

A Quantitative Analysis of the Effectiveness of Community Mediation in Decreasing Repeat Police Calls for Service

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This research measures the effect of community mediation on decreasing repeat police calls for service. These results suggest that community mediation reduces repeat police calls to conflict situations. Issues of selection bias and the life cycle of conflict are addressed.

Among the many virtues of mediation extolled by its advocates is the ability to save participants and courts time and money. Although some research has identified cost savings to court systems (see, for example, Felstiner and Williams, 1982), little attention has focused on isolating the effect of mediation on police work.

Using a sample of personal conflict in which there was police involvement in Baltimore City, this study estimates the effect of mediation on calls for service to the police. The index is the intensity of police calls per week to the conflict participants' homes. Because the decision to use mediation is voluntary, this article presents a definition of selection bias; the study also includes a correction for the selection bias identified.

The principal finding is that mediation reduces police calls by approximately 0.331 calls per week in the six months following a mediation. To put this in perspective, the average number of police calls prior to mediation for this sample was 0.431 calls per week.

Police Response to Conflict

Across the United States, police officers are often called on to deal with neighborhood disputes, ranging from minor disagreement to violent confrontation. Police response may stop the confrontation for the moment,

but officers are rarely able to resolve the underlying issues in the conflict (Goldstein, 1990; Merry, 1979). As a result, the conflict continues, escalates, and usually results in repeat police calls, court action, or violence.

Rapid response and random patrols are not designed to allow law enforcement to deal with the underlying issues in an interpersonal dispute. Instead, police tend to deal with the symptoms of conflict while allowing the underlying issues to fester (Goldstein, 1990; Black, 1980). Sometimes police intervention can further escalate the situation, especially if one participant is angry that the other called the police or the police officer's approach is confrontational, thus increasing hostility. Police often do not have the time it takes to build trust, identify the underlying issues, and help people develop solutions to the complex issues in conflict (Volpe, 1989; personal correspondence with Baltimore Police Department). However, even if police had the time and the skills, Volpe (1989) argues that police may not be seen as neutral because they have the authority to make decisions. Goldstein (1990) also stresses the lack of perceived neutrality of police officers. If police are not seen as neutral, and if participants feel coerced, it is unlikely that all underlying issues in their dispute will be addressed.

Computerized police records from the Baltimore City Police Department indicate that the average amount of time spent by an officer per call for a case that could be mediated was thirty-two minutes (including travel to and from the location). According to information provided by the Fiscal Division of the Baltimore Police Department in 2001, the average hourly personnel cost of responding to a call with two officers in a patrol car is \$45.72, which translates to a cost of \$24.38 per conflict-related call. (This does not include the cost related to a situation in which police have to arrest an individual. In this case, officers spend up to four hours booking the individual and then must appear in court for their trial, which may take an entire day.) This figure is the lower bound on the cost per call to the department because it does not include the cost of the communication system and the dispatcher, equipment, or fixed costs such as supervisors' salaries. Perhaps more important than the financial cost, however, is the amount of time spent by officers responding to a call resulting from interpersonal conflict. For example, at the time of this study, Baltimore had a high homicide rate (greater than three hundred per year). Many of those arrested for homicide had outstanding warrants that were never served prior to the crime because of lack of personnel time. Less time spent on repeat calls to interpersonal conflict situations could free up time for other law enforcement activities such as serving warrants.

Mediation of Neighborhood, Family, and Personal Disputes

This study was conducted using cases referred to and mediated by the Community Mediation Program (CMP) in Baltimore. CMP is a nonprofit organization that provides mediation services at no cost in 120 locations in Baltimore City. CMP mediates:

- Neighbor disputes (such as noise, property, animals, and lifestyle differences)
- Interpersonal disputes (assaults, allegations of harassment)
- Business disputes (between businesses and residents, or customer complaints)
- Family disputes (parent-teen conflict, custody and visitation issues)
- Landlord-tenant disputes (payment and repair schedules)
- Neighborhood association conflicts

CMP receives referrals from the courts, the police, social service agencies, city agencies, community organizations, and individuals who refer themselves. CMP promotes mediation through public education campaigns, including presentations to community groups, billboards, participation in community events, and distribution of flyers and brochures in public places. Six paid staff are responsible for case management, program administration, coordination of public awareness, evaluation, mediator training, fundraising, and developing relationships with referral sources. CMP depends on seventy-five volunteer mediators who provide most of the actual mediation services. Volunteers complete an extensive training process. CMP is governed by a board of directors and is funded by a variety of sources (private foundations, corporate foundations, federal and state grants, personal contributions, fundraisers, and income generated through training contracts with other agencies).

