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**RELEASE-ON-RECOGNIZANCE
RECOMMENDATION SYSTEM
FOR JUVENILE OFFENDERS ARRAIGNED
IN NEW YORK CITY ADULT COURTS**

PART II

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FINAL REPORT

March 2000

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PART II

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1. INTRODUCTION

On April 28, 1996, the New York City Criminal Justice Agency, Inc. (CJA) implemented a release-on-recognizance recommendation system for children under the age of 16 who are brought for prosecution in the adult courts in New York City under the State's Juvenile Offender Law. The recommendation system provides the Criminal Courts¹ at arraignment with a recommendation for release on recognizance (ROR) based on the juvenile's community ties.

Only after the ROR-recommendation system for juveniles had been in use for several years was it possible to study the effect of the system on release rates and to validate the system's ability to make accurate recommendations. The first report from this validation research project was released in August 1999. Part I described the population of juvenile defendants included in the study, presented outcome measures for the ROR-recommendation system, and successfully validated the system's ability to identify juveniles with a low probability of failure to appear.

Part II concludes our presentation of the results of this research. The current report extends the validation analysis and addresses some additional questions raised by the analysis done in Part I. The Introduction describes the ROR-recommendation system for juveniles and presents a brief summary of the research results reported in Part I. Readers who are familiar with the earlier report may wish to skip directly to the new research results, beginning with Section 2.

¹ New York has a two-tiered court system. The lower (Criminal) court has jurisdiction over cases in which the most severe charge is a misdemeanor or a charge of lesser severity. The superior (Supreme) court has jurisdiction over cases in which the most severe charge is a felony. Most cases are arraigned in Criminal Court, and cases sustained at the felony level must be brought for prosecution into Supreme Court. Only juveniles charged with certain felony offenses are brought into adult court under the Juvenile Offender Law, so if prosecution on the felony charge proceeds, JO cases must be transferred to Supreme Court for disposition.

The New York City Criminal Justice Agency, Inc.

The New York City Criminal Justice Agency, Inc. (CJA) is a not-for-profit corporation that provides a variety of criminal justice services to the City of New York through a contract with the Mayor's Office of the Criminal Justice Coordinator. These services consist of three principal activities. The first activity is to interview arrestees held for Criminal Court arraignment in order to provide prosecutors, defense counsel, and judges with background information regarding arrestees' community ties. The community-ties information is used for the release-recommendation system, which is based on an assessment of the likelihood that individual defendants, if released on their own recognizance, would appear for subsequent court appearances.

The second activity is to notify released defendants of future court appearances. The third is to perform research and evaluation regarding issues related to the effective operation of criminal justice processes in New York City.

The CJA Release-On-Recognizance Recommendation System

In New York risk of flight is the only basis permitted by law for determining the release status of an accused person awaiting adjudication in the adult courts, so the CJA recommendation system was developed accordingly to predict likelihood of failure to appear (FTA) for scheduled court appearances. Research done over a quarter of a century ago showed that having roots in the community was an excellent predictor of a low risk of FTA in New York City (Lazarsfeld, 1974). A release-on-recognizance (ROR) recommendation system based on this research has been in use for adults in New York City since the 1970s.² Soon after arrest, CJA staff interview virtually every defendant held for arraignment. The purpose of the interview is to col-

² The CJA release-recommendation system for adults has recently undergone an extensive review and is in the process of revision. See Siddiqi (1999).

lect community-ties information, which is used to assign a recommendation category. The recommendation is presented to the judge at arraignment in Criminal Court as an aid in making the release decision.

Development of a Release-On-Recognizance Recommendation System for Juvenile Offenders

The current recommendation system for adults dates to 1974, when sociologist Paul Lazarsfeld did the empirical research that resulted in its development (Lazarsfeld, 1974). Juveniles were not included in this recommendation system because it was not until 1978 that New York passed its Juvenile Offender (JO) Law, which created a category of juveniles to be brought for prosecution directly in adult court. Once the JO law was passed and juveniles began to be arraigned in adult court, they were interviewed along with the adults but the applicability of the adult recommendation system to juveniles seemed questionable. Consequently, information on juveniles' community ties was presented to the court, but with no recommendation about the risk of flight if the juvenile were released.

The JO Law mandated that the prosecution of 14- and 15-year-olds arrested in New York for certain serious felony offenses, and 13-year-olds arrested for second-degree murder, be initiated directly in the adult court. (The specific Juvenile Offender felony charges are listed in Appendix A.) Cases may subsequently be "waived down" to juvenile court (Family Court in New York), but the court of original jurisdiction for Juvenile Offenders in New York is the adult court. This is in contrast to the system used in many states whereby original jurisdiction for juveniles is in the juvenile court, and they may be "waived up" to adult court.

In the 1980s CJA first conducted research on the factors that predict failure to appear for Juvenile Offenders (Metchik, 1987), but it was not until the Annie E. Casey Foundation helped

fund new research, completed in 1996, that an ROR-recommendation system was developed specifically for them. The recommendation system for JOs was developed using data from a cohort of juveniles arrested in Fiscal Year (FY) 1992 (July 1, 1991, through June 30, 1992). The results of the development research showed that the two aspects of community ties that best predicted a juvenile's failure to appear were school attendance and whether the juvenile expected someone to come to the Criminal Court arraignment. These two items became the basis for assigning a category of "Recommended" or "Not recommended" to each juvenile arrested and held for arraignment in New York's Criminal Court (Winterfield, 1996).

The development research showed that those who fit the criteria for "not recommended" were more than twice as likely to fail to appear for a court appearance than those who fit the criteria for "recommended." And a large majority—70 percent—of the Juvenile Offenders arrested in FY1992 and arraigned in adult courts citywide satisfied the criteria for a positive recommendation.

How the Juvenile ROR-Recommendation System Works

CJA interviewers who conduct all other pre-arraignment interviews also interview Juvenile Offenders. Interviewers follow the standard procedure for conducting any ROR interview, which includes asking questions about the defendant's employment, living arrangements, financial status, and other indicators of ties to the community. An attachment to the adult interview form is added when the defendant is a JO. The two items previously identified as predictors of FTA for JOs appear as questions on the JO attachment:

- | |
|---|
| <ol style="list-style-type: none">1. Is defendant in school full or part time?2. Does defendant expect someone at arraignment? |
|---|

The CJA interviewer assigns a JO recommendation category based on the defendant's response to these questions and the results of attempts to verify³ school attendance. (Verification is not attempted for the defendant's claim to expect someone at arraignment.)

On the front of the CJA Interview Report is a space for the ROR recommendation. Prior to April 28, 1996, "Juvenile: For Information Only [4E]" was entered in this space on JO reports. Beginning April 28, 1996, interviewers enter on JO reports one of the ROR-recommendation categories shown below:

JUVENILE OFFENDER RECOMMENDATION CATEGORIES

- [J7] Juvenile Offender: No Recommendation Due To:
 - [J7A] A. Bench Warrant Attached to NYSID
 - [J7B] B. No NYSID Available
 - [J7C] C. Murder Charge (125.25 or 110/125.25)
 - [J7D] D. Interview Incomplete
- [J6] Juvenile Offender: Not Recommended
- [J5] Juvenile Offender: Recommended

The categories are listed in descending numerical order (J7 first, J5 last) because this is the order of precedence. A "J5" (recommended) or "J6" (not recommended) category may be overridden by a policy consideration that excludes arrestees from receiving a recommendation. The four policy exclusions are: an outstanding bench warrant (J7A); no NYSID sheet⁴ (J7B); arrest on a murder charge (J7C); or an incomplete interview (J7D).

³ During the interview the arrestee is asked for the name and telephone number of someone who could verify certain items of information. This contact person is called by CJA staff. If the contact person confirms the information, either "Yes verified" or "No verified" is recorded. If the contact person cannot be reached, the arrestee's answer is recorded as "Yes" or "No" without verification. If the contact person gives information that conflicts with the arrestee's statement, and this conflict cannot be resolved by further questions, the response is recorded as an "Unresolved conflict."

⁴ New York State Identification (NYSID) sheets are initiated by the defendant's fingerprints and describe his or her criminal history (also known as "RAP" sheets). After the defendant is fingerprinted by the police, the prints are transmitted electronically to the New York State Division of Criminal Justice Services (DCJS) in Albany. A few

If there is no policy exclusion, the recommendation is assigned as follows:

[J5] RECOMMENDED. Juveniles who claim that they are enrolled in school either full or part time, and for whom this response is verified, are “recommended” for release on recognizance. If school status cannot not be verified, the juvenile is still recommended if he or she is expecting someone at arraignment.

[J6] NOT RECOMMENDED. Juveniles who claim that they are not enrolled in school, and for whom this response is verified, are “not recommended” for release on recognizance. If school status cannot not be verified, the juvenile is not recommended unless he or she is expecting someone at arraignment.

Part I Results: Summary

A data set of JOs arrested from April 28, 1996 (the date of implementation of the recommendation system), through June 30, 1997, was developed in order to test and validate the recommendation scheme after it had been in use long enough for an adequate number of cases to have been processed and disposed under the new system. The 988 cases included in this 1996-1997 data set were followed through June 30, 1998, allowing at least a full year for all arrests to be processed by the courts and for the collection of FTA data. An “at-risk” sample of 705 cases was extracted from the complete data set for analysis of FTA. This sample consisted of only those cases in which the defendant was released from custody and was thus at risk for failure to appear for at least one scheduled court appearance at any time from Criminal Court arraignment through sentencing in Supreme Court for convicted cases. A more complete description of the

hours later DCJS returns a NYSID sheet to Central Booking, and CJA staff use it to transcribe the defendant’s NYSID number and criminal history information onto the CJA Interview Report.

data file, including the criteria for selection of cases, and a detailed description of the technical aspects of the creation of the at-risk sample, is provided in Appendix B.

The Part I report presented data showing that 79 percent of the 1996-1997 JOs were assigned a positive recommendation, which was slightly higher than the proportion estimated from the development research using FY 1992 arrests (70% was the estimate). However, the ROR rate at Criminal Court arraignment was lower in 1996-1997 than in FY 1992: 38 percent in 1996-1997, compared to 52 percent in FY 1992.

It was found that the ROR-recommendation category assigned to a JO had only a small effect on whether he or she was released on recognizance (ROR'd) at Criminal Court arraignment. Of those who were recommended, 42 percent were ROR'd at Criminal Court arraignment, compared to 31 percent of those who were not recommended. This indicates that the recommendation category was related to the release decision, but not strongly. It was striking that even with a positive recommendation, more than half were detained at arraignment. These data suggest that factors other than the CJA recommendation were influential in the release decision.

For the validation analyses, several techniques were used to assess the ability of the recommendation system to predict FTA for the cohort of 1996-1997 JOs. The issuance of a bench warrant was used as the indicator of failure to appear, and only one missed court appearance (or warrant) per case was counted. Case-based FTA rates were obtained by dividing the number of cases with a failure to appear prior to sentencing (or disposition, if there was no conviction) by the total number of at-risk cases.

The pre-sentence FTA rate for recommended JOs in the study was 9 percent; for JOs who were not recommended, the FTA rate was 29 percent. This meant that a released JO who was not recommended was 3.2 times more likely to FTA prior to sentencing than one who had been

recommended. All of the techniques used to measure the predictive power of the recommendation system for the 1996-1997 cohort produced results that equaled or exceeded the results obtained in the development study for FY 1992 arrests. Considering a positive recommendation to be a prediction of no FTA, and a negative recommendation to be a prediction of FTA, the system produced correct predictions for 85 percent of the cases.

Although the analyses reported in Part I were sufficient to validate the ROR-recommendation system successfully, further research was needed to gain a better understanding of the factors affecting release and FTA. One of the principle areas of concern was whether the recommendation would work as well if post-disposition, pre-sentence data were excluded from the analysis. Another area for further research was suggested by the finding that the CJA recommendation did not appear to have a very strong influence on the release decision at Criminal Court arraignment. It was hoped that analysis of additional factors associated with ROR at arraignment could help explain the wide disparity between the proportion of JOs recommended for ROR and the proportion who were actually released.

A related question was raised by the necessity of excluding detained defendants from the at-risk sample that was used in the FTA analysis. In the Part I report, we noted the possibility that the at-risk sample might be biased in some way because it included only released defendants, and we promised to address this issue in Part II.

These topics are covered in the remainder of this report. Section 2 replicates the validation analyses for pretrial (pre-disposition) data. Section 3 analyzes factors other than the CJA recommendation that are associated with ROR at Criminal Court arraignment. Section 4 addresses the issue of sample bias. In Section 5, the results are summarized and discussed.

Two other topics were mentioned in the plans for further analysis outlined at the conclusion of the Part I report. One was a study of issues of timing and their effect on FTA. For example, we proposed to analyze how length of time at risk and the timing of the first release affected FTA, and how long it took juveniles to return to court after a bench warrant had been issued. This topic is not covered here because a preliminary examination of the data showed that there were too few cases with a failure to appear to allow the kind of analysis that would be required to obtain definitive results.

The other proposed topic was an analysis of the effect of bail amount on length of time in detention and likelihood of pretrial release. This subject was not included here because CJA now anticipates initiating a more comprehensive study of release decisions and bail-setting practices and the effects of bail on release and case outcomes. Since bail issues are not directly relevant to the current study, we will defer addressing them until they can be incorporated in a larger project.

2. VALIDATION OF THE ROR-RECOMMENDATION SYSTEM FOR JUVENILE OFFENDERS AS PREDICTOR OF PRETRIAL FTA:

Confirming The Results Of The Pre-Sentence FTA Analysis

In Part I, release rates and FTA rates were reported based on outcomes up to the date of sentencing. The sentencing date, if there was one, was used as the cutoff point in order to replicate the analysis that was done to develop the ROR-recommendation system.

However, the CJA recommendation is presented to the Criminal Court arraignment judge as a recommendation for *pretrial* release, or more generally, *pre-disposition* release. The recommendation may play little or no part in release decisions made after conviction. For this reason post-conviction court appearances are often excluded from analyses of FTA. For example, most of the FTA rates routinely reported by CJA are for appearances up to the date of the conviction or other final disposition, and do not include subsequent court dates.⁵

Post-conviction court appearances up to sentencing were nevertheless included in the analysis for the development of the ROR-recommendation system for JOs in order to maximize the number of cases. This was considered advisable because of the small number of cases in the data set of FY 1992 JOs, and their low FTA rate. By including convicted defendants whose initial release occurred while awaiting sentencing, the size of the at-risk sample was augmented; and by including post-conviction, pre-sentence FTA, the number of cases with a failure increased. The larger sample size and the greater number of FTAs made it more likely that factors affecting FTA could be identified using statistical methods. For the validation data set of

⁵ CJA's *Semi-Annual Report* series presents most FTA rates for pre-disposition appearances only. Some comparative FTA rates are also reported for post-conviction, pre-sentence appearances; and for post-sentence appearances (e.g., court dates scheduled for fine payment).

1996-1997 cases, the size of the at-risk sample increased by 11 percent (from 633 to 705) when post-conviction releases were included. (As explained in the Introduction, the “at-risk sample” is the subset of the data set that includes all defendants who were released prior to a scheduled court appearance, and were thus at risk for FTA.) The number of cases with an FTA increased by 56 percent (from 48 to 75) when post-conviction FTAs were included.

In this report the term *pretrial* is used to denote events that occurred prior to the final disposition, which includes conviction by plea or by trial, as well as favorable dispositions such as acquittal, dismissal, or transfer to the juvenile court. The term *pre-sentence* is used to denote events that include pretrial events and also include, for cases in which there was a conviction, the period following conviction until the sentencing date.

