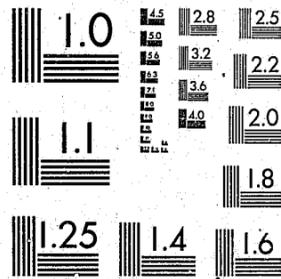


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DEPARTMENT OF URBAN STUDIES AND PUBLIC  
ADMINISTRATION  
OLD DOMINION UNIVERSITY  
NORFOLK, VIRGINIA

Executive Summary:

PRODUCTIVITY IN THE MANAGEMENT OF CRIMINAL  
INVESTIGATIONS

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Prepared for:

City of Portsmouth  
Department of Police

Under:

LEAA Discretionary Grant Number 79-DF-AX-0137  
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September 1981

IRS

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EXECUTIVE SUMMARY

Productivity in the Management of Criminal Investigations  
Portsmouth Police Department  
Portsmouth, Virginia  
25 September 1981

ACQUISITIONS

PART I: INTRODUCTION

Background

The Portsmouth Police Department's concern with evaluating investigative productivity is demonstrated in a departmental memorandum dated July 9, 1979 in which Chief Boone wrote, "there is a lack of any instrument with which data may be captured to effectively evaluate and measure investigative unit and individual productivity. Also non-existent are mechanisms for capturing elements for measuring performance or accountability to commanding officers."

Based on Chief Boone's memorandum, evaluation studies were conducted in Portsmouth to:

- A. Develop productivity measures for individual investigators and investigative units.
- B. Determine the relationships among the various case outcomes of investigations. The various terms used in describing case outcomes are discussed in the Glossary of Terms (Appendix A).
- C. Estimate the optimum caseloads for investigators in terms of agency goals.
- D. Provide a means whereby resource allocation decisions in the investigative function can be made on a better informed basis.

PART II: PROPERTY CRIMES

Introduction

The research methodology for the study of Property Crimes involved extensive analysis of case management records, case tracking of a sample of burglary cases and concurrent interviews and discussions of preliminary and interim findings with the Officer-in-charge of the Property Crimes section and the sergeants in charge of the Burglary and Larceny Squads. Several procedural and organizational changes were implemented during the study which were monitored in order to assess their impact.

Section A: Burglary Squad

Research Questions

The research questions set forth below were derived from specific memoranda promulgated by the Chief of Police, the literature search and consultation with members of the Portsmouth Detective Division.

A. Burglary Squad Operations

1. What was the effect of the policy decision to carefully review unfounded and inactivated burglary reports?
2. What were the reasons for the unfounding of burglary reports?
3. Was there a relationship between the UCR clearance rate and the rate at which reports were unfounded?
4. What was the relationship between inactivation rates, UCR clearance rates and the rate at which detectives clear cases by arrest? Did the UCR clearance rate reflect how effectively detectives processed assigned cases?
5. What was the relationship between clearance rates, the rate

at which cases were inactivated by initial screening and the rate at which cases were inactivated after investigations?

#### B. Burglary Squad Caseload

1. What were the caseloads and case disposition rates for burglary detectives for 1979 and January-June 1980?
2. Was there any relationship between a burglary detective's caseload and inactivation rate?
3. What was the current monthly caseload for burglary detectives?
4. Was there a relationship between monthly caseloads and the rate at which reports were unfounded by burglary detectives?
5. Was there a relationship between caseloads and assigned case clearance rates?

#### Research Findings (January 1979-June 1980)

##### A. Operations

1. There had been a substantial increase in the rate of unfounded reports (13% to 29%) and a decrease in the rate of inactivations (43% to 27%). If this workload could be reduced by an improved preliminary investigation it would allow for assignment of more cases which would normally be screened out by the burglary squad sergeant.
2. Eighty-six percent (86%) of the unfounded reports involved circumstances where there was no crime committed (28%) or the crime was not a burglary (58%).
3. There was no relationship between the unfounded rate and the UCR clearance rate.

