

72-ED-04-002

FINAL EVALUATION REPORT
FULTON COUNTY JUVENILE COURT
OUTREACH PROJECT

NCJRS

SEP 17 1976

ACQUISITIONS

August, 1973 through April, 1975

Georgia Institute of Technology

Atlanta, Georgia 30332

404/894-2300

36532

Table of Contents

	Page
1.1. Introduction	1
2.0. Legend	1
3.0. Overview	2
4.0. Limitations	4
5.0. Comparison with Goals and Objectives	4
5.1 Goal Statement	4
5.2 Statement of Objectives	4
5.3 Measure for Goal	5
5.4 Measure for Objective 1	10
5.5 Measure for Objective 2	10
6.0. Statistical Measures	12
6.1 Non-equivalence of Supervision & Control Groups	12
6.2 Discharge Rates	17
6.3 Treatment Length	17
6.4 Goal Measurements	23
6.5 Measurement of Objective 1	31
6.6 Measurement of Objective 2	31
7.0. Input Analysis	33
8.0. Analysis of Time to Recidivate	33
9.0. Disposition Time	50
10.0. Crime Switch	50
11.0. Conclusion	57
12.0. Cost Analysis	58

List of Exhibits

	Page
5-1 Type II Recidivists	7
5-2 Discharges of Impact Supervision Cases	8
5-3 Type II Recidivism Analysis	9
5-4 Comparative Analysis of Target Cases for the Fulton County Juvenile Court August, 1973 Through April, 1975	11
5-5 Fulton County Juvenile Court Offense Breakdown for August, 1973 Through April, 1975	13
5-6 Fulton County Juvenile Court Offense Computations for August, 1973 Through April, 1975	14
6-1 Impact Supervision-Control Comparison Cumulative Number Receiving Treatment	15
6-2 Impact Supervision-Control Comparison Percentage Breakdown	16
6-3 Discharges of Control Cases	18
6-4 Discharge Rate Impact Supervision Cases	19
6-5 Discharge Rates Control Cases	20
6-6 Length of Treatment Prior to Discharge Impact Supervision Group	21
6-7 Length of Treatment Prior to Discharge Control Group	22
6-8 Treatment Years and Recidivates Impact Supervision Group	24
6-9 Treatment Years and Reicidivates Control Group	25
6-10 Annual Recidivism Rates	26
6-11 Impact Supervision Control Comparison -	27
6-12 Average Number in Treatment	29
6-13 Results of Statistical Test	30
6-14 Fulton County Juvenile Court Percentage of Offenses August, 1972 Through April, 1975	32
7-1 Cumulative Number Receiving Treatment	34
7-2 Those Who Have Reentered Treatment	35
8-1 Recidivism in Months Since Placed in Group Impact Supervision Cases Adjusted Target Offenders	37

List of Exhibits (continued)

8-2 Recidivism in Months Since Placed in Group Impact Supervision Cases Probated Target Offenders	38
8-3 Recidivism in Months Since Placed in Group Impact Supervision Cases Adjusted Potential Target Offenders	39
8-4 Recidivism in Months Since Placed In Group Impact Supervision Cases Probated Potential Target Offenders	40
8-5 Recidivism In Months Since Placed in Group Control Group Adjusted Target Offenders	41
8-6 Recidivism in Months Since Placed in Group Control Group Probated Target Offenders	42
8-7 Recidivism In Months Since Placed in Group Control Group Adjusted Potential Target Offenders	43
8-8 Recidivism in Months Since Placed in Group Control Group Probated Potential Target Offenders	44
8-9 Time to Recidivate	45
8-10 t Test For Time to Recidivate	46
8-11 Frequency Distribution of Time to Recidivate for All Cases	48
8-12 Time to Recidivate Goodness of Fit Test for $P(\lambda = 0.6)$	49
9-1 Disposition Time	51
9-2 t Test for Disposition Time	52
10-1 Type of Offense Committed by Recidivates Impact Supervision Group	53-54
10-2 Type of Offense Committed by Recidivates Control Group	55
10-3 Crime Switch	56
12-1 Caseload by Month	59
12-2 Allocation of Costs	61
12-3 Phase II Supervision of Juveniles by Center	62
12-4 Phase II Cost Allocation (1/74 - 9/74)	63

1.0 Introduction

The purpose of this report is to provide information for assessing the degree to which interim goals and objectives are being met and for determining if project modifications or redirections are required. This study is based on the Interim Evaluation Report through November, 1974, and information forwarded monthly thereafter to the Crime Analysis Team. This evaluation covers the 21 months of project operation: August, 1973 through April, 1975. The evaluation component appearing in the grant application has been revised. The draft version dated June 26, 1974, was used to perform the evaluation resulting in this final report. The major focus of the project is to contribute to target crime reduction by providing intensive probation and processing services to 200 potential target and target offenders identified by the Fulton County Juvenile Court. The reduction in crime will occur as a reduction in recidivism is achieved.

2.0 Legend

In order to prepare a more concise evaluation, mnemonic symbols are used to indicate treatment centers, offender types, and group.

The symbols for the treatment centers are:

B - Bankhead
E - East Central
L - Leila Valley

Offenders types are shown by the following:

TO - Target Offender
PTO - Potential Target Offender
ADJ - Adjusted Case
PROB - Probated Case

Group placement is indicated as follows;

SUPV or I - Impact Supervision Group
CON or C - Control Group

Individuals are identified in a unique manner. The identifier 10BI indicates a juvenile served by the Impact Project being treated at the Bankhead Center. Similarly, 52LC indicates a youth who is serving in the Control Group for Leila Valley.

3.0 Overview

1. The goal of reducing post treatment recidivism by 31.8% for Impact Supervision youths has been achieved. If a youth can complete the treatment period leading to dismissal from supervision the expected recidivism is extremely low. No Adjusted Target Offenders, Probated Target Offenders, or Probated Potential Target Offenders have recidivated. Only three Probated Target Offenders have recidivated, but their rate of recidivism is only $\frac{2}{3}$ of the value necessary to successful accomplishment of the goal.
2. The objective of reducing target cases by 19% has not been achieved. There has been an increase in target cases of 27.5% over the base value.
3. The number of target crimes has increased by 44.3% in the Impact Area over the base year, 1972. The objective of decreasing target crimes by 31.8% has not been met.
4. The contents of the supervision and control groups are of such a difference that they must be broken down into categories in order to make any comparisons.

5. The discharge rate of the Impact Supervision Group is about four times the rate of the Control Group. There seems to be an underreporting of Control Group discharges.
6. Control Group members who are discharged have a treatment period which is about 16% longer than the treatment period for their counterparts in the Impact Supervision Group.
7. There is no significant difference in recidivism occurring during treatment for any grouping of youths.
8. There is a sinusoidal pattern of crimes and cases occurring in the Impact Area. There are two peaks and two valleys occurring each year. The peaks come in March and September, and the valleys come in June and December.
9. There is a statistically significant increase in the proportion of crimes being committed by residents of the Impact Area over the base period, 1972. This proportion has become stabilized at about 11% above the base value.
10. The Project has served 324 youths, meeting and far exceeding its input goal of serving 200.
11. There is no significant difference in time to recidivate, given a youth recidivates, within major comparison groups. The time to recidivate follows a Poisson process with mean of 3.6 months. Over 90% of those that are going to recidivate during treatment do so within one year of being placed in treatment.
12. There is no significant difference in disposition time within major groupings of youths who have recidivated. The mean disposition time is 1.4 months.

13. Approximately 70% of repeat offenses are burglaries.

4.0 Limitations

1. Several cases have not been closed so that the recidivism rates will be slightly higher than reported. Since the average disposition time is 1.4 months, an addition of perhaps 7% to each recidivism rate reported could be made. Thus, a recidivism rate reported as 12% might actually reach 12.8% ($12\% + .07 (12\%)$) with the new addition. The 7% was obtained by dividing 1.4 months for average disposition of a case, by 21 months of project activity. In comparing the Impact Supervision Group to the Control Group, bias is consistent, and can be ignored.
2. There is a slight difference of one or two days between the occurrence of an offense and the complaint date. The complaint dates are used in several analyses in this evaluation report as a proxy for the date the offense occurred.
3. There appears to be a great deal of underreporting of the discharge of Control Group Cases.

5.0 Comparison with Goals and Objectives

5.1 Goal Statement. As stated in the draft evaluation component dated June 26, 1974, the goal of the project is to reduce the recidivism rate among the selected group of juvenile offenders by one-third by May 31, 1975. Since the evaluation is being conducted on the basis of data through April, 1975, rather than May, 1975, the reduction in recidivism is revised accordingly to 31.8%.

5.2 Statement of Objectives. The draft evaluation component indicates that the project has two objectives. It is further stated in the evaluation component that accomplishment of the objectives is highly desired,

but not necessary for labeling the project a "success." This last statement was added since the Project can not be held fully accountable for the two Objectives which are as follows:

Objective 1: Reduce the number of juvenile cases^{1/} of target offenses by twenty percent by May 31, 1975.

Objective 2: Reduce the number of target crimes^{2/} by juveniles in selected operational areas^{3/} by one third by May 31, 1975.

Since the evaluation is based on data collected through April 30, 1975, only 21 months of Project operation will have occurred. Objective 1 and 2 are reduced by 1/22nd accordingly to read as follows:

Objective 1 (Revised): Reduce the number of juvenile cases of target offenses by nineteen percent by April 30, 1975.