Police and Community Mediation

Police response to neighborhood conflict is often inadequate, and repeat calls to the same conflict can be costly to the police department. Recent national trends towards community policing encourage systematic analysis of calls for service with the goal of determining and resolving the underlying

issues. The community policing philosophy is that “incidents are merely overt symptoms of problems” (Goldstein, 1990, p. 33); by examining the relationship between incidents and the background issues causing them, police can resolve the underlying issues. This decrease in calls for service will allow more proactive crime-fighting work. An important piece of community policing is referral to agencies better able to deal with the underlying issues in a given situation (Goldstein, 1990). Volpe (1989) and others have encouraged police to make referrals to dispute resolution centers as a way to cut police time spent on disputes, prevent repeat calls, and reduce police work processing court cases. Although there is significant anecdotal evidence of the effectiveness of the referral relationship between police and community dispute resolution centers, there are few documented studies. This article quantifies the time savings to the police resulting from mediations conducted by CMP. It is the author’s hope that this will begin dialogue and generate more research in this area.

Methods

CMP keeps a database of all cases referred to CMP for mediation. The database includes demographic information on participants, referral source, type of dispute, address, whether or not each participant agreed to use mediation, whether the case was mediated, and whether an agreement was reached in mediation. This information is gathered by CMP employees as they talk to clients and are entered into the database.

In an attempt to research cases most likely to have police involvement, all cases referred by the police department or the criminal court system (through the Baltimore City State’s Attorney’s Office or the Public Defender’s Office for Baltimore City) between January 1999 and February 2000 were pulled from the CMP case database. Whether mediation occurred in each situation was coded. The decision to mediate is voluntary, which raises selection bias concerns that are dealt with here.

A search for each address involved in these disputes was run in the police call archives to determine the number and type of calls in the six months prior to and the six months after the mediation program was involved.

In Baltimore, police calls are categorized by type: parking complaint, common assault, armed person, juvenile disturbance, missing person, child neglect, narcotics, and other. There are seventy-nine crime codes that can be used to code these calls. Most conflicts sent to mediation are issues

related to certain call types: common assault, assault by threat, loud music, animal disturbance, sanitation complaint, disorderly conduct, juvenile disturbance, parking complaint, or family disturbance. However, people involved in conflict may report a variety of complaints in order to get the police to respond. For example, police will respond to a child abuse call more quickly than to a call about people screaming at each other late at night. Therefore a neighbor who is angry about the noise may suggest in reporting the situation that child abuse is occurring. Another example might be a neighborhood dispute over animals escalating to where one neighbor is threatened by another. The former may call the police and report that the neighbor has a gun. This may be coded as armed person rather than animal disturbance. Therefore, in the study reported here *all* calls for service were counted. This may undercount the change in police calls that is due to mediation, because people might continue to call the police for other reasons, even if the conflict has been resolved. Despite this fact, we find a significant drop in *all* calls for service after mediation.

Experimentally, the ideal way to measure the number of calls saved is to start measuring calls when the first call to the police was made, and then let people fight for six months before making a referral to mediation. This was not done for ethical reasons and because data was collected from CMP, which had preestablished referral systems in place before this study began. Instead, the cases in this study were referred by the Police Department, the State's Attorney's Office, or the Public Defender's Office when the conflict came to the attention of someone in these agencies who knew about mediation. In some cases, police calls were made to the home involved in the referral for the full six months examined in this study and possibly longer. In other cases, police calls were made for only a few days prior to the referral. On average, police calls were made for four months before referral. Presumably, if the participants had been left to make calls for another two months before being referred to mediation, they would have made more calls and we would have found a larger difference in the calls for service before and after mediation.

An informal test of whether allowing six months before a referral would have caused more calls can be done by looking at those cases that did not go to mediation. The average number of calls in the six months before a referral for such a case was 7.56. This number was found by looking at the date of the referral, pulling the call data for the six months before that date, and counting the number of calls. When we begin with calls from the first date and count six months forward, the average number of calls in six months

for those cases that did not go to mediation is 9.06. This implies that if a full six months were allowed for people to make calls before they were referred to mediation, there would have been more calls before the mediation. To account for the experimental constraint, the main variable used for this study is the number of calls per week—the intensity of calling—before and after the intervention, rather than the total number of calls before and after the referral.

The “intensity before” variable is the number of calls that came in before the mediation divided by the number of weeks during which calls were made. The “intensity after” variable is the number of calls that came in the six months after mediation divided by the number of weeks in six months. The “difference in intensity” variable is the intensity before minus the intensity after.

