MANAGING INVESTIGATIONS: THE ROCHESTER SYSTEM

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THE URBAN INSTITUTE

PoliceFoundation

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FOREWORD

In December 1974 the Police Foundation published a small report entitled *Auditing Clearance Rates.* The report contained the results of an audit of Rochester, N.Y., Police Department clearance rates which confirmed that detectives and patrol officers organized in teams were substantially more effective in clearing up crimes, especially burglary, than were detectives organized in the more standard, centralized mode.

The Police Department agreed that the next step on the way to expanding the new investigation approach citywide was a thorough study to determine why and by what means the Rochester System produced its results. The Foundation contracted with The Urban Institute, which had just completed the audit, to conduct the study in partnership with the Rochester Police Department. This report contains the results of that research.

The Rand Corporation recently published a report entitled *The Criminal Investigation Process* that concludes, based on survey data from 156 police agencies, that investigations resources as they are commonly managed are not particularly productive. The Rand study was supported by the Law Enforcement Assistance Administration. The Rochester System produces quite different results from those reported in the Rand study and does so, according to The Urban Institute research reported here, by using management techniques proven successful in modern commerce and industry.

Motivation under the new system is high. In fact, there is some possibility that a drop in the quality of on-

scene arrests which accompanied the solid, sustained improvement in overall investigative performance under the Rochester System may possibly have been the result of overresponse to emphasis on improving arrest productivity. The actual cause or causes of lower quality remain in part unknown; more transient and less cooperative victims and witnesses may be a factor. The department is taking steps to improve the quality of on-scene arrests as it takes advantage citywide of the superior investigative effectiveness of the Rochester System.

Rochester stands to benefit substantially from having applied the results of research to increasing its police department's capability of apprehending criminals under its new system of managing investigations. The Police Foundation believes that other cities may well find their answer to some of the deficiencies pointed up by the Rand study by carefully adapting the concepts of the Rochester System to their own settings.

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INTRODUCTION

Early in 1971 the Rochester, New York, Police Department initiated an experiment called Coordinated Team Patrol (CTP), a variant of neighborhood team policing,[1] in certain parts of that city. The goal of the experiment was to determine whether the CTP system could improve the department's investigative and apprehension operations. Table 1 indicates how Coordinated Team Policing changed previous operations.

A previous report[2] on this experiment confirmed the department's own belief that patrol officers and investigative personnel involved in Coordinated Team Patrol were more productive than non-CTP personnel in dealing with the targeted crimes of burglary, robbery, and larceny. This report describes those elements of the "Rochester System" that contributed to its success and caused the Rochester Police Department to expand its use to all parts of the city in 1975. Some of these elements, alone or in combination, are believed to be promising methods of improving police operations in other departments.

[1] See Peter B. Bloch and David Specht, *Neighborhood Team Policing*, Washington, D.C.: Government Printing Office 1973; and Lawrence W. Sherman, Catherine H. Milton, and Thomas V. Kelly, *Team Policing: Seven Case Studies*, Washington, D.C.: Police Foundation 1973.

[2] Peter B. Bloch and Cyrus Ulberg, *Auditing Clearance Rates*, Washington, D.C.: Police Foundation 1974.

TABLE 1

PRINCIPAL CHANGES BROUGHT ABOUT BY COORDINATED TEAM POLICING

Previous Methods	Changes	
	By Administrative Decision	By Team Commander
Patrol Unit of 95 officers	Teams of about 36 officers	–
Detectives work in centralized division	About 6 detectives in each team, responsible to team commander	–
Responsibility for patrol operations at the unit level (captain)	Responsibility for both patrol and investigative operations at the team level (lieutenant)	–
All cases receive some follow-up investigation, with substantial attention to improved classification of crimes	–	Unpromising robbery and burglary cases may be closed early and effort officially concentrated on promising cases
Each burglary and robbery case assigned to an investigator	–	Investigative tasks assigned by the team commander to assure continuity of the team's investigative priorities (Team C only)

A Brief History of the Experiment

Before the experiment began, the Rochester department was arranged in a traditional fashion. All the department's patrol officers worked in a patrol division divided into three units (A, B, and C), each of which patrolled approximately a third of the city. At the same time, all the

department's detectives, and other plainclothes investigators without detective rank, were assigned to a central investigations division and were dispatched to investigate crimes regardless of geographic location in Rochester.

In 1970 it had become apparent to the department's top command that this arrangement was inadequate. Reported crime rates (particularly for burglary and robbery) were climbing steeply, and the investigations division was beset with managerial problems which were common knowledge throughout the department. From the standpoint of the department's managers, including Commissioner John A. Mastrella and Thomas F. Hastings, then director of planning and research, it was evident that the time had come to experiment with new arrangements.

Thus, on March 15, 1971, Commissioner Mastrella issued a general order creating Coordinated Team Patrol B to work in part of the territory previously patrolled by Unit B and Coordinated Team Patrol C to work in part of the area previously patrolled by Unit C. Each team was composed of roughly 36 members, including about 30 uniformed patrol officers and six detectives and plainclothes investigators. Two patrol lieutenants were named as team commanders, each one responsible for the team's effectiveness, and each having the authority to structure the team for maximum efficiency. The task of each team was to provide most of the required police services in its given geographic area on a 24-hour basis, with special emphasis on improving arrest and clearance rates.[3]

After both teams had operated for ten months, the department's administrators concluded that Team B had failed to meet expectations, but that Team C appeared to be a success. As a result Team B was dissolved on January 9, 1972, and on the same date a Coordinated Team Patrol A (or Team A) was formed. This new team became responsible for part of the area originally patrolled by Unit A.

By the spring of 1973 the department was convinced that Teams A and C had improved police effectiveness. A comparison of clearance rates for burglaries and robberies in

[3] Not assigned to the teams was responsibility for investigating homicides, rapes, assaults which gained public notoriety, fraud, sale of narcotics, and some other crimes requiring specialized knowledge. Crime scene searches and criminal offenses by juveniles also continued to be handled by centralized personnel.

team and nonteam areas showed that the two teams were clearing more than 40 percent of these two crimes in their areas, almost double the rate of clearances in the rest of the department.[4] The department believed that these improved clearance rates resulted from the fact that teams made more arrests than nonteam personnel. The higher number of team arrests, in turn, was attributed to better preliminary and follow-up investigations, an improvement directly stemming from the Coordinated Team Patrol concept.

At that point the Rochester department asked the Police Foundation to evaluate the performance of the teams. The department also asked the Foundation for financial assistance to improve further the teams' preliminary investigations and for some minor matters, such as office equipment for a proposed third team.

The Foundation agreed to meet these requests, provided that an external audit of the teams' clearance figures showed that the improvement was real and not simply the result of bias or statistical error. That audit, described in *Auditing Clearance Rates*,[5] concluded that the teams' improved clearance rates were in fact a statistical indication of better police work. Six other possible explanations, including statistical error, reclassification of crimes from more serious to less serious, a higher rate of exceptional clearances,[6] and bias in the selection of team members, were rejected as unfounded. The audit also revealed that team members had improved their arrest rates far more than nonteam personnel. Specifically, the audit's findings were that:

> The clearance rates for burglary and larceny (excluding shoplifting) were higher in both team areas than in the rest of the city (36 percent and 16 percent in Team A's area, and 49 percent and 9 percent in Team C's area, compared to 14 percent and 4 percent in the rest

[4] A clearance, in police terminology, occurs when a reported crime is followed either by the arrest of someone charged with that crime or by a limited class of "exceptional clearances."

[5] Bloch and Ulberg, *Auditing Clearance Rates.*

[6] An exceptional clearance occurs when the police determine who committed a crime but are unable to make an arrest for a reason beyond their control, such as flight from their jurisdiction or imprisonment for another crime.

of the city); clearance rates for robbery were similar for teams and non-teams (about 23.5 percent for both).

Team members who were in the department in both the before and during periods increased their robbery arrests from 34 to 159 (more than four times) and their burglary arrests from 129 to 372 (about three times). In contrast, comparison officers increased their arrests for these two crimes by only 54 percent.

Once the audit was completed it was clear that the Rochester System merited a thorough evaluation which would uncover the methods used by team personnel to clear more reported crimes and make more arrests than patrol officers and detectives still working within the traditional division of responsibilities. This report is devoted, for the most part, to a description and explanation of those factors which enabled the teams to clear more crimes and make more arrests than nonteam personnel in Rochester. It also describes and explains certain factors which, contrary to managerial expectations, played little or no part in the teams' performance.

The Evaluation Process

The data on crimes, arrests, and clearances used in the audit were taken from various periods of time before June 1, 1973.[7] For this report, a more recent period—July 1 through November 30, 1973—was chosen for evaluation. Selection of this period was predicated on the desirability of studying more recent data which, at the same time, were far enough in the past so that the researchers' handling of records would not conflict with the department's day-to-day responsibilities.

Data from a large sample of investigations occurring during this more recent period were analyzed, first, to confirm that the success of the Coordinated Team Patrol experiment had continued beyond the period covered by the audit. Without continuing success on the part of the teams, as indicated by statistics on arrests and clearances, this report

[7]Further information on data selection can be found in *Auditing Clearance Rates*, pp. 21-22.

would instead have been directed to an exploration of the experiment's temporary effects. As it turned out, however, (and as will be shown in Chapter III) the statistical record compiled by the teams during the new evaluation period did indicate continuing success.

The next question was to determine how the teams had achieved and maintained their higher number of arrests, particularly for burglary and robbery. As mentioned earlier, the department's own belief was that the teams' improved arrest figures were the result of better preliminary and follow-up investigations. But arrests stemming from preliminary or follow-up investigations are not the only kinds of arrests. There is another kind, in this report called "on-scene" arrests. These are arrests which take place at or quite near the scene of a crime, either immediately or within minutes after it occurs. While such arrests often involve a quick preliminary gathering of information—such as the direction taken by a fleeing offender—they involve only minimal "investigation."

Thus, the initial stages of this evaluation included, first, the determination that during the evaluation period there were 2,433 reported burglaries, 303 reported robberies, and 4,834 reported larcenies in Rochester.[8] The second step was to determine how many investigations of these crimes resulted either in an arrest or in the classification of cases as "cleared by arrest," either by the teams or by nonteam police personnel. The third step was to determine, for both teams and nonteam personnel, how many arrests were "on-scene" and how many resulted from preliminary or follow-up investigations.

As in any other city, comparatively few investigations of burglaries, robberies, and larcenies resulted in an arrest or even in an arrest clearance. Consequently, all of the cases leading to an arrest, and most cases cleared by arrest, were inspected. Unsuccessful investigations were also sampled in order to make a determination of the overall frequency with which various kinds of investigative information was developed.

[8] All crimes classified by the department's central records section as burglary, robbery, and larceny were included, since the expectation was that teams and nonteam personnel might have adopted divergent policies on reclassification. This expectation was confirmed.

For example, inspection of all successful investigations for burglary and inspection of a sample of unsuccessful investigations for burglary made it possible to estimate the percentage of all burglary cases in which a witness provided information about a suspect's identity. In addition, data from both successful and unsuccessful investigations provided insight into the kinds of information that resulted in successful outcomes, that is, arrests.

At this point one should note that this report, unlike the audit, focuses more attention on arrests than it does on clearances. The chief reason is that arrest statistics are operationally more important and less subject to manipulation and distortion than clearance statistics, which are affected by the reclassification or unfounding of crimes and by the number of clearances determined to stem from arrests.

Apart from the types of data already discussed, one other set of statistics was necessary to evaluate the worth of the Rochester System: A determination of how many team and nonteam arrests were followed by prosecution, such as indictment, bench warrant, plea bargain, or court trial. What had to be determined, in other words, was not only the number of arrests and resulting clearances achieved by teams and nonteam personnel, but also the quality of the arrests achieved by teams and nonteams. While arrests may or may not lead to prosecution, both kinds of arrests result in clearances. However, a police unit having similar cases and a higher proportion of prosecuted arrests is functioning better than a unit with a lower proportion.

As Chapter III will show, statistical evidence from the evaluation period (with one notable exception) reinforced the conclusion of the audit that team performance in regard to burglaries, robberies, and larcenies surpassed the performance of nonteam personnel.

The next question—and the primary one as far as this evaluation was concerned—was why. In order to determine the answer, the authors studied whatever written material was available apart from statistics and case records, such as the general orders establishing the teams. Much more important, however, were personal observation, lengthy discussions and daily interactions with the department's managers, with commanders and members of the teams, and with nonteam

police officials, patrol officers, and investigations personnel. These discussions involved such matters as policy, procedures, and tactics, particularly where team operations differed from those used in other parts of the department. The more nebulous matters of cooperation and morale, among both team and nonteam personnel, were also subjects of discussion. What proved notably useful here was a survey of team and nonteam patrol officer attitudes carried out by the department itself in July 1973.

The authors also examined many variables that might have influenced a determination of success in order to determine whether there was some alternative explanation to better performance. Examined variables included seniority, prior performance records, personnel policies, equipment, and the relative difficulty of policing the team areas.

In general, the authors used appropriate statistical tests to determine whether differences in the data were due to chance alone rather than to the Coordinated Team Patrol experiment. Statistical differences between teams and nonteams which would have occurred by chance only one time in 20 are considered "significant" and are discussed in this report. When differences between teams and nonteams were not "significant" according to the statistical definition used, the results are described as "similar," "no difference," or "not statistically significant."

