STATISTICAL ANALYSIS OF RECIDIVISM DATA

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I

INTRODUCTION

Statistical comparison of the recidivist behavior of different groups of releasees is a recurrent problem in comparative evaluations of the relative effectiveness of various rehabilitation programs. For purposes of such comparisons, recidivism is usually defined in terms of the number of releasees from a particular program who are returned because of a new violation. Because recidivism literally means "tendency to lapse into a previous behavior mode," the point of return (arrest, conviction, incarceration) is often determined by who is doing the study (Police, Courts, or Corrections). The argument as to whether arrests or convictions or incarcerations are the best measures of recidivism was not taken to be an issue with which this study was concerned. Actually, neither of the three, in isolation, can be taken as the true measure. This is true because, while we know that there may be people arrested each year who are not guilty, there are others who are released or not processed on a current violation because of court overloads and the often-available alternative of returning the individual to custody by rescinding parole.

This study analyzes in-program failures (arrests, escapes, and administrative removals) and post-program arrests and parole violations. These data were not chosen for analysis because of any belief that convictions and incarcerations are not equally or more important measures. Rather, since this study was done to support a separate contractual effort to evaluate the department's halfway houses, the choice of the data to analyze was made by Informatics, Inc., the primary contractor. Arrests, escapes, administrative removals, and parole violations are, nonetheless, valid indicators of recidivism even though they do not supply the total picture.

From a statistical standpoint one can argue that the effects of biases in the data, due to factors such as overzealous police activity, on comparison of different release programs are to be minimal unless there were a definite attempt on the part of Police, for example, to discredit or monitor halfway houses. If such bias is suspected it probably could only be established by a separate statistical study. Although not specifically stated, the Informatics study and the supporting analysis of data in this report tacitly assume that such bias does not exist.

From a statistical standpoint, then, whatever the point of return (or non-return in the case of escapes and failures to appear for trial) the basic problem is one of determining: (1) if a difference exists in the propensity of releasees from different programs to return (or not return) and (2) to what extent is the difference attributable to program variables as distinguished from people or client variables created by the selection procedures. This study has addressed the first of these two basic issues in the context of the District of Columbia.

The commonly accepted procedure in correctional literature is to compare the proportions of those released who return within some fixed time interval. The problem of equating cohorts (groups released from particular programs) with respect to total potential exposure time (within which a failure can occur) is either not addressed, or, when addressed, is handled in a manner that requires ignoring approximately half of the available data. For example, if on January 1, 1974, we begin collecting data on people released during 1972, the first releasee will have had a potential exposure time of close to two years whereas the last releasee would have had only one year in which to fail or succeed. However, since the release patterns of the two programs being compared will never be the same, the total potential exposure time will vary between the two programs. The traditional way of handling this problem is to limit the follow-up to the minimum exposure time -- in the case cited, one year. In addition to losing valuable data (e.g., the second year for the first release), this method compounds the effects of socio-economic conditions that may vary in time. This compounding occurs because the performance of the last releasee is traced during 1973, while the first releasee is traced through 1972.

The purpose of this study, then, has been to apply an alternative method of analysis on District of Columbia data that did not entail discarding data while still preventing biases from different total exposure times. This method is commonly used in the analysis of equipment failures and is largely drawn from the literature on reliability theory, and its details will be found among other things in the appendix.

To be somewhat more specific, the following specific tasks have been accomplished under the terms of N.S. Contract No. 745, dated May 1, 1973:

(1) Recidivism rates have been estimated for 44 subcohort groups of releasees as defined by type of offender (Youth Act, Adult Male Felons, and Adult Male Misdemeanants), method of failure (administrative, escape, and rearrest), and associated halfway house.

(2) Test for constancy in time of recidivism rates and the calculation of the rates have been performed for the subcohort groups.

(3) Statistical comparisons have been carried out between the various recidivism rates to determine whether or not statistically significant differences exist between groups.

(4) Finally, probabilities of unsuccessful completion associated with the recidivism rates have been calculated.

In addition to these specific quantitative results, we are supplying herein all computer programs used to analyze the data along with a set of user's instructions. For purposes of this report, the programs are provided in the FORTRAN IV language since this was the language used for all calculations.