To isolate the effect of mediation on change in intensity, regression analysis was used. It allows the researcher to look at the effect of a variety of independent variables on the dependent variable. In doing so, regression analysis is able to hold constant the effect these other variables may have on the dependent variable, thus isolating the effect of the variable of interest. The primary variable of interest was whether or not the case was mediated. The other variables included in the study were the type of conflict (neighborhood, parent-teen, personal), whether the dispute was interracial or not, whether the case was referred by the police or the courts, the number of calls per week before referral to mediation, and the number of weeks during which calls were made to the police before referral was made to mediation.

The variable for the number of calls per week before the referral to mediation and the variable for the number of weeks during which calls were made to the police before the referral was made to mediation were included in order to account for what appears to be a life-cycle issue. Looking just at raw numbers, the average number of calls per week in the six months prior to mediation for those cases mediated was 0.446. The average number of calls per week in the six months after mediation for the mediated cases fell to 0.151. The average number of calls per week in the six months prior to intervention for those cases not mediated was 0.423. The average number of calls per week in the six months after intervention for the nonmediated cases was 0.260.

The intensity of calls for service decreases both for those cases that went to mediation as well as for those that did not. This indicates there is some underlying pattern that intensity of calls for service follows regardless of outside intervention. In most cases, the intensity of calls for service increases and then

decreases over the time period examined. This may be because people decide to move away, resolve the conflict on their own, or get tired of calling the police. The information in this database does not allow us to test what happens to cases in which calls for service decrease when there was no mediation. This database does not include sufficient information, nor is it large enough to determine the specific life-cycle pattern of calls for service; however, this is an important topic for future research. Even though the intensity of calls eventually drops for all cases, those cases in which the conflict was mediated had an average decrease in intensity almost twice that of the cases that were not mediated. Because this dataset catches conflicts at different points in their life cycle, the regression analysis includes the variables for the length of time the calls were made and the level of intensity the calls reached before referral to mediation. This allows us to isolate the effect of mediation, holding constant the point in the life of the conflict at which the case is referred. In fact, we find that regardless of the point in the life of a conflict where the intervention occurs, mediation decreases the intensity of calls for service.

Selection Bias

Because the decision to mediate is voluntary, the fact that people call police less often after mediation may be due to some third factor that also affects their decision to use mediation. For example, there may be people who are more interested in working things out with their neighbors. These people may be more likely to go to mediation, or to stop calling the police. If this is the case, then using Ordinary Least Squares (OLS) regression analysis may overestimate the effect of mediation on a decrease in police calls. To account for the possibility of selection bias, the Treatment Effect model and the Heckman two-step estimation procedure were used in addition to the OLS method (Greene, 1993).

Results

The results from the OLS method appear in Table 1.

The significance of the coefficient on Mediated indicates that the mediation resulted in a decrease in intensity of police calls. The coefficient does not tell the whole story, however, because OLS does not account for possible selection bias. The significance of the coefficients for Weeks Calls Made and Intensity Before is a result of the life cycle of conflict and conflict associated calls. Running the Heckman two-step procedure results in the data shown in Table 2.

Table 1. Impact of Intervention on Calls per Week

<i>Dependent Variable = Change in Calls/Week After Intervention</i>		
<i>Variable</i>	<i>Coefficient</i>	<i>Standard Error</i>
Mediated	0.121*	0.059
Weeks calls made	-0.016*	0.004
Intensity before	0.547*	0.079
Neighbor dispute	-0.056	0.093
Parent-teen dispute	-0.164	0.124
Personal dispute	-0.214	0.118
Police referral	-0.051	0.060
Interracial dispute	0.142	0.082
Constant	0.313	0.132

Notes: *Indicates significance at a 95 percent confidence level.
Adjusted $R^2 = 0.5566$.

Discussion

The results indicate that mediation has a significant impact on decreasing the intensity of police calls for service to conflict situations. Contrary to what was expected, after accounting for selection bias through use of the Treatment Effect model we found that the effect of mediation on the difference in police calls before and after mediation is *greater* than before accounting for selection bias. This indicates that cases in which people choose to use mediation are those in which there are likely to be more police calls in the absence of mediation, not cases in which people would have stopped calling the police on their own anyway.

It is possible that people more likely to seek help by calling the police are also likely to accept the help of a mediation program. This willingness to seek help may also be reflected in the fact that court-referred cases have a higher probability of going to mediation. People who are more likely to seek help may be inclined to file in court, and more likely to use mediation services. Although this phenomenon may address the difference in mediation use between people who use the court and police systems and those who do not (who are not represented in this study), it is unlikely to play an important role in the difference in calls for service found in this study. In fact, discussion with CMP case managers indicated the opposite. People who call the police or use the court system are often looking for someone