Now that the ROR-recommendation system for juveniles has been validated successfully as a good predictor of pre-sentence FTA, as reported in Part I, we turn to an examination of how the results might differ for pretrial FTA. This is to ensure that the ROR recommendation system works as effectively for its intended purpose—to assess pretrial risk of failure—as it does when post-conviction risk of failure is also included.

Pretrial and Pre-Sentence Comparisons: Release and FTA Rates

The pretrial release rate was lower than the release rate that included all pre-sentence releases. The at-risk sample used for the Part I analyses included 705 cases in which the defendant was released prior to sentencing, of which 72 were cases in which the defendant was not released until he or she pled guilty. Excluding these post-conviction releases from the at-risk sample lowered the “ever-released” rate from 72 percent to 65 percent, as shown in **Table 1**.

New York City Criminal Justice Agency

TABLE 1
Timing of Release
Juvenile Offenders Arrested 1996-1997¹

	Number	Percent
Released at arraignment	395 ²	41%
Released post-arraignment, pre-disposition	238	24%
Subtotal: Ever released pre-disposition	633	65%
Released post-disposition, pre-sentence	72	7%
Total: Ever released pre-sentence	705	72%
N = 974 (100%) (excluding 13 cases that were disposed at arraignment and 1 case with no Criminal Court appearance history)		

¹ Includes arrests from April 28, 1996 through June 30, 1997. The at-risk sample includes juveniles released on recognizance and on bail.

² In one additional case the defendant was ROR'd at arraignment, re-arrested later the same day, and held in custody for the remainder of the case. Only cases in which the defendant was at risk for the next scheduled court appearance are included here.

FTA rates were lower, too, when post-conviction outcomes were discounted. The small number of defendants who were released for the first time after conviction (72) had an FTA rate of 13 percent. The post-conviction FTA rate was identical—13 percent—for those who had been released pretrial and were also at risk post-conviction (**Table 2**, shaded cells). When the post-conviction FTAs were included in the total, the FTA rate rose from 8 percent (pretrial) to 11 percent (pre-sentence). These rates are given in the cells enclosed with double lines.

Association Between ROR Recommendation and Pretrial Release

A juvenile who was recommended for ROR was more likely to be released at Criminal Court arraignment than one who was not recommended, as reported in Part I (42% of recommended JOs were released on recognizance at arraignment, compared to 31% of not-recommended JOs). This indicates a weak relationship. When all releases prior to disposition were examined for a relationship with recommendation, however, it was found that being recommended conferred almost no advantage. **Table 3** shows the relationship between the CJA recommendation and pretrial release. Of those who were recommended for ROR, 54 percent were released on recognizance before disposition, compared to 52 percent of those who were not recommended. The association between a positive ROR recommendation and pretrial bail-making was a little stronger: 15 percent with a positive recommendation made bail prior to disposition, compared to 10 percent with a negative recommendation. No data were available on defendants' finances, but bail-making could be related to a positive recommendation because defendants with strong community ties may have more access to financial resources. These findings are nearly identical to the conclusion reported in Part I that there was no relationship between recommendation and ROR prior to sentencing.

New York City Criminal Justice Agency

TABLE 2
Pretrial and Pre-Sentence FTA Rates
By Timing of Release
For Juvenile Offenders (1996-1997 Arrests)

Timing of Release	FTA Rate				
	No FTA	Pretrial FTA	Post-conviction & pre-sentence FTA	Total pre-sentence FTA	Row total
Released pretrial	567 90%	48 8%	18 3%	66 10%	633 100%
At risk pre- and post-conviction	116 82%	8 6%	18 13%	26 18%	142 100%
At risk pretrial only	451 92%	40 8%	—	40 8%	491 100%
Earliest release post-conviction & pre-sentence	63 88%	—	9 13%	9 13%	72 100%
Total released pre-sentence	630 89%	48 7%	27 4%	75 11%	705 100%

New York City Criminal Justice Agency

TABLE 3
Pretrial Release Rate
By CJA Recommendation
For Juvenile Offenders (1996-1997 Arrests)

Ever Released Status	Recommendation Category						Row Total
	Recommended (J5)	Not recommended (J6)	No recommendation because of Bench Warrant (J7A)	No recommendation because no NYSID (J7B)	No recommendation because of murder charge (J7C)	No recommendation because of incomplete interview (J7D)	
Released on recognizance at first release	412 54%	51 52%	2 50%	1 33%	2 7%	—	468 52%
Posted bail at first release	112 15%	10 10%	—	1 33%	4 15%	1 100%	128 14%
Total released pretrial	524 68%	61 62%	2 50%	2 67%	6 22%	1 100%	596 66%
Held on bail at arraignment, not released pretrial	243 32%	35 36%	2 50%	1 33%	10 37%	—	291 32%
Remanded at arraignment, not released pretrial	1 <1%	2 2%	—	—	11 41%	—	14 2%
Total detained through disposition	244 32%	37 38%	2 50%	1 33%	21 78%	—	305 34%
Column Total	768 100%	98 100%	4 100%	3 100%	27 100%	1 100%	901 100%

Percentages may not sum to exactly 100% because of rounding.

87 cases without a JO recommendation stamp or disposed at arraignment or missing a release status were excluded.

Post-arraignment ROR actually had a negative association with the CJA recommendation, which is why the positive association between ROR and release at Criminal Court arraignment was all but erased when post-arraignment releases were included. **Table 4** shows that for those who were detained at arraignment, the likelihood of eventual pretrial ROR was greater for those who were *not* recommended (31%) than for those who were (22%). It is likely that some post-arraignment RORs occurred because an indictment was not obtained within the statutory time limit for detained defendants. Section 180.80 of the New York Criminal Procedure Law (CPL) mandates that a defendant held in custody upon a felony complaint must be released if an indictment has not been voted or a hearing commenced within 120 hours after arrest (144 hours if a Saturday, Sunday, or legal holiday occurs during such custody). We could not conclusively identify the cases in which the defendant was released to comply with the statute, but an estimated 40 percent of the post-arraignment RORs in this research probably fit into this category. Since the time limitation applies regardless of risk of FTA, it is not surprising that a positive recommendation did not predict post-arraignment ROR. It is not clear, however, why the relationship appears to be reversed.

Association Between ROR Recommendation and Pretrial FTA

The relationship between recommendation category and FTA was also re-examined, with results that were similar to the results reported in Part I for pre-sentence FTA rates. As shown in **Table 5**, the citywide pretrial FTA rate for recommended JOs was 6 percent, compared to 18 percent for JOs who were not recommended. Thus, a juvenile who was not recommended for ROR was three times more likely to fail to appear pretrial than a juvenile who was recommen-

New York City Criminal Justice Agency

TABLE 4
Post-Arrest, Pretrial Release
By CJA Recommendation
(Cases in which the defendant was detained at Criminal Court arraignment)

Release Status	Recommendation Category			
	Recommended (J5)	Not recommended (J6)	No recommendation (J7A, B, C, & D)	Row Total
Released pretrial (post-arrest)	178 42%	31 46%	9 27%	218 42%
ROR at first release	94 22%	21 31%	3 9%	118 23%
Bail at first release	84 20%	10 15%	6 18%	100 19%
Detained to disposition	244 58%	37 54%	24 73%	305 58%
Column Total	422 100%	68 100%	33 100%	523 100%

Percentages may not sum to exactly 100% because of rounding.
54 cases without a JO recommendation were excluded.

New York City Criminal Justice Agency

TABLE 5
Pretrial FTA Rate
By Recommendation Category and Borough of Arrest
Cases At Risk Pretrial

Borough of Arrest	Recommendation Category			
	Recommended (J5)	Not recommended (J6)	No recommendation (J7A, B, C, & D)	Borough Total
Brooklyn	17 (8%) (base=216)	3 (19%) (base=16)	0 (base=6)	20 (8%) (base=238)
Manhattan	8 (9%) (base=88)	1 (8%) (base=12)	2 (67%) (base=3)	11 (11%) (base=103)
Queens	4 (5%) (base=86)	1 (11%) (base=9)	—	5 (5%) (base=95)
Staten Island	1 (8%) (base=13)	0 (base=1)	—	1 (7%) (base=14)
Bronx	4 (3%) (base=121)	6 (27%) (base=22)	0 (base=2)	10 (7%) (base=145)
Citywide Total	34 (6%) (base=524)	11 (18%) (base=60)	2 (18%) (base=11)	47 (8%) (base=595)

38 cases without a JO recommendation stamp were excluded.

The number (and percentage) within each cell represents those who failed to appear. The base within each cell is the number who failed to appear plus the number who did not fail to appear.

ded. The comparable pre-sentence FTA rates reported in Part I were 9 percent and 29 percent; or a juvenile who was not recommended was 3.2 times more likely to fail to appear pre-sentence than one who was recommended. This indicates that the relationship between recommendation and FTA was strong for pretrial FTA, and slightly stronger when post-conviction FTAs were included.

Borough differences followed the same pattern as was reported in Part I for pre-sentence FTA rates. Manhattan had the highest FTA rates, both pretrial and pre-sentence (11% pretrial FTA) and Queens the lowest (5% pretrial FTA). The strongest association between recommendation and FTA (both pretrial and pre-sentence) was found in the Bronx. A juvenile who was not recommended in the Bronx was nine times more likely to FTA pretrial than one who was recommended: the rates were 27 percent and 3 percent respectively.

The only borough in which a different result was found when post-conviction outcomes were excluded was Manhattan, where pretrial FTA did not appear to be related to recommendation (9% for recommended JOs; 8% for not recommended). The pre-sentence analysis had found a strong association between recommendation and FTA in Manhattan. However, there were only 12 cases in which the defendant was not recommended in Manhattan (15 for the pre-sentence analysis), which is too few cases for a stable result. In fact, only the Bronx had over 20 cases in the not-recommended category, so for that category most of the borough results should be interpreted with caution.

Factors That May Affect the Association Between Recommendation and Pretrial FTA: Release Type and Timing of Release

The pre-sentence analysis indicated that the association between recommendation and FTA could not be accounted for by release type. Regardless of whether the release was on recognizance or bail, being recommended was associated with a much lower likelihood of FTA.

The current analysis confirms that the relationship between recommendation and pretrial FTA cannot be explained by release type. Among those who were released on recognizance, recommendation was a good predictor of pretrial FTA. **Table 6** shows that the pretrial FTA rates for juveniles who were ROR'd were 7 percent for those who were recommended and 22 percent for those who were not recommended. For those who were released on bail, recommendation did not predict FTA, but the number of bailed releasees who were not recommended (10) was too small for stable results.

The pre-sentence analysis also suggested that bail was not any more effective than ROR in ensuring that defendants appeared for their scheduled court dates. The pre-sentence FTA rate was 11 percent for both types of release. For pretrial FTA, the data presented in Table 6 show that bail was associated with a slightly lower rate overall. For those released on recognizance, the pretrial FTA rate was 9 percent; for those released on bail, pretrial FTA was 5 percent.⁶ However, for the vast majority who were recommended for release the difference in pretrial FTA rates between the ROR and the bail groups was negligible: 7 percent and 5 percent respectively.

Further analysis revealed that release type had a somewhat stronger association with FTA when release occurred at arraignment. **Table 7** shows that there were no FTAs among the small

⁶ The FTA rate given in Table 6 for those released on recognizance differs slightly from the rate given in Table 7 because the base for percentaging is different: 38 defendants missing a JO recommendation were excluded from Table 6 but not from Table 7.

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TABLE 6
Pretrial FTA Rate
By Recommendation Category and Release Type
Cases At Risk Pretrial

Recommendation Category	Release Type at First Release*		
	ROR	Bail	Row Total
Recommended (J5)	29 (7%) (base=414)	5 (5%) (base=110)	34 (6%) (base=524)
Not recommended (J6)	11 (22%) (base=50)	0 (base=10)	11 (18%) (base=60)
No recommendation (J7A, B, C, & D)	1 (20%) (base=5)	1 (17%) (base=6)	2 (18%) (base=11)
Column Total	41 (9%) (base=469)	6 (5%) (base=126)	47 (8%) (base=595)

38 cases without a JO recommendation stamp were excluded.

* For cases with an FTA, the case was categorized according to the latest release type prior to the FTA. Release type prior to pretrial FTA differed from first release type in only one case (the change was from bail to ROR).

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TABLE 7
Pretrial FTA Rate
By Timing of Release and Release Type
Cases At Risk Pretrial

Timing of First Release	Release Type at First Release*		
	ROR	Bail	Row Total
Arrestment	27 (7%) (base=366)	0 (base=29)	27 (7%) (base=395)
Post-arrestment	14 (11%) (base=133)	7 (7%) (base=105)	21 (9%) (base=238)
Column Total	41 (8%) (base=499)	7 (5%) (base=134)	48 (8%) (base=633)

* For cases with an FTA, the case was categorized according to the latest release type prior to the FTA. Release type prior to pretrial FTA differed from first release type in only one case (the change was from bail to ROR).

group who made bail at arraignment, compared to 7 percent of those who were ROR'd at arraignment. Perhaps the more significant comparison is between the overall FTA rate for those who were released on bail (5%) and the FTA rate for those who were ROR'd at arraignment (7%) — a negligible difference. Those who were ROR'd post-arraignment were twice as likely to have received a negative recommendation than those who were ROR'd at arraignment (18% and 9% respectively, not shown), and they were likely to have been released for procedural reasons. As suggested previously, many of the post-arraignment RORs may have occurred only because an indictment had not been obtained within the time limit for detained defendants.

Association Between Charge Severity and Pretrial FTA

Among juveniles who were released at some point pretrial, those who were recommended were more likely (than those who were not recommended) to be charged with a Class-C felony: 34 percent of recommended JOs (179 of 519) were charged with a Class-C felony, compared to 25 percent of not-recommended JOs (15 of 59) in this charge-severity category. Nevertheless, data presented in **Table 8** show that this association between recommendation and charge severity did not account for the lower pretrial FTA rate for recommended juveniles. Within each severity class a recommended juvenile was less likely to FTA than one who was not recommended. For defendants charged with a Class-B felony, a negative recommendation more than doubled the likelihood of pretrial FTA (8% for recommended juveniles; 18% for not recommended). For defendants charged with a Class-C felony, the association was stronger: Their pretrial FTA rates were 4 percent (recommended) and 20 percent (not recommended).

Overall, juveniles charged with more serious offenses (Class-B felonies) were slightly more likely to FTA than defendants charged with less serious (Class C) offenses: The pretrial

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TABLE 8
Pretrial FTA Rate
By Affidavit-Charge Severity and Recommendation Category
Cases At Risk Pretrial

Affidavit Charge Severity	Recommended J5	Not Recommended J6	No Recommendation J7	Row Total
Class-B Felony	27 (8%) (base=340)	8 (18%) (base=44)	1 (11%) (base=9)	36 (9%) (base=393)
Class-C Felony	7 (4%) (base=179)	3 (20%) (base=15)	1 (100%) (base=1)	11 (6%) (base=195)
Column Total	34 (7%) (base=519)	11 (19%) (base=59)	2 (20%) (base=10)	47 (8%) (base=588)

8 cases with charges of other severity classes and 37 additional cases without a valid JO recommendation were excluded.

FTA rates were 9 percent and 6 percent respectively. The difference in FTA rates between the two severity classes was greater when post-conviction FTAs were included (13% for Class B and 7% for Class C, as reported in Part I). Regardless of whether the analysis covers all pre-sentence FTA or only pretrial, the relationship of FTA to charge severity was weaker than its relationship to recommendation.

