

Thinking Globally, Focusing Locally

Repeat Call Analysis as the Cornerstone of Problem Solving

Project Summary:

The New Castle County Police, herein after referred to as the Department, have been dedicated to the community policing philosophy since 1988. It is a department-wide strategy embraced by all of our officers. Our endeavors in this arena have been tremendously successful, and the department has received national attention for our groundbreaking programs and projects. This success aside, the Department has seen calls for service rise while actual crime has been on a decline. Over the last ten years, the Department has seen calls for service increase 27%, while at the same time the Department's authorized strength has grown less than 4%. Due to our community policing philosophy, we realized an increase in calls for service and a need to assume a greater role in the community by stepping into non-traditional police areas. Unfortunately, this increased demand on police resources was becoming a burden on the Department and required immediate response.

In early 1999, Colonel John L. Cunningham realized that advanced training in problem solving would alleviate some of the officers' stress and work associated with the new role policing plays in society. Without problem solving training, officers would continually find themselves drowning in a sea of complaints and tirelessly responding to 911 calls. Recognizing the potential of problem solving in reducing these demands, he ordered training in the SARA method of problem solving for every member of the Department. Just as with community policing so many years before, problem solving was instituted as a department-wide philosophy.

What the colonel quickly realized was that merely training officers in problem solving was not going to be enough. There had to be a logical way to direct problem solving efforts to maximize their effectiveness. This led to a commissioned study to analyze *police* responses. Results indicated an alarming trend towards repeat responses to the exact same locations. The idea was born to create a system directing problem solving efforts toward the locations that continued to require repeated police response. Once these areas were identified, officers would be assigned to use the SARA methods to end the need for further police response.

The system began as one officer manually searching through records and assigning repeat call addresses. This tracking has evolved and grown into a computerized system of accountability. The system is accessible to officers directly in their police cars and allows them to see a history of all responses and the efforts being used to solve the issue. It is a global way to direct local police response and ensure a focused and quick solution to problem areas.

Scanning:

Colonel Cunningham and the executive staff realized that crime was declining; however, demands for police service were still climbing. Over a ten-year period, New Castle County has seen a population spurt of 60,000 residents, and the police department recognized a 27% growth in calls for service. At the same time, the department realized very minimal gains in our authorized strength.

Analysis:

The colonel and the executive staff understood that the changing role of policing in society could account for some of the increase in the need for police response. More and more is being asked

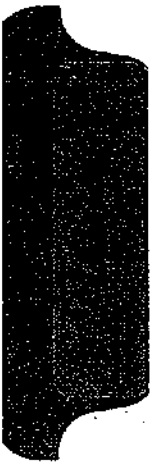
of police officers today. They cannot just be law-enforcers; they must be mediators, counselors, code enforcers, and problem solvers. However, a complete analysis revealed that we must direct our problem solving efforts to the issue of repeat calls for service, which are those locations that continue to need the physical presence of police. If not, these repeat response locations could force the department into a 911 driven, traditional style of policing.

Response:

The initial response was to train every officer in advanced problem solving technology. Next was to direct their efforts through an analysis of repeat call locations. This was initially accomplished by an officer manually searching records and assigning locations for real-time intervention. Over time, a ground breaking computer program was written and implemented allowing for the assignment, tracking, and ownership of all repeat call locations. Finally, weekly accountability meetings are held where police responses to repeat locations are critiqued, and solutions are shared with all district commanders.

Assessment:

The initial numbers have been very promising. False Alarms are down by 8%, which marks the first time in history the number of alarms has fallen in a year. Traditional problem residences have been eliminated as police response locations. In at least two cases, a problem residence and a commercial establishment required a physical police response over 130 times in a one-year period. The new Repeat Call Program recognized these addresses and assigned officers to utilize the SARA method. Since then, police have not responded to either location.