MAJOR FINDINGS

In this section, the major findings of the evaluation are given in summary form. Statistical measurements and other supporting material are in Chapter III, "Detailed Findings."

Overall Effectiveness

1. During the evaluation period the two teams made arrests in a larger percentage of cases initially classified as burglary, robbery, and larceny than did nonteam personnel. Teams were almost 50 percent more likely to make an arrest as the result of a burglary investigation than were nonteams, and they were three times as likely to make a robbery arrest as were nonteam personnel. For larceny, teams were about twice as likely to make arrests as were nonteam personnel.

2. During the evaluation period the two teams cleared a larger percentage of burglaries, robberies, and larcenies than did nonteam personnel. Teams were 50 percent more likely to clear a burglary or a robbery and more than two-and-one-half times as likely to clear a larceny (excluding larceny arrests made by private police, who then surrender custody to city police).

On-Scene Arrests

3. During the evaluation period the two teams made arrests "on-scene" (either when they arrived at the scene or immediately afterwards) for robbery and larceny in a larger percentage of their cases than did nonteam personnel. (Team on-scene arrests for burglary were similar to nonteam on-scene burglary arrests.) Teams were more than twice as likely to make on-scene robbery and larceny arrests as nonteam personnel.

Factors Contributing to Differences

- Greater team emphasis on arrests as an indication of success.
- More frequent response by investigative personnel to crimes in progress.
- Occasional use (by one team only) of investigative personnel to block criminal escape routes.
- More intensive use by teams of photographs of criminal suspects.

Factors Not Found to Have Contributed to Differences

- Increased team familiarity with the neighborhood.
- Information on suspects furnished by witnesses immediately after police arrived at the crime scene.

4. During the evaluation period on-scene arrests made by teams for burglary, robbery, and larceny were less likely to result in prosecutions than were arrests by nonteam personnel. Prosecution resulted from 57 percent of burglary on-scene arrests by teams and 86 percent by nonteam personnel, from 30 percent of robbery on-scene arrests by teams and 100 percent by nonteam personnel, and from 31 percent of larceny on-scene arrests by teams and 56 percent by nonteam personnel.

Preliminary Investigations

5. During the evaluation period preliminary investigation reports of burglary, robbery, and larceny by patrol officers of the two teams contained no more information than preliminary investigation reports completed by nonteam patrol personnel.

Follow-up Investigations and Arrests

6. During the evaluation period follow-up investigations of burglary and robbery by the two teams resulted in a larger percentage of arrests than follow-up investigations by nonteam police personnel. Teams were about 50 percent more likely to make burglary follow-up arrests and three times as likely to make robbery follow-up arrests. (Follow-up investigations for larceny by teams and nonteam personnel resulted in a similar number of arrests.)

Factors Contributing to Differences

- More effective use of information collected by patrol officers.
- Close analysis of preliminary investigative reports to identify potentially worthwhile cases and to concentrate investigative effort on those cases, a procedure called "Early Case Closure."
- Team command supervision of each individual investigation, a procedure called "Centralized Case Management." (One team only.)
- Team emphasis on making arrests rather than reclassifying or otherwise disposing of crimes administratively.

Factors Not Found to Have Contributed to Differences

- Physical evidence gathered at crime scenes.
- Tracing of stolen property.

7. During the evaluation period prosecutions stemming from follow-up arrests by the two teams for burglary, robbery, and larceny were similar in percentage terms to prosecutions stemming from follow-up arrests by nonteam police personnel.

Effectiveness, Morale, and Cooperation

8. Both team and nonteam patrol officers reported that Coordinated Team Patrol was a more effective method of dealing with crime.

9. Both team and nonteam patrol officers reported that Coordinated Team Patrol helped to solve the "morale problem" between patrol officers and investigative personnel.

10. Team patrol officers reported a much higher degree of cooperation with team investigative personnel than nonteam investigative personnel.

CONCLUSION

Like *Auditing Clearance Rates*, which provided a preliminary assessment of the Rochester experiment and suggested further lines of inquiry, this evaluation demonstrates that a police department can improve its arrest and clearance rates by assigning detectives to work as part of police teams. But this evaluation also points out that police departments that do adopt the Rochester System, either on an experimental or permanent basis, must assess their own experience carefully.

That a department must exercise caution in its own assessment is shown by the fact that the Rochester department believed that its teams had improved arrest and clearance rates through better preliminary and follow-up investigations. This evaluation, however, revealed that during the sample period the teams' preliminary investigation reports were no more complete than those conducted by nonteam police personnel. On the other hand, the Rochester department was correct in believing that follow-up investigations that built on the teams' preliminary investigations played a large role in the teams' success.

It should be pointed out, however, that the follow-up investigations might not have proved so successful if the department had paid less attention than it did to important questions of management. By assigning a fair share of patrol and investigative personnel to each team and by giving the team commander the responsibility for developing innovative methods to meet team objectives, the department's administrators moved away from a rigid chain of command toward

a more flexible, more effective arrangement of personnel. While team commanders (mid-level management personnel) remained strictly accountable to higher management, they also were given the opportunity to design their own approaches to problems.

As a result, the commanders of Teams A and C were able to innovate in productive ways. Both teams adopted the procedure of "Early Case Closure," which proved successful in preventing wasted effort on unproductive investigations. The adoption of "Centralized Case Management" by Team C was another innovation of great value. Through day-to-day scrutiny of each follow-up investigation, the team commander was able to assign the next task necessary to keep the investigation moving along, regardless of days off, vacations, court appearances, and other factors which frequently impede continuous progress on investigations. Under this arrangement certain detectives also became specialists in various investigative activities, such as interrogation or fingerprint analysis.

A problem uncovered by this evaluation was the comparative failure of the teams to obtain prosecution for their on-scene arrests. The factors responsible for this comparative lack of team success have yet to be fully determined, but the police department is acting to diagnose the problem and to test corrective measures.

Finally, it should be noted that in April 1975, the Rochester department reorganized all its field personnel into seven teams similar in size to Teams A and C. Given the success of the two experimental teams, both statistically and in the eyes of police personnel throughout the department, this decision was a logical one for the department to make. The authors of this evaluation believe it to be a positive step, and recommend it to other police departments concerned about the crime-control productivity of their patrol and investigation units.

Departments that decide to adopt an arrangement similar to Rochester's will need to provide appropriate support for the managerial innovations that may be proposed by team commanders. They must also be continuously alert to team problems, particularly those of the individual commanders, whose performance will play a large part in determining whether teams are successful.

II. BACKGROUND: THE CITY, THE DEPARTMENT, THE EXPERIMENT

THE CITY

Rochester is on the south shore of Lake Ontario, roughly midway between Syracuse and Buffalo in western New York State. It is the hub of a metropolitan area of about 710,000 people, of whom approximately 296,000 live in the city. Several large and well-known industrial firms, including Eastman Kodak Company, Xerox Corporation, and Bausch and Lomb Optical Company, have their headquarters in Rochester, and as a result a significant proportion of those who work in the city are skilled scientific and technical personnel. Employment stability is good in Rochester—in recent years the metropolitan area's unemployment rate has been about half the national average.

The city has a comparatively high percentage of owner-occupied dwellings, a high proportion of residents over 65, and, in 1970, a median family income of just over $10,000. Between 1950 and 1975 the black population of the city grew from five percent to about 17 percent of total population. A 1975 article in *Harper's Magazine*, which rated the country's 50 largest cities on the basis of 24 statistical indicators of quality of life, placed Rochester 25th on the list.

The city is governed by a nine-member council whose members are elected every two years, four from election dis-

tricts, five at-large. The council itself elects one of its nine members as mayor, and also has the power to appoint or remove the city manager. During the last decade Democrats have controlled City Hall for six years, Republicans for four.

In recent years the face of the city has been transformed by extensive urban redevelopment which began in the 1950s. Following rioting in 1964, Rochester became one of the first cities to apply for federal aid under the Model Cities program, and in the latter part of the 1960s it was receiving more federal funds per capita for urban renewal than all but ten other cities. Hundreds of older buildings in the downtown and nearby residential areas have been demolished to make way for new homes, public housing projects, and community facilities.

Another recent sign of change in Rochester is a streamlining of government functions in cooperation with surrounding Monroe County. Recently the county was given responsibility and authority for certain areawide activities, including physical maintenance of major highways and water pollution control. There have been recurring proposals to merge the city police department, the county sheriff's office, and several nearby town police departments into a metropolitan area agency, but so far only some minor records and communications functions have been consolidated. Between 1966 and 1973 the city's total index crime rate, as well as its rates of reported burglary and robbery, corresponded fairly closely to the average rates of cities having 100,000 to 250,000 residents. The average rates for cities in Rochester's population class (250,000 to 500,000) were somewhat higher.

THE DEPARTMENT

The first Rochester "police officer" was a watchman, hired for the winter season in 1819. By 1853 the city had 20 police officers, and a chief of police was appointed. A few decades later, in reaction to a belief that serious crimes had increased, the department added a detective division, installed a curbside alarm system which allowed citizens to notify police headquarters in an emergency, and started horse-mounted patrol. By 1895 the department had 175 officers, and a new headquarters building was erected.

At the turn of the century the city's police and fire departments were placed under a public safety commissioner who decentralized police operations by assigning almost all patrol and investigative personnel to seven precincts. Simultaneously, the number of police supervisors was doubled.

Soon after the appointment of the first city manager in 1928 there were other changes in the department. A bureau of criminal identification was established, radio equipment was installed in patrol cars, and some precinct detectives were reassigned to a central detective bureau. In 1946 all detectives were assigned to a central detective division, and two years later the seven precincts were consolidated into four. The years after World War II saw the creation of a public relations unit and a youth bureau.

Early in 1962, following the appointment of a new public safety commissioner and a new police chief, the detective division was again reorganized. Some 23 detectives were demoted and reassigned to regular patrol duty, and the remainder were rearranged into squads of specialists, including a violent crimes squad, a morals squad, a technical services squad, and an office of internal inspections. At about the same time the International Association of Chiefs of Police (IACP) was asked to appraise the department and make recommendations. IACP recommended an increase in the size of the internal inspections unit (responsible for investigating citizen complaints and insuring adherence to department regulations and standards of conduct), improvements in the communications system, and expanded use of in-service training.

In 1965 the detective division was again reorganized, this time into four sections specializing in physical crimes against persons, crimes against property, juvenile crimes, and vice offenses. The following year a planning and research division was created. In 1967, the department was consolidated into three major divisions: Administration, Operations, and Special Services. Accompanying this consolidation was a realignment of the four existing patrol sections into three.

In 1970 John A. Mastrella, then a county court judge, became commissioner, and during his tenure the department was reorganized into four divisions, each commanded by a deputy chief. Under Mastrella the department also began its Coordinated Team Patrol experiment, which was continued

by his successor, Joseph E. Battaglia, named commissioner in 1972. Thomas F. Hastings became chief in April 1974, and the office of commissioner was abolished.

Despite the various reorganizations of the 1960s, department administrators at the turn of the decade were not convinced that the department was operating at maximum effectiveness. Between 1969 and 1970 reported burglaries and robberies had increased drastically in the city, as had the overall crime rate. (See Figures 2, 3, and 4.) But arrests and clearance rates were not keeping pace with the increase in crime. To the department's administrators the chief problem, in general terms, was poor management and inefficient use of investigative resources within the investigations division and a pervasive lack of coordination between investigative and patrol personnel.

More specifically, one problem was that the investigative units seemed to emphasize fruitless paperwork, such as completing follow-up reports which duplicated patrol work. They also frequently conducted investigations whose only result was to reclassify reported crimes and "unfound" cases.

Another specific problem seemed to stem from the fact that the investigations division was centralized, and that any given detective in any given week was probably working on crimes far removed geographically from the crimes of the previous week. Because of this, many detectives lacked knowledge of localized crime patterns that was useful in solving crimes.

Finally, there was the problem of coordination between investigative personnel and patrol officers. Here, again, to some degree, the problem seemed to stem from the institutional arrangement. Investigative personnel and patrol officers had little to do with each other and tended to disregard each other. Patrol officers often sensed that their preliminary investigative efforts were more or less ignored by the investigative personnel assigned to the case; there was little motivation for them to take a case seriously, since investigative personnel would start their investigation all over again from the beginning. And even when patrol officers did conduct valuable investigations they rarely received any appreciation for their work.

This is not to imply that investigative personnel were unnecessarily callous. Apart from the historical fact that

investigative personnel have customarily had more status than patrol officers, the institutional arrangement of a centralized investigations division encouraged the detectives' feelings of separateness from patrol officers, and vice versa. Nonetheless, to the department's administrators the heart of the problem existed in the investigative division.

THE EXPERIMENT

The department's response to the problem was to plan an experimental project in team policing. Under the guidance of Thomas Hastings, then director of research and planning, the department studied other team policing projects in order to draw up a plan that would meet Rochester's specific needs.

The first move toward improved operations was to make sections of the detective units responsible for definite geographical areas. This change, obviously, was intended to give investigative personnel a better understanding of crime patterns within those geographical areas and, incidentally, to reduce the number of patrol officers whose preliminary investigations would be followed up by each section.