The primary measure employed for the comparisons is the failure rate. In this report, this is always expressed in terms of "percentage failures per day," that is to say, what is the probability that an individual arbitrarily selected from the subject population might fail on any given day, where a failure is understood to be defined as either a rearrest, escape, or administrative removal. Yet another way of saying the same thing is that the failure rate is approximately given by:

$$\frac{\text{average \# of failures on any day}}{\text{average \# present at the beginning of that day}} \times 100 .$$

These failure rates can, if desired, be quickly converted to probabilities of a recidivism or no recidivism by reference to Tables 1 and 2. If the subject failure rate is not one of those listed, simple interpolation would

be used to obtain the appropriate probability. The next question that must normally be answered is with regard to determining whether or not any two specific failure rates can be deemed to be identical. Ordinary statistical variation away from equality must always be tolerated, but the exact size of this toleration is in fact determined by the statistical theory discussed in Appendix I. We can be pretty sure that failure rates of (say) 0.561% and 0.559% (that is, probabilities of .00561 and .00559) are effectively identical and are therefore describing populations which are operating equivalently since each rate differs by only .001% from the straight arithmetic average of 0.560%. But, on the other hand, what could be said about 0.561% versus 0.295%? Is then 0.295% too far away for the two populations to be declared identical? The answer is that we really do not know until the data are examined more carefully -- what are the respective sample sizes and how much confidence must we have in the final answer? With the answers to these questions, the statistical method will indeed give an answer.

In Section II, the actual results are provided in well-laid-out detail. The actual computations were carried out on an IBM 370/155 computer, and a copy of the necessary programs, along with a copy of some sample output and all the data, are provided later in this report.

II

RESULTS

IN-PROGRAM PERFORMANCE

(0) EFEC

(a) Felons vs. Misdemeanants -- nonidentical: with failure rates (in percentage failures per day) of 0.151% and 0.481%, respectively.

Felons vs. all other adult Felons -- nonidentical: with failure rates of 0.151% and 0.269%, respectively.

Misdemeanants vs. all other adult Misdemeanants -- identical: with failure rates of 0.481% and 0.692%, respectively.

Felons and Misdemeanants vs. all other Felons and Misdemeanants -- nonidentical: with failure rates of 0.236% and 0.397%, respectively.

(b) vs. CCC#1 -- nonidentical: with failure rates of 0.236% and 0.565%, respectively.[1]

vs. CCC#1 with respect to rearrests -- identical.

vs. CCC#1 with respect to escapes -- nonidentical.

(c) vs. CCC#4 -- nonidentical: with failure rates of 0.236% and 0.525%, respectively.

vs. CCC#4 with respect to rearrests -- identical.

vs. CCC#4 with respect to escapes -- nonidentical.

(d) vs. CCC#5 -- nonidentical: with failure rates of 0.236% and 0.380%, respectively.

vs. CCC#5 with respect to rearrests -- identical.

vs. CCC#5 with respect to escapes -- identical.

(e) vs. Euclid -- identical: with failure rates of 0.236% and 0.242%, respectively.

vs. Euclid with respect to rearrests -- identical.

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[1] The administrative removal rates cannot be compared, since there were no such removals at EFEC.

vs. Euclid with respect to escapes -- identical.

(f) vs. SR2 -- nonidentical: with failure rates of 0.236% and 0.452%, respectively.

vs. SR2 with respect to rearrests -- identical.

vs. SR2 with respect to escapes -- identical.

(g) vs. RTC -- identical: with failure rates of 0.236% and 0.342%, respectively.

vs. RTC with respect to rearrests -- nonidentical.

vs. RTC with respect to escapes -- identical.

(h) vs. NARC -- nonidentical: with failure rates of 0.236% and 0.368%, respectively.

vs. NARC with respect to rearrests -- identical.

vs. NARC with respect to escapes -- identical.

(i) vs. RTC + NARC -- nonidentical: with failure rates of 0.236% and 0.361%, respectively.

vs. RTC + NARC with respect to rearrests -- identical.

vs. RTC + NARC with respect to escapes -- identical.

(1) CCC#1

(a) Felons vs. Misdemeanants -- nonidentical: with failure rates (in percentage failures per day) of 0.425% and 0.758%, respectively.

