O'Flaherty, 2014; Ostrowsky, 2014). The team creates a focal point around which a community can be built, often becoming part of the individual's social identity (Ostrowsky, 2014). The state identity associated with the Queensland team in State of Origin may serve to heighten these relationships. This strong team identification is potentially more likely to produce violence directed against an opposing team (Wann, Peterson, Cothran & Dykes, 2003), and as

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and disrupt domestic, family, and sexual violence.

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such, losses, particularly unexpected or 'upset' losses, are therefore likely to provoke a strong negative and violent reaction (Card & Dahl, 2011).

However, there is substantial variation in the conclusions of studies which explore the relationship between violence and sport, particularly in relation to the effect of the outcome on the likelihood of violence. Examination of three different demographics and contact games with comparable features showed an increase in domestic abuse from upset losses in America (Card & Dahl, 2011), an increase in assaults and domestic and family violence (DFV) regardless of game outcomes in the UK (Kirby et al., 2014), and an increase in emergency department presentations from winning in Geelong, Victoria, Australia (Miller et al., 2012). Reasons for this variation in the literature includes varying importance placed on confounding or contributing factors Ostrowsky (2014); and an unwillingness by the public to link DFV with national sports (Abudato, 2015).

Ultimately, the aim of this research is to determine the expected increase in the demands for police in relation to violence on State of Origin nights. Research within Australia has begun to explore the nature of the relationship between State of Origin games and violence. Livingston (2018), for example, analysed recorded incidents of domestic and non-domestic assaults on Wednesday nights across New South Wales, comparing State of Origin game nights and non-game nights between 2012 and 2017. The study found a significant increase in domestic assaults on game nights, as opposed to the surrounding Wednesday nights in which no game occurred. Furthermore, no significant increases in violence were found in Victoria, indicating that the effects identified in NSW were causal. Conversely, using emergency department presentations data from Queensland hospitals, Furyk and colleagues (2012) found a decrease in presentations on State of Origin game nights when compared with non-game nights. While these studies do not consider the impact of game outcomes on violence, these studies do indicate that police demands on State of Origin game nights, and the nature of the relationship between State of Origin and violence, is relatively unknown in the Queensland context.

# **Present study**

The relationship between State of Origin, violence and assaults has not yet been examined using Queensland Police Service (QPS) data. As such this research will examine the relationship between sport and violence in a Queensland context by exploring whether State of Origin game nights are correlated with an increase in violence (assaults and DFV). The research questions addressed are:

- 1. What is the relationship between State of Origin Game nights and violent behaviour in Queensland?
- 2. Which QPS patrol groups does violent behaviours on State of Origin Game nights concentrate?
- 3. Is there a difference in violence based on the following characteristics?
- 4. What game characteristics predict violence on State of Origin game nights?



Taking into consideration the current literature on the relationship between violence and sporting events, it is expected that analysis of QPS administrative data will show an increase in violence on State of Origin game nights, thus indicating increases in police demand. However, it is not known what the impact of the game outcome on violence will be.

## Methods

For this research, violence was characterised into two main streams, assaults and DFV. Data was extracted from two QPS administrative data systems: the Queensland Police Records and Information Management Exchange (QPRIME), which records incidents/crime data; and the Queensland Computer Aided Dispatch (QCAD) system, which records calls for service data. This data was linked with game outcomes, created from archived news articles on wins, losses, and predictions for each game. The timeframes for inclusion were 2015 to 2019, only capturing Wednesday evenings (6:00pm) to Thursday mornings (6:00am) during the months May, June and July across Queensland, reflecting the same timeframes utilised by Livingston (2018), and the months that the State of Origin series is played each year.<sup>1</sup>

## Results

# Relationship between State of Origin and Violent Behaviour

To test if there were significant differences in the number of violent incidents between game nights and non-game nights, several t-tests were performed. The results, displayed in Figure 1, indicated that for both forms of violence there was a significant increase across Queensland on a State of Origin game night compared to a non-game night. This was evident in both calls for service for police, and in reported incident data.

# Figure 1 Average number of violence incidents on State of Origin game nights and non-game nights



Source: QPRIME and QCAD.

### Violent Behaviour by QPS Patrol Group

When geographically mapped by patrol group, there were substantial differences identified in the frequency of violent incidents on State of Origin game nights. Of the 51 QPS patrol groups, Brisbane City Central (N = 16), Cairns Metro (N = 9), and Logan (N = 8) patrol groups were the most common areas for calls for service for assaults on State of Origin game nights. Similarly, assaults as reported crime data also demonstrated high trends in Brisbane City (N = 20) and Cairns Metro

(N = 13). However, surprisingly, there was a high number of reported assaults in Mount Isa patrol group (N = 19).

Comparatively, Cairns Metro (N = 58), Rockhampton City (N = 58) and Mount Isa (N = 50) patrol groups were the most common areas for calls for service for DFV on a State of Origin game night.

However, Mount Isa (N = 120), Cairns Metro (N = 66) and Mackay City Stations (N = 60) patrol groups presented the highest number of reported DFV incidents.

#### **Characteristics of Violence**

To explore the nature of the violence by offence and offender characteristics on game and non-game nights, several t-tests were performed using data from QPRIME. The offence and offender characteristics examined included: the involvement of alcohol and other substances, the scene of the violence (private residence or public location, including licensed premises), indigenous status of the offender, and for DFV, the relationship between the respondent and aggrieved. The results of the t-test indicate there were no significant differences between offence and offender characteristics on game and non-game nights for both assault and DFV reported incidents.

#### **Game Characteristics**

Given the focus of this research is on violence and sport, game characteristics, such as game location (home/away), outcomes (Queensland win/loss) and predicted outcomes, were also explored to determine if aspects of the game can predict the increase of violence on a State of Origin game night. The findings of the Ordinary Least Squares (OLS) regressions indicate that there were no significant relationships between any of the game characteristics in predicting assaults and DFV on a State of Origin game night.

#### Discussion

Understanding the expected demands of police during State of Origin is key to improving responses to such events. The findings demonstrated that regarding the first research question, there was a significant increase in violence on a game night compared to nongame nights.

Regarding the second research question, the findings demonstrated violent behaviour on State of Origin game nights was substantially concentrated in several QPS patrol groups. The concentration of violence in the patrol groups were different for assaults and DFV, and for calls for service and incidents reported. This suggests that calls for service do not reflect police demands alone. We found that, particularly for Mount Isa, there were fewer calls for service for violence incidents compared to the number of violence incidents reported, suggesting violent incidents on State of Origin game nights may be reported after the fact and police need to be cognisant that demand on game nights may not be concentrated to that particular night, but in the days or weeks following as crime is reported and investigated.

Regarding the third research question, the offence and offender characteristics between game and non-game nights remained largely the same. There were no significant increases on game nights regarding the number of incidents involving alcohol and substances, the scene of violence, offenders in terms of indigenous status, and for DFV incidents, the respondent and aggrieved relationship. This indicates that the demand for police across Queensland to respond to violence is simply of a greater volume across all types of offences.

Finally, regarding the fourth research question, game location and outcomes did not predict calls for service or reported crime, indicating that the level of violence does not vary no matter what the State of Origin results are on the night. Further, discrepancies in the expected game outcome and the actual game outcome (i.e. whether Queensland was predicted to win and instead lost and vice versa), did not predict calls for service or reported incidents.

This work adds to the large amount of literature which finds sporting events is correlated with an increase in reported violence. Interestingly, the findings of the research align with the findings of Livingston (2018) who using NSW police data found an increase in domestic and nondomestic related assault on State of Origin game nights. However, it contrasts with the findings of Furyk and colleagues (2012) who using Queensland hospital data found a decrease in emergency department presentations, including for presentations of injury, poisoning and other external causes. Given the discrepancy between the findings of our study which uses Queensland police data and that of Furyk and colleagues (2012) who used Queensland hospital data, it could be speculated that police are able to effectively diffuse violence on a State of Origin game night which correlates with a decrease in injury severity and emergency department presentations, or that the nature of violence on game nights is that it is less likely to inflict injury. However, this is speculative and investigation of the relationship between police and hospital data on State of Origin game nights in Queensland is therefore warranted.

Interestingly, there were no differences between game and non-game nights in terms of the offence and offender characteristics. The finding that violence involving alcohol and substances did not significantly increase on game nights was unexpected, as previous studies identified a positive correlation between sporting events and alcohol, and the impact of alcohol on both assaults and DFV (see Kirby et al., 2014).

This work also adds to the variation in the findings of other international studies, which report different impacts of game characteristics on assaults and domestic violence. Speculation regarding the failure to find significance for an upset-loss in this research, in contrast to many other studies, may be due to a relatively low number of unpredicted losses for Queensland in the dataset. Only one of the 13 games included in the dataset were unpredicted losses. As such the data is likely to be insufficient to produce any predictive findings for unexpected game outcomes.

#### Implications for policing

This research has considerable implications for rostering of staff on game nights. Firstly, these results identify a need for greater police resources to respond to violent behaviour on State of Origin game nights. Secondly, the results also identify that demands for police resources to respond to violence which occurred on State of Origin game nights may not be realised until after the night, as crime is reported and requires investigation after the fact. Thirdly, the results identified that the type of violence being responded to on game nights is largely the same as non-game nights. Finally, the results identified that police demands do not vary depending on the results of the game.

#### Limitations and future research

There are several limitations to undertaking research using administrative data, and this study was no exception. First, the extent of DFV occurring within a community is difficult to determine, as underreporting is common among the population of DFV victims (Felson, Messner, Hoskin & Deane, 2002). Many incidents are not reported at the time of occurrence, with some never reported to the police at all (Voce & Boxall, 2018). As such, the data used only reflects self-reported violence to the police, or police-detected violence. Second, the research only considered police demand for violent incidents, and did not consider demand for other incidents on game nights that police routinely respond to, including public order and mental health incidents. Thirdly, the research does not consider the time taken to respond to violent incidents, which limits the scope of how demand was defined.

Finally, due to restrictions in the dataset, it was not feasible to examine or control for the offence and offender characteristics when analysing the impact of the game location and outcome. Nor was it feasible to link the QPRIME and QCAD datasets to identify whether calls for service resulted in recorded incidents. Research that addresses these limitations would be beneficial in enhancing the understanding of violence and police demand on game nights.

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#### End Note

 While State of Origin games were traditionally held on a Wednesday evening, the 2018 and 2019 Series held one game on a Sunday evening. Due to the limited occurrences, Sunday was excluded from the dataset as to not disproportionally alter the dataset and allow for accurate comparisons between game and non-game night.

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# Identifying Some Misconceptions about Evidence Based Policing: A Research Note



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## **Executive Commentary**

The research note remains relevant and important for those of us working to communicate the value and impact of Evidence Based Policing and research in a policing context. Fundamentally it reminds us that everything we do occurs in a broader cultural context, and that context may promote or inhibit our ability to communicate the impact of an initiative. We can't be complacent in that regard and need to keep

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working on ways to demonstrate relevance and value, we also need to understand what works in communicating what works.

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## Abstract

There is some evidence to suggest that police professionals may not have a complete understanding of evidence-based policing (EBP) and often hold misconceptions about it. To explore awareness of EBP, and the extent to which police professionals believe it is a valued approach, sworn and civilian members in seven police agencies in Canada were asked an open-ended question about its usefulness. Drawing on an analysis of

142 responses, we identified and present six major misconceptions: (1) EBP relates to legal evidence, (2) EBP results in police being taken off the streets, (3) EBP is more work,

(4) EBP undermines community policing, (5) EBP is not effective, and (6) EBP lacks officer input. We discuss these misconceptions within the context of the development of EBP in Canada, and its relative newness. We then explain how these misconceptions could and should be addressed by EBP practitioners.

## Introduction

This research note is informed by analysis of answers to an open-ended question appended to a survey conducted on police receptivity to empirical research. The purpose of the general survey was to replicate Telep and Lum's (2014) receptivity research with Canadian police agencies. We developed a modified version of the Telep and Lum survey1 that included three open- ended questions not found in the original version. These questions were intended to help us more thoroughly explore knowledge of evidence-based policing (EBP), and the extent to which respondents value this approach and feel that it should be used in relation to their work and that of their organisations.

To help us explore knowledge and/or awareness of EBP, we initially coded and analysed answers to the question: 'Would you consider evidence based policing to be a good approach for your department?' We then re-analysed comments in which the respondent did not demonstrate knowledge of EBP, looking to identify themes that might help practitioners better understand where knowledge gaps or misconceptions exist. In the pages below, we present the six themes we uncovered.

## Method

#### Recruitment

Given the difficulties associated with securing high response rates for online surveys, we felt that approaching a number of policing agencies would be beneficial to achieving a larger sample size. To ensure representative diversity, we sought participation from agencies in seven provinces, and included a mix of municipal and regional police agencies. Therefore, whereas the original Lum et al. (2012) pilot study and the subsequent Telep and Lum (2014) follow- up study drew on samples of one and three police agencies respectively, we asked seven police agencies across Canada to participate.