After only a short period of unsatisfactory results from experimentation with this idea, the department initiated its pilot team project. Two areas of the city were selected for this decentralized form of policing, which was to be carried out by permanent teams composed of both patrol officers and investigative personnel working together day by day.

Well aware that good leadership was likely to prove crucial to success, the project planners made what they hoped was a careful selection of the two team commanders from among the department's patrol lieutenants. Even though the two teams would technically be part of two of the three existing patrol units, and even though the team commander would report to the unit commander, team commanders were expected to function largely on their own. They were to be given authority to structure the teams as they saw fit, and to adopt whatever procedures they deemed necessary.

No such careful selection of team patrol officers and investigative personnel was made, however, for the reason that the department hoped to expand this new mode of

TABLE 4

PERCENTAGE[b] OF CRIME DISPOSITIONS[a]

	On-Scene Arrest	Follow-Up Arrest	All Arrests	Secondary Arrest Clearance[c]	Exceptional Disposition[d]	No Action	Number Reported
BURGLARY							
Teams	4.9%	6.1% *	*11.0%* *	28.0% *	11.0% *	50.0%	854
Nonteams	3.5	4.2	*7.7*	11.7	29.5	51.0	1,579
ROBBERY							
Teams	11.6 *	16.3 *	*27.9* *	14.0 *	7.8 *	50.4 *	129
Nonteams	4.6	4.6	*9.2*	2.3	32.8	55.7	174
LARCENY (excluding turnover arrests)							
Teams	2.3 *	0.5	*2.8* *	10.4 *	13.8 *	73.0 *	993
Nonteams	0.9	0.6	*1.4*	0.4	9.7	88.5	3,853

*Statistically significant difference.

[a]Based on classification in the central records section.

[b]Percentages are rounded to the nearest tenth of a percent. Because of rounding, percentages may not add precisely.

[c]A "secondary arrest clearance" is the disposition of a crime that was considered cleared because a person arrested for another crime was found to have committed this one and perhaps others.

[d]Includes cases that were unfounded, reclassified, or unsolved by arrest because the subject left the jurisdiction.

TABLE 5

PERCENTAGE OF CRIME CLEARANCES

	On-Scene Arrest	Follow-Up Arrest	All Arrests	Secondary Arrest Clearance[a]	Exceptional Clearance	All Clearances	Number Reported
BURGLARY							
Teams	5.2%	6.4%	*11.6%*	29.6% *	5.9%	*47.2%* *	808
Nonteams	4.8	5.6	*10.4*	15.8	4.9	*31.1*	1,170
ROBBERY							
Teams	11.8	16.5 *	*28.3* *	14.2 *	6.3 *	*48.8* *	127
Nonteams	5.6	5.6	*11.3*	2.8	17.6	*31.7*	142
LARCENY (excluding turnover arrests)							
Teams	2.4 *	0.5	*2.9* *	10.6 *	12.3 *	*25.8* *	965
Nonteams	0.9	0.6	*1.5*	0.4	8.0	*9.9*	3,783

*Statistically significant difference.

[a]A "secondary arrest clearance" is the disposition of a crime that was considered cleared because a person arrested for another crime was found to have committed this one and perhaps others.

when patrol officers had to transfer their attention to other police calls.

As Table 7 shows, the teams did prove to be more effective in making on-scene arrests for robbery and larceny. The team percentage of robbery cases disposed of by on-scene arrests was 11.6, compared to 4.6 percent for nonteams. The team percentage of larceny cases disposed of by on-scene arrests was 2.3, compared to 0.9 percent for nonteams.

In addition, the table shows that the percentage of burglaries disposed of by on-scene team arrests was similar, 4.9 for teams and 3.5 for nonteams. (Team A and Team C, incidentally, were found to have a similar number of on-scene arrests for these three crimes.)

Factors in Team Success

Although the department still believes that team officers make more arrests because they have better knowledge of their neighborhoods, this belief was not supported by the examination of police records. Out of 177 burglary, robbery, and larceny cases disposed of by on-scene arrest by both teams and nonteam personnel, only four cases were found where "knowledge of the neighborhood" could be said to have been the most important factor in solving the case, and these were nonteam arrests.

Of the 98 burglaries disposed of by on-scene arrest by teams and nonteams combined, some 63 percent were solved chiefly by means of information provided by a witness, generally a neighbor or passerby rather than the victim. The only other notable factors leading to on-scene burglary arrests were alarms (15 percent) and stolen property which was identified in the preliminary investigation report (10 percent).

Of the 23 robberies disposed of by on-scene arrest by teams and nonteams combined, some 87 percent were solved chiefly through critical information provided by a witness, with the victim being the witness in 60 percent. (There was no significant difference between teams and nonteam personnel in the frequency with which these different factors led to on-scene arrests.)

Further indication that greater team knowledge of neighborhoods was *not* a factor in on-scene arrests can be

TABLE 7

ON-SCENE ARRESTS[a]

	Number	Percent Disposed of by On-Scene Arrests
BURGLARY		
Team	854	4.9
Nonteam	1,579	3.5
ROBBERY		
Team	129	11.6*
Nonteam	174	4.6*
LARCENY[b]		
Team	993	2.3
Nonteam	3,853	0.9*

*Statistically significant difference.

[a] Includes all crimes classified in the central records section as belonging to these categories, regardless of whether they were later changed from their original classification by exceptional disposition.

[b] Excluding arrests for shoplifting made by special police.

seen in Table 8. This table shows that team and nonteam officers relied about equally on immediate information from witnesses to make arrests for the three crimes in question. This fact is reflected in the table by the category "Immediate Follow-up," which was actually responsible for more nonteam on-scene arrests for burglary, 23 percent, than team on-scene arrests, 14 percent. While information from witnesses was somewhat more valuable to teams in robbery incidents (40 percent, to 25 percent for nonteam personnel), the difference was not significant. Only in larceny cases, where "hot" information was responsible for 43 percent of team on-scene arrests compared to nine percent of nonteam arrests, do we find such information of greater value to teams.

After it became clear that neither better knowledge of their neighborhoods nor ability to make use of "hot" information was responsible for team on-scene arrest success, it became necessary to search for other possible explanations.

Discussions with team commanders and other members of the department then uncovered other factors in team on-scene arrests that no one had fully anticipated when the teams were formed. The relative importance of each of these other factors could not be determined, but four of them are believed to have been particularly significant:

-Greater team emphasis on arrests as an indication of success. Team members, it appears, were more highly motivated to make arrests than nonteam personnel. Their enhanced motivation stemmed from their realization that they were part of a team that was expected to solve crimes, and this realization led them into more energetic policing.

-More frequent response by investigators to crimes in progress. Because they were team members, and because they believed that the sooner a detective gets to the scene of a crime the better the investigation, team investigators were more inclined to drop what they were doing in favor of responding to a crime scene.

-Occasional use (by one team only) of investigators to block criminal escape routes. Team C developed a contingency plan in which detectives were given the task of blocking potential escape routes. On the occasions when they did so, they became in effect additional patrol personnel, thus strengthening the on-scene arrest capabilities of uniformed personnel.

-More intensive team use of photographs of criminal suspects. Team A patrol officers were given photographs of known neighborhood offenders which they carried with them on patrol. Team C prepared each month a composite photograph of all persons being sought in the team's neighborhood, and this collection of photographs was posted in the team office. Team C also regularly posted in the team office photographs of individuals labeled "Wanted" and—for known offenders or suspects for whom there was no warrant outstanding—"Do you know this guy?"

MAJOR FINDING 4 (PROSECUTION OF ON-SCENE ARRESTS)

Although teams had greater success (in percentage terms) in arresting suspects for the three crimes in question, they had less success than nonteam personnel in obtaining

TABLE 8

PATROL ACTIVITY RESULTING IN ON-SCENE ARRESTS

	Response to Call	Immediate Follow-up[a]	Hot Pursuit[b]	Response to Alarm	General Patrol	Number of Arrests
BURGLARY						
Teams	74%*	14%	2%	5%	5%	42
Nonteams	45	23	11	7	9	56[c]
ROBBERY						
Teams	33	40	27	0	0	15
Nonteams	50	25	25	0	0	8
LARCENY						
Teams	43*	43	13	0	0	23
Nonteams	76	9	3	0	12[d]	33

*Statistically significant difference.

[a]Enough information was available at the crime scene for the officer to go immediately to the suspect's location.

[b]Pursuit of a suspect seen by the officer when he arrived at the crime scene.

[c]Includes three arrests that could not be classified by type of patrol activity.

[d]Includes four arrests made on patrol by nonteam officers paying special attention to the specific area in which the arrests occurred.

prosecution of suspects arrested at a crime scene or immediately following a crime where witnesses gave complete information on the identity and whereabouts of a suspect.

Table 9 shows the outcome of a selected sample of on-scene arrests by teams and nonteams. The table demonstrates that on-scene team arrests for burglary, robbery, and larceny were all less likely to lead to prosecution than nonteam on-scene arrests for these offenses. The overall rate of prosecution for the three offenses combined was 43 percent for teams and 77 percent for nonteam police personnel, a statistically significant difference.

The reasons for the comparatively poor showing of the teams in winning prosecution of on-scene arrests are not entirely clear at this time. It is possible that teams may have been too quick to make arrests, were more likely to make an arrest without sufficient evidence, or even to arrest the wrong person. Another possible explanation, one that is more favorable to the teams, stems from the general character of the neighborhoods policed by the teams. Both Team A and Team C areas were comparatively poor neighborhoods with large numbers of black and other minority inhabitants. They were, in other words, the Rochester neighborhoods least likely to be sympathetic to representatives of the law. Even when poor and/or minority group members are not instinctively hostile to law enforcement officials, their personal situation often makes it difficult for them to provide the cooperation necessary for a smoothly functioning criminal justice system. Frequently, for instance, they are reluctant to take the time to serve as witnesses. This reluctance may have many causes, ranging from inability to take time from work without suffering economic penalties to poor public transportation in getting to and from the courtroom. The department recently initiated a "victim's assistance" program to help alleviate some of the problems that keep people from appearing in court to support formal complaints.

Since there are several possible explanations for the comparatively low percentage of team on-scene arrests resulting in prosecution, the department is developing a system to monitor the outcome of future on-scene arrests. This monitoring may eventually be useful in diagnosing the nature and extent of nonprosecution more thoroughly and in testing the

TABLE 9

PROSECUTION OF ON-SCENE ARRESTS OF ADULTS

	Number of On-Scene Arrests	Percentage	
		No Prosecution[a]	Prosecution[b]
BURGLARY			
Team	21	42.9	57.1
Nonteam*	28	14.3	85.7
ROBBERY			
Team	10	70.0	30.0
Nonteam	5	0.0	100.0
LARCENY			
Team	13	69.2	30.8
Nonteam	18	44.4	55.6

*Statistically significant difference.

[a]Includes no indictment, withdrawn by complainant, failure to prosecute.

[b]Includes indictment, trial, bench warrant, plea bargain.

effectiveness of corrective measures. A report on the monitoring system is being prepared by The Urban Institute for publication by the Police Foundation at a later date.

MAJOR FINDING 5 (PRELIMINARY INVESTIGATIONS)

One of the objectives of the Rochester experiment was to determine whether this new mode of policing could improve the quality of preliminary crime investigations carried out by patrol officers. Before the experiment preliminary investigations suffered from weaknesses stemming from the attitudes found in separate divisions containing patrol officers and investigative personnel, a situation that exists in many other police departments.

As in other cities, there was antipathy and lack of cooperation between the patrol and investigations divisions, partly because of status differences, because of the physical separation of divisions into separate offices, and because detectives tended to reinvestigate all cases, ignoring the work

of patrol officers. This traditional antipathy undermined preliminary investigations in Rochester.

Patrol officers had little motivation to perform preliminary investigations well. Investigative personnel were seldom available or inclined to give patrol officers guidance in conducting their investigations. The attitude of patrol officers, generally speaking, was that preliminary investigations were a nuisance if they themselves could not make the arrest. Once patrol officers realized that a case would have to be passed on to an investigator, they thought of the preliminary investigation as burdensome paperwork. They also knew that even if they made a good preliminary investigation their work would seldom be acknowledged or even used.

As a result, their preliminary investigations were frequently perfunctory, reinforcing the predisposition of investigators to ignore the patrol officers' preliminary reports. Instead, investigators were likely to begin the investigation again from the beginning. And even when investigators received a good preliminary report, they seldom complimented the patrol officer.

The Rochester System, departmental administrators hoped, would change all that. Patrol officers and investigators assigned to the teams were required to work with each other day after day, and the expectation was that this would increase the personal feelings of responsibility of patrol officers to investigators, and vice versa.

Second, team commanders stressed to patrol officers that preliminary investigations had to be complete and reliable in order for the "early case closure" procedure to work. This procedure involved judging all cases upon preliminary investigation—those that appeared promising were kept open for follow-up, those that appeared unpromising were closed immediately.

Third, the system allowed team investigators to become familiar with team patrol officers and gave the investigators the opportunity to train and guide patrol officers in carrying out preliminary investigations.

Fourth, team commanders were deeply involved in the investigative process at every stage. They had to become aware of the effectiveness of both preliminary and follow-up investigations, since they were held accountable for team success.