Felons vs. all other adult Felons[1] -- nonidentical: with failure rates of 0.425% and 0.225%, respectively.

Misdemeanants vs. all other adult Misdemeanants -- identical: with failure rates of 0.758% and 0.641%, respectively.

Felons and Misdemeanants vs. all other Felons and Misdemeanants -- nonidentical: with failure rates of 0.565% and 0.338%, respectively.

(b) vs. CCC#4 -- identical: with failure rates of 0.565% and 0.525%, respectively.

vs. CCC#4 with respect to rearrests -- identical.

vs. CCC#4 with respect to escapes -- identical.

vs. CCC#4 with respect to administrative removals -- identical.

(c) vs. CCC#5 -- nonidentical: with failure rates of 0.565% and 0.380%, respectively.

vs. CCC#5 with respect to rearrests -- identical.

vs. CCC#5 with respect to escapes -- identical.

vs. CCC#5 with respect to administrative removals -- identical.

(d) vs. Euclid -- nonidentical: with failure rates of 0.565% and 0.242%, respectively.

vs. Euclid with respect to rearrests -- identical.

vs. Euclid with respect to escapes -- nonidentical.

vs. Euclid with respect to administrative removals -- nonidentical.

(e) vs. SR2[2] -- identical: with failure rates of 0.565% and 0.452%, respectively.

[1] That is, vs. all other non-narcotic, adult Felons.

[2] SR2 is an acronym for Shaw.

(b) vs. CCC#5 -- identical: with failure rates of 0.525% and 0.380%, respectively.

vs. CCC#5 with respect to rearrests -- identical.

vs. CCC#5 with respect to escapes -- identical.

vs. CCC#5 with respect to administrative removals -- identical.

(c) vs. Euclid -- nonidentical: with failure rates of 0.525% and 0.242%, respectively.

vs. Euclid with respect to rearrests -- identical.

vs. Euclid with respect to escapes -- nonidentical.

vs. Euclid with respect to administrative removals -- nonidentical.

(d) vs. SR2 -- identical: with failure rates of 0.525% and 0.452%, respectively.

vs. SR2 with respect to rearrests -- identical.

vs. SR2 with respect to escapes -- nonidentical.

vs. SR2 with respect to administrative removals -- identical.

(e) vs. RTC -- nonidentical: with failure rates of 0.525% and 0.342%, respectively.

vs. RTC with respect to rearrests -- nonidentical.

vs. RTC with respect to escapes -- nonidentical.

vs. RTC with respect to administrative removals -- identical.

(f) vs. NARC -- nonidentical: with failure rates of 0.525% and 0.368%, respectively.

vs. NARC with respect to rearrests -- identical.

vs. NARC with respect to escapes -- nonidentical.

vs. NARC with respect to administrative removals -- nonidentical.

(g) vs. RTC + NARC -- nonidentical: with failure rates of 0.525% and 0.361%, respectively.

vs. RTC + NARC with respect to rearrests — nonidentical.

vs. RTC + NARC with respect to escapes — nonidentical.

vs. RTC + NARC with respect to administrative removals -- nonidentical.

(3) CCC#5

(a) Felons vs. Misdemeanants -- nonidentical: with failure rates (in percentage failures per day) of 0.194% and 0.559%, respectively.

Felons vs. all other adult Felons -- identical: with failure rates of 0.194% and 0.261%, respectively.

Misdemeanants vs. all other adult Misdemeanants — identical: with failure rates of 0.559% and 0.714%, respectively.

Felons and Misdemeanants vs. all other Felons and Misdemeanants — identical: with failure rates of 0.380% and 0.376%, respectively.

(b) vs. Euclid -- nonidentical: with failure rates of 0.380% and 0.242%, respectively.

vs. Euclid with respect to rearrests — identical.

vs. Euclid with respect to escapes -- identical.

vs. Euclid with respect to administrative removals -- nonidentical.

(c) vs. SR2 — identical: with failure rates of 0.380% and 0.452%, respectively.

vs. SR2 with respect to rearrests — nonidentical.

vs. SR2 with respect to escapes -- identical.

vs. SR2 with respect to administrative removals -- identical.