4. There was no relationship between the UCR clearance rate and the rate at which investigators clear cases by arrest.
5. High rates of inactivation were associated with lower UCR clearance rates.
6. There was no relationship between clearance rates, the rate at which cases were inactivated by initial screening and the rate at which cases were inactivated by detectives.
7. UCR clearance rates and aggregate data about offenses did not accurately reflect the performance of detectives in processing their assigned cases. A new format was developed for a monthly internal report which would provide the UCR data, workload and performance data on assigned cases, and a breakdown on the inactivation process.
8. The research thus far indicated: (1) that the UCR rate for burglary was frequently more reactive to inactivation by screening rates than to the outcomes produced by detectives; and (2) that the burglary squad consistently cleared 44% of assigned cases.

##### B. Caseloads

1. The assigned case disposition rates were: arrest (27%), exception (17%), unfounded (13%) and inactivation (43%). The average monthly caseload for individual burglary detectives was 13 cases a month.
2. There was no relationship between caseloads and inactivation rates.
3. There was no relationship between caseloads and unfounded rates.
4. There was no relationship between caseloads and assigned case clearance rates.

C. Performance Measures for Burglary

1. The performance measures discussed and presented here can be viewed from several perspectives. They can be applied to units and individuals; they can be regarded as the average of past performance compared to current performance; they may be considered to be a goal statement for investigative units; and finally, they provide performance indicators for the monitoring of changes brought about by alterations in policy or organizational and procedural innovations. Based on past performance it is reasonable to anticipate: a monthly clearance rate of 35%; a clearance rate for assigned cases of 44% (Arrest - 28%; Exception - 16%); and, a ratio of arrest to exceptional clearance of 1.7:1.
2. In applying these measures to individual detectives the special circumstances involved in exceptional clearance must be considered.
3. In addition to the application of measures to units and individuals, it was also recommended that the unfounded rate of assigned burglary cases be monitored in conjunction with an effort to reduce the frequency with which the initial report proves to be unfounded or misclassified.

Performance Monitoring: Burglary

A. As a result of the initial research findings, three significant changes were brought about in burglary squad during the period July-September 1980.

1. Detectives from burglary squad briefed ongoing watches of

the patrol force on a scheduled basis regarding the elements of the offenses of burglary, vandalism, property destruction and prowling. This was done in an attempt to reduce the rate of unfounded and/or misclassified offense reports.

2. The previous caseload research reflected substantial variance in the workload assigned to burglary detectives. One of the factors causing this was a logical policy of the Squad sergeant to assign new, inexperienced detectives a lighter caseload than their peers. However, the case disposition rates indicated that the newer detectives were clearing cases at substantially the same rate as the others. Therefore, this policy was terminated and an effort was made to equalize caseloads.
3. The new Management Information System report formats were implemented as a monthly procedure. There was general consensus that the various rates, (i.e., clearance, disposition and resolution) accurately reflected individual and squad performance.

B. Monitoring Methodology. Performance monitoring was accomplished by comparison of case disposition and UCR clearance rates for different periods of time prior and subsequent to the introduction of changes discussed above.

C. Discussion of the Comparative Performance Data

1. There was a marked decrease (12%) in the unfounded rate during July-December 1980 in comparison to January-June 1980. However, during January-May 1981 this rate increased by 6%.
2. The exceptional clearance rate rose substantially (11%) during

July-December 1980 and then fell back by 7% during January-May 1981.

3. The inactivation rate dropped substantially during 1980 and has remained stable.
4. The rate at which cases are cleared by arrest is stable over the entire period.
5. The rate at which cases are resolved (cleared or unfounded) rose substantially during 1980 (by 16%) and has remained stable.
6. The unfounded rate and the exceptional clearance rate vary inversely with each other: as one rises the other falls.

#### Statistical Analysis of Burglary Caseloads (January 1979-May 1981)

- A. Background. To analyze the caseload data it was necessary to find a way to measure the impact of caseload on investigative performance. Because the UCR clearance rate represents the proportion of reported burglary crimes which are solved, an attempt was made to determine the association between changes in this rate and changes in average caseloads and other explanatory variables. Explanatory variables (factors which would be associated with changes in the UCR clearance rate) selected were the inactivation rate, the clearance rate of assigned cases, the unfounded rate and monthly average caseload as a percent of total reported burglaries.
- B. Results. In general terms, it was found that the caseload variable (individual average monthly caseload as a percent of total reported burglaries) had the most impact on the UCR clearance rate. Increases in the average monthly caseload were clearly associated with increases in the UCR clearance rate. During the 29 month period for which data

was collected the average monthly caseload as a percent of the total reported burglaries was 12.4%. Reported burglaries averaged 136 incidents a month; therefore, average monthly caseload was  $136 \times .124 = 17$  cases per detective. Based on our statistical analysis and discussions with investigators, it is recommended that average caseload be increased to 19-20 cases a month and the outcomes monitored. Based on the average incidence of burglary a caseload of 20 would compute to an average caseload that is 14% of reported burglaries.