Objective 2 (Revised): Reduce the number of target crimes by juveniles in selected operational areas by 31.8% by April 30, 1975.

5.3 Measure for Goal. There have been surprisingly few cases of post-treatment recidivism reported. This pertains to both the Impact Supervision and Control Groups. Those who have committed Type II^{4/} or

^{1/} A target offense case occurs when a target offense charge receives a judicial adjustment or adjudication which is not dismissed or reduced to a non-target offense.

^{2/} Target offenses are specified as burglary, robbery, homicide, aggravated assault, aggravated battery, and rape.

^{3/} Selected operational areas include those 89 census tracts referenced in "Interim Evaluation Report 1" covering the period September 1, 1973 through November 30, 1973.

^{4/} Type I Recidivism - Occurs when a juvenile target offender, receiving the services of the court, receives a judicial adjustment or adjudication which is not dismissed or reduced to a non-target offense.

Type II Recidivism - Occurs when a juvenile target offender, released from supervision of the court, receives a judicial adjustment or adjudication which is not dismissed or reduced to a non-target offense.

post-treatment recidivism are shown in Exhibit 5-1. Five of the six Type II recidivists are probated target offenders. In previous evaluations, the low number of Type II recidivists has been rationalized by the low number of discharged cases and the short elapsed time since the discharges took place. Exhibit 5-2 helps to dispell some of this rationalization. Exhibit 5-2 indicates that 166 Impact Supervision cases have been discharged with an average time since discharge of 6.99 months. A sufficient number of Impact Supervision cases have been discharged for a period of such length to reach a conclusion concerning the goal of Project Outreach as discussed in this section.

Prior to presenting the conclusion, some background information is necessary. The performance measure for Type II recidivism was provided in the draft evaluation component. A base comparison rate of 23.2% was stated. The base comparison rate had been previously determined by following all juveniles probated for a target offense who were released from probation in 1971. The tracking period was 18 months. Thus, the rate was for two years. In the base study, recidivism occurred when a youth was returned to the Juvenile Court for a target offense and the case was not dismissed.

In developing the draft evaluation component, recidivism as a function of time was subjectively determined in cooperation with the Juvenile Court and the Project evaluators. The consensus was that 50% would recidivate within three months of release from probation, 75% within six months, and approximately 5% monthly for the next three months. Based on these estimates, Exhibit 5-3 was constructed. The expected recidivism rate is computed only for probated target offenders, since the base comparison data only concerns probated target offenders.

Exhibit 5-1

Type II Recidivists

Identifier	Group
90EI	TO-SUPV-PROB
100EI	TO-SUPV-PROB
105EI	TO-SUPV-PROB
2EC	TO-CON-PROB
18LC	TO-CON-PROB
4LC	TO-CON-PROB

Exhibit 5-2

Discharges of Impact Supervision Cases

Category	Discharges	Post-Treatment Months	Post-Treatment Years	Average Time Since Discharge (Months)
B-TO-SUPV-ADJ	10	32.0	2.67	3.2
B-TO-SUPV-PROB	35	238.5	19.87	6.8
B-PTO-SUPV-ADJ	11	90.5	7.34	8.2
B-PTO-SUPV-PROB	7	49.5	4.12	7.1
E-TO-SUPV-ADJ	5	32.5	2.71	6.5
E-TO-SUPV-PROB	16	108.0	9.00	6.8
E-PTO-SUPV-ADJ	7	52.5	4.37	7.5
E-PTO-SUPV-PROB	3	12.5	1.04	4.2
L-TO-SUPV-ADJ	10	50.0	4.17	5.0
L-TO-SUPV-PROB	37	221.0	18.42	6.0
L-PTO-SUPV-ADJ	17	167.5	13.95	9.9
L-PTO-SUPV-PROB	9	105.5	8.79	11.7
B-SUPV	63	410.5	34.20	6.5
E-SUPV	31	205.5	17.12	6.6
L-SUPV	72	544.0	45.33	7.6
TO-SUPV-ADJ	25	114.5	9.55	4.58
TO-SUPV-PROB	87	567.5	47.29	6.52
PTO-SUPV-ADJ	35	310.5	25.86	8.87
PTO-SUPV-PROB	19	167.5	13.95	8.82
ADJ-SUPV	60	425.0	35.41	7.1
PROB-SUPV	106	735.0	61.24	6.9
TO-SUPV	112	682.0	56.84	6.1
PTO-SUPV	54	478.0	39.81	8.9
SUPV	166	1160.0	96.65	6.99

Exhibit 5-3

Type II Recidivism Analysis

Category	Post-Treatment Years	Recidivates	Recidivism Rate	Average Time Since Discharge (Months)	Expected Recidivism Rate	Test Recidivism Rate
TO-SUPV-ADJ	9.55	0	0.00	4.58		
TO-SUPV-PROB	47.29	3	0.06	6.52	0.18	0.12
PTO-SUPV-ADJ	25.86	0	0.00	8.87		
PTO-SUPV-PROB	13.95	0	0.00	8.82		

Coincidentally, the only Type II recidivists were probated target offenders. The expected recidivism rate is determined by multiplying 0.776 by 0.232. The number 0.776 represents the proportion which would be expected to recidivate within 6.52 months from release from probation. The value 0.232 or 23.2% is the base comparison rate determined in the follow up of probated target offenders released in 1971. The test recidivism rate is determined by subtracting 31.8% of 0.18. The value 31.8% compensates for deleting the final month, May, 1975, from the evaluation.

The Project is achieving its goal. No recidivism has occurred in three of the categories shown in Exhibit 5-3. Although the expected recidivism rate in these categories is indeterminable because of insufficient data, a zero recidivism rate will meet any test value which could be entered. In the one category where recidivism has occurred, the Project is below the test value.

5.4 Measure for Objective 1. Exhibit 5-4 shows the total intake of juvenile cases of target offense experienced by the Juvenile Court. The base comparison case value was 61.4 cases per month for 1972. As can be seen from Exhibit 5-4, the running average of cases per month has reached 78.3. The difference from the base value has been as high as 44.6. This difference has been particularly high in the last three months, averaging 28.9 above the base. The running average increase over the base, as of April 1975, is 16.9 (78.3 - 61.4). This increase is 27.5% rather than an objective decrease of 19%. The 19% decrease was determined by multiplying the 20% value in the draft evaluation component by $\frac{21}{22}$ to allow for the shortened evaluation period.

5.5 Measure for Objective 2. The number of target crimes by juveniles (residing in the Impact Area) occurring during 1972, the base period, was

Exhibit 5-4

Comparative Analysis of Target Cases for the Fulton
County Juvenile Court^{1/} August, 1973 Through April, 1975

Month	Target Cases	Difference From Base	Cumulative Total	Running Average
August, 1973	75	+13.6	75	75.0
September	69	+ 7.6	144	72.0
October	61	- 0.4	205	68.3
November	71	+ 9.6	276	69.0
December	67	+ 5.6	343	68.6
January, 1974	67	+ 5.6	410	68.3
February	81	+19.6	491	70.1*
March	96	+34.6	587	73.4
April	85	+23.6	672	74.4
May	75	+13.6	747	74.7
June	75	+13.6	822	74.7
July	88	+26.6	910	75.8
August	82	+20.6	992	76.3
September	106	+44.6	1098	78.4
October	72	+10.6	1170	78.0
November	69	+ 7.6	1239	77.4
December	65	+ 3.6	1304	76.7
January, 1975	73	+11.6	1377	76.5
February	84	+22.6	1461	76.9
March	95	+33.6	1556	77.8
April	88	+26.6	1644	78.3

^{1/} Total Intake

545 for an average of 45.4 per month. Data pertaining to the period August, 1973 through April, 1975 are shown in Exhibit 5-5. The data is analyzed further in Exhibit 5-6. The column entitled "Difference from Base" is a comparison to the statistic 45.4 crimes per month mentioned previously. As can be seen in the last column of Exhibit 5-5, the crime rate is increasing rather than decreasing. As of April, 1975 the percentage increase is 44.3% from the base in contrast to an objective decrease of 31.8%. The objective is not being met.

6.0 Statistical Measures

6.1 Non-equivalence of Supervision and Control Groups. In order to determine the effectiveness of the project as it relates to recidivism, comparisons are made between the supervision and control groups. In order to make comparisons between supervision and control groups, equivalence of the two is required. Exhibits 6-1 and 6-2 portray the contents of the two groups with respect to the dimensions target offenders, potential target offenders, adjusted cases, and probated cases. These dimensions are used since there is concern that differences exist among the types of individuals within each contrasting dimension. To apply statistical measures to contrasts between the Impact Supervision and Control Groups, the various categories need to be distributed approximately in equal amounts. Exhibit 6-2 indicates that this is not the case. Approximately 39% of the Impact Supervision cases are adjusted versus 55% of the Control cases. The complementary figures are 61% of the Impact Supervision cases as probated and 45% for the Control Group. Since such differences occur, the statistical contrasts will be made on categories of each group as a whole.