Configuration Analysis (Pretrial FTA)

The JO recommendation system was developed using a technique called configuration analysis, which divided the sample sequentially into groups based on factors that were found to have a strong statistical relationship to pre-sentence FTA. These factors then became the criteria for the recommendation: verified school attendance; and whether the juvenile expected someone to come to the Criminal Court arraignment. A data set of FY1992 arrests was used for the development research. A major component of the validation presented in Part I consisted of replicating the configuration analysis using the validation data set of 1996-1997 arrests. The current objective is to repeat the replication using pretrial, rather than pre-sentence, FTA as the outcome variable. (The reader is referred to Part I for a fuller explanation of configuration analysis and the development of the JO recommendation system.)

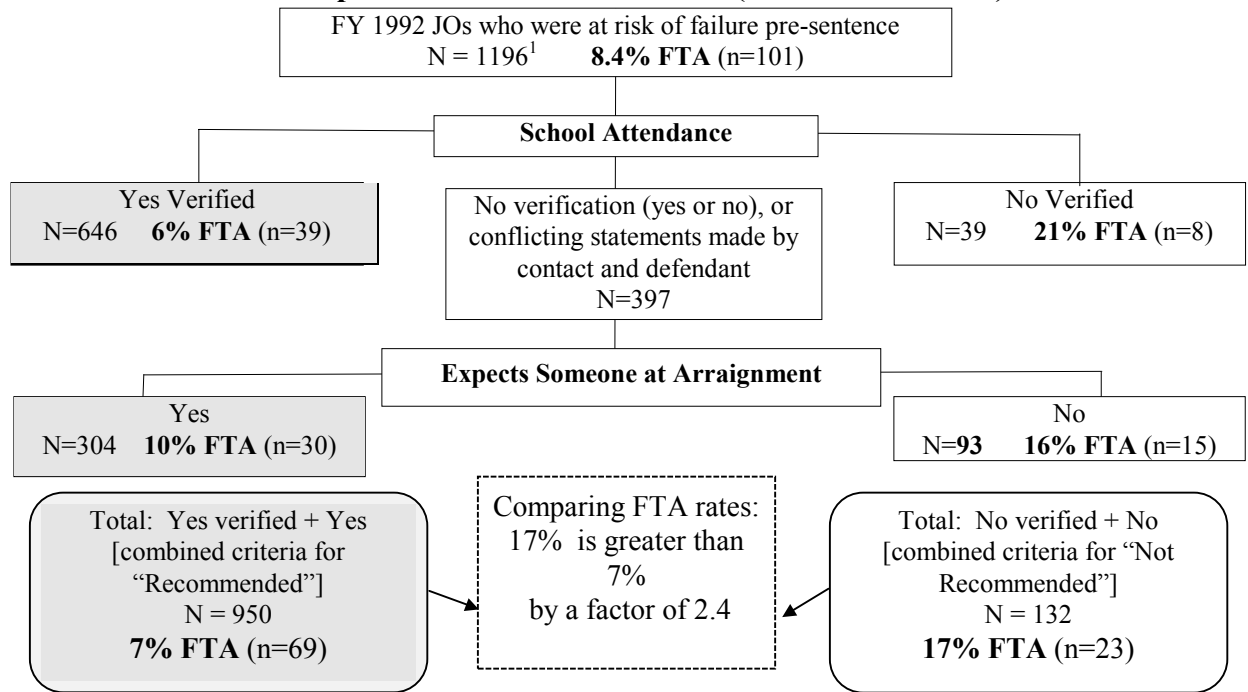
Figure 1 presents the results of the configuration analysis for the development cohort (top) and for the 1996-1997 validation cohort excluding post-conviction data (bottom). The figure illustrates how the samples were divided according to defendants' responses to the criterion items, and how responses to these items affected FTA rates. The FTA rates for the development cohort, at the top of the figure, are pre-sentence rates. The FTA rates for the validation cohort, at the bottom, are pretrial rates. Shaded boxes on the left represent responses that would result in

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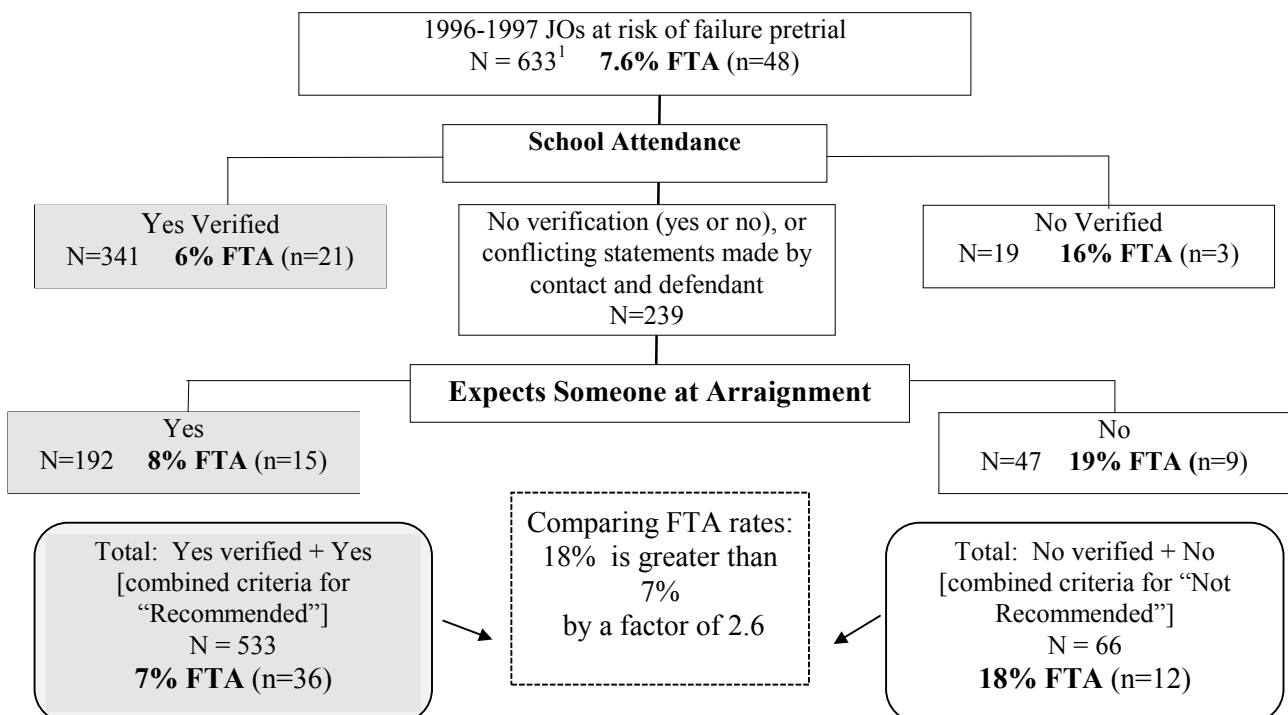
FIGURE 1

Configuration Analysis: Development and Validation Results for Pretrial FTA

Development: FY 1992 JO Cohort (Pre-Sentence FTA)



Validation: 1996-1997 JO Cohort (Pretrial FTA)



¹The total number of at-risk cases was greater than the sum of the individual branches because some cases were missing data on the criterion factors.

a positive recommendation (“recommended”), and unshaded boxes on the right represent responses that would result in a negative recommendation (“not recommended”).

Comparing the top and bottom halves of the figure, one can see that very similar results were obtained for the development and validation cohorts, especially when the combined effects of the two criteria are considered. The same conclusion was reached when pre-sentence FTA rates were used in the analysis for the validation cohort, as reported in Part I.

The overall FTA rate was about 8 percent for both cohorts (although, as noted, the FTA rate reported here for the development cohort, but not for the validation cohort, included post-conviction FTA). For both cohorts, the overall rate was affected sharply by the juvenile’s verified response regarding school attendance. Also for both cohorts, expecting someone at arraignment was strongly related to FTA for those for whom school attendance could not be verified.

The rounded boxes at the bottom of each part of the figure represent the sums of all cases in which the defendant satisfied the criteria for a positive (shaded) and negative (unshaded) recommendation. These groupings differ from the recommendation category that was actually assigned, or would have been assigned, only in that the data in the figure do not account for policy exclusions. (Of the 633 cases at risk pretrial in the validation cohort, 11 involved a defendant who received a policy exclusion; see Table 3.)

For the validation cohort, those who fit the criteria for a negative recommendation were 2.6 times more likely to fail to appear for a scheduled pretrial court appearance than were those who satisfied the criteria for a positive recommendation (calculated by dividing 18% by 7%; see the broken-line box). This is the same ratio found for pre-sentence FTA reported in Part I: the comparable FTA rates were 9 percent and 23 percent for those who fit the criteria for a positive and negative recommendation respectively (not shown here). This ratio compares favorably with

the results of the development research: As shown in the top half of Figure 1, for the FY 1992 cohort the pre-sentence FTA rate for those who fit the criteria for a negative recommendation (17%) was 2.4 times greater than the FTA rate for those who satisfied the criteria for a positive recommendation (7%).

For this aspect of the validation—replication of the configuration analysis—using pretrial rather than pre-sentence FTA as the outcome measure made no difference in the conclusions.

Classification Table (Pretrial FTA)

One way to measure the power of a risk-assessment instrument is by calculating the percentage of correct predictions it makes for a given set of data. In the case of CJA's ROR recommendation system, the prediction is in terms of FTA. In effect, a juvenile who is not recommended for ROR is predicted to fail to appear. In fact, the prediction is merely that the juvenile has a *higher risk* of FTA than those who are recommended. As previously shown in Table 5, the risk of pretrial FTA for not-recommended juveniles in this research was 18 percent — three times the likelihood for recommended juveniles (6%), but still a minority. Since the recommendation system cannot identify which individuals will fail, the best it can do is to not recommend for ROR the entire group at risk for a higher FTA rate. In practical terms, then, each individual in the group is treated by the recommendation system as predicted to fail.

The prediction of failure was correct for those who did in fact FTA (out of those who were released in spite of being not recommended) and incorrect for those who made every scheduled court appearance. Conversely, for everyone who was recommended for ROR the prediction was no failure, so for them the prediction was correct if no FTA occurred and incorrect if an FTA did occur.

The four possible combinations of predictions and outcomes are classified as *true negatives* (no FTA predicted and no FTA occurred); *false negatives* (no FTA predicted but FTA occurred); *true positives* (FTA predicted and FTA occurred); and *false positives* (FTA predicted but no FTA occurred).

The data presented in **Table 9** show the number and percent of cases that fell into each classification category when pretrial FTA was calculated. Comparable tables were presented in Part I for pre-sentence FTA for the 1996-1997 and the FY 1992 cohorts. The total number of correct predictions, which is the sum of true negatives and true positives, was 501, or approximately 86 percent (below the double line). This is about the same as the proportion of correct predictions when post-conviction FTAs were included (85%), and slightly greater than the total correctly predicted for the FY 1992 cohort (84%; reported in Part I).

The proportion of false positives (FP, about 8%) was slightly higher than false negatives (FN, about 6%), but the difference was less than for the FY 1992 arrests (10% FP and 6% FN). The higher the proportion of false positives, the greater the risk of detaining defendants who would not FTA. On the other hand, the higher the proportion of false negatives, the greater the risk of releasing defendants who will FTA. The research reported in Part I found that for pre-sentence FTA the two types of error were equally balanced at about 8 percent.

The other three measures given near the bottom of the table are *sensitivity*, which is the percent of FTAs that were correctly predicted; *specificity*, which is the percent of non-failures that were correctly predicted; and the *RIOC* score, which is a measure of the predictions' Relative Improvement Over Chance. On these measures, the recommendation system did not perform quite as well when post-conviction outcomes were discounted, but most of the scores were still higher than those obtained for the FY 1992 cohort.

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TABLE 9
Pretrial FTA Analysis
Classification Table for the 1996-1997 JO Cohort

Actual Outcome	Predicted Outcome	
	J5 Recommended Predict no FTA	J6 Not Recommended Predict FTA
No FTA	True negatives (TN) 490 83.9%	False Positives (FP) 49 8.4%
FTA	False negatives (FN) 34 5.8%	True positives (TP) 11 1.9%
Totals	524 89.7%	60 10.3%
Total Correct predictions	TN + TP = 501 (85.8%)	
Total Incorrect predictions	FN + FP = 83 (14.2%)	
Sensitivity	24.4%	
Specificity	90.9%	
RIOC	15.9%	
Base for %	N = 584 at-risk cases (49 missing JO recommendation category, or with no recommendation due to exclusionary factors, were omitted from the at-risk sample, N=633)	

- **Sensitivity:** Of all juveniles who failed, 24 percent were correctly predicted (in other words, were not recommended for ROR) compared to 29 percent correctly predicted when post-conviction FTAs were included. Sensitivity for the FY 1992 cohort was 25 percent. This sensitivity rating indicates that about a quarter of the failures that occurred would have been averted if all negative recommendations had been followed.
- **Specificity:** Of all who did not fail, 91 percent were correctly predicted (that is, recommended), compared to 92 percent when post-conviction FTAs were included and 89 percent for the FY 1992 cohort. Specificity fared better than sensitivity in both pretrial and pre-sentence FTA analyses because the base FTA rate was so low. Thus, a prediction of non-failure would most likely be correct even if the prediction were made at random. The 91 percent specificity score suggests that 9 percent of those who appeared for all their court dates would have been needlessly detained if all negative recommendations had been followed.
- **RIOC:** The recommendation system was able to improve on a prediction based on chance, relative to the greatest improvement over random classification that would be possible given the FTA base rate and the proportion recommended, by 16 percent. When post-conviction FTAs were included, the RIOCI score was 20 percent. Both scores exceeded that obtained for the FY 1992 cohort, which was 14 percent. (See Part I, Appendix E, for further explanation of the RIOCI score, and the formula for calculating it.)

Logistic Regression Model (Pretrial FTA)

Finally, a logistic regression model was estimated to validate the ROR-recommendation system. Logistic regression is a type of statistical analysis most appropriate for dichotomous dependent variables such as FTA, where the only values are “yes” and “no.” In this analysis, “yes” was coded “1” and “no” was coded “0.”

We were interested in testing the ability of the recommendation system to predict FTA, so a model was estimated in which the six recommendation categories were treated as though they were separate, dichotomous variables. Each case was coded “1” if the juvenile received that recommendation category, otherwise “0.” This technique, called contrast coding, produces a coefficient and an odds ratio, with a corresponding significance level, for each category as shown in **Table 10**. The statistical procedure compares the FTA rate for each category to the “reference category,” which is “recommended.” Since the reference category cannot be compared to itself, no statistics are produced for the “recommended” category.

The model as a whole is statistically significant, as indicated by the significance level for the model chi-square of .0136 (at the bottom of the table). This means that the probability is about 1 in 100 that the relationship between recommendation and pretrial FTA could have occurred by chance. A significance level less than .05 is usually considered by researchers to be statistically significant.