More specifically, senior command staff at selected police agencies were contacted by email and asked if their agency would participate in the survey. For those agencies that agreed to participate, an internal email was sent out to all employees (sworn and civilian) describing the survey, its goals, and how to access it online. Surveys were posted online as early as 18 October, 2016 using Qualtrics, and the last survey remained active until 15 February, 2017. Follow-up emails were sent to potential participants prior to the survey being discontinued.

## **Data Collection**

The original survey consisted of five parts (Lum et al. 2012; Telep & Lum 2014). Section one explored officers' knowledge of both policing evaluation research and EBP more generally. The second part asked officers for their views of science and scientific research. Section three asked officers about their openness to innovation, including new policing techniques and strategies. This was followed by section four, which explored views on higher education and its relative

"merits within the field of policing. The survey concluded by asking for demographic and institutional information.

Respondents were advised that they would remain anonymous, details of their survey would not be shared with their employer, and that they could skip any questions they wished. In total, 586 individuals completed the general survey2. Of these, 352 sworn officers and civilian employees answered open ended question #2: 'Would you consider evidence based policing to be a good approach for your department?'

# **Data Analysis**

After the survey data was downloaded into the Statistical Package for the Social Sciences (SPPS v. 23), a second version was created in Excel and sent to a team member

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for exploratory, inductive coding. The initial coding indicated that once simple 'yes,' 'no,' 'maybe,' and 'unsure' responses were removed-because they failed to yield detailed information regarding knowledge of EBP-the remaining answers provided richer details as to the relative degree of knowledge of EBP held by respondents. The result was a dataset of 149 responses. These responses were then re-read and placed into one of two categories: 'Demonstrates some knowledge/awareness of EBP' or 'demonstrates no knowledge/ awareness of EBP.' Decisions as to what category a response would be placed into were made based on whether the response clearly referenced some aspect of the collection, analysis, and/or use of 'research' in policing. We were helped by the fact that many participants simply stated that they did not know what EBP was.

Drawing on the initial coding results, a decision was made to re-code the data using a more focused approach centred on the theme of 'knowledge'. This entailed identifying themes based on recurrent patterns in responses, noting related sub- themes, and then mapping these sub- themes to develop a larger picture of what the data said about officer knowledge of EBP.

To ensure the findings were reliable, all coding was independently verified by another team member. A third team member reviewed the manuscript to ensure all figures were accurately reported.

# Results

#### Initial Results

Question: 'Would you consider evidence based policing to be a good approach for your department?'

Response received: 'Possibly, but I would like to see more analysis and/or evidence of what this strategy would entail.'

Of the 149 comments analysed, we found that 42 evidenced some knowledge of EBP. For example, one respondent opined that 'research and evidence based policing provide a concrete foundation to gear policing strategies.' Another replied, 'policing strategies based on scientifically conducted, and peerreviewed studies make far more sense than relying on old-fashioned systems based on tradition.' An officer from a different agency stated, 'I believe scientific study has a definite role to play in analysing the effectiveness of policing methods and tactics.' Conversely, 107 participants clearly stated they did not: (1) know what EBP was,

(2) were confused by the meaning of the word 'evidence' in this context, and/or (3) provided other indicators that demonstrated a lack of knowledge. The most common answers in this third group included: 'Not sure what is meant by this term' and 'DONT KNOW WHAT THIS IS.' Other examples in this category are discussed among the themes presented below.

In short, the responses analysed indicated that most participants who responded to this openended question in some detail were unfamiliar with the concept of EBP. In the next section, we examine some of the themes that emerged in their comments. The identification of these themes can, we believe, help EBP proponents address what might be common gaps and/ or misconceptions about EBP among police practitioners.

#### Themes Identified from the Data

In this section, we draw on the thematic analysis we employed to help us better understand gaps in knowledge of EBP. In particular, we wanted to know more about what police professionals who were not familiar with the concept thought EBP might mean and where there might be misconceptions or misapprehensions that could be addressed through future knowledge mobilisation efforts. In total, we identified six themes worth further attention.

Legal evidence, not research. One of the biggest sources of confusion is rooted in the name. The term 'evidence based policing' is derived from an earlier, similar movement—evidence based medicine (Sherman 1998). In medicine, evidence refers to results achieved from rigorously designed research. In the policing environment, evidence has traditionally meant something entirely different: A fact that meets standards of admission into a set of legal proceedings.

Not surprisingly then, some individuals who lacked knowledge of EBP misunderstood the concept of evidence and its use in this context. 'If I knew what it was,' one respondent acknowledged, 'Isn't all policing evidence based????' Another agreed that EBP is a good approach because 'that is what I use to determine how an event occurred and who is at fault.' Another replied, 'I don't know what other method could be used. Court oversight examines and weighs "evidence".' One officer thought that EBP was common sense: 'As a police officer or investigator it is our job to follow the evidence and let the evidence dictate the course of the investigation.' Still another worried that the emphasis on evidence could be problematic because 'There are some investigations that have no evidence at all other then the allegation that's been made. Evidence takes time to gather and is not always available at the time it's needed, ex. DNA evidence.' Some did, however, see the benefits if it meant that 'with CCTV or other evidence you won't need witness accounts to corroborate what occurred.'

**EBP = Cops taken off the streets.** A key component of identifying 'what works' in EBP is centred on the effective and efficient allocation of policing resources. A raft of studies-from hot spot policing to foot patrol evaluations-have all been directed at determining which policing strategies and programs use resources wisely, without producing crime displacement and other backfire effects (Slothower, Sherman & Neyroud 2015; Weisburd et al. 2011). While it is the case that a strategy implemented on the basis of one or more of these studies could result in police officers being reallocated, or assigned new or different tasks, we are not aware of any case in which a study resulted in police officers being removed from patrol or other frontline duties. This was, however, a concern of some respondents.

One respondent wanted to see 'more details on implementation' but was concerned that EBP might entail removing police officers from the community. 'People still want to see a cop at the door when they call,' he advised. More specifically, some participants worried that frontline officers might be reallocated from patrol or community responsibilities, or new officers simply assigned away from patrol to work in offices generating research. One participant expressed this concern in the following way, 'The onus is placed on general patrol officers, who are already incredibly overwhelmed/worked with calls for service. We are over specialised and do not have enough boots on the ground. Cops on corners, stop crime - Not cops in offices researching new policing tactics.' This concern was shared by another officer, who advised, 'I am a huge advocate of not removing policing agencies from close contact with the community it serves. There must be a balance. Removing oneself from community stakeholders to "hide" behind a computer is, in my opinion, a flawed strategy.'

**EBP increases workload.** Despite the fact that EBP is not about increasing workload or

cost inefficiencies, but rather about ensuring that existing systems and processes whether they be crime-control strategies or human resource decisions—are effective and efficient, some participants expressed concerns that EBP would increase officer workload and/or policing costs. Recall one of the comments cited in the paragraph above, where a member expressed how their agency was 'overwhelmed' with calls for service. This view was expressed by an officer from the same city, who stated: 'We need to get more staff in the reactive component...as the city is tied down due to calls for service.'

An illustrative example of the 'inefficiency concern' was found in the following statement: 'I don't know much about this strategy but it sounds like it would involve a great deal of leg work prior to implementing any strategy. How cost effective would that be?' Others cited a 'lack of resources' as a barrier to adopting an evidence based approach: 'The theory is practical, however the lack of resources do not support it's [sic] effective application.' Another officer thought EBP might be 'somewhat' useful, but worried if there would be 'appropriate resources to use.' Still another expressed concerns over the possibility of an extra work burden that might render police less efficient: 'Would the paperwork alter our ability to serve the public? How would this approach change our workflow? Would it hamper our ability to provide information to prosecutions (in a timely manner)?'

#### EBP = less or no community policing.

EBP is an approach that can work well in combination with other major policing philosophies, notably with problem-oriented and community policing models (Bueermann 2012). It is not a total or absolute vision in the sense that its adoption necessarily requires an organisation to abandon reliance on these other models. Indeed, many police services have found that EBP and community policing can be highly complementary. Unfortunately, this message may have failed to gain wider traction among Canadian police audiences. This suggestion is based on the fact some respondents stated they would only be supportive of EBP if their organisation did not abandon their community policing approach.

'As long as the community based policing still plays an underlying role,' one participant wrote, he would view EBP as a valuable approach for his organisation. Another similarly replied 'Yes,' to EBP, but that its use 'also needs to include aspects of community policing.' Yet another officer thought EBP would be a 'great approach', if used as 'an extension of community based policing.' While a fourth individual thought there was 'no doubt every police department or service should use evidence base policing to support their presence and implications,' she was concerned that EBP might actually inhibit community policing because: 'EBP does not allow Police to fully integrate themselves in the community as Policing is a "sense," a "gut instinct," a commitment to the community!'

**EBP is not effective.** As we have stated throughout, much of the focus of EBP is on increasing effectiveness and efficiency, particularly (but not exclusively) on issues of crime control. However, this message has also failed to translate to a wider audience, as one major theme represented in several comments received was the perceived ineffectiveness of EBP strategies and programs in addressing crime and disorder.

In essence, respondents whose comments fell under this theme perceived their world as too fluid and/or complex to be accurately captured in data. As one explained: 'Statistics are not an accurate reflection of actual crime and disorder.' This view was shared by an officer in another service: 'Policing is a dynamic, fluid response to volatile often unknown circumstances. Due to this nature, no amount of statistics or analysis can accurately or effectively assist in the deployment of resources or the profiling of crime.'

Someone else disagreed about the utility of EBP in assisting with resource allocation issues, but similarly thought those changes would have little effect: 'I believe it is a good model in that it puts resources in the right places...but...it will not improve the crime rates we have here.' One explanation for why reliance on research evidence could have little effect on crime rates was offered by an officer in a different city: 'Only incarceration works at minimizing crime in a noticeable way. Evidence based policing and any other form of resource allocation will only be effective at disrupting trends or displacing crime.' Some felt that EBP would be a good approach, but only 'when combined with traditional approaches to policing' because it is not 'practical'. Another individual could give only qualified support to EBP because it is 'a reactive approach' and thus limited in its potential effectiveness.

**EBP lacks officer input.** We received fewer comments about the last theme that arose; however, we include it here as we felt it important to highlight. A core principal of EBP is that the research produced be a product of the experience of police officers and the academic skills and knowledge of the researcher (Sherman 2013). Part of the job of EBP practitioners is to ensure that officers and civilians in relevant roles throughout an organisation are engaged with the research creation process in a meaningful way, and that this expectation is embedded in how EBP is communicated and used. Some respondents were unaware of this condition, which was reflected in their comments. The most illustrative example came from a participant who was not supportive of the idea of EBP because 'I find that when academics try to mold policing without actually having experiencing it for themselves, the solutions that are brought forward are either impractical or unrealistic.'

## Conclusions

Since its introduction in 1998, the EBP approach has generated a significant volume of research and knowledge mobilisation activity. Since 2010 alone, there has been the development of four national EBP Societies3, the recent launch of a new journal4, as well as a host of workshops and annual meetings. Each of these activities has helped to generate a global membership of over 5,000 police and civilian police employees in one or more of the Societies, with that number growing daily. All of this would seem to suggest that knowledge and awareness of EBP is becoming increasingly mainstream within policing circles. Findings presented in this research note indicate, however, that EBP practitioners need to do a better job of communicating what EBP is versus what it is not to policing audiences.

There is some good news, though. The focus of our research has been on Canadian police agencies. In Canada, EBP is a much more recent arrival in contrast to the U.K. and Australia. For example, whereas the U.K. Society of Evidence Based Policing was founded in 2010, the Canadian version launched in 2015. Furthermore, EBP- themed workshops, articles, videos, and other modes of knowledge exchange only really began in Canada in 2016. Thus, it is hardly surprising that significant knowledge gaps remain and it is encouraging that a reasonable number of police professionals in Canada evidenced some knowledge of EBP. The utility of this research note is to provide some insights into how to respond to the knowledge gaps that do exist, and, perhaps more importantly, to the misconceptions and misunderstandings highlighted by our survey respondents.

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#### End Notes"

1. Certain questions related to rank and education that were not appropriate for Canadian police services were revised. In addition, Canadian-based journals, magazines, and agencies were added as options to certain questions to make them more applicable to a Canadian policing audience. Lastly, a question related to the efficacy of "legitimacy policing" was removed, and four other strategies were added that were arguably more appropriate for Canadian agencies.