(d) vs. RTC — identical: with failure rates of 0.380% and 0.342%, respectively.

vs. RTC with respect to rearrests -- identical.

vs. RTC with respect to escapes -- identical.

vs. RTC with respect to administrative removals -- identical.

(e) vs. NARC -- identical: with failure rates of 0.380% and 0.368%, respectively.

vs. NARC with respect to rearrests -- nonidentical.

vs. NARC with respect to escapes -- identical.

vs. NARC with respect to administrative removals -- nonidentical.

(f) vs. RTC + NARC -- identical: with failure rates of 0.380% and 0.361%, respectively.

vs. RTC + NARC with respect to rearrests -- identical.

vs. RTC + NARC with respect to escapes -- identical.

vs. RTC + NARC with respect to administrative removals -- identical.

(4) EUCLID

(a) Felons vs. Misdemeanants -- nonidentical: with failure rates (in percentage failures per day) of 0.207% and 0.463%, respectively.

Felons vs. all other adult Felons -- identical: with failure rates of 0.207% and 0.282%, respectively.

Misdemeanants vs. all other adult Misdemeanants -- identical: with failure rates of 0.463% and 0.705%, respectively.

Felons and Misdemeanants vs. all other adult Felons and Misdemeanants -- nonidentical: with failure rates of 0.242% and 0.43[illegible]%, respectively.

(b) vs. SR2 -- nonidentical: with failure rates of 0.242% and 0.452%, respectively.

vs. SR2 with respect to rearrests -- identical.

vs. SR2 with respect to escapes -- identical.

vs. SR2 with respect to administrative removals -- identical.

(c) vs. RTC -- identical: with failure rates of 0.242% and 0.342%, respectively.

vs. RTC with respect to rearrests -- nonidentical.

vs. RTC with respect to escapes -- identical.

vs. RTC with respect to administrative removals -- nonidentical.

(d) vs. NARC -- nonidentical: with failure rates of 0.242% and 0.368%, respectively.

vs. NARC with respect to rearrests -- identical.

vs. NARC with respect to escapes -- identical.

vs. NARC with respect to administrative removals -- identical.

(e) vs. RTC + NARC -- nonidentical: with failure rates of 0.242% and 0.361%, respectively.

vs. RTC + NARC with respect to rearrests -- identical.

vs. RTC + NARC with respect to escapes -- identical.

vs. RTC + NARC with respect to administrative removals -- nonidentical.

(5) SR2

(a) Felons vs. Misdemeanants -- nonidentical: with failure rates (in percentage failures per day) of 0.244% and 0.849%, respectively.

Felons vs. all other adult Felons -- identical: with failure rates of 0.244% and 0.255%, respectively.

Misdemeanants vs. all other adult Misdemeanants -- identical: with failure rates of 0.849% and 0.647%, respectively.

Felons and Misdemeanants vs. all other Felons and Misdemeanants -- identical: with failure rates of 0.452% and 0.369%, respectively.

(b) vs. RTC -- identical: with failure rates of 0.452% and 0.342%, respectively.

vs. RTC with respect to rearrests -- nonidentical.

vs. RTC with respect to escapes -- identical.

vs. RTC with respect to administrative removals -- identical.

(c) vs. NARC -- identical: with failure rates of 0.452% and 0.368%, respectively.

vs. NARC with respect to rearrests -- identical.

vs. NARC with respect to escapes -- nonidentical.

vs. NARC with respect to administrative removals -- nonidentical.

(d) vs. RTC + NARC -- identical: with failure rates of 0.452% and 0.361%, respectively.

vs. RTC + NARC with respect to rearrests -- identical.

vs. RTC + NARC with respect to escapes -- nonidentical.

vs. RTC + NARC with respect to administrative removals -- nonidentical.

(6) RTC

(a) Felons vs. Misdemeanants -- identical: with failure rates (in percentage failures per day) of 0.317% and 0.405%, respectively.

Felons vs. all other non-narcotic adult Felons -- identical: with failure rates of 0.317% and 0.253%, respectively.

Misdemeanants vs. all other non-narcotic adult Misdemeanants -- nonidentical: with failure rates of 0.405% and 0.669%, respectively.