Exhibit 5-5

Fulton County Juvenile Court Offense Breakdown^{1/}

For August, 1973 Through April, 1975

Month Offense	1973					1974												1975			
	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
Aggravated Assault	10	13	10	6	3	11	7	9	10	14	11	12	15	14	9	13	3	9	9	18	12
Aggravated Battery	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Burglary	38	36	25	44	42	35	50	59	47	55	45	47	39	57	47	40	47	50	56	54	50
Homicide	1	1	1	2	0	1	0	1	1	0	1	0	0	3	0	1	1	1	0	1	1
Rape	2	0	1	0	0	1	0	3	0	1	0	3	2	1	0	0	0	0	0	2	2
Robbery	2	8	12	9	5	17	16	8	11	1	3	8	6	15	2	5	4	7	8	7	10
TOTAL	53	60	50	61	50	55	73	80	69	71	60	70	62	90	58	59	55	67	73	84	75

^{1/} Offenses committed where offender resided in Impact Area

Exhibit 5-6

Fulton County Juvenile Court Offense
 Computations For August, 1973 Through April, 1975

Month	Offenses	Cumulative Total	Cumulative Average	Difference From Base ^{1/}
August, 1973	53	53	53.0	+ 7.6
September	60	113	56.5	+11.1
October	50	163	54.3	+ 8.9
November	61	224	56.0	+10.6
December	50	274	54.8	+ 9.4
January, 1974	55	329	54.8	+ 9.4
February	73	402	57.4	+12.0
March	80	482	60.2	+14.4
April	69	551	60.8	+15.4
May	71	622	61.8	+16.4
June	60	682	61.6	+16.2
July	70	752	62.3	+16.9
August	62	814	62.3	+16.9
September	90	904	64.2	+18.8
October	58	962	63.9	+18.5
November	59	1021	63.9	+18.2
December	55	1076	63.3	+17.9
January, 1975	67	1143	63.5	+18.1
February	73	1216	64.0	+18.6
March	84	1300	65.0	+19.6
April	75	1375	65.5	+20.1

^{1/} Base rate is an average of 45.4 crimes per month where the year 1972 is the base year.

Exhibit 6-1

Impact Supervision-Control Comparison
 Cumulative Number Receiving Treatment

	TO-ADJ	TO-PROB	TO	PTO-ADJ	PTO-PROB
Supervision	76	163	239	50	35
Control	63	85	148	49	6

	PTO	ADJ	PROB	TOTAL
Supervision	85	126	198	324
Control	55	112	91	203

Exhibit 6-2

Impact Supervision-Control Comparison

Percentage Breakdown

	TO-ADJ	TO-PROB	TO	PTO-ADJ	PTO-PROB
Supervision	23.46%	50.31%	73.77%	15.43%	10.80%
Control	31.04%	41.87%	72.91%	24.14%	2.95%

	PTO	ADJ	PROB
Supervision	26.23%	38.89%	61.11%
Control	27.09%	55.17%	44.83%

6.2 Discharge Rates. Discharges of Impact Supervision Group youths was previously shown in Exhibit 5-2. Exhibit 6-3 indicates discharges of Control Group members. Note that only 24 Control Group members have been discharged compared to 166 Impact Supervision Group members discharged. The rate of discharge for each Group is indicated in Exhibits 6-4 and 6-5. Examination of a particular set of entries in Exhibit 6-4 will aid in understanding the information provided. There have been 76 different Adjusted Target Offenders in this category. One of these was discharged, and then reentered the group. There have been 25 youths discharged. The discharge rate is 0.32 (25 ÷ 77). The discharge rates are vastly different. The rate is much higher for the Impact Supervision Group, approximately four times higher. Either an error in reporting has occurred or there is a difference in the length of treatment prior to discharge. This subject of treatment length is discussed in the following section.

6.3 Treatment Length. Exhibits 6-6 and 6-7 indicate the length of treatment prior to discharge. Because of the small numbers involved, the only category for which a comparison can be made is Probated Target Offenders. As shown in Exhibit 6-6. There were 88 Impact Supervision Group members discharged. Their sixteen counterparts in the Control Group had an average treatment length of 9.9 months. Thus, the Probated Target Offenders in the Control Group seem to have a treatment length which is about 16% higher than their Impact counterparts. However, this 16% difference is not sufficient to offset discharge rates which are so vastly different. The most likely situation is that discharges of Control Group members are under-reported.

Exhibit 6-3

Discharges of Control Cases

Category	Discharges	Post-Treatment Months	Post-Treatment Years
B-TO-CON-ADJ	2	12.0	1.00
B-TO-CON-PROB	9	53.5	4.46
B-PTO-CON-ADJ	1	14.5	1.21
B-PTO-CON-PROB	1	12.5	1.04
E-TO-CON-ADJ	0	0.0	0.0
E-TO-CON-PROB	2	8.0	0.67
E-PTO-CON-ADJ	0	0.0	0.0
E-PTO-CON-PROB	1	3.5	0.29
L-TO-CON-ADJ	0	0.0	0.0
L-TO-CON-PROB	5	59.5	4.96
L-PTO-CON-ADJ	3	43.5	3.62
L-PTO-CON-PROB	0	0.0	0.00
B-CON	13	92.5	7.71
E-CON	3	11.5	0.96
L-CON	8	103.0	8.58
TO-CON-ADJ	2	12.0	1.00
TO-CON-PROB	16	121.0	10.09
PTO-CON-ADJ	4	58.0	4.83
PTO-CON-PROB	2	16.0	1.33
ADJ-CON	6	70.0	5.83
PROB-CON	18	137.0	11.42
TO-CON	18	133.0	11.09
PTO-CON	6	74.0	6.16
CON	24	207.0	17.25

Exhibit 6-4

Discharge Rate Impact Supervision Cases

Category	Initial Entries	Second Entries	Total Entries	Discharges	Discharge Rate
B-TO-SUPV-ADJ	29	1	30	10	0.33
B-TO-SUPV-PROB	67	2	69	35	0.51
B-PTO-SUPV-ADJ	15	0	15	11	0.73
B-PTO-SUPV-PROB	8	0	8	7	0.88
E-TO-SUPV-ADJ	25	0	25	5	0.20
E-TO-SUPV-PROB	38	2	40	16	0.40
E-PTO-SUPV-ADJ	14	1	15	7	0.47
E-PTO-SUPV-PROB	17	1	18	3	0.17
L-TO-SUPV-ADJ	22	0	22	10	0.46
L-TO-SUPV-PROB	58	2	60	37	0.62
L-PTO-SUPV-ADJ	21	1	22	17	0.77
L-PTO-SUPV-PROB	10	1	11	9	0.82
B-SUPV	119	3	122	63	0.52
E-SUPV	94	4	98	31	0.32
L-SUPV	111	4	118	73	0.62
TO-SUPV-ADJ	76	1	77	25	0.32
TO-SUPV-PROB	163	6	169	88	0.52
PTO-SUPV-ADJ	50	2	52	35	0.67
PTO-SUPV-PROB	35	2	37	19	0.51
ADJ-SUPV	126	3	129	60	0.46
PROB-SUPV	198	8	206	107	0.52
TO-SUPV	239	7	246	113	0.46
PTO-SUPV	85	4	89	54	0.61
SUPV	324	11	335	167	0.50

Exhibit 6-5

Discharge Rates Control Cases

Category	Initial Entries	Second Entries	Total Entries	Discharges	Discharge Rate
B-TO-CON-ADJ	26	0	27	2	0.07
B-TO-CON-PROB	34	0	34	9	0.26
B-PTO-CON-ADJ	18	0	18	1	0.06
B-PTO-CON-PROB	3	0	3	1	0.33
E-TO-CON-ADJ	19	0	19	0	0.0
E-TO-CON-PROB	25	1	26	2	0.08
E-PTO-CON-ADJ	12	0	12	0	0.0
E-PTO-CON-PROB	3	0	3	1	0.33
L-TO-CON-ADJ	18	0	18	0	0.0
L-TO-CON-PROB	26	0	26	5	0.19
L-PTO-CON-ADJ	19	1	20	3	0.15
L-PTO-CON-PROB	0	0	0	0	
B-CON	81	0	81	13	0.16
E-CON	59	1	60	3	0.05
L-CON	63	1	64	8	0.12
TO-CON-ADJ	63	0	63	2	0.03
TO-CON-PROB	85	1	86	16	0.19
PTO-CON-ADJ	49	1	50	4	0.08
PTO-CON-PROB	6	0	6	2	0.33
ADJ-CON	112	1	113	6	0.05
PROB-CON	91	1	92	18	0.20
TO-CON	148	1	149	18	0.12
PTO-CON	55	1	56	6	0.11
CON	203	4	207	24	0.12

Length of Treatment Prior to Discharge

Impact Supervision Group

Category	Discharges	Cumulative Treatment Months ^{1/}	Average Length of Treatment (Months)
B-TO-SUPV-ADJ	10	78	7.8
B-TO-SUPV-PROB	35	297	8.5
B-PTO-SUPV-ADJ	11	94	8.5
B-PTO-SUPV-PROB	7	73	10.4
E-TO-SUPV-ADJ	5	29	5.8
E-TO-SUPV-PROB	16	158	9.9
E-PTO-SUPV-ADJ	7	72	10.3
E-PTO-SUPV-PROB	3	26	8.7
L-TO-SUPV-ADJ	10	53	5.3
L-TO-SUPV-PROB	37	289	7.8
L-PTO-SUPV-ADJ	17	110	6.5
L-PTO-SUPV-PROB	9	60	6.7
B-SUPV	63	542	8.6
E-SUPV	31	285	9.2
L-SUPV	73	512	7.0
TO-SUPV-ADJ	25	160	6.4
TO-SUPV-PROB	88	744	8.5
PTO-SUPV-ADJ	35	287	8.2
PTO-SUPV-PROB	19	159	8.4
ADJ-SUPV	60	447	7.5
PROB-SUPV	107	903	8.4
TO-SUPV	113	904	8.0
PTO-SUPV	54	446	8.3
SUPV	167	1350	8.1