In interpreting this model, we focus on the odds ratios given in the last column of the table. The odds ratio for “not recommended” is 3.2, meaning that the odds of pretrial FTA more than tripled for a juvenile who was not recommended, compared to the odds of pretrial FTA for one who was recommended. The significance level of each coefficient, which is used to determine the odds ratio, is given in the middle column. The increase in odds of FTA for those who

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TABLE 10
Logistic Regression Analysis Predicting Pretrial FTA¹
Application of the JO Recommendation System
to 1996-1997 Arrests (At risk pretrial only)
N=595²

Independent Variable JO ROR RECOMMENDATION	Logit Coefficient	Significance Level	Odds Ratio
J5 Recommended (Reference Category) n=524	—	—	—
J6 Not Recommended n=60	1.174	.0019	3.235
J7A No Recommendation because of: Bench Warrant n=2	2.668	.0612	14.412
J7B No Recommendation because of: No NYSID n=2	2.668	.0612	14.412
J7C No Recommendation because of: Murder charge n=6	-4.534	.7619	.011
J7D No Recommendation because of: Incomplete interview n=1	-4.534	.9016	.011
Constant model chi-square=14.338	-2.668	.0136	

Dependent variable: Pretrial Failure to Appear

0 = no

1 = yes

A positive logit coefficient and an odds ratio greater than 1.0 indicate that the recommendation category is associated with a higher FTA rate than the reference category (“recommended”). A negative logit coefficient and an odds ratio less than 1.0 indicate that the recommendation category is associated with a lower FTA rate than the reference category.

A significance level less than .05 is considered statistically significant.

¹ FTA was counted to final disposition.

² 38 cases were excluded from the analysis because of missing data.

were not recommended was also statistically significant: the probability was less than 1 in 100 that the relationship occurred by chance, as indicated by the significance level of .0019. Coefficients for the other recommendation categories were not statistically significant. They contained so few cases that it would be virtually impossible to obtain significant results, since statistical significance is partly a function of the number of cases.

In comparison, the logistic regression model predicting pre-sentence FTA was a little more powerful than the pretrial model. A negative recommendation increased the odds of pre-sentence FTA by a ratio of 4.3, with a significance level of .0000 (not shown).

Conclusions

Concern that a model based on data through the sentencing appearance would be deficient in predicting pretrial FTA alone was heightened when it was found that over a third of all pre-sentence FTAs occurred post-conviction. In order to address that concern, the validation analyses were repeated using a subset of the pre-sentence at-risk sample to include only those who were at risk pretrial. The outcome variable for the new analysis was pretrial, rather than pre-sentence, FTA.

In only one respect did the current research modify an earlier conclusion. In Part I it was reported that the pre-sentence FTA rate was identical for juveniles released on recognizance compared to those released on bail. In contrast, the current research found that pretrial FTA rates were a little lower for bailed juveniles, especially for those who were released at arraignment.⁷ However, higher FTA rates for defendants who were ROR'd turned out to be almost entirely accounted for by those who did not receive a positive recommendation. Among those who were

⁷ The median bail amount posted at arraignment was \$1,000. The median amount posted following the arraignment appearance was \$2,250. Thus, it does not appear that posting a higher amount of bail was any more effective in de-

given a positive recommendation for ROR, there was little difference in FTA rates between those who were ROR'd and those who were released on bail. Ultimately, then, the conclusion reached earlier — that bail did not have a deterrent effect on FTA — is unchanged for the great majority of juveniles who are recommended for ROR.

Although pretrial release and FTA rates were lower than the comparable pre-sentence rates, in most respects the pretrial validation analysis produced results very similar to the pre-sentence analysis. By some measures the pretrial model was a little weaker than the pre-sentence model, which may simply reflect the statistical difficulties inherent in predicting a rare event (pretrial FTA was a “rarer” event than pre-sentence FTA). The relationship between recommendation and FTA was strong and statistically significant in both analyses, and slightly stronger for pre-sentence FTA. The validation results thus establish the adequacy of the JO recommendation system for predicting both pretrial and pre-sentence FTA.

tering FTA than posting a low amount. Median bail amounts were highest for those who were held on bail at arraignment and later ROR'd (\$4,000); and for those who were held on bail throughout case processing (\$5,000).

3. FACTORS ASSOCIATED WITH ROR FOR JUVENILE OFFENDERS

The CJA recommendation system for Juvenile Offenders is intended to aid judges at Criminal Court arraignment in making the decision regarding release on recognizance (ROR). In making that decision, judges are required to consider a variety of factors. These factors include, but are not limited to, the kind of community-ties information provided by the CJA interview and captured in the ROR recommendation.

Because the CJA recommendation is only one of several factors considered by judges in deciding whether ROR is appropriate for any given defendant, we would not expect the recommendation to be followed in every case. In fact, less than half of the juveniles recommended for ROR in the period following implementation of the system were actually released at Criminal Court arraignment. As reported in Part I, 771 JOs were recommended for ROR during the study period, yet only 321 of them (42%) were released on recognizance at arraignment. In this section we examine other factors associated with the release decision at Criminal Court arraignment for juveniles arrested in 1996 and 1997. Identifying these factors could help explain why so many recommended juveniles were detained at arraignment during the study period. This information could also illuminate reasons for the decline in ROR rates that occurred during the mid-1990s, from 55 percent in 1993 to 38 percent in 1997.⁸

The statute that governs release and bail in New York is Article 510 of the Criminal Procedure Law. In Section 30 of Article 510, eight types of factors are listed that “the court must, on the basis of available information, consider and take into account.” These factors include the defendant’s character, employment and financial resources, family ties and length of residence in the community, criminal record, previous adjudication as a juvenile delinquent or youthful of-

fender, previous failures to appear, probability of conviction, and the sentence that may be imposed upon conviction. (The applicable portions of CPL 510.30 are reproduced in Appendix C.)

The nature or severity of the specific criminal charge is not among the factors listed in the New York statute, but the charge has often been used as a criterion in determining eligibility for pretrial detention or release, especially in jurisdictions where—unlike the situation in New York—state laws permit danger to the community to be considered in making the release decision.⁹ Charge, however, may also serve as an indicator of the probable sentence. For JOs in the current study, the severity class of the most serious affidavit charge was strongly related to likelihood of ROR at arraignment in Criminal Court. **Table 11** shows that for JOs charged with a Class-C felony (almost all second-degree robbery), the likelihood of ROR was 54 percent. For those charged with a Class-B felony (mostly first-degree robbery), the likelihood of ROR was only 31 percent. No one was released on recognizance who had been charged with a Class-A felony (second-degree murder in all but one case).

Historical Trends in ROR Rates and Charge Severity

Historical data indicate that there was a loose correspondence between increases and declines in the ROR rate and the proportion of Class-C felony charges (the lowest New York Penal Law severity class for a JO charge¹⁰) during the 15-year period between 1982 and 1997.

⁸ Sources: For 1993, unpublished CJA trends data for Fiscal Year 1993 (July 1, 1992, through June 30, 1993). For 1997, the source is the current study, including cases for Fiscal Year 1997 (July 1, 1996, through June 30, 1997).

⁹ “Contrary to the criticisms of bail practices by reform advocates of the 1960’s that bail decisions should not rely primarily on the seriousness of the current charge to determine likely risk, the predominant criterion for defining a defendant’s eligibility for pretrial detention under the recent pretrial danger laws is the criminal charge.” (Goldkamp, 1985, pp. 24-25)

¹⁰ In November 1998, after the conclusion of the study period, two additional charges were added to the list of JO charges, now including a Class-D felony: criminal possession of a weapon in the second degree (265.03, Class-C felony), and in the third degree (265.02, Class-D felony), when the possession occurred on school grounds.

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TABLE 11
Release Status at Criminal Court Arraignment
By Affidavit-Charge Severity
Juvenile Offenders Arrested 1996-1997

Release Status at Arraignment	Class-A felony	Class-B ¹ felony	Class-C felony	Row Totals
Released on recognizance	0	211 31.3%	142 53.8%	353 37.1%
Bail made	0	20 3.0%	9 3.4%	29 3.0%
Bail not made	1 7.7%	433 64.1%	113 42.8%	547 57.5%
Remanded	12 92.3%	11 1.6%	0	23 2.4%
Subtotals	13 100%	675 100%	264 100%	952 100%
Missing release status	0	0	1	1
Disposed at arraignment	0	4	5	9
Column Totals	13	679	270	962

Percentages may not sum to exactly 100% because of rounding.
 26 cases with no JO affidavit charge were omitted from this table.

¹ Assault in the first degree was upgraded from a Class-C felony to a Class-B felony in November 1996, midway through the study period. For this report, all first-degree assault charges were classified as Class-B felonies regardless of the date of arrest. Of 679 Class-B felonies citywide reported here, 39 were first-degree assault.

Table 12-A shows that the ROR rate for FY 1997 was 38 percent — identical to the rate for a six-month period in 1982. By the early 1990s the ROR rate had risen to over 50 percent, but then in 1994 it dropped to 40 percent. ROR rates remained under 40 percent for the next three years. **Table 12-B** reflects a similar pattern for affidavit-charge severity. The periods with the lowest proportion of Class-C felony affidavit charges were 1982 (when the most severe affidavit charge was a Class-C felony for 28% of cases) and 1997 (when the most severe affidavit charge was a Class-C felony for 27% of cases).¹¹ These were also among the years with the lowest ROR rates. Likewise, the year with the highest proportion of Class-C felony affidavit charges (36 % in 1993) was also the year with the highest ROR rate.

These trends are illustrated in **Figure 2**, where the Class-C felony rate and the ROR rate are charted together on the same graph. The two lines generally rose and fell together, but the fluctuations in ROR rates were greater in magnitude, and the direction of change was not always the same. From 1994 to 1995, a rise in the percent of Class-C felonies was accompanied by a slight decline in the ROR rate. (The drop in the proportion of Class-C felonies from 1996 to 1997 is an artifact of the upgrading of first-degree assault from a Class-C to a Class-B felony. Without this reclassification of the charge, the proportion of Class-C felonies would have remained the same as the previous year, as did the ROR rate.)

While charge severity is related to ROR rates, then, the decline in ROR rates since the mid-1990s can be only partially attributed to more severe charges. There were obviously factors other than charge severity that influenced fluctuations in ROR rates.

¹¹ However, the proportion of Class-C felony charges for FY 1997 is not exactly comparable to previous years because in November 1996, midway through FY 1997, first-degree assault was upgraded from a Class-C to a Class-B felony. In order to simplify the analysis, first-degree assault was classified as a Class-B felony for all of FY 1997. If the 29 first-degree assault charges in FY 1997 had been classified as Class C, the proportion of Class-C felonies would have remained unchanged from the previous year at 31%.

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TABLE 12
Trends in Release Status At Criminal Court Arraignment
and Affidavit-Charge Severity
For Juvenile Offenders 1982 – 1997

TABLE 12-A Release Status At Criminal Court Arraignment

Release Status at Arraignment	1982 ¹ (6 months)	FY 1992 ²	FY 1993 ³	FY 1994 ³	FY 1995 ³	FY 1996 ³	FY 1997 ⁴
Released on recognizance	184 38%	795 52%	752 55%	539 40%	437 39%	415 38%	297 38%
Bail set	272 56%	690 45%	582 42%	743 56%	660 58%	625 58%	461 59%
Remanded	27 6%	57 4%	36 3%	55 4%	34 3%	45 4%	20 3%
Column Totals	483 100%	1542 100%	1370 100%	1337 100%	1131 100%	1085 100%	778 100%

Percentages may not sum to exactly 100% because of rounding.

TABLE 12-B Affidavit-Charge Severity

Affidavit-Charge Severity	1982 ¹ (6 months)	FY 1992 ²	FY 1993 ³	FY 1994 ³	FY 1995 ³	FY 1996 ³	FY 1997 ⁴
Class-A felony	24 5%	51 3%	35 3%	48 4%	29 3%	32 3%	11 1%
Class-B felony	336 67%	1011 66%	813 61%	860 65%	700 64%	708 66%	548 71%
Class-C felony	138 28%	465 30%	478 36%	407 31%	372 34%	335 31%	210 27%
Totals	498 100%	1527 100%	1326 100%	1315 100%	1101 100%	1075 100%	769 100%

Percentages may not sum to exactly 100% because of rounding.

Assault in the first degree was upgraded from a Class-C felony to a Class-B felony in November, 1996, midway through FY 1997. For this report, all first-degree assault charges were classified as Class-B felonies. If the 29 first-degree assault charges in FY 1997 had been classified as Class C, there would have been 519 (67%) Class-B felonies and 239 (31%) Class-C felonies in FY 1997.

¹ Source: Metchik, Eric, *Recommending Juvenile Offenders for Pretrial Release*. CJA, December 1987. Data are for arrests June 21 through December 31, 1982. *For Table 2-A:* See Metchik, Table 10. Cases disposed at arraignment and missing release status were deleted from the base. *For Table 2-B:* See Metchik, Table 6. Data are for arrest charge, rather than affidavit charge, because the distribution of affidavit-charge severity was not reported. The data are roughly comparable to the other years in the table because there is usually little change between the arrest and the affidavit charge. Cases with a non-JO arrest charge were deleted from the base.

² Source: Winterfield, Laura A., *Developing a Release-On-Recognizance System for Juveniles Arraigned in New York City Adult Courts*. CJA, May 1996. *For Table 2-A:* See Winterfield, Appendix B. Cases disposed at arraignment and missing release status were deleted from the base. *For Table 2-B:* unpublished data. Cases with a non-JO affidavit charge and missing affidavit charge were deleted from the base.

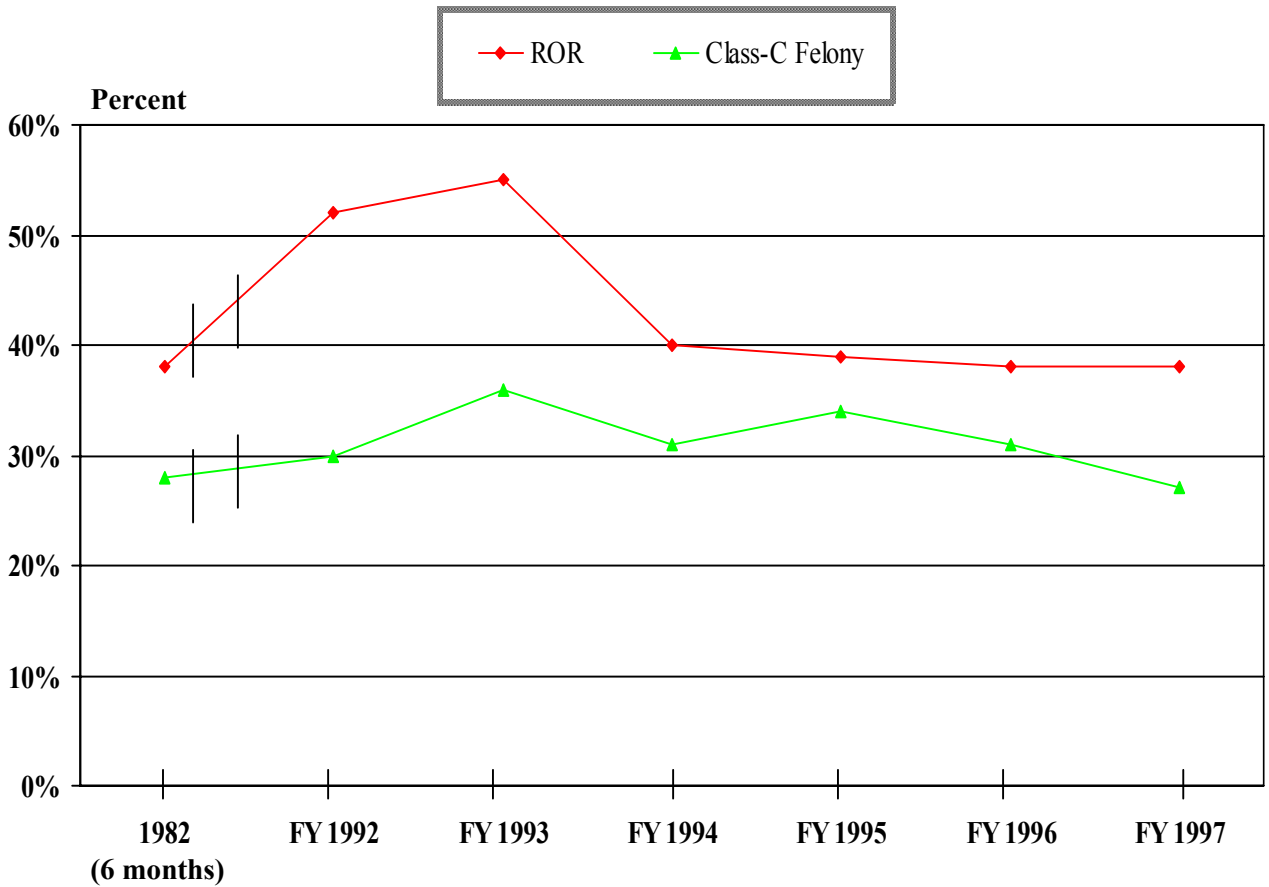
³ Source: Unpublished CJA trends data. A Fiscal Year begins with July 1 of the previous year and ends on June 30, but these data were compiled from data for statistical months; consequently, the dates of the beginning and end of each year may deviate from the dates of a true Fiscal Year by a few days (although each year still contains 365 days). *For Table 2-A:* Cases disposed at arraignment and missing release status were deleted from the base. *For Table 2-B:* Cases with a non-JO affidavit charge and missing affidavit charge were deleted from the base.