Felons and Misdemeanants vs. all other non-narcotic adult Felons and Misdemeanants -- identical: with failure rates of 0.342% and 0.377%, respectively.

(b) vs. NARC -- identical: with failure rates of 0.342% and 0.368%, respectively.

vs. NARC with respect to rearrests -- nonidentical.

vs. NARC with respect to escapes -- identical.

vs. NARC with respect to administrative removals -- nonidentical.

(7) NARC

(a) Felons vs. Misdemeanants -- identical: with failure rates (in percentage failures per day) of 0.367% and 0.371%, respectively.

Felons vs. all other non-narcotic adult Felons -- identical: with failure rates of 0.367% and 0.253%, respectively.

Misdemeanants vs. all other non-narcotic adult Misdemeanants -- nonidentical: with failure rates of 0.371% and 0.669%, respectively.

Felons and Misdemeanants vs. all other non-narcotic adult Felons and Misdemeanants -- identical: with failure rates of 0.368% and 0.377%, respectively.

(8) NARC + RTC

(a) Felons vs. Misdemeanants -- identical: with failure rates (in percentage failures per day) of 0.352% and 0.380%, respectively.

Felons vs. all other non-narcotic adult Felons -- nonidentical: with failure rates of 0.352% and 0.253%, respectively.

Misdemeanants vs. all other non-narcotic adult Misdemeanants -- nonidentical: with failure rates of 0.380% and 0.669%, respectively.

Felons and Misdemeanants vs. all other non-narcotic adult Felons and Misdemeanants -- identical: with failure rates of 0.361% and 0.377%, respectively.

(9) YOUTHFUL OFFENDERS

(a) SERD vs. CTCY -- identical: with failure rates (in percentage failures per day) of 0.467% and 0.483%, respectively.

SERD vs. CTCY with respect to rearrests -- identical.

SERD vs. CTCY with respect to escapes -- identical.

SERD vs. CTCY with respect to administrative removals -- identical.

(b) SERD + CTCY vs. YCCP -- identical: with failure rates of 0.479% and 0.437%, respectively.

SERD + CTCY vs. YCCP with respect to rearrests -- nonidentical.

SERD + CTCY vs. YCCP with respect to escapes -- identical.

SERD + CTCY vs. YCCP with respect to administrative removals -- nonidentical.

(c) SERD + CTCY vs. all non-narcotic adult Felons -- nonidentical: with failure rates of 0.479% and 0.253%, respectively.

SERD + CTCY vs. all adult Felons -- nonidentical: with failure rates of 0.479% and 0.289%, respectively.

(10) OVERALL TOTALS

All non-narcotic adult Felons vs. Misdemeanants -- nonidentical: with failure rates of 0.253% and 0.669%, respectively.

All adult Felons vs. Misdemeanants -- nonidentical: with failure rates of 0.289% and 0.555%, respectively.

Non-narcotic adult rearrest rate vs. narcotic rearrest rate -- identical: with rates of 0.0751% and 0.0812%, respectively.

Non-narcotic adult escape rate vs. narcotic escape rate -- identical: with rates of 0.193% and 0.184%, respectively,

Non-narcotic adult removal rate vs. narcotic removal rate -- identical: with rates of 0.109% and 0.0956%, respectively.

Institutional Parole

- total failure rate: 0.0876%
  contribution from rearrests: 0.0676%
  contribution from escapes and parole violations: 0.0200%

Halfway House Parole (adult only)

- total failure rate: 0.0624%
  contribution from rearrests: 0.0446%
  contribution from escapes and parole violations: 0.0178%
  vs. IP: nonidentical
  vs. IP: with respect to rearrests: nonidentical
  vs. IP: with respect to escapes and parole violations: nonidentical.