Both the department's managers and the team commanders in Rochester believed that preliminary investigations had been improved by the experiment, before this formal evaluation, and when the authors of this study first examined the teams' preliminary reports, their neatness and apparent completeness seemed to indicate a marked improvement.

Further scrutiny of the actual contents of the investigations, however, failed to confirm this initial impression. Table 10 shows no significant difference between team and nonteam patrol personnel in obtaining descriptions of offenders from witnesses. Table 11 shows no significant difference between team and nonteam patrol personnel in obtaining descriptions of stolen property.

More specifically, Table 10 reveals that both teams and nonteams were equally unsuccessful in obtaining descriptions of burglary suspects. Teams obtained no description in 66 percent of their cases, nonteams in 69 percent of theirs. The other three description categories, "vague," "useful/complete," and "very complete," were comparable in percentage terms.

Descriptions of suspects obtained by teams and nonteams in preliminary robbery investigations were also similar, in percentage terms. "Vague" descriptions were found in 60 percent of the team investigations, and 69 percent of the nonteam investigations. The two categories "useful/complete" and "very complete" combined added up to about the same for both teams (35 percent) and nonteam personnel (30 percent).

Better team use of preliminary investigations led to the impression that these preliminary investigations were better in themselves. As subsequent sections of this chapter will discuss, preliminary team investigations—while no more complete—may have been more *useful* to teams than preliminary nonteam investigations were for nonteam detectives.

MAJOR FINDING 6 (ARRESTS RESULTING FROM FOLLOW-UP INVESTIGATIONS)

Table 12 demonstrates that Rochester's two experimental police teams were significantly more successful than nonteam personnel in making arrests for burglary and robbery as a result of follow-up investigations.

What Table 12 also demonstrates, however, is that the

TABLE 10

WITNESS DESCRIPTIONS OF SUSPECTS

	Description	Weights	Percentages[a]	Weighted Average	Number Reported
BURGLARY					
	None	(0)	66		
	Vague	(1)	13		
Team	Useful/Complete	(2)	6		
	Very Complete	(3)	15	0.69	854
	None	(0)	69		
	Vague	(1)	11		
Nonteam	Useful/Complete	(2)	7		
	Very Complete	(3)	13	0.62	1,579
ROBBERY					
	None	(0)	4		
	Vague	(1)	60		
Team	Useful/Complete	(2)	18		
	Very Complete	(3)	17	1.48	129
	None	(0)	2		
	Vague	(1)	69		
Nonteam	Useful/Complete	(2)	21		
	Very Complete	(3)	8	1.34	174

[a]Percentages may not add to 100 because of rounding.

TABLE 11

DESCRIPTIONS OF TRACEABLE PROPERTY

	Description	Weights	Percentages[a]	Weighted Average	Number Reported
BURGLARY					
	None	(0)	25		
	Vague	(1)	20		
Team	Useful/Complete	(2)	43		
	Very Complete	(3)	11	1.41	854
	None	(0)	29		
	Vague	(1)	22		
Nonteam	Useful/Complete	(2)	37		
	Very Complete	(3)	13	1.33	1,579
ROBBERY					
	None	(0)	10		
	Vague	(1)	35		
Team	Useful/Complete	(2)	22		
	Very Complete	(3)	33	1.77	129
	None	(0)	6		
	Vague	(1)	47		
Nonteam	Useful/Complete	(2)	18		
	Very Complete	(3)	28	1.68	174

[a]Percentages may not add to 100 because of rounding.

TABLE 12

FOLLOW-UP ARRESTS IN CASES
NOT CLEARED BY ON-SCENE ARREST

	Number Not Cleared by On-Scene Arrest	Percentage Resulting in Follow-up Arrest
Team A	435	3.2
Team C*	377	11.2
BURGLARY		
Teams	812	6.4
Nonteams*	1,523	4.3
Team A	62	16.1
Team C	52	21.2
ROBBERY		
Teams	114	18.4
Nonteams*	164	4.8
Team A	483	0.4
Team C	487	0.6
LARCENY		
Teams	970	0.5
Nonteams	3,798	0.6

*Statistically significant difference.

success of the teams in making burglary arrests—as shown by their combined statistics—does not mean that each individual team was better than nonteam personnel in dealing with this crime through follow-up investigation. While the percentage of investigations resulting in burglary arrests for the two teams combined was 6.4, compared to 4.3 for nonteams, success in making burglary arrests was due solely to the efforts of Team C, 11.2 percent of whose follow-up cases resulted in an arrest. Team A's follow-up investigations for burglary yielded an arrest percentage of 3.2, or about the same as the nonteam percentage of 4.3. The chief reason for

Team C's success in regard to this crime apparently stemmed from a procedural innovation which will be discussed later in this section.

In contrast to the burglary arrest statistics, robbery arrests resulting from follow-up investigations were impressive for both Teams A and C. The Team A percentage of 16.1, combined with Team C's 21.2 percent, produced an average team percentage of 18.4 for robberies, significantly greater than the nonteam figure of 4.8 percent.

Finally, Table 12 shows that overall team success in making arrests for burglary and robbery as a consequence of follow-up investigations was not matched by similar success in larcenies. Here, the team and nonteam percentage was just about equal, 0.5 percent to 0.6 percent.

Factors in Team Success

The success of Team C in making arrests for burglary as the result of follow-up investigations, and the success of both teams in making arrests for robbery as the consequence of such investigations, was the result of several factors. The importance of some of these factors can be shown in statistical form.

The first factor was the success of the teams in assembling information. Information important in solving crimes can be categorized either by source (for example, witness, victim, informant, police bulletin, and so forth) or by type (for example, information about the suspect, information about the stolen property, other physical evidence, confession, and so on).

Table 13 shows the sources of information that were critical in permitting teams and nonteam personnel to make arrests for the three crimes in question. Both teams made significantly better use of information sources to make follow-up arrests for burglary and robbery, but not for larceny. In the case of burglary the most important sources for the teams were a witness who was not the victim, police bulletins, and the victim, in that order. In the case of robbery the same three sources again were the most important. What one can deduce from this table is that team investigators got more information when they interviewed witnesses or victims, and also that they were better able to use departmental bulletins, which were also available to nonteam personnel.

TABLE 13

SOURCES OF CRITICAL INFORMATION IN FOLLOW-UP ARRESTS

Crime/Source	Percentage of Cases Not Cleared On-Scene Cleared by Follow-Up Arrest[a]			
	Team A	Team C	Both Teams	Non-teams
BURGLARY				
Knowledge from Other Cases	0.3	0.5	0.4	0.2
Witness (Not Victim)	1.4	3.3	2.2	2.0
Victim	0.6	1.6	1.0	1.5
Bulletins	0.3	2.2	1.2	0.3
Traceable Property	0.6	0.8	0.7	0.1
Informant	0.0	0.8	0.4	0.2
Knowledge of Neighborhood	0.0	0.8	0.4	0.0
Other Officer	0.3	0.0	0.1	0.0
Physical Evidence	0.0	0.0	0.0	0.1
All Sources	3.3	10.1	6.4	* 4.4
[Number Not Cleared by On-Scene Arrest	435	377	812	1,523]
ROBBERY				
Knowledge from Other Cases	1.6	0.0	0.9	0.0
Witness (Not Victim)	1.6	11.5	6.1	1.8
Victim	4.8	3.8	4.4	1.2
Bulletins	8.1	3.8	6.1	1.2
Traceable Property	0.0	0.0	0.0	0.6
Informant	0.0	0.0	0.0	0.6
Knowledge of Neighborhood	0.0	0.0	0.0	0.0
Other Officer	0.0	1.9	0.9	0.0
Physical Evidence	0.0	0.0	0.0	0.0
All Sources	16.1	21.2	18.4	* 4.8
[Number Not Cleared by On-Scene Arrest	62	52	114	164]
LARCENY				
Knowledge from Other Cases	0.0	0.0	0.0	0.0
Witness (Not Victim)	0.0	0.2	0.1	0.2
Victim	0.4	0.2	0.3	0.3
Bulletins	0.0	0.0	0.0	0.0
Traceable Property	0.0	0.0	0.0	0.0
Informant	0.0	0.0	0.1	0.0
Knowledge of Neighborhood	0.0	0.0	0.0	0.0
Other Officer	0.0	0.0	0.0	0.1
Physical Evidence	0.0	0.2	0.0	0.0
All Sources	0.4	0.6	0.5	0.6
[Number Not Cleared by On-Scene Arrest	483	487	970	3,798]

*Statistically significant difference.

[a]Data in this chart are estimates derived from samples of cases. The estimates, which were not whole numbers, were rounded and used to calculate percentages, which were rounded to the nearest tenth. Because of rounding, column and row totals may not add precisely.

Table 14 shows the types of information that were crucial in making arrests. Here again, teams made significantly better use of the types of information they gathered on burglaries and robberies than nonteam personnel. Particularly helpful in solving both crimes was information about the suspect's identity.

Table 14 also provides data from which it can be concluded that, all things considered, neither physical evidence nor traceable property played an important role in team success in follow-up arrests for burglary and robbery. While both teams had some success in using both types of information, information about the identity of suspects clearly was predominant.

Another factor accounting for the greater success of the teams in making arrests for burglary and robbery as a result of follow-up investigations was the teams' use of the "early case closure" procedure. This procedure was used to weed out potentially worthless cases from potentially worthwhile cases, that is, cases in which follow-up investigation was likely to be productive.

To determine which cases could be closed "early" and which ones should be continued, team members prepared the standard form used by the patrol officers. If the supervisor determined that the case was sufficiently important or if any "solvability factors" or leads were found in the preliminary investigation of a crime, the investigation continued. If no "solvability factors" were reported, the case still might be left open if a supervisor decided that the preliminary investigation was not sufficiently thorough.

The fact that the teams closed many more cases on the basis of preliminary reports alone is revealed by Table 15. This table shows that teams did not file follow-up reports in 32.6 percent of their burglary investigations, compared to 5.8 percent for nonteams, a significant difference. Similarly, the table shows no follow-up reports by teams in 21.1 percent of their robbery investigations, compared to 13.9 percent for nonteams, which again illustrates the basic point being made here, even though the difference was not significant.

Table 15 also shows that, because the teams closed many of their cases early, they were able to concentrate on those that remained open. For both burglary and robbery the teams showed a significantly greater ability to uncover new

information, particularly new information from witnesses, as the result of follow-up.

In contrast, as one can see in Table 15 at "No New Information," nonteam personnel were significantly more likely not to uncover new information through follow-up investigation. Nonteam personnel uncovered no new information in 68.5 percent of their burglary follow-up investigations, and 79.5 percent of their follow-up robbery investigations. In comparison, the teams uncovered no new information in 28.1 percent of their burglary investigations and 54.4 percent of their robbery investigations.

To examine further the team use of early case closure, evaluators counted the number of follow-up reports filed on each burglary and robbery case by teams and nonteams. The result showed that teams were far less likely than nonteams to file only one report—29.1 percent for team burglary and 39.5 percent for team robbery, compared to 67.1 percent for nonteam burglary and 60.8 percent for nonteam robbery. In other words, detectives expended more concentrated effort on those cases teams selected for continuing investigation.

As a final documentation of team use of early case closure, evaluators calculated the number of days between the filing of the preliminary report and the filing of the last follow-up report for both teams and nonteams. They discovered that teams were more likely to close a case within one day of its inception, while nonteams were more likely to take two to seven days. This discrepancy no doubt occurred because of the nonteam practice of filing reports in cases about which no further information had been discovered.

A third factor leading to team success in follow-up investigations of burglary and robbery was the procedure called "centralized case management," a procedure used only by Team C. Under this procedure, case management became the responsibility of the team commander and the day sergeant. These two officers (both experienced in follow-up investigations) reviewed each case each day and assigned specific investigative tasks, rather than full cases, to investigators. (At the end of the day shift the day sergeant informed the night sergeant of remaining investigative tasks, and in turn the night sergeant informed the sergeant on the grave-

TABLE 14

TYPES OF CRITICAL INFORMATION IN FOLLOW-UP ARRESTS

Crime/Type	Percentage of Cases Not Cleared On-Scene Cleared by Follow-up Arrest[a]			
	Team A	Team C	Both Teams	Non-teams
BURGLARY				
Information About the Suspect's Identity	2.3	3.7	3.0	2.4
Traceable Property	0.5	3.2	1.7	0.7
Physical Evidence	0.0	1.3	0.6	0.3
Confidential Information	0.0	0.5	0.2	0.5
Confession	0.0	1.1	0.5	0.1
All Types	2.8	9.8	6.0 *	4.0
[Number Not Cleared by On-Scene Arrest	435	377	812	1,523]
ROBBERY				
Information About the Suspect's Identity	14.5	19.2	16.7	3.6
Traceable Property	1.6	0.0	0.9	0.6
Physical Evidence	0.0	0.0	0.0	0.0
Confidential Information	0.0	1.9	0.9	0.6
Confession	0.0	0.0	0.0	0.0
All Types	16.1	21.2	18.4 *	4.8
[Number Not Cleared by On-Scene Arrest	62	52	114	164]
LARCENY				
Information About the Suspect's Identity	0.4	0.2	0.3	0.4
Traceable Property	0.0	0.2	0.1	0.0
Physical Evidence	0.0	0.2	0.1	0.0
Confidential Information	0.0	0.0	0.0	0.0
Confession	0.0	0.0	0.0	0.0
All Types	0.4	0.6	0.5	0.5
[Number Not Cleared by On-Scene Arrest	483	487	970	3,798]

*Statistically significant difference.

