

THE INTERFACES BETWEEN SCIENCE, MEDICINE, LAW AND LAW ENFORCEMENT

Final Report

31st January 2013

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Roberta Julian



TILES Mission:

To conduct and promote evidence based research to improve the quality of law enforcement and enhance community safety.

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Interfaces between science, medicine and law enforcement

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1. EXECUTIVE SUMMARY

Project Title: The Interfaces between science, medicine, law enforcement and law

Project Team

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The Interfaces Project

Forensic science is increasingly relied on in police investigations and in criminal trials to exonerate the innocent and to assist in establishing links to crime. With this increased reliance on forensic science, the potential for unjust outcomes increases, especially in serious matters (homicide/sexual assault). The reasons for this are twofold: First, the more serious the matter, the more likely that evidence mishandling can lead to wrongful imprisonment; second, the more serious the matter, the more likely that the personnel involved are multi-disciplinary (police, medicine, law, forensic science) and multi-organisational (Health, Justice, Police, private legal/medical). The importance of identifying effective multi-organisational interactions was highlighted in a judicial report into the wrongful imprisonment of an Australian male for a sexual assault he did not commit. The report noted one factor that led to the unjust outcome was the limited communication and interaction between law enforcement, medical, forensic science and legal practitioners throughout the entirety of the case.

The project had two primary aims:

1. To identify communication patterns that are currently applied across different Australian states/territories; and
2. To develop recommendations that maximise the benefits of interactions between key personnel involved in sexual assault and homicide cases whilst maintaining their integrity, and reducing the risk of social influence/cognitive biases.

Methodology

This project identified forms of communication between four professional groups during the investigation of homicide/sexual assault matters. Seven Australian states/territories took part: Victoria, Australian Capital Territory, Western Australia, Queensland, South Australia, New South Wales and Tasmania. The four groups were forensic medicine, forensic science, law enforcement and law. In total we interviewed 103 criminal justice practitioners Australia-wide. The composition of the groups was as follows:

Forensic Medicine

Pathologists, forensic physicians and nurses, medical practitioners from sexual assault centres

Forensic Science

Field sciences (crime scene, ballistics, fingerprints); laboratory sciences (biology, chemistry)

Law enforcement

Senior homicide and sexual assault investigators

Law

Defence and prosecution lawyers, senior judiciary/magistrates/coroners

Findings

Six main themes were identified in the data:

1. the silo effect was only partial and in each jurisdiction some form of inter-agency communication actively occurred;
2. inter-agency meetings were more common in homicide than in sexual assault cases;
3. forensic physicians were engaged less often than other groups;
4. there had been considerable momentum over the past ten years for practice improvement groups;
5. there were differing characteristics in practice improvement groups dependent on the level of formality; and
6. there were more benefits than pitfalls to be gained by practitioners from inter-agency information sharing.

THE SEVEN RECOMMENDATIONS

Recommendation 1.

- To develop comprehensive flow-charts of sexual assault (adult/child) and homicide cases. These flow charts should: map out the end-to-end forensic and evidentiary process from crime scene to court, provide details of the different agencies and practitioners involved in each step, include feedback loops to advise practitioners of the quality of the evidence they collected. These would be jurisdictionally specific.

Recommendation 2.

- To develop social science seminars to be delivered on-line or by videoconferencing for all new practitioners in forensic science, forensic medicine, law, and homicide and sexual assault squads that provide an overview of the criminal justice system including discussion of the end-to-end case flow charts developed in Recommendation 1.

Recommendation 3.

- That agencies in the criminal justice system provide opportunities for practitioners to participate in jurisdictional, multi-disciplinary practice improvement groups and encourage participation through the provision of appropriate resources in terms of time and support.

Recommendation 4.

That with respect to maximising the benefits of multi-disciplinary practice improvement groups agencies ensure that:

- there is a clear purpose for any group to meet;
- members have defined roles and responsibilities;
- organisational commitment and support at senior management level backed by formal inter-agency agreements; and
- there is clear and adequate recording and dissemination of information to all relevant parties.

Recommendation 5.

That with respect to investigative case meetings and pre-trial briefings, ensure that:

- meetings are open and transparent;
- all personnel who attend are skilled in critical and lateral thinking;
- attention is paid to maintaining professional boundaries; and
- group leaders are participatory, not directive in style, and are skilled in recognising negative group dynamics.

Recommendation 6.

- To develop seminars deliverable on-line or via videoconferencing for all new practitioners in forensic science, forensic medicine, law and homicide and sexual assault squads that provide information related to and examples of the pervasive nature, risk and potential impact of context bias, social influence, conformity and groupthink.

Recommendation 7.

- That further experimental, social, psychological and evaluation research is undertaken to determine how to maximise the effectiveness of inter-agency groups.

2. PROJECT BACKGROUND

Closer association with forensic pathology/medicine was identified as a priority in *Directions in Forensic Science Australia and New Zealand 2009-2012* under the heading ‘Working in Partnership’:

Promoting and facilitating integration between the broad scope of forensic science disciplines including medicine and pathology. [1, p. 4]

The ANZPAA National Institute of Forensic Science (NIFS) held preliminary discussions with Prof. Steven Cordner and Dr David Wells from the Victorian Institute of Forensic Medicine (VIFM) and these discussions highlighted the need for better interactive processes between forensic science, medicine/pathology and law enforcement particularly in cases of homicide and sexual assault. Discussions were then held with Dr Sally Kelty at the Tasmanian Institute of Law Enforcement Studies (TILES). It was agreed that this was an independent project in its own right and that TILES would conduct the project. The project is supported by the NIFS Forum.

The essence of the interfaces project can be found in the quote from Justice Vincent’s report:

For a number of obvious and excellent reasons, it is vital for the integrity of the system of justice upon which our society depends, that the forensic scientists and those responsible for the other parts of an investigation operate within their designated areas and maintain an appropriate professional distance and independence of each other. Neither does it mean, however, that they isolate themselves [2, p. 58].