#### Case Tracking: Investigative Activities: Burglary Crimes

- A. Background. During the period March-May 1981 data was collected on how burglary investigators distribute their time among various investigative activities. In addition to collecting data on time distribution it was possible to also extract information about case solvability factors so that analysis could estimate the importance of these information elements in regard to the clearance of burglaries in Portsmouth.

#### Summary and Conclusions: Burglary Squad

- A. Operations.
  1. There has been substantial improvement in the disposition of burglary cases since 1979. The resolution of cases has increased from 57% and stabilized at a level of about 73%. Case inactivations have dropped from 43% in 1979 to 29% in 1981.
  2. The ratio of arrests to exceptional clearance has consistently been greater than one.

3. The rate at which cases are unfounded/misclassified dropped dramatically in 1980 (from 29% to 17%) but has increased somewhat thus far in 1981 (17% to 23%). This increase appears to be associated with variation in the exceptional clearance rate which dropped from 27% to 20% while the arrest and inactivation rate remained stable.
4. The UCR clearance rate for 1981 currently averages 35% while in 1980 it averaged 58%. However, impact of the Sting Operation on the 1980 UCR clearance rate must be considered. The drop in the UCR clearance rate has not been associated with any decrease in the assigned case clearance rate (Jan-June 80: 44% -- Jan-May 81: 48%).
5. The preliminary investigation by the first officer at the scene is a critical element that has not yet been directly evaluated. If initially screened out reports in fact contain all the information available at the scene then the system is approaching the optimum in dealing with total reported burglaries. However, if the initial report is cursory and overlooks important elements of information a potentially productive case will be screened out in error.

B. Caseloads.

1. Statistical analysis indicates that burglary detectives can handle more than 12-13% of the monthly reported Burglaries as an average monthly caseload. The analysis does not forecast how much this percentile can be increased before it begins to depress the UCR clearance rate. This can only be determined

by monitoring the impact of various caseloads on the assigned case clearance rate, the number of cases carried over into the next month and the incidence of overtime. It is recommended at this time that an attempt be made to stabilize caseloads at 19-20 cases a month per detective.

2. The caseload analysis also indicated that the current staffing level in the burglary squad (one sergeant and six detectives) is adequate and consistent with the current frequency of burglary crimes.

C. Case Tracking: Investigative Activities.

1. Those activities which occur most frequently in the conduct of burglary investigations are those which essentially replicate the preliminary investigation. Complete and thorough preliminary investigations will operate to decrease the amount of detectives time devoted to these activities.
2. The circumstances of each case investigated are sufficiently different to cause a wide variation in the amount of time devoted to specific activities.
3. The fact that a great proportion of cases are inactivated in 9-56 man hours supports the current procedure whereby cases are closed in 10 working days unless there is a specific justification to continue the investigation.
4. Statistical analysis of solvability factors indicated that suspect information was the only factor significantly related to case clearance.

## Section B: Larceny

### Research Questions

The specific research questions developed for larceny squad are listed below.

#### A. Larceny Squad Operations

1. What was the distribution of larceny clearances between patrol and detective division? Did this distribution have any impact on the UCR clearance rate?
2. What were the case disposition rates (Arrest, Exception, Unfounded, Inactivation) for larceny/property destruction for 1979 and for January-June 1980?
3. What was the relationship between inactivation rates, clearance rates and the rate at which detectives clear cases by arrest. Did the UCR clearance rate reflect how effectively detectives were processing assigned cases?

#### B. Larceny Squad Caseloads

1. What were the larceny and property destruction caseloads and case disposition rates for larceny detectives during January-June 1980?
2. Was there a relationship between caseloads and inactivation rates in larceny?
3. Was there any relationship between larceny caseloads, clearance rates and unfounded rates?

