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3-10-83

THE COMMONWEALTH OF MASSACHUSETTS  
OFFICE OF THE COMMISSIONER OF PROBATION

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EXECUTIVE SUMMARY OF  
RESEARCH FINDINGS  
FROM THE PILOT COURT  
RISK/NEED CLASSIFICATION  
SYSTEM  
REPORT #4

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DECEMBER 31, 1981

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U.S. Department of Justice  
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## INTRODUCTION

The following report results from a research project carried out by the Management Information Division of the Office of the Commissioner of Probation for the Commonwealth of Massachusetts.

The project received funding from the National Institute of Corrections (NIC). Nine probation offices participated in this study.

The data base consisted of 3,145 offenders placed under Probation Officer Supervision during the period September 2, 1980 to August 31, 1981. The research project was concerned with three major questions:

.... Is the information reliable?

.... What is the predictive validity of the Risk Assessment Scale?

.... What is the maximum predictive ability of the individual items on the scale?

## BACKGROUND

In the Spring of 1979 with both state and L.E.A.A. funding, the Office of the Commissioner of Probation (OCP) initiated the implementation of a probation offender needs/strengths assessment instrument in nine pilot probation offices from Hampden, Plymouth and Suffolk Superior Court, Cambridge, Peabody, Quincy, Taunton, Worcester District Courts, and Middlesex Juvenile Probation District. The location (urban, suburban, rural) size and style of operation in these nine probation offices vary considerably from one another, and represent a microcosm of the entire Massachusetts Probation Service.

By January 1980 all 90 probation offices of the Superior District and Juvenile Court Departments in the Massachusetts Trial Court were using the needs/strengths assessment instrument. The instrument was used by approximately 650 probation officers in supervising approximately 30,000 offenders per year. The system was developed to improve service delivery to probation offenders, to make the best use of available resources and to identify needed resources.

In September of 1980 the nine pilot probation offices began using a client risk assessment instrument in conjunction with the needs assessment scale. All probation officers in these nine offices received training from personnel of the Office of the Commissioner of Probation in the use of the risk scale during the summer of 1980.

The Massachusetts Risk Assessment System being piloted assumed that certain variables were correlated with the probability of a person being convicted of a new crime while under probation officer supervision. These variables are prior record, prior revocation, age at first conviction, address changes, employment, family structure, alcohol/drug usage, and offender attitude.

The first six variables are based on objective data, while the remaining two are subjective judgements by the classifying probation officer. All eight variables were chosen as predictors based on the reported experience of the California Base Expectancy Scale and recent validation studies in Wisconsin and Connecticut.

It now became imperative that a research study be conducted to identify which offender characteristics and to what degree these characteristics were correlated with recidivism during the probationary period. Only by reliably identifying high risk offenders could the Office of the Commissioner of Probation begin to develop and test effective supervision strategies and optimum allocation of resources as well as address community safety issues.

The project simultaneously examined the relationship between the need level and recidivism. It was expected that there would be a positive correlation between offenders identified as deficient in basic life skills and further criminal activity during the probation supervision period.

Because of the recognized subjectivity by the classifying probation officer in identifying offender needs/strengths, it had been expected originally that the findings would not be as reliable as the data measured by the Risk/Assessment scale.

However, in order to make equitable and consistent classification decisions, improve offender service-delivery and make optimum use of probation resources, it was necessary to establish the association between need/strength levels and recidivism during the probation supervision period.

The Probation/Parole Level of Supervision Sourcebook, prepared by the American Justice Institute (AJI) with funding from the National Institute of Corrections, cited a critical need for research support of classification instruments. Of 23 agencies surveyed in the AJI report, only four had research results available. The Office of the Commissioner of Probation recognized the need for validation of its classification system through research and was willing to support this research project with the time and efforts of the OCP staff.

As a result of a number of background studies, a number of research hypotheses were developed; the remaining portions of this report present the findings of the research project in relation to the stated research hypotheses.

In summary, the data for these findings come from 3,145 probation offenders placed under probation officer supervision during the period covering September 2, 1980 through August 31, 1981. Of the 3,145 offenders 345 became recidivist (found guilty of a subsequent offense, while under probation officer supervision). These 3,145 cases were analyzed for the period covering September 2, 1980 until December 31, 1981.

## METHODOLOGY

The objective of this empirically-based information system was to predict the success or failure of adult and juvenile offenders who were under active probation officer supervision in Massachusetts. The study, therefore, tested the relationship between selected probation characteristics and probation success or failure.

Probation success was defined as no further criminal convictions, or successful termination from probation supervision.

Probation failure was defined as a new conviction while under probation officer supervision.

Using an ordinal coding scale, probation officers from the nine pilot courts prepared an initial assessment form on all new, actively supervised probation cases between September 2, 1980 and August 31, 1981 totaling 3,145 adult and juvenile probation cases. The initial coding instruments were submitted to the Office of the Commissioner of Probation at the onset of the probationary period.

A filing system of the initial assessment forms was established to match the initial assessment forms with one of the following subsequent action forms: (a) successful termination from probation, or (b) new conviction.