3. PROJECT OVERVIEW AND CONTEXT

3.1. Overview and context of the project

The reliance on forensic evidence, be it science or medicine, has increased rapidly over the past 30 years. Many of the forensic sciences can be highly influential in focusing the direction of police investigations, in exonerating the innocent and establishing links to crime [3]. With this increased reliance, the potential risk for miscarriages of justice, especially in serious matters such as homicide and sexual assault, increases in two distinct ways. First, the more serious the matter, the more likely that evidence mishandling can lead to wrongful imprisonment, even wrongful executions [4, 5, 6]. Second, the more serious the matter, the more personnel will be involved in the case, and the more likely these personnel will be multi-disciplinary (police, medicine, law, forensic science) and multi-organisational (Health, Justice, Police, private legal/medical). Many of these personnel will have divergent work practices and differing views on what their role is, or how and whether they should meet during criminal investigations or court trials.

To reduce the risk of unjust outcomes, more emphasis must be placed on how forensic experts communicate with each other and with law and law enforcement agencies. When there is an absence of meaningful and regular communication between the practitioners in forensic science, forensic medicine, law, and policing, this can be described as the ‘justice silo effect’. Justice silos effectively mean that practitioners, even within their own organisations, operate in isolation, unaware of the roles and responsibilities of other justice personnel.

It is commonplace to think about the criminal justice system as a unified entity with agencies working effectively toward a single purpose and goal [7]. However, a recent commentary by Ross painted a different picture of siloed agencies with a fragmented approach to collaboration [8]. Within the US, similar fragmented interactions and siloed agencies have been noted [9, 10]. The existence of agency silos and fragmented service delivery is not unique to forensic science; it exists between forensic services, forensic medicine, law and law enforcement [8].

3.2. The case of Farah Jama and the justice agency silo effect

A clear example of how detrimental the justice silo effect can be was demonstrated in the case of Farah Jama in 2008 in Australia. In this case concerns were raised during the investigation but were not dealt with adequately due to the silo effect.

Farah Jama (FJ) was convicted of a rape he did not commit and sentenced to six years imprisonment. The jury’s verdict rested solely on the basis of DNA evidence, with no other circumstantial evidence presented at the trial.

In December 2009, it became apparent that there was a problem with the original DNA swabs in that there was contamination at the point of collection and a prosecutor from the Victorian Public Prosecutions Office advised the Victorian Court of Appeal in Melbourne that a ‘substantial miscarriage of justice’ had occurred; FJ was acquitted immediately.

In 2010, retired Supreme Court Justice, the Hon. Frank Vincent was asked to head the inquiry into the matter. The Vincent report into this wrongful conviction detailed an extraordinary case of forensic evidence contamination combined with limited interactions and information flow between the medical, scientific, law enforcement and law practitioners involved throughout the entirety of the case. Vincent considered that the Victorian criminal justice system had wholeheartedly let FJ down. Cases such as that of Farah Jama clearly show the importance of ensuring that criminal justice personnel interact and do not operate in isolation [2, 6].

4. PURPOSE OF THE INTERFACES PROJECT

The current study (known as the Interfaces Project) was devised to explore current forms of communication and practices and to identify whether these interactions could be effective in shielding the members of four professional groups from the silo effect during the investigation and trial of homicide/suspicious death and sexual assault matters. In essence, this project aimed to determine whether the current forms of communication between and within agencies were at a level where risks could be identified and responded to adequately.

The project had two primary aims:

1. To identify communication patterns that are currently applied across different Australian states/territories; and
2. To develop recommendations that will maximise the benefits of interactions between key personnel involved in sexual assault and homicide cases whilst maintaining their integrity, and reducing the risk of social influence/cognitive biases.

5. LITERATURE REVIEW

After an extensive search of the literature, including databases and reference books, no empirical research could be located that had specifically explored how the practitioners of forensic sciences, medicine, law and law enforcement communicate effectively. The literature located consisted of commentary articles [7, 10] presenting the case for why agencies should collaborate, rather than mapping out how to communicate effectively. Instead, a number of large evaluation studies included in the review assessed how partnerships and collaborations operated successfully in other fields, including family violence initiatives between police, health and community services; program development collaborations between US defence forces and federal agencies; and joint strategic collaboration of police, parole officers and community service interventions aimed at crime reduction.

5.1. Current research into effective inter-agency collaborations

Information sharing can present in a number of forms. Recently partnership policing has come to prominence and has been shown to be effective in assisting police to manage complex tasks, such as policing diverse communities, reducing crime in shopping centres, gun related offending and domestic/family violence [11, 12]. Partnership approaches are based upon the view that no single agency alone can be responsible for the complexity of managing community safety and reducing crime [12]. The complexity of crime problems requires knowledge to be shared across agencies and between disciplines [13]. While it is important for agencies to remain within professional boundaries and areas of responsibilities, Bartkowiak-Theron argues this does not need to occur in isolation. Rather, being aware of the various expertise of other agencies provides for fruitful cross-pollination of ideas [11]. This is directly relevant to the multi-agency approach to homicide and sexual assault investigation. Understanding how other agencies work together successfully is a first step in understanding how science, medicine, law and law enforcement could communicate effectively.

5.1.1. Summary of current research into successful inter-agency collaborations

A literature review demonstrated that for inter-agency information sharing to be effective, a multi-faceted approach is needed. Such an approach is underpinned by five key elements [14-18]:

- An explicit and shared purpose for the group (all members of the group are committed, know the purpose of the group and have clearly defined roles/responsibilities);
- Motivation of group leaders (a clearly defined and well-trained group leader);
- Organisational support (staff have the resources to fulfil their roles/responsibilities);
- Value to the organisation (firm commitment from the organisation, especially senior managers, to ongoing partnerships and to implementing any changes, as evidenced by signed memoranda of understanding [MOUs]); and
- Clear dissemination of information and decisions made in the groups to all stakeholders and interested parties.

5.2. Potential pitfalls of justice agency collaborations and information sharing

To reduce the risk of agency silos contributing to miscarriages of justice, information sharing between criminal justice agencies appears beneficial. The literature review identified the key elements that need to be in place for partnerships and information sharing between agencies to be successful. However, despite the benefits there are numerous pitfalls that can occur when justice agencies work too closely together.

The main pitfall for any group work that involves decision-making is that the human mind functions on a daily basis by filtering out and ignoring most of the social information it sees or hears. In reality people cannot make sense of everything they see or hear and cannot make decisions about everything; people simply could not function in complex societies without taking short cuts, and it is the short cuts that cause problems for people in groups where important decisions are made [19, 20]. Research from cognitive science and social psychology has provided insights into the range of short-cuts that people make on a daily basis. The main errors that affect decision making in the forensic sciences (and for group work in general) are: groupthink, group and social conformity, tunnel vision, and cognitive bias. Each of these will be discussed in turn.

