ABSTRACT

Title of Document: THE PRETRIAL PROCESS IN BALTIMORE CITY: AN EVALUATION OF THE EFFECTIVENESS OF PREDICTING FLIGHT RISK

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This study examines and provides a preliminary update to Baltimore City's Bail- Risk Assessment Scales. It is based on a sample of 757 recent arrestees in Baltimore City, and specifically examines factors relating to current charge severity, prior record, substance use, and community stability and their impact on Failure to Appear (FTA) in court in conjunction with guidelines set forth by the National Association of Pretrial Services Agency (NAPSA) and the American Bar Association (ABA). Results suggest that Baltimore City's Bail- Risk Assessments can be condensed into one scale and be made more simple and effective. Additionally, the results suggest that Baltimore City uses and applies reasonable risk factors, but the measures are inappropriate. Finally, the results suggest that future risk assessments must be tailored to the population for which they are applied.

THE PRETRIAL PROCESS IN BALTIMORE CITY: AN EVALUATION OF THE EFFECTIVENESS OF PREDICTING FLIGHT RISK

By

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The Purpose of Pretrial Services

The purpose of pretrial services is implicit within the principles of the United State's Constitution. The Bill of Rights provides protections for those who come into contact with the criminal justice system. The Eighth and Fourteenth Amendments prohibit federal and state governments, respectfully, from the use of excessive bail, excessive fines, and the use of cruel and unusual punishment (US Constitution 1787). The Eighth Amendment's opposition to excessive bail and the use of cruel and unusual punishment is substantially important for the present research concerning Baltimore City, Maryland's pretrial release services. The use of bail is to ensure that individuals awaiting criminal trial will appear on their court date without having to be detained. Bail is also used as a preventative measure before trial where the risk of flight is high or when there is a danger that the person will commit a new crime if released. Under these circumstances bail is frequently set very high in order to keep extremely dangerous criminals or high-flight risks off of the street (Ozanne, Wilson & Gedney 1980; Bak 2002**)**. The Eighth Amendment does not mandate either the federal government or the states to provide suspects with pretrial release, nor does it state "that the right to bail is absolute" (Arthur 1986). However, due to the presumption of innocence until there is proof of guilt beyond a reasonable doubt, it is a common feeling that individuals should not be detained needlessly. In addition, there is evidence that suspects who are detained are less successful at subsequent steps in the adversarial process than those suspects who are released. Unnecessary

detention therefore may constitute cruel and unusual punishment (Arthur 1986). Balanced against this, there is also an assumption that some of the individuals awaiting trial will be a flight risk and are too dangerous to be in the community, so the suspects "right" to be released must be understood within the need to protect the community. For this reason, it is considered necessary to set either a financial release to ensure their appearance in court or in the absence of bail, to ensure their detention.

Financial release options include surety bonds, full cash bonds, deposit bonds, and property bonds[1]. The bail amount will be set either at a reasonable value to ensure that the defendant appears in court for trial, or an unaffordable value to continue detention with the assurance of a court appearance and safety for the community. Those who are not determined to be either a flight risk or dangerous will receive a non-financial release. Non-financial release options include release on recognizance (ROR), conditional release, or release on unsecured bonds (Cohen & Reaves 2007)[2]. The National Association of Pretrial Services Agencies (NAPSA) and American Bar

[1] Surety bonds is the release of a defendant under money bail by using the services of a bondsman. Their appearance is assured by the bondsman, and they are not under pretrial services supervision. A full cash bond bail requires the defendant to post the full bail amount to obtain release. "It exposes the defendant to possible loss of the full amount that is posted in the event of nonappearance, but provides for return of the full amount if court appearances are made as scheduled." Deposit bonds are generally ten percent deposit bail bonds which requires the defendant to deposit ten percent of the bond amount with the court" to obtain release. A property bond allows the defendant or a family member to pledge assets that would pay the full amount of the bond if the defendant failed to appear in court" (NAPSA 2005).

[2] Release on "personal recognizance" is a release made on a presumption in favor of the defendant based on a simple promise to appear (i.e., release on "personal recognizance." Conditional release is "release under the condition of participation in available medical, drug, mental health or other treatment, diversion or alternative adjudication release options." An unsecured bond "is the defendant's promise to pay a certain amount of money in the event of nonappearance" (NAPSA 2005).

Association (ABA) Release Standards recommend minimizing the unnecessary use of secure detention. This would suggest that unless there are sound grounds not to, defendants should be released on recognizance. Also, the guidelines suggest that release on financial conditions should be used only when no other conditions are reasonable. The defendant's pretrial release outcome is then reliant on pretrial detention investigators and their assessments of risk via interviews and pretrial release guidelines.

