UTILISING CALLS FOR SERVICE DATA

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FOREWORD

To date, efforts to promote 'information driven policing' have concentrated on the development and utilisation of computerised crime recording systems. However, with the development of computer aided dispatch systems, police in Queensland and elsewhere now have access to a valuable alternative information source, in the form of calls for service data. These data lack the detail of crime report data, but on the other hand, provide a more comprehensive picture of the nature and extent of the demands on police time, and the types of problems confronted by police.

This paper illustrates how analysis of calls for service data can facilitate the better management of police resources, particularly in relation to problem-solving and crime prevention activities. The paper relies primarily on data collected as part of the CJC's evaluation of the Toowoomba Beat Area Policing Pilot Project, but the points which are made, and the examples which are provided, are of general applicability. It is to be hoped that release of this paper, in conjunction with the redevelopment of computerised dispatching systems within the Queensland Police Service, will assist the Service to discharge its functions in a more efficient and effective manner.

On behalf of the CJC, I wish to acknowledge the ongoing cooperation and assistance provided by the Queensland Police Service in the various policing projects in which the Research and Co-ordination Division has been involved. I would also like to thank Christine Bond, until recently a research officer within the Division, who was primarily responsible for the preparation of the paper.

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INTRODUCTION

Calls for service are requests for police assistance made by members of the community via the '000' emergency number, or directly to a police station. Police record this information primarily to manage the dispatch of patrol cars and officers to incidents. However, these calls also constitute a rich source of information about the timing, location and nature of incidents reported to the police.

Improved access to and use of information, particularly at the divisional and district levels, has been identified by the Queensland Police Service (QPS) and the Criminal Justice Commission (CJC) as important strategies for improving the delivery of policing services to the community. Recent developments in computerised dispatching systems in the QPS have the potential to significantly increase the range of localised information available to officers.

This paper outlines some uses which can be made of this information by local police officers and managers.

DATA SOURCE

The examples provided in this paper are drawn primarily from a database containing details of over 36,000 calls for service recorded by the QPS in the Toowoomba Division in the period February 1993 – January 1995.[1] These data were collected for the CJC's evaluation of the Toowoomba Beat Policing Pilot Project (see CJC 1995). The calls for service data were initially obtained from the original job cards used by the Toowoomba police. Subsequently, with the Toowoomba Station's adoption of a computerised dispatch system (known as IMS) in mid-1994, the data were obtained from that system.

HOW CALLS FOR SERVICE ARE RECORDED

Currently, within the QPS there are three methods of recording calls for service:

- calls from the Brisbane metropolitan area are entered into a computer aided dispatch program known as ESCORT
- calls in several major urban centres outside Brisbane (such as Logan, Broadbeach, Toowoomba, Maroochydore and Townsville) are recorded on a similar but less sophisticated system called the Incident Management System (IMS)
- some smaller centres still rely on the manual completion of job cards.

The computerised systems adopted by the QPS enable police to document the nature of the call, caller details, location of the incident, date and time of the call, and the police action taken in response to the call. These systems can also be used to provide information about past calls to the same location to assist operational police. For instance, if a particular address has a history of use of weapons, this information (if recorded) can be retrieved and passed on to the responding vehicle at the discretion of the despatching officer. In the case of ESCORT, police can also map the location of patrol cars and calls. IMS data can be down loaded and used in a mapping package to map the distribution of calls.

1 Some calls received by the Toowoomba station were for other stations in the district. Calls that could not be matched to addresses or locations within the Toowoomba Division were removed from the database.

The QPS is in the process of refining both ESCORT and IMS, with a view to enhancing the information management components of the packages.

USES OF CALLS FOR SERVICE DATA

Criminal offence reports are frequently used by the QPS and other police services to develop special operations, direct patrols and measure corporate performance. However, calls for service data provide a more accurate picture of the problems occurring in an area and of police workload than do crime reports. This is because many incidents that the police respond to do not result in a criminal offence report. For example, in Toowoomba only around one-third of the calls matched to a location in the division resulted in a criminal offence report (Figure 1).