## Variables

The following variables were analyzed in this research study:

### General Identifying Characteristics

- |                           |   |
|---------------------------|---|
| 1. Age at instant offense | 4. Instant offense(s)                     |
| 2. Sex                    | 5. Supervising probation officer          |
| 3. Court                  | 6. Term of probation supervision (months) |

### Client Need Characteristics

- |                   |                          |
|-------------------|--------------------------|
| 1. Education      | 6. Other drug usage      |
| 2. Employment     | 7. Counseling            |
| 3. Marital/Family | 8. Health                |
| 4. Social         | 9. Living arrangements   |
| 5. Alcohol Usage  | 10. Financial Management |

#### Client Risk Characteristics

1. Prior adult and/or juvenile record during past 5 years
2. Number of prior probation revocations during past 5 years
3. Age at first conviction, or juvenile adjudication
4. Number of address changes during past 12 months
5. Time employed (or in school) during past 12 months
6. Family Structure
7. Alcohol usage or drug usage problems
8. Attitude

In addition, the following risk variables were generated for each offender, by extracting case history data from the criminal history repository in the Probation Central File of the Office of the Commissioner of Probation:

1. Age at first court appearance
2. Age at first quasi-adjudication (defined as: having a case dismissed, continued without a finding, or filed)
3. Number of prior cases dismissed
4. Number of prior cases continued without a finding
5. Number of prior cases filed

After working with the preliminary data for several months, the following additional variables were computer generated, by combining two or more of the risk characteristics:

1. Prior record (generated by adding the actual number of prior convictions, plus the actual number of prior cases dismissed, continued without a finding and filed). The prior record variable was coded as follows:

0 = 3 or more prior prosecutions  
1 = 2 prior prosecutions  
2 = 1 prior prosecution  
4 = 0 prior prosecution

2. Prior periods of probation supervision (using data from "Prior Record" variable), was coded as follows:

0 = 4 or more prior prosecutions  
1 = 3 prior prosecutions  
2 = 2 prior prosecutions  
4 = 0 prior prosecution

#### Test of Reliability

Reliability was defined as the ability of probation officers to consistently, accurately code the 6 general identifying and 8 client risk characteristics.

Inasmuch as the need/strength variables had been successfully utilized by probation officers for over a year, the need/strength variables were reliability tested only to the extent that a score was recorded; missing scores were noted and requested in writing from the nine pilot offices.

However, because the risk variables were new to probation officers, these variables underwent extensive reliability testing, since reliability of these risk characteristics was essential. Inaccurate coding could over-estimate or under-estimate the final risk scores, and thereby increase the incidence of Type I (false positive) or Type II (false negative) errors.

To assess the reliability of the probation officers' coding of the general identifying and client risk variables on the initial assessment forms, two methods were undertaken:

(A) Objective Variables. The court appearance record histories of all 3,145 adult and juvenile probation offenders were read, so that the objective coding on the initial assessment forms could be verified through the data in the Probation Central File records. The precise numerical datum for each variable which was coded within a numerical range on the initial assessment form was added to the data base, to add specificity.

In addition to the precise numerical datum, the probation officers' coding was verified for accuracy. In the case of the missing or inaccurate information, the Chief Probation Officers were notified and correct data was requested. The corrected data was then included in the data base. The coding forms indicated where original data was either missing or incorrect, so that a subsequent analysis of the nature of the coding errors could be undertaken.

When individual variables were analyzed to assess their reliability based on (a) incorrect coding and (b) frequency of missing data, the following was found.

**TABLE I: Reliability of Data**

Variable Title	% Accurately Coded	% Inaccurately Coded	% Originally Missing
Court number	100%	0	0
Sex of Offender	100%	0	0
Date of birth	100%	*	0
Offense #1	99.8%	*	0.1%
Offense #2	99.9%	0.1%	*
Offense #3	99.9%	*	*
Start date-probation	99.6%	0.1%	0.4%
End date-probation	99.6%	0.1%	0.3%
Education need	99.4%	**	0.6%
Employment need	99.1%	**	0.9%
Marital/Family need	99.4%	**	0.6%
Social need	99.3%	**	0.7%
Alcohol need	99.6%	**	0.4%
Drug need	99.5%	**	0.5%
Counseling need	99.5%	**	0.5%
Health need	99.5%	**	0.5%
Living arrangements need	99.4%	**	0.6%
Financial need	99.2%	**	0.8%
Prior convictions	91.3%	8.7%	0
Prior revocations	99.2%	1.8%	*
Age at first conviction	92.2%	7.7%	0.1%
Address changes	99.9%	0	0.1%
Prior employment	99.6%	0.3%	0.1%
Family structure	99.8%	0.2%	0
Attitude	99.8%	0.2%	*
Total risk score	85.1%	14.9%	*

\* less than 0.1%

\*\* accuracy not verified

In the case of both missing and inaccurately coded variables, the Chief Probation Officer provided corrected data; only when the data was complete and accurate was it entered into the computer for analysis. Wherever error patterns were evident (either by court, or by individual probation officers), the Chief Probation Officer was called, advised of the coding problems, and provided with technical assistance.

As the above reliability chart illustrates, for most of the objective variables there was a high degree of reliability in the probation officers' coding. Two variables had reliability scores (91.3% prior convictions and 92.2%-age at first conviction) which were somewhat lower than the other variables tested. The higher percentage of coding errors was largely due to definitional problems; these two variables were later refined (as is developed further on in this report).

Coding errors due to missing data were evident in less than 1% of the cases for any given variable.