The purpose of the risk assessment by pretrial personnel is to make a prediction about the future behavior of the defendant – her dangerousness and the likelihood that she will appear at trial. Specifically, it is to somehow estimate the probability that a defendant will appear in court and the form of pretrial release to be granted (Gottfredson 1987). This estimation is usually based upon information collected by pretrial personnel about the criminal history and "community stakes" of the suspect, information contained in something called the pre-trial screening instrument. Since the Fourteenth Amendment assures the right to quick due process, pretrial offices use the risk instrument to aide them in making a timely recommendation for bail and the judge's final decision on release (Arthur 1986; Gottfredson 1987). Typically bail risk assessment guidelines use the factors found to be significant from the Manhattan Bail Project in 1964. These factors form a scale for failure to appear (FTA) risk commonly referred to as the Vera point system. The Vera point system is used to determine flight risk, and jurisdictions typically adopt a modified Vera point system tailored to their needs. The guidelines are comprised of factors related to defendant attributes such as age, physical and mental condition,

family ties, education, employment status and history, history relating to drug or alcohol abuse. They are also related to legal factors relating to past conduct, criminal history, and record concerning appearance at court proceedings. In addition it includes factors related to the seriousness of the current charges and the individual's probation or parole history (NAPSA Release Standards 2005). This information serves as "risk factors" and the pretrial instrument results in some type of summation of the risk factors as well as decision rules as to appropriate cut-offs for different types of release.

Prediction of risk for the pretrial release decision is a risk in itself. Goldkamp (1993) describes pretrial decision-making as a judicial function plagued with unfairness and ineffectiveness stemming from the free exercise of discretion and the difficulties associated with predictive decision-making. This free exercise of discretion creates the potential for false positives and false negatives (Glaser 1987). The false positives associated with the bail risk instruments can be very damaging to those awaiting trial. A false positive in this case occurs when an individual is predicted to FTA in court and is detained, but they would have appeared in court had they been released. Therefore, the defendant is either detained or receives a higher bail when it is not necessary. It is also possible that a prediction instrument will create a false negative. A false negative in the terms of FTA, is when someone is predicted to appear in court but they actually FTA. It is difficult to quantify the actual number of false positives and negatives, as those who are false positives do not have the chance to prove that they would appear in court (Glaser 1987). One of the consequences of the false positives and negatives is the use of a financial release. The

use of a financial release creates problems for those who are young, poor, and are a racial minority. This group of individuals is more likely to experience poor employment history, a lower amount of education, and weak family ties (Goldkamp 1993). Additionally, being young, poor, and a racial minority work with the factors often associated with flight risk. As a result, they are less likely to be deemed a good risk for release and are more likely to be detained or have a high financial bail set. Thus, the recommendation made by the case manager and ultimately the decision by the presiding judge can have lasting ramifications on the defendant's family, employment, community, and future (Frazier, Bock & Henretta 1980). Families are often unable to produce the finances to cover bail. Those detained may lose their jobs, their marriages may weaken or dissolve, their ties in the community may deteriorate, and the aspirations the defendant has may be lost due to unnecessary detention. In addition, those detained may be less able to prepare for their defense and fare less well at trial than those released. Since the risk scales weigh heavily on factors related to those already at risk, NAPSA and ABA standards for pretrial release recommend the use of release on recognizance over financial mean of release.

Research Goals

The goal of this research is twofold. One goal is to evaluate the operation of the pretrial prediction instrument current used by pretrial services in Baltimore City, Maryland. This will be done by identifying the factors that differentiate between those who fail to appear in court and those who do not. The ultimate goal, but one not able to be achieved with the current data, is to update the city's 10-year old bail review risk assessment scale via statistical analysis of recent arrestee data from the

city's pretrial detention office.[3] It is necessary to examine Baltimore City's bail decisions due to the high volume of arrests and detention hearings the city has every month, Baltimore City's changing demographics, and the cost to the city. The Baltimore City Office of Pretrial Detention (B. Weisengoff, personal communication, July 22, 2009) estimates that there are approximately 100,000 arrests in Baltimore every year that will result in 1,025 pretrial detention cases in a month. The cost estimate for the pretrial process is $48,000 a year per defendant, making it a sizeable proportion of Baltimore City's Budget. Approximately one in nine defendants will FTA, and the trick is to be able to accurately distinguish these ten percent *a priori*. Although this is a low prevalence event, it is still important to examine due to the consequences of pretrial release decisions and the impact on the city.

The decision to detain or to release an individual pending trial is costly to the city. However, the decision is arguably more important for the defendant in Baltimore City than anywhere else in the state, because of the city's demographics and factors associated with high-risk individuals. Currently, Baltimore City is home to 11.3 percent of Maryland's population. Compared to 541.0 persons per square mile in the rest of the state, there are 8,038.9 persons per square mile in Baltimore City, making it densely populated (US Census 2000). The US Census Bureau (2008) reports that 63.6 percent of Baltimore City's population is Black, 30.8 percent is White non-Hispanic persons, 2 percent is Asian, and 2.7 percent are persons of Hispanic or Latino origin. Additionally, 19.9 percent of Baltimore City's population lives below the poverty level compared to 8.3 percent in Maryland as a whole. Finally, the

[3] It is not the goal to create a new predictive instrument as it is not possible due to data limitations.

median household income in Baltimore City is $36,894 as opposed to $67,989 in Maryland.