[a]Data in this chart are estimates derived from samples of cases. The estimates, which were not whole numbers, were rounded and used to calculate percentages, which were rounded to the nearest tenth. Because of rounding, column and row totals may not add precisely.

TABLE 15

FREQUENCY WITH WHICH DIFFERENT KINDS OF INFORMATION WERE ADDED TO CASE RECORD BY FOLLOW-UP REPORT

Crime/Type of Information Added	Estimated Percentage of Investigations				
	Team A	Team C	Both Teams[a]		Non-teams
BURGLARY					
Follow-up Report(s) Filed	60.7	74.5	67.5	*	94.2
No New Information	35.4	21.2	28.1	*	68.5
Witness Information	23.4	48.8	35.7	*	18.1
Physical Evidence	0.0	0.0	0.0		0.0
Traceable Property	0.0	3.7	2.3		5.9
Combination	0.0	0.8	1.4		1.6
No Follow-up Report Filed	39.3[b]	25.5	32.6	*	5.8
[Number Not Cleared by On-Scene Arrest	435	377	812		1,523]
ROBBERY					
Follow-up Report(s) Filed	83.9	69.2	78.9		86.1
No New Information	59.7	30.8	54.4	*	79.5
Witness Information	24.2	30.8	21.9	*	6.0
Physical Evidence	0.0	0.0	0.0		0.0
Traceable Property	0.0	7.7	0.0		0.0
Combination	0.0	0.0	2.6		0.6
No Follow-up Report Filed	16.1	32.7[b]	21.1		13.9
[Number Not Cleared by On-Scene Arrest	62	52	114		164]

*Statistically significant difference.

[a]Estimated values were calculated separately for Team A, Team C, Both Teams, and Nonteams. The estimating procedure need not result in Total Team figures equal to Team A plus Team C.

[b]This column does not add because percentages were calculated from rounded estimates.

yard shift of remaining investigative tasks.) At the completion of each assigned investigative task, the team commander reviewed each case to determine whether it should be concluded or continued, and, if continued, what subsequent activities should be assigned.

Team C's centralized supervision of investigations had four advantages:

-It permitted close supervision of investigative activities, since the team commander and the three shift sergeants were involved in making the major tactical decisions in each investigation.

TABLE 16

FREQUENCY WITH WHICH FOLLOW-UP REPORTS WERE FILED

Crime/Number of Reports	Estimated Percentage of Investigations[a]							
	Team A		Team C		Both Teams		Non-teams	
BURGLARY								
None	39.3		25.5		32.6	*	5.8	
One	36.8	*	20.7		29.1	*	67.1	
Two	16.1	*	40.3		27.8	*	14.1	
Three or More	7.8		13.8		10.3		13.2	
[Number Not Cleared by On-Scene Arrest	435		377		812		1,523]	
ROBBERY								
None	17.7		30.8		21.1		13.3	
One	58.1	*	19.2		39.5	*	60.8	
Two	6.5		13.5		8.8		17.5	
Three or More	24.2		38.5		29.8	*	8.4	
[Number Not Cleared by On-Scene Arrest	62		52		114		164]	

*Statistically significant difference.

[a]Estimated values were calculated separately for Team A, Team C, Both Teams, and Nonteams. The estimating procedure does not necessarily result in Team figures equal to the sum of Team A and Team C. Percentages need not add because estimates were rounded. Percentages were calculated from the rounded numbers.

-It added continuity to the overall investigative efforts of the team, because there was daily review of the allocation of effort among cases.

-It permitted team investigators to work continuously on important cases when necessary, regardless of duty schedules.

-It permitted some investigators to develop specialties and to concentrate on those specialties—for example, searching records, interviewing witnesses, or locating and interrogating suspects.

A final factor in team success in making follow-up arrests was team emphasis on making arrests rather than on merely processing paperwork, a topic already discussed under Major Findings 1 and 2.

MAJOR FINDING 7 (PROSECUTION OF FOLLOW-UP INVESTIGATION ARRESTS)

Table 17 demonstrates that there was no difference between teams and nonteam personnel in terms of percentage of arrested adults prosecuted for the three offenses in question after a follow-up arrest. This table shows that prosecution occurred in 58 percent of the team arrests for all three crimes, compared to 61 percent of nonteam arrests. Specifically, the percentage of prosecutions of those adults arrested for burglary as the result of follow-up investigations was somewhat higher for teams than for nonteams, while the opposite was true in robbery and larceny cases.

MAJOR FINDINGS 8, 9, AND 10 (EFFECTIVENESS, MORALE, COOPERATION)

In July 1973 the Rochester Police Department carried out a survey of its team and nonteam patrol officers by means of a written questionnaire. The purpose of the questionnaire was to elicit patrol officer opinions on a number of matters, and the questions and responses are shown in complete form in Table 18. The responses to several of these questions substantiate the subjective impressions of the authors of this report that the Coordinated Team Patrol concept had gained widespread approval among the department's members, and that it had improved morale and cooperation between patrol officers and investigative personnel. The over-

all response rate for the survey was 49 percent, with Unit C (nonteam personnel) having only a 22 percent response rate. The responses from Unit C were examined separately and found to be similar to those in the other nonteam units; consequently, Unit C responses were counted in the nonteam totals.

While several of the questions dealt specifically with the Coordinated Team Patrol experiment, Question 13 in particular provided support for Major Finding 8, which was that both team and nonteam patrol officers believed that the CTP concept was a superior way of dealing with crime. When asked whether they believed Coordinated Team Patrol to be a more effective mode of policing than Rochester's traditional methods, 96 percent of team patrol officers and 92 percent of nonteam patrol officers responding answered yes.

Major Finding 9 stated that Coordinated Team Patrol had helped to resolve the "morale problem" which often exists between patrol officers and investigators in any police department. Both Question 14 and Question 15 of the department's survey involved morale, the first being an

TABLE 17

PROSECUTION OF FOLLOW-UP ARRESTS

		Number of Arrests[a]	Percentage of Offenders Prosecuted
BURGLARY	Team	27	70
	Nonteam	34	62
ROBBERY	Team	14	36
	Nonteam	7	43
LARCENY	Team	2	50
	Nonteam	10	70
All Three Crimes	Team	43	58
	Nonteam	51	61

[a] Excluding juveniles and missing data.

TABLE 18

ATTITUDE SURVEY

Question	Unit	Number of Responses	Percentage	
			Yes	No
1. Are you, the patrol officer, interested in conducting a thorough preliminary investigation which will assist in solving crime?	Team Nonteam	53 85	96 89	4 11
2. Do you, the patrol officer, feel you have the proper amount of time to do a thorough investigation?	Team Nonteam	52 80	58 29	42 71
3. Are you, the patrol officer, encouraged by your commanding officers to do a thorough preliminary investigation?	Team Nonteam	52 78	85 69	15 31
5. Would a crime-specific, forced-choice report, where you would have to answer certain questions assist you in the preliminary investigation of a crime?	Team Nonteam	53 82	58 63	42 37
6. Is the response time, by members of the Technicians Unit, adequate to assist you, when required, in the preliminary investigation of a crime?	Team Nonteam	53 81	42 31	58 69

7. Is the response time by investigators adequate to assist you, when required, in the preliminary investigation of a crime?	Team Nonteam	53 83	85 43	15 57
8. Do investigators roll in without being dispatched with the patrol units to assist in the investigation of a crime?	Team Nonteam*	53 82	94 52	6 48
9. Are investigators helpful in assisting you with your preliminary investigation when they arrive on the scene of the crime?	Team Nonteam*	53 80	100 71	0 29
11. After you, the patrol officer, have conducted your preliminary investigation of a crime, and have forwarded your reports, do you receive any kind of feedback with regard to suspects or vehicles which investigators may have developed in the case and who may be located in or frequent your patrol area?	Team Nonteam*	53 80	75 8	25 92
12. Do you, the patrol officer, feel you receive the proper recognition and credit when you are helpful in furnishing critical information leading to the arrest of a person involved in a crime, or actually make the arrest yourself?	Team Nonteam	53 79	72 18	28 82

TABLE 18 (CONTINUED)

ATTITUDE SURVEY

Question	Unit	Number of Responses	Percentage	
			Yes	No
13. Do you, the patrol officer, feel that uniformed officers and detectives working out of the same office, as in the CTP concept, are more effective in solving crime than the present system of separation of patrol officers and Criminal Investigation Section?	Team Nonteam	52 77	96 92	4 8
14. Is there a morale problem between the uniform officers and investigators?	Team Nonteam*	52 80	17 79	83 21
15. Do you think the CTP concept, with officers and investigators working closely together, is a step toward improving the morale problem if you feel one exists?	Team Nonteam	51 81	84 83	16 17
16. Do you, the commanding officers, and the patrol officers, feel that following your submission of an initial investigative report, which indicates no chance of apprehension of the perpetrator, that the report should be administratively closed at the unit command	Team Nonteam	51 76	71 68	29 32

level, providing more time for Criminal Investigation Section investigators and Coordinated Team Patrol investigators to follow up on more solvable cases?					
17. Would a series of questions and preliminary investigative suggestions, dealing with specific crimes, assist you in doing a better, more thorough preliminary investigative report?	Team Nonteam	52 81	79 80	21 20	
			Always	Sometimes	Never
4. Do your commanding officers review your preliminary investigative reports and offer comments and ask for changes when they feel the report is inadequate?	Team Nonteam*	53 79	55 31	43 68	2 1
			Most	Half	Few	None
10. Do you feel that the members of the CTP have received the proper training and have adequate experience to assist you, the patrol officer, in conducting the preliminary investigation?	Team Nonteam*	52 82	74 30	19 26	6 41	2 2

SOURCE: Survey by the Rochester Police Department, July 1973.

*Statistically significant difference.

attempt to determine the extent of any problem and the second asking if CTP was a way of solving it.

The response to Question 14 showed only a small minority of team patrol officers (17 percent) holding the opinion that problems existed between team patrol officers and investigators. In comparison, some 79 percent of nonteam patrol officers thought there was a morale problem between them and nonteam investigators.

While perceptions as to the extent of the problem differed, there was substantial agreement on the way to resolve it. Some 84 percent of the team respondents and 83 percent of the nonteam respondents agreed that Coordinated Team Patrol was "a step toward improving the morale problem."

Major Finding 10 dealt with the higher degree of cooperation between team patrol and investigative personnel in comparison with nonteam personnel and was supported by the responses to Questions 7, 8, 9, 11, and 12. Team patrol officers gave team investigators high marks for responding to crime scenes quickly, for assistance in carrying out preliminary investigations, and for providing feedback and recognition for patrol officers.

The positive attitudes among team patrol officers revealed in this survey were essential to the success of the Rochester experiment, including success in follow-up investigations and arrests. Because team patrol officers felt more favorably inclined toward team investigators, information was exchanged readily between patrol and investigative personnel, both formally and informally.

POSTSCRIPT–THE "HAWTHORNE EFFECT"

In recent years social scientists have discovered that a change in the way an organization carries on its activities can cause a temporary increase in the organization's productivity. This principle was first discovered during an experiment conducted in a manufacturing plant in Hawthorne, New Jersey. The experiment consisted of changing at various intervals of time the working conditions at the plant, including a change back to the conditions that existed before the experiment. In every case, the changes temporarily improved productivity. What those conducting the experiment gradually realized—and subsequently named the "Hawthorne effect"—was that

the particular changes in working conditions were not responsible for the improvement. The cause of the improved productivity was that the workers knew they were taking part in an experiment, and each change in working conditions was a sign that someone was paying attention to them.

As a result, a certain degree of skepticism is in order whenever a claim is made that changes in the way an organization operates have resulted in improved productivity. The true effect of organizational changes on productivity can best be judged over a substantial period of time. Where improvements were due only to the "Hawthorne effect," productivity will gradually have decreased to the previously existing level, after a short period of gain. But where improvements are lasting, and due to effective structural changes in an organization, the productivity level may well be maintained at a higher level.

Given the fact that the major findings in this report are based on statistical evidence gathered for a five-month period more than two years after the Rochester experiment began, the authors are convinced that the statistical superiority of the teams was the result of the structural change called Coordinated Team Patrol and cannot be attributed to the "Hawthorne effect." Police managers concerned about whether the Rochester System would result in only temporary improvements in their operations should note that Coordinated Team Patrol was still operating effectively more than two years after the experiment began. Such success is what managers seek to achieve.

COST CONSIDERATIONS

The effects of the Rochester experiment came at some cost. Adoption and use of some or all aspects of the system by other agencies would be expected to cost them something. Part of the costs in Rochester had to do with the cost of experimenting rather than simply the cost of the system finally used. Part of the costs were those of introducing the system rather than the steady state costs of running the system, which tend to be low—a few thousand dollars per year per team. What it would cost another agency to adopt and use the Rochester system depends very heavily on the conditions peculiar to the particular agency and city at the

outset. The Rochester cost experience and the principal cost factors any other agency would need to consider are set out in Appendix C.