2. Results from the larger receptivity study will appear in a second, forthcoming paper.

3. In the United Kingdom (U.K.), Canada, the United States (U.S.), and Australia and New Zealand.

4. Police Science, launched by the Australia-New Zealand Society of Evidence Based Policing in 2016.



# Preparing Policing for the Predictive Analytics Future

**6**00

Authors: by Dr Geoffrey C. Barnes, Western Australia Police and University of Cambridge Dr Jordan M. Hyatt, Drexel University"

# **Executive Commentary**

While not focussed on the rise of generative AI, this article is very prescient on the challenges around the rise of big data, algorithmic processing, and highly complex data-informed decision-making. Many of the observations around ethical use mirror emerging governance around AI in policing and are just, as if not more relevant, to our environment today as they were when first published.

Advanced computer algorithms are already being used to forecast all kinds of human behaviour. From purchasing decisions made in the supermarket to the safety (or lack thereof) of new teenaged drivers, predictive analytics are now a common part of everyday life. These tools allow countless businesses to make decisions based on often startlingly accurate predictions of future events, and to produce these forecasts in a manner that is consistent, evidence-based, and that— at least at first glance—appears to be objective analytics present enormous potential value to policing seems abundantly clear. It also seems equally certain that these techniques will eventually enter into everyday use within most police agencies, especially those challenged by reduced governmental funding.

Regardless of the utility and accuracy of these forecasts, however, it remains very unclear whether the public and their representatives will accept the use of predictive analytics within the criminal justice system (Harcourt 2008; O'Neil 2017). Many consumers seem content with having their own behaviour encoded, scrutinised, and forecasted for commercial purposes, such as by using store loyalty cards, establishing trackable accounts on shopping websites, and having their predicted purchases advertised to them on Facebook. It is also true that most of us have no idea how often our behaviours are being predicted by some form of analytic software. But for the purposes of modern policing, the public acceptance and all-too-common lack of transparency seen in the commercial realm present both an opportunity and sincere challenge.

On one hand, it is tempting for police agencies to mirror the patterns already established in the marketplace. Law enforcement agencies have collected decades of machine-readable administrative data, and invest enormous sums of taxpayer money to maintain and store both countless terabytes of information and innumerable paper files. From this perspective, it seems obvious that this information should be put to use, and that these many years of information technology costs should be leveraged to the maximum extent possible to inform better policing outcomes.

Moreover, predictions are already part of what law enforcement agencies do every day, and these forecasts are often produced so quickly and with so little transparency that we may not even think of them as predictions. An arrest decision made by a third-year constable at the scene of a domestic dispute is, at least in part, based on a prediction of whether the situation will escalate or lead to repeat calls for service in the next few hours. Assuming that this arrest occurs, it leads to an extensive number of other decisions concerning bail, protection orders, charging, prosecution, guilty pleas, sentencing, and any number of other choices—that depend upon on often quickly made assessments of what the offender is likely to do in the future. Given that these informal forecasts are happening anyway, First Published in Police Science Vol.2 No.2 Summer Edition 2017

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it seemingly makes perfect sense to apply advanced data analytics to enhance their accuracy and ensure consistency across an agency.

This same economically-oriented perspective could be extended to suggest that there is little need to provide any more transparency to the public concerning these algorithmic predictions than is currently available regarding the countless decisions that are already being made within the legal system by human actors. While the public is usually told the outcome of our decisions, we have never been either able or expected to explain every single element that played a role in reaching them. Why should our predictive algorithms be any different, especially when they are so commonly used and accepted in other areas of everyday life?

On the other hand, the legal and criminal justice systems are simply different. Our decisions carry massive weight, affecting both individual liberty and community safety (Angwin et al. 2016). Our ability to make these decisions relies extensively on pubic consent, and is financed from the public purse. The public will also ultimately bear the cost of constructing, deploying, and defending any predictive analytic solution used within the legal system. Even though they may use many of the same technologies and techniques, predictive systems developed for the police and other legal actors will almost certainly be held to different standards and expectations than those used by commercial concerns (Berk & Hyatt 2015; Oswald et al. 2017).

These differential demands become guite understandable when considering just a small number of hypothetical anecdotes. The same people who are unconsciously willing to hand over the highly personal data that allow Amazon to suggest interesting new books may be far less accepting when a computer determines that their son-in-law is 'low-risk', and can be safely bailed after a domestic dispute involving their daughter. Other community members will question a sudden increase in police presence-likely leading to more stops, searches, and arrests (Ratcliffe et al. 2015)-stemming from an algorithmic forecast that their neighbourhood will experience elevated levels of crime. And it seems increasingly clear that defendants and their attorneys are likely to be deeply disquieted by the notion that an algorithm, which is neither transparently constructed nor available for cross-examination, may produce forecasts that have a direct impact on decisions by the court (Angwin et al. 2016; Harcourt, 2008; Hyatt et al., 2011). The courtroom and the street, however, are vastly different environments. Predictive analytics will inescapably play a crucial role in the future of policing. But before this future can take hold, law enforcement agencies must first lay an appropriate foundation to both support the construction of predictive models, and govern their use after they have been built.

This essay was written with three purposes in mind. First, it sets out a number of steps that police agencies can take today to prepare their

data systems for the coming wave of algorithmic forecasting. Second, it presents some concepts that will help to distinguish more advanced and potentially useful approaches from those that rely on older and less accurate techniques. Finally, it describes some of the ethical concerns that should be firmly recognised and addressed before even attempting to construct a predictive analytic solution within the justice systems. A firm understanding in all three of these areas is likely needed now, if only because the fields of artificial intelligence and machine learning are expanding at an exponential pace.

This rapid expansion means that more and more consultants, academics, and businesses are now working in this sphere. If it hasn't happened already, these people will soon arrive in meeting rooms throughout our agencies to make grand promises of what their technologies can do. Whether these promises can be met, however, depends in large part on how prepared we are to deliver the information needed to power these approaches, the questions we ask, and whether the public determines that our predictive solutions are more beneficial than worrying.

# 1. Preparing the Data Environment

Most policing agencies will already have a number of large and complex data systems available for use, but these systems may not be configured and designed in a manner that allows easy linking between them, or easy access to key predictors. For our purposes, the term 'predictor' refers to any value from the past (e.g., number of prior arrests for violent crime, age at the time of first arrest, current age) that could be used by an algorithm to predict future criminal behaviour. Many of the most common problems in obtaining these predictor values are endemic to most law enforcement data environments. Solving these problems now will not only allow the eventual development of algorithmic forecasting, but will likely also make existing systems much stronger and better able to respond to other needs.

Linking Keys. Linkable key values are a crucial concern. All too often, offenders and victims are assigned one (often numeric) key in one data system, only to be given an entirely separate key value in another. Similar issues exist in geographic data, with different databases often recording information at varying scales and using different definitions to demarcate areas of interest. The lack of common, linkable keys is an especially common problem when data are shared between agencies. Database professionals have known about this problem for decades, of course, and the most common solution has been to create a cross-agency person (or area) identifier that can be used across multiple data systems. These values are often defined at the state or national level, but are not always reliably recorded in agency- level databases.

In working with two neighbouring counties in Pennsylvania, for example, we found that the same statewide court database properly recorded the offender's state-issued identifier key for over 99% of all criminal cases in one county, but was available for only 75–80% of the cases in the other. Even if missing key values occur only rarely, they can present an exponentiated level of difficulty when multiple systems must be linked together. An individual agency may be satisfied when one of their systems records a linking key 97% of the time, but when this same scenario is mirrored by multiple partner agencies and the key value is needed to join 10 systems together, over a quarter of all linking attempts will fail in connecting to at least one data source. Under these conditions, it may be impossible to construct the reliable data set needed to build a predictive model. Another issue, especially in older data systems that likely still exist in most law enforcement agencies, is the physical limits that prevent external identifiers from being stored, at least in their entirety. One system in Pennsylvania, for example, was unable to adapt when the court system adopted a much longer alpha-numeric identifier for each criminal case. The solution was to truncate the case number so that it could fit into the available space, but this adaptation meant that the value from the agency database could not be directly linked to data provided by the court system. Some other databases may be limited to recording only a single external key value, which may be a problem when multiple potential linking keys exist at the state and national levels.

The solution is to pay rigorous attention to the quality of linking key values across the full range of law enforcement data systems. While internal database issues are not something that agency leaders normally pay much attention to, this particular issue is crucial to ensuring that a 'big data' future is possible. Leaders can communicate its importance simply by asking for regular reports of what linking key values are being stored, how often these values are missing, and how often validated links are possible to other key databases within the criminal justice system.

Access to Raw Data. Once the databases can be linked, the next question is whether the appropriate people within the agency have sufficient access to them. Many of those who perform data analysis within police agencies, and who would therefore seem ideally placed to lead the development of predictive analytics, may not have the level of access needed to combine all of the data into a single source. Most agencies provide analysts with access to a series of 'pre-digested' data sets, which are often created for an entirely different purpose. These existing data sources necessarily encapsulate a large number of different coding decisions—such as national offence counting rules, exclusion criteria which make some records invisible, and an unknown number of missing variables. These limits may be counter-productive in constructing a big data solution, where rich and more complete data are essential.

Modern predictive analytic solutions work best when provided with as many different sources of relevant information as possible (Barnes & Hyatt 2012; Berk 2012). This means not only the linking of data held in different systems, but also combining and transforming a relatively small number of values to form a multitude of potential predictor variables. These kinds of calculations, however, almost invariably require access to the raw information held in the 'back end' of the agencies' data structures. Analysts are often not provided this level of access, and database administrators will be understandably concerned about allowing it to those seen as 'outsiders'.

The 'siloed' organisational structure of many police departments can also be a barrier in giving the right people the necessary access to the right data. Different teams, with different purposes, often work in very different information technology environments. They literally speak different (programming) languages. Analysts may not be able to write the computer code needed to extract data from deep back end data stores, while database administrators may not understand the nuances in calculating the many different predictor variables that are needed to power an advanced forecasting model. In many cases, people from a mixture of different teams will need to work together, and it will take time for them to reach an understanding of each other's needs and capabilities.

Matching Construction Data to Live Forecasting Data. Building

a predictive model is very different from deploying one to provide real- time forecasts in a live operational environment (Barnes & Hyatt 2012). The construction data that are used to build a forecasting model are usually obtained and combined in a very different manner than will be required when the model goes 'live' - and is expected to assess cases in the field or to inform actual decision-making. Construction data are assembled with the dual luxuries of time and patience. The data sources do not need to be kept current, since all predictive models are necessarily constructed using historical data. Static copies of the data are perfectly sufficient for these needs, and these copies can be easily moved to and assembled in a common location, even when they are sourced from multiple external agencies. The nuances of different network settings and database platforms can be painstakingly resolved so that all of the data sources exist in the same format, with common linking keys ensuring access between them all.

These same conditions are unlikely to exist in a live environment, and these differences can sharply limit the predictor variables that can be used within a forecasting solution. There often may be excellent predictors that can be calculated and used in the construction environment, but that would present enormous technical challenges to obtain in a real-time live forecasting. These situations present a dilemma. If the predictors from a challenging data source add novel and useful information for forecasting purposes, the difficulties and financial costs of connecting to a live version of the data may be necessary. In other situations, the reverse may be true.

For example, Philadelphia has developed a series of advanced risk forecasting models for its adult probation population (Barnes & Hyatt 2012; Barnes et al. 2012; Berk et al. 2009). Each of these models has been limited to local data, meaning that only offences that were committed within the city limits were available for use in calculating predictors. Geographically, however, the city of Philadelphia is rather small and it is surrounded by a number of populous suburban counties whose offending data were not available when the models were built. These conditions led to strong concerns that incoming probationers may have rather extensive criminal histories outside of Philadelphia, and that access to offending data from across Pennsylvania would make the forecasts more accurate. For construction purposes, it was rather easy to obtain a one-time static copy of statewide offending data for Philadelphia probationers, which allowed the research team to rebuild the model using these more extensive data. A comparison with the existing local model showed that adding offending data from outside Philadelphia produced only a token increase in predictive accuracy. The amount of technical work that would be needed to establish live access to the state database was extensive, and the modest improvements that would result were judged to be not worth the cost.

In preparing for algorithmic forecasting, it may be easier to deal with these data connectivity challenges in advance well before these kinds of dilemmas arise. Establishing inter-operability across different criminal justice data systems can produce numerous benefits, far beyond the utility this effort will lend to predictive modelling. And, for the purposes of predictive analytics, data pulled from external data sources can be profoundly important. A recent forecasting model developed to predict the reoffending of arrestees in Durham Constabulary (UK), for example, gained 5 percentage points of overall predictive accuracy by adding just a single predictor variable from police intelligence systems (Barnes 2016, 2017; Urwin 2016).

Data Storage Strategies. Anyone working with police data will

eventually encounter a need for information that is unfortunately available only in free-text form. While some inventive strategies exist to pull useable data from free text, these approaches tend to be adhoc and often miss information that was not recorded in the expected manner. These problems tend to be most acute on older data systems, where adding new fields to the database is either expensive or impossible, and the user base eventually begins to develop 'workarounds' to record necessary information in whatever free text fields happen to be available.