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Repeat Call Analysis as the Cornerstone of Problem Solving

Scanning:

New Castle County, Delaware, is a 437 square mile area with a population of approximately 500,000 people. Over the past ten years, New Castle County has undergone a population growth of almost 60,000 residents. Along with this growth, the New Castle County Police have experienced an increase in their calls for service of nearly 27%. The colonel and the executive staff realized that even though crime was down in New Castle County, there was a steady increase in calls for police service. It became evident at this rate the calls for service were outpacing the Department's ability to keep up. A study of the calls for service revealed a pattern of repeat calls for service and repeat responses.

In January 2000, the colonel and the executive staff began a comprehensive effort to attack these repeat calls for service. It was a documented fact that patrol officers were routinely responding to the same location over and over and treating each response as a single isolated occurrence. The team realized there was a problem. The repeat calls for service were causing the Department to become inundated with calls, thus reducing the amount of time patrol officers could devote to proactive community policing endeavors. The repeat calls were, in effect, forcing the Department to revert to the traditional style of 911 driven policing, not to mention abandoning the obvious wisdom of doing a job right the first time. After all, who would return to a mechanic over and over again with the same problem and be satisfied with that level of service? Efforts were channeled to develop a method for tracking and monitoring repeat calls for service. It was decided that patrol officers needed to be provided with tools that would allow them to address

and resolve these repeat calls for service, which would then decrease the overall number of calls for service.

In 2000, the New Castle County Police responded to 142,570 calls for service. Of those calls for service, 9,500 were to repeat locations. In many instances the repeat calls for service were for alarms, incidents of domestic violence, disorderly conduct, and other nuisance crimes occurring at the same locations time and time again. Routinely, a different patrol officer was dispatched to the call for service unaware of past officers responding to the same location for the same problem. It was determined that if each patrol officer were made aware of the repeat calls for service and provided with training in problem solving, the issues could successfully be addressed and resolved.

Each officer within the New Castle County Police Department was provided with training on the SARA model and other problem solving techniques. An officer was assigned to track and monitor repeat calls for service. Based on this tracking, patrol officers were then assigned repeat calls for service and held responsible for developing a response to the problem.

Analysis:

When the colonel realized actual crime was declining and calls for service were continually rising, he initiated a search to identify the reasons why. The colonel ordered a thorough review of all available statistical data, including types, clearance, and locations of police responses.

What became apparent was a disturbing pattern of repeat calls at the exact same locations.

The interesting part was that the trend of responding to repeat calls could not be defined just by geographic boundaries, socio-economic status or even by type of incident. In one area it might be a problem with repeated domestic calls, while in another area alarms were the issue. What was very clear, however, was that because of the size of the Department, nobody was aware that we were constantly sending officers to the same residences. A perfect demonstration of this was the fact that while the executive staff was in the colonel's office reviewing all of the data, the colonel located a particular residence that officers had responded to over forty times in a three month period. The Executive Officer entered the room and inquired about the address in question. He was familiar with the occupants and the reasons for prior police responses. Years before he responded to the problem house for the same reasons.

It was not from a lack of police expertise that these issues continued to require police response. In fact, it was due to each officer treating their response as a singular incident, never looking at the historical data surrounding a residence, business location, or development. As a result, our calls for service continued to rise, officers had less time to execute the proactive community policing strategies expected of them, and their frustration level was increasing. Worst of all, our citizens were not getting the most from their police department.

The Department has had great success with its community policing philosophy, and our officers are very attuned to community needs and issues. However, many of these locations that require repeat police responses are not the areas that the community has concerns about. For example, the community and the property owner may not know a particular alarm constantly goes *off*, or they may not be aware that a particular residence has issues concerning domestic violence.

Therefore, using traditional community policing methods would not bring these issues to light. It was only through careful analysis of our own response data that we came to the realization that we were sending officers time and again to the same locations.

The New Castle County Police realized that we did not have the staffing levels to continue to conduct business as usual. With an officer to citizen ratio of .85 officers per 1000 residents, which in no way compares to the national figure of 3.2 officers per 1000 residents, we could not afford the demand for service to continually rise. The Department decided it must develop a system to catch repeat call locations quickly and assign officers to use advanced problem solving techniques on the specific problem. By giving officers the tools and the time to end these repeat call situations, it would provide more time for proactive police work.