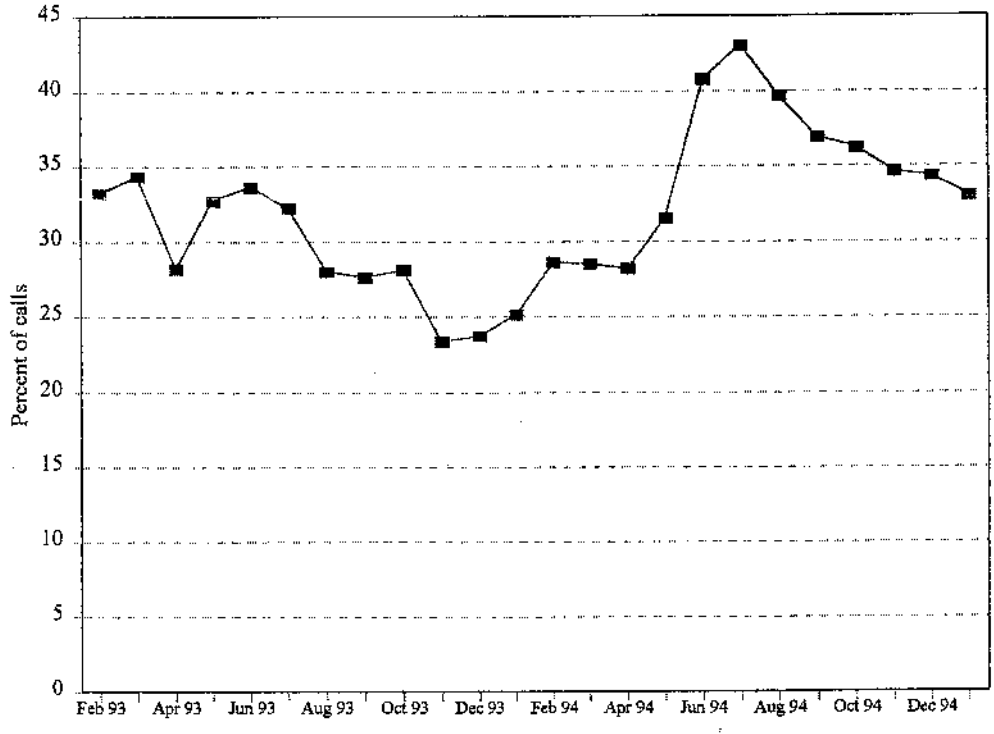

FIGURE 1 – PROPORTION OF KNOWN CALLS RESULTING IN A CRIMINAL OFFENCE REPORT (TOOWOOMBA DIVISION, FEBRUARY 1993 – JANUARY 1995)

Source: Toowoomba calls for service data.

Another important feature of calls for service is that they are collected on a continuous basis as part of the routine "business" of policing. This means that:

- accessible, accurate and up-to-date information can be provided to officers
- it is possible to be responsive to short-run changes in patterns and trends.

Calls for service data can be utilised for:

- problem-solving/crime prevention activities
- directing patrols
- enhancing officer safety
- managing resources
- training purposes.

PROBLEM-SOLVING/PREVENTION ACTIVITIES

Analysis of calls for service data can provide a foundation for problem-solving and crime prevention activities. With the problem–solving approach, responding to calls for service is seen as the first step of a process, rather than as an end in itself: 'police go beyond individual crimes and calls for service, and take on the underlying problems that created them' (Eck & Spelman 1987, p. xv). This approach can be contrasted to conventional reactive response strategies, whereby police simply respond to individual calls or incidents as if each were unique or isolated events.

Why should police be interested in problem-solving?

- If police can reduce the numbers of calls for service they receive, they can free-up resources. For instance, according to the QPS it costs around $75.00 to send a car with two officers to respond to a false alarm call. In Toowoomba, there were 1,092 alarm calls over 12 months. Assuming that responding to a genuine call costs at least the same as a false call, a 10 per cent reduction in alarm calls in Toowoomba would theoretically result in a saving of approximately $8,200 for the year. At the very least, the police time taken up in responding to such calls could be used more productively.

- Simply responding to calls for service can be frustrating for many officers. Being able to "make a difference" appears to increase job satisfaction. As an officer involved in the Toowoomba Beat Policing Pilot Project pointed out:

> . . . I can fix things instead of just putting a bandaid on and just cover [it] until next time . . . so I'm much enjoying that bit of it.