(B) In the case of Subjective Variables (ie. those which could not be verified through the records in the Probation Central File), a random sample of 10% of the case folders was examined in all of the nine pilot courts, on four occasions during the year. Based on presentence investigations, police reports and other documents, probation officers' coding of the subjective risk variable was also found to be highly reliable.

#### Test of Validity

Validity was defined as the ability to accurately measure and predict behavior. In order to assess which risk/need variables were good predictors of case outcomes, the dichotomous analysis ("success" versus "failure") was used.

The first hypotheses of this study was:

**AS RELIABILITY OF THE CODED DATA INCREASES,  
THE PREDICTIVE VALIDITY WILL ALSO INCREASE.**

Although a quarterly time line was originally designed to assess reliability and validity at three-month intervals, the consistently high degree of the reliability of the probation officers' coding made this repetitive test unnecessary. The data remained at the 99% level with the exception of the two variables (prior record and age at first conviction) which were somewhat lower. The incidence of the coding errors for these two variables occurred at random throughout the year, across all nine pilot courts, in all three court departments. The problem therefore was found to rest with the definitions rather than in the reliability of the probation officers' coding. These problems have been rectified in the subsequent Risk/Need instrument being implemented statewide in 1982.

Statistical tests of validity of the risk/need scores were conducted, specifically by both Chi Square and Pearson's correlation. However since Pearson's correlation is the more powerful statistic, detecting relationships which the Chi Square statistic often misses, the Pearson's correlation statistic was more thoroughly examined. The Chi Square statistic is preferable only when the relationship is very curvilinear; in the case of this research, the analysis was based on a dichotomous "success-failure" situation and a curvilinear situation would be very unlikely.

When looking at the Pearson's R statistics we kept in mind that there are two important significance tests. Statistical significance indicates the probability of the occurrence being due to chance, while substantive significance indicates the strength of the relationship, or how much of the variance is explained. While a given variable may indicate a statistically significant relationship to probation failure, the Pearson's R showed the strength of the relationship.

For the purpose of this research, Pearson's R significance scores of 0.01 and below were considered statistically significant. While the standard criteria for statistical significance is 0.05, the findings of this research could have an important impact on people. For that reason, the more stringent 0.01 level of significance was required. The majority of variables in this study were found to meet this test.

In terms of substantive significance, if the Pearson's R was less than 0.2, the relationship was considered weak; if Pearson's R was 0.2-0.5, it was considered moderate, and if Pearson's R was over 0.5, it was considered a strong relationship, accounting for more than 25% of the variance.

This research was not so much interested in the substantive significance of any one single variable, but rather the combined strength of all variable used on the risk/need instrument. For the most part, Pearson's R scores fell in the 0.2-0.5 range, indicating a moderate relationship to probation failure.

By assessing the strength of the individual variable in accounting for probation failure, the Pearson's statistic provided insights into the relative weight of variables in the subsequently revised Risk/Need instrument.

## EVALUATION OF FINDINGS

The following section will contain a number of displays that further clarify the findings from the nine pilot probation offices.

The second hypotheses of the study was that:

Probation failure was most likely to occur within the first six months after conviction for the "instant offense".

Analysis of the findings from the nine pilot courts reflect that when an offender does become a recidivist, they do so according in the following time frame:

TABLE 2: Time frame in which offenders become Recidivists:

	TIME TO RECIDIVISM	ADULT	JUVENILES
WITHIN	1st Month	20.6%	34.4%
	2nd Month	15.2%	8.9%
	3rd Month	14.8%	9.4%
	4th Month	11.7%	6.4%
	5th Month	11.2%	20.3%
	6th Month	10.8%	9.4%
	7th Month	4.9%	6.4%
	8th Month	4.5%	3.2%
	9th Month	1.8%	0%
	10th Month	3.1%	1.6%
	11th Month	1.4%	0%
	12th Month	0%	0%
		100%	100%

The data indicates that in those cases in which an offender did become a recidivist (probation failure), 84.3% of the adults failures occurred during the first six months, 88.8% of the juvenile failures occurred in the same period of time.

The third hypothesis of the study was that:

The probation failure rate will not be equal across all risk scores: the lower the risk score, the higher the rate of failure

(Risk assessment scores range from four to thirty - low scoring individuals are considered high risk offenders and, conversely high scoring individuals are considered low risk).

**TABLE 3: Level of Supervision by Probation Success/Failure**

Level of Supervision	# of Total Offenders	% of Total Offenders	# of Favorable Probation Outcomes	% of Favorable Probation Outcomes	# of Recidivist	% of Recidivist
MAXIMUM	421	13.4	322	76.5	99	23.5
MODERATE	1695	53.9	1493	88.1	202	11.9
MINIMUM	1029	32.7	985	95.7	44	4.3

Clearly the above table bears out the original research hypotheses in regard to the proposition that the higher risk offenders would constitute a larger proportional rate of recidivist, than would the lower risk offenders. Nearly 24% of the maximum risk cases were recidivists compared to 12% of the moderate risk cases and 4% of the minimum risk cases.

In addition to the major hypotheses, specific hypotheses relating to risk and needs/strengths variables were developed.

The specific hypotheses and case outcome findings related to risk variables are to be listed below.

Hypothesis      1. The frequency and severity of prior adult and/or juvenile records will be related to the incidence of probation failure.