Response:

In planning the response to our problem, several possible alternatives were examined. These included increasing the number of officers on the Department, eliminating responses to certain types of calls for service, using technology to improve the efficiency of the resources we already had, or implementing of a goal-oriented strategic management process to control crime.

As we weighed the pros and cons of each alternative, we kept in mind that our County Executive, who is also our department's former colonel, mandated there would be no tax increases, even though revenue projections were decreasing. He also instilled upon the entire County workforce that the citizens we so proudly serve are entitled to higher levels of service and improved quality of life in their communities. These statements clearly indicated that adding

large numbers of officers was not a cost-effective alternative to be supported by the government's current financial resources. With our Executive's emphasis on increasing levels of service with existing resources, it also negated the possibility of eliminating police response to certain types of calls for service. Thus, the only alternatives available not supported by increased finances were a better use of existing technology and a new management philosophy that fixed accountability and utilized the talents of our officers. With these principles and goals in mind, the Repeat Call Program was synthesized and became the Department's response to the problem.

Our Repeat Call Program was developed as the result of an analysis that indicated we could increase our levels of service by decreasing the number of inefficient police responses. With fewer repeat calls for service, our officers could focus on solving problems and preventing future problems from occurring. This ideology reinforces our belief that as a police department, we have accountability to the public not only to make arrests, but to also control crime. Frequent responses to the same location for the same problem demonstrated the need to improve inter-agency communications among officers, as well as specialized units to resolve issues in our communities before they escalated. We then focused on utilizing available resources to enable us to quickly identify problem areas, and then affix accountability. This allowed for resolution of the issue before additional police resources and taxpayer dollars were wasted on yet another repeat response.

When defining our evaluation criteria, we remained focused not only on addressing the three sides of the SARA triangle, but also keeping in mind our shareholders, our officers, our citizens,

and the Department's vision statement of making New Castle County the safest county in America. Armed with baseline statistics from previous years, we were able to compare the results of the Repeat Call Program as well as the effectiveness. By assigning a staff officer and crime analysts, we were able to assure constant and relentless monitoring of the efficiency and effectiveness of the program. Flexibility to make positive changes in the program was achieved by combining this with Deming's cycle (Plan-Do-Check-Act).

We now knew that a method was needed that would allow the police to recognize what the victims, suspects and community already knew. Police *were* not focusing on long term solutions to reoccurring problems. There was little focus or knowledge shared among officers to resolve issues before they grew into long term problems. To keep our costs low, we looked to utilize resources already in existence to evaluate our routinely collected data in such a way that personnel would be able to quickly identify areas draining police services.

We already had laptop computers assigned to each officer. We also had a Computer Aided Dispatch/Record Management System that automatically populated when officers were dispatched to complaints and/or electronically wrote a report. In-house computer experts were used to create the Repeat Call Program. This program also forced us to utilize other resources outside of the police domain. Once we recognized the types of repeat calls, we developed informational brochures and solicited the assistance of our Citizen Advisory Councils, who in turn volunteered their time to handle repeat calls for such things as multiple false alarms at the same location.

Criteria were established defining a repeat call for service, thereby allowing us to quickly identify the suspect, victim and location so that the SARA model could be employed to prevent future responses to the same location. Three responses to the same location were established as the definition of a repeat call, thus mandating an evaluation of the situation. Next, a computerized program was established that would not only automatically identify a repeat call, but would also provide the prior responses leading up to this classification. The program also afforded accountability to be affixed by allowing an individual officer to be assigned to the repeat call investigation. Additionally the program constantly monitors the problem solving efforts by all levels of the Department. Only supervisors can close a case, thus removing it from the officer's assigned active investigation list. Finally, the computer program monitors the status of each repeat call and re-opens the original repeat call if there is another response to the same location. This repeat call is then reassigned to the original investigating officer for additional efforts to prevent future police responses.

Our project goal was to stop repeat utilization of police resources by eliminating repeat responses to the same location for the same reason. We were expending large amounts of effort with limited positive outcomes. We needed to work smarter, not just harder.