For example, one correctional data system in the United States provides only a small number of fixed fields to store the results of urinalysis drug screenings, and each of these fields is devoted to a single specific substance (alcohol, cannabis, opiates, etc.). Over time, the agencies which use this system have expanded the number of substances in their screening panels, and are now testing for more substances than the database has room for. Since the database vendor is no longer supporting this version of the case management system, there is no way to create new fields to hold the data from the additional substance screenings, and these results are instead being manually typed into a 'comments' text field. This is both inefficient and promotes the creation of multiple types of errors.

In general, this approach works acceptably well for case management staff, who typically look only at a single offender's record at a time, and who can easily interpret the written comments of another human user. But for aggregate analysis, and especially for a big data approach to algorithmic forecasting, these results are exceedingly difficult to access and properly encode into machine-readable predictor values. As a result, none of the forecasting models developed for these agencies have been able to use prior drug test results to predict future criminal behaviour, despite the fact that this information might very well be strongly related to offending or relapse.

This kind of difficulty is not at all limited to older data systems. More modern police data systems frequently take a 'records management' approach to data storage, essentially allowing users to write freely, create their own data definitions, and upload external documents as needed in an effort to keep all available information in a single location. But for analytical purposes, information that is buried and available only within scanned PDFs files or uploaded word processing documents is all but completely inaccessible.

In several jurisdictions, potentially essential predictive information such as risk screening documents completed at the scene of domestic violence incidents—are stored as uploaded files in this manner. In some case, the only available method to extract this information for analysis would be to employ data entry workers to read the scanned documents and enter the appropriate details into an entirely separate database. Obviously, such an approach would quickly become cost-prohibitive, especially when these values are needed in a live forecasting environment and must be made available as quickly as possible.

In preparing for a future of predictive analytics, police data systems may need to adapt. Law enforcement databases not only need to allow the viewing and management of individual cases, but also need to make these same data available in bulk for analysis purposes. Moreover, our relationship with database vendors may need to change. All too often, agencies purchase 'off the shelf' data products, and pay for only limited aftermarket support. Any desired changes to the database post-installation can be prohibitively expensive under these support contracts, and changes can become completely impossible once the contract expires. Agencies may be better off with in-house support who are capable and empowered to make data structure changes quickly and at no additional cost, and who can ensure that users do not need to result to free text and other workarounds that make analytical data impossible to obtain. Although the upfront costs may be higher, the retention of long-term, local control will likely avoid expenses and data quality issues over time.

# 2. Distinguishing Between Different Predictive Analytic Technologies

As predictive analytics become more common, the number of people engaged in this activity is continually expanding. As police professionals, it can be very hard to distinguish between the genuinely good opportunities and the consultant who is simply trying to sell a re-badged iteration of an old-school regression model that was first developed in the 1980s. Simply asking a few informed questions, however, can help separate the wheat from the chaff.

Was this forecasting solution developed elsewhere? When making most purchasing decisions, it is often a good idea for an agency to buy something that has a proven track record of success in another jurisdiction. This approach seems logical when acquiring police vehicles, body-worn cameras, uniforms, and protective equipment. In predictive analytics, however, the reverse is more likely to be true. Predictive models are very strongly tied to the data that were used to construct them. One real concern with these models is referred to as 'overfitting', which happens when a model does a fantastic job in predicting the outcomes presented within the construction data, but cannot adapt to new data that are pulled from a different time frame or location. Every predictive model will overfit to a certain degree, but most contemporary techniques provide ways to measure its impact and reduce its effects. When assessing overfitting, however, these techniques inherently assume that all of the predictor values are measured the same way, and will continue to be measured the same way in the future.

The key problem, of course, is that different agencies almost never measure things the same way. This is especially true for the historical data that are used to construct any predictive algorithm. Every police force has its own unique history with information technology.

One agency may have installed a new data system four years ago, but never transferred any of the data from the older systems onto the new one. Another agency may have two systems in place: a 'live' system that contains all of the data from six years ago to the present, and a static copy of an older database that is still available to view what happened prior to the newer system. A third agency may have been on the same data management system for 11 years, and was able to successfully convert 90% of data from its prior systems into the new one. Each of these histories will produce very different values when calculating a predictor such as an offender's age at the time of their first (recorded) arrest, and different extraction techniques will be needed in different places.

Other factors can also affect historical data. In Philadelphia, for example, the election of a new prosecutor (after 19 years of service by the previous one) produced vast changes in how criminal charges were laid against individual defendants. Different charging standards were applied, and different teams of attorneys were assigned to make these decisions. The result was a strong shift in the way that charged crimes were recorded, beginning in January 2010 and with several months of changes until full implementation was achieved.

No other city is likely to have experienced this same shift in charging standards at the exact same time as Philadelphia. It is therefore very unlikely that any predictive model developed in Philadelphia after 2010 would be directly transferrable to another location. Every jurisdiction has its own unique history of shifting standards and different recording systems, and will almost certainly get the best forecasting results if a bespoke model is constructed from local data.

How many predictors are used? Just a few decades ago, predictive modelling required a series of very finely-tuned decisions regarding the number and selection of the predictor variables that could be used to forecast the desired outcomes. There were limits on how many variables could be used, and there were strong requirements that none of the predictors were too strongly related to one another. The exact definition of which predictors were 'too strongly related' varied based on the methods being used and an array of statistical tests as the model was being built. Finally, the precise impact of any mistakes in making these decisions was often very hard to determine. Violating the core statistical assumptions of these regression models could often be safely permitted under some conditions, but could be rather disastrous in other circumstances.

Modern machine-learning methods, on the other hand, are typically much more forgiving. In many ways, these approaches are able to take a 'kitchen sink' approach to predictor selection. With the random forest techniques used to develop models in Philadelphia (Barnes & Hyatt 2012; Berk et al. 2016) and Durham (Barnes 2016, 2017; Oswald et al. 2017; Urwin 2016), for example, there is essentially no risk in adding an additional predictor. At worst, a new predictor will make no impact and will essentially be ignored, but its inclusion is very unlikely to reduce forecasting accuracy. Moreover, even predictors that have only a weak effect in the overall model may end up being quite important in specific sub-sets of the targeted population. The predictors that function best in forecasting the crimes committed by young urban property offenders may be quite different from those that are most important with the far-smaller subset of middle-aged rural sex offenders.

For these and a number of other reasons, there are clear advantages in being able to make use of many different predictors. Solutions that strongly limit the number of predictors are quite likely to be based on older technologies, and will probably not be able to leverage all of the complex relationships that can exist between different variables.

Does the solution allow natural relationships between variables? Older regression techniques often assume that the predictors and outcomes have a fixed relationship to one another. For example, many of these techniques assume that a linear relationship exists, and that every unit of change in one value will be linked to an exact and constant amount of change in another. Real life, however, rarely cooperates by falling so neatly on a straight line. Contemporary modelling methods, on the other hand, make no assumptions about these relationships and allow the data to naturally define how each predictor is associated with the forecasted outcome. These relationships often take the shape of rather complex curves, but these curves are likely a better match for natural reality than blind (or inferred) assumptions of a fixed and inflexible mathematical function.

Another crucial question is whether the predictor variables are allowed to have an inter-dependent relationship with one another. Most older forecasting technologies assume that all of the predictors are strongly related to the outcome that is being predicted, but are not related at all to one another. Newer machine-learning methods, such as random forests, make no such assumptions. Predictors can be related to one another, and can even exist in dependent relationships where a given variable is only useful when a number of conditions exist across other predictors. Again, this kind of approach appears, on its face, to be a better match for messy natural reality than simplistic assumptions that the predictors have little or no connection with one another.

#### Can the solution apply different costs to different kind of

errors? Any prediction can produce (at least) two different kinds of errors. For example, Berk et al. (2016) produced a predictive model that was designed to forecast whether a newly-arrested Philadelphia domestic violence offender will be re-arrested for another domestic violence offence within the next two years. For each offender, this model can make one of two different forecasts: (1) that the offender will produce a new domestic offence during this two-year period, or (2) that the offender will not produce any new domestic offences. These forecasted outcomes can then be overlaid with the actual observed outcomes that these offenders produce over the follow-up period, forming something known as a 'confusion matrix' that details both the accuracy and the errors of these forecasts. The confusion matrix for this particular model is shown in Figure 1, simplified somewhat from the original version.

# Figure 1: Confusion matrix for the domestic violence forecasting model produced by Berk et al. (2016)



In this figure, the accurate predictions are contained within the red and blue boxes. In these cases, representing 49% of all forecasts, the outcome predicted by the forecasting model matches what actually happened during the 2-year follow-up period. The two grey boxes represent the two different kinds of errors that can occur within this forecasting model. The larger, lighter-coloured box (46%) contains all of the false positive errors, where the model predicted that new offending would take place (a 'positive' prediction), but in fact no new crimes occurred. The smaller, darker box (4.5%) contains the false negative errors. In these instances, the model predicted the total absence of new offending (a 'negative' prediction), but these offenders went on to commit at least one new domestic violence offence.

The crucial thing to understand about this model is not its overall level of accuracy, which likely seems somewhat unimpressive at just 49%. Instead, the most important aspect of these results is the ratio in size between the lighter (46%) and darker (4.5%) grey boxes. In this model, there are almost exactly 10 times as many false positive errors

as compared to false negative errors.

This ratio of 10-to-1 is no accident. It was an intentional part of the model's design, and reflects a decision that each false negative error (i.e., missing someone who will actually re-offend) is 10 times more costly than a false positive (i.e., predicting that someone will re-offend when they actually will not). Since false positives have only one-tenth the cost as false negatives, they occur ten times more often.

At least some modern machine-learning techniques, such as random forests, allow us to apply these differential costs to different kinds of errors. They allow us to specify not only which error we most want to avoid, but exactly how rarely we would like these errors to occur compared to alternative forms of error. Older regression models, and even some advanced predictive approaches, take a contrary perspective. These techniques treat all errors as being equally problematic, and attempt to maximise the overall predictive accuracy by reducing the total number of errors.

In criminal justice settings, however, some errors will almost always be seen less desirable than others. Generally speaking, we typically prefer to make cautious errors (where we over-estimate the actual level of risk) as opposed to dangerous ones (underestimates of actual risk). The exact cost ratio will vary from solution to solution, providing yet another reason why models work better when they are tailored to local conditions than when they are developed elsewhere and then deployed in many varying circumstances. For this particular model, the cost ratio was set at 10-to-1, but this value is infinitely adjustable and would likely be different—perhaps even reversed—in other contexts.

Given this 10-to-1 cost ratio, however, it is possible for us to reassess the accuracy of model produced by Berk et al. (2016). The question no longer needs to be seen as how accurate the model is in an overall sense (a somewhat uninspiring 49% of all predictions), but how well the model avoided making the least desirable form of error (false negative), which occurs only 4.5% of the time. Among the subset of forecasts where the model predicts that no re-offending will take place (i.e., 4.5% + 35%), the forecast is correct 89% of the time.

In this sense, the model performs quite well in both producing accuracy where it is most desired, and in distributing the error types in a way that matches the costs associated with them. This ability to apply differential costs to errors is likely to be an essential element to algorithmic forecasting in policing, and approaches which are unable to take costs into account will likely have only limited utility for our purposes.

# 3. Ethical Concerns regarding Algorithmic Forecasting within the Legal System

Although advance warning of criminal behaviour clearly provides many benefits for policing, it does come at a cost. Numerous concerns have been raised in both the popular press (Angwin et al. 2016) and scholarly writings (Harcourt 2008; O'Neil 2017; Starr 2014) concerning the use of forecasting within the criminal justice system, and its potential reinforcement of existing social biases. We must be clear about these risks. Even the most advanced predictive analytic techniques cannot currently correct for the fact that many of the outcomes that we would most desire to forecast—violent recidivism, domestic victimisation, and geo-temporal crime patterns, to name just a few—are currently recorded in a way that reflects historical trends and potentially systematic biases regarding racial groups and underprivileged neighbourhoods. If the source data reflect a disproportionate distribution of these outcomes, then the predictions based on these data will almost always reflect the same distribution.

In many ways, these models simply cannot function in any other way. If the majority of recorded violent recidivists come from a specific racial or ethnic category, a predictive model for this kind of reoffending would not be doing its job if its forecasts did not reflect the same distribution of outcomes. This statement remains true even when more controversial predictor variables, such as race and postcode, are excluded from the model, leaving the algorithm with no direct information on the ethnic origin of the offenders in the data. A good model will continue to reflect the actual distribution of its targeted outcomes.

Even though this connection between (potentially biased) source data and forecasted outcomes is largely impossible to avoid, that does not remove the obvious disquiet that stems from any disproportionate distribution in the forecasted risk groups. Why should the community accept the use of a forecasting model which, by all appearance, seems to perpetuate the existing biases within the criminal justice system?