^{1/} Discharged only

Exhibit 6-7

Length of Treatment Prior to Discharge

Control Group

Category	Discharges	Cumulative Treatment Months ^{1/}	Average Length of Treatment (Months)
B-TO-CON-ADJ	2	19	9.5
B-TO-CON-PROB	9	105	10.6
B-PTO-CON-ADJ	1	5	5.0
B-PTO-CON-PROB	1	8	8.0
E-TO-CON-ADJ	0	0	
E-TO-CON-PROB	2	10	5.0
E-PTO-CON-ADJ	0	0	
E-PTO-CON-PROB	1	14	14.0
L-TO-CON-ADJ	0	0	
L-TO-CON-PROB	5	53	10.6
L-PTO-CON-ADJ	3	8	2.7
L-PTO-CON-PROB	0	0	
B-CON	13	127	9.8
E-CON	3	24	8.0
L-CON	8	61	7.6
TO-CON-ADJ	2	19	9.5
TO-CON-PROB	16	158	9.9
PTO-CON-ADJ	4	13	3.2
PTO-CON-PROB	2	22	11.0
ADJ-CON	6	32	5.3
PROB-CON	18	180	10.0
TO-CON	18	177	9.8
PTO-CON	6	35	5.8
CON	24	212	8.8

^{1/} Discharged only

6.4 Goal Measurement. Since there are only 24 discharged Control Group members and there is some question about the reporting of discharged Control cases, it is not possible to perform an adequate statistical analysis of Type II recidivism.

There is adequate information to analyze Type I recidivism, that which occurs during treatment. Type I recidivism is investigated since it is deemed an important measure and since it is readily available. Exhibits 6-8 and 6-9 are the result of an extensive investigation of an accounting nature of the Impact Supervision and Control Group members. The term treatment years in the exhibits refers to the number of experience years that have been recorded for each of the categories. If there were three youths in a particular category who had been in the component for 7, 8, or 9 months respectively, the treatment months would be the sum, or 24 months, and the treatment years would be two ($24 \div 12$).

The number of recidivates shown in Exhibits 6-8 and 6-9 are those which have occurred only for youths receiving treatment and does not include those discharged or those offenses committed after a child return from YDC. It includes only cases closed as of April 30, 1975. Any bias caused by having open cases will be equally present for both the Impact Supervision and Control Groups and thus, discounted.

The annual rate of recidivism in Exhibit 6-10 is computed by dividing the recidivates by the treatment years for each category. The recidivism rates shown in Exhibit 6-10 are shown in Exhibit 6-11 to make the comparisons easier to view. The differences between some groups is quite small or zero, and some differences appear much larger. A negative difference means that for the particular category the Impact Supervision Group has a lower recidivism rate than does the Control Group. However, the application of

Exhibit 6-8

Treatment Years and Recidivates

Impact Supervision Group

Category	Center						All Centers	
	Bankhead		East Central		Leila Valley		Treatment Years	Recidivates
	Treatment Years	Recidivates	Treatment Years	Recidivates	Treatment Years	Recidivates		
TO-SUPV-ADJ	12.67	3	16.67	2	9.20	2	38.54	7
TO-SUPV-PROB	44.65	5	29.36	6	34.42	8	108.43	19
TO-SUPV	57.32	8	46.03	8	43.62	10	146.97	26
PTO-SUPV-ADJ	10.70	2	11.33	1	11.70	1	33.73	4
PTO-SUPV-PROB	6.67	1	11.03	5	5.21	1	22.91	7
PTO-SUPV	17.37	3	22.36	6	16.91	2	56.64	11
ADJ-SUPV	23.37	5	28.00	3	20.90	3	72.27	11
PROB-SUPV	52.40	6	39.31	11	39.95	9	131.34	26
SUPV	75.77	11	67.31	14	60.85	12	203.61	37

Exhibit 6-9

Treatment Years and Recidivates

Control Group

Category	Center						All Centers	
	Bankhead		East Central		Leila Valley		Treatment Years	Recidivates
	Treatment Years	Recidivates	Treatment Years	Recidivates	Treatment Years	Recidivates		
TO-CON-ADJ	20.16	2	9.75	0	12.29	0	42.20	2
TO-CON-PROB	20.03	2	14.50	5	20.28	4	54.81	11
TO-CON	40.19	4	24.25	5	32.57	4	97.01	13
PTO-CON-ADJ	22.91	0	15.37	3	22.03	4	60.31	7
PTO-CON-PROB	2.5	0	2.62	1	0.00	0	5.12	1
PTO-CON	25.41	0	17.99	4	22.03	4	65.43	8
ADJ-CON	43.07	2	25.12	3	34.32	4	102.51	9
PROB-CON	22.53	2	17.12	6	20.28	4	59.93	12
CON	65.60	4	42.24	9	54.60	8	162.44	4

Exhibit 6-10

Annual Recidivism Rates

Group	Treatment Years	Recidivates	Annual Rate
TO-SUPV-ADJ	38.54	7	0.182
TO-SUPV-PROB	108.43	19	0.175
TO-SUPV	146.97	26	0.177
PTO-SUPV-ADJ	33.73	4	0.119
PTO-SUPV-PROB	22.91	7	0.306
PTO-SUPV	56.64	11	0.194
ADJ-SUPV	72.27	11	0.152
PROB-SUPV	131.34	26	0.198
SUPV	203.61	37	0.182
TO-CON-ADJ	42.20	2	0.047
TO-CON-PROB	54.81	11	0.201
TO-CON	97.01	13	0.134
PTO-CON-ADJ	60.31	7	0.116
PTO-CON-PROB	5.12	1	0.195
PTO-CON	65.43	8	0.122
ADJ-CON	102.51	9	0.089
PROB-CON	59.93	12	0.200
CON	162.44	21	0.129

Exhibit 6-11

Impact Supervision-Control Comparison

Group	Comparison								
	TO-ADJ	TO-PROB	TO	PTO-ADJ	PTO-PROB	PTO	ADJ	PROB	ALL
Impact or Supervision	0.182	0.175	0.177	0.119	0.306	0.194	0.152	0.198	0.182
Control	0.047	0.201	0.134	0.116	0.195	0.122	0.089	0.200	0.129
Difference ^{1/}	+0.135	-0.026	+0.043	+0.003	+0.111	+0.072	+0.063	-0.002	0.053

^{1/} Difference = Impact Supervision-Control

of a statistical test is necessary to determine which differences shown in Exhibit 6-11 are significant.

The test will be based on the statistic:

$$z = \frac{d - e}{(F_1)(F_2)\left(\frac{1}{D} + \frac{1}{E}\right)}$$

$$F_1 = \frac{dD + eE}{D + E}$$

$$F_2 = 1 - F_1$$

where

d = Recidivism rate of the Impact Supervision Group

e = Recidivism rate of Control Group

D = Average number of the Impact Supervision Group

E = Average number of Control Group

In order to perform the test, the average number in each category must be computed. Exhibit 6-12 shows the results of this computation. Since 1.75 years have elapsed from the start of the Project, that number is used as the divisor to obtain the average number in treatment. All the data to perform the test is available. A computer program was prepared to perform the computations. The input data, z values, and significance are shown in Exhibit 6-13.

Exhibit 6-13 is interpreted as follows. The column labeled Comparison indicates the groups being compared. For example, "TO-PROB" means that the target offenders who were probated and members of the Impact Supervision Group are being compared to their counterparts in the Control Group. The last column labeled SIG (for significance) indicates that comparison meets the criterion of the test.

Exhibit 6-12

Average Number in Treatment

Group	Treatment Years	Average Number in Treatment ^{1/}
TO-SUPV-ADJ	38.54	22.02
TO-SUPV-PROB	108.43	61.96
TO-SUPV	146.97	83.98
PTO-SUPV-ADJ	33.73	19.27
PTO-SUPV-PROB	22.91	13.09
PTO-SUPV	56.64	32.37
ADJ-SUPV	72.27	41.30
PROB-SUPV	131.34	75.05
SUPV	203.61	116.35
TO-CON-ADJ	42.20	24.11
TO-CON-PROB	54.81	31.32
TO-CON	97.01	55.43
PTO-CON-ADJ	60.31	34.46
PTO-CON-PROB	5.12	2.93
PTO-CON	65.43	37.39
ADJ-CON	102.51	58.58
PROB-CON	59.93	34.25
CON	162.44	92.82

^{1/} Average number in treatment = treatment years/1.75

Exhibit 6-13

Results of Statistical Test

Comparison	d	D	e	E	Z	Sig ^{1/}
TO-ADJ	0.182	22.02	0.047	24.11	1.455	No
TO-PROB	0.175	61.96	0.201	31.32	-0.306	No
TO	0.177	83.98	0.134	55.43	0.678	No
PTO-ADJ	0.119	19.27	0.116	34.66	0.033	No
PTO-PROB	0.306	13.09	0.195	2.93	0.380	No
PTO	0.194	32.37	0.122	37.39	0.828	No
ADJ	0.152	41.30	0.089	58.58	0.972	No
PROB	0.198	75.05	0.200	34.25	-0.024	No
Group	0.182	116.35	0.129	92.82	1.043	No

^{1/} Sig = Significance, If Z is less than -1.96 or greater than 1.96, a significant difference occurs between the comparison groups.

