

BRINGING DATA UP TO SPEED

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AIC Conference Abstract

Paper Title: Bringing Data up to Speed

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Although there is experience on the implementation of an evidence-based approach to policy and programs, there is limited discourse on how to use and process 'old' data that is not inline with this rationale. Existing agencies wanting to adopt an evidence-based approach to their work must give consideration to the 'back log' of data in this new environment and identify its usefulness.

The adoption of a new approach to the management, processing and analysis of data requires agencies to measure the quality of data gathered in the past. This process encourages a SWOT analysis and assesses how this existing data can be collated in the format and context of the new focus.

The Crime Prevention Division has recently undertaken an extensive process to code 1999-2004 data in a systematic manner that will allow the Division to utilise this data in an evidence-based policy environment. A working methodological framework is presented as a case study.

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This paper considers the practical transition into an evidence-based environment. Of particular interest is the establishment of an evidence-based knowledge management process and the role that old data should have in this. A case study is presented to argue that there is value in extracting the evidence-based qualities of existing/old data.

Existing agencies wanting to adopt a new approach to knowledge management must give consideration to the 'back log' of old data in the context of this new environment. In a general sense, the strategic decision to change any given current practice is inherently future focused; directed towards improving efficiency and outputs. In this environment the past is often seen as having limited relevance and resources are usually committed to improving future practice. It is often inefficiencies of past practices that are the drivers for change. The establishment of processes to 'bring old data up to speed' is an important one. These processes will reduce the likelihood of the old data becoming redundant in the new context.

The Crime Prevention Division, Attorney General's Department of NSW (the Division) has in the last 14 months begun a process of knowledge management change. The impetus for this change has been the adoption of an evidence-based approach to its work, particularly, in the components relating to funding of community-based crime prevention strategies. At its most basic level, the Division's evidence-based approach can be understood as linking need (crime), target population and location to justify an intervention. The identification of these factors at the conception stage will allow the development of credible, measurable and tangible indicators to assess success or failure. In recent times the Division has particularly required stakeholders seeking funding to consider area specific data from a variety of sources including Police, Courts, Bureau of Crime Statistics and Research, Health and census information.

Understanding the Process

The internal development of the Division's new knowledge management process can be best understood in two stages. The 'Future' stage considers the establishment of new processes in an evidence-based environment. Practically, this relates to the identification of current and desirable incoming and outgoing data sources, reviewing drivers and objectives, and, information management and dissemination. The 'Old' stage relates to the analysis of data previously collated and how this can now be integrated with new data. The 'Old' stage is the focus of this paper.

A key aim of integrating 'Old' data in a new evidence-based knowledge management process is identifying what information can still be of use. In the case of the Division 155 project files covering the 1999-2004 time period were reviewed. The aim of the review was to identify evidence-based components and qualities of programs. The identification of this information will allow the Division to consider new and incoming data alongside that of previous programs with similar targets or locations. Rather than consider old data as outdated or unreliable, the analysis has allowed the Division to extract credible and evidence-based outcomes that can be applied to the new environment.

Given that it was not an essential requirement of the 'old' programs to be established within an evidence-based context, a key analysis outcome has been the identification of a 'lack of evidence' to support the project's establishment and/or success. As will be discussed, whilst this is a methodological limitation, the analysis has allowed the Division to identify which programs have produced outcomes that can sustain evidence-based scrutiny.

Defining 'Evidence' and Research Variables

A key step in practically initiating the analysis and transition of 'old' data was the identification of information that would be considered 'evidence'. The Division considered the following categories to be essential to the analysis of previously funded and completed programs:

- Target Population
- Client Demographics
- Target Offences
- Program Intervention Methodology
- Program Expected Outcomes
- Achieved Program Outputs
- Achieved Program Outcomes

Variables for each category were developed and program information categorised accordingly (please see Table 1 for example).

Table 1 - Evidence categories and data variables

Evidence Category	Examples of Variables
Target population	<ul style="list-style-type: none"> • Individuals 'at risk', • Victims, • Known offenders
Client demographics	<ul style="list-style-type: none"> • Youth, • Women, • Indigenous peoples
Target offences	<ul style="list-style-type: none"> • Assault, • Domestic violence, • Break and enter
Program intervention methodology	<ul style="list-style-type: none"> • Mentoring, • Community patrols, • Target hardening through environmental design
Program expected outcomes	<ul style="list-style-type: none"> • Reduced offending levels of target offences, • Increased reporting levels of target offences, • Increased use of existing community resources
Achieved program outputs	<ul style="list-style-type: none"> • Successful development and implementation of the program, • Media coverage generated
Achieved program outcomes	<ul style="list-style-type: none"> • Reduced offending levels, • Increased reporting rates, • Successfully achieving all stated objectives

Many of the 'evidence' categories were based on data that the Division had collected as part of its past program funding and evaluation processes. For example variables relating to a program's target 'Client demographic' and 'Target offences' were largely developed from data that the Division has always required as part of its funding applications. Where necessary however, additional variables were added to these categories so as to more accurately reflect priority populations and behaviours that the Division has identified. These additions were most apparent in the category of target 'Client demographics', where, for example variables, were added to reflect differences between programs that target male clients exclusively compared to programs that are exclusively targeted at females or programs that target both male and female clients.