The exact path towards community acceptance of these techniques currently remains unclear, but the ethical implications of forecasting within policing need to be considered well before an agency begins to pursue predictive analytics.

Oswald et al. (2017) suggest one possible framework to guide agencies on the ethical deployment of algorithmic assessment tools in the policing context, referred to with the acronym ALGO-CARE. This framework suggests that any forecasting solution should meet each of following criteria:

**A** – **Advisory.** The forecasting tool should only support normal officer discretion rather than replacing it. Model forecasts should not be the only factor considered in making decisions.

**L** – **Lawful.** The algorithm's use and construction should be considered against the legal principals of necessity, proportionality and data minimisation.

**G** – **Granularity.** The data used to build the model should avoid common problems in data analysis, such as the compatibility of data from disparate sources, missing data, and inferencing.

**O** – **Ownership.** Police agencies should own the models that they use, and should avoid proprietary contracts that might preclude disclosure of the algorithm's inner workings.

**C** – **Challengeable.** Agencies should consider whether individuals and their legal advisors ought to be notified whenever forecasting is used, and should publicly present regular validation of the model's forecasts.

**A – Accuracy.** The stated accuracy of the algorithm should be validated periodically, and the potential consequences of inaccurate forecasts should be made clear. Agencies should also consider producing a written justification for any error cost ratios used to construct the model.

**R – Responsible.** Ethical considerations, spanning wider concerns than legal compliance, should be factored into decision-making concerning the algorithm. An external ethical review committee incorporating independent members could be established for this purpose.

**E – Explainable.** The agency should be able to explain the methods used to build the algorithm, including the selection of predictor variables and the targeted forecasted outcomes. If necessary, 'expert witness' testimony should be made available for any court proceedings which question the forecasts.

Regardless of whether our agencies are able meet all of the obligations under the ALGO-CARE framework, it is in our obvious best interests to consider each element before deploying any kind of forecasting solution. These techniques have enormous potential, but they do present genuine risks. Law enforcement systems will not and should not be held to the rather weak ethical standards that govern commercial uses of predictive analytics. By employing the best data available, asking challenging questions to those who seek to build these models, and by deploying them in a transparent and ethical manner, predictive analytics can enter into policing with the greatest chance of success. These tools are simply too powerful to risk deploying them any other way.

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# Twenty-one Performance Indicators for Measuring Success in Family Violence Initiatives

A Manuscript Prepared for Submission to Police Science

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## **Executive Commentary**

This article is one of the most practical I have seen relating to performance measures for family violence. These twenty-one performance indicators are readily implemented and can serve as a helpful reference when designing family domestic (FDV) monitoring and evaluation frameworks. If implemented, tracked, and measured these indicators will provide a comprehensive understanding of the impact

## Introduction

Family violence (FV) is an umbrella term encompassing a range of forms, for example, intimidation, physical abuse, emotional abuse, and sexual abuse that occurs between people who have a family or family-like relationship (Goncales & Matos 2016). FV is an important issue because of its prevalence and the significant long-lasting impact it has on victims and their families (Her Majesty's Inspectorate of Constabulary [HMIC] 2014; World Health Organization 2013). Internationally, jurisdictions have called for and/or developed strategies to prevent FV and promote safer families. Commonly used strategies include increasing the awareness of harm induced by FV, increasing social disapproval for FV, encouraging victims and witnesses to seek help, developing multi-agency response to FV incidents, and improving police operating protocols (e.g., Angus 2015; Cussen & Lyneham 2012; HMIC 2014; Taskforce for Action on Violence within Family 2012). Evaluating the impact of these initiatives is crucial to understanding the effectiveness of strategies and developing future programmes.

Difficulties in evaluating the impact of FV initiatives have been discussed in previous research, and some commonly raised issues include data quality and data accessibility across agencies (Ellsberg et al. 2001; Guy, Feinstein & Griffiths 2014; Jaycox et al. 2006; Social Policy Evaluation and Research Unit [Superu] 2013). While these are important issues that need addressing, there is also a lack of literature that offers a comprehensive understanding of the different performance indicators that are relevant in FV evaluation, and their strengths and limitations. Having this understanding would assist researchers and evaluators to develop FV monitoring and evaluation frameworks, identify gaps and limitations of current data sources, and facilitate development of infrastructure that supports the collection and reporting of these metrics. This information gap has motivated the development of this paper, which aims to collate and appraise a comprehensive list of outcome indictors for FV initiatives based on international research.

To increase the applicability of the findings, we have also analysed the data environment in New Zealand, and made recommendations on how to improve the data environment and increase utilisation of existing datasets or data collection mechanisms. Since the challenges faced by FV researchers and evaluators are not unique to New

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of FDV initiatives. Given the focus on FDV, in all jurisdictions, this article remains very relevant and provides key measure for police to use to determine if the strategies they implement with respect to FDV have an impact.

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Zealand, this paper should benefit other agencies that deliver FV initiatives.

## Methodology

International literature on FV was searched and reviewed, including journal articles and official reports from governments and jurisdictions. Relevant publications were identified through Google searches, Google Scholar searches, and specific searches in organisation websites and the Journal of Family Violence (a journal that is dedicated to research on FV). Additional publications were identified by assessing the references of identified reports and papers. Because the aim of this work was to identify and gather a comprehensive list of performance indicators for FV initiatives, the current article does not report on the specific findings from these publications.

## Family Violence Initiative Performance Indicators

Through the literature review, we noted that it is common practice for researchers and evaluators to report on multiple indicators of FV (e.g., Bentley et al. 2016; Guy, Feinstein & Griffiths 2014; US Department of Justice 2005). This has the advantage of capturing a range of potential outcomes of a FV intervention, and therefore increases the comprehensiveness of the evaluation. A total of 21 performance indicators were identified and separated into five broader categories. Having these broader categories helped to identify the similarities and differences across indicators, and improve understanding of the wide range of indicators that are relevant in FV research.

Key findings are presented in Table 1, which intends to serve as a stand-alone guide to researchers and evaluators. Table 1 contains a description of each of the indicators, how the indicators could be presented, and an assessment of the current data environment in New Zealand and opportunities for improvement. Additional commentaries are included below to assist the reader, including a more thorough discussion of the similarities and differences across indicators and the associated strengths and limitations.

#### Category 1: Volume of family violence

Category one performance indicators are basic statistics that

describe the volume of family violence: 1) victims known to police, 2) offenders known to police, 3) callouts to police, and 4) prevalence of FV in the community. The first three indicators are specific to reported incidents, while the fourth captures both reported and unreported incidents. The recording of these indicators may be time-specific, and therefore could be used to assess patterns and changes over time.

The first three indicators are generally extracted from police official statistics, and there are clear distinctions between them. First, offender/offending statistics provide an indication on demand for services offered by the wider criminal justice system, while victim/victimisation statistics provide an indicator of demand for victim-oriented support services. Second, callouts to police are different from the measures on victims, victimisations, offenders, and offences, as the former also includes unsubstantiated cases (Lloyd, Farrell & Pease 1994). The relevance of these indicators depends on the objectives of the research and evaluation."

Apart from reporting the raw count of victims and victimisations (or offenders and offences) and a per capita measure ('n per 10,000 people' or 'n per 100,000 people') (Canadian Centre for Justice Statistics 2015; NSW Bureau of Crime Statistics and Research 2016), having detailed breakdowns provides a better description of the incidents, and therefore improves the value of the statistics.

For example, demographic information of victims highlights the concentration of FV, and data on perpetrator–victim relationships assist the understanding on the motives and opportunities for FV and risks for future incidents (Moore & Browne 2016). For example, the Canadian Centre for Justice Statistics (2015) report FV data by relationship of the perpetrator to the victims (i.e., ex-spouse, current spouse, parent, child, sibling, and extended family member).

It is also important to acknowledge the limitations of police official statistics. Depending on how the data are collated and analysed, changes over time observed in these measures could be a reflection of changes in practice or reporting behaviours, and therefore might not necessarily reflect changes in the volume of FV in the community. Further, measures based on police data exclude behaviours that are not considered unlawful activities, such as emotional or psychological abuse (Canadian Centre for Justice Statistics 2015).

There are two types of community prevalence statistics: lifetime prevalence and point prevalence, and data are typically collected through self-reported surveys (e.g., World Health Organization 2013). Lifetime prevalence refers to the proportion of people in the community who have ever experienced a certain condition, while point prevalence captures incidents that occurred within a specific time period (12- month point prevalence is a commonly used measure in FV, e.g., used by Fanslow et al. 2010). In FV, point prevalence is a better performance indictor than lifetime prevalence. Limitations of lifetime prevalence include 1) retrospective self-reported lifetime prevalence may be distorted or biased towards more recent experience (Morris, Mrug & Windle 2015), 2) changes over an extended time period may be influenced by a cohort effect, and 3) the measure may not be sensitive enough to capture the impact of recent changes in policy and interventions.

As outlined above, data from both police official statistics and community surveys generate useful performance indicators in FV. There are also added benefits in comparing results between community prevalence and police official statistics, which helps to understand reported versus unreported incidents. This understanding could be substantiated by findings from population-based surveys that report on reasons for not reporting FV to police (Angus 2015; US Department of Justice 2005).

#### Category 2: Characteristics of FV incidents

Category two indicators provide contextual information around the frequency and nature of violent behaviours. Five of the seven indicators are derivable from usual recordings by police officers attending an incident: 1) repeat victimisation, 2) repeat offending, 3) chronicity, 4) severity of harm, and 5) escalation of harm. The remaining variables,

6) exposure to inter-parental violence, and 7) co-occurrence, are not always captured in police data but may be available from other data sources (e.g., administrative data from social service agencies and surveys).

Repeat victimisation refers to a person/household who experiences FV repeatedly (Lloyd, Farrell & Pease 1994). Measures of repeat victimisation could, therefore, be a raw count/proportion of FV victims who are repeat victims, or a raw count/proportion of households that experienced FV repeatedly (Lloyd, Farrell & Pease 1994). In contrast, repeat offending refers to people who are repeat offenders in FV, and may include violent behaviours enacted against the same or different persons (State of Victoria 2016). This indicator is measured by the proportion of FV offenders who re-offend (i.e., re-offending rate), and may be substantiated by the number of offences enacted by those repeat offenders (State of Victoria 2016). A better measure of repeat offending would separate the reporting of repeat offending enacted to the same victim versus that enacted to different victims (State of Victoria 2016).

Chronicity refers to the frequency and period of victimisation, and enhances the understanding of repeat victimisation. This may be measured by the number of victimisations experienced over a defined time period. For example, the Conflict Tactics Scale requires respondents to report experience of each violent behaviour in the past 12 months using response options ranging from zero to 20+ times (Straus 1979). By capturing frequency, the mean number of victimisations can be extrapolated (McDonald et al. 2016).

Another way to assess chronicity is to determine the number of years (or days/months) a victim has not experienced FV, sometimes expressed as the number of years lived free from FV (Superu 2015). The duration of repeat victimisation experienced by FV victims is another measure of chronicity. This measures the length of time victims have regularly experienced FV (Birdsey & Snowball 2013; Westmarland, Hester & Carrozza 2005).

It is also necessary to record the level of harm caused by FV to provide a qualitative understanding of the nature of the violent behaviour. The wide range of violent behaviours classified as FV makes it naturally difficult to assess and compare the level of violence. A recent study used the Cambridge Crime Harm Index (CHI) as a measure of harm severity in FV to assess changes in severity experienced by repeated victims over time (Bland & Ariel 2015).

The Cambridge CHI was derived based on the number of days of imprisonment for each offence type under sentencing guidelines, and therefore could only apply on FV behaviours that are classified as an offence under the criminal justice system. If there is a need to expand the scope of the indicator, harm severity may also be approximated according to perceived severity among the general population. A study of European Union citizens assessed the perceived seriousness of five broad categories of FV: sexual violence, physical violence, psychological violence, restricted freedom, and threats of violence (European Commission 2010). It might be possible to use this finding (or replicate the study) to develop a scale for use as a performance indicator.

As a related measure to chronicity and severity of harm, escalation of harm refers to an increase in the severity of harm (i.e., an evolution from psychological abuse to physical abuse), and/or frequency of victimisation over time (Machado 2016). An escalation of harm increases potential danger for victims, and therefore is important to assess (Department of Human Services 2012). The ability to assess changes in the level of severity of harm rests on the availability of a valid measure of severity (as discussed above).

This category also contains two indicators that specifically measure outcomes for children. The first indicator is on children's exposure to inter-parental or parent-to-partner violence, which is considered a form of child maltreatment because of the associated short- and long-term negative consequences (Rizo et al. 2016). The measure of exposure covers a continuum of activities, ranging from being aware of the conflict, overhearing the conflict, witnessing the conflict, seeing the aftermath, and/or being actively involved (e.g., trying to intervene) (Kimball 2016; Peisch et al. 2016).