### Research Findings (January 1979-June 1980)

#### A. Larceny Squad Operations

1. The average distribution of larceny clearances between patrol

and detectives was essentially equal (16% and 15% respectively).

2. The assigned case disposition rates (larceny and property destruction) for 1979 were: arrest, 27%; exception, 25%; unfounded, 13%; and inactivations, 35%. The rates for the first six months of 1980 were: arrest, 20%; exception, 39%; unfounded, 9%; and inactivation, 33%.
3. There was no relationship between inactivation rates, clearance rates and the rate at which detectives clear cases by arrest. The UCR clearance rate gave no indication as to how effectively detectives were processing their assigned caseload.
4. There were several problems involved in the procedure of assigning both larcenies and property destruction cases to the same squad. First, property destruction is not reportable under UCR, therefore, detectives had a split caseload - part of which will have highly visible outcomes (larcenies) and another part (property destruction) which received substantially less attention. This produced a cross effect where there was greater motivation to actively pursue larceny cases and devote less effort to property destruction. Second, there are different expectations regarding these two crimes. Even though detectives were clearing 53% of assigned larceny and 52% of assigned property destruction cases, the proportion of arrests were significantly lower for property destruction (13%) than larceny (22%). Apparently recognizing this difference the larceny squad sergeant consistently assigned cases so that each detective was carrying a caseload which is 75% larceny and 25%

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1. What were the larceny and property destruction caseloads and case disposition rates for larceny detectives during January-June 1980?
2. Was there a relationship between caseloads and inactivation rates in larceny?
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### Research Findings (January 1979-June 1980)

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- and detectives was essentially equal (16% and 15% respectively).
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property destruction cases. Based on the foregoing it was recommended that the property destruction cases not be assigned to larceny squad.

5. The stability of the monthly inactivation rate in larceny with an 8% range (81-89%) makes it possible to make estimates as to expected outcomes in relation to reported offenses.

a. It is reasonable to expect that 30% of reported larcenies will be solved (cleared).

b. It is reasonable to expect that 50% of larceny cases assigned for follow-up investigations will be solved (cleared).

6. As was the case in burglary squad, the internal monthly report of squad operations provides aggregate data and UCR clearance rates but does not provide management with sufficient information about the disposition of assigned cases or inactivation rates. It was recommended that the monthly reporting format developed for burglary squad be employed in the larceny squad.

#### B. Larceny Squad Caseloads

1. The larceny/property destruction caseload averaged 15 cases per month per investigator (11 larceny, 4 property destruction). Composite disposition rates were: arrest, 16%; exception, 35%; unfounded, 9%; and inactivation, 40%.

2. There was no relationship between caseloads and inactivation rates in larceny and property destruction.

3. There was no relationship between larceny caseloads, assigned case clearance rates, unfounded rates and the UCR clearance rate.

4. The range of caseloads over time and among detectives had no measureable impact on clearance inactivation and unfounded rates.

#### C. Performance Measures for Assigned Larceny Cases

1. Monthly clearance rate - 30%

2. Clearance rate for assigned cases - 53%

Arrest - 22%

Exception - 31%

3. Ratio of arrests to exceptional clearance - .7:1

#### D. Performance Measures for Assigned Property Destruction Cases

1. Clearance of assigned cases - 52%

Arrest - 13%

Exception - 39%

2. Ratio of arrests to exceptional clearance - .3:1

#### Performance Monitoring: Larceny

A. As a result of the previous research, two significant changes were implemented in larceny squad during July-October 1980:

1. The reporting formats developed for burglary squad were found to be compatible with larceny squad operations and were implemented as the squad reporting system in July 1980.

2. Effective October 1, 1980 property destruction crimes were assigned to the patrol division and the larceny squad was committed solely to larcenies (except grand larceny-auto).

#### B. Monitoring Methodology

To assess the impact of these changes, performance data were compared for the period January-June 1980 (prior to implementation) and two periods subsequent to implementation (July-December 1980 and January-May 1981).