⁴ Source: the current study. Data are for arrests July 1, 1996, through June 30, 1997. *For Table 2-A:* Cases disposed at arraignment and missing release status were deleted from the base. *For Table 2-B:* Cases with a non-JO affidavit charge and missing affidavit charge were deleted from the base.

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FIGURE 2

Trends in ROR Rate at Criminal Court Arraignment and Affidavit-Charge Severity
For Juvenile Offenders 1982-1997



Note: The decline in proportion of Class-C felony charges in FY 1997 is fully accounted for by the upgrading of first-degree assault during that year from a Class-C to a Class-B felony.

Other Factors Affecting ROR: Bivariate Analysis

It makes sense to begin our search for these other factors by returning to CPL 510.30, the law that instructs the courts as to what they must consider in deciding whether to release or detain a defendant. For some of the considerations enumerated in the law, such as defendant's character, mental condition, and financial resources, there was no reliable measure in the CJA database. For others, such as criminal record, some data were available. For still others, such as probability of conviction and the sentence that may be imposed, data were available that could be used as a proxy for the item that we actually wanted to measure.

Nineteen variables representing various aspects of defendant and case characteristics were analyzed for a possible relationship with ROR at Criminal Court arraignment. These included all variables in the data file that measure some dimension of the considerations mandated by CPL 510.30, as well as others that might reasonably have a bearing on the ROR decision.

Of the 19 variables tested, five had no statistically significant relationship with ROR. The non-significant variables were: whether the defendant reported being on probation at the time of arrest; whether the defendant had a telephone in the residence; whether the defendant had lived at the current residence for 18 months or longer; the defendant's age at arrest; and the arraignment court part (examined as a possible measure of individual differences among judges).

The other 14 variables did have a statistically significant relationship with ROR at Criminal Court arraignment. These were: defendant's gender; ethnicity; grade in school; first arrest (yes/no); open cases (yes/no); severity of arrest charge;¹² specific arrest charge; number of arrest charges; CJA recommendation; school status; whether defendant lived with a parent; whether the

¹² Affidavit-charge severity also had a significant relationship with ROR rate, as the data presented in Table 12 and Figure 2 would suggest. There was little difference between the severity of the affidavit charge and the arrest charge,

defendant expected someone at arraignment; whether the case ended with a conviction; and whether the defendant was sentenced to incarceration. The last two variables could not be known at arraignment, of course, but they were included in the analysis as surrogates for the judge's opinions regarding probability of conviction, and the sentence that could be imposed upon conviction, respectively.

Table 13 lists in the left-hand column each variable that was found to have a statistically significant association with ROR at Criminal Court arraignment. Asterisks signify the level of statistical significance, where “*” represents the lowest level of statistical significance ($p \leq .05$) and “***” represents the highest level ($p \leq .001$). The significance level indicates the probability that the relationship was merely a result of chance: .001 indicates a probability equal to or less than one in 1,000, and .05 indicates a probability equal to or less than 5 in 100 that the relationship was due to chance.

The middle column of Table 13 shows the percent (and number, in parentheses) of JOs in each category who were released on recognizance at Criminal Court arraignment. The “base” number given in each row is the total upon which the percentage was based.

The split column on the right presents two ways of measuring the strength of the association between each factor and the likelihood of ROR at arraignment. The first measure is the difference in percent ROR'd between the categories of the independent variable. For example, 34 percent of males were ROR'd at arraignment, compared to 63 percent of females. The difference is 29 percentage points, which represents a fairly large disparity in the treatment of males and females. Of course, this bivariate relationship does not take into account any other factors that could explain the gender differences in ROR rates, such as the possibility that females were more

but arrest charge severity had a slightly stronger association with ROR. For this reason, the arrest charge is used in

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TABLE 13
Factors Significantly Associated With ROR at Criminal Court Arraignment
All Cases (Overall ROR Rate = 38%, N = 976)

Factor		Percent ROR at Criminal Court Arraignment			Strength of Association ¹	
					Difference in % ROR	λ (lambda)
Defendant Characteristics						
Gender***	Male Female	34% 63%	(295) (71)	base = 857 base = 112	29	.08
Ethnicity***	All other White, Hispanic white, or Asian	36% 54%	(271) (87)	base = 760 base = 160	18	.04
Grade in school***	8th or higher 7th or lower	36% 50%	(306) (60)	base = 846 base = 119	14	<.01
Lives with parent**	No Yes	29% 41%	(50) (306)	base = 172 base = 745	12	.00
Criminal History						
First arrest***	No Yes	17% 47%	(43) (312)	base = 251 base = 670	30	.00
Open cases***	Yes (1 or more) No	13% 44%	(16) (337)	base = 128 base = 767	31	.00
Arrest Charge						
Severity of arrest charge***	Class-A + Class-B felony Class-C felony	31% 58%	(221) (140)	base = 722 base = 242	27	.11
Specific arrest charge***	First-degree robbery Second-degree robbery	31% 57%	(177) (134)	base = 564 base = 235	26	.11
Number of arrest charges***	4 or more 3 or less	22% 42%	(46) (321)	base = 207 base = 765	20	.00
Case Outcomes						
Convicted***	Yes No (transferred to Family Court or dismissed)	16% 54%	(60) (276)	base = 374 base = 511	38	.12
Incarcerated***	All Disposed Cases:					
	Incarceration	6%	(10)	base = 178	40	.00
	No incarceration	46%	(352)	base = 761		
	Sentenced Defendants Only:					
	Incarceration	6%	(10)	base = 178	21	.00
	No incarceration	27%	(45)	base = 164		
Recommendation Category and Individual Recommendation Criteria						
CJA recommendation for JOs*	Not recommended Recommended	31% 41%	(30) (318)	base = 98 base = 768	10	.00
Expects someone at arraignment***	No Yes	24% 41%	(40) (327)	base = 166 base = 807	17	.00
School status**	No, No Verified, or Unresolved Conflict	26%	(27)	base = 103	15	.00
	Yes or Yes Verified	41%	(333)	base = 822		

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$ Cases dismissed or transferred to Family Court at Criminal Court arraignment are excluded.

¹ “Difference in % ROR” is the number of **percentage points** difference between the percent ROR’d for each value of the independent variable. Lambda (λ) measures the proportion of improvement in the ability to predict ROR once the value of the independent variable is known: $\lambda = .12$ for “Convicted” indicates a 12% improvement in ability to predict ROR if conviction status is known.

likely to receive a positive recommendation, or the likelihood that males were charged with more severe offenses.

Using the change in percent as the measure of the strength of the relationship, the table shows that the factors most strongly associated with ROR were gender, criminal history (whether it was the first arrest and whether the defendant had other open cases), arrest charge (severity class and specific charge), and whether the defendant was convicted or sentenced to incarceration. All of these resulted in a difference of over 25 percentage points in the ROR rate, depending on the value of the independent variable. Females, those with no prior arrests (first arrest = yes) or open cases, those charged with a Class-C felony, those charged with second-degree robbery (a subgroup of Class-C felonies), defendants who were not convicted, and those who were not sentenced to incarceration were all much more likely than other juveniles to have been ROR'd. Even among defendants who were convicted and sentenced, a non-incarcerative sentence was associated with a higher ROR rate (27%) than the ROR rate for those who were incarcerated (6%).

Lambda (λ) measures the strength of the association in a different way. This statistic is useful for assessing if the variable would improve the ability to predict ROR, assuming the prediction is made on the basis of the modal category (the category with the greatest number of cases). Lambda can be interpreted as the percentage improvement in prediction if the value of the independent variable is known. For example, "Convicted" is the variable with the highest lambda, .12, which indicates that knowing whether the defendant was convicted improves the ability to predict whether the defendant had been ROR'd by 12 percent.

It may seem strange that some of the factors most strongly associated with ROR, as measured by the change in percentage, nevertheless did not improve the ability to predict ROR,

as measured by lambda. For example, the greatest percentage-point difference was between incarcerated and non-incarcerated defendants (when those who were not convicted were included in the base of non-incarcerated defendants). There was a 40-percentage-point difference in ROR rates between defendants sentenced to prison or jail (6%) and all others whose cases were disposed (46% ROR). In spite of this large difference, lambda equals zero. The reason is that the ROR rate was under 50 percent for those with no incarceration, as well as for those who were incarcerated. Therefore, the prediction most likely to be correct is *no ROR* for both groups. This is the same prediction that would be most likely to be correct without having any information other than the overall ROR rate, which was 38 percent. Only if the prediction would differ depending on the value of the independent variable can lambda have a value greater than zero. Consequently, the only variables listed in Table 13 with a lambda greater than zero are those in which one of the categories had an ROR rate over 50 percent and the other had an ROR rate less than 50 percent. A lambda of zero does not mean that there is no relationship; it means only that the variable cannot improve on the ability to make a prediction based on the modal category.

The shaded rows in Table 13 highlight the variables with the strongest association with ROR, as measured by both lambda and change in percent. These variables are the Penal Law severity class of the arrest charge (change in % = 27; $\lambda = .11$); whether the arrest charge was first- or second-degree robbery¹³ (change in % = 26; $\lambda = .11$); and whether the defendant was

¹³ These two charges together account for 82 percent of all cases. Since most Class-B felony charges were first-degree robbery, and most Class-C felony charges were second-degree robbery, the severity class and specific charge measure much the same thing.

convicted (change in % = 38; $\lambda = .12$).

An association between arrest charge and ROR could be consistent with the mandate of CPL 510.30 if judges make inferences about the probable sentence based on the crime with which the defendant was charged. Or it may be that the seriousness of the offense is used by the courts more as a measure of dangerousness than as a clue to the probable sentence. It is impossible to know from these data which rationale best explains the association between charge severity and ROR.

Likewise, the association between conviction and ROR could be consistent with CPL 510.30's instructions to weigh the probability of conviction. There is no direct measure of the arraiging judge's estimate of the probability of conviction, but there may be a close correspondence between eventual conviction and the judge's estimate of its probability. An alternative interpretation of this strong association is that detention at arraignment influences the outcome, resulting in a higher likelihood of conviction. The same range of interpretations could apply to the strong association between receiving an incarcerative sentence and ROR at Criminal Court arraignment. In neither instance is the direction of influence clear: whether detention at arraignment affected the later outcomes, or whether the judge's expectations regarding conviction and sentence affected the ROR decision.

The criminal history variables also had a great effect on ROR rates, even though lambda indicates that they did not improve the ability to predict ROR. A strong relationship between criminal history and ROR would be in accord with statutory requirements. The criminal history data available for this study were very limited because 14- and 15-year-olds have not had a

chance to compile much of an adult court record, and juvenile court records were unavailable. However, juvenile court records are unlikely to be available at Criminal Court arraignment, either, so such information is probably not a factor in the ROR decision at that point in case processing. The only two criminal history items that differentiated between the two groups (those who were ROR'd and those who were not) were: whether the sample arrest was the defendant's first adult arrest; and whether the defendant had an open case in Criminal Court at the time of the sample arrest. For both of these overlapping factors, a JO in the more favorable category (first adult arrest and no open cases) had an ROR rate 30 percentage points or more higher than one in the less favorable category.

Four defendant characteristics were also significantly related to ROR: gender, ethnicity, grade in school, and whether the juvenile lived with a parent. Females were almost twice as likely to be ROR'd as males (63% of females compared to 34% of males). Whites (including Hispanics who identified themselves as white) and Asians were more likely to be ROR'd than others (54% compared to 36%). Children in the 7th grade or lower were more likely to be ROR'd than those in upper grades (50% compared to 36%). And those who lived with a parent were more likely to be ROR'd than those who did not (41% compared to 29%). These factors, especially gender and ethnicity, are not legitimate considerations for assessing suitability for release, but it has already been pointed out that other factors—including some of those mandated by CPL 510.30—could account for any of the bivariate relationships.

The relationship between CJA recommendation category and ROR was the weakest of the significant relationships found, with only 10 percentage points difference in ROR rates between those who were recommended (41%) and those who were not recommended (31%). Lambda equals zero because fewer than half were ROR'd among those who were recommended,

as well as among those who were not recommended, so knowing the recommendation category does not improve the ability to predict release.

Each of the factors upon which the recommendation is based had a stronger relationship with ROR than did the recommendation category itself. Forty-one percent of those who expected someone at arraignment were ROR'd, compared to 24 percent of those who did not (a difference of 17 percentage points); and 41 percent of those who said they were attending school were ROR'd, compared to 26 percent of the others (a difference of 15 percentage points).

Logistic Regression Models (ROR at Criminal Court Arraignment)

The next step was to do a multivariate analysis, examining simultaneously the relationships of all these factors to ROR. This would reveal whether any of the statistically significant bivariate relationships could be accounted for by some other factor. The multivariate statistical technique used was logistic regression, which is the same technique used for the validation analysis to predict pretrial FTA. Here the dependent variable is whether the defendant was released on recognizance at Criminal Court arraignment. Like FTA, ROR at arraignment is a dichotomy, with two possible values: “yes” or “no.” The logistic regression models predicting ROR show which factors were still statistically significant once the values of other factors were held constant, and their relative strength in predicting ROR.