Category #1 on the Risk Assessment Form is:

Prior record felony/misdeameanor convictions or juvenile adjudications during past 5 years	0=3 or more 1=two 2=one 3=none
--	---

**TABLE 4: Prior Record and Case Outcome**

Prior Record Score	Frequency of cases	Percent Successful	Percent Failure
0 = 3 or more	722	80.6	19.4
1 = two	224	88.4	11.6
2 = one	327	89.3	10.7
3 = no prior record	1872	92.3	7.7
	3145		

While 7.7% of those with no prior record were probation "failures", this percentage increased sharply among those with 3 or more priors (19.4%). This hypothesis met the statistical test at the 0.01 level.

Hypothesis      2. The frequency of prior probation revocations during the past five years will be related to the incidence of probation failure.

Category #2 on the Risk Assessment Form is:

Number of prior probation revocations during past 5 years	0=2 or more 1=one 4=none
---	--------------------------------

**TABLE 5: Prior Revocations and Case Outcomes**

Prior Revocations Score	Total Cases	Percent Successful	Percent Failure
0 = 2 or more	58	60.3	39.7
1 = one	134	79.1	20.7
4 = none	2953	90.0	10.0

While 10% of those with no prior revocation were probation "failures", nearly 40% of those with 2 or more prior revocations were probation failures. This hypotheses met the test of statistical significance at the 0.01 level.

Hypothesis      3. The younger the person is at the first conviction or juvenile adjudication, the higher the incidence of probation failure.

Category #3 on the Risk Assessment Form is:

Age at first conviction (or juvenile adjudication)	0=16 or younger 1=17-19 2=20-23 3=24 or older
--	--

**TABLE 6: Age at First Conviction Case Outcomes**

Age at First Conviction	Total Cases	Percent Successful	Percent Failure
0 = 16 or younger	777	83.9	16.1
1 = 17 - 19	820	86.6	13.4
2 = 20 - 23	495	91.1	8.9
3 = 24 or older	1053	93.7	6.3

The data illustrates that the younger a person is at the time of the first conviction, the greater the incidence of probation failure. This hypothesis met the statistical significance test at the 0.01 level.

In this particular category, by changing the measure to incidence of court prosecution, (except those which resulted in a finding of not guilty or not delinquent), then we find that 89% of the failures entered the court system by age 19 and 97% of the failures were brought before the Court for the first time by age 24.

Hypothesis                      4. The greater the number of address changes during the previous 12 months, the higher the incidence of probation failure.

Category #4 on the Risk Assessment Form is:

Number of address changes during past 12 months                      1=2 or more  
2=one  
4=none

**TABLE 7: Address Changes and Case Outcomes**

Address change score	Total cases	Percent Successful	Percent Failure
1 = two or more	402	87.6	12.4
2 = one	700	88.6	11.4
4 = none	2043	89.5	10.5

The data illustrate that the greater the number of address changes, the higher the probability of probation failure. This hypothesis was statistically significant at the 0.10 level.

Hypothesis                      5. The lower the number of months a person is employed or in school during the previous 12 months, the higher the incidence of probation failure.

Category #5 on the Risk Assessment Form is:

Time employed during past 12 months (for juvenile cases make this same assessment regarding school attendance).                      0=2 months or less  
1=3-4 months  
2=5-6 months  
3=7-8 months  
4=9 months or more

**TABLE 8: Employment/School and Case Outcome**

Employment/School Score	Total cases	Percent Successful	Percent Failure
0 = 2 months or less	491	87.6	12.4
1 = 3 - 4 months	252	84.9	15.1
2 = 5 - 6 months	350	83.1	16.9
3 = 7 - 8 months	362	90.1	9.9
4 = 9 months	1690	91.1	8.9

The data supports the hypothesis that probation failure is related to employment/school attendance with 12.4% of those employed or in school 2 months or less being probation failures, compared to 8.9% of those who were in school or employed 9 months or more. The hypothesis met the statistical significance test at the 0.01 level.

In regard to the above category, it should be noted that 50.4% of the adult offender population were unemployed at some time during the prior twelve months. This is during the same time that the general unemployment rate in Massachusetts was 7%.

Hypothesis                      6. The weaker a person's family ties, the higher the incidence of probation failure.

Category #6 on the Risk Assessment Form is:

Family Structure  
1 = Currently resides away from family with few or no family ties.  
2 = resides in one parent home, or parent not supporting children.  
3 = Single emancipated from parental home, with strong family ties.  
4 = resides in two-parent home, or parent supporting children.

**TABLE 9: Family Structure and Case Outcomes**

Family Structure Score	Total Cases	Percent Successful	Percent Failure
1 = currently resides away from family with few or no family ties	367	86.1	13.9
2 = resides in one parent home; or parent not supporting children	758	85.0	15.0
3 = single emancipated from parental home, with strong family ties	523	90.6	9.4
4 = resides in two-parent home, or parent supporting children	1497	91.2	8.8

As the data in table 9 illustrates those with strong family ties had a lower rate of probation failure (9%) than those with few or no family ties (nearly 14% probation failure). This hypothesis met significance at the 0.01 level.

Hypothesis                      7. The greater a person's frequency of abuse of alcohol or other drugs, the higher the incidence of probation failure.