Exposure may be self-reported by children or family members (McDonald et al. 2016; Morris, Mrug & Windle 2015; New Zealand Family Violence Clearinghouse 2016b; United Nations Children's Fund [UNICEF] 2014), although reporting from the latter may be biased or inaccurate (UNICEF 2014). Some measures, such as the Child Exposure to Domestic Violence Scale, provide a detailed account of the child's experience by assessing frequency, type and proximity of exposure to the violent behaviour (McDonald et al. 2016), while other studies merely assessed the 12-month prevalence of exposure to FV (e.g., New Zealand Family Violence Clearinghouse, 2016b). The other child-centred metric is co-occurrence, which refers to the co-existence of self-experienced and exposure to FV among children. Those who experience co-occurrence tend to have more negative internalising or externalising problems (Kimball 2016).

# Category 3: Measures of response from police and other agencies

It is necessary to gather information on responses from police and other agencies to FV incidents. These performance indicators assist the understanding of the adequacy and quality of support received by FV victims (and offenders and witnesses in some instances), and the resulting legal actions. The first three indicators capture responses from 1) the criminal justice system including police, 2) other government and non-government agencies, and 3) medical providers. The fourth indicator is perceived quality of support and is relevant across service providers.

The measure on responses from police and the wider criminal justice system captures a range of activities, from initial attendance by police to probation (Kelly et al. 2013; US Department of Justice 2005). This may include generic measures such as raw count of investigations, proportion and outcomes of prosecutions, and number of protection/protective order applicants (New Zealand Family Violence Clearinghouse 2016a, 2016b), as well as measures that are

specific to a jurisdiction. For example, in New Zealand, the monitoring of applications and outcomes of the Police Safety Order is highly relevant (New Zealand Family Violence Clearinghouse 2016a).

Apart from seeking support from the criminal justice system, formal support could also be provided by other government or non-government agencies, including social agencies, lawyers/counsellors, and victim support agencies (Cho & Huang 2016). Demand for these services could be captured through the monitoring of administrative data routinely collected by these agencies. Multi-agency collaboration improves outcomes for FV victims, as agencies provide support within their sphere of influence and expertise (Guy, Feinstein & Griffiths 2014). Cross-agency collaboration could be measured by capturing the interactions and referrals made between agencies (State of Victoria 2016).

Injury caused by FV is an objective measure of severity (Hughes et al. 2014). Medical attention, is therefore an important performance indicator in FV. This may be captured by need for medical help, admission to hospital, treatment required, length of hospitalisation, and resulting injury/disability (Hughes et al. 2014; New Zealand Family Violence Clearinghouse 2016b; US Department of Justice 2005). However, administrative data from health authorities are incomplete as they do not capture victims who did not seek health care for injuries (Superu 2013; World Health Organization 2013). This limitation may be overcome by supplementing with population-based surveys (World Health Organization 2013).

The fourth indicator in this category is perceived quality of support. A report from the United Kingdom (UK) noted the importance of incorporating victims' views to monitor police effectiveness in FV, and recommended having a mechanism to routinely collect data from victims (HMIC, 2014). Metrics may include perceived timeliness and helpfulness of the service, and overall satisfaction with the service (HMIC 2014; Superu 2015), as well as the agencies/service providers being non-judgemental (Morrison et al. 2016). Findings on victims' perceived quality of support could be supplemented by observations of agencies' responses, such as police officers who attended the FV incident (HMIC 2014). While the examples provided above focus on law enforcement agencies, this measure may be applied on other support agencies and service providers (e.g., victim support services and health providers).

## Category 4: Impact on victims

Victims of FV may suffer a range of severe and lasting effects. This may include impacts on their physical and mental health, employment and financial stability, education, social competence, and increased tendency for future offending/victimisation in violent crime (e.g., Jaffe et al. 1986; Johnson et al. 2014; Lagdon, Armour & Stringer 2014). It is, therefore, important to use multiple measures to develop a comprehensive understanding of victims' well-being. These measures are useful for assessing the impact of FV on victims, as well as to evaluate the effectiveness of FV interventions in alleviating harm caused by FV (pre–post intervention comparisons).

Victims of FV are susceptible to a wide range of physical and mental health issues as a direct and/or indirect consequence of FV (World Health Organization 2013). Health status may be objectively assessed using biological outcome measures or self-report. An example of a self-report instrument used in FV research is the Short Form Health Survey (SF-36), which measures eight health domains: physical

functioning, role-physical, body pain, general health, vitality, social functioning, role-emotional, and mental health (Asadi et al. 2016). Mental health and distress among children may be measured using age-appropriate instruments, such as the Preschool Age Psychiatric Assessment (Briggs-Gowan et al. 2015) and the Trauma Symptom Checklist for Young Children (Briggs-Gowan et al. 2015).

Apart from physical and mental health, victims' employment may be affected by their experience of FV, such as being late to work repeatedly (Machado et al. 2016) and reduced productivity (Rayner-Thomas, Fanslow & Dixon 2014). Employment, work performance, and financial stability may be used as performance indicators for FV interventions (Rizo et al. 2016). However, findings may need to be interpreted with caution because in some cases, financial stress may also be reported by victims who are still adjusting to changes in life, for example, those who ended their relationship with their abusive partner.

For children and young people, self-experienced and exposure to FV is a risk factor for negative academic outcomes (Teasley 2003). Academic competence and involvement may be assessed by objective measures such as nationally standardised test scores, repeated grades, truancy, and school drop-out rates (Davis et al. 2005). Academic competence and involvement is not only a potential outcome of experiencing FV, it may also influence resilience towards exposure to FV (McDonald et al. 2016). A benchmark measure, if available, should be obtained.

Social competence includes social skills and relationship with peers, and is more commonly assessed among children and young people than adults. Similar to academic competence and involvement, social competence is not only a potential outcome of experiencing FV, but also may help to buffer negative consequences of FV. Compared with FV victims who have a low level of social competence, those with a high level of social competence have better physical and mental health, increased help seeking behaviours, and reduced child-centred aggression (among parents) (Ridings, Beasley & Silovsky 2016). Children's social competence may be captured by parental report, including use of the Child Behaviour Checklist, which captures a wide range of social activities including sport participation, participation in other extracurricular activities, engagement in paid or unpaid work and chores, number of friends, and quantity and quality of time spent with friends (McDonald et al. 2016).

In the context of FV, the term "cycle of violence" refers to the association between exposure to FV (including self-experienced and witnessed incidents) during childhood and subsequent FV perpetration or victimisation during adulthood. This relationship has been demonstrated in a number of studies (Morris, Mrug & Windle 2015; Zvara, Mills-Koonce & Cox 2017). A recent publication from the "Birmingham Youth Violence Study" found that witnessing of FV between parental figures predicted subsequent perpetration of dating violence. Furthermore, experience of harsh discipline predicted both subsequent perpetration of and victimisation from dating violence (Morris, Mrug & Windle 2015). Reporting of the long-term impact of FV initiatives is rare, probably due to the challenges and resources required to gather individual-linked data over a long period of time.

#### Category 5: Impact on society

Societal changes in the awareness, perception, and tolerance to FV over time may be generated through single or multiple interventions,

such as primary prevention programmes and policy development. These broader changes in society affect both the prevalence and reporting of FV (Superu 2015), and therefore are important performance indicators in FV.

Responses are generally collected via population-based surveys. With an adequate sampling methodology and sample size, survey responses can provide a representative view from the general population, and allow statistical comparisons across sub-groups. A Eurobarometer survey of European Union citizens undertaken in 1999 and 2010 focused on domestic violence against women specifically, but still provides good examples of how to measure societal views on FV in general (European Commission 2010). The survey included measures of awareness, perceived prevalence, and tolerance to domestic violence against women. Responses were tracked over time, and compared by country of residence, gender, age, levels of education, and level of proximity to cases of domestic violence against women (including proximity to both victims and offenders).

# New Zealand Case Study

An assessment of the data environment in New Zealand is included in Table 1 to provide an illustrative case study of how to populate these 21 indicators. The assessment has a strong focus on the New Zealand Police databases and reporting practice. A number of limitations associated with the data capture protocol were identified, which have a strong impact on data extraction and reporting. These limitations were not unexpected, given that the primary function of these databases is to record administrative information for operational activities (Gulliver & Fanslow 2012). However, these problems should be addressed to improve monitoring and evaluation activities. Apart from this potential improvement, there are also opportunities to increase collaboration with other agencies, researchers and evaluators to maximise use of existing data collection mechanisms. This may include gaining access to data that has already been collected, or inserting questions into population-based monitors that do not currently capture FV performance indicators.

## Conclusion

The purpose of this paper was to develop a comprehensive understanding of the range of performance indicators that could be used to measure success in FV initiatives, and 21 indicators were identified as a result. We believe this work serves as a helpful reference to researchers and evaluators when designing FV monitoring and evaluation frameworks. The list of performance indicators were collated through a review of the international literature, and we have demonstrated ways to adopt these indicators by using the New Zealand data environment as a case study. We encourage researchers and evaluators in other jurisdictions to use the current table format to analyse their data environment and identify opportunities. This would be an important step towards creating a better data environment for FV research and increasing utilisation of existing datasets or data collection mechanisms.

In the context of evaluating police-led FV initiatives, most performance indicators from categories one and two could be derived from existing police datasets. Developing and tracking these measures are therefore less resource intensive, and do not require additional input from victims, offenders, informants, or other agencies. Collating categories three to five indicators are, however, important for building a comprehensive understanding of the impact of FV initiatives. While the specific tasks of police in FV interventions may vary across jurisdictions depending on their operating strategy and practice, recent papers have emphasised the importance of police taking a guardian role (Stoughton 2016; Wood & Watson 2016). With this changing view and practice, it is important to not underestimate the sphere of influence police could have in FV incident attendance and response, and to reflect this thinking when designing an evaluation framework.

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#### End Notes for Table 1

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# Whariki Haumaru: Partnering with Maori Wardens to reduce Warrants to Arrest

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## **Executive Commentary**

I love this for so many reasons. First, police response to issues are normally so blunt and unsophisticated – this is the opposite – personcentred. Second, this is a problem in every policing jurisdiction – all the hard work has been done – so you would think that when the suspect does not attend court we would take it seriously, but most don't – they just go onto a computer as wanted. And last, what is beautiful about this is the thinking that has gone into it. It is culturally relevant – using wardens to make contact who understand the community better than anyone else and the principles of procedural justice that have be

## Abstract

Failing to appear at court (FTA) leads to a cascade of negative consequences for individuals, their whanau and the criminal justice system. The problem is particularly marked in the east coast of New Zealand's North Island, where 13.7% of events in Napier District Court and 11.9% of events in Hastings District Court resulted in a Warrant to Arrest (WTA) (compared to around 10% across the country). To address this, New Zealand Police's Eastern District and the Ministry of Justice worked with Ahuriri Maori Wardens to develop a new intervention named Whariki Haumaru. The wardens made phone calls to people with active WTAs, using a script that was designed based on a combination of behavioural science and Te Ao Maori principles. This article presents results from a five-month trial to evaluate the impact of the initiative. We find encouraging evidence that wardens were able to contact over a guarter of participants. Further, we find statistically significant evidence that those who were successfully contacted by the wardens were 29 percentage points more likely to make a voluntary appearance compared to those who were not contacted. While further analyses and other research using experimental designs will provide clearer evidence about the impact of Whariki Haumaru, there is promising evidence that this Te Ao Maori and behaviourally informed intervention can increase voluntary appearances at court.

We strongly recommend that New Zealand Police roll out Whariki Haumaru in different districts in Aotearoa, and that they use every opportunity to explore the additional research questions referenced in this discussion. Conducting further research will enable New Zealand Police to make design improvements that bring even greater benefits to the justice system and, more importantly, its participants.

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embedded in the conversation – first and foremost, demonstrating that you have a good motivation. Finally, then, the use of behavioural science – making a plan to attend, conforming the plan and seeking consent. Ultimately this all sounds like common sense – but the truth is policing does not normally operate in this way. The results are profound – the limitations accepted – and I think there are clear lessons here for all police forces.

Alex Murray OBE, Chief Constable, West Mercia Constabulary

# Background

Failing to appear at court (FTA) leads to a cascade of negative consequences for individuals, their whanau and the criminal justice system. Every time someone fails to appear at court, there is a high likelihood that a Warrant to Arrest (WTA) is issued for that person. This leads to issues for the justice sector due to new court events being created (costing the courts approximately \$1.5 million per year) and police time spent on processing, transportation and paperwork relating to WTAs. There are also significant costs to defendants and their whanau, as those with active WTA are more likely to be arrested, experience stress and anxiety, risk a reduction of benefit payments and experience disruption to employment.