C. Discussion of the Comparative Performance Data.

1. In assigned case dispositions there had been a decrease in clearances and an increase in inactivations.
2. The rate at which cases were inactivated by screening decreased and a greater proportion of reported larcenies were assigned for investigation.
3. As the inactivation by initial screening rate declines, the UCR clearance rate rises. Thus, as a greater proportion of reported larcenies are assigned (45-55%), the UCR clearance rate rises while at the same time the assigned case clearance rate falls as investigators receive more cases with marginal solvability. Even though marginal cases may be assigned, more reported larcenies are cleared which impacts positively on the UCR clearance rate.

Statistical Analysis of Larceny Caseloads (July 1980-June 1981)

A. Regression Analysis.

Analysis of the data collected showed that the average monthly caseload for a larceny detective were:

January-June 1980: 15  
July-September 1980: 17.5  
October 1980-June 1981: 20.3

However, there appeared to be no direct relationship between investigators caseloads and assigned case clearance rates. To examine the possible relationship between caseloads and the UCR clearance rate a univariate regression equation was set up with the average monthly caseload as a percentage of total monthly reported larcenies as the explanatory variable.

- B. Results. There was a statistically significant relationship between the caseload variable and the UCR clearance rate. The analysis estimated that a 1% increase in the average monthly caseload as a percent of reported larcenies would be associated with a 1.9% increase in the UCR clearance rate. It is recommended that the average monthly caseload be increased to the 23-29 cases a month range.

Summary and Conclusions: Larceny Squad

A. Inactivation by Screening Rates.

Inactivation by initial screening rates in excess of 40% to 50% are associated with a decline in the UCR clearance rate. Therefore, in addition to applying solvability and experiential factors in the case screening process, the proportion of cases screened out should be monitored.

- B. Closely related to the inactivation by screening rate is the average monthly caseload as a percent of total monthly reported larcenies. Obviously for this rate to go up the inactivation by screening rate must go down.

- C. The caseload analysis also indicated that the current staffing level in the larceny squad (one sergeant and six detectives) is adequate and consistent with the current frequency of larceny crimes.

PART III: CRIMES AGAINST PERSONS

Introduction

Research in the Crimes Against Persons section of Criminal Investigation Division initially focused on caseloads and case outcomes among units

and individuals and on development of reporting formats for the section similar to those developed for the Property Crimes Section.

#### Methodology

Case assignment logs, case files, offense reports and monthly activity reports were researched to provide the necessary data to compute caseloads and case outcomes on a monthly basis for the Homicide and Robbery and Sex Crimes squads and the individual teams and detectives assigned to those squads.

#### Section A: Caseloads and Case Outcomes (1 May-31 December 1980)

##### Purpose

The purpose of this section is to present the results of the analysis of caseloads and case outcomes in the Crimes Against Persons section of the Criminal Investigation Division, Portsmouth Police Department.

##### Qualifications on Caseload Data

- A. Inactivations. The matter of case inactivations in the Crimes Against Persons section was not as clearly specified as in the Crimes Against Property section. In many instances cases were administratively inactivated due to a lack of evidence and/or exhaustion of leads, but due to the seriousness of the crime and the possibility of new information, an inactivated case may still be informally assigned to a team or individual detective. Thus, actual caseload may be slightly higher than the formal record keeping system would indicate.
- B. Special incidents. Another factor which makes specification of true workload difficult in the Crimes Against Persons section is

the processing or monitoring of incidents such as missing persons and dead bodies. Frequently these incidents involve active investigation and follow-up even though they may never be reclassified as a crime. It is difficult to quantify and systematically aggregate this workload with the UCR reportable cases.

#### Summary of Findings (1 May - 31 December 1980)

- A. The three crime categories of homicide, robbery and assault were associated with certain specific outcome rates. Homicide was characterized by a high rate of arrest, a high proportion of robberies resulted in inactivation and assault was associated with a high rate of exceptional clearance.
- B. The various outcome rates generated by the investigative teams in Homicide/Robbery were more a result of the distribution of assigned cases among the crime categories of homicide, robbery and assault than a result of relative effectiveness of the teams.
- C. The variance in the proportions of type of crimes among the caseloads of the teams makes any comparisons of relative effectiveness of the teams extremely difficult.
- D. Sex crimes were characterized by fairly uniform distribution of caseloads but there is substantial variation in outcome rates, with one of the investigators generating a significantly higher inactivation rate than his two peers.