There are several ways in which calls for service data can be used to identify problems. The simplest is to generate a list of the top incident addresses in a given period (Table 1). The list can then be supplied to supervisors to assign officers to further investigate what the problem might be at the location and how it might be addressed.

TABLE 1 - TOP TEN REPEAT ADDRESSES IN TOOWOOMBA (FEBRUARY - APRIL 1993 AND FEBRUARY - APRIL 1994)

February - April 1993		February - April 1994	
Location	*No. of calls*	*Location*	*No. of calls*
1. Hospital A	84	1. Hospital A	87
2. A Ave & J St	43	2. A Ave & J St	56
3. M St & V St	32	3. R St & S St	40
4. 6 O St	29	4. R St & So St	33
5. 554 R St	24	5. M St & V St	26
6. 277 M St	19	6. J St & S St	21
7. Hospital B	18	7. 28 N St	19
8. J St & R St	18	8. Baker St & West St	19
9. R St & S St	18	9. Hospital B	18
10. 28 N St	17	10. B St & R St	17

Source: Toowoomba calls for service data.

From the information collected, it should be possible to develop strategies for addressing the identified problems. For instance, in Toowoomba, Hospital A in Table 1 regularly generated over 80 calls for service in a three-month period. As the hospital has its own security, a possible strategy would be to discuss the better utilisation of security guards on hospital premises. If the QPS managed to reduce the calls generated by the hospital by 20 per cent, that could result in a saving of around $1,200 every three months.[2] The problem-solving strategies developed do not have to rely solely on the police, but can involve other government agencies or welfare organisations. In some cases the problems may not be amenable to any action. However, in the majority of cases, it should be possible to *at least* reduce the number of calls originating from a particular address.

Further investigation to identify the possible cause of repeated calls to the police for assistance can involve:

- Generating the call history for the repeat address. A good grasp of the problem can often be obtained from looking at the call history for the address. Table 2 (below) shows the call history for two addresses in Toowoomba over a three-month period. The first address has a history dominated by a series of calls about accidents, indicating that the problem at that address is primarily traffic-related. In contrast, the second address is characterised by a high number of complaints relating to disturbances and property destruction. The data indicate that the second address may have more intractable social problems than the first address.

- Visiting the location. For instance, a visit to the first address in Table 2 may show that the accidents are being caused by unclear road markings, road works or poor street lighting.

- Talking to people affected by the calls, such as complainants, neighbours and so on. In the case of the second address, discussions with people involved may reveal that many of the incidents are related to excessive alcohol consumption.

2 Based on a figure of $75.00 to respond to a call.

TABLE 2 – EXAMPLES OF ADDRESS HISTORY

Address: 168 H St		*Address:* 6 O St	
3/11/94	Person collapsed	5/11/93	Disturbance (not noise)
9/11/94	Drunk	13/11/93	Break and enter
11/11/94	Drug related	15/11/93	Domestic
14/11/94	Traffic accident no injury; Traffic accident with injury	2/12/93	Disturbance (not noise); Disturbance (not noise)
16/11/94	Traffic accident fatal	15/12/93	Break and enter
18/11/94	Traffic accident with injury	16/12/93	Stealing; Street disturbance
22/11/94	Community assistance	19/12/93	Disturbance (not noise)
24/11/94	Traffic accident no injury; Traffic accident with injury	20/12/93	Wilful destruction; Disturbance (not noise)
25/11/94	Traffic accident with injury	21/12/93	Wilful destruction; Disturbance (not noise)
28/11/94	Traffic accident no injury	27/12/93	Stealing; Break and enter
16/12/94	Message	29/12/93	Break and enter
27/12/94	Traffic accident no injury	1/1/94	Attempted rape
8/1/95	Break and enter	7/1/94	Disturbance (not noise)
13/1/95	Gas	9/1/94	Domestic
30/1/95	Traffic accident with injury	16/1/94	Animal related
		21/1/94	Disturbance (not noise)
		27/1/94	Message

Source: Toowoomba calls for service data.