For the first model (**Model A** presented in **Table 14**), all the variables that had a statistically significant bivariate association with ROR were entered in the first step of model building, with three exceptions. The specific arrest charge, whether the defendant had an open case, and whether the defendant received an incarcerative sentence were not entered because those varia-

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TABLE 14

Logistic Regression Analysis Predicting ROR at Criminal Court Arraignment
For Juvenile Offenders Arrested 1996-1997

Model A: Including Conviction in the ModelAll Cases (N=760¹)

Independent Variables	Logit Coefficient	Significance Level	Odds Ratio
Convicted (Proxy for judge's estimate of probability of conviction) 0 = Yes; 1 = No	1.446	.0000	4.25
Gender 0 = Male; 1 = Female	1.084	.0001	2.96
Expects someone at arraignment 0 = No; 1 = Yes	.978	.0001	2.66
First arrest 0 = No; 1 = Yes	.976	.0000	2.65
Arrest charge severity 0 = A, B felony; 1 = C felony	.831	.0000	2.30
Grade in school 0 = 8th or higher; 1 = 7th or lower	.667	.0036	1.95
Lives with parent 0 = No; 1 = Yes	.631	.0064	1.90
Ethnicity 0 = All other; 1 = White or Asian	.483	.0558	1.62
Number of arrest charges 0 = 4 or more; 1 = Fewer than 4	.477	.0458	1.61
Constant	-7.591		
Model chi-square = 229.008		.0000	
Total correctly predicted = 75%			

Dependent variable: ROR at Criminal Court Arraignment. 0 = no; 1 = yes

A positive logit coefficient and an odds ratio greater than 1.0 indicate that the category of the independent variable assigned a value of "1" is associated with a higher ROR rate than the category assigned a value of "0."

All variables in the model were statistically significant. A significance level equal to or less than .05 is considered statistically significant; by this criterion, ethnicity is only marginally significant.

Additional variables having a statistically significant bivariate relationship with ROR at Criminal Court arraignment were: **CJA recommendation**, **school attendance**, whether the defendant had any other **open cases** in Criminal Court, the **arrest charge** (first- or second-degree robbery), and **incarceration**. Open cases, arrest charge, and incarceration were not entered in the model because they were closely related to variables in the model (first arrest, charge severity, and conviction respectively). Recommendation and school attendance were entered into the first step of the analysis, but they were eliminated from the model in subsequent steps because, once all other variables in the model were controlled for, they no longer had any statistically significant relationship with the dependent variable.

¹ 214 cases were excluded because of missing data for one or more of the variables in the analysis.

bles were closely related to arrest-charge severity class, whether it was the defendant's first arrest, and whether the defendant was convicted, respectively.

The final model was statistically significant, as indicated by the significance level of .0000 shown for the model chi-square near the bottom of the table. The independent variables are listed in the order of their importance in predicting ROR, which can be judged by the size of the logit coefficient and the odds ratio for each variable: the larger the coefficient and the odds ratio, the greater the effect on ROR.

The logit coefficients presented in the second column cannot be easily interpreted without first transforming them into the corresponding odds ratios, found in the right-hand column. The size of the coefficient, relative to other coefficients in the same model, indicates relative importance in prediction; and a positive coefficient indicates that the variable has a positive relationship to the dependent variable. In this model, the independent variables were coded so that the category assigned a value of "1" represents defendants more likely to be released on recognizance at arraignment. (The coding is given in the table under each variable name.)

The next column in the table displays the significance level of each independent variable in the model. Only statistically significant variables are presented in the model.¹⁴ Two variables with a statistically significant bivariate relationship with ROR were no longer significant in the multivariate analysis. Those variables are the CJA recommendation and whether the defendant was in school (an element in the recommendation).¹⁵

¹⁴ Ethnicity was only marginally significant: .0558 might not be considered significant by some researchers because it is slightly greater than the .05 criterion level. However, SPSS, the computer program that was used for the regression analysis, included ethnicity among significant predictors in the model because the level remained under .06.

¹⁵ When both of the variables representing individual elements of the recommendation (whether the defendant was in school or expected someone at arraignment) were excluded from the analysis, the recommendation category was a significant predictor of ROR. However, it was one of the least important predictors, and the percent correctly predicted by the model decreased slightly (74%).

The right-hand column presents an odds ratio for each variable in the model. The odds ratio represents the increase in odds of ROR for juveniles in the variable category coded “1,” compared to the category coded “0.” The odds ratio is derived from the logit coefficient (it is the antilog of the logit), but unlike the coefficient, it can be easily interpreted. The odds ratio for “Convicted” was 4.25; this means that the odds of a JO receiving ROR at Criminal Court arraignment were more than 4 times greater if he or she was not convicted, compared to the odds of ROR for a JO who was convicted. Remember, conviction is used here as an indicator of the judge’s estimate of the likelihood of conviction, so (if the measure is a good one) this means that the odds of ROR are four times greater for a defendant who is unlikely to be convicted, in the opinion of the arraigning judge. This was the factor with the strongest bivariate association with ROR, and it turned out to be the most important factor in the multivariate model as well. (Whether the defendant was incarcerated made a slightly greater percentage-point difference in ROR rates, but lambda equals zero. Incarceration was not entered in the final model, as explained above.)

Next in importance was gender. The odds of ROR for a female were about three times greater than the odds for a male, controlling for all the other factors in the model (odds ratio = 2.96). Three additional factors each more than doubled the odds of ROR: expecting someone at arraignment (odds ratio = 2.66), never having been arrested before (odds ratio = 2.65), and having been arrested on a Class-C felony charge (odds ratio = 2.30). The odds of ROR were nearly doubled by being in the seventh grade or lower (odds ratio = 1.95), living with a parent (odds ratio = 1.90), being white (including those who identified themselves as Hispanic/white) or Asian (odds ratio = 1.62), and having been arrested on fewer than four charges (odds ratio = 1.61).

A second statistical model of the release decision at arraignment was developed in order to discount the effect of whether the defendant was convicted. Actual conviction might not be a good measure of the arraigning judge's opinion as to the likelihood of conviction. Moreover, prior research on the factors affecting ROR has generally limited the variables tested to those that could be known at the time of the release decision.¹⁶ Since using conviction to predict something that occurred previously could arguably be questionable, it seemed advisable to test an alternative model excluding this item.

Table 15 presents **Model B**, which excludes conviction from the analysis and predicts ROR for juvenile offenders using only factors that would be knowable at Criminal Court arraignment. Once conviction was removed from consideration, gender and arrest-charge severity became the strongest predictors of ROR. The odds of ROR more than tripled for females compared to males, and for those arrested on a Class-C felony compared to those arrested on more severe charges. All the significant predictors were the same as for the model with conviction included, with the addition of school attendance. The odds of ROR for defendants who reported being in school were nearly double the odds of ROR for defendants who reported not being in school, all else being equal. These results were similar to results of prior research.¹⁷ The CJA recommendation itself was not significant in either model as a predictor of ROR for juveniles,

¹⁶ For example, a CJA study of factors associated with ROR for a random sample of 1989 defendants (adults and juveniles) tested only factors known at Criminal Court arraignment. This research found that affidavit charge severity was the strongest predictor of ROR at arraignment, followed by existence of a prior bench warrant, whether it was the defendant's first arrest, the number of open cases, whether the defendant was on parole, and the CJA recommendation category. The research did not test for the possible influence of extra-legal factors (Lee, 1995, Appendix B).

¹⁷ A CJA study of juveniles arrested during Fiscal Year 1992 found that the most important predictors of the ROR decision at Criminal Court arraignment were an outstanding warrant, an open case, arrest-charge severity, and gender. Having no warrant, no open cases, being female and charged with a Class-C felony each more than doubled the odds of ROR for a juvenile (Liberman, 1996, Appendix C, Table 30). Outstanding warrants were not tested in the current research because there were only eight cases with an outstanding bench warrant.

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TABLE 15

Logistic Regression Analysis Predicting ROR at Criminal Court Arraignment
For Juvenile Offenders Arrested 1996-1997

Model B: Omitting Conviction From the ModelAll Cases (N=830¹)

Independent Variables	Logit Coefficient	Significance Level	Odds Ratio
Gender 0 = Male; 1 = Female	1.227	.0000	3.41
Arrest charge severity 0 = A, B felony; 1 = C felony	1.186	.0000	3.27
First arrest 0 = No; 1 = Yes	1.012	.0000	2.75
Expects someone at arraignment 0 = No; 1 = Yes	.994	.0000	2.70
Grade in school 0 = 8th or higher; 1 = 7th or lower	.779	.0002	2.18
In school 0 = No; 1 = Yes	.666	.0319	1.95
Number of arrest charges 0 = 4 or more; 1 = Fewer than 4	.596	.0054	1.82
Lives with parent 0 = No; 1 = Yes	.536	.0157	1.71
Ethnicity 0 = All other; 1 = White or Asian	.463	.0487	1.59
Constant Model chi-square = 184.477	-7.474	.0000	
Total correctly predicted = 71%			

Dependent variable: ROR at Criminal Court Arraignment. 0 = no; 1 = yes

A positive logit coefficient and an odds ratio greater than 1.0 indicate that the category of the independent variable assigned a value of "1" is associated with a higher ROR rate than the category assigned a value of "0."

All variables in the model were statistically significant. A significance level equal to or less than .05 is considered statistically significant.

Additional variables having a statistically significant bivariate relationship with ROR at Criminal Court arraignment were: **CJA recommendation**, **open cases** (yes or no), **arrest charge** (first- or second-degree robbery), **conviction**, and **incarceration**. Open cases and arrest charge were not entered in the model because they were closely related to variables in the model (first arrest and charge severity, respectively). Incarceration and conviction were not entered because they could not be known at Criminal Court arraignment. Recommendation was entered into the first step of the analysis, but it was eliminated from the model in a subsequent step because, once all other variables in the model were controlled for, it no longer had any statistically significant relationship with the dependent variable.

¹ 144 cases were excluded because of missing data for one or more of the variables in the analysis.

although Model A included one of the elements of the recommendation as a significant predictor, and Model B included them both.

In sum, the bivariate and multivariate analyses have identified a variety of factors other than the CJA recommendation that seem to have influenced the ROR decision at arraignment for this cohort of JOs. The recommendation, which had a weak but significant association with ROR when no other factors were controlled for, was not statistically significant in the multivariate analysis—even though recommendation has been shown to be a good predictor of FTA. Other factors, including the elements of the recommendation individually, were apparently more influential in the arraignment release decision than the recommendation itself.

This helps to explain why there was such a large discrepancy between the proportion of JOs who were recommended for ROR (85%) and the proportion who were actually ROR'd at Criminal Court arraignment (38%). However, it does not completely explain why ROR rates were so low. The logistic regression model made a correct prediction of ROR 75 percent of the time (or 71% without using conviction as a predictor), taking into account information from all of the significant predictors. This leaves much of the variation in ROR rates still unexplained.

4. POSSIBLE BIAS INTRODUCED BY USING A SAMPLE OF RELEASED DEFENDANTS

The foregoing analysis of factors affecting release provides a useful starting point for addressing a related issue: whether any bias may have been introduced by using a sample of released defendants for the development and the validation of the recommendation system. That research was done using a subset of arrests that included only juveniles who had been released at some point prior to final disposition. It was necessary to limit the analysis to released defendants because, in order to be “at risk” for failure to appear (FTA), the defendant had to have been out of detention. The issue is whether the conclusions drawn from this research — that a JO who was recommended for ROR had a much lower risk of FTA than one who was not recommended — would be just as true for detained JOs as it was for those who were released.

An indirect demonstration of the absence of sample bias has already been provided by showing that the recommendation system predicts pre-sentence FTA as well as, or even a little better than, pretrial FTA. This assertion derives from the fact that 72 defendants in the pre-sentence at-risk sample were not released until they pled guilty, and thus were not included in the pretrial at-risk sample. The recommendation system was able to predict the likelihood of FTA for these defendants after their eventual release just as well as it predicted FTA for those at risk prior to disposition. This suggests that the factors predicting FTA for the detained defendants were the same as the factors that predicted FTA for those who were released pretrial.

However, there could still be differences (relevant to FTA) between juveniles who were at risk at any time prior to sentencing, and those who were detained through the sentencing appearance. Our approach for addressing this issue will be to determine if, among those who were recommended for ROR, the detainees differed significantly from those who were released, in any

way relevant to likelihood of FTA. If not, then the samples used in the development and validation analyses were arguably free from bias. Unless a factor or factors for which we lack data affects both the decision to ROR and FTA—for example, the quality of evidence, or strength of the family—we can be reasonably confident that the risk of failure for recommended JOs who were detained was no greater than for their counterparts who were released.

The two groups that will be compared are recommended JOs who were at risk pretrial, and recommended JOs who were never at risk pretrial. The at-risk group overlaps to a great extent with those who were ROR'd at arraignment, but this comparison will include only those who received a positive recommendation. The at-risk group also includes juveniles who were released post-arraignment and pre-disposition. So, while we would expect the factors associated with inclusion in the at-risk group to correspond closely to those associated with ROR at arraignment, the first step is to confirm this assumption.

All of the factors that were tested for association with ROR at Criminal Court arraignment were tested again for their association with inclusion in the at-risk group; and this time the analysis was limited to those who had been recommended for ROR. The results were similar to the results of the previous bivariate analysis. For the most part, the same factors that had a significant association with ROR at arraignment for all cases also had a significant association with inclusion in the at-risk group for recommended JOs. The only exceptions were the recommendation category, which was irrelevant to this analysis because only recommended JOs were included; and the recommendation system's two criterion items, expecting someone at arraignment and school status. Recommended defendants in both the at-risk and the not-at-risk groups were very similar on these measures. Likewise, the factors that were found to have no significant as-

sociation with ROR for all cases also had no significant association with inclusion in the at-risk group of recommended JOs.

Profile of Recommended Juveniles Who Were Detained

This information enabled us to construct a profile of the statistically significant differences between JOs who were recommended and released prior to disposition (at risk), compared to those who were recommended and yet never released prior to disposition (not at risk). This description is presented in **Table 16**. The JOs who were not at risk (in spite of being recommended for ROR) were more likely to be male, in the eighth grade or higher, not white or Asian, not living with a parent, to have been arrested previously, to have an open case at the time of the study arrest, to have been arrested on a Class-B felony charge, to have been arrested on a first-degree robbery charge, to have at least four arrest charges, to be convicted, and to be sentenced to incarceration.

The next question for this research is to determine whether the characteristics that distinguish the not-at-risk group (among recommended JOs) are also associated with a greater likelihood of FTA. If so, then sample bias may be a problem for conclusions regarding FTA. If not, then we can assert, with a reasonable degree of confidence, that there is no such problem.

Table 17 shows the FTA rate for each category of the variables that were listed in Table 16. For every variable, the characteristic that fits the profile of the not-at-risk group (printed in bold) had a higher FTA rate. However, the difference was so small for most of the variables that it was not statistically significant. The only two characteristics that did have a statistically significant association with FTA were not living with a parent and having an open case in Criminal Court. JOs who did not live with a parent had an FTA rate 8 percentage points higher than those

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TABLE 16
Statistically Significant Differences Between At-Risk and Not-At-Risk Groups
Juveniles Recommended for ROR (N=769)¹

Characteristic: JOs in the Not-At-Risk group were more likely to be . . .	At Risk Pre-Disposition (N=524)	Not At Risk Pre-Disposition (N=245)	Difference in % Between At Risk and Not At Risk
<i>Defendant Characteristics</i>			
Gender*** Male	85% (446) base = 523	94% (230) base = 245	9
Grade in school*** In 8th grade or higher	79% (399) base = 507	89% (212) base = 239	10
Ethnicity* Non-white and non-Asian	86% (446) base = 520	91% (221) base = 243	5
Lives with parent* No	15% (74) base = 507	21% (50) base = 240	6
<i>Criminal History</i>			
First arrest*** No	18% (91) base = 510	42% (101) base = 239	24
Open case*** Yes	8% (41) base = 497	26% (60) base = 231	18
<i>Arrest Charge</i>			
Severity of arrest charge*** Class-B felony (There were no recommended JOs with a Class-A felony arrest charge)	70% (362) base = 519	82% (200) base = 245	12
Specific arrest charge*** First-degree robbery	66% (286) base = 436	80% (174) base = 219	14
Number of arrest charges* 4 or more	18% (93) base = 524	24% (58) base = 245	6
<i>Case Outcomes</i>			
Convicted*** Yes	30% (138) base = 464	59% (138) base = 236	29
Incarcerated*** Yes (<i>Sentenced Defendants Only</i>)	27% (34) base = 126	65% (82) base = 127	38
Yes (<i>All Disposed Cases</i>): (<i>Convicted cases missing sentence deleted from base</i>)	7% (34) base = 512	35% (82) base = 233	28

*p≤.05 **p ≤.01 ***p≤.001

¹ 13 cases dismissed or transferred to Family Court at Criminal Court arraignment, or missing Criminal Court appearance information, were excluded from the analysis.