5.2.1. Groupthink

Groupthink manifests as a strong compulsion within certain groups to reach unanimous decisions. Although reaching a unanimous decision may be seen as advantageous, in some groups it is problematic when the desire to reach consensus results in an increased likelihood of poorer quality and quicker, less rational decisions as fewer alternative solutions are explored, and dissenting opinions in the group are minimised [19, 20]. A group is especially vulnerable to groupthink when members of the group are from similar backgrounds and are not subject to outside opinions or evaluations [21]. For example, researchers looking at jury deliberations have found that jurors are susceptible to groupthink due to a lack of external reviewers present and the pressure to reach a specific outcome (guilty/not guilty) [22].

5.2.2. Conformity and social influence

Another problem that occurs within groups is conformity and obedience to the social influence of others [23]. Conformity can be defined as a change in behaviour or opinion as a result of real or imagined pressure, often from another person. Group conformity refers to the thoughts and feelings people have in groups, such as feeling intimidated, wanting to be accountable and/or wanting to fit in. Certain people within groups have been shown to be able to exert more influence and pressure than others [24]. For example, a younger person working with older experts may start to conform to the opinions of the older persons in the group [19].

It is not unreasonable to expect to see this problem occurring in justice groups where junior police, lawyers, and scientists conform to the authority of older or more experienced practitioners who present an assertive opposing view to their own. This is especially so in policing organisations which are often structured hierarchically, with clear rank and associated chains of command, with directive leadership and where obedience to rank and senior officers is expected [25].

5.2.3. Tunnel vision

A pervasive contributor to wrongful convictions is tunnel vision. Tunnel vision refers to seeing an incident or series of events from a personal perspective through a narrow lens. It can result in investigations zoning in on a single cause and/or focusing on a single suspect, while ignoring or suppressing alternative explanations or evidence that contradicts the circumstances of the case or perceived guilt [26]. Tunnel vision can occur, for example, in mistaken eyewitness identifications and it is suggested that this is the most common cause of wrongful convictions [4, 5]. Mistaken eyewitness identification early in an investigation can lead investigators to become convinced that a particular individual is the perpetrator, resulting in them focusing their investigation on proving the individual's guilt, rather than being open to alternative possibilities [26].

Research has suggested that strong group leadership qualities are important in minimising the risk of groupthink, tunnel vision and conformity in decision making groups. Although these risks cannot be eliminated, reducing them may be achievable by having a leader who is participative rather than directive or authoritarian in style, combined with high level skills in recognising and managing negative group dynamics [27, 28].

5.2.4. Context bias

Context bias or contextual bias describes how decisions can be influenced by knowledge of circumstantial information that is in excess of what is needed to carry out a scientific analytical task [29]. In the criminal justice system, the contextual information surrounding trace evidence can often be of an emotive origin (semen slides from a vicious child rape; a knife from the scene of an elderly victim of a violent home invasion). Research has continually demonstrated that contextual information does influence a person's decision making [30, 31].

Byrd has suggested there are eight steps that can help protect against the possibility of bias influencing expertise [32]. These include:

1. Training and participating in proficiency testing (including scientific reasoning);
2. Accepting that bias exists and that biases can have more impact on older, more experienced forensic scientists, medical professionals, lawyers and police officers due to their established beliefs and methods;
3. Limiting the pressure to perform and have closure, especially in high-profile cases;
4. Remaining objective;
5. Trying to disprove by looking for alternative explanations;
6. Limiting outside influences and only having sufficient background information needed to carry out the analysis correctly;
7. Using scientific protocols; and
8. Limiting overconfidence.

5.2.5. Summary of current research into potential pitfalls of inter-agency collaboration

The research presented above illustrates the potential pitfalls that occur when people from different agencies meet to make decisions and share information and knowledge. While collaboration, information flow and information sharing are necessary to avoid the justice silo effect, this needs to be balanced with safeguards to potential pitfalls such as group think and contextual bias.

As can be seen from the review above, there are at least four ways in which human decision making can be influenced in negative ways: group think, conformity and social influences, tunnel vision and context bias. Research has also shown that as the complexity of the cases and the emotions increase, so does the potential for biases to arise [30, 31]. In cases of homicide/suspicious death and sexual assault, and particularly when these crimes are against vulnerable people such as children or elderly people, it is not unreasonable to argue that emotions could influence all those involved in the case. Furthermore, several of the problems, such as group conformity, obedience to authority and groupthink are potentially highly problematic in cases where someone believes that something is wrong in an investigation and raises concerns. It is possible that the pervasive nature of group conformity, obedience to authority and groupthink can undermine the person raising the concerns as they fall in line with the group.

Whilst the practitioners of forensic sciences (including forensic medicine) are beginning to accept that social influence and cognitive biases exist, there remains the belief that errors in decision making can be removed through attending training or by having good intentions. Is simply being aware of social influence, tunnel vision, context bias, and belief persistence enough to protect criminal justice personnel from falling prey to these biases in their decision making? Not according to 65 years of experimental research in the fragility of decision making by social and cognitive psychologists and legal scholars that has consistently shown human decisions can be influenced by both internal and external factors (see especially Aronson, 2010 [19]; Findley, 2010 [26]; Janis, 1982 [20]; Sangha et al., 2010 [33]; and Zimbardo, 1974 [34]).

6. METHOD, DATA ANALYSIS AND ETHICAL APPROVALS

6.1. Participants

The participants were 103 practitioners from four professional groups who regularly play a role in the investigation /criminal proceedings of homicide/suspicious death and sexual assault matters. The four professional groups were: forensic medicine, forensic science, law enforcement and law. Participant numbers and specialisations for each professional group can be seen below in Table 1. The age range was 21 to 80 years. Participants were drawn from seven Australian states and territories: Victoria, Australian Capital Territory, Western Australia, Queensland, New South Wales, South Australia and Tasmania.