Note: Only calls for a three-month period have been presented in the table. A longer address history may be appropriate for operational purposes.

Two examples of how Queensland police officers have addressed the problems of repeat addresses are provided below. Although these examples come from beat policing programs, it should be emphasised that problem-solving is not tied to beat policing. In both Britain and the United States problem-solving initiatives have often involved a team approach, rather than the use of the beat policing framework.

Example 1

Background
Regular calls for assistance about prowlers or persons breaking into her house were made by a woman living alone in one of the beat areas. Police responding to the complaints would find no prowler and no visible signs of entry. The radio-dispatcher identified this as a recurrent problem and asked the beat officer if he could 'fix it'.

Officer Response
The beat officer rang the complainant and arranged to come and see her.

Nature of Problem
While speaking with the complainant, the officer noticed that she showed several symptoms consistent with suffering from some mental illness. When asked who her doctor was, the woman volunteered that she was seeing a psychiatrist.

Strategy
(1) The beat officer contacted the woman's doctors about his concerns, explaining that she had been regularly calling the police about 'phantom prowlers'. That afternoon, arrangements were made for her to return to hospital to monitor her medication.
(2) After the woman was discharged from the hospital, the officer asked one of her neighbours to 'keep an eye on her'. As the officer is concerned that his continuing presence could aggravate her condition, he keeps in contact with the neighbour.

Outcome
No further calls have been received from the complainant.

Source: Toowoomba Beat Policing Project.

Example 2

Background
An analysis of calls for service for West End beat revealed that a particular commercial premises was being regularly attended by the police. In a six-month period, the police had responded 12 times. On each occasion, the call related to an alarm sounding, and always on the weekend. When the police responded, they discovered that in each case it was a false alarm.

Officer Response
The officer contacted both the alarm monitoring company and the owner of the premises.

Nature of the Problem
From these discussions, it became apparent that there were two main reasons for the false alarm calls to the police:
- presence of dogs and cockroaches was activating the alarm
- the alarm monitoring company only held one after-hours contact number and was often unable to contact the owner.

Strategy
(1) Beat officers discussed the problems with the owner. Owner agreed to undertake steps to eliminate these problems.
(2) Owner agreed to supply the alarm monitoring company with three or four after-hours contact numbers.

Outcome
Action only recently completed. A reduction in the number of calls to this address is expected.

Source: West End Beat Project.

DIRECTING PATROLS/TARGETING

With the introduction of the computerised crime reporting system (CRISP), crime data for police divisions have been available to supervisors and officers in charge of stations to use in directing patrols. However, these data should not be the only source of information for directing patrols, because, as discussed, crime only accounts for around one third of the calls for police assistance. Calls for service data can often provide a better picture of "troublesome" locations. For example, an analysis of the data may show that a particular intersection has a high number of accidents and traffic infringements in the middle of the day. This information can then be used by supervisors to assign a patrol to this area at a time that is most likely to produce results. In this way, patrol time can be allocated more effectively.

ENHANCING OFFICER SAFETY

Many computerised dispatching systems, including those utilised by the QPS, have the facility to provide address history information for use at the time of dispatch. With the development of IMS, this information is now easily accessible for the first time outside the Brisbane metropolitan area.

In both ESCORT and IMS, communications room officers can "flag" an address where there may be a threat to officer safety. For example, if responding officers pass on information about the presence of weapons, violence, or hostility to police, this can be recorded. If another call is received about that address, the information can be retrieved and passed on to the officers handling the call.

MANAGING RESOURCES

Calls for service data provide information that can assist police managers in making decisions about allocating resources. By knowing when the periods of peak demand for services occur, and the types of calls which are most common, managers and supervisors can plan rosters accordingly and identify tasks to which officers can be allocated.