Category #7 on the Risk Assessment Form is:

Alcohol or drug usage problems  
 1=frequent abuse, needs treatment  
 2=occasional abuse, some disruption of functioning  
 3=prior problem  
 4=no apparent problem

**TABLE 10: Alcohol/Drug and Case Outcomes**

Alcohol/Drugs	Total Cases	Percent Successful	Percent Failure
1=frequent abuse, needs treatment	415	83.1	16.9
2=occasional abuse some disruption of functioning	767	84.4	15.6
3=prior problem	421	90.5	9.5
4=no apparent problem	1542	92.5	7.5

While 7.5% of those with no apparent drug or alcohol problem were probation failures, this compares to nearly 17% of those who frequently abuse drugs or alcohol. This hypothesis met the test of significance at the 0.01 level.

In regard to this category, it should be noted that 67.2% of those persons who were a probation failure had a present or prior alcohol or other drug usage problem. In addition, 51% of the total complement of cases had a present or prior alcohol or other drug usage problem.

Hypothesis

8. The more negative and unmotivated a person is the higher the incidence of probation failure.

Category #8 on Risk Assessment Form is:

Attitude  
 1=rationalizes behavior, negative not motivated to change  
 2=dependent or unwilling to accept responsibility  
 3=motivated to change; receptive to assistance  
 4=motivated; well adjusted; accepts responsibility for actions

**TABLE 11: Attitude and Case Outcomes**

Attitude	Total Cases	Percent Successful	Percent Failure
1=rationalizes behavior; negative not motivated to change	316	82.3	17.7
2=dependant or unwilling to accept responsibility	575	82.4	17.6
3=motivated to change; receptive to assistance	1264	89.2	10.8
4=motivated; well adjusted; accepts responsibility for actions	990	94.7	5.3

Clearly, a person's motivation to change was found to be related to probation success. The data illustrated that nearly 18% of those who were unmotivated and rationalized their behavior were probation failures, compared to 5.3% of those with a positive attitude. This hypothesis met the test of statistical significance at the 0.01 level.

In general, the hypotheses we were working under in regard to the Risk Assessment Scale is that the lower the score an offender had on the total instrument the higher the probability of probation failure. We also hypothesized that this factor of low scores would lead to higher rates of recidivism in each individual category on the Risk Assessment Form. As the reader can see from a review of TABLES 4 through 11 regarding case outcome, our hypotheses proved to be accurate in regard to the Risk Assessment Scale.

While the hypotheses developed around risk variables are largely based on objective facts, the need/strength variables focus on the probation officers observation of the offenders skill development and motivation. We further believed that offenders who are dysfunctional in one or more of the 10 need/strength areas also have a high probability of probation failure. The need/strength variables were also analyzed in the same manner as the offender risk characteristics.

**TABLE 12: Need Area With Identified Problems and Case Outcome**

Need/Area	Total Offenders with a problem	Percent of Total Sample	Percent Successful	Percent Failure
Educational	1206	38.3	84.2	15.8
Employment	1233	39.2	86.0	14.0
Marital/Family	1232	39.2	84.8	15.2
Social	1144	36.4	84.1	15.9
Alcohol Usage	1244	39.6	85.7	14.3
Other Drug Usage	784	24.9	85.2	14.8
Counseling	1358	43.2	84.2	15.8
Health	365	11.6	92.3	7.7
Living Arrangements	656	20.9	83.4	16.6
Financial Management	1148	36.5	86.5	13.5

As the data in TABLES 12 and 13 indicate, people with needs had a higher probability of probation failure than those with no apparent problem. The only exception was health problems. However all the need/strength variables met the test of statistical significance at the 0.01 level.

**TABLE 13: Need Area With No Identified Problems and Case Outcome**

Need Area	Total Offenders With no Problem	Percent of Total sample	Percent Successful	Percent Failure
Educational	1937	61.6	92.0	8.0
Employment	1905	60.6	91.0	9.0
Marital/Family	1911	60.8	91.7	8.3
Social	1996	63.5	91.8	8.2
Alcohol Usage	1900	60.4	91.2	8.8
Other Drug Usage	2359	75.0	90.3	9.7
Counseling	1786	56.8	92.7	7.3
Health	2779	88.4	88.6	11.4
Living Arrangements	2488	79.1	90.5	9.5
Financial Management	1990	63.3	90.6	9.4

TABLES 12 and 13 indicate clearly that those offenders who have an identified need or problem become recidivist (probation failures) at a substantially higher rate than those offenders who do not have any identified need or problem areas. The need/strength area also points out the same issue raised by the Risk Assessment Scale: namely, probation officers are required to work with a substantially disadvantaged segment of the Massachusetts population.

An additional measurement that is being highlighted from the research findings deals with data regarding the percentage of various age groups of the offender population versus the percentage of the general Massachusetts population in the same age groups.

**TABLE 14: Demographic Make Up Of Massachusetts Population VS. Risk/Need Cases**

Age Group	1980% of MA Population in Age Group	% of Risk/Need in Age Group	# of Probation Failures in Age Group	% of the Probation Failures in Age Group
Under 5	5.88	0	0	0%
5 - 9	6.53	0	0	0%
10 - 14	8.04	5.9	28	8.1%
15 - 19	9.56	35.6	166	48.1
20 - 24	9.64	24.2	74	21.5
25 - 29	8.53	14.8	37	10.7
30 - 34	7.78	8.6	21	6.1
35 - 39	6.08	4.3	8	2.3
40 - 44	4.86	2.8	6	1.7
45 +	33.10	3.8	5	1.5
	100%	100%	345	100%

The above display highlights the fact that offenders between 10 - 29 years of age account for 80.5% of the risk/need cases. This compares with 35.8% of the Massachusetts population being in that age group. In addition, the 10 - 29 age group accounts for 88.4% of the recidivist (probation failures).