Table 1. Interview participants by professional group and specialisation

Participant Group and Specialisation	Number
Forensic Medicine	
Pathologist	5
Forensic Physician/Forensic Nurse	10
Forensic Science	
Laboratory Scientist (biology and chemistry)	25
Field Scientist (crime scene, ballistics, fingerprints)	19
Other (senior fire investigator)	1
Law Enforcement	
Senior Police Forensic Manager	3
Senior Homicide /Sexual Assault Investigator	9
Law	
Senior Judge	3
Chief Magistrate/State Coroner	5
DPP and Prosecution Counsel	8
Legal Aid and Private Bar Defence Counsel	14
Sexual Assault Centre/Victim Support	1
Total	103

6.2. Procedure

The data from the 103 participants was collected during digitally recorded focus groups ($n = 19$ focus groups) or one-on-one in-depth interviews ($n = 52$) interviews. The interviews and focus groups ranged from 40 minutes to just over two hours. The format for the interviews and groups was the same, commencing with a general discussion about each of the practitioner's employment and workplace and then moving to the focus of the study. Each of the practitioners was initially asked six structured questions (see Appendix A). However, in many instances the practitioners expanded beyond the specific focus of the questions as applicable to their profession and additional follow-up (unstructured) questions were asked in over 50% of the interviews and focus groups.

Document analyses were also carried out to assess the structure and formality of inter-agency groupings identified during the data collection. Where applicable, agencies were asked to provide documents, such as procedural manuals, MOUs, meeting agendas detailing the types of personnel who attend groups, and prosecutorial guidelines from the different states and territories.

6.3. Qualitative data analyses

All group and interview recordings were transcribed into word documents. Recordings were erased following verification of the transcription. The word documents were uploaded into Nvivo 8. Nvivo is data analysis software which can be used to organise both structured and unstructured qualitative data and documents (such as procedural manuals). The narrative content analysis was carried out using a sequential idiographic approach [35]. This is where each interview is analysed in full before moving onto the next. During the analysis a theme list was created providing a system to identify the major and minor subthemes contained within the narrative. As qualitative analysis is open to bias, it is essential that themes identified are verified [36]. In this project the data was analysed separately by two researchers.

6.4. Triangulation of method

To ensure that the research was methodologically rigorous, three triangulation methods were employed. Triangulation is a technique that ensures reliability of qualitative data through cross verification [37]. First, data triangulation was achieved by gathering the same information using different methods and populations (focus groups and interviews in four different professional groups, and organisational policy documents). This ensured that much of the interview narrative was verified through organisational documents. Second, investigator triangulation was achieved by ensuring two experienced interviewers carried out the interviews and groups; thus collecting high quality data. Third, theoretical triangulation was achieved as the data was analysed using various bodies of relevant literature including: business management, organisational sociology and social psychology, cognitive science and police studies.

6.5. Ethical approval and considerations

The study had ethical approval from the Social Sciences Human Research Ethics Committee based at the University of Tasmania. Consent to participate in this study was freely obtained and no rewards were offered. The procedures followed the National Health and Medical Research Council (NHMRC) guidelines for ethical research. All participants were offered the opportunity to receive a copy of their transcript. Only two participants asked for transcripts. No participants withdrew from the study. To provide confidentiality to the participants, names, places of work and genders are not presented here; names were replaced with codes, such as SA23. The codes are used in presenting the key findings below.

7. KEY FINDINGS

Six main themes were identified in the data. These themes are presented and discussed below as key findings. To enrich the findings and add clarity, where appropriate, narrative from the interviews or focus groups is provided.

7.1. Finding #1. The silo effect was only partial: Some form of inter-agency communication actively occurred in each jurisdiction

The first aim of the project was to identify the types of communication patterns that were currently in place across the different Australian states/territories. The first finding was that all 103 participants stated that at some point in their current position they had been involved in inter-agency information or knowledge sharing.

Inter-agency meetings or information sharing occurred in three ways: investigative case conferencing/meetings (during the investigative/brief preparation stage), case briefings (post brief/pre and during trial), and practice improvement (multi-agency networking meetings and inter-agency professional development groups). No instances of complete isolation from other justice agencies were evident. This is not to say that silo effects were not present, but rather if present, in 2012, they appeared to be partial with agencies not sharing as much information as they could, rather than agencies working in social vacuums and not communicating at all. This partial silo effect is discussed in more detail below (see Section 7.3).

7.2. Finding #2. Inter-agency meetings were more common in homicide than in sexual assault cases

One pattern evident from the data was that face-to-face investigative and briefing meetings were common, almost routine, in suspicious death/homicide matters. However, it was extremely rare for face-to-face meetings to occur, either at the investigative or briefing stages in sexual assault matters.

In suspicious death/homicide matters, investigative and briefing meetings between forensic medicine (namely pathology), forensic science, law and law enforcement agencies had been occurring across Australia for over 10 years. However, there was no uniformity across the country as to the level of formality of the groups, the procedures followed at meetings, or which practitioners would be invited to attend. Over the past 5 years, three of the states had restructured the manner in which investigative case meetings proceeded and the meetings had become less ad hoc and more formalised. One of these states had also formally restructured case briefing meetings and formal procedures were in place prescribing the interactions between practitioners of forensic science and medicine and police and prosecutors.

Investigative meetings in suspicious death and homicide matters were usually held a few days to three weeks after the incident. The meetings were held in offices during the day and were always attended by the detectives and crime scene personnel. Forensic scientists were often asked to join the meetings. Pathologists were asked to attend in most, but not all, of these initial meetings. The purpose of the meetings was different for each state. In some states the

meetings were for forensic sample triage purposes only; to discuss priorities in what would be analysed. In other states the meetings were more inclusive, and could be described as context rich; these involved discussions about the circumstantial and forensic samples collected and the direction of the investigation. In two states the meetings had become more formalised, detailing who would attend, and when these meetings would be called. As mentioned there was no national uniformity.

Pre-trial briefing meetings in suspicious death and homicide matters were far more ad hoc in nature than were investigative meetings for the same types of cases. During the interviews it became apparent that what lawyers refer to as ‘meetings’ were considered ‘passing discussions’ by other practitioners. When forensic scientists, medical practitioners and police were asked how often they met with lawyers prior to court, the most common response was: “I hardly see lawyers, maybe five minutes before court or just outside the courtroom door before I am called in”. These brief encounters were seen as frustrating for the experts who wanted to spend more time with lawyers prior to the trial. The response from lawyers was that they did meet with most of the important expert witnesses before each trial. This disjuncture between these professional groups (about what constituted a ‘meeting’) was illustrated by the following comment from one participant:

“Huge benefits in meeting experts. There wouldn’t be someone that an opposing party calls, an expert, who I wouldn’t ask the prosecutor to have them, if we’re resuming at 2.15, there at 2.00 so I can sit down and sound them out.” (CD9)

To CD9, that fifteen minutes before court was a meeting.