The computation of the Z value for the TO-PROB test is shown below:

$$F_1 = \frac{(0.175)(61.96) + (0.201)(31.32)}{61.96 + 31.32} = 0.184$$

$$F_2 = 1 - F_1 = 0.816$$

$$z = \frac{0.175 - 0.201}{(0.184)(0.816) \left(\frac{1}{61.96} + \frac{1}{31.32} \right)} = \frac{-.026}{.085}$$

$$z = -0.306$$

The conclusion based on Exhibit 6-13 is that there is no significant difference in Type I recidivism between the Impact and the Control Group.

6.5 Measurement of Objective 1. An analysis of juvenile crime through May, 1974 indicated a high degree of correlation between crimes committed. This analysis further indicated that the number of target offenses (by residence of offender) is growing more rapidly in the Impact Area than in the non-Impact Area. Only in the category of robbery, which comprised 12% of total offenses did the Impact Area have a slower growth in crimes per month which further indicates that Objective 1 has not been achieved. The analysis procedure was of such methodological interest that the manuscript "Sinusoidal Pattern Analysis in Criminal Incidence" was prepared. The manuscript was submitted to Criminology: An Interdisciplinary Journal. Revision suggestions were made by the editor and the manuscript was resubmitted on May 14, 1975.

6.6 Measurement of Objective 2. Reference is made to Exhibit 6-14 which portrays the total intake of the Juvenile Court from August, 1973 through April 1975. During the base period, 1972, 72% of the target offenses were committed by residents of the Impact Area. Lower and upper

Exhibit 6-14

Fulton County Juvenile Court

Percentage of Offenses

August, 1972 through April, 1975

MONTH OFFENSE	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	TOTAL
Agg. Assault	12	12	12	8	4	11	8	12	12	15	12	12	15	21	9	13	3	9	12	19	13	
Agg. Battery	0	1	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	
Burglary	59	44	34	52	56	47	60	77	59	76	63	60	55	73	60	51	58	62	66	69	65	
Homicide	2	1	2	2	0	1	0	0	1	0	1	0	0	3	1	1	1	1	0	1	1	
Rape	2	0	2	0	0	1	0	3	0	1	1	3	2	1	0	0	0	0	0	2	2	
Robbery	2	12	17	11	8	9	18	8	16	2	8	15	12	16	4	6	4	10	9	7	9	
Total ^{1/}	77	70	68	73	68	69	86	100	88	95	85	90	84	115	74	71	66	82	87	100	90	1648
Impact Area ^{2/} Offenses	53	60	50	61	50	55	73	76	69	71	60	70	62	90	58	59	55	67	73	84	75	1375
Percentage	68.8%	85.7%	73.5%	83.6%	73.5%	79.7%	84.9%	76.0%	73.4%	74.7%	70.6%	77.8%	73.8%	78.1%	78.4%	83.3%	83.3%	81.7%	83.9%	84.0%	83.3%	83.4%

^{1/} Total intake of the Juvenile Court

^{2/} Offender resided in Impact Area

confidence limits on the percentage were developed as 68.9% and 75.1%, respectively. If the percentage is greater than 75.1%, there is a statistically significant increase in the proportion of crimes being committed by residents of the operational areas compared to 1972. Since the percentage is 83.4% ($\frac{1375}{1648} \times 100$), a significant increase is indicated. Observation of Exhibit 6-14 indicates a surprising stability in the monthly proportion of offenses committed by juveniles who reside in the Impact Area. For the last six months, the percentage has varied between 81.7% and 84.0%, a range of only 2.3%.

7.0 Input Analysis

Exhibit 7-1 shows the number of persons in the various categories used in this report who have ever received treatment, both for the Impact Supervision and Control groups. A total of 324 persons have been enrolled in the project under supervision of the Outreach staff. This is compared with a goal of 200 recipients. Thus, the project has met and exceeded its input goal. There have been thirteen instances where a youth has reentered either the Impact or Control Group. As a matter of record, these youths are identified in Exhibit 7-2.

8.0 Analysis of Time to Recidivate.

The time until a treatment youth recidivates for those who do recidivate has been analyzed. The analysis serves a number of purposes. It identifies all those cases of Type I recidivism that have occurred during the Project. The time until the complaint occurs is indicated for each recidivist and for various groupings of recidivists. Similarly, the dis-

Exhibit 7-1

Cumulative Number Receiving Treatment

Group	Bankhead	East Central	Leila Valley	All
TO-SUPV-ADJ	29	22	25	76
TO-SUPV-PROB	67	58	38	163
TO-SUPV	96	80	63	239
PTO-SUPV-ADJ	15	21	14	50
PTO-SUPV-PROB	8	12	15	35
PTO-SUPV	25	31	29	85
ADJ-SUPV	44	43	39	126
PROB-SUPV	77	68	53	198
SUPV	121	111	92	324
TO-CON-ADJ	26	18	19	63
TO-CON-PROB	34	26	25	85
TO-CON	60	44	44	148
PTO-CON-ADJ	18	19	12	49
PTO-CON-PROB	3	0	3	6
PTO-CON	21	19	15	55
ADJ-CON	44	37	31	112
PROB-CON	37	26	28	91
CON	81	63	59	203

Exhibit 7-2

Those Who Have Reentered Treatment

Current Identifier	Former Identifier	Category
60BI		B-TO-SUPV-ADJ
105BI	28LI	B-TO-SUPV-PROB
82BI		B-TO-SUPV-PROB
100EI	47LI	E-TO-SUPV-PROB
90EI	76LI	E-TO-SUPV-PROB
28EI		E-PTO-SUPV-ADJ
30EI		E-PTO-SUPV-PROB
538EC	18LC	E-TO-CON-PROB
43LI		L-TO-SUPV-PROB
13LI		L-TO-SUPV-PROB
61LI		L-PTO-SUPV-ADJ
5LC		L-PTO-SUPV-PROB
4LC		L-PTO-CON-ADJ

position time is determined. This section contains an analysis and interpretation of time to recidivate Section 9.0 is an analysis and interpretation of disposition time.

Exhibits 8-1 through 8-8 contain basic information necessary to analyze time to recidivate and disposition time. In each instance, the mid-point of the month of entry is used as the entry date. Complaint dates are indicated. However, these complaints only pertain to cases where an unfavorable disposition occurred.

A summary of Exhibits 8-1 through 8-8 is shown in Exhibit 8-9. The development of the t test to determine if there is a significant difference in time to recidivate is recorded in Exhibit 8-10. The test statistic is:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s_{\bar{x}_1 - \bar{x}_2}}$$

$$s_{\bar{x}_1 - \bar{x}_2}^2 = \frac{s^2}{n_1} + \frac{s^2}{n_2}$$

$$s^2 = \frac{(\sum x_1^2 + \sum x_2^2)}{n_1 + n_2 - 2}$$

where

\bar{x}_1 and \bar{x}_2 are the average time to recidivate for the two groups

n_1 and n_2 are the number of recidivists in the two groups

s^2 is the sample variance, and

$s_{\bar{x}_1 - \bar{x}_2}^2$ is the variance of the means.

Exhibit 8-1

Recidivism in Months Since Placed in Group

Impact Supervision Cases

Adjusted Target Offenders

Number	Identifier	Entry Date ^{1/}	Complaint Date ^{2/}	Time to Recidivate (Months)	Disposition Date	Disposition Time (Months)	Offense
1	80BI	10/15/73	9/23/74	9.3	10/11/74	0.6	Burglary
2	107BI	1/15/75	2/1/75	0.5	2/26/75	0.8	Burglary
3	111BI	1/15/75	2/18/75	1.1	3/19/75	1.0	Burglary
4	19EI	10/15/73	9/24/74	9.3	12/2/74	2.3	Burglary
5	78EI	9/15/74	3/3/75	5.6	3/12/75	0.3	Burglary
6	54LI	2/15/74	6/26/74	4.4	9/16/74	2.7	Robbery
7	93LI	9/15/74	11/18/74	2.1	2/27/75	3.3	Burglary

^{1/} The mid-point of the month of entry is used

^{2/} Only complaints resulting in an unfavorable disposition are listed.