TABLE 1

PROBABILITY OF RECIDIVISM WITHIN SIX MONTHS

h(t) = failure rate (in % failures per day)	Probability for Recidivism within Six Months
0.000	.0000
0.050	.0872
0.100	.1668
0.150	.2395
0.200	.3058
0.250	.3663
0.300	.4216
0.350	.4720
0.400	.5181
0.450	.5601
0.500	.5985
0.550	.6335
0.600	.6655
0.650	.6946
0.700	.7213
0.750	.7456
0.800	.7678
0.850	.7880
0.900	.8065
0.950	.8234
1.000	.8528

TABLE 2

PROBABILITY OF NO RECIDIVISM WITHIN SIX MONTHS

h(t) = failure rate (in % failures per day)	Probability for No Recidivism within Six Months
0.000	1.0000
0.050	.9128
0.100	.8332
0.150	.7605
0.200	.6942
0.250	.6337
0.300	.5784
0.350	.5280
0.400	.4819
0.450	.4399
0.500	.4015
0.550	.3665
0.600	.3345
0.650	.3054
0.700	.2787
0.750	.2544
0.800	.2322
0.850	.2120
0.900	.1935
0.950	.1766
1.000	.1612
1.050	.1472

TABLE 3

MEDIAN OF DURATION DISTRIBUTION

h(t) = failure rate (in % failures per day)	Number of Days at which Probability for Recidivism is 1/2
0.000	∞
0.050	1386.3
0.100	693.1
0.150	462.1
0.200	346.6
0.250	277.3
0.300	231.0
0.350	198.0
0.400	173.3
0.450	154.0
0.500	138.6
0.550	126.0
0.600	115.5
0.650	106.6
0.700	99.0
0.750	92.4
0.800	86.6
0.850	81.5
0.900	77.0
0.950	73.0
1.000	69.3
1.050	66.0

TABLE 4

HOUSE PERFORMANCE REFERENCE TABLE I

HOUSE	HOUSES WITH WORSE RECORD	HOUSES WITH SAME RECORD	HOUSES WITH BETTER RECORD
EFEC	CCC#1, CCC#4, CCC#5, SR2, NARC ALL Other Non-Narcotic Houses[1]	Euclid, RTC	---
CCC#1	---	CCC#4, SR2	EFEC, CCC#5, Euclid, RTC, NARC ALL Other Non-Narcotic Houses
CCC#4	---	CCC#1, CCC#5, SR2	EFEC, Euclid, RTC, NARC ALL Other Non-Narcotic Houses
CCC#5	CCC#1	CCC#4, SR2, RTC, NARC ALL Other Non-Narcotic Houses	EFEC, Euclid
Euclid	CCC#1, CCC#4, CCC#5, SR2, NARC ALL Other Non-Narcotic Houses	EFEC, RTC	---
SR2	CCC#1	CCC#4, CCC#5, RTC, NARC ALL Other Non-Narcotic Houses	EFEC, Euclid
RTC	CCC#1, CCC#4	CCC#5, Euclid, SR2, NARC ALL Non-Narcotic Houses	EFEC
NARC	CCC#1, CCC#4	CCC#5, SR2, RTC ALL Non-Narcotic Houses	EFEC, Euclid

[1] That is, against the other five non-narcotic houses taken together as a composite.

TABLE 5

HOUSE PERFORMANCE REFERENCE TABLE II

HOUSE	OVERALL RATE & RANK		REARREST RATE & RANK		ESCAPE RATE & RANK		REMOVAL RATE & RANK	
EFEC	0.236%	1	0.067%	4	0.169%	7	0%	1
CCC#1	0.565	11	0.032	7	0.283	10	0.200	9
CCC#4	0.525	10	0.064	3	0.322	11	0.139	5
CCC#5	0.380	5	0.043	2	0.190	8	0.147	6
Euclid	0.242	2	0.073	5	0.133	3	0.037	2
SR2	0.452	7	0.146	9	0.087	1	0.218	11
RTC	0.342	3	0.003	1	0.159	4	0.175	7
NARC	0.368	4	0.110	8	0.195	9	0.064	3
SERD	0.467	8	0.173	10	0.164	5	0.130	4
CTCY	0.483	9	0.179	11	0.091	2	0.213	10
YCCP	0.437	6	0.076	6	0.168	6	0.193	8

TABLE 6

RAW DATA SUMMARY I

HOUSE	TOTAL EXPOSURE TIME	TOTAL FAILURES	NUMBER OF REARRESTS	NUMBER OF ESCAPES	NUMBER OF REMOVALS
EFEC	8901	21	6	15	0
CCC#1	12033	68	10	34	24
CCC#4	9327	49	6	30	13
CCC#5	11578	44	5	22	17
Euclid	21882	53	16	29	8
SR2	6863	31	10	6	15
SUB-TOTALS	70584	266	53	136	77
RTC	11979	41	1	19	21
NARC	29871	110	33	58	19
RTC & NARC	41850	151	34	77	40
GRAND TOTALS	112434	417	87	213	117