Before the implementation of the response plan, the Repeat Call Program computer was created, additional software and hardware were installed, and the Department's first intranet site was created. This resulted in a program being accessed from in-house computers and laptop computers in the field. Before the program was distributed to all officers, the entire program was utilized and refined by crime analysis personnel. Once a dependable and functional system was

established, all levels of supervisors were trained in the use of the system. The entire department was later trained to utilize the system and immediately recognize a repeat call while in the field. This training also allowed us the opportunity to reinforce the fact that the SARA model could be used as a means to resolve each repeat call.

Several difficulties were encountered during the implementation of the Repeat Call Program. First was the development of the actual program and the supporting hardware. We had to update some of the agency's hardware to allow for mobile laptops to access the program from the field. We also found that too much information became a problem, which slowed the system. We continued refining the program making it a point and click application that is now user friendly.

The Repeat Call Program involves every officer in the Department. From the colonel to the officer in the field, everyone in the organization plays a role in either supporting the program and/or responding to the problem. The initial premise for the program came from the colonel as not only a means to stop repeat calls for service, but also to act as a check and balance for the Department's crime response and accountability philosophy.

Another factor was discovered as the result of our analysis. Because of the close examination of our response to calls for service, officers were reclassifying dispatches to non-crime classifications. These new classifications would not appear on the maps during our weekly examinations of calls for service and the resulting officer accountability. The Repeat Call Program monitors responses to locations, regardless of the type of call. Because of this, police managers are able to discover repeat response locations without crime maps or how the

responding officer may classify the incident. Instead our managers can just enter the Repeat Call Program and see where police resources are being wasted as the result of continual responses.

Once a location is discovered, accountability can be affixed to resolve the issue at hand.

Assessment:

The implementation of the Repeat Call Program has increased officer awareness to recurring calls for service from specific addresses within their assigned beats. By identifying these repeat call locations early, officers can apply the SARA model of problem solving more quickly, prior to situations becoming out of control. The response to these problems obviously requires increased officer commitment to address the matter, initially. However, by identifying and addressing the locations to which officers are called three or more times in a given time period, ultimately, overall officer availability has and will continue to increase as the need to repeatedly respond to the same location is being eliminated.

The evaluation of the Repeat Call Program involved a number of people from the patrol officer in the field to the colonel. In order to compare raw figures for the number of repeat calls in a given time period, the data is extracted from the Repeat Call Program that interfaces with the Department's Computer-Aided Dispatch System. The total number of calls for service from January 1, 2000 to April 26, 2000 was compared with the same time period in the year 2001. The comparison demonstrated a total reduction of 1856 calls for service. In the year 2000, the New Castle County Police answered 142,570 calls for service with 51,717 of those calls, or 36.3% of the total calls for service, being at addresses which would be considered repeat call

locations. During the first four months of 2001, repeat call locations only account for 21.6% of the total number of calls for service.

In 2000, there were 151 locations that the New Castle County Police responded to fifteen or more times, amounting to 7210 total complaints. After having been identified by the Repeat Call Program and assigned to officers for follow-up investigation, 54 of those locations were eliminated as repeat calls. Most of the remaining 97 complaints have demonstrated a substantial decrease in calls for service, relieving some of the burden on patrol officers and allowing them to devote more time to proactive police work. On average the Department responded less than three times to each of those remaining 97 locations, and efforts are continuing to resolve these issues.

An example of the success of the Repeat Call Program was a warehouse to which numerous police officers had responded on more than 100 separate occasions. Each officer would respond to the location, make an exterior check of the facility, and clear. Each of those responses consumed anywhere from 15 to 30 minutes of officer time. The officer assigned to follow up the repeat calls to the location was able to spend a couple of hours conversing with the property owner and with the alarm agency, and accompanying them on an inspection of the facility. The officer made many suggestions, and since that time, no other officers have needed to respond to the warehouse.