Exhibit 8-2

Recidivism in Months Since Placed in Group

Impact Supervision Cases

Probated Target Offenders

Number	Identifier	Entry Date ^{1/}	Complaint Date ^{2/}	Time to Recidivate (Months)	Disposition Date	Disposition Time (Months)	Offense
1	24BI	10/15/73	2/26/74	4.3	4/9/74	1.4	Burglary
2	50BI	1/15/74	12/19/74	11.1	1/8/75	0.7	Robbery
3	62BI	3/15/74	6/23/74	3.3	7/9/74	0.5	Murder
4	82BI	6/15/74	9/1/74	2.5	11/14/74	2.5	Robbery
5	82BI	6/15/74	9/1/74	<u>3/</u>	11/14/74	<u>3/</u>	Aggravated Assault
6	2EI	8/15/73	6/6/74	9.7	6/17/74	0.3	Burglary
7	6EI	8/15/73	9/26/74	12.3	10/14/74	0.6	Armed Robbery
8	6EI	8/15/73	9/26/74	<u>3/</u>	9/26/74	<u>3/</u>	Armed Robbery
9	18EI	10/15/73	3/6/74	4.7	5/10/74	2.1	Burglary
10	40EI	2/15/74	8/6/74	5.7	10/22/74	2.5	Burglary
11	86EI	11/15/74	2/21/75	3.2	3/5/75	0.5	Burglary
12	24LI	10/15/73	4/29/74	6.5	9/24/74	4.8	Burglary
13	38LI	12/15/73	2/11/74	1.9	3/9/74	0.9	Burglary
14	43LI	12/15/73	7/8/74	6.8	7/23/74	0.5	Burglary
15	44LI	12/15/73	7/8/74	6.8	7/23/74	0.5	Burglary
16	45LI	1/15/74	4/9/74	2.8	5/11/74	1.1	Burglary
17	73LI	10/15/73	9/15/74	11.0	2/11/75	4.9	Burglary
18	80LI	6/15/74	7/11/74	0.9	8/13/74	1.1	Burglary
19	87LI	8/15/74	10/8/74	1.8	10/24/74	0.5	Burglary

^{1/} The mid-point of the month of entry is used

^{2/} Only complaints resulting in an unfavorable disposition are listed.

^{3/} Several offenses associated with above case

Exhibit 8-3

Recidivism in Months Since Placed in Group

Impact Supervision Cases

Adjusted Potential Target Offenders

Number	Identifier	Entry Date ^{1/}	Complaint Date ^{2/}	Time to Recidivate (Months)	Disposition Date	Disposition Time (Months)	Offense
1	40BI	11/15/73	5/16/74	6.0	5/22/74	0.2	Armed Robbery
2	40BI	11/15/73	5/16/74	<u>3/</u>	5/22/74	<u>3/</u>	Aggravated Assault
3	27EI	10/15/73	4/17/75	18.0	4/23/75	0.2	Burglary
4	61LI	3/15/74	4/11/74	0.9	5/3/74	0.7	Burglary

^{1/} The mid-point of the month of entry is used

^{2/} Only complaints resulting in an unfavorable disposition are listed.

^{3/} Several offenses associated with above case.

Exhibit 8-4

Recidivism in Months Since Placed in Group

Impact Supervision Cases

Probated Potential Target Offenders

Number	Identifier	Entry Date ^{1/}	Complaint Date ^{2/}	Time to Recidivate (Months)	Disposition Date	Disposition Time (Months)	Offense
1	13BI	9/15/73	1/14/74	4.0	4/5/74	2.7	Burglary
2	13EI	10/15/73	8/8/74	9.8	8/23/74	0.5	Burglary
3	14EI	10/15/73	8/1/74	9.5	8/15/74	0.5	Rape
4	16EI	10/15/73	2/3/75	15.6	3/31/75	1.9	Armed Robbery
5	30EI	11/15/73	3/3/74	3.6	3/6/74	0.1	Burglary
6	73EI	9/15/74	10/3/74	12.6	12/3/74	2.0	Burglary
7	64LI	4/15/74	4/15/74	1.0	5/31/74	0.5	Aggravated Assault

^{1/} The mid-point of the month of entry is used

^{2/} Only complaints resulting in an unfavorable disposition are listed.

Exhibit 8-5

Recidivism in Months Since Placed in Group

Control Group

Adjusted Target Offenders

Number	Identifier	Entry Date ^{1/}	Complaint Date ^{2/}	Time to Recidivate (Months)	Disposition Date	Disposition Time (Months)	Offense
1	527BC	12/15/74	1/16/75	1.0	2/3/75	0.6	Burglary
2	532BC	1/15/75	2/20/75	1.2	2/27/75	0.2	Burglary

^{1/} The mid-point of the month of entry is used

^{2/} Only complaints resulting in an unfavorable disposition are listed.

Exhibit 8-6

Recidivism in Months Since Placed in Group

Control Group

Probated Target Offenders

Number	Identifier	Entry Date ^{1/}	Complaint Date ^{2/}	Time to Recidivate (Months)	Disposition Date	Disposition Time (Months)	Offense
1	512BC	6/15/74	9/8/74	2.8	12/10/74	3.1	Burglary
2	512BC	6/15/74	12/13/74	5.9	12/23/74	0.3	Murder
3	4EC	8/15/73	11/15/74	<u>3/</u>	1/4/74	<u>3/</u>	Aggravated Assault
4	6EC	8/15/73	9/5/74	0.7	9/20/74	0.5	Robbery
5	6EC	8/15/73	9/5/74	<u>3/</u>	9/20/74	<u>3/</u>	Aggravated Assault
6	538EC	8/15/73	12/14/74	16.0	3/18/75	3.1	Burglary
7	2LC	8/15/73	2/8/74	5.8	4/23/74	2.5	Burglary
8	2LC	8/15/73	9/18/74	13.1	10/15/74	0.9	Burglary
9	11LC	9/15/73	12/13/73	2.9	1/29/74	1.5	Burglary
10	11LC	9/15/73	2/24/74	5.3	3/11/74	0.6	Burglary
11	13LC	8/15/73	2/27/74	6.4	5/13/74	2.6	Burglary

^{1/} The mid-point of the month of entry is used -

^{2/} Only complaints resulting in an unfavorable disposition are listed.

^{3/} Several offenses associated with above case.

Exhibit 8-7

Recidivism in Months Since Placed in Group

Control Group

Adjusted Potential Target Offenders

Number	Identifier	Entry Date ^{1/}	Complaint Date ^{2/}	Time to Recidivate (Months)	Disposition Date	Disposition Time (Months)	Offense
1	4LC	11/15/73	1/21/75	<u>3/</u>	4/17/75	<u>3/</u>	Burglary
2	26LC	10/15/73	2/7/75	15.7	2/25/75	0.6	Burglary
3	34LC	3/15/73	10/23/74	19.3	12/20/74	1.9	Robbery
4	10EC	10/15/73	4/6/75	17.7	4/15/75	0.3	Burglary
5	12EC	11/15/73	11/30/73	0.5	12/31/73	1.0	Burglary
6	12EC	11/15/73	5/5/74	5.7	5/15/74	0.3	Burglary
7	502EC	3/15/74	6/23/74	3.3	11/1/74	4.3	Burglary

^{1/} The mid-point of the month of entry is used

^{2/} Only complaints resulting in an unfavorable disposition are listed

^{3/} Several offenses associated with above case

Exhibit 8-8

Recidivism in Months Since Placed in Group

Control Group

Probated Potential Target Offenders

Number	Identifier	Entry Date ^{1/}	Complaint Date ^{2/}	Time to Recidivate (Months)	Disposition Date	Disposition Time (Months)	Offense
1	49EC	11/15/73	1/28/74	2.5	3/12/74	1.5	Burglary

^{1/} The mid-point of the month of entry is used

^{2/} Only complaints resulting in an unfavorable disposition are listed

Exhibit 8-9

Time to Recidivate

Comparison	Impact Supervision Recidivates	Average Time (Months)	Control Recidivates	Average Time (Months)
TO-ADJ	7	4.61	2	1.10
TO-PROB	17	5.61	9	6.54
PTO-ADJ	3	8.30	6	10.37
PTO-PROB	7	8.01	1	2.50
ALL	34	6.14	18	7.00

Exhibit 8-10

t Test For Time to Recidivate

Comparison	Impact Supervision Recidivates	(Average Time) ² Months	Control Recidivates	(Average Time) ² Months
TO-ADJ	7	229.6	2	2.4
TO-PROB	17	740.3	9	581.8
PTO-ADJ	3	360.8	6	975.9
PTO-PROB	7	618.4	1	6.2
ALL	34	979.2	18	1566.3

Comparison	Sum of Squares	Degrees of Freedom	Sample Variance	Variance of Means	Difference In Means	t Value
TO-ADJ	232.0	7	33.1	4.6	3.51	0.76
TO-PROB	1322.1	24	55.1	9.4	-0.93	-0.10
PTO-ADJ	1336.7	7	191.0	95.5	-2.07	-0.02
PTO-PROB	624.2	6			5.51	0
ALL	2515.0	50	70.3	5.98	-0.86	-0.35

Comparison	Test Value ^{1/}	Significant Difference
TO-ADJ	±2.365	No
TO-PROB	±2.064	No
PTO-ADJ	±2.365	No
PTO-PROB	±2.447	No
ALL	±2.01	No

^{1/} α = 0.05

As indicated in Exhibit 8-10, there is no significant difference at the 0.05 level. Finding no significant difference in the first four comparisons, the Impact Supervision Group was compared to the Control Group. The resulting t value was -0.35. The test value was ± 2.01 which indicates very little difference in the time to recidivate for all cases. Thus, all cases can be lumped into one large group for the analysis. This grouping is shown in Exhibit 8-11. The time to recidivate is shown in both three and six month intervals. The proportion in each interval is also shown. The resulting distribution appeared to be Poisson. A χ^2 goodness of fit test was tried. The Poisson function, with $\lambda = 0.6$ is given by

$$f(x) = \frac{\lambda^x e^{-\lambda}}{x!}$$

where x is the 6 month interval.