TABLE 7

RAW DATA SUMMARY II

	FELONS			MISDEMEANANTS		
HOUSE	Number of Failures	Total Exposure Time	Failure Rate	Number of Failures	Total Exposure Time	Failure Rate
EFEC	10	6614	0.151%	11	2287	0.481%
CCC#1	30	7055	0.425	38	4978	0.763
CCC#4	25	6986	0.358	24	2341	1.025
CCC#5	11	5671	0.194	33	5907	0.559
Euclid	39	18856	0.207	14	3026	0.463
SR2	11	4506	0.244	20	2357	0.849
SUB-TOTALS	126	49688	0.253	140	20886	0.669
RTC	27	8524	0.317	14	3455	0.405
NARC	72	19625	0.367	38	10246	0.371
GRAND TOTALS	225	77837	0.289	192	34597	0.555

III

ANALYSIS OF RESULTS

In this discussion of results we shall not pursue any comparisons in which all categories are shown to be identical, but rather shall confine ourselves to those where there was at least one difference. It should be noted that performance summary tables are provided on pages 22 and 23 after the conclusion of all the pairwise comparisons, in addition to summaries of the data collected, which are presented in Tables 6 and 7.

The very first thing that is noticed is that misdemeanants had a significantly higher failure rate than felons in every single house, with overall rates of 0.669% and 0.253%, respectively, when taken over the six non-narcotic adult houses, and 0.555% and 0.289%, respectively, when the two narcotic houses are added back in. There are obviously going to be some houses for which there appear to be better performances among felons and/or misdemeanants than at other houses, but this is generally a mixed picture. As a rule, though, those houses which seem to be performing more poorly than the others did so also with respect to both misdemeanants and felons. For example, in the case of CCC#1, misdemeanant performance was deemed to be identical to that of the total group, but there was a slight leaning in the direction of a higher rate for CCC#1. The same could be said for CCC#4 and its felon record.

When we begin to look at the specific performance records of house versus house, the first clash occurs in the comparisons of EFEC to all the other houses. There is a clearly overall superior performance by EFEC when compared to all other houses except Euclid. Though EFEC also has a lower total failure rate than Euclid, the difference is so slight as to be deemed negligible. When the failures are broken down into their three possible causes, we note that there were no administrative removals from EFEC and hence no comparisons are possible for removal rates. Then going down the list and looking at the rearrest and escape figures, we see that EFEC ranks about in the middle on escapes and surpasses all but RTC, CCC#5, and CCC#4 on rearrests. But it is clearly EFEC's "superior" removal rate which puts it into the number one position overall. We could, of course, suspect that if indeed there had been removals from EFEC, then the rearrest and escape rates would have been lowered accordingly.

The next house to be examined is CCC#1, and the first difference noted is that with CCC#5. Though these two houses appear to have identical records for each of the three failure categories, the total comparison showed CCC#1 to be inferior. A further breakdown of the figures shows that CCC#1 had a slightly higher failure rate in each category, but not quite enough to be indicated as such, and when all three were put together this difference did indeed show up. When CCC#1 is compared to Euclid, a more definitive pattern is seen, namely, that the overwhelmingly larger failure rate for CCC#1 is directly due to clearly greater frequencies of both escapes and administrative removals, which is exactly the same kind of observation that can be made when CCC#1 is taken against RTC and NARC combined (though the results are slightly different when the two narcotic houses are treated individually). Finally, when the comparison is made to SR2, a considerably higher escape rate for CCC#1 is balanced by a higher rearrest rate for SR2 (administrative removals occurring at about the same rate). This might be due to the fact that indeed there is little criminal difference between an absconce and a rearrest, maybe only in degree, and, in fact, when rearrests and escapes are lumped together we find a near equality of rates.