The data from the nine pilot probation offices also breaks down offenses according to offense categories.

**TABLE 15: Offense Categories and Case Outcomes**

Offense Category	Total Cases	Percent Successful	Percent Failure
Against Persons	663	90.8	9.2
Against Property	1028	87.2	12.8
Non-Assault Sex	14	71.4	28.6
Major Motor Vehicle	416	89.9	10.1
Public Order	680	87.9	12.1
Controlled Substance	343	93.0	7.0
Other	1	100	0

As the data in TABLE 15 illustrates, probation failure was highest (28.6%) among non-assault sex crimes and lowest among controlled substance violations (7.0%). This data met the statistical significance test at the 0.01 level.

One additional demographic factor taken from the Risk/Need sample from the nine pilot probation offices is that of the 3145 cases that have been analyzed, 88.7% of the cases are male, 11.3% are female.

A copy of the assessment of client risk form used in the pilot probation offices can be seen in Appendix A. In addition, a copy of the assessment of client needs/strengths form can be found in Appendix B.

#### **Revision of Risk/Need Classification**

As a result of the use of a Risk/Need Classification System during the past two years in Massachusetts, and based upon the findings highlighted in this report, system-wide Risk/Need Classification Standards were promulgated December 14, 1981. Prior to the effective date of these standards, April 1, 1982, all probation officers in the Commonwealth dealing with adult criminal and juvenile offenders will receive training in the use of the standards.

As a result of the research findings highlighted in this report, a number of changes have been made in the Risk/Need Classification System.

In the PRIOR RECORD CATEGORY, the scoring procedure has been simplified and made more accurate by including all prior prosecutions except those that resulted in not guilty or not delinquent or which included charges that neither carried a potential jail or prison sentence, nor commitment to the Department of Youth Services. As pointed out earlier, in the error rate section of this report, this category had caused the greatest amount of scoring problems.

The number of PRIOR PROBATION REVOCATIONS has been replaced by the number of prior periods or probation supervision during the past 5 years category. Even though the prior category of revocations proved to be a good predictive category by itself, the actual percentage of revocations was low, therefore other findings demonstrated that prior periods of probation supervision would prove to be more reliable.

The category dealing with EMPLOYMENT AND SCHOOL ABSENCE during the past twelve months has been further refined and simplified by establishing a separate scale for school absence. By making use of school attendance figures from 54 cities and towns in Massachusetts, plus the nine pilot probation offices, we have improved the scoring accuracy for this category.

The FAMILY STRUCTURE CATEGORY has also been refined and simplified based upon data generated by the research findings from the nine pilot probation offices, plus additional comparable data collected from Connecticut and Wisconsin probation and parole systems.

The ALCOHOL OR DRUG USAGE category has had one category added, the category of "presently in treatment". The monitoring of statistics from actual case folders in the nine pilot probation offices led us to the conclusion that this important category could be made even more accurate by scoring it in the way it is shown on the new Assessment of Offender Risk Form (Appendix C).

The form for the Assessment of Offender Needs/Strengths has also undergone a number of changes aimed at increased accuracy and simplified use by probation office personnel.

Based upon the monitoring of thousands of probation case folders, it seemed that we could improve the scoring of the Needs/Strengths by changing to a clearer "problem-no problem system". The basic idea here is both simple and profound, the probation officer is expected to work with the offender in making use of identified strengths in overcoming behavioral problems that lead to law-violating behavior.

Supervision plans are required to be written in behavioral terms, with a specific due date. This system allows for the probation officer to know in concrete terms whether or not the offender is moving toward more law-abiding behavior.

The administrative/management role of Chief and Assistant Chief Probation Officers is enhanced in this classification system by requiring regular review and approval of the offender supervision work conducted by the individual probation officer.

The Assessment of Offender Needs/Strengths form can be seen by referring to Appendix D of this report. In addition, Appendix E of this report gives a further explanation of the Needs/Strength scoring.

In general it is believed that the Risk/Needs Classification System has been substantially improved by the changes made from the initial phase of implementing the classification system.

## Summary and Conclusion

The objective of this Risk/Need research project was to identify offender characteristics associated with probation failure. We recognized that reliability of the data was essential to producing meaningful research findings, reliability tests indicate that for most variables in our research project, the data was 99% reliable. For those two variables with less than 99% reliability, the definitions were changed.

With confidence in the reliability of the data submitted by the probation officers in the nine pilot courts, validity tests were conducted on all the variables in the study. A stringent 0.01 level of statistical significance was established. Nearly every variable tested met this criteria for statistical significance.

Looking at the offender characteristics, this research project found that the average probation failure was male, under 19 years of age, had committed a crime against property, had been employed for six months or less during the past year, had a substance abuse problem, as well as a general attitude problem. Also, offender needs were evident in nine out of the ten need categories.