IV. THE EFFECT OF THE ROCHESTER SYSTEM ON CRIME RATES

One of the chief goals of any criminal justice system is to reduce the number of crimes. Arrest, prosecution, sentencing, and imprisonment of criminals are carried out in the belief that the procedure reduces crime in at least two ways. First, it separates criminals from the rest of the population for varying lengths of time, preventing them from committing additional crimes. Second, it demonstrates to potential criminals the consequence of committing crimes.

The presumption, then, is that any change (for better or worse) in any part of the criminal justice system should result in a corresponding change in crime rates, provided all other things remain equal. Unfortunately this ideal equilibrium never exists in the real world.

Many sociologists and other students of crime believe that there are relationships between economic well-being and crime which can be stated in general form—for example, that a person without a job is more likely to commit a crime than a person with a job. Others believe there is a relationship between family stability and crime, or drug use and crime, or housing and crime, and so on. Obviously, the number of social factors that may be related to crime is large, none of these factors remain static, and each is often affected by one or more of the others.

Yet even though it seems obvious that there is a rela-

tionship between crime and many economic, political, and social factors, there is very little scientific evidence on how these relationships operate. While it is evident, for instance, that many poor people of minority races who are poorly educated, who are under the age of 25, and who live in crowded housing commit many crimes, it also is true that the majority of those who can be categorized this way do not commit crimes. That fact complicates matters, as does the fact that many people over the age of 25 with adequate education who live in decent housing also commit crimes.

Because there are so many social factors which affect crime, and because these factors vary greatly, correlating any change in one part of the criminal justice system with a change in crime rates becomes extremely difficult. A decrease in the robbery rate of a city, for instance, may be the result of better police work, longer jail sentences, or some other change within the criminal justice system. But it also may be the result of a decrease in unemployment, or better housing, or simply a change in the average age of a city's population. Given the absence of firm knowledge about the causes of crime, little can be said with certainty about what prevents it.

The relationships between crime and various social factors are further complicated by the fact that, for various reasons, crime rates are only an approximation of the number of actual crimes. First, not all crimes are reported to the police. Second, not all crimes, even when reported as crimes, are in fact crimes. (A murder, for instance, may appear to be a suicide, and vice versa.) Third, systems for the classification of crimes vary, and not even a uniform classification system would guarantee uniform results, since the system would still be operated by human beings.

Given all these complications, any attempt to determine the effect of the Rochester experiment on crime rates is likely, from the outset, to be inconclusive. Nonetheless, given the importance of crime control, it was necessary to try to determine whether this innovative program in policing, which showed success in other respects, had any effect on crime rates.

For that reason, this chapter contains two kinds of comparisons. The first is a comparison of reported crime rates in Rochester before and during the audit-evaluation

period with reported crime rates for the same years in other cities of more or less comparable size. The second is a comparison of reported crime rates in the areas policed by Rochester's Teams A and C with reported crime rates in the rest of the city.

COMPARISON TO CITIES OF COMPARABLE SIZE

The Rochester experiment, as shown in an earlier chapter, resulted in percentage increases in the number of arrests and clearances in the team areas. Although these team areas comprised less than a quarter of the city, the impact of the experiment on crime in those areas might have been large enough to have affected the city's overall rates for various crimes, assuming that increased apprehensions did not simply "displace" crime to other parts of the city. Thus, the empirical test was whether trends (in the overall crime rate and in the rates for the targeted crimes) improved in comparison with similar cities that did not conduct a similar experiment.

Determining which cities were "similar" to Rochester, however, posed many problems. Truly similar cities would have been those similar in population and similar in respect to all those factors which cause and control crime, except of course for the experimental program.

Such a determination was not considered feasible given the state of knowledge about these factors. Thus, a decision was made to compare Rochester's crime trends with those in two classes of cities—cities with populations of between 100,000 and 250,000, and those with populations ranging from 250,000 to 500,000. This decision was based on the knowledge that crime rates are affected by the size of a city, and also on the fact that crime trends in those two classes of cities were similar to Rochester's before the introduction of the Coordinated Team Patrol Experiment.

It should be noted, however, that Rochester changed its recordkeeping from a manual to a computerized system in 1969, a change which may have improved the accuracy of the city's crime reporting. Because of this change, the apparent similarity in crime trends among Rochester and the two classes of cities may have been less a true similarity than a similarity caused by more accurate recordkeeping.

In any event, what Table 19 and Figure 2 show is that

reported total index crime in Rochester and in the comparison cities showed similar trends both before and after the experiment was started. During the pre-experiment years, 1966-1970, the annual percentage increase in Rochester was 19.1, compared to 14.5 percent during the experiment years of 1971-1973. This greater increase in reported crime in the pre-experiment years, however, may have been due to computerized recordkeeping alone. Furthermore, crime during the same two periods for cities of 100-250,000 population was at first growing at 17.3 percent per year and later grew at 13.6 percent per year—an "improvement" similar to Rochester's.

Table 19 and Figures 3 and 4 show that the trends in burglary and robbery—the crimes of greatest concern in the Rochester Experiment—were similar in Rochester and in the two classes of cities. That is, the trend everywhere was to a slower rate of growth. From this information it can be concluded that the Rochester experiment had no demonstrable impact on the number of reported burglaries and robberies in the city.

COMPARISON OF TEAM AREAS TO THE REST OF ROCHESTER

The previous comparison, that of Rochester's crime trends with those in other cities of comparable size, was bound to suffer from various limitations. Thus, a comparison of crime trends in team areas with those in the rest of the city also seemed advisable. Since this comparison involved subareas within one geographical area, it could be assumed that the causes of crime and crime-control methods would be at least somewhat more similar than they would be between cities, meaning that the experiment would come closer to being the ideal single difference between the two areas being compared. Furthermore, such a comparison would not be affected by the department's computerization of its crime reporting system, since this change was implemented throughout the city.

At the same time, of course, it is important to remember that the same factors that make it difficult to compare crime rates between cities also make it difficult to compare the crime rates of different areas within a single

city. In particular, it seems plausible to suspect that urban redevelopment, which has taken place in Team A and C areas, had an effect on crime rates in those areas, although the effect cannot be quantified.

In addition, an intracity comparison provides its own special problems, particularly the problem of displacement. Several analyses of crime patterns in recent years have suggested (sometimes more strongly than the data permit) that

TABLE 19

GROWTH IN DIFFERENT TYPES OF CRIME
IN ROCHESTER AND IN COMPARISON CITIES

Crime	Time Period	City	Annual Percentage Increase
Total Crime Index	Pre-Team (1966-1970)	Rochester	19.1
		250-500,000 pop.	14.2
		100-250,000 pop.	17.3
	Post-Team (1971-1973)	Rochester	14.5
		250-500,000 pop.	14.1
		100-250,000 pop.	13.6
Burglary	Pre-Team (1966-1970)	Rochester	16.0
		250-500,000 pop.	11.0
		100-250,000 pop.	15.3
	Post-Team (1971-1973)	Rochester	6.4
		250-500,000 pop.	5.4
		100-250,000 pop.	2.4
Robbery	Pre-Team (1966-1970)	Rochester	26.1
		250-500,000 pop.	23.7
		100-250,000 pop.	24.5
	Post-Team (1971-1973)	Rochester	10.5
		250-500,000 pop.	7.3
		100-250,000 pop.	6.0

SOURCE: Uniform Crime Reports, Federal Bureau of Investigation.

FIGURE 2

TRENDS IN REPORTED TOTAL INDEX CRIME IN ROCHESTER AND IN CITIES OF COMPARABLE SIZE, PRE-TEAM (1966-1970) AND POST-TEAM (1971-1973)

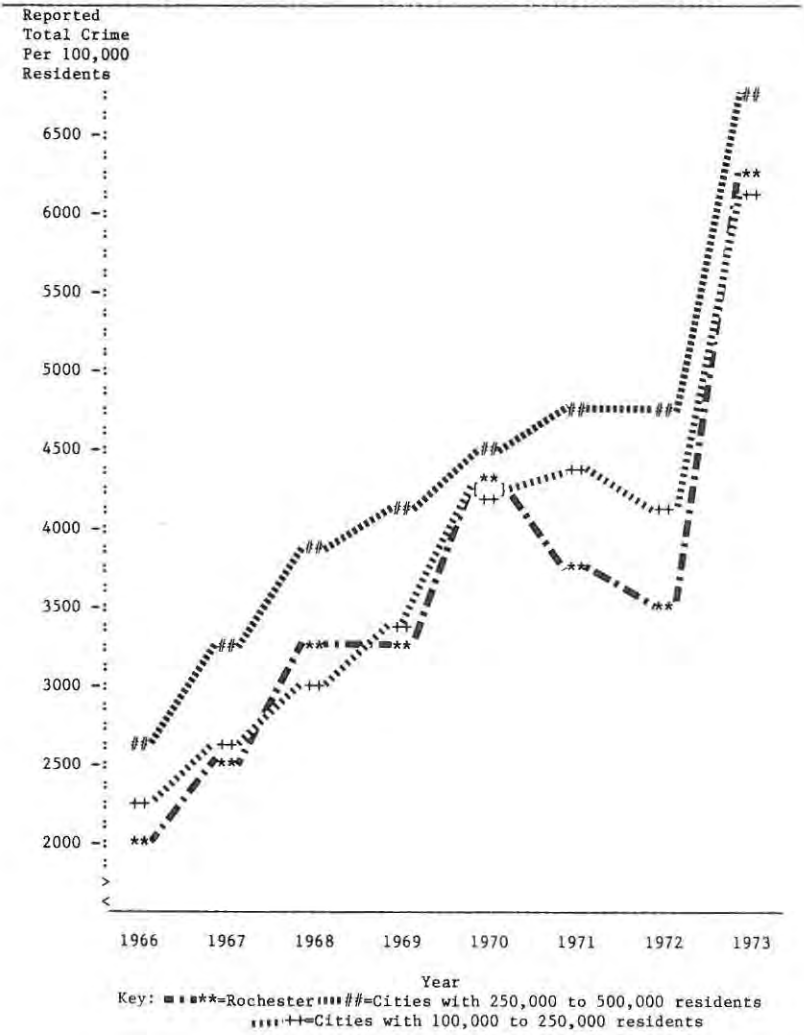


FIGURE 3

TRENDS IN REPORTED BURGLARY IN ROCHESTER AND IN CITIES OF COMPARABLE SIZE, PRE-TEAM (1966-1970) AND POST-TEAM (1971-1973)

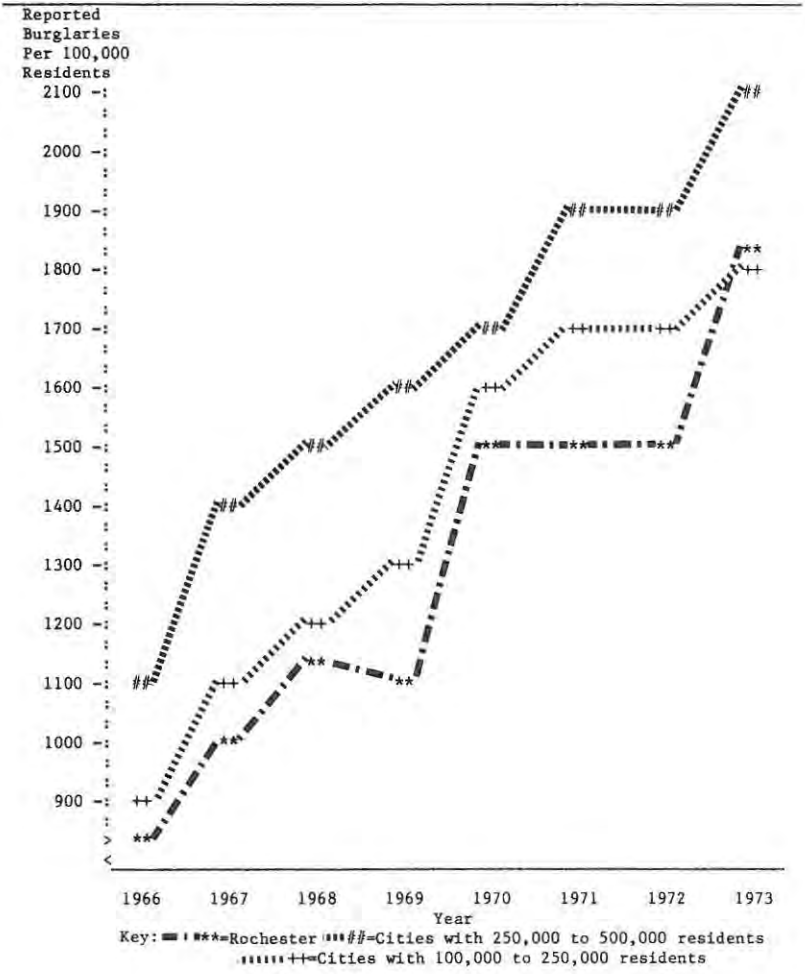
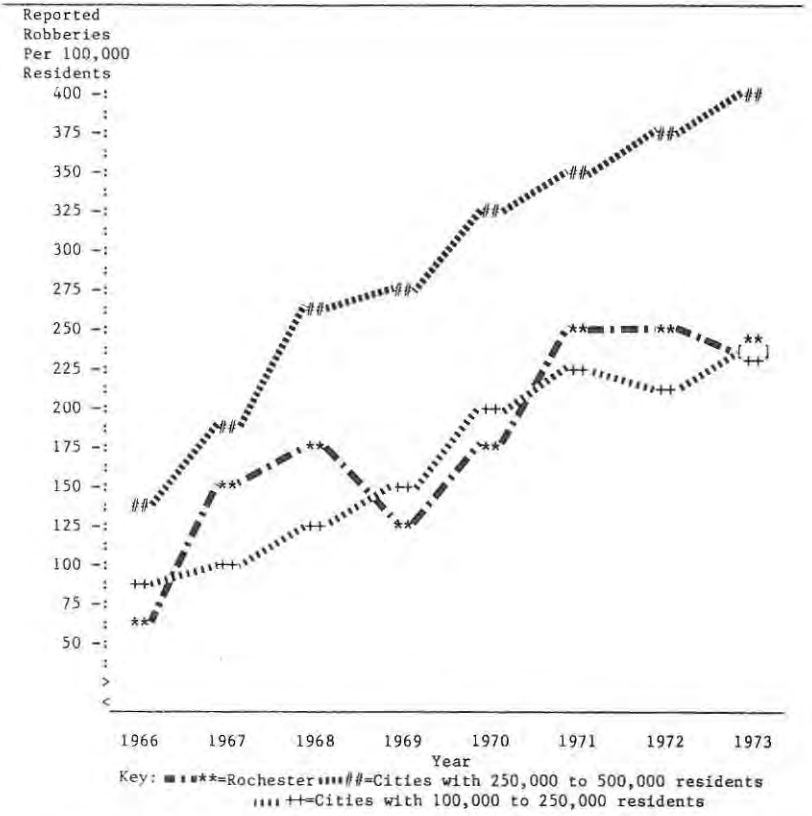