When we next turn to CCC#4, we note that both its misdemeanants and felons failed much more frequently than those of the combination of all the other non-narcotic adult houses, and this, in turn, clearly makes the total failure rate significantly higher. CCC#4 comes out with a very similar performance to CCC#5, but with a much poorer one than Euclid. Euclid does better because it has a far superior performance with respect to escapes and removals along with a rearrest rate which is about the same. When we next come to CCC#4 versus SR2, we find that a worse escape record for SR2 is counterbalanced by slightly better performances in rearrests and removals. Again, are escapees eventual candidates for rearrest or possible administrative removal? The comparisons then between the drug houses and CCC#4 give very similar results, except that in this case the escape rate for CCC#4 showed up to be sufficiently higher than that at CCC#1 to allow it to be deemed nonidentical with that of NARC. Also, when RTC and NARC were put together, the rearrest rate at CCC#4 showed up to be recognizably higher.

When we next look at CCC#5, we find that its performance is worse than that of Euclid, but about the same as SR2. The key category in the

Euclid comparison is administrative removals, wherein CCC#5 has a much higher rate. In the SR2 comparison, we note that CCC#5 has a better rearrest record, but just not quite enough to swing the overall comparison in its favor. Finally, against NARC, a lower rearrest rate for CCC#5 is completely balanced out by its higher removal rate.

Continuing now to Euclid, slightly lower rates for all three categories when compared to SR2 lead to a clearly lower total rate for Euclid. It should be pointed out that when we went back to check Euclid versus the other houses, its performance turned out to be the very best of all. Though it was ruled to have performed the same as RTC, Euclid had a significantly higher rearrest rate, but this was more than balanced by RTC's much higher administrative removal rate. Finally, against NARC, slight edges in each category gave Euclid a significantly better total performance rate.

The last non-narcotic house, SR2, had performances considered to be identical to both narcotic houses, though it had a slightly higher rearrest rate than RTC, and higher escape and removal rates than NARC.

The main observations which can be made about RTC and NARC are: (1) the felon failure rates were a lot closer to those of the misdemeanants than any of the other houses; (2) narcotic misdemeanants tended to do a lot better than non-narcotic misdemeanants; and (3) total performance was about the same as all the other non-narcotic houses taken together.

With regard to youthful offenders, the most interesting point is that the failure rate there is considerably higher than that of the adult felon group considered as one. The two youth houses themselves tended to perform the same, each with a higher failure rate than most of the adult houses. When the youth house comparison is broken down somewhat further, we see SERD and CTCY together had a total failure rate considered to be the same as YCCP, though SERD and CTCY had a much higher rearrest rate, which was counterbalanced by a higher removal rate at YCCP.

VI

CONCLUDING REMARKS

The results presented in this report have uses beyond the comparative evaluation of the relative performance of the houses. Since standard performance levels for in-program failures do not exist, the comparative data could be used to stimulate the low-performing houses such as CCC#1 and CCC#4 to equal the performance of the better houses, EFEC, CCC#5, Euclid, NARC, and RTC. The analysis should also lead to questions concerning administrative removal policies, management and a review of the factors associated with escapes.

The fact that the narcotic houses, RTC and NARC, had superior in-program performance may indicate the desirability of routing all "users" to these houses. We would like to propose a continuation of this study which would identify "users" in the population sampled by examination of department computer files on urine analysis results. The questions we would like to address are:

(1) Do "users" in non-narcotic houses do as well as those in RTC or NARC,

(2) Can positive urinalysis reports be established as a cause or an indicator of the likelihood of escape, and

(3) How do "users" compare with "non-users" in terms of post-program performance?

Other questions we would be interested in addressing are:

(4) Comparisons between the two youth houses and between the Youth Acts and Adults with respect to post-program performance,

(5) Analysis of community performance data for women, and

(6) Use of in-program failure rate data to predict the number of referrals needed to keep the houses up to capacity in terms of number of residents.

These are six extremely important problems which it is felt can now be attacked by the failure-rate analysis and possibly some other related techniques. It is hoped that the conclusiveness and usability of the results contained herein will now kindle sufficient interest to allow

for the continuation of this kind of applied research. The benefits to an improved correctional system would be enormous and the continuation of a free dialogue between corrections officials and the applied scientific community must in the long term be of vital importance to a healthy District of Columbia.

END