In terms of the risk characteristics, clients characterized as needing maximum supervision had the highest probability of probation failure. Prior record, prior probation revocations, age at first conviction (or juvenile adjudication), time employed or in school, family structure, substance abuse and attitude were found to be significantly associated with probation failure.

Analysis of the ten Need/Strength variables indicated that probation failures have a greater need in the areas of education, employment, marital/family problems, social, alcohol, drugs, counseling, living arrangements and financial management than do those who successfully completed their probation. Only health needs did not indicate greater problems among probation failures versus probation successes.

The product of this research is clear: probation failures have distinct characteristics from those who are successful on probation. Their track record waves a warning flag that immediate probation intervention is essential to supporting law-abiding behavior by the offender in the community. In this research, nearly 90% of new offenses occurred within the first six - months of court ordered probation officer supervision.

The promulgation of Risk/Need Classification and Supervision Standards by the Commissioner of Probation places an emphasis upon the need to promote law-abiding behavior on the part of the offender by balancing the need between public safety and individual offender needs.

By enabling probation officers to identify which offenders should receive the maximum intervention, thereby working more intensely with the offenders posing the greatest risk to the community, this Risk/Need Classification System will serve as a good management tool for gathering valuable offender information leading to better deployment of resources. In an era of diminishing fiscal and operational resources, cost effective use of existing resources becomes imperative.

When considering probation's mandate to service the court, community and offender, the Risk/Need Classification System leads to a more fair and equitable supervision of the offender in the community.

In conclusion, we are reminded of the suggestion that in few other fields of human services has the contrast between aspiration and reality prevailed for as long or been so pronounced as it has been in the administration of the probation supervision process. For centuries, spokesmen have espoused the ideals of fairness, even-handedness, humane treatment and rehabilitation of the offender. With the research results of this project dealing with the Massachusetts Risk/Need Classification System, we have been able to identify the more troublesome offenders. What remains to be seen over time is whether or not we make effective use of the information in bringing about increased efficiency in the administration of Probations Supervision responsibilities.

(RN-3B 7/80)

Appendix A

NAME \_\_\_\_\_ D.O.B. \_\_\_\_\_ S.S. \_\_\_\_\_ SEX \_\_\_\_\_ CT. NO. \_\_\_\_\_

### ASSESSMENT OF CLIENT RISK

1	Prior record felony/misdemeanor convictions or juvenile adjudications during past 5 years	0=3 or more 1=two 2=one 3=none	7 Alcohol or drug usage problems  1=frequent abuse, needs treatment 2=occasional abuse some disruption of functioning 3=prior problem 4=no apparent problem
2	Number of prior probation revocations during past 5 years	0=2 or more 1=one 4=none	
3	Age at first conviction (or juvenile adjudication)	0=16 or younger 1=17-19 2=20-23 3=24 or older	
4	Number of address changes during past 12 months	1=2 or more 2=one 4=none	
5	Time employed during past 12 months (for juvenile cases make this same assessment regarding school attendance)	0=2 months or less 1=3-4 months 2=5-6 months 3=7-8 months 4=9 months or more	
6	Family structure  1=currently resides away from family with few or no family ties 2=resides in one parent home; or parent not supporting children 3=single emancipated from parental home, with strong family ties 4=resides in two-parent home, or parent supporting children		
8	Attitude  1=rationalizes behavior; negative not motivated to change 2=dependent or unwilling to accept responsibility 3=motivated to change; receptive to assistance 4=motivated; well adjusted; accepts responsibility for actions		

RISK CATEGORIES	SCORE AT INITIAL ASSESSMENT	SCORE AT SIX MONTHS	ONE YEAR	TERMINATION
1 PRIOR RECORD				
2 PRIOR REVOCATION				
3 AGE AT FIRST CONVICTION				
4 ADDRESS CHANGES				
5 EMPLOYMENT				
6 FAMILY STRUCTURE				
7 ALCOHOL/DRUG USAGE				
8 ATTITUDE				
TOTAL SCORE				

NEEDS/STRENGTHS	INITIAL ASSESSMENT				SIX MONTHS *				ONE YEAR *				TERMINATION *			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
EDUCATIONAL	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
EMPLOYMENT	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MARITAL/FAMILY	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SOCIAL	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ALCOHOL USAGE	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
OTHER DRUG USAGE	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
COUNSELING	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
HEALTH	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
LIVING ARRANGEMENTS	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
FINANCIAL MANAGEMENT	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

BRIEF NARRATIVE SUMMARY OF ASSESSMENT	PLANNED ACTION STEPS AND DUE DATE
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INITIAL	SIX MONTHS	ONE YEAR

TERMINATION SUMMARY:

[illegible]

Appendix C

MASSACHUSETTS PROBATION SERVICE

ASSESSMENT OF OFFENDER RISK

Name

(First)

(Middle)

(Last)

D.O.B.S.S.SexCT #

Date AssessedAssessed by

(First)

(Middle)

(Last)