Table 2. Adjustments for Selection Bias

<i>Dependent Variable = Change in Calls/Week After Intervention**</i>		
<i>Variable</i>	<i>Coefficient</i>	<i>Standard Error</i>
Mediated	0.332*	0.143
Weeks calls made	-0.016*	0.004
Intensity before	0.563*	0.073
Neighborhood dispute	-0.060	0.091
Parent-teen dispute	-0.277	0.143
Personal dispute	-0.220	0.122
Constant	0.240	0.123
<i>Equation (4): Dependent Variable = Choice to Use Mediation</i>		
<i>Variable</i>	<i>Coefficient</i>	<i>Standard Error</i>
Interracial dispute	1.044*	0.490
Neighborhood dispute	0.378	0.577
Parent-teen dispute	1.771*	0.739
Personal dispute	0.119	0.742
Police referral	-1.157*	0.358
Constant	-0.463	0.517
λ	-.124	0.089
ρ	-0.549	
σ_ε	0.226	

Notes: *Indicates significance at a 95 percent confidence level.

**Wald $\chi^2(9) = 116.01$; Prob = 0.000.

The result is that after accounting for selection bias, the effect of mediation on police calls is a greater decrease in calls for service.

else to resolve their problem or discipline the person with whom they are having the dispute. When these people are offered mediation and understand that the mediation process involves sitting down with the other person and developing a solution together, many refuse, indicating that they would rather have the police or the courts “punish” this person. The question of what affects people’s choice to use mediation is an important area for future research.

The fact that calls continue at all after mediation may raise questions about whether the dispute was fully resolved. Some of the remaining calls

for service can be attributed to the cases in which mediation was not successful in resolving the dispute. It is important to remember, however, that *all types* of calls for service were used in this dataset. Because it is not possible to isolate those calls that were due to the conflict and those calls resulting from other situations, some of the calls both before and after the mediation may have been due to situations unrelated to the conflict that was mediated. Regardless of this noise we may be measuring by including all calls for service, the decrease in calls in cases that were mediated remains significant.

Time and Cost of Police and Public Agency Involvement

The Treatment Effect results indicate that mediation causes a decrease of .332 calls per week during the six months after mediation. This is approximately 8.53 calls in the six months. Using this figure and the 32 minutes per call average for police responding to neighborhood conflicts, mediation saved 273 minutes per situation per six-month period, or 4 hours and 33 minutes of patrol time. Assuming two officers to a patrol car, this is 9 hours and 6 minutes of personnel time. Financial savings resulting from this can be assessed using the officer's salary. The upper bound of the cost of conflict-related calls is \$193.35 (found by dividing the police budget by the number of calls), and the lower bound is \$24.38. With these figures, the financial savings to the police department in a six-month period from one mediation lies somewhere between \$1,649.27 and \$208.00.

It is unlikely that savings to the police department from mediation will be realized in financial costs; the department will probably not lay off officers as a result of this savings. The time saved is perhaps more important. Officers who are not responding to repeat calls for service can spend time preventing and investigating crimes.

The savings to the police department represents only a small part of the savings to public agencies as a result of mediation. A 1975 study of misdemeanor cases in criminal court in Dorchester, Massachusetts, that could have been mediated found that it cost the court \$203.09 per case (in 1978), which would be \$657.21 per case in FY2000 dollars (Felstiner and Williams, 1982). Other city and state agencies responsible for enforcement are often drawn into interpersonal conflict even though there may not be an enforcement issue, or when the main issues of the conflict do not require these agencies. Examples of city and state agencies that may respond to a conflict situation

that is not necessarily appropriate for enforcement are the city planning department, department of social services, city housing department, public school, human services department, and health department.

Ideally, we should be able to quantify the cost of a mediation to compare to the savings. Because CMP provides a variety of services, simply dividing the budget by the number of mediations does not accurately reflect the cost of mediation. The direct costs involved in mediating one case are the cost of the case manager working on it (\$13.22 per hour), the volunteer coordinator who assigns mediators and coaches volunteers as necessary (\$14.42 per hour), and the volunteers who actually mediate. The volunteers are unpaid. Case managers work on average five hours from beginning to end for every one that goes to mediation, and the volunteer coordinator works one hour for every case that goes to mediation. Therefore the average direct cost of mediation to CMP is \$80.52.

Public Policy Recommendations

Despite the questions that remain and the importance of future research, these results clearly indicate the benefit of mediation to the police department in terms of decreased calls to conflict situations. At a time when many inner-city police departments are in need of personnel, the discretionary time created by the decrease in return calls to the same address can be crucial. Police department and court personnel should increase the number of cases referred to mediation to realize this potential cost savings. Furthermore, making referrals earlier in the life of the conflict may save even more time and resources for the police. In the conflicts in this study, police were receiving calls to the addresses involved for four months on average before the referral was made. If the referral had been made at the beginning of those four months, all but the first call for service might have been prevented.

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