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TABLE 17
FTA Rates
By Factors That Differentiated Significantly
Between the At-Risk and the Not-At-Risk Groups of Recommended JOs
At-Risk Cases Only (JOs Recommended for ROR)

Factor		FTA Rate (and number) By Category of Independent Variable			Is This Factor Significantly Associated With FTA For Recommended JOs?
<i>Defendant Characteristics</i>					
Gender	Male Female	7% FTA (32) 3% FTA (2)	base = 446 base = 77	No	
Grade in school	8th or higher 7th or lower	8% FTA (31) 3% FTA (3)	base = 399 base = 108	No	
Ethnicity	All other White/Asian (includes Hispanic white)	7% FTA (31) 4% FTA (3)	base = 446 base = 74	No	
Lives with parent	No Yes	14% FTA (10) 6% FTA (24)	base = 74 base = 430	Yes**	
<i>Criminal History</i>					
First arrest	No Yes	10% FTA (9) 6% FTA (24)	base = 91 base = 419	No	
Open cases	Yes (1 or more) No	17% FTA (7) 6% FTA (26)	base = 41 base = 456	Yes**	
<i>Arrest Charge</i>					
Severity of arrest charge	Class-B felony Class-C felony	7% FTA (26) 5% FTA (8)	base = 362 base = 157	No	
Specific arrest charge	First-degree robbery Second-degree robbery	7% FTA (19) 5% FTA (8)	base = 286 base = 150	No	
Number of arrest charges	4 or more 3 or less	7% FTA (6) 7% FTA (28)	base = 93 base = 431	No	
<i>Case Outcomes</i>					
Convicted	Yes No (transferred to Family Court or dismissed)	7% FTA (9) 5% FTA (17)	base = 138 base = 326	No	
Incarcerated	<i>Sentenced defendants only:</i> Yes No	12% FTA (4) 4% FTA (4)	base = 34 base = 92	No	
<i>All disposed cases:</i>		Yes No	12% FTA (4) 6% FTA (29)	base = 34 base = 478	No

*p≤.05 **p≤.01 ***p≤.001

The value of each variable printed in **bold** is the value associated with being **not at risk**.

who did live with a parent (14% compared to 6%); and those with an open case had an FTA rate 11 percentage points higher than those with no open case (17% compared to 6%).

Estimating the Likelihood of FTA for Recommended Juveniles Who Were Detained

Since there were two variables with a statistically significant association with FTA, we cannot yet discount the possibility of sample bias. However, the not-at-risk group was not heavily weighted with defendants with an open case or those who did not live with a parent, nor were their FTA rates high enough to have much effect on the group as a whole. This effect can be estimated by using the number of cases in each category of the “lives with parent” variable in the not-at-risk group, and multiplying it by the FTA rate found for that category in the at-risk group. The result is an estimated number of FTAs for each category, which can then be summed to produce an estimated total number of FTAs for the not-at-risk group. This calculation produced an estimated 8 percent FTA rate. Repeating the procedure for the other variable that was significantly related to FTA, “open cases,” resulted in an estimated FTA rate of 9 percent for the not-at-risk group. The results vary slightly because of different numbers of missing cases for the two variables. The difference in the actual FTA rate for the at-risk group (7%) and the estimated FTA rate for the not-at-risk group (between 8% and 9%) was not statistically significant. The calculations are given in Appendix D.¹⁸

We can conclude that sample bias should not be a concern with this research. A possible source of bias could still arise if different factors were to affect FTA for the detained defendants (if they were released) than affected FTA for the released defendants. However, we have eliminated the possibility that any factors that are known to be related to FTA among released defen-

¹⁸ The citywide pretrial FTA rate for the at-risk sample given in Table 5 is 8%. The difference can be attributed to different missing cases in the analyses used in Appendix D.

dants were disproportionately represented in the not-at-risk group. Even though some defendant characteristics that were associated with higher FTA rates were found disproportionately in the not-at-risk group, this was not enough to raise the estimated FTA rate significantly for the not-at-risk, recommended defendants. Therefore, the results of this research show no reason to be concerned that juveniles who were recommended but not released would have significantly higher FTA rates than the recommended juveniles who were released.

5. SUMMARY AND DISCUSSION

The findings reported in Part I, while providing answers to some questions, raised others. Part II presents the results of further analysis done to address these additional research questions.

Pretrial Validation Analysis

First, the validation analysis was extended to confirm that the recommendation system is effective in predicting pretrial, as well as pre-sentence, FTA. The purpose of the CJA recommendation systems for both juveniles and adults is to aid judges in making release decisions at Criminal Court arraignment. Thus, it was important to confirm that the recommendation can be used with confidence at that stage in case processing.

The initial validation, reported in Part I, established that the system works well to predict pre-sentence FTA, which includes pretrial as well as post-conviction and pre-sentence FTA. However, many of the defendants in that analysis were not released until after they pled guilty. Of the 705 cases in the at-risk sample used for the analysis of FTA, 10 percent were not released until after conviction. This group had a higher FTA rate than those who were released pre-disposition (13%, compared to 8% for those released pre-disposition). And the juveniles who were at risk both before and after conviction tended to wait until after conviction to fail to appear, if they were going to do so. Of the 142 cases at risk both before and after disposition, 8 defendants (6%) had a pretrial FTA and 18 (13%) had a first FTA after conviction. Given the relatively large number of post-disposition FTAs, it was unclear whether the factors that were found to predict pre-sentence FTA would still be good predictors when post-disposition data were excluded.

This was tested by repeating the validation analysis, using pretrial FTA as the outcome measure and including only defendants who were at risk prior to disposition of the case. The re-

sults of this analysis were very similar to the results of the pre-sentence analysis, thus confirming that the recommendation system works well to predict pretrial FTA for Juvenile Offenders. The fact that the recommendation system for juveniles has now been validated for its ability to predict both pretrial and pre-sentence FTA differentiates this research from that used to construct the current adult recommendation system, which predicted pretrial FTA in Criminal Court only.

Factors Associated With ROR

Second, the results of the earlier analyses suggested that other factors influenced the release decision more strongly than did the CJA recommendation. There was an association between the recommendation category and ROR, but the data suggested that other, as yet unidentified, factors were more important. Less than half (42%) of JOs who were recommended for ROR were released on recognizance at Criminal Court arraignment. Moreover, the ROR rate at arraignment declined following implementation of the recommendation system (from 52% in FY 1992 to 38% in FY 1997), even though the proportion of JOs who would have been recommended, using the same criteria, rose (from 70% to 79%).

The current report identifies almost a dozen factors that had a statistically significant association with ROR at Criminal Court arraignment. The recommendation category, too, had a statistically significant association with ROR as long as no other factors were taken into account, but when multivariate models were estimated that included the two criterion items for assigning a recommendation category, the recommendation itself was no longer significant. One of the criteria for a positive recommendation — expecting someone at arraignment — remained an important predictor in both multivariate models, and the other criterion (being in school) was also significant when conviction was excluded from the analysis. This suggests that judges may have

been more influenced by the individual elements than by the recommendation category itself, and they may have weighted the criteria in a way that the recommendation system does not reflect.

The strongest predictor of ROR was whether the juvenile was convicted or not, when that variable was used to measure the arrainging judge's estimate of the probability of conviction. This may mean that judges are reluctant to release defendants whom they believe are likely to be convicted. However, there are other plausible interpretations. Some researchers (e.g., Rankin, 1964) have argued that detention at Criminal Court arraignment pressures a defendant to plead guilty, thereby contributing to the likelihood of conviction. Or the causal direction may be circular: the arrainging judge's expectations concerning conviction may influence his or her release decision, which in turn may influence the likelihood of conviction. There is no way that this complex question can be answered with the data in hand.

The role of charge severity class as a predictor of ROR at arraignment is also ambiguous. Those arrested on less severe charges (Class-C felonies) were more likely to be ROR'd at arraignment than those arrested on more severe charges (Class A and B), but it is not clear why. It

was suggested earlier that judges may use the charge as a gauge of the probable sentence, which is a factor they must weigh in assessing risk of flight. Average sentence lengths received by the defendants in the study who were convicted are shown at right, by the

Severity Class of Arrest Charge	Sentence Length in months For convicted JOs (The minimum time was used in the calculations for indeterminate sentences)	
	Mean	Median
Class-A felony	48.6	38
Class-B felony	7.5	0
Class-C felony	5.9	0

severity class of the arrest charge. (Time served and non-incarcerative sentences such as probation were counted as zero in these calculations.) The defendants arrested for a Class-A felony received very long sentences (a minimum sentence length of over four years on average), com-

pared to the other two severity classes. However, the difference of less than two months between average sentence lengths for JOs arrested for a Class-B felony and those arrested for a Class-C felony does not seem great enough to explain the large difference in ROR rates shown in Table 11 (31% and 54% respectively). Thus—unless Criminal Court arraignment judges have a distorted sense of the sentences handed down by their counterparts in Supreme Court—it seems unlikely that this is the explanation for the association between charge severity and ROR.

A related explanation may derive from the fact that convicted defendants who had been arrested on Class-C felonies were a little more likely to receive Youthful Offender (YO)¹⁹ status (89%) than those arrested on Class-A or -B felonies (77%). Since lighter sentences are allowed for defendants granted YO status, higher expectations of YO status for defendants charged with Class-C felonies may lead judges to be more willing to release these defendants (even though their sentences did not actually turn out to be appreciably shorter).

Another possibility that has already been suggested is that judges see charge severity as an indicator of the defendant's dangerousness to the community. The elements that distinguish first-degree robbery (the most common Class-B JO offense) from second-degree robbery (the most common Class-C JO offense) are primarily that the injury inflicted was more serious for first-degree robbery, and a dangerous weapon was used and not simply displayed. It is plausible that these elements of the crime, along with inferred "dangerousness," underlie the observed association between higher detention rates for JOs charged with Class-B felonies, compared to Class-C felonies.

¹⁹ Defendants convicted of a Class-C felony or certain Class-B felonies may be eligible for YO status if they are JOs, or if they are 16, 17, or 18 years of age, with no prior felony conviction or adjudication as a YO or juvenile delinquent. YO status may be applied for upon conviction. If granted, the YO adjudication replaces the conviction, and the defendant's record is sealed.

The roles of gender and ethnicity in predicting ROR raise equally intriguing questions. Neither characteristic should play any role in the release decision, yet the odds of ROR at arraignment were significantly increased for females, and for whites and Asians.²⁰ This was true even after the effects of likelihood of conviction, criminal history, charge severity, and all the other significant factors were held constant. This means that the other predictors did not account for the differential ROR rates found by gender and ethnicity, but it does not rule out the possibility that some other unknown factors may account for the relationship.

It is obvious that statistical analysis alone cannot explain why and how judges make release decisions as they do. At the conclusion of Part I, we stated that CJA hopes to follow up this study by initiating discussions with judges to improve our understanding of release decisions, and of the role of the CJA recommendation in those decisions. Even though we have now identified many factors that are associated with release or detention at arraignment, and have developed two multivariate statistical models of ROR at arraignment, this discussion suggests that the models raise as many questions as they answer. We know what factors are related to ROR, but we do not know why most of them are related. Research that combines quantitative and qualitative techniques, including interviews with judges, could help to resolve these questions.

²⁰ In his previously cited study of Fiscal Year 1992 arrests, Liberman (1996) found that gender was a significant predictor of the arraignment release decision for JOs, but ethnicity was not. However, there were too few white defendants in the data set to compare them to minorities in the multivariate analyses. Consequently, blacks were compared to Hispanics in Liberman's analysis.

Possible Bias

The third and final question addressed in this report arose from the research design: Was the validation biased because detained defendants (who were never at risk for FTA) were not included in the analysis? The question has practical implications for the courts' confidence in the CJA recommendation system. Many juveniles who were recommended for ROR were detained through disposition of their cases, presumably because—in spite of a positive recommendation—judges thought they might flee. Or, judges used other criteria, not related to risk of flight. In any case, a positive CJA recommendation might carry more weight if we could show that *all* recommended juveniles have the same low likelihood of FTA. This would require a demonstration that the validation results were not biased in favor of released defendants.

It was impossible to test directly the likelihood of FTA for detained defendants, so it was done indirectly. Research results showed that the released (at-risk) juveniles who were recommended for ROR did differ significantly in many ways from the detained (not-at-risk) juveniles who were also recommended for ROR, but only two of these characteristics had any significant association with likelihood of FTA in the at-risk group. Juveniles who had an open case in Criminal Court and who did not live with a parent were both more prevalent in the not-at-risk group, and both of these characteristics were associated with significantly higher FTA rates. However, the number of juveniles with each of these risk factors was so small, even in the not-at-risk sample, that their greater tendency to flee would not have much of an impact on the overall FTA rate. An estimated FTA rate was calculated for the recommended juveniles who were not at risk, using the FTA rates for the risk factors found to affect FTA for the recommended juveniles who were at risk, weighted according to their distribution in the not-at-risk group. The result was that the estimated FTA rate for the recommended, not-at-risk sample was no more than two per-

centage points higher than the rate for the recommended, at-risk sample. That difference was not statistically significant, so sample bias should not be a concern. There is still the possibility that other, unidentified risk factors would affect FTA for detained defendants, if they were released, but this analysis eliminates the known risk factors as causes of bias. Moreover, the assumption that the same risk factors affect FTA for both groups is supported by the finding that the recommendation system predicted pre-sentence FTA just as well for defendants who had been detained until disposition as it did for those who were at risk pretrial.

Eventual conviction was the factor that distinguished most strongly between juveniles who were released pretrial and those who were not, among recommended JOs, but that factor was not related to FTA. Even though New York law requires judges to weigh the probability of conviction in considering likelihood of flight, the results of this study do not indicate that a defendant with a high probability of conviction is any more likely to flee.

This research, as reported in Parts I and II, has highlighted both the strengths of the JO recommendation system and the limited ways in which it is apparently being used. The recommendation system identifies defendants who are at greater risk of flight than others, and it identifies high-risk defendants more accurately than can be done by using charge severity, criminal history, likelihood of conviction, or any of the other factors that judges seem to weigh most heavily. Although the separate elements of the recommendation system already fill an important role in the release decision, we hope that the courts will use the recommendation itself with more confidence in the light of the results of the current research.

APPENDIX A JUVENILE OFFENSES

Created by New York's 1978 Juvenile Offender Law

Juveniles aged 14 or 15 who are charged with any of the 15 felony offenses in the table, or 13-year-olds charged with second-degree murder, are prosecuted directly in the adult court as Juvenile Offenders (JOs). JO cases may subsequently be transferred to the juvenile court.