Supervising Probation Officer

Offense(s) #1#2

#3Probation Fromto

SCORE AT:				
	INITIAL	FOUR MOS.	TEN MOS.	TERM
1. PRIOR RECORD (ADULT OR JUVENILE) DURING PAST 5 YEARS 0=3 or more 1=two 2=one 4=none				
2. NUMBER OF PRIOR PERIODS OF PROBATION SUPERVISION DURING PAST 5 YEARS 0=2 or more 1=one 4=none				
3. AGE AT FIRST OFFENSE 0=16 or younger 1=17-19 2=20-23 3=24 or older				
4. NUMBER OF RESIDENCE CHANGES DURING PAST 12 MONTHS 1=2 or more 2=one 3=none				
5. EMPLOYED/SCHOOL ABSENCE DURING PAST 12 MONTHS <div>EMPLOYED 0=2 months or less 1=3-4 months 2=5-6 months 3=7-8 months 4=9 months</div> <div>SCHOOL ABSENCE 0=26 or more days 1=21-25 days 2=16-20 days 3=11-15 days 4=10 days or less</div>				
6. FAMILY STRUCTURE 0=currently resides away from family, few or no family ties 1=resides in one-parent home 2=parent not supporting children 3=single, emancipated from parental home, strong family ties, or married no children 4=resides in two-parent home 5=parent supporting children				
7. ALCOHOL OR DRUG USAGE PROBLEMS 0=frequent abuse, needs treatment 1=presently in treatment 2=occasional abuse, some disruption of functioning 3=prior problem 4=no apparent problem				
8. ATTITUDE 1=rationalizes negative behavior; not motivated to change 2=dependent or unwilling to accept responsibility 3=motivated to change; receptive to assistance 4=motivated; well-adjusted; accepts responsibility for actions				
TOTAL RISK SCORE				

MASSACHUSETTS PROBATION SERVICE  
ASSESSMENT OF OFFENDER NEEDS/STRENGTHS

Name \_\_\_\_\_ D.O.B. \_\_\_\_\_ S.S. \_\_\_\_\_ SEX \_\_\_\_\_ CT. # \_\_\_\_\_  
(First) (Middle) (Last)

NEEDS/STRENGTHS	INITIAL ASSESSMENT				FOUR MONTH ASSESSMENT				TEN MONTH ASSESSMENT				TERMINATION ASSESSMENT			
EDUCATIONAL	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
EMPLOYMENT	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
MARITAL/FAMILY	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
SOCIAL	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
ALCOHOL USAGE	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
OTHER DRUG USAGE	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
COUNSELING	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
HEALTH	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
FINANCIAL MANAGEMENT	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2
MOTIVATION/ABILITY	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2	-2	-1	+1	+2

NEEDS/STRENGTHS BRIEF NARRATIVE SUMMARY		SUPERVISION PLAN AND DUE DATE	
INITIAL			
FOUR MONTHS			
TEN MONTHS			

TERMINATION SUMMARY:

PROBATION SUPERVISION VIEWED AND APPROVED BY AND DATE	DATE			DATE			DATE			DATE		
	INITIAL ASSESSMENT			FOUR MONTHS			TEN MONTHS			TERMINATION		
	MAX	MOD	MIN	MAX	MOD	MIN	MAX	MOD	MIN	MAX	MOD	MIN
				SUPV. PLAN ADDRESSED			SUPV. PLAN ADDRESSED			SUPV. PLAN ADDRESSED		
				YES NO			YES NO			YES NO		

**MASSACHUSETTS PROBATION SERVICE  
SCORING PROCEDURES FOR ASSESSMENT  
OF OFFENDER NEEDS/STRENGTHS**

	-2	-1	+1	+2
<b>EDUCATIONAL:</b>	Minimal skill/ability level causing severe adjustment problems	Low skill/ability level causing minor adjustment problems	Adequate skills/ability no apparent problems	High school or above skill/ability level
<b>EMPLOYMENT:</b>	Unemployed and virtually unemployable; needs training	Unsatisfactory employment; or unemployed but has adequate job skills/abilities	Secure employment; no difficulties reported; or homemaker, student or retired	Satisfactory employment for one year or longer
<b>MARITAL/FAMILY RELATIONSHIPS:</b>	Major disorganization or stress	Some disorganization or stress but potential for improvement	Relatively stable relationships	Relationships and support exceptionally strong
<b>SOCIAL:</b>	Peer group relationships negative or non-existent	Peer group relationships occasionally negative	No negative relationships	Good peer support and influence
<b>ALCOHOL USAGE:</b>	Frequent abuse; serious dysfunctional behavior; needs treatment	Occasional abuse, some disruption of functioning	No difficulties reported or observed	No known use
<b>OTHER DRUG USAGE:</b>	Frequent abuse; serious dysfunctional behavior; needs treatment	Occasional abuse, some disruption of functioning	No difficulties reported or observed	No known use
<b>COUNSELING:</b>	Behavior problems that severely limit independent functioning	Behavior problems that indicate some need for assistance	Able to function independently	Well adjusted; accepts responsibility for actions
<b>HEALTH:</b>	Serious handicap or chronic illness; needs frequent medical care	Handicap or illness interferes with functioning on a recurring basis	No current health problems	Sound physical health, seldom ill
<b>FINANCIAL MANAGEMENT:</b>	Severe difficulties in handling finances	Situational or minor difficulties	No current difficulties	Long standing pattern of self sufficiency; e.g. good credit rating
<b>MOTIVATION/ABILITY:</b>	Offender both unable and unwilling to address problems	Offender willing but unable to address problems	Offender able but unwilling to address problems	No problem; offender is able and willing to address daily living situations



**END**