FIGURE 4

TRENDS IN REPORTED ROBBERY IN ROCHESTER AND IN CITIES OF COMPARABLE SIZE, PRE-TEAM (1966-1970) AND POST-TEAM (1971-1973)



reduction of crime through better police methods in one area of a city does not necessarily mean an overall (citywide) crime reduction. These analyses argue that crime that would have occurred in the experimental area was merely displaced into adjacent areas where police methods had not changed. In other words, criminally inclined persons simply changed the locale of their operations.

Yet on the other hand it may be that an experimental program would reduce crime in adjacent areas, since an in-

creased number of arrests (and subsequent imprisonment) would reduce the number of criminals in the city as a whole. It is therefore unclear whether data from different parts of a city can be used to make generalizations about what would happen if an experimental program were expanded throughout a city.

Regardless of those difficulties, the data in Figures 5, 6, and 7 reveal much more promising trends in team than in nonteam areas in terms of burglaries, robberies, and larcenies between 1970 and 1974. In 1970, reported burglaries and robberies were both higher in what later became team areas than they were in nonteam areas. By the end of 1971, however, this situation was reversed. Reported burglaries and robberies in nonteam areas had surpassed the numbers of those crimes in team areas and remained higher for the next three years. For larceny the number was higher in nonteam areas from the beginning and remained higher. Larcenies in team areas, moreover, diminished during the five-year period.

The findings, in percentage terms, were these:

-Reported burglary increased 23 percent a year in nonteam areas and declined seven percent a year in team areas.

-Reported robbery increased 29 percent a year in nonteam areas and declined six percent a year in team areas.

-Reported larceny increased seven percent a year in nonteam areas and declined 12 percent a year in team areas.

While it is difficult to know whether the improved crime control in team areas was because of the experiment itself, because of urban renewal, or because of a combination of these two factors (or possibly other, unknown factors), the data do suggest that the Rochester experiment may have displaced crime from team to nonteam areas.

CONCLUSIONS

1. Comparison of Rochester to cities more or less similar in size showed no difference in crime trends after Rochester initiated its team experiment.

2. Comparison of team to nonteam areas in Rochester showed a substantially more favorable trend in team areas. The more favorable trend might have been caused because the teams helped to reduce the total amount of crime

FIGURE 5

NUMBER OF REPORTED BURGLARIES FOR TEAM AND NONTEAM AREAS, 1970-1974 (TEAM YEARS, 1971-1974)

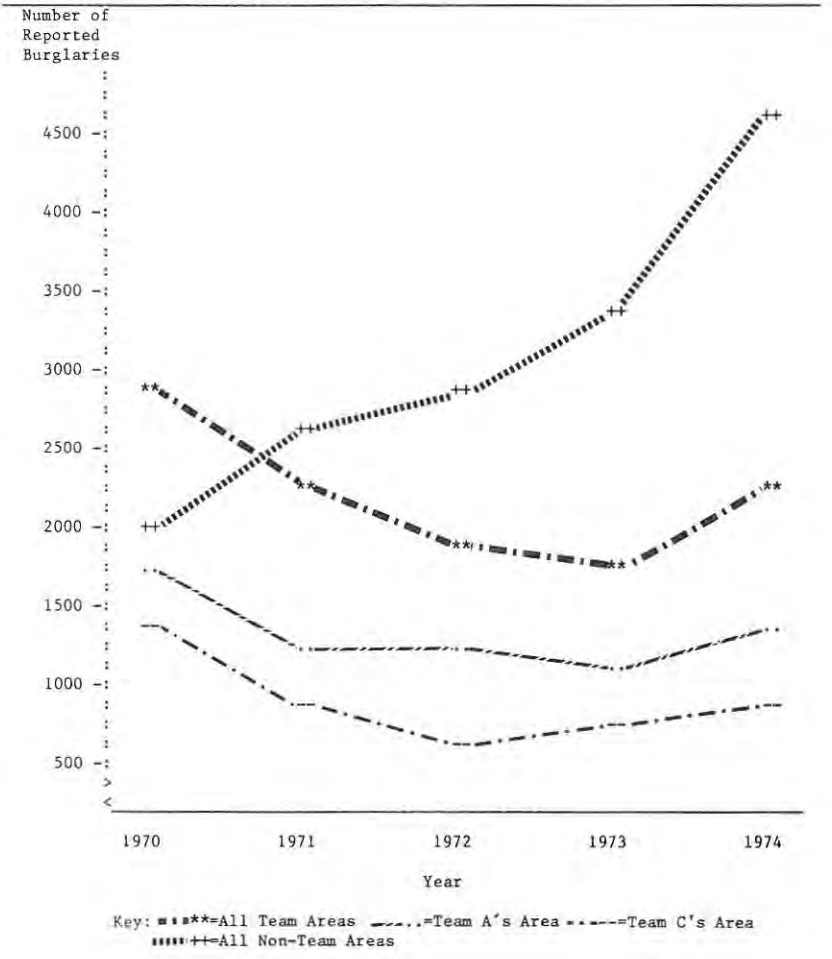
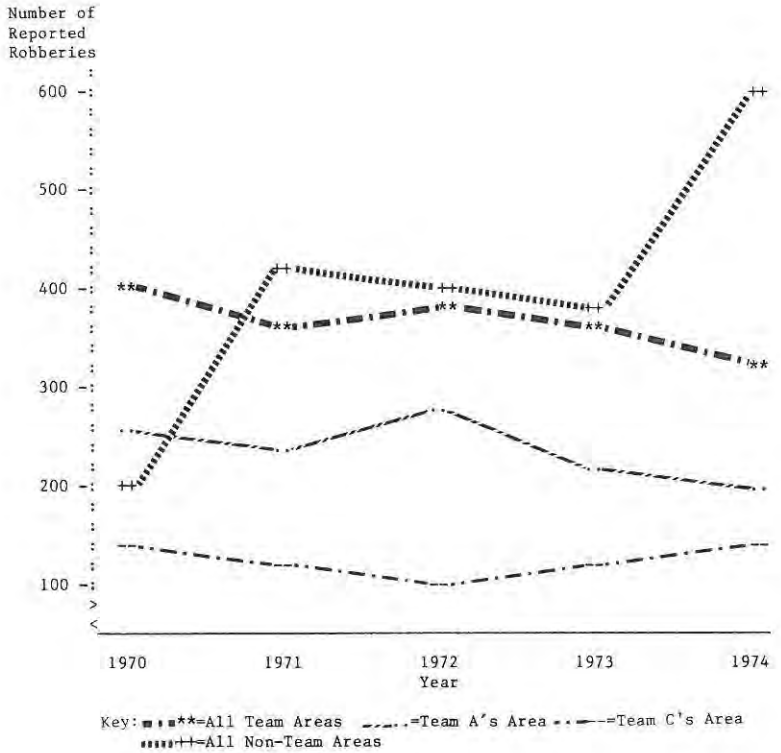


FIGURE 6

NUMBER OF REPORTED ROBBERIES FOR TEAM AND NONTEAM AREAS, 1970-1974 (TEAM YEARS, 1971-1974)

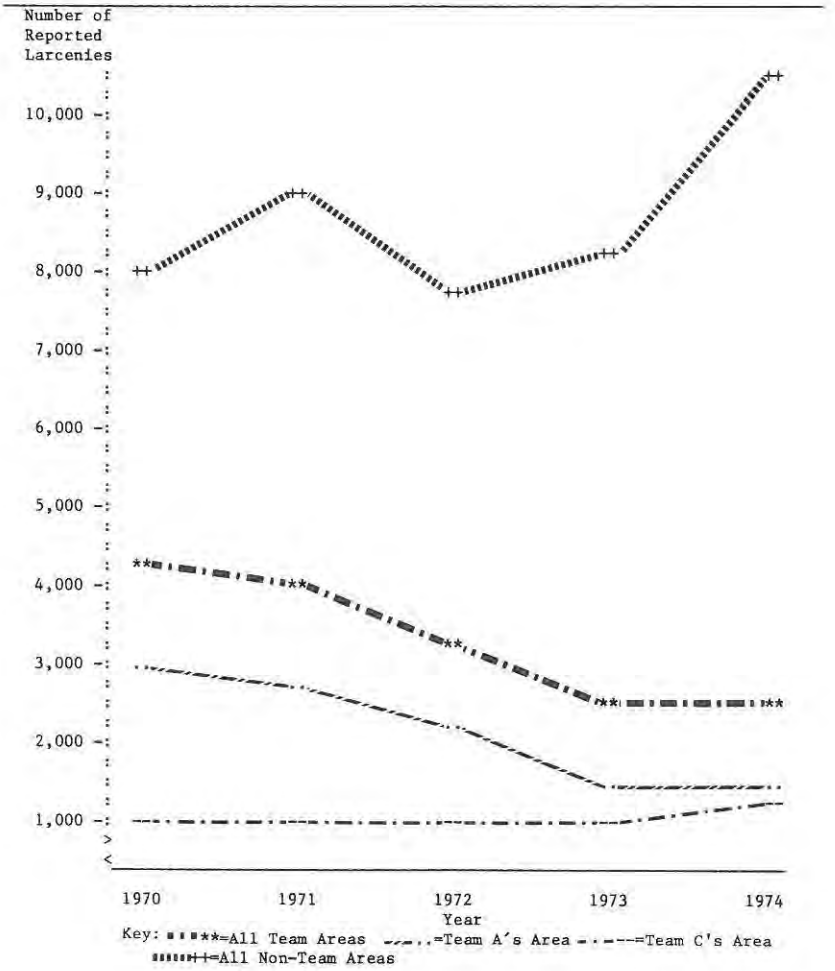


in the city or because the teams displaced crime from the team areas to the nonteam areas. The study does not provide data about which of these explanations is the more accurate.

3. Given the difficulties in drawing sound comparisons, the data should be interpreted with caution. Generalizations concerning the effect of the Rochester experiment on crime trends cannot be made without corroborating evidence obtained from evaluation of similar experiments in other cities.

FIGURE 7

NUMBER OF REPORTED LARCENIES FOR TEAM AND NONTEAM AREAS, 1970-1974 (TEAM YEARS, 1971-1974)



APPENDIXES

A: SUPPLEMENTARY DATA FINDINGS

Information bearing on the accuracy of the primary data or on characteristics of the team system which was not sufficiently important to be included in the body of this report appears in this appendix.

ANALYSES OF DATA RELATED TO ACCURACY OR GENERALITY

Crime Classification by the Review Officer

During this study each case was examined to determine whether the review officer in the central records section or the follow-up investigator reclassified the case as more or less serious. (In many instances reclassification did not affect cases for FBI reporting purposes. For example, the degree of a burglary might be reduced, but it remained a burglary.) This analysis revealed that the review officer was no more likely to change the degree of burglary cases, whether reported by teams or by nonteams. The review officer increased the degree of burglaries in 11 to 12 percent of the cases and decreased the degree in about 47 percent of the cases. There was no change in classification in the remaining burglaries.

Effectiveness of Different Platoons

No single team platoon started more cases than its corresponding nonteam platoon. Generally speaking the second (7:00 A.M. to 3:00 P.M.) and third (3:00 P.M. to

11:00 P.M.) platoons were the most active in starting investigations. The second platoon opened somewhat more burglary investigations, and the third opened somewhat more robbery investigations.