#### Section B. Monthly Reports; Crimes Against Persons

##### Background

Research conducted in the Crimes Against Persons section revealed problems similar to those initially found in Property Crimes. Again,

the rate at which cases were inactivated by screening had more impact on UCR clearance rates than did the outcomes of cases assigned for investigation and the monthly report did not highlight these outcome rates. The ability to track case outcomes by crime category was complicated somewhat by the multiple crime categories assigned to the functional squads in this section.

#### Report Formats

The development of reporting formats for the Crimes Against Persons section involved several revisions in order to capture the necessary information and still have an instrument that was not administratively burdensome.

#### Section C: Performance Monitoring: Crimes Against Persons (January-June 1981)

##### Background

In addition to the introduction of the new report formats in January 1981, an attempt was made to make a more uniform distribution of crime categories in the caseloads of the Homicide and Robbery teams. Data was collected and analyzed for the period January-June 1981 to assess the impact of these changes.

#### Summary of Findings: Crimes Against Persons (January-June 1980)

##### A. Homicide and Robbery

1. The more uniform caseload distribution allowed for comparative performance evaluation among investigative teams.
2. Homicide and robbery investigations continue to have characteristic outcomes with homicide resulting in a high rate of arrest and robbery associated with a high rate of inactivation.

Assault which had previously been associated with a high rate of exceptional clearance is currently characterized by high rates of arrest. It is questionable that the circumstances of assault crimes have undergone a consistent change, therefore, it is recommended that the reporting and classification procedures involved in assault cases be closely examined.

3. The crimes of robbery and assault have an extreme variation in the monthly UCR clearance rate which frustrates the ability to make any prediction as to a reasonable expectation of clearance.
4. The statistical relationship between the incidence of homicide and the clearance rate for robbery is relatively weak - but it does exist and it is negative. It can be said with some assurance that a heavy homicide caseload will pre-empt investigative activity that would normally be devoted to robbery cases. There is no apparent effect of the homicide caseload on assault clearances.

##### B. Sex Crimes

1. Rape and sexual assault are characterized by high rates of arrest. Even though sexual assault is not reportable under the UCR system, it is a category that encompasses criminal acts which can attract a high level of community concern. This is another instance where UCR statistics fail to measure police effectiveness.
2. The caseload in the sex crimes unit is distributed on a fairly even basis among the various categories of this crime. Caseload composition does not appear to be related to the outcome

rates achieved by the individual investigators and relative comparisons of performance can be legitimately made.

3. Average monthly caseload in the sex crimes unit is six cases per month. However, there is no indication as to whether this is an optimum workload in terms of outcomes.

#### PART IV: FINDINGS AND CONCLUSIONS

##### Property Crimes

###### A. Burglary

1. Based on past performance the statistical estimate of the optimum caseload in burglary squad is 19-20 cases per month. It should be emphasized that the number of burglaries which will occur in a given month can only be estimated and the maintenance of individual caseloads at a specific level will not always be possible. However, the estimate of 19-20 cases a month can be used to identify full commitment and to make resource allocations based on the average frequency of burglary crimes. Based on this caseload estimate the current staffing level in burglary is adequate.
2. The unfounded/misclassified rate has started to increase after the initial decrease achieved during 1980. This may indicate some deterioration in the quality of the initial reports and a need for more training in crime classification.
3. The current UCR average clearance rate of 35% is considered to be a reasonable estimate of the proportion of burglary cases which will be solved in Portsmouth. The average of 46.5% for

1980 was strongly influenced by the Sting Operation conducted during that year and is an overly optimistic expectation.

4. It is reasonable to expect that burglary investigators will, in the long run, clear approximately one-half of their assigned cases.
5. The analysis of burglary solvability factors clearly indicated that suspect information was the only statistically significant factor associated with case clearance. Our research thus far indicates that the experienced judgment of squad sergeants and detectives in evaluating the presence or absence of certain elements of information (solvability factors) provides a sound basis for case screening. The effectiveness of the case screening procedure should be the subject of continued monitoring and research.
6. The most frequent investigative activities in the burglary squad replicate the actions which should be taken during the preliminary investigation. Thus, the quality of the preliminary patrol investigation must be examined. In addition, the elements of a preliminary investigation must be specified.