The opposite was found for sexual assault matters, where very few inter-agency investigative meetings were held. Although some briefing meetings were held, this often depended on the seriousness of the matter and the contested facts in issue. The differences in communication in homicides, where agencies often communicated, and in sexual assaults, where there was limited inter-agency communication, appeared to exist for several reasons. First, there was an apparent lack of trust between the police and lawyers towards forensic physicians and nurses and a lack of knowledge of what these practitioners could offer. The police and lawyers questioned forensic physicians’ ability to be objective and not to identify overly with the victim. The second reason, according to several police officers, was that the vast number of sexual assault matters were historical in nature before the investigation began (where assaults were reported weeks or years after the incident and physical evidence was lost), or where the victim was seen by a physician, but a forensic examination did not take place (often at the victim’s request). This meant that in many cases forensic science and medicine could not play a significant role. When practitioners in this study were asked if it would be beneficial for them to attend more investigative or briefing meetings, the main response was ‘no’, as illustrated below:

“Look sex assault is pretty specific in terms of the disciplines that are involved. Homicides are dealt with individually; sex assault does not need to be dealt with like that all the time. We’ve got a (practice improvement) group that deals with sex case issues that are raised.” (K3)

7.3. Finding #3. The partial silo effect was related to the lack of engagement with forensic physicians

An interesting finding was that forensic physicians and nurses overwhelmingly believed that they had important knowledge and experience that could enrich investigations and could clarify contested facts prior to court. They believed their knowledge was underutilised. It is noteworthy that during the Farah Jama investigation, when the possibility of DNA contamination was very briefly raised by one police officer to a superior officer, neither the police officers nor the forensic scientists who discussed possible contamination contacted the forensic physician who had undertaken the examination of the victim (it was at the hospital that the DNA contamination in this case occurred). During the interviews it was apparent that even in the aftermath of the Farah Jama case, forensic physicians can remain an underutilised resource by other justice agencies:

“The police, they get a lot of reports, and they will look at them and prioritise how they’re going to act, and they seem to forget about us, they seem to forget about health sometimes. Sometimes they will ring us up to discuss our medical findings, but often there’s very little interaction between the two.” (PM6)

In a few instances where forensic physicians were utilised by lawyers and the police this occurred as a result of these physicians placing themselves on the ‘radar’ of other justice agencies and practitioners; it was no accident that these self-motivated practitioners became part of the justice agency community. The manner in which these practitioners made their professional knowledge known and visible was often through networking and practice improvement groups; discussed below (see Section 7.4).

7.4. Finding #4. Considerable momentum had existed over the past decade for Practice Improvement (PI) groups

An unanticipated finding was the growth over the past ten years of non-case-specific information and knowledge-sharing groups, especially informal and semiformal groups across most of the states and territories. The aims of this study had been to discover effective forms of communication and information sharing during the investigation and trial stages of homicide and sexual assault matters. It became apparent during the interviews that for many practitioners attending non-case-specific working groups was an important mechanism for them to share knowledge, to promote what their disciplines could offer and to network. The rationale for starting many of the PI groups was to meet colleagues in different agencies, to improve forensic and policing practice and to share knowledge in general. While they were not case-specific meetings, certain aspects of cases were sometimes discussed to facilitate practice improvement.

The genesis of these groups was often the initiative and leadership of one or two practitioners within an agency; for example where a practitioner became aware of certain practices by one agency that impacted negatively on forensic/police practice, and where this was in part a manifestation of the silo effect. Another way in which these groups formed was during the aftermath of a parliamentary or judicial inquiry into negative forensic practice resulting in unjust outcomes (such as after the Vincent Report [2] into the FJ matter was released). These

groups would either form as a direct result of the recommendations of parliamentary inquiries or judicial reviews, or due to the initiative and leadership of individual practitioners.

Of note, the PI groups discussed in detail in this report are not the professional associations to which many forensic scientists and lawyers belong, such as the branches of the Australian and New Zealand Forensic Society (ANZFSS), or the Australian and New Zealand Society of Psychiatry, Psychology and Law (ANZAPPL). However, for some practitioners, especially lawyers, developing knowledge and networking with other professionals from other justice agencies often occurred informally at the evening seminars organised by professional industry associations.

7.5. Finding #5. The characteristics of PI groups differed by formality level

Three formality levels were apparent in the way that PI groups were formed and operated. To enhance the data analysis, the PI groupings identified were assessed using the five key elements of successful inter-agency groupings to determine their potential effectiveness. These were:

- An explicit and shared purpose for the group (all members of the group are committed, know the purpose of the group and have clearly defined roles/responsibilities);
- Motivation of group leaders (a clearly defined and well-trained group leader);
- Organisational support (staff have the resources to fulfil their roles/responsibilities);
- Value to the organisation (firm commitment from the organisation, especially senior managers, to ongoing partnerships and to implementing any changes, as evidenced by signed memoranda of understanding [MOUs]); and
- Clear dissemination of information and decisions made in the groups to all stakeholders and interested parties.

Informal groups usually formed after a problem was identified and where there was no mechanism to deal with the problem. For example, a practitioner identified the potential for contamination to occur at homicide/suspicious death scenes where deceased persons were collected from scenes by newly appointed private undertakers who had not been adequately briefed on procedure for the collection of bodies for forensic post-mortem examination. This lack of knowledge created problems in the morgue. Rather than ignoring the problem or sending an email, this practitioner decided it would be more beneficial if all personnel who attend suspicious death/homicide scenes within a given geographical area, met to discuss each others' roles and what practices each agency used that were helpful or problematic for the others. As one of the participants who had initiated a similar group commented,

“You don't get things fixed by sitting down in your office thinking someone else will do it.” (U67)

Meetings of these informal groups were voluntary; people came because they wanted to and often there was a representative from all relevant organisations involved in the group. The meetings were task and solution focused, with the solutions ideally involving forward thinking. These groups typically met either during working hours (lunch times) or out of

hours, for example for dinner. When assessing these groups, it was apparent that the members knew that the purpose of the group was to improve practice and solve problems. The groups were managed by motivated and committed leaders. However, with limited organisational support, the groups were planned and run in people's free time and dissemination of knowledge to people who did not attend the groups was either limited or did not occur. Although the groups appeared beneficial, their longevity could not be assured due to lack of organisational support. As C89 commented with reference to a PI group they had run for over 8 years, *"If we weren't doing it, it would fall in a heap"*. The main issue with getting organisational support was also exemplified by C89, who commented that forensic medical practitioners and rape crisis centres are often located in health departments where sexual assault medicine does not appear to be a departmental priority.