It is interesting to note that both team and nonteam third platoons started more investigations resulting in follow-up arrests than would have been expected from their case load. Third platoons were responsible for conducting less than 35 percent of the preliminary investigations, but these led to more than 44 percent of the follow-up arrests. It may be that the somewhat younger personnel assigned to the evening shift were more effective in conducting preliminary investigations, or it may be that daytime burglaries, first discovered on the evening shift, are easier to solve than burglaries occurring at other times.

Recovery of Property

Teams and nonteams had similar success in recovering property. Official records show recoveries in about eight percent of the burglary cases, nine percent of the robbery cases, and one percent of the larcenies. Unfortunately, there are three problems common to many police agencies which make the return of stolen property difficult. First, the victim may not be able to give a complete enough description of property for the police later to return it. Second, the preliminary investigation may not be thorough enough in obtaining property descriptions. Third, the records system may not enable officers who have recovered property to find the original identification given by the victim.

Number of Suspects Arrested

Teams and nonteams arrested similar numbers of people in a case when their investigations led to arrests. Most often only one person was arrested. (See Table 20.)

OTHER DATA COMPARISONS

Use of Physical Evidence

Teams and nonteams used technicians to collect physical evidence in a similar proportion of their burglary investigations (an estimated 26 percent for team investigations and 19 percent for nonteams—a difference not statisti-

cally significant). On the other hand, half ot the teams' follow-up arrests and only one-quarter of the nonteams' follow-up arrests occurred in cases where physical evidence was reported as part of the preliminary investigation.

This apparent success in using physical evidence was limited to Team C, which filed preliminary reports indicating physical evidence in 61 percent of its cases later solved by follow-up arrests. Team A reports in follow-up arrest cases indicated physical evidence in only 21 percent of the cases, or about the same frequency as nonteams.

Discussions with members of Team C produced the following explanations for its greater ability to use physical evidence:

- A team detective specialized in using physical evidence descriptions in preliminary investigation reports;
- Team C's centralized case management resulted in better identification of cases in which physical evidence might produce an arrest.

The process by which investigators ordinarily request information from personnel in the physical evidence section apparently is inefficient, and it took the continued effort of Team C specialists to obtain the needed information.

Team C's success in using physical evidence indicates that the department might benefit from experimenting with ways of improving efficiency in the use of records. It might also be helpful if some investigators specialized in follow-up of physical evidence reported in preliminary investigations.

Time Spent on Preliminary Investigations

The amount of time an officer should spend on a criminal investigation depends on department policy. The correct amount of time is neither so short that the investigation is incomplete (and has to be redone later when the evidence is less fresh) nor so long that useless information is collected or patrol assignments are neglected. The correct amount of time depends on how much other work must be done. Additional time spent on an investigation may interfere with handling important calls, or it may fill time that would otherwise be spent in less productive ways.

TABLE 20

NUMBER OF SUSPECTS ARRESTED FOR EACH INVESTIGATION WHICH LED TO AN ARREST

Crime	Percentage of Successful Investigations Resulting in Arrest		
	One Suspect	Two Suspects	Three or More Suspects
Burglary	58	29	12
Robbery	69	21	10
Larceny	72	18	10

In this study, data available from the computerized dispatching system showed no difference in the amount of time taken by teams and nonteam personnel for preliminary investigations. More than half the burglary investigations took between half an hour and an hour. When an on-scene arrest was made the investigation kept the officers out of service more than an hour and a half. One-third of the burglary cases in which an arrest subsequently was made had a preliminary investigation which kept the officers out of service longer than an hour and a half. Officers apparently know when an extended preliminary investigation of a burglary is particularly likely to lead to an arrest.

Frequency of Handling Cases in Assigned Area and Outside Area

Teams and nonteams conducted almost all their investigations in their assigned areas. Both teams and units are subdivided into sectors, and more than half of the preliminary investigations were completed by the officers assigned to the sector.

Preliminary and follow-up investigations of almost all crimes occurring in team areas were conducted by the same team, and investigations for crimes occurring in nonteam areas were completed by the same nonteam unit. Among the small number of cases followed up outside a unit, teams were more likely than nonteams to have performed the follow-up. (In this report cases are considered team cases if they

occurred in a team area and to be nonteam cases if they occurred in a nonteam area. Since teams handled a somewhat disproportionate share of investigations [following up somewhat more on nonteam cases], the teams may have made a small contribution to the closing of nonteam cases. Hence, this report may understate somewhat the effectiveness of the teams.)

Absenteeism

In calendar year 1973 the average rate of absenteeism each week was similar for teams and nonteams. (Of team members 6.2 percent were absent at least once, on average, during a week, compared to 6.7 percent of nonteam officers. During calendar year 1974 teams had a somewhat better record, with 4.9 percent of team members with one or more absences a week, on average, contrasted to 6.8 percent of nonteam members. (During 1974 a third team—a new Team B—was formed, and its absenteeism rate was even less than that of the existing teams, averaging 3.4 percent a week.)

B: ROCHESTER POLICE DEPARTMENT ROCHESTER, NEW YORK

SPECIAL ORDER	DATE OF ISSUE	EFFECTIVE DATE	NO.
	March 11, 1971	March 15, 1971	S-71-17

SUBJECT:	DISTRIBUTION:
Coordinated Team Patrol	All Commanding Officers

PURPOSE: This order establishes administration, supervision, functional responsibilities and duties of the Coordinated Team Patrol (CTP).

OBJECTIVES: To ascertain if a cooperative and concentrated team effort in the investigation of reportable crimes can increase the crime clearance in a specific area.

I. COMMAND

A. Each CTP will be commanded by a Lieutenant who will be directly responsible to the Captain commanding the area in which the team is functioning.

B. The teams will be supervised by a Sergeant for each platoon.

C. The Lieutenant will maintain a daily record of personnel assignments for the team (time book) and will forward the weekly duty roster in accordance with current directives.

D. All other administrative and supervisory functions such as: sick reports, sick visits, days off, detail assignments, training and furlough schedules, etc. will be performed by the Sergeants and Lieutenant of the Team.

II. AREA INVOLVED

A. The Teams will function in the following car beat areas:

Unit B: B-11, B-13, B-17 and B-19

Unit C: C-14, C-16, C-18 and C-20

III. PERSONNEL

A. The uniform cars in the area will be manned by uniform personnel now assigned.

B. Investigative personnel will be assigned from the CIS in proportion to the crime experience in the areas.

IV. ASSIGNMENT AND DUTIES

A. Reporting times will be as follows:

1. First Platoon—2245 hours
2. Second Platoon—0645 hours
3. Third Platoon—1445 hours.

B. All personnel including investigators will attend roll-call in the district office unless otherwise assigned by the Team Commanding Officers.

C. All uniform officers will be assigned to regular patrol duties by the Team Commanding Officers.

D. Investigative personnel will be assigned as the Team Commander deems necessary to attain the Team objective.

E. All of the normal police called-for-services will be performed by members of the Team.

F. The police dispatcher may, of necessity, move CTP cars out of the Team area to perform in the absence of units which may be out of service on other jobs.

G. If CTP cars are out of service the Dispatcher may bring in cars from outside the Team area to take jobs.

H. The Team Commander has the authority to use innovative type methods of patrol and investigation as needed to attain the Team objective.

I. The Team Commander will submit a rundown of units and personnel to the dispatcher before each platoon in keeping with the current procedures.

J. All specialized investigation such as vice, homicides, rapes, and robbery will be referred to the existing specialized units such as Violent Crimes, SCIU, etc. The initial complaint will be taken by Team members as they would in accordance with current directives.

K. Nothing in this order relieves the Team members from performing other duties as per Rules and Regulations and other current directives.

L. Responsibilities and duties of other field units and personnel

    1. Other field personnel who would normally perform police service of a specialized type will continue with normal service in the area. EX: Radar and motorcycle enforcement units, Tactical Unit, etc.

2. Technicians Unit services will be utilized by the Team in the manner as now exists in the field.

V. FORWARDING AND DISTRIBUTION OF REPORTS

A. All reports will be forwarded by the Team Commanding Officer to the Review Desk through existing channels.

1. Copies of General Reports, Vehicle Reports and Supplements will be stamped by the Team Sergeant in the box that is now used for "office use only." This stamp will be in the lower right hand corner on all copies.

2. The green copy and one pink copy will be removed and kept at the unit office. All other copies will be forwarded.

B. Review Desk personnel, upon receipt of reports stamped with Team initials will, after review, distribute in the usual manner with these exceptions.

1. One copy will return to the Team.

2. One copy will be sent to the CIS for information only. This copy will also be stamped as in V, A, 1 above.

a. This copy is to be used as a device by CIS supervisors to insure cooperation and an exchange of information between investigators of the Team and the CIS.

3. Officers not assigned to CTP taking reports in car beat areas assigned to the CTP will print the initials "CTP" in place of the stamp, in the lower right hand box of the General Report Form labeled "For Office Use Only." These initials shall be approximately 1/2" high and legible.

4. When a petit larceny or other misdemeanor is investigated by CTP personnel and it is decided that no further leads may develop the General Report form will be checked in "Office Use" box under "Status" as "Administratively Closed" and initialed by the Sergeant or Lieutenant. NOTE: "Administrative Closing" does not mean that the case is cleared. It merely means that no further leads or information can be gained and the case is pending.

BY ORDER OF: /s/ John A. Mastrella

John A. Mastrella, Commissioner of Police

C: COSTS OF FORMING PILOT CTP TEAMS

The CTP pilot teams were designed for ease and economy of implementation. There was a brief planning period in which teams in other cities were studied. However, team officers were not given any special training or orientation other than guidelines given to the team commander. (See Appendix B for the guidelines.)

FINANCIAL EXPENSE

Rochester's financial expenses directly related to program implementation were:

- A few site visits to other cities for planning purposes
- Rental of office space ($3,600 for one team) and purchase of furniture ($5,290 for desks, chairs, typewriters, file cabinets, lockers, lamps, desk trays, and telephone for one team).

In addition, the Planning and Research Division and the Police Commissioner spent a total of approximately two person-months reviewing literature, gathering information, deciding what to do, talking with people within the organization and writing the necessary general order.

The team headquarters selected for a team formed in late 1974 (then called Team B) was a temporary classroom purchased by the school system at a time when extra class-

rooms were needed, but now unused. The school system was pleased to have police located on the school grounds and charged rent equal only to custodial costs and utilities. Compared to the rent paid to house a unit headquarters in a shopping center store front, the costs of the classroom are far lower. (Unfortunately for the Rochester Police Department, however, the store front was leased for five years, during which the city must continue paying rent.)

Additional costs, most of which were paid by a $95,000 grant from the Police Foundation, were incurred during the formation of one team (Team B). With the exception of the costs for furniture and office space, already discussed, these costs did not substantially contribute to the success of the program. The costs included camera and fingerprint equipment for use by individual officers, overtime pay for preliminary and follow-up investigations ($32,000 for 16 officer-months), travel, printing of new crime report forms, and the use of a civilian analyst. The experiments with fingerprint and photographic equipment were found not to have contributed to the arrest rate, and these expenses may therefore be considered unnecessary to the success of the project.

As its "in-kind contribution" to the project, the Department provided a project coordinator (one-quarter time), a researcher, and trainers in the use of photographic and fingerprint equipment. These contributions, while necessary for the experiment, had little direct effect on operations.

OTHER TRANSITIONAL COSTS

The most important "cost" of conversion to Coordinated Team Policing is the mirror image of the principal advantage. The program was an important departure from past practice. The departure proved effective. However, implementation unavoidably disrupted traditional ways. Police captains found it necessary to adjust to a new role. Detectives assigned to teams had to adjust to patrol supervision (a process aided because one of the supervisors had previous detective experience). Detectives not assigned to teams naturally worried about the future of their unit. The director of the Investigative Division had to be concerned that reorganization might threaten his place in the organization. These costs of implementing change should be carefully con-

sidered. As was the case with the first Team B, inadequate attention to the expectations of supervisors or other members of an organization can be disruptive.

PLANNING AND BUDGETING

Rochester's teams are an example of a limited form of team policing which found considerable success. Other departments may use a similar system or may seek additional objectives which another form of team policing may provide. Advance consideration of different options and their budgetary implications may permit a police manager to try a form of team policing designed for specific political and organizational problems of his agency.[11]

[11] Peter B. Bloch and David Specht (The Urban Institute), *Neighborhood Team Policing*, Washington, D.C.: U.S. Department of Justice, December 1973 (U.S. Government Printing Office Stock number 2700-00240).

ABOUT THE AUTHORS

PETER B. BLOCH, project manager for this evaluation, has been directing police studies at The Urban Institute of Washington, D.C., since 1970. His publications include *Neighborhood Team Policing* (LEAA, 1973); *Policewomen on Patrol* (Police Foundation, 1974); *Auditing Clearance Rates* (Police Foundation, 1974); *Managing Criminal Investigations* (LEAA, 1975); and *Police Officer Height and Selected Aspects of Performance* (Police Foundation and IACP, 1975). Mr. Bloch is a social scientist who also trained as a lawyer, receiving his LL.B. and LL.M. from Harvard Law School and a B.S. in experimental psychology from Tufts University.

JAMES BELL, who was the field investigator for this evaluation, is a political scientist with a B.A. from the University of California at Los Angeles and an M.A. from California State University at Northridge. He has completed all Ph.D. requirements but the dissertation for the University of Maryland.