###### B. Larceny

1. Insofar as circumstances allow, the average monthly caseload for larceny detectives should be between 23-29 cases a month and assigned case outcomes closely monitored. Based on the average frequency of larceny crimes the current staffing level of one sergeant and six investigators is considered adequate.
2. There is a clear inverse relationship between the inactivation

by screening rate and the UCR clearance rate.

3. The inactivation by screening rate is an important indicator of trends in the UCR clearance rate. When initial inactivations approach the 40-50% range the assignment of more cases should be considered even though those cases have marginal solvability.
4. If larceny detectives are assigned to a larger proportion of larcenies their individual clearance rates will drop as they receive a greater number of cases with marginal solvability. However, in terms of total reported larcenies, a larger proportion will be cleared, because in terms of numbers more cases are solved.
5. It is reasonable to expect that larceny investigators will, in the long run, clear at least forty percent of their assigned cases.
6. The current UCR clearance rate of 30% is considered to be a reasonable estimate of the proportion of larceny cases which will be solved in Portsmouth.

#### Crimes Against Persons

##### A. Homicide, Robbery and Assault

1. Homicide cases are most frequently cleared by arrest, while robbery most frequently results in inactivation. Assault, which previously was characterized by exceptional clearance is now most frequently cleared by arrest. The reason for this is not clear and may be the result of classification and procedural changes which should be checked for consistency with UCR reporting criteria.

2. Caseloads are now more evenly distributed among the teams in Homicide and Robbery squads which will allow for evaluation of comparative performance.
  3. The extreme variation in the monthly UCR clearance rates for assault and robbery makes it difficult to replicate the case-load analysis done for property crimes. The substantial unexplained variation presently frustrates the ability to make an association between caseloads and outcomes.
  4. Additional research will be required in order to better approximate the optimum caseload for Homicide and Robbery investigators.
- C. Sex Crimes
1. Rape and sexual assault are both characterized by high rates of arrest. This should be kept in mind when comparing the relative performance of investigators in the unit.
  2. Caseloads in the unit are quite evenly distributed among the categories of crime handled by the unit.
  3. A mixed caseload of six per month has been the past average but this does not necessarily establish the optimum caseload. Additional research is needed to establish the optimum caseload for the sex crimes unit.

#### PART V. DIRECTIONS FOR FURTHER RESEARCH

##### Preliminary Investigations

Thus far, research in the investigative function has concentrated on Criminal Investigations Division. The role of the patrol force in the investigative function has not been directly evaluated. Research thus far has revealed

that the most frequent investigative activities are those which replicate the preliminary investigation and it is also relevant that the unfounded/misclassified rate for burglary and larceny is 23% and 25% respectively. These factors indicate a clear need to evaluate the preliminary investigative function and assess its conformity with the overall investigative mission.

#### Caseloads

The recommendations regarding caseloads in the property crimes section should be monitored on a continuing basis to insure that maximum productivity is achieved. The caseloads in the Crimes Against Persons section requires more research to provide management with a usable estimate of what level of caseload represents a reasonable commitment for investigators.

#### Team Assignments

The team assignment policy in Homicide and Robbery Squad should be thoroughly examined to determine if this procedure is in fact more productive than case assignment to individuals.

#### General Assignment Function

Crimes involving checks, auto theft and other miscellaneous offenses are not all UCR reportable but commit substantial investigative resources. Performance indicators and caseload analysis is required in order to provide effective management of these investigations.

## GLOSSARY OF TERMS

UCR Clearance Rate: That percentage of reported crime for the given period which is cleared by arrest or exception in accordance with UCR criteria.

Unfounded Rate: That percentage of assigned caseload which is determined to be unfounded or misclassified. A case is unfounded when investigation reveals that the reported crime did not occur or was improperly categorized by crime type.

Disposition Rates: These rates reflect the distribution of investigations among the various possible results of arrest, exception, inactivation and unfounded.

Case Outcome Rates: These rates reflect the percentile distribution of investigative results among the possible outcomes of arrest, exceptional clearance and inactivation. Unfounded cases are not considered.

Case Resolution Rate: This is the proportion of total caseload which culminates in arrest, exceptional clearance or a determination of unfounded.