The development of the χ^2 test shown in Exhibit 8-12. The χ^2 test statistic is given by

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

where O_i is the observed frequency.

E_i is the expected frequency.

The computed χ^2 value was 5.13. The test value was approximately 36 which indicates a very good fit. This analysis indicates that the average time to recidivate, given that the child recidivates, for a youth placed in the Impact or Control Group, is 3.6 months (6×0.6). The variance is also 3.6 months. Of those that recidivate, about 61% will do so in the first six months of treatment. Similarly, about 91% will recidivate in the first year of treatment. Only 9% of the reci-

Exhibit 8-11
 Frequency Distribution of Time
 To Recidivate For All Cases

Time to Recidivate (Months)	Frequency (3 month intervals)	Frequency (6 month intervals)	Proportion
0.00-2.99	17		
3.00-5.99	14	31	.60
6.00-8.99	5		
9.00-11.99	7	12	0.23
12.00-14.99	3		
15.00-17.99	4	7	0.13
18.00-20.99	2		
> 20.99	0	2	0.04

Exhibit 8-12

Time to Recidivate Goodness

Of Fit Test For $P(\lambda = 0.6)$

Time to Recidivate	Observed Frequency, O_i (6 months intervals)	Poisson Function Value, $\lambda = 0.6$
0.00-5.99	31	0.607
5.99-11.99	12	0.303
12.00-17.99	7	0.075
≥ 18.00	2	0.015

Time to Recidivate	Expected Frequency, E_i (6 month interval)	$(O_i - E_i)^2$	$\frac{(O_i - E_i)^2}{E_i}$
0.00-5.99	31.6	0.4	0.01
5.99-11.99	15.8	14.4	0.91
12.00-17.99	3.9	9.6	2.46
≥ 18.00	0.8	1.4	1.75
			$\chi^2 = 5.13$

$\chi_{.05}^2 = 36$

divism will occur after one year. This information can be used to help determine the discharge policy in general. Specific instances prevail, however. If a child is not ready to be discharged, the statistics discussed here should be ignored.

9.0 Disposition Time

Individual disposition time values were shown in Exhibits 8-1 through 8-8. Exhibit 9-1 displays the mean disposition times for several important groupings. The development of the t test for the comparison is shown in Exhibit 9-2. Mainly, due to lack of sufficient sample sizes, no significant differences are found in the major groupings. The test comparing Impact Supervision to the Control Group had a very low t value of -0.17 indicating no significant difference. The mean disposition time for all cases was about 1.4 months.

10.0 Crime Switch

The purpose of this section is to indicate initial and recidivist offenses committed by members of the Impact Supervision Group and the Control Group. Exhibit 10-1 indicates the type of offense committed by Impact Supervision Group members. Exhibit 10-2 is the same for Control Group members.

To obtain some notion of the switch from one crime to another, Exhibit 10-3 has been prepared. This Exhibit includes both Impact and Control cases, it includes all categories of offenses. The target offenders and potential target offenders can be distinguished by observing the original offense. If originally, a non-target offense was committed, the youth was classified as a potential target offender. Otherwise, the youth is

Exhibit 9-1
Disposition Time

Comparison	Impact Supervision Recidivates	Average Time (Months)	Control Recidivates	Average Time (Months)
TO-ADJ	7	1.57	2	0.40
TO-PROB	17	1.49	9	1.68
PIO-ADJ	3	0.37	6	1.40
PIO-PROB	7	1.17	1	1.50
ALL	34	1.34	18	1.43

Exhibit 9-2

t Test For Disposition Time

Comparison	Impact Supervision Recidivates	(Average Time) ² Months	Control Recidivates	(Average Time) ² Months
TO-ADJ	7	25.6	2	0.4
TO-PROB	17	71.3	9	36.0
PTO-ADJ	3	0.6	6	23.6
PTO-PROB	7	15.7	1	2.2
ALL	34	113.2	18	62.2

Comparison	Sum of Squares	Degrees of Freedom	Sample Variance	Variance of Means
TO-ADJ	26.0	7	3.7	2.4
TO-PROB	107.3	24	4.5	0.8
PTO-ADJ	24.2	7	5.4	2.7
PTO-PROB		6		
ALL	175.4	50	3.5	0.29

Comparison	Difference ^{1/} In Means	t Value	Test Value	Significant Difference
TO-ADJ	1.17	0.49	±2.365	No
TO-PROB	-0.19	-0.24	±2.064	No
PTO-ADJ	-1.03	-0.38	±2.365	No
PTO-PROB	-0.33	0	±2.447	No
ALL	-0.09	-0.17	±2.01	No

^{1/} Supervision-Control

Exhibit 10-1

Type of Offense Committed by Recidivists

Impact Supervision Group

Identifier	Category	Original Offense	Offense committed while in Group
80BI	TO-ADJ	Burglary	Burglary
107BI	TO-ADJ	Burglary	Burglary
111BI	TO-ADJ	Burglary	Burglary
19EI	TO-ADJ	Aggravated Assault	Burglary
78EI	TO-ADJ	Burglary	Burglary
54LI	TO-ADJ	Burglary	Robbery
93LI	TO-ADJ	Burglary	Burglary
24BI	TO-PROB	Burglary	Burglary
50BI	TO-PROB	Aggravated Assault	Robbery
62BI	TO-PROB	Burglary	Homicide
82BI	TO-PROB	Burglary	Robbery
82BI	TO-PROB	Burglary	Aggravated Assault
2EI	TO-PROB	Burglary	Burglary
6EI	TO-PROB	Burglary	Robbery
6EI	TO-PROB	Burglary	Robbery
18EI	TO-PROB	Aggravated Assault	Burglary
40EI	TO-PROB	Burglary	Burglary
86EI	TO-PROB	Burglary	Burglary
24LI	TO-PROB	Burglary	Burglary
38LI	TO-PROB	Burglary	Burglary

Impact Supervision Group (Concluded)

Identifier	Category	Original Offense	Offense Committed While in Group
43LI	TO-PROB	Burglary	Burglary
44LI	TO-PROB	Burglary	Burglary
45LI	TO-PROB	Burglary	Burglary
73LI	TO-PROB	Burglary	Burglary
80LI	TO-PROB	Burglary	Burglary
87LI	TO-PROB	Burglary	Burglary
40BI	PTO-ADJ	Theft from Auto	Robbery
40BI	PTO-ADJ	Theft from Auto	Aggravated Assault
27EI	PTO-ADJ	Theft by Taking	Burglary
61LI	PTO-ADJ	Criminal Trespass	Burglary
13BI	PTO-PROB	Theft by taking	Burglary
13EI	PTO-PROB	Auto theft	Burglary
14EI	PTO-PROB	Theft by taking	Rape
16EI	PTO-PROB	Theft by receiving	Robbery
30EI	PTO-PROB	Criminal trespass	Burglary
73EI	PTO-PROB	Auto theft	Burglary
64EI	PTO-PROB	Criminal trespass	Aggravated Assault

Exhibit 10-2

Type of Offense Committed By Recidivists

Control Group

Identifier	Category	Original Offense	Offense Committed while in Group
527BC	TO-ADJ	Burglary	Burglary
532BC	TO-ADJ	Burglary	Burglary
512BC	TO-PROB	Robbery	Burglary
512Bc	TO-PROB	Robbery	Homicide
4EC	TO-PROB	Burglary	Aggravated Assault
6EC	TO-PROB	Burglary	Robbery
6EC	TO-PROB	Burglary	Aggravated Assault
538EC	TO-PROB	Burglary	Burglary
2LC	TO-PROB	Aggravated Assault	Burglary
2LC	TO-PROB	Aggravated Assault	Burglary
11LC	TO-PROB	Burglary	Burglary
11LC	TO-PROB	Burglary	Burglary
13LC	TO-PROB	Burglary	Burglary
4LC	PTO-ADJ	Theft by taking	Burglary
26LC	PTO-ADJ	Theft by taking	Burglary
34LC	PTO-ADJ	Theft by taking	Robbery
10EC	PTO-ADJ	Theft by taking	Burglary
12EC	PTO-ADJ	Theft by taking	Burglary
12EC	PTO-ADJ	Theft by taking	Burglary
502EC	PTO-ADJ	Criminal trespass	Burglary
49EC	PTO-PROB	Simple battery	Burglary

Exhibit 10-3

Crime Switch

Second Offense

Original Offense	Aggravated Assault	Aggravated Assault	Burglary	Homicide	Rape	Robbery	Total
Aggravated Assault	0	0	4	0	0	1	5
Aggravated Battery	0	0	0	0	0	0	0
Burglary	3	0	23	1	0	5	32
Homicide	0	0	0	0	0	0	0
Rape	0	0	0	0	0	0	0
Robbery	0	0	1	1	0	0	2
Non-target Offense	2	0	13	0	1	3	19
Total	5	0	41	2	1	9	58

classified a target offender.

Exhibit 10-3 indicates that of 32 original burglary offenses, 23 or 72% recidivated by committing another burglary. Five, or 16%, switched from burglary to robbery. The potential target offenders also recidivated with a burglary charge. Thirteen, or 68%, of the nineteen were adjudicated on a burglary charge. This is about the same proportion as the 72% compiled by the target offenders ($28 \div 39 \times 100$). Generally, 71% ($41 \div 58 \times 100$) recidivated on a burglary charge.