Across New Zealand, the FTA rate increased from around 8% in 2014 to 10% in 2020, although rates vary between courts. The problem is particularly marked in the Eastern District, where 13.7% of events in Napier District Court and 11.9% of events in Hastings District Court resulted in a WTA (for events in cases disposed between 1 March 2019 and 29 February 2020). Eastern District Police are estimated to spend between 1,600 and 2,500 hours a year dealing with WTAs .

The easiest way for defendants to clear their warrant is to make a voluntary appearance at court. For most cases, this enables the court to set a new date and to remove the active warrant from the defendant's record. However, defendants may not make voluntary appearances for a range of reasons, including a lack of awareness that they have an outstanding warrant for their arrest and fear about what might happen to them at court. To address this issue, Eastern District Police have been exploring innovative evidence-based solutions.

# The intervention

The Eastern District population has a higher proportion of Maori than the overall national average (33% compared to 17% across New Zealand), so New Zealand Police (New Zealand Police) were keen to design a solution that meets the needs of its community. The police developed a new intervention called Whariki Haumaru, working with Ahuriri Maori Wardens and the Behavioural Science Aotearoa (BSA) team based in the Ministry of Justice.

In this intervention, two Maori Wardens were based at a local police station in the Eastern District for one day a week. They made phone-

#### Figure 1. The script used by Maori Wardens was informed by behavioural science and Te Ao Maori principles



calls to people with active WTAs that had been issued from within the Hawkes Bay area. Using a specially designed script, the wardens encouraged defendants to go to court to clear their warrants. As part of their usual role, the same wardens also attended Napier District Court two days a week, and supported people at court if they made a voluntary appearance.

The script (figure 1) was developed using a combination of behavioural science and Te Ao Maori based principles and was designed to enable the wardens to build rapport with the defendants in a culturally appropriate way. The script is based around the principles of whanaungatanga, pono and manaakitanga, and includes elements of procedural justice and implementation intentions .

# Method

The purpose of the research was to determine:

1. The impact of the intervention on the proportion of defendants with active WTAs who voluntarily appear at court to clear their warrant

We expected that the intervention would increase the proportion of defendants who make a voluntary appearance, and that Maori defendants would particularly benefit from the intervention.

2. The impact of intervention on the proportion of defendants with active WTAs who are arrested

We expected that those receiving the calls would be less likely to be arrested as they were more likely to have cleared their warrants, and that Maori defendants would particularly benefit from the intervention.

374

people were called by

the wardens

The intervention was trialled for five months, starting in March 2021. Each week, the wardens were provided with a list of people with active WTAs, including their name and phone number. Using the specially designed script, the wardens first sought consent before continuing with the call. For all calls, wardens recorded which people they called, how many attempts they made, whether they successfully spoke with the defendant, and whether consent was given to

take part in research. If consent was given, details of the conversation (including intention to make a voluntary appearance) were recorded. If consent was not given, the call was ended.

Every week, the wardens wrote qualitative reflections and stories based on the calls they made and subsequent voluntary appearances. A local police officer supporting the wardens also contributed some qualitative accounts.

Voluntary appearances were recorded by court staff via the usual court processes. Personal data was removed from the dataset and then made available to BSA to be analysed for the purpose of this research.

# Analysis

We used a non-experimental design where we compared outcomes between those who were successfully contacted against those who were called but could not be reached. For each person, we found all WTA which were active at the time they were first called. We then compared the outcomes of these warrants in the two weeks after they were first called (if the person was not contacted) or first contacted (if contact was made). Key outcome measures were whether the person made a voluntary appearance (signified in the data as "WTA withdrawn") or was arrested (signified in the data as "WTA executed").

With this quasi-experimental approach, it is possible that there are some systematic differences between the group that was successfully contacted and the group that could not be reached, which may also impact their likelihood of making a voluntary appearance. This could potentially introduce bias into our results (see Limitations). Although preferable, a randomised controlled trial (RCT) was not feasible for this trial due to reasons of practicality and a small sample size.

To add context and richness to the quantitative findings, we also analysed the qualitative reflections and stories from the wardens and local police officer using thematic analysis .

# Results

### Quantitative findings

Over the first 5 months of the trial, the wardens called 374 people, of whom 76% were Maori, 17% were European, 4% were Pacific and ethnicity was unknown for 2%. 37% of those called were female, and 62% male. Gender was unknown for 1%. Twenty two percent were under 25 years old.

Of the 374 people that were called, the wardens successfully contacted 27% of them (100 people). For around 40% of those who were successfully contacted, contact was made after more than one attempt.



# Figure 1. Proportion of people who were called, contacted and subsequently made a voluntary appearance at court

It appears that contact was less likely to be made with people who were Maori (24% contacted) compared with people who were non-Maori (35% contacted). This difference approaches significance .

#### Finding 1: voluntary appearances

To answer research question 1, we compared voluntary appearance rates between those who were called but not successfully contacted (n=274) and those who were called and successfully contacted (n=100).

We found that for people who were successfully contacted, 47% (48 people) made a voluntary appearance within 2 weeks of being contacted. This was 29 percentage points higher than people who were not contacted (18%; 50 people). This difference is strongly statistically significant (p<0.0001), meaning it is very unlikely to have occurred by chance alone.

Figure 2. Graph showing the percentage of people who made a voluntary appearance within 2 weeks of being called. This difference is statistically significant (p<0.0001).



When comparing the voluntary appearance rates by ethnicity, we found that for Maori defendants, there was a 20 percentage-point increase in the rate of voluntary appearances within 2 weeks for people successfully contacted (38%), compared to those who were not contacted (18%). For non-Maori, this increase was higher (49 percentage-points; 68% compared to 19%). The difference between Maori and non-Maori defendants is statistically significant.

Figure 4. Graph showing the percentage of people who made a voluntary appearance within 2 weeks of being called, comparing Maori defendants with non-Maori defendants. This difference is statistically significant.

![](_page_50_Figure_5.jpeg)

#### Finding 2: Arrests

To answer research question 2, we compared arrest rates between those who were and were not successfully contacted.

We found that 8% of people who were successfully contacted by the wardens were arrested within two weeks of the call (8 people), compared to 14% of people who were not successfully contacted (38 people). While this difference is in the right direction, it is not statistically significant (p=0.1081), meaning we cannot rule out that it occurred by chance.

Of the eight people who were arrested within two weeks of being contacted, five did not make a voluntary appearance and three people did make a voluntary appearance at court but do not appear to have had their warrant cleared on the day. Sample sizes were not large enough to compare arrest rates between Maori and non-Maori.

## **Qualitative findings**

During the trial, the wardens and local police officer wrote accounts of their phone calls and interactions with people at court. In total, 55 separate accounts were recorded between 25 March 2021 and 11 August 2021. The following key themes emerged through the process of thematic analysis.

#### The experience of the defendant in relation to the wardens

# THE WARDENS' PHONE CALLS WERE RECEIVED POSITIVELY BY MOST PEOPLE

In most cases, the defendant appeared to have either a neutral or positive experience when speaking with the wardens. Wardens reported that defendants were often "very happy with the phone call". In a very small number of cases, the call was received less positively, but the wardens were often able to turn the conversation around:

"He was not aware of a WTA, sounded a bit angry asked why a Maori Warden was ringing him, I explained our kaupapa, then told him what to do so he said he would do a voluntary appearance at the Napier Courts straight after work today."

#### PEOPLE FEEL SUPPORTED BY THE WARDENS' MANAAKITANGA

The wardens' accounts showed that they expressed manaakitanga in various ways. This included reassuring people when scared, offering ideas for seeking support for drug addiction, explaining the process and answering questions. They often appeared to go "above and beyond" when offering support (in one example they helped connect a defendant with a potential employer). The wardens reported that people felt reassured, thankful and at ease after speaking with them.

"One of the clients that I was able to contact last week made a voluntary appearance yesterday at our Napier Courts. She was so afraid that she would get arrested. We awhied her, Zita took her to see a Duty Solicitor and when she came out she could not thank us enough and commented that she appreciated for helping our people."

"My delivery to her made her feel worthy, putting her mind at ease and hopefully a positive outcome for her. A new court appearance has been set. She was so grateful to have the call and it gave her strength to turn up, without police arrest."

#### MAORI WARDENS ARE TRUSTED BY PEOPLE IN THE COMMUNITY, SO THEY CAN INFLUENCE PEOPLE THAT POLICE STRUGGLE TO REACH

Several accounts showed that defendants and their whanau have trust in the Maori Wardens. In some cases, defendants demonstrated their trust by sharing personal details about their lives with the wardens:

"I mentioned to her that there is still an outstanding WTA and it must be sorted, her reply she is aware, she has admitted that she has drug addiction and has decided to forego treatment, she simply don't think her problem is bad enough to hit rock bottom."

In some cases, people responded more positively once they found out that the caller was a warden:

"On the first call he hung up on me. Second call he was totally different after I told him I was a Maori Warden and the reason for my call. He was aware of a WTA, then went on to say that he was going to the Hastings Police Station for another mater and then he will pop into the Courts to make a Voluntary Appearance."

A police officer's account shows that the wardens were able to influence people who police have found difficult to reach:

"One of the people contacted by Josie has an extensive criminal history with police and in the past has evaded police at every opportunity, which resulted in many police resources being utilised to apprehend him. When contacted he advised Josie that he would head into the Napier courts to sort his warrant out. On checking this morning, this person made a voluntary appearance yesterday arvo as per his agreement with Josie. This is a great outcome and prevented a potential risk to the community. In addition, also demonstrates the trust and confidence that our community have in the Maori Wardens. Good story to share with all."

#### The intervention's function

SOME PEOPLE WERE ALREADY AWARE THAT THEY HAD A WARRANT TO ARREST, BUT THE PHONE CALL REMINDED THEM TO GO TO COURT AND FILLED GAPS IN THEIR UNDERSTANDING OF THE PROCESS Many defendants were aware of their warrant to arrest, but the warden's phone call explained that they had to go to court. Some defendants were grateful for the explanation and reminder:

"She was aware of a WTA but unsure what to do, she was very thankful for the reminder and said that she would go straight away to make a Voluntary Appearance at the Hastings Courthouse... and thanked me again."

# IN OTHER CASES, PEOPLE FOUND OUT ABOUT THEIR WARRANT TO ARREST THROUGH THE PHONE CALLS

Around one in six defendants did not know there was an active warrant for their arrest before speaking with the warden. In most of these cases, they were aware of the charge but there was some confusion around the process. For example, one person said that a police officer had told her that she wouldn't need to go to court if she paid her bill. Another said that their son (the defendant) had been to the police station recently and the police had not mentioned the warrant.

# THE WARDENS' PRESENCE AT COURT WAS VALUABLE TO DEFENDANTS MAKING VOLUNTARY APPEARANCES

The wardens accounts sometimes focused on interactions they had with people whilst carrying out their usual roles in court. Often, the wardens' physical presence was important e.g. when they "awhied her" or "held her hand". It seems people responded positively to seeing them in court:

"[She] approached Josie and I upstairs at the Napier courts, she was so excited to speak to us about making the volunteer appearance"

# WHANAU CAN HELP DEFENDANTS TO MAKE VOLUNTARY APPEARANCES

In some cases, wardens spoke with whanau members (often mothers) who expressed concern for the defendant and offered to support them to make a voluntary appearance. However not all whanau members have the best interests of defendants in mind – in one example, the defendant said that his ex-girlfriend didn't pass on the warrant that was issued for him.

#### Wider impact

# NEWS ABOUT THE WARDENS' PHONE CALLS IS SPREADING WITHIN THE COMMUNITY

There appears to have been a diffusion of benefits (also known as a positive spillover effect) in Whariki Haumaru i.e. the effects of the intervention are not limited to just those who were directly contacted.

The wardens and local police recorded two separate cases where a defendant made a voluntary appearance at court after speaking to whanau who had received a phone call from the wardens. Local police staff note: "It's clear the benefits of Whariki Haumaru are being spoken about in the community. It demonstrates that others not called by the Maori Wardens are hearing about this Kaupapa, therefore getting WTA resolved."

This could suggest that many defendants in the community need more information and communication about warrants to arrest – not just those that were included in this pilot.

# THE TRIAL HAS STARTED TO INFLUENCE WIDER POLICE CULTURE AND PRACTICE

Local police staff told a story that shows how the wardens' phone calls have started to change how police think about resolving issues on the frontline. In this case, frontline officers who had heard about Whariki Haumaru called the officer working with the wardens, hoping to find an alternative to making an arrest. The officer then chose to help the man to get to court, likely due to his involvement in the trial and understanding the importance of going to court:

"I was contacted by frontline staff who were dealing with a male who had an outstanding warrant. The warrant was low level and the male responded very well to attending officers. In addition, the PST [public safety team] staff had a backlog of incidents to respond to and an arrest of the male would've tied them up for a few hours, once they travelled to and from Hastings. The officers were aware of Whariki Haumaru and called me for my advice before arresting the male. I advised the officers to obtain his details and I will contact him, they did this, forwarded his details to me and were able to come free to attend more urgent matters.