Offense	Penal Law	Felony Class	Defendant's Age
Aggravated sexual abuse in the first degree	130.70	B	14, 15
Arson in the first degree	150.20	A	14, 15
Arson in the second degree	150.15	B	14, 15
Assault in the first degree	120.10 (1) (2)	B*	14, 15
Burglary in the first degree	140.30	B	14, 15
Burglary in the second degree	140.25 (1)	C	14, 15
Kidnapping in the first degree	135.25	A	14, 15
Attempted kidnapping in the first degree	110/135.25	B	14, 15
Manslaughter in the first degree	125.20	B	14, 15
Murder in the second degree	125.25 (1) (2) 125.25 (3)**	A A	13, 14, 15 14, 15
Attempted murder in the second degree	110/125.25	B	14, 15
Rape in the first degree	130.35 (1) (2)	B	14, 15
Robbery in the first degree	160.15	B	14, 15
Robbery in the second degree	160.10 (2)	C	14, 15
Sodomy in the first degree	130.50 (1) (2)	B	14, 15

*Assault in the first degree was upgraded from Class-C to Class-B felony in November 1996.

**But only where the underlying crime is also a JO offense.

Criminal possession of a weapon in the second degree (265.03, a Class-C felony) and criminal possession of a weapon in the third degree (265.02, a Class-D felony), when the possession occurred on school grounds, were added to the list of juvenile offenses in November 1998. This change did not affect the current research because it occurred after the study period.

APPENDIX B DESCRIPTION OF THE RESEARCH DATA FILE AND ANALYTIC SAMPLE

Selection of Cases

In order to provide criminal justice information and research services, CJA maintains an arrest-based, automated database containing detailed information on all New York City arrests, court appearances, and case dispositions in Criminal Court and Supreme Court. From this database we selected all Juvenile Offenders (JOs) arrested on April 28, 1996, through June 30, 1997. The starting date was selected to be the first day of the implementation of the new JO recommendation system. The closing date was selected to provide a data set that included all of Fiscal Year 1997, so that the results could be more easily compared to other Fiscal Year data (particularly the FY 1992 data set used to develop the JO recommendation system). We estimated that the number of arrests occurring within this time period would be sufficient for the analysis.¹ An arrest cutoff date of June 30, 1997, would also allow at least a full year for all cases to be completed by June 30, 1998.

Arrests within the specified dates were identified as JOs using the following criteria:

- age is 14 or 15 at the time of arrest **and** the top arrest charge is a JO charge (see Appendix A for JO charges); **or**
- age is 13 **and** the top arrest charge is second-degree murder; **or**
- the CJA recommendation category is J5, J6, or J7 (or 4E, the category used for juveniles prior to implementation of the recommendation system).

¹ The estimate was done by means of a statistical technique known as “power analysis.” The power analysis showed that 485 cases would be the minimum needed to detect a small effect ($R^2 = .05$) at a significance level of .05 and a power of .99 (meaning that there is a 99% chance that a statistically significant effect this small would be detected by the analysis), assuming that up to four independent variables were entered in the multivariate analysis. The number of cases in the final analytic sample was 705, which is well over the minimum requirement as estimated by the power analysis. (The analytic sample included only cases in which the defendant had been released; the number of cases in the complete data set was larger.) For a discussion of the use of statistical tests of significance for data sets that are not random samples, see Appendix C.

To the cases selected using these criteria were added three arrests that had occurred on April 27, 1996, because the juveniles were interviewed by CJA staff on April 28 and were assigned a JO recommendation category according to the new procedures. We dropped from the file all cases that were declined prosecution or were transferred to Family Court prior to arraignment, keeping only cases with a Criminal Court arraignment.

The resulting file contained 1,065 cases. Of these, 77 were deleted because, after checking all cases with conflicting data regarding eligibility for Juvenile Offender status, we decided that the defendants in these cases were probably not JOs. In addition, extensive efforts were made to check the data for errors in court-processing information, especially release status and outcomes of court appearances. (See Part I for additional details concerning data-checking procedures and decisions regarding cases with conflicting data.)

Since the data file contained every arraigned JO arrested within the time frame of the validation study, it is not a statistical sample, which would consist of some representational portion of all the cases. Instead, the cases comprise an entire 14-month cohort. In this respect the validation cohort is comparable to the Fiscal Year 1992 cohort used to develop the JO recommendation system.

Court-Processing Status of Cases in the Data File

The final file contained 988 docketed cases from arrests that had occurred during the 14 months from the end of April 1996 through June 30, 1997.² We collected court-processing data through June 30, 1998, allowing at least a full year for all arrests to be processed by the courts

² A few cases were missed because both date of birth and CJA recommendation were blank in the database. We found 3 such cases while checking rearrests and other data for several hundred juvenile offenders in the data file; for those cases, we knew that the defendant was a JO because of the sample case. There is no way of knowing how many other JOs we might have missed because date of birth and CJA recommendation were blank, but this is a rare occurrence in the database. In any event, a JO without a CJA recommendation could not be used in the validation

and for the collection of FTA data. By that time 94 percent of the cases in the data file had been completed, either by transfer to Family Court (28%), by a favorable outcome in Criminal Court (29%) or in Supreme Court (2%), or by the defendant's conviction and sentencing in Supreme Court (35%). A handful of cases were still working their way through the courts (3%), a few were still open after the defendant failed to appear and did not return prior to disposition or sentencing (1%), and a few were missing data on case outcome (1%). See Part I for a more detailed description of the court-processing status of the cases in the data file.

Defendants With Multiple Cases

Since this is an arrest-based file, defendants with more than one arrest were counted as many times as they were arrested within the time range of the study. The number of defendants with more than one arrest during the study period was small: there were 950 unique defendants in the sample, of whom fewer than four percent had another case in the data file.³ Counting a defendant multiple times could bias the results if it occurred frequently, but this number was too small to have much of an effect. Treating multiple arrests as though they represented different defendants can also be justified on the grounds that the same defendant's circumstances (such as school attendance) could change from one arrest to the next, resulting in a different CJA recommendation and thus, a different prediction regarding the defendant's likelihood of FTA.

analysis (although such cases might slightly alter the overall FTA rate).

³ 914 (96 %) had only one case; 34 had two cases, and two had three cases. The number of defendants in the data file who were rearrested during the study period was actually somewhat larger than this because some were rearrested as adults or as juvenile delinquents. This rearrest count includes only JO cases that were arraigned. Not counted are rearrests as an adult or JD, rearrests that were not prosecuted, and rearrests that were not collected in the data file because date of birth and CJA recommendation were both missing in the database (see footnote 6). When we checked rearrests for detention status in order to verify failure to appear, however, we checked *all* rearrests, not just those included in the data file.

Validating these differing CJA recommendations, based on different circumstances, requires treating each case uniquely.⁴ Consequently, this report may occasionally refer to “juveniles” or “defendants” as though the person is the unit of analysis, but the reader should keep in mind that the unit of analysis is the arrest (case).

Creation of the At-Risk Sample

Validation of the ROR-recommendation system requires demonstrating that JOs who were “not recommended” for release on recognizance failed to appear more often than those who were “recommended.” In order for the comparison of FTA rates to be meaningful, both groups (“not recommended” and “recommended”) must have had an *opportunity* to fail to appear. If the defendant was in custody during the entire processing of the case, he or she would have had no opportunity to fail to appear. Including such defendants in a category of “never failed to appear” would be misleading. If given a chance, they *might* have failed. The fact that they were not released may indicate that the judge considered the risk of FTA to be high enough to justify detention.

Therefore, we needed to create an “at-risk sample” to use for the FTA analysis. This sample consisted of only those cases in which the defendant was at risk for failure to appear for at least one appearance during the processing of the case at any time from Criminal Court arraignment through final disposition. (In Part I, a larger at-risk sample was created that included cases in which the defendant was released following conviction, prior to sentencing.) If the case was not disposed during the study period, the latest court appearance through June 30, 1998, was the final date used.

⁴ Of the 36 defendants who were represented by more than one case in the file, almost half (16) did not receive the same CJA recommendation in all their cases.

We defined “at risk” in the following way: Defendants who were released (either on their own recognizance or on bail) at any given court appearance were considered at risk for the next appearance. A defendant was considered at risk even in the absence of a release at any court appearance if supplemental data from the Department of Juvenile Justice (DJJ) indicated that he or she posted bail prior to a court date included in the study. A defendant need be at risk for only one court appearance prior to disposition in order to be included in the pretrial at-risk analytic sample.

If the earliest release occurred at the latest court appearance in the study, we did not consider the defendant at risk for purposes of the research because the next scheduled appearance—the one for which he or she was at risk—was not included in the study. Also, a defendant who was released at a court appearance but was rearrested and was still in custody at the next court date was not at risk for that appearance. (The case would still be included in the at-risk sample if the defendant were at risk for another court date.)

APPENDIX C
New York
CRIMINAL PROCEDURE LAW
§510.30. Application for recognizance or bail; rules of law and
criteria controlling determination.

1. Determinations of applications for recognizance or bail are not in all cases discretionary but are subject to rules, prescribed in article five hundred thirty and other provisions of law relating to specific kinds of criminal actions and proceedings, providing (a) that in some circumstances such an application must as a matter of law be granted, (b) that in others it must as a matter of law be denied and the principal committed to or retained in the custody of the sheriff, and (c) that in others the granting or denial thereof is a matter of judicial discretion.

2. To the extent that the issuance of an order of recognizance or bail and the terms thereof are matters of discretion rather than of law, an application is determined on the basis of the following factors and criteria:

(a) With respect to any principal, the court must consider the kind and degree of control or restriction that is necessary to secure his court attendance when required. In determining that matter, the court must, on the basis of available information, consider and take into account:

(i) The principal's character, reputation, habits and mental condition;

(ii) His employment and financial resources; and

(iii) His family ties and the length of his residence if any in the community; and

(iv) His criminal record if any; and

(v) His record of previous adjudication as a juvenile delinquent, as retained pursuant to section 354.2 of the family court act, or, of pending cases where fingerprints are retained pursuant to section 306.1 of such act, or a youthful offender, if any; and

(vi) His previous record if any in responding to court appearances when required or with respect to flight to avoid criminal prosecution; and

(vii) If he is a defendant, the weight of the evidence against him in the pending criminal action and any other factor indicating probability or improbability of conviction; or, in the case of an application for bail or recognizance pending appeal, the merit or lack of merit of the appeal; and

(viii) If he is a defendant, the sentence which may be or has been imposed upon conviction.

(b) Where the principal is a defendant-appellant in a pending appeal from a judgment of conviction, the court must also consider the likelihood of ultimate reversal of the judgment. A determination that the appeal is palpably without merit alone justified, but does not require, a denial of the application, regardless of any determination made with respect to the factors specified in paragraph (a).

3. When bail or recognizance is ordered, the court shall inform the principal, if he is a defendant charged with the commission of a felony, that the release is conditional and that the court may revoke the order of release and commit the principal to the custody of the sheriff in accordance with the provisions of subdivision two of section 530.60 of this chapter if he commits a subsequent felony while at liberty upon such order.

Source: *New York Criminal Statutes and Rules: 2000 Graybook* Bender Pamphlet Edition. New York: Lexis Publishing, 1999.

APPENDIX D ESTIMATING SAMPLE BIAS

Only released defendants were selected for the analysis of how well the ROR-recommendation system for JOs predicts FTA. This was necessary because defendants who were in detention had no opportunity to FTA. This analytic strategy, although necessary, could not produce any information as to how well the results of the analysis would apply to defendants who were never released. If more recommended juveniles were released—resulting in the release of some who formerly would have been detained—would the recommendation system be as effective in predicting FTA for them as it was for the research sample of released defendants? Or did the use of a sample of released defendants introduce a bias such that the results would not apply to the detained defendants in the sample? These questions must be addressed adequately if we hope to convince the courts that there would be little risk in releasing a higher proportion of juveniles recommended by CJA for ROR.

Nineteen variables were tested for an association with being at risk (released prior to case disposition) among JOs who were recommended for ROR. The 14 variables that had a statistically significant association with being at risk were then tested for a bivariate association with FTA. Only two variables were significantly associated with both release prior to disposition (being at risk) and with FTA. This appendix presents the calculations for estimating the FTA rate for the not-at-risk (detained) group, given the impact of these two factors.¹

¹ The two factors were also tested in a multivariate analysis using logistic regression. Both were still significantly associated with FTA for recommended JOs.

Of the juveniles recommended for ROR, those in the not-at-risk group were significantly more likely than those in the at-risk group to be living with someone other than a parent and to have an open case in Criminal Court. There were other statistically significant differences between the two groups, but these two distinguishing traits were the only ones associated with significantly different FTA rates. The FTA rates associated with these traits in the at-risk group were used to calculate an estimated FTA rate for the not-at-risk group, taking into account the higher proportion of defendants with the traits in the not-at-risk group.

The following table is filled in with the actual values for the variable “lives with parent.” The data for the at-risk group are taken from Table 6. The number of JOs who do not live with a parent in the not-at-risk group and the total number who were not at risk (the column labeled “Base”) are taken from Table 5. The number of JOs in the not-at-risk group who do live with a parent was determined by subtracting the number who do not live with a parent from the total (240–50=190). There were no actual FTA rates for the not-at-risk group, so these cells are blank.

Lives With Parent	AT RISK		NOT AT RISK	
	Number and % FTA [actual]	Base [actual]	Number and % FTA [estimated]	Base [actual]
No	10 (14%)	74 (100%)		50 (100%)
Yes	24 (6%)	430 (100%)		190 (100%)
Total	34 (7 %)	504 (100%)		240 (100%)

The next step was to apply the at-risk FTA rates to the not-at-risk base numbers to estimate the number of FTAs in each category of “lives with parent” for the not-at-risk group. The FTA rate for “No” was 14 percent for the at-risk group, so the number of FTAs estimated for the not-at-risk group was calculated to be 7 (14% of 50). This was entered in the table below (in bold). The FTA rate for “Yes” was 6 percent for the at-risk group, so the number of FTAs for the not-at-risk group was calculated to be 11 (6% of 190). This was entered in the next row of the

table below. An estimated overall FTA rate for the not-at-risk group was then calculated by summing these two cells (7 + 11) and dividing the sum by the total in the not-at-risk group (18/240). The result was an estimated FTA rate for the not-at-risk group equal to 8 percent, which is barely higher than the rate for the at-risk group, which was 7 percent. This difference was not statistically significant.

Lives With Parent	AT RISK		NOT AT RISK	
	Number and % FTA [actual]	Base [actual]	Number and % FTA [estimated]	Base [actual]
No	10 (14%)	74 (100%)	7 (14%)	50 (100%)
Yes	24 (6%)	430 (100%)	11 (6%)	190 (100%)
Total	34 (7 %)	504 (100%)	18 (8%)	240 (100%)

The process was then repeated for the other variable that was significantly associated with both inclusion in the at-risk group and with FTA: whether the defendant had an open case in Criminal Court. First the actual numbers were filled in from Tables 5 and 6; then the FTA rates for the at-risk group were applied to the not-at-risk group to obtain the estimates in bold.

Open Case	AT RISK		NOT AT RISK	
	Number and % FTA [actual]	Base [actual]	Number and % FTA [estimated]	Base [actual]
Yes	7 (17%)	41 (100%)	10 (17%)	60 (100%)
No	26 (6%)	456 (100%)	10 (6%)	171 (100%)
Total	33 (7 %)	497 (100%)	20 (9%)	231 (100%)

The results varied by about one percentage point depending on which variable was used to calculate the estimated FTA rate. This variation can be attributed to the different missing cases for each calculation. Regardless of which estimate is used, the difference in FTA rates between the at-risk and the not-at-risk groups was very small and was not statistically significant.

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