Semi-formalised groups were also organised by individuals who took the initiative to foster better practice. The aim of these groups was similar to that of informal groups: to be forward thinking, to be solution focussed and to improve inter-agency working relationships. However, these groupings were more formalised in their mechanism for information sharing. When assessing these semi-formalised groups, it was apparent there was a stronger degree of organisational support; in all instances agencies had signed MOUs which detailed how agencies would share information. Most of the assessed MOUs documented a clear purpose for the group, such as to improve the experience of victims of sexual assault when accessing services and progressing through the criminal justice system. However, not all groups were this clear in the purpose of the group, as exemplified by the following comment:

"I am not really sure what the point of the group is, something about getting written protocols set up, something like that." (T21)

Semi-formalised PI groups were also provided with more organisational support such as time to attend and prepare for meetings during work hours. This resulted in more group members receiving agendas and minutes, which for them created role clarity, as they knew what was expected of them and what would be discussed in the group. The main negative aspect was the limited dissemination of information or feedback. One practitioner, PM6, whose colleague sat on a PI group commented:

"To be honest, I don't really know what they discuss. We've asked to have a summary of some of their meetings – that would be really nice. Because although I hear bits and pieces from XXX, it's only if she happens to tell us. So if they did come out, I think that would be really useful actually, to see their minutes, particularly if they come up with some recommendations, or guidelines...." (PM6)

Formalised groups were clearly distinguishable from the informal and semi-formal groups due to the manner in which the group conducted their business. Several of the groups identified were created following parliamentary enquiries or by the directive of a government minister. MOUs, policies and procedural manuals were in place. Of importance, all five key elements of successful inter-agency partnerships were present.

This policy works, according to SD2, because:

“This is built on trust, and respect, this policy. It’s respect for each party’s abilities. The skills, knowledge and attitudes people bring to an investigative process. And everyone does it the same way. That builds trust.” (SD2)

7.6. Finding #6. Practitioners gain more benefits than pitfalls from sharing information

Beneficial aspects. Most of the practitioners who participated in this project said they found it beneficial to meet with personnel from other agencies. Five main benefits were discussed. Of interest, most of the participants, regardless of profession, stated that they found meeting people face to face more beneficial than restricting their communications to telephone calls or emails. The five benefits of meeting were as follows:

1. An understanding of what other personnel did, including their roles and responsibilities in criminal investigations, inquests and trials. This benefit was important to prevent overlapping in tasks, and to prevent things being missed because people assumed that others would do certain tasks.
2. The ability to put a name to an email. Most of the participants saw this as highly beneficial and most had a preference for face-to-face meetings rather than telephone calls or emails. Face-to-face meetings were viewed as an important element in preventing the silo effect as well as the best way to fully utilise professional knowledge.
3. Related to the preference for face-to-face meetings was the benefit that knowing someone personally from another agency or discipline made it easier to ask the types of questions that people may not like to ask strangers.
4. Related to all three benefits already discussed, was having a point of contact when something looked potentially wrong. This benefit inter-relates with the first three in that knowing the process in detail and understanding what all other personnel in the process do, meant that when something looked wrong a person could ‘wave a red flag’. They also knew who to contact to seek advice, even if they felt that they may be being over cautious or asking inane questions.

The four benefits detailed above are inter-related and are best illustrated in the following examples from one of the participants:

“I suppose people can be taught those things but having the ability to put a face to a name, and it means that an undertaker who has been called to pick up a body from a hospital and thinks something is not right or some form hasn't been filled out and they don't have any qualms about ringing me, they know to ring the Police Communications and find out the medical officer on, or ring and say "X2, there's something that hasn't happened here.” (X2)

5. The fifth benefit was a more comprehensive understanding of the intricacies involved in specific cases. This benefit was overwhelmingly of interest to the lawyers as illustrated by one of the practitioners whose preference was always for face-to-face meetings, even if of short duration:

“Often the lawyers are brought in quite late, disappointingly late in some ways and so they can’t give much guidance in terms of the investigation but to the extent that they can when we’re brought in early enough, it can focus things on what is admissible and what isn’t and who additionally might be spoken to and what extra evidence might be obtained.” (IZ9)

Differences were also apparent in that although defence lawyers were in favour of meeting forensic experts they believed they had to be guarded in what they said to prevent ‘showing their hand’, as illustrated by one lawyer:

“When I’ve got a murder brief, gone along and spoken to the forensic pathologists about it and I’ve done that mostly for the purpose of expanding on what it is. Mainly to understand what their medical jargon is all about and what the terms mean. So I’d be trying to be fairly careful about giving them a bit of an indication of what I was thinking, I would try to conduct that sort of meeting on the basis that I’m just going through your report and trying to understand myself what it is you’re actually saying.” (GR7)

Although most participants stated that at some point they had interacted face to face with other justice personnel, several participants noted that “forcing” or “suggesting” that justice personnel meet in every serious matter to discuss aspects of the case was not practicable and would further overload an already overloaded system. Several participants stated that in less complex cases, sometimes a phone call will suffice to clarify an issue.