By dealing with the incident in this way, kept PST response in Napier at full strength and didn't apply any further pressure on staff. The male avoided arrest, overnight stay in the cells, having to find travel back from Hastings and returned to his whanau. The male also works part time (late shift) at the hospital so would've missed his shift, potentially losing his job.

I called the male the following morning and he told me that he had some mental health issues and couldn't get a hold of his case worker to provide transport to the courts. I decided to uplift him and take him to the courts. [...]

On a staff perspective, the two Constables were pleased and appreciative that an holistic approach was an option for them and spoke very highly to other staff about the pilot."

## **Discussion** Summary of findings

This study has found encouraging evidence that phone calls from Maori Wardens can increase the likelihood of defendants making a voluntary appearance to clear their warrant at court. Whilst this positive finding applies to all defendant groups, the intervention appears to be somewhat less effective for Maori defendants compared to others. This is an important finding that requires further investigation. The study has also found that the intervention has promise to reduce arrests, but more research is needed to establish whether there is a statistically significant impact. Qualitative analysis supports the quantitative results and indicates manaakitanga and trust as possible reasons for why the wardens could be having a positive impact. Finally, the qualitative accounts also indicate further potential for the intervention; for example it could help shift police culture and spread positive perceptions of the justice system via word-of-mouth in communities.

## Limitations

As aforementioned, an RCT would have been the most appropriate method to robustly evaluate the impact of this intervention. However, when planning the operationalisation of the trial it was important that no further complications were introduced. It also became apparent that active and accurate phone numbers would only be available for a small proportion of people with active WTAs, and randomising would reduce the number of people that we could contact.

This trial therefore used a non-experimental design where we compared people that could be contacted by the Maori Wardens against people who couldn't be reached. This means that the effect we found cannot be directly attributed to the intervention, as there are likely to be underlying factors which contribute to both a person's likelihood of being able to be contacted and likelihood of making a voluntary appearance. For example, people who could be contacted may have more stable employment and income, which could also make it easier for them to make a voluntary appearance.

Another limitation with this research is that the 5-month period included in the analysis yielded a relatively small sample size of people who were successfully contacted (n=100). This means it was not possible to compare between some sub-groups based on age, gender or ethnicity with enough power to find statistically significant results. Future research using larger sample sizes will enable this analysis.

Finally, it should be noted that findings regarding ethnicity should be treated with caution as we relied on ethnicity data captured within police systems. Police ethnicity data is often based on officer-

Continued on next page

reported ethnicity rather than being self-reported by defendants themselves.

# **Recommended next steps**

# Test Whariki Haumaru with a wider audience using experimental methods

Given the promising findings from this study, we recommend testing the intervention in different districts across Aotearoa. This would provide a larger sample size, allowing the intervention to be tested using experimental methods e.g. a randomised control trial. This would allow additional research questions to be explored, such as:

• How effective are phone calls from Maori Wardens compared to others e.g. police officers or other community figures?

• Can we establish causation between the intervention and voluntary appearances? Or is it simply that people who are contactable by phone have more trust in authorities (resulting in them picking up the phone), which also makes it more likely for them to go to court voluntarily?

• What impact does the intervention have on arrests? (This was explored in this study but a larger sample size is required).

#### Examine differences by demographics, particularly ethnicity

Whariki Haumaru was designed specifically with Maori defendants in mind. However, although we found the intervention had positive impacts for all defendants, the effects were weaker for Maori participants. The reasons for this are unknown, but possible reasons include greater challenges in making contact, and greater systemic barriers to attending court e.g. income, employment, transport. Further research, both quantitative and qualitative, is strongly recommended to examine this in more detail and inform the design of the intervention so it is as effective as possible for Maori defendants.

# Test whether the intervention could encourage court appearances before WTAs are issued

Most of the defendants in this trial had active WTAs because they missed a previous court appearance. Whariki Haumaru could be used to help avoid people avoid WTAs in the first place by encouraging initial court attendance. We recommend testing this intervention at an earlier stage in the defendant's experience of the justice system, as this could have meaningful benefits for the person and the justice system.

#### Consider involving whanau members

Our qualitative analysis has provided some evidence that whanau members can be instrumental in encouraging defendants to go to court. This suggests that there could be potential to encourage attendance via whanau members, particularly if the defendant cannot be contacted directly. The ethicality and legality of contacting whanau members should be explored by New Zealand Police.

# Conclusion

While police have a long history of partnering with local organisations to support the community, this study adds value by focusing specifically on Maori Wardens and voluntary appearances, which has not been examined before. It also highlights the potential benefits of aligning procedural justice concepts with Te Ao Maori principles by establishing a partnership between police, central government and the Maori community. We hope this study encourages others to consider this approach when designing interventions in the criminal justice system.

This study provides the first evidence that Maori Wardens can play a role in encouraging defendants to clear their WTA by voluntarily appearing at court. We strongly recommend that New Zealand Police roll out Whariki Haumaru in different districts in Aotearoa, and that they use every opportunity to explore the additional research questions referenced in this discussion. Conducting further research will enable New Zealand Police to make design improvements that bring even greater benefits to the justice system and, more importantly, its participants.

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# **Executive Commentary**

I especially liked this article at the time it was first published in Police Science because of the focused, practical approaches suggested. The strategies outlined remain crucial in contemporary policing for several reasons, not least the targeted approach to identifying and visiting the most harmful domestic abusers which is essential for reducing crime harm, as we know from multiple studies that a small percentage of perpetrators are responsible for most of the harm. The third strategy proposed has now been rigorously tested and rolled out widely, the introduction of Rapid Video Response (RVR) (Rothwell, S., McFadzien, K., Strang, H. et al. Rapid Video Responses (RVR) vs. Face-to-Face Responses by Police Officers to Domestic Abuse Victims: a Randomised Controlled Trial. Camb J Evid Based Polic 6,

#### First Published in Police Science Vol.5 No.1 Winter Edition 2020

1-24 (2022). https://doi.org/10.1007/s41887-022-00075-w) has shown significant advancements in the police response to domestic violence. RVR provides a faster and more efficient way to respond to domestic abuse calls, significantly reducing response times from an average of 32 hours to just three minutes. This method has also led to higher victim satisfaction rates and a 50% increase in arrests, demonstrating its effectiveness in improving service delivery and enhancing outcomes for victims of domestic abuse.

Simon Williams, KPMG Australia (formerly West Midlands Police, Western Australia Police, New Zealand Police and ANZPAA)

![](_page_54_Picture_6.jpeg)

CAMBRIDGE CENTRE FOR EVIDENCE-BASED POLICING

# Cambridge Centre for Evidence-**Based Policing**

Policing Domestic Abuse in the Pandemic: A Pyramid Peak Strategy

Authorship: Professor Lawrence Sherman, Director Cambridge Centre for Evidence-Based Policing, Salisbury House, Cambridge, CB1 2LA, UK

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# **From Reactive to Proactive: Pandemic Policing of Domestic Abuse**

This strategy paper uses decades of strong evidence to craft a three-point strategy for democratic police agencies with digital data support. The three parts of the strategy are as follows:

1. Identify the most harmful domestic abusers in the jurisdiction, including those most likely to commit domestic homicide, using evidence-based targeting.

2. Assign units of two constables with Personal Protection Equipment (PPE) to visit the last known residence of the most harmful abusers, testing a variety of tactics depending on the circumstances, from focused deterrence for ex-prisoners to cognitive behavioural therapy referrals for depressed persons suffering suicidal ideation or making suicidal threats.

3. Test a diversion program for a sample of most emergency calls requesting police to attend domestic abuse incidents, by which the caller is instantly linked to a uniformed officer by video screen with audio-after which the officer could decide if dispatching a car is necessary. If the test is successful in managing domestic issues with no more injury than would normally occur while awaiting a police response, it could be adopted as a standard policy. That decision

would create time for officers to undertake targeted visits, delivering tactics described at point 2.

![](_page_54_Figure_18.jpeg)

Figure 2 (From Barnham, Barnes & Sherman 2017)

# I. Target & Visit Most Harmful Domestic Abusers

1. Most reported domestic abusers never come back to police attention after first incident (Figure 1).

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2. Most repeat domestic abuse offenders commit very minor offences.

3. But just 3% of known abusers cause 90% of the crime harm from reported abuse (Fig. 2).

4. These "severe" abusers are readily identified from existing police records (with consistent findings of studies in Kent, Suffolk, Thames Valley, W. Australia) over multi-year records.

5. Most DA homicide is committed by first offenders, but many murders done by severe repeaters.

6. Most domestic incidents can be screened by 999 staff to identify immediate danger.

7. Pandemic policing can prioritise serious crime harm by giving most 999 calls to R-TREC officers.

8. PROACTIVE pandemic policing can do home visits to all known severe repeat offenders.

9. Police visits to repeat DA offenders in Thames Valley reduced crime harm in a randomised trial.

10. Further RCTs could be rolled out with quick results to test both reactive & proactive strategies:

R-TREC (or IRCs = Investigative Resolution Centres) for most DA calls, home visits to all severe offenders, and a public strategy of targeting unreported high harm rather than stay-home compliance.

#### THREE-POINT SUMMARY

A. TRIAGE: identify highest-risk offenders by 5 years of criminal records, with separate analyses for potential domestic homicide based on suicide risk factors (see part 2).

B. TELEPHONE: using the list of severe offenders to screen 999 and 101 calls about domestic abuse, prioritise responses to those calls; transfer most calls to self-isolated constables working at home, or based in control rooms, who can send a car as needed (See Part 3).

C. TRACK: 2-constable teams proactively visit severe offenders' homes to check welfare

## **II. Prevent Domestic Homicide**

1. 1. The best predictor of domestic homicide is prior suicide attempts or self-harm by the killer (Thames Valley, Leicestershire, All-England, Denmark, W. Australia).

2. 2. Most prior suicide threats or attempts by domestic killers were never reported to police.

3. 3. Mental health trusts do not share that information with police, despite repeated requests (Kent)

4. 3. But police do have records of some suicide attempts, and of all self-harm risks in custody suites.

5. 4. In Leicestershire, across 158,379 arrestees in 1997–2015, those charged in 620 cases of domestic murder or attempted murder were three times more likely than other arrestees to have had a self-harm marker in police records. For completed murders, the ratio was five times higher.

6. 5. If all arrestees with self-harm markers or prior suicide attempts were identified by each police force, the names could be cross-referenced against either incoming calls, or a list of highest-harm DA offenders in the past 5 years.

7. 6. If the highest-harm DA offenders were all visited by 2-constable teams to check welfare, prior RCT evidence (Thames Valley) shows the visits would reduce crime harm from domestic abuse.

8. 7. If the highest harm offenders with any self-harm flags were prioritised for proactive safeguarding visits, there could be cases of severe mental health problems identified that could justify further police and social services action, especially protection of children.

9. 8. Cognitive behavioural therapy (CBT) has been found in two US studies to reduce repeat suicide attempts by over 60%. If police recommended CBT provision by psychologists, a national service could be mobilized by #10 to provide immediate video consultation or a course of CBT therapy.

10. 9. About half of UK domestic homicide is committed by repeat DA offenders, but that risk could rise under lockdown conditions, with no prior warnings to police.

11. 10. Police visits to families at high risk of domestic homicides would be a welcome contrast to talk of police checking shopping trolleys, with police focusing on known offenders rather than the public.

#### THREE-POINT SUMMARY

A. TRIAGE: identify highest-risk offenders by analysis of 5-10 years of custody records and attempted suicide incidents (including BTP's national data base).

B. VISIT: two-constable teams (in Protective Masks) visit homes of persons at highest risk of committing domestic homicide, assessing possible courses of action, separating partners for private conversations to allow potential victims to express concerns, offering to provide access to cognitive behavioural therapy if needed.

C. ACTION: Constables consult with safeguarding teams on appropriate options if needed, such as CBT or referral of children to social services or request for mental health services. with telephone checks or repeat visits to selected homes to check welfare

# III. Testing: to Divert Vehicle Responses to Video Consultations

1. Screening by call takers of incoming requests for policing domestic incidents by name of accused offender; digital support for a list with daily updates of most previously harmful or currently suicidal persons in policing area.

2. Establishing clear protocols for automatic dispatch of constables in cars.

3. Where criteria are not met for automatic dispatch, use lottery method to choose which calls on wait-list should receive a dispatched car, which ones not.

4. All those assigned to await an available car offered opportunity to consult an officer immediately by video link.

5. Train and staff a video link team for handling domestic calls based

on extensive experience in field settings.

6. Compare outcomes (injury, caller satisfaction, repeat call rates) between cases assigned to a dispatched police team vs cases handled instantly by video response.

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