An additional advantage realized by the Repeat Call Program was the early recognition of reoccurring domestic-related incidents at any given location. Now on a daily basis, domestic

violence investigators can identify those families in need of early and intense police intervention to diffuse the escalating violence. The system has again proven itself by providing the Domestic Violence Unit with a more accurate and efficient method of preventing repeat victimization.

The problems involved in implementing the repeat call analysis program were consistent with those in beginning any computer-based initiative. The first problem involved the training of officers and sergeants in the daily use of the program. Although the program involved one screen with pull down menus, officer unfamiliarity with the system initially led to difficulties in retrieving complete information from the system. The problem was quickly resolved with remedial training and more hands-on use by the officers. Another problem addressed was locations that appeared as repeat calls that did not meet the criteria for field officer follow-up. These locations did not meet the criteria because the reasons for response were not related in any way. These locations included multiple vehicle or pedestrian stops on the same roadway, multiple calls from a public pay telephone for various legitimate complaints, and multiple legitimate complaints from one address that were not related in any fashion. A careful screening by crime analysis personnel, followed by a brief screening by an assigning supervisor, eliminated the field officer from spending valuable time at a location that clearly did not meet the repeat call criteria. Finally, as the system was utilized more frequently, ways to make the program more efficient were identified by the daily users and discussed with information systems personnel. Through those discussions, changes were made that led to more efficient user screens and technical enhancements to the system.

The use of the Department's Repeat Call Program requires continual monitoring by the crime analysts, officers in the field, first line supervisors, unit commanders and police executive staff on a daily basis. Unit commanders and executive staff monitor the success of the program during the weekly accountability meetings. Information systems personnel are also required to monitor the program from a technical perspective, as well as deliver support for officers requesting upgrades and assistance.

The implementation of the Repeat Call Program has increased officer awareness to recurring calls for service to specific addresses within their assigned beats. By identifying these repeat call locations early, officers can apply the SARA model of problem solving more quickly, prior to situations becoming out of control. Initially, the response to these problems requires increased officer commitment to address the matter. Ultimately, by identifying and addressing repeat call locations, overall officer availability has, and will continue to increase.

Agency and Officer
Information

Agency and Officer Information

The use of the Repeat Call Program was initiated as a department-wide philosophy with each officer receiving access to the system. The level of access depends upon the individual assignment, with supervisors and administrators having the highest level. They have the ability to review all cases/locations and assign follow-up investigations to officers working within specific geographic beats. Line officers have the ability to review their assigned cases as well as check individual addresses for past or present repeat call activity as an investigative tool. All members of the organization have received training on the use of the system; and as the need for improvement or modification arises, funding is obtained to implement appropriate upgrades.

Prior to the implementation of the Repeat Call Program, all members of the agency received 24 hours of in-service training on the SARA method of problem solving. This training was accomplished via a train the trainer program that permitted utilization of instructors from within the ranks of the agency as well as from outside resources. This training included the tenants of the SARA model as well as the development of improved community contact skills. The training culminated with the in-house production of a problem-solving handbook that included a lesson text and refresher presentation on compact disk.

With these skills in hand, the Repeat Call Program became the cornerstone of the Department's problem solving philosophy. This program is organizationally reviewed for the entire jurisdiction at weekly accountability meetings. Each of the four district areas of the County is reviewed during these weekly meetings by a staff panel. The purpose of the review is to encourage problem solving and review the past month's activities.

When first implemented, the use of this technology was brand new to the organization.

Therefore, the ground first covered was wrought with pitfalls that have each been reviewed and overcome with time and increased levels of expertise and funding. Each week of use brings valuable suggestions from users of every level. Valid recommendations are reviewed and implemented based on merit and available funding. Currently, there are three full time positions, two sworn officers and one civilian that support this program. In addition to these salaries, approximately \$100,000 of New Castle County dollars were spent to upgrade existing computer equipment and purchase new equipment.