Recognition of pitfalls. The pitfalls of investigative case meetings or group briefings were discussed by many of the participants, some of whom talked in depth about the potential for diminished professional boundaries. Although these participants did not mention group conformity, social influence and bias directly, it was in the essence of the narrative. The first comment below from IZ9 relates to the question of whether police, investigators, forensic experts and lawyers (primarily Crown prosecutors) should meet during the investigative stages of serious criminal matters:

“I think there are some real dangers in them (case meetings). One doesn’t really want to have the scientists and the doctors and others perceiving themselves too much to be part of a criminal investigation process in which they are assembling evidence as part of a case against an individual. It risks it becoming quite contaminated by the investigative process, which is really the job of the informant (police officer) and persons assisting. That detachment and distance for the scientists, doctors, and psychologists and so on is very important and getting them too involved in the process can be problematic...” (IZ9)

The comments from one of the judges (D93) were in relation to the pros and cons of combined briefings between Crown prosecutors and expert witnesses prior to trial. The essence here was that such meetings could undermine professional boundaries, and that ideally there should be open and transparent meetings pre-trial to discuss evidence. In essence D93 raised the problem of groupthink:

“That’s an extremely dangerous thing. That harmonisation, the self confirmation of each other really threatens the individual expertise....The expert’s role has to be independent.” (D93)

The possibility of context bias was raised by several participants from one focus group who openly acknowledged they had heard of it. Although they did not advocate it should be dismissed, the essence of their comments appeared to underestimate the pervasive influence this bias can have on anyone; stating their belief that biologists needed context to perform their role.

“I accept that there is contextual bias and I think it's something we all need to be educated about and aware of and I think we should all try to have mechanisms in place to try and prevent it from creeping in. To suggest that we should sit in our silos and not interact because we're incapable of handling information, I actually find that quite professionally insulting.” (F20)

The final example reflected the views of several forensic practitioners and lawyers concerned with the dangers of getting too close to the police yet at the same time working collaboratively towards just outcomes.

“I see the principle role of a forensic pathologist as performing a coronial or forensic autopsy. For the coroner and for the police and I would expect to do the autopsy in close collaboration with the police. My role is to record my findings objectively.... Then subsequently, I would see my role as assisting police with their continuing investigation and ultimately going to court to give evidence about my findings and opinions. Particularly in a complex homicide, I would see participation in case conferences or pre-trial meetings with prosecution and defence as being an integral part of that....But, there are the dangers of pathologists and police being too close to each other.” (T46)

8. PROJECT CONCLUSIONS

The Interfaces Project was devised to explore current forms of communication and practices and to determine whether these interactions could be effective in shielding four professions/professional groups from becoming too isolated from each other during the investigative and trial process in homicide and sexual assault matters. In essence, this project aimed to see whether the current forms of communication between and within agencies were at an appropriate level.

Homicide matters

There appears to be a trend towards more formalised investigative case meetings. The more formalised the meetings, the more likely that a range of practitioners attend, including police, forensic science and medical practitioners (primarily pathologists) and prosecution lawyers. All participants in this study who had attended investigative meetings said they benefitted from them and none of the participants felt that attendance at the meetings impacted negatively upon their work. From a practitioner's perspective, attendance at investigative meetings was beneficial as it allowed them to understand the 'bigger picture' of the case, what the investigators were thinking and what other circumstantial evidence had been gathered. Furthermore, the practitioners said the ability to narrow down the type of analyses needed was most helpful and that generally, the meetings were rich in context.

Despite the benefits outlined above, forensic physicians, nurses and general practitioners, who work on homicide/suspicious death matters (such as examination of homicide suspects), were often not involved in investigative case meetings. This suggests that not all forensic practitioners are fully aware of the end-to-end process of a homicide investigation or the exact nature of the role of those involved in it. If practitioners do not fully understand investigative and trial processes in homicide cases, then if a concern is raised, the understanding of the possible risks associated with this concern will be less than optimal and will be limited by a practitioner's partial knowledge of the process. This knowledge would be valuable as policy and procedures across the states and territories become more formalised.

Are context-rich meetings problematic?

Although forensic practitioners were aware of context bias, they appeared to have limited knowledge of other biases that are just as pervasive. Many practitioners believed their own professionalism would make them immune, or that training could eliminate the risk of bias. Many practitioners found it insulting that the notion of being informed about a case might lead to them being influenced by context. Some practitioners also appeared overconfident in the infallibility of their internal peer-review processes, believing reviews were sufficient to remove bias. At present the 'message' provided by researchers such as Dror and Hampikian [31] on context bias is not necessarily being accepted by forensic practitioners who remain unconvinced and defensive. Similarly, most practitioners were not willing to accept that social influence and groupthink were part of everyday human interactions and behaviour.

Although awareness and practices are beginning to emerge in forensic laboratories and medical facilities with respect to contextual bias it is a relatively new concept to forensic practitioners. It was also apparent that little has been done to protect practitioners from the risk of social conformity or tunnel vision in the context rich meetings they attend. Some forensic, medical and legal practitioners raised concerns about how professional boundaries can be diminished by practitioners getting too close to the investigative stage of criminal matters. They felt this could be overcome by having more open and transparent meetings and where the meetings were recorded, to provide defence lawyers the opportunity to hear what occurred, or with more extensive pre-trial committal hearings (not a 15 minute brief pre-trial hearing). In this way, all contested evidence could be debated with the aim to decide on agreed facts. Of interest, most of these solutions placed upon the courts the role of gatekeepers of justice. As noted in the National Academy of Sciences Report and by Edmond and Roach, the courts are not necessarily the best gatekeepers of justice because justice effectively rests on the competency of individual lawyers [9] and knowledgeable judges [38].

Sexual assault matters

The combined effects of findings 2 and 3 highlight that in sexual assault matters interactions between law enforcement, law, forensic science and forensic medicine are rare. Practitioners stated that they considered most sexual assault investigations to be fairly 'routine' in nature and that extensive case meetings would be more time consuming than beneficial; hence, they were deemed unnecessary – a phone call would often suffice. Given the limited interactions, the benefits identified by practitioners involved in homicide matters, to understand the 'bigger picture' of the case, what the investigators were thinking and what other circumstantial evidence had been gathered, are unlikely to be experienced by sexual assault practitioners.

The limited exposure practitioners have with each other in sexual assault cases, even in 2012, suggests that if concerns are raised the potential for the circumstances underpinning Jama to occur again is still present. Furthermore, and of more concern, forensic physicians nationwide post-Jama still do not have the same visibility and engagement as other groups. As practitioners have stated that it would be an inefficient use of their time to meet for *every* case, it may be more beneficial to support and encourage the use of practice improvement (PI) and networking groups. This could increase the visibility of forensic physicians, nurses, general practitioners and other agencies that are part of the investigative and trial process in sexual assault cases.