Table 3 provides an example of the type of weekly briefing report which can be prepared using calls for service data.[3]

3 In NSW, this type of information is provided to shift supervisors in a number of stations.

TABLE 3 – EXAMPLE OF 'WEEKLY BRIEFING REPORT'

Summary of Calls: Toowoomba Division **31 January 1995**

(A) Type of Call

	% of calls for January	% of calls for week prior to 31/1	% of calls for 31/1
Police assist/internal police business	1	1	---
Reports of suspicious circumstances	16	14	15
Reports of thefts	11	12	12
Reports of accidents/collapses/illnesses	7	6	10
Traffic problems	5	5	2
Reports of public nuisances	6	6	5
Assistance to public	7	6	7
Assistance to emergency services	<1	---	---
Reports of crisis situations	1	1	---
Reports of disputes/disturbances	17	17	15
Report of personal crime	4	3	5
Reports of threats/threatening behaviour	1	2	---
Reports of other property crime	19	21	22
Reports of missing persons/escapees	3	3	5
Other	3	4	2
Unknown	1	1	---
Total number of calls identified as originating within the division	*1480*	*391*	*41*

(B) Shift Call Received

	% of calls for January	% of calls for week prior to 31/1	% of calls for 31/1
8 am to 4 pm	34	37	34
4 pm to 12 midnight	44	40	39
12 midnight to 8 am	22	24	27
Total number of calls identified as originating within the division	*1480*	*391*	*41*

(C) Day Call Received

	% of calls for January	% of calls for week prior to 31/1
Sunday	17	16
Monday	17	16
Tuesday	14	11
Wednesday	12	15
Thursday	14	17
Friday	13	14
Saturday	14	13
Total number of calls identified as originating within the division	*1480*	*391*

(D) Top 5 Repeat Addresses

For January		For the week prior to 31/1		For 31/1	
1. Hospital A	23 calls	1. Hospital A	5 calls	1. 173 H St	2 calls
2. A Ave & J St	10 calls	2. 3 N St	4 calls	2. 3 N St	2 calls
3. Transit centre	7 calls	3. B St & R St	3 calls	3. 322 B St	2 calls
4. Hospital B	7 calls	4. M St & N St	3 calls	4. H St & M St	2 calls
5. 3 N St	6 calls	5. R St & S St	3 calls		
6. 580 R St	6 calls				

Source: Toowoomba calls for service data.

AS A TRAINING TOOL

Calls for service data can be used to identify the most frequent types of calls that general duties officers handle in a particular division or district. This information can then be used to direct the development of "refresher training" at the local level.

In Toowoomba – and probably in most other police divisions in Queensland – officers respond to a high number of disturbance calls (Figure 2). This finding suggests that a local training initiative covering issues such as conflict resolution/mediation, officer safety and relevant community support networks could be useful to officers.