From Exhibit 5-5, it can be determined that 963 of the offenses committed by residents of the Impact Area were burglaries during the 21 months of the Project. From Exhibit 6-14, it can be observed that there were 1375 total offenses during the study period. Thus, 70% ($963 \div 1375 \times 100$) of all offenses were burglaries. This corresponds with the percentages mentioned in the previous paragraph.

11.0 Conclusion

Project Outreach has served implications for Criminal Justice Systems planning. Those youths who reach the point of being discharged from probation have a very low rate of recidivism. Recidivism occurs during treatment. This is not to say that the treatment causes the youths to recidivate. Rather, there is a period of time, during which if they are going to recidivate, the greatest likelihood exists. Over 90% of those that recidivate do so within the first year of treatment. What determines whether a child will recidivate during these 12 months is unknown. This evaluation has investigated outcomes and outputs rather than processes.

Project Outreach was neither better, nor worse, than its Control Group. With caution, it may be stated that decreased caseloads and geographical decentralization of treatment are not variables which affect recidivism. The caution is indicated because of other variables which may have seriously affected the process by which Project Outreach performed its day to day activities.

These variables include personnel selection, administrative difficulties, and organizational placement. These variables were discussed in great detail in the Interim Evaluation Report for the period August, 1973 through November, 1974. Transferability of the findings of this evaluation to other settings is complicated because of the effect of these three variables on the probation/treatment process.

12.0 Cost Analysis

This section provides a cost analysis of the Outreach Project with costs allocated to each of the three major juvenile centers (Wheat Street, Bankhead Courts and Leila Valley) from categories of salaries, equipment, terminal rent, supplies, travel and other. The basic cost data was obtained from the juvenile court fiscal records through the CAT personnel. Once costs are allocated to each center, a display of costs per juvenile month and costs per juvenile discharged is provided.

The period chosen for the cost analysis is that which began in August, 1973 and completed at the end of September, 1974. Program implementation began in August, 1973 and the caseloads increased through a transition period and levelled off in January, 1974 as shown in Exhibit 12-1. Hence, Phase I of the Project for which total expenditure data was available is composed of both planning, i.e. project planning and operations, i.e. involvement with juveniles, activities from June, 1973 through December,

Exhibit 12-1

Caseload by Month

<u>Month, Year</u>	<u>Caseload</u>
August, 1973	16
September, 1973	42
October, 1973	84
November, 1973	93
December, 1973	118
January, 1974	125
February, 1974	139
March, 1974	136
April, 1974	143
May, 1974	133
June, 1974	137

1973. Phase II, assumed to concentrate on operations activities, and for which cost data was available, begins in January, 1974 and continues through September, 1974. The allocation of costs, in the standard categories, for the two activities of Phase I and the equipment category of Phase II are displayed in Exhibit 12-2. It should be noted that 91% of the Phase II costs are devoted to personnel salaries. If the costs of Phase I Planning are spread over the entire duration of the project (6/1/73 - 10/30/75), the total amount of that cost allocated to Phase II is $9/30 \times \$48,356.58$ or $\$14,506.97$ ($\$1,611.89$ per month), hence raising the Phase II cost total to $\$420,988.47$.

These costs of Phase II were incurred in the supervision of juveniles, with these juveniles associated with a Center for a period of time. The actual juvenile - months serviced by each Center in each of the juvenile categories during Phase II is shown in Exhibit 12-3. In addition, data on departures from supervision, both discharges and other departures are displayed in Exhibit 12-3.

Finally, Exhibit 12-4 shows the allocation of costs to each Center, and in turn, the costs per juvenile month and the costs per discharged juvenile. Since the project activities are labor intensive as mentioned earlier, the allocation of the total Phase II costs to each Center and the combined Court-Administrative Center is done on the basis of data on personnel assigned to each Center and their respective salaries. In so doing, it should be recognized that equipment, supplies, travel and other categories of expenditure are pro-rated in accord with personnel salary data. The allocation of the Court and Administrative costs to each of the Centers on an equal basis was determined after discussion

Exhibit 12-2

Allocation of Costs

Costs	Phase I 6/73 - 12/73			Phase II	
	Operations ^{1/}	Planning ^{2/}	Total	1/74 - 9/74	Total
Salaries	\$128,107.89	\$40,981.39	\$169,089.28	\$368,084.63	\$537,173.91
Equipment	740.36	677.81	1,418.1 ^{3/}	2,127.26 ^{3/}	3,545.44 ^{3/}
Terminal Rent	-	-	-	7,763.19	7,763.19
Supplies	937.97	1,757.04	2,695.01	1,147.47	3,842.48
Travel	1,185.46	2,220.64	3,406.10	16,022.65	19,428.75
Other	1,451.87	2,719.70	4,171.57	11,336.30	15,507.87
	\$132,423.55	\$48,356.58	\$180,780.14	\$406,481.50	\$587,261.64

^{1/} Determined by the monthly cost per average monthly caseload of Phase II.

For example,

$$\left(\frac{6 \text{ months} \times 71 \text{ avg. caseload per month Phase I}}{9 \text{ months} \times 136 \text{ avg. caseload per month Phase II}} \right) \times (\text{Salaries Phase II}) =$$

Salaries Phase I Operations

^{2/} Determined by the difference between the known total for Phase I and that allocated to operations, for example

$$\text{Travel cost Planning} = \text{Total Travel Cost} - \text{Travel cost Operations}$$

^{3/} Equipment costs for the 15 month period total \$14,181.75 (Phase I = \$8,271.20, Phase II = \$5,910.55). These are allocated over 60 months on a straight line basis of \$236.36 per month.

Exhibit 12-3

Phase II Supervision of Juveniles by Center

Juvenile categories under Supervision in Phase II	Bankhead Courts Center				Wheat Street Center				Leila Valley Center			
	Juvenile Months	% of Total	Discharged From Supervision	Other Departures	Juvenile Months	% of Total	Discharged From Supervision	Other Departures	Juvenile Months	% of Total	Discharged From Supervision	Other Departures
Target Off.- Adjusted	59	10.8	1	-	72	17.9	1	-	43	10.2	-	1
Target Off. - Probated	350	64.1	20	4	183	45.4	6	2	254	60.5	14	6
Potential Target Off. - Adjusted	85	15.6	8	1	90	22.3	5	2	81	19.3	7	-
Potential Target Off. - Probated	52	9.5	4	1	58	14.4	1	2	42	10.0	9	1
	546		33	6	403		13	6	420		30	8

Phase II Cost Allocation
(1/74 - 9/74)

	Total	Court & Administrative	Wheat Street Center With 33% Court & Ad.	Bankhead Courts Center With 33% Court & Ad.	Leila Valley Center With 33% Court & Ad.			
Percentage of Total Costs	100	0.183 ^{1/}	0.285 ^{1/}	0.346	0.265 ^{1/}	0.316	0.277 ^{1/}	0.338
Total Costs	\$420,988.47	\$77,040.89	\$119,981.71	\$145,662.01	\$107,352.06	\$133,032.36	\$116,613.81	\$142,294.10
Total juvenile months during Phase II ^{2/}	1369		403		546		420	
Cost per juvenile-month	\$ 307.52		\$ 361.44		\$ 243.65		\$ 338.80	
Avg. no. of months counsel. per person during Phase II	5.41		5.45		5.87		4.88	
No. of juveniles discharged from supervision ^{2/}	79		13		33		30	
Average cost per month	\$ 46,776.50		\$ 16,184.67		\$ 14,781.37		\$ 15,810.46	
Average cost per discharged juvenile ^{3/}	\$ 4,051.20		\$ 8,714.82		\$ 2,911.48		\$ 3,689.11	

^{1/} Percentage of total costs allocated on the basis of actual salaries devoted to each of the three centers and the administration - court activity.

^{2/} From data for period of Phase II collected for evaluation report. See Exhibit 12-3.

^{3/} Since not all juveniles would be eligible for discharge during Phase II, but for whom costs were incurred, the costs incurred only for graduates must be estimated. For both Wheat Street and Leila Valley (since duration of counseling is approximately 5 months during Phase II) only 1/5 of juveniles in 9/74 would be eligible for discharge, 2/5 in 8/74, 3/5 in 7/74, 4/5 in 6/74. Thus, 2 months of cost were spent on juveniles not yet eligible and these costs must be excluded. Similarly for Bankhead Courts where the average duration is approximately 6 months during Phase II. The fractions eligible for discharge are 1/6, 1/3, 1/2, 2/3 and 5/6 for 9/74, 8/74, 7/74, 6/74 and 5/74 respectively, giving 2 1/2 months of costs to be excluded.

with project staff.

There does appear to be marked differences between the Centers based on the data of Exhibit 12-4. In both the cost per juvenile-month and the cost per discharged juvenile, the Bankhead Courts Center is the "least-cost" Supervision Center while the Wheat Street Center appears to have the highest costs. Even consideration of the discharge rate of the Wheat Street Center as the average of the other two centers does not reduce the cost per discharged juvenile far enough. These differences may arise from the different distributions of juveniles in juvenile categories supervised by each center, if the costs of supervision in each category vary significantly. Further investigation into this detail may be warranted in an attempt to examine this possible explanation of the differential between Centers. If such examination is not fruitful, other explanations should be sought in order to fully understand the cost impact of the program.

END

7 ables / 11/12/11