In conceptualising these variables it was necessary to achieve a balance between what Old data was actually available within the Division's files and what data will be necessary to provide evidence for Future programs. A key consideration of this was the acknowledgement that in many instances programs had been developed using variables that in retrospect, are now considered too general (for example programs targeting anti social behaviour). Where possible data variables developed for each category complemented new or existing data sources. For example, in the 'Target offences' category, major offences listed complement those used by the Bureau of Crime Statistics and Research (BOCSAR) in their quarterly crime reports for NSW. This was particularly important given the Division's use of BOCSAR data and the fact that many funding recipients/applicants use this information as key performance measurements of offence reductions/increases. Variables also related to Division strategic aims regarding a reduction in offending, recidivism and victimisation.

Obstacles in the Application of Variables

Once categories and variables had been established the challenge was reviewing files and coding data according to these variables. Two particular issues complicated the application of the variables to data: Lack of outcome focused data and, the generic and non-specific nature of some programs.

Outputs & Outcomes

The Division's new policy of evidence based crime prevention meant that there was a necessity for the review of 'Old' data to strongly differentiate between the successful program outputs that funded programs had achieved, and the positive crime prevention outcomes that had resulted from these. In the past program evaluations had tended to focus on the outputs of programs rather than the crime prevention outcomes that had been achieved. Thus program evaluation reports received by the Division provided very detailed descriptions of how the program was successfully developed and implemented, how many staff or volunteers had been hired and assisted with the program, the number of clients who had accessed or successfully completed the program, and whether the program had received any local news-media coverage. In other cases the evidence of program success was based largely on the anecdotal feedback of program clients with limited thought given to the methodology of program evaluation.

Past program evaluation reports have tended to provide only very limited data regarding crime prevention outcomes. Therefore variables relating to this evidence category needed to be largely developed from scratch by the Division. The variables for this category were thus based on priority actions and objectives that are identified in the Crime Prevention Division's current business plan.

Non-Specific data

Due to the fact that much of the data that had been provided to the Crime Prevention Division regarding funded programs was very non-specific. For example, many of the funded crime prevention programs specified ongoing "street violence" or "violent behaviour", especially in relation to young people, as the offending behaviours that the funded programs aim to address. A large number of programs were also identified as targeting "antisocial behaviour" of a non-specific nature.

Overcoming the Obstacles

A series of methodological 'sacrifices' were allowed to encourage the transformation of data. For example, in cases where program evaluations had been conducted internally and mainly based on anecdotal data, these were treated as equally valid as those evaluations that were able to present more methodologically reliable evidence.

While this coding practice means that conclusions could be drawn from otherwise redundant data, there is a need to use a certain level of caution when interpreting the evidence that the review. A detailed coding guide was developed to provide a level of consistency in coding the large amount of data that had been collected – particularly data that was non-specific as previously discussed.

Efforts were made to avoid treating data as 'missing'. In instances where information relating to particular evidence categories did not appear to be contained in any of the common reports, such variables were coded as "unclear from the data available". It was only when the common reports were not present in the Division's files that relevant data variables were treated as "missing". By coding the data in this way it has allowed the Division to gain a greater understanding of the strengths and weakness of the data that had been collected in the past. Most specifically it identified significant past weaknesses in collecting data relating to the successful crime prevention outcomes, and even in identifying priority needs based on targeted offending behaviours.

The benefit of using ‘Old’ data to develop ‘Future’ processes

For the Division the key aim in conducting this exercise was to ensure previously collated data was still relevant in an evidence-based environment. The analysis has allowed the Division to consider the qualities and merits of previous programs in an evidence-based environment.

There have also been two other benefits of carrying out a review of ‘Old’ program data. Firstly, it has provided the Division with an indication of where, to whom, and which offences have most frequently received funding in past years. This has assisted the Division in gaining a greater understanding of what program designs and intervention methodologies have been most successful in achieving positive crime prevention outcomes. Secondly, by reviewing this ‘Old’ data the Division has been able to identify weaknesses in this data, and is now working on adapting ‘Future’ processes to overcome these weaknesses.

The Division has developed new funding application and program evaluation reports that require funding applicants to place a greater emphasis on reporting on these achieved outcomes, and providing evidence in the form of local crime statistics. These new reporting formats, and the greater emphasis they place on crime prevention outcomes, will result in the Division receiving more reliable information about the success of the programs it funds. Furthermore, by placing greater emphasis on successful outcomes, funding applicants will be encouraged to develop programs that are increasingly based on supportive evidence. It is hoped that this will further allow the Division to more reliably direct funding into crime prevention programs that have the greatest chance of achieving positive outcomes for their clients and local communities.