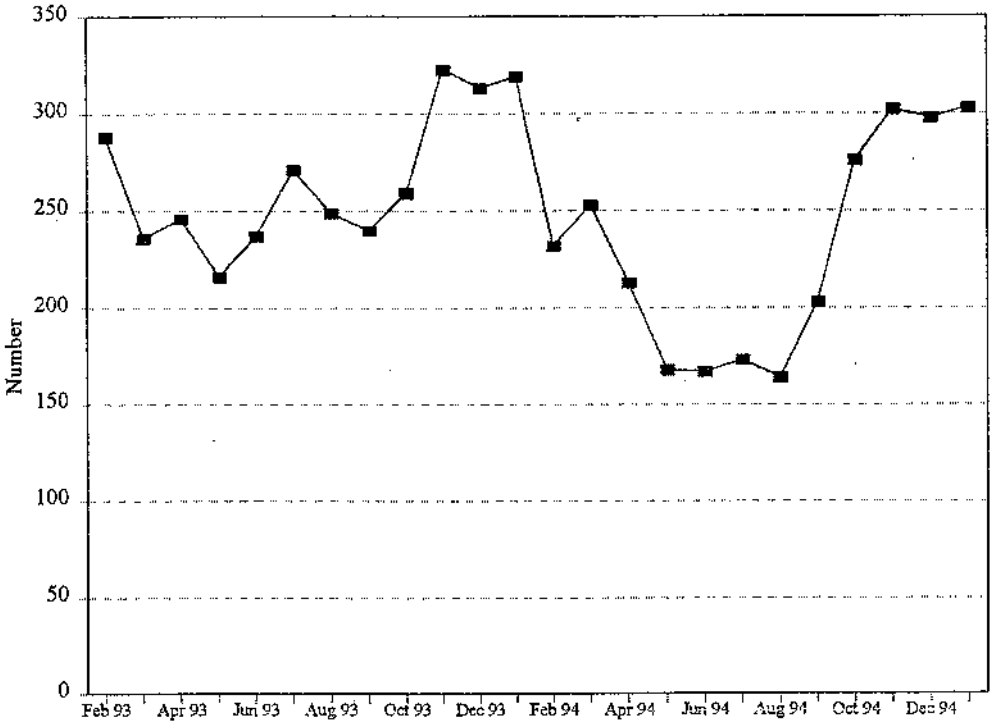

FIGURE 2 – CALLS RELATING TO DISTURBANCES (TOOWOOMBA DIVISION, FEBRUARY 1993 – JANUARY 1995)

Source: Toowoomba calls for service data.

Note: Figure is based on the calls that could be matched to a location in Toowoomba Division. 'Disturbances' includes xx radio codes.

Calls for service data can also be used to develop profiles of areas for orientation programs. Summaries of the types of calls and problems in a particular division, district or region could be provided to officers at all levels when they arrive in an area.

GETTING THE BEST OUT OF CALLS FOR SERVICE DATA

The usefulness of calls for service analysis depends on two factors. First, a good information management system is required. This system must contain accurate and comprehensive data, and be capable of generating "user-friendly" reports. Without the benefit of such a system, data are too difficult and time-consuming to extract for routine use by the police. Second, supportive management and policing styles are also needed: a good information system by itself will not mean that calls for service are used to the best advantage.

A GOOD INFORMATION MANAGEMENT SYSTEM

STRATEGIES TO ENSURE ACCURATE AND QUALITY DATA

Obviously, police need to have confidence that the data they are using are accurate. Missing data, different uses of abbreviations, misspellings, misuse of fields, and inconsistent coding all adversely affect the quality and accuracy of the data, and reduce its usefulness.

There are four strategies that can be put in place to improve data quality:

- Restricting the types of data that can be entered into particular fields, and introducing a facility for checking the spelling of key text entries. This has been done in the ESCORT system which, for instance, matches address entries against a master list, and "flags" entries in the incorrect format.

- Providing guidelines for data entry. For example, the quality of IMS data could be improved if there were guidelines outlining what information belongs in each field and standardising common abbreviations (such as 'ST' for street). A project currently under way to redevelop the IMS system should result in the compilation of a training/user manual, which should assist in achieving consistent data entry and facilitate comparison across districts.

- Conducting regular audits of the database. Regular monitoring of the database means that any problems in data quality can be identified and addressed within a reasonable time frame.

- Increasing the awareness of general duties officers of the importance of supplying detailed information. In Toowoomba, for example, more detailed information was provided and recorded on the job cards, once officers realised that the calls for service data were being used for more than the immediate dispatch of patrol cars to calls.

STRATEGIES TO PROVIDE TIMELY REPORTS

Given the amount of information available, calls for service data need to be provided to officers in an accessible and useable form. To achieve this:

- local police managers should first determine what information is required and who requires it

- the reporting function should be made "user friendly", such as by providing "templates" for common types of reports

- reports must be readable and in a form that is easily interpretable by officers.

Time can be saved by implementing a routine reporting function as part of the information management system, so that selected reports are automatically produced by the computer on a nominated date.

MANAGERIAL SUPPORT

In the end, how well information is used depends on the level of support provided to officers and the extent to which the structures of policing allow such information to be acted upon. Policing styles that encourage flexibility in police responses and a problem-solving orientation need to be put in place. This requires:

- supportive management strategies
- encouragement of officers to experiment and use data
- a willingness to invest in the development of a good information management system
- provision of the necessary training.

CONCLUSION

Calls for service are a valuable source of information available to police about the nature of policing tasks as these data provide a better measure of public demand for police assistance than crime data. To date, this information has been under-utilised, with the QPS focusing primarily on crime report data. However, by investing in a good information system and developing supportive management and policing strategies, police can use calls for service data to improve the utilisation of police resources and facilitate the use of problem-solving approaches. In particular, the application of problem-solving strategies based on calls for service analysis has the potential to free-up police resources and time.

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