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Appendix #1 Repeat Call Program Search Menu Page

Home Find Repeat Call Administration

Time Period: All Dates

From Date To Date
 JAN 2000 JAN

Street Number From: P-----
Direction Name Type
 S 'DUPONT RD
 N MAIN ST

Community: I
 All v Me (') (Unassigned (') (All (') /IBM#:i

Call Status: AI1 New Open Reopened Closed Finished
 Count >=

Note: Leaving an item blank means that the selected calls won't be checked for that item

I-Tome

Find Repeat Call

Administration

Action

Event

Save

Call #	Status	Status Dt	# Calls	Sector	Community	Street	SQUAD	Event	Action	Assigned Officer	IBM
2501	Closed	3/20/2001 3:28:28 PM		22	ASHLEY	18 S DUPONT RD	E	Event	Action	212112001 FRANKS	2541

Appendix #2
Repeat Call Program
Search Response Page

Appendix #3
Repeat Call Program
Events Response Page

Call Events

Home

Up

Find Repeat Call

Administration

Action

8 S DUPONT RD, ASHLEY

Case	Type	Clearance	Case Date	Case Time	O FLG	Community Sector
01020769.1	ALARM	FLS	02/26/2001	:20:16		ASHLEY 22
10101392411	ALARM	FLE	0210812001	6:43:59		ASHLEY 22
101012423.1	FIGHTX	NP . .	0210312001	21:31:43		ASHLEY 22
01009118'1	ALARM	FLE	01/26/2001	6:28:21		ASHLEY 22
10100912411	ALARM	FLE	01/26/2001	6:59:24		ASHLEY 22
0100744511	ALARM :I	FLE	01/21/2001	9 01:44		ASHLEY 22
00140983	ALARM	FLE	12/27/2000	7:24:49		ASHLEY 22
10014026611	PDHR	PR	1212412000	19:23:47		ASHLEY 22
00 1 39247.1	PUBREL	NP	1212112000	20:38:50		ASHLEY 22
	DESCRX	NP	12/16/2000	23:41:50		ASHLEY 22
00131893'.1	ALARM	FLS	12/01/2000	7:06:09		ASHLEY 22
0008413811	ALARM	FLS	07/31/2000	6:36:56		ASHLEY 22
10004773511	ALARM	FLS	05/06/2000	6:42:55		ASHLEY 22
1000369151	ALARM	FLE	0410912000	6:49:19		ASHLEY 22
00034693'1	ALARM	FLS	04/04/2000	:44:07		ASHLEY 22
00127401	ALARM	FLS	0210612000:1	2:46:05		ASHLEY 22
00012047	ALARM	FLS	02/04/2000	1:40:10		ASHLEY 22
0000521911	ALARM	FLS	01/15/2000	2:07:02		ASHLEY 22
0000268611	ALARM	FLS	01/08/2000	2:22:23		ASHLEY 22
991393401	ALARM	FLS	1212911999	.. 1 08:14		ASHLEY 22

Call Actions

Home

Up

Find Repeat Call

Administration

Event

New Act' On'

Save

8 S DUPONT RD, ASHLEY

Call Status: Closed

Status Date: 3/20/2001 3:28:28 PM

ActionId: 432 Officer: FRANKS, HARLEY Date: 3/4/2001 5:22:41 PM

OFFICER CONTACTED ALLEN W LYNCH (PRESIDENT & BAR MANAGER) OF VFW POST 2863. MR LYNCH ADVISED HE WOULD CONTACT ALL SUBJECTS WHO OPEN THE FACILITY ON THE USE OF THE ALARM. MR LYNCH PROVIDED A PAGER NUMBER FOR FUTURE CONTACT IF THE SITUATION IS NOT RESOLVED.

Action	Description	Date	Officer
432	OFFICER CONTACTED ALLEN W LYNCH (PRESIDENT & BAR MANAGER) OF VFW POST 2863. MR LYNCH ADVISED HE WOULD CONTACT ALL SUBJECTS WHO OPEN THE FACILITY ON THE USE OF THE ALARM. MR LYNCH PROVIDED A PAGER NUMBER FOR FUTURE CONTACT IF THE SITUATION IS NOT RESOLVED.	3/4/2001 5:22:41 PM	FRANKS, HARLEY