A further issue of concern raised during the interviews was the lack of feedback that practitioners receive from lawyers, forensic scientists and law enforcement agencies after matters have concluded concerning the quality of the samples they collected. This was especially so for clinical forensic physicians and sexual assault centre staff. Feedback on the quality of the evidence taken from victims and suspects is an important mechanism through which they can improve their clinical practice.

Practice improvement groups

An important finding related to PI groups is that they have gained momentum and provide criminal justice personnel with the ability to network and to put a 'face' to an email. Group members understand the roles of others in the justice system, how their practices impact upon others, and how to prevent overlap of tasks, or assumptions that others know what their role should be. Of importance, police officers, forensic scientists, medical practitioners and lawyers who attended these groups all gained similar benefits; no-one saw these groups as a waste of time.

At no point during the Jama case were any groups other than forensic science and law enforcement involved in case-related discussion. No enquiries were made at the hospital where the samples were taken, or to the forensic physician who collected the samples. No investigative meetings were called so that all practitioners from agencies involved in the process could discuss the problem of having DNA evidence as the only circumstantial evidence implicating FJ. It is possible that one way to prevent the narrow siloed thinking that occurred in FJ would be for all agencies involved in sexual assault matters to have a wider understanding of the process and the different practitioners (including victim support) who play a role in these matters. The data showed that comprehensive PI groups have allowed a range of practitioners to meet and to understand each other's roles.

However, the lack of organisational support underpinning most PI groups impacted negatively in three ways. First, many of the personnel who managed PI groups did so in their own time. Second, outcomes of group discussions were not passed to other practitioners and in many instances only the people who attended gained full knowledge. Third, PI groups may not be immune to the problems of social influence, group conformity and tunnel vision. Influential or senior people would still be able to exert influence over junior members.

Further research

There are two main areas for further research that stem from the results of this project.

First, the results show that in 2012 some practitioners and their roles are less visible and less well understood than others. Without understanding the contributions to investigations that all relevant practitioners can make it is unlikely that they will be used most effectively. It follows that if concerns are raised, as in Jama, practitioners can only respond to these based on their limited knowledge. Such situations can still pose significant risk. One solution to this would be to develop comprehensive flow-charts of a typical sexual assault case and homicide/suspicious death case. The flow charts would not only map out the end-to-end process from crime scene to court, but would also note the different types of agencies and practitioners involved in each step. The flowcharts would inform practitioners about who they should communicate with and may counter the types of narrow-focused and siloed thinking that underpinned the inter-agency communication in the Jama matter.

Second, as this is a new area of exploration, very little empirical evidence exists that demonstrates how reductions in tunnel vision, group conformity, and social influence can be achieved during either investigative case briefings or during PI group meetings. This is

certainly an area for future experimental research. However, this does not suggest that meetings should not occur until sufficient knowledge is gained. Rather, and as verified by this research, practitioners find inter-agency meetings highly beneficial. The immediate task appears to be making sure these meetings are adequately resourced and have sufficient organisational support underpinning them. It appears there is merit in ensuring that the five key elements that underpin effective inter-agency information-sharing and networking are in place.

9. PROJECT RECOMMENDATIONS

Based on the findings from this project seven recommendations are proposed to improve the effectiveness of inter-justice agency information sharing and communication. Many of these recommendations require long-term support and commitment from senior management.

THE SEVEN RECOMMENDATIONS

Recommendation 1.

- To develop comprehensive flow-charts of sexual assault (adult/child) and homicide cases. These flow charts should: map out the end-to-end forensic and evidentiary process from crime scene to court, provide details of the different agencies and practitioners involved in each step, include feedback loops to advise practitioners of the quality of the evidence they collected. These would be jurisdictionally specific.

Recommendation 2.

- To develop social science seminars to be delivered on-line or by videoconferencing for all new practitioners in forensic science, forensic medicine, law, and homicide and sexual assault squads that provide an overview of the criminal justice system including discussion of the end-to-end case flow charts developed in Recommendation 1.

Recommendation 3.

- That agencies in the criminal justice system provide opportunities for practitioners to participate in jurisdictional, multi-disciplinary practice improvement groups and encourage participation through the provision of appropriate resources in terms of time and support.

Recommendation 4.

That with respect to maximising the benefits of multi-disciplinary practice improvement groups agencies ensure that:

- there is a clear purpose for any group to meet;
- members have defined roles and responsibilities;
- organisational commitment and support at senior management level exist for practice improvement groups, backed by formal inter-agency agreements; and
- there is clear and adequate recording and dissemination of information to all interested parties.

Recommendation 5.

That with respect to investigative case meetings and pre-trial briefings, ensure that:

- meetings are open and transparent;
- all personnel who attend are skilled in critical and lateral thinking;
- attention is paid to maintaining professional boundaries; and
- group leaders are participatory, not directive in style, and are skilled in recognising negative group dynamics.

Recommendation 6.

- To develop seminars deliverable on-line or via videoconferencing for all new practitioners in forensic science, forensic medicine, law, and homicide and sexual assault squads that provide information related to and examples of the pervasive nature, risk and potential impact of context bias, social influence, conformity and groupthink.

Recommendation 7.

- That further experimental, social, psychological and evaluation research is undertaken to determine how to maximise the effectiveness of inter-agency groups.

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11. APPENDIX A

Main focus questions

1. How do you see the role of a XXX (your occupation i.e. police investigator or forensic chemist) in a homicide and/or sexual assault investigation or case?
2. In general terms (i.e., not specific case details), what type of information are you given about the circumstances (and from whom) around the homicide or sexual assault investigation or case you are working on?
3. During an investigation of homicides and sexual assault cases, or as the case is coming up to or during trial, in your opinion who do you usually interact with, or who should interact with each other, and for what purpose? (i.e., Have you attended a case conference? Was the conference what you expected?)
4. Should there be more or less pre-trial conferences (briefings with a legal team before a homicide or sexual assault hearing), and why?
 - Have you been to a briefing? What was it like?
5. Are there any types of formal or informal interactions or information exchange (i.e., emails, meetings, briefs) that you feel may undermine your independence in the investigation/process?
6. What would you change to improve the interactions between people who work on homicide and sexual assault cases?
 - What type of interactions would you like to have?