It is evident that Baltimore City is unlike the rest of Maryland. Its population is more dense, poor, and mostly minority. It also has a higher rate of arrests than anywhere else in the state. In fact, data from 1994 to 1999 indicates that Baltimore City hears one out of every three bail review hearings statewide (Abell Foundation 2001b). Given the quantity of cases, the amount of resources needed for them, and the relative homogeneity of the arrestee population, it is essential that the decisions made by the case managers in Baltimore City are accurate.

Chapter 2: Literature Review

A Study of Maryland's Pretrial Release and Bail System

In order to accurately assess pretrial practices in Baltimore City and to evaluate and update their bail risk assessment scale, it is necessary to review the history of bail guidelines, examine recent bail guideline updates in other cities, and examine empirical research on the pretrial release decision. It is especially essential to examine the current status of the bail decision process in Maryland and specifically Baltimore City. The focus on bail practices in Baltimore City is partially the result of the Baltimore City Lawyers at Bail (LAB) Pilot Project in 1998**.** This project, funded by the Abell Foundation and the American Bar Association (ABA), prompted further research in the practice of bail decision-making in Maryland with the Pretrial Release Project (PRP) in 2001. Both projects highlight pertinent issues regarding bail risk assessment, pretrial detention, the role of lawyers, and the issue of fairness in regards to arrestee characteristics. They also highlight the historic past of bail in Baltimore City.

History of Bail and Bail-Risk Guidelines in the United States

The use of bail in the United States has a lengthy history. Its history begins with the Bill of Rights in which the Eighth Amendment prohibits excessive bail, cruel and unusual punishment, and excessive fines. The history continues into the Vera Institute's 1960 Manhattan Bail project where we find the origin of the Vera Institute Point System for pre-trial release. It then transitions into the Federal Bail Reform Act

in 1966, DC's Preventative Detention Act in 1970, and the Federal Bail Reform Act in 1984. Finally, we move into the present for bail reform with the National Association of Pretrial Services (NAPSA) and American Bar Association (ABA) standards for bail.

The history of reform has a great impact on the history and use of bail-risk guidelines. Joan Petersilia, Susan Turner, Don Gottfredson, and John Goldkamp all examined the use of risk guidelines and their validity. It is important to examine the use of risk guidelines and their validity, as this empirical information will aid in the development and evaluation of risk guidelines. In addition, the work by Pertersilia, Turner, Gottfredson and Goldkamp helps lay the foundation for this present research as they address many of the issues Baltimore City faces today in their research.

Impact of the Manhattan Bail Project

The Vera Institute of Justice's 1961 three-year experiment, in conjunction with the New York University School of Law, examined bail practices in the borough of Manhattan, New York. Their hypothesis indicates that the concept that cash bail is necessary to ensure a defendant reappears for court is false and unnecessary. A New York Legislative Committee contends that the inability for a defendant to post bail has a deep impact on their ability to hold a job to earn the money for their release. It also hinders the defendant's ability to aide in the gathering of witnesses and can even have an unhealthy psychological effect on the defendant. Additionally, it is costly to the community as the community must pay to support the detained individual, find new employees to replace the detained, and support the detained's family (Botein

1964). It is therefore more economical for a defendant to be released on a non-financial means if at all possible.

The Vera Institute holds that the reason the necessity-for-cash-bail contention is false is that their experiment shows that if a defendant has roots in the community, a family, and has employment, then that defendant will return to court without the use of cash bail. To test their findings, the Vera Institute makes use of a point system (Rourke & Carter 1969). The point system incorporates five main factors: residence, community ties, employment, prior record, and character. These five factors are equally weighed in that one factor does not impose a greater impact on the decision than another (Ozanne et. al 1980). The point system is used to determine a defendant's risk of flight and their eligibility for release on their own recognizance (Rourke & Carter 1969). Due to the findings of the experiment, the original and modified versions of the Vera point system are in use in other cities throughout the country. In addition, it gave way to reforms to bail in 1966 and 1984.

The Federal Bail Reform Act of 1966 holds that an individual in a non-capital case should be released on recognizance unless that person is deemed a serious flight risk. The 1984 Bail Reform Act changed this law. The 1984 Act added that a defendant should be released on recognizance unless they *pose a risk to society* or if they are a flight risk (Jackson 1987). It is with this change in law that the use of bail-risk assessments are ever more important. It is also very important that the bail-risk assessments are accurate and kept up to date due to demographic changes within a population.

Although the Vera Institute findings indicate that the factors in their point system are significant, there is debate over the validity of the findings (Botein 1964; Ozanne et. al 1980). There is evidence cited by Ozanne et. al (1980) that the system does not prove to make a difference in cases in which a defendant fails to arrive in court (FTA) and those who do appear in court. Additionally, they find some evidence that the criteria the Vera point system uses may not have the same impact on each and every community. Finally it may be necessary to weigh Vera's criteria differently or to use different criteria in the prediction of FTA (Ozanne et al 1980). For this reason, Ozanne et. al (1980) feel that the original Vera criteria are not universal predictors. Jurisdictions need to find the criteria that will allow for the most number of defendants to be released on recognizance allowing continued interaction in the community and ensuring appearance at trial. This finding further supports the need for the evaluation and update of the Baltimore City bail-risk assessment scale.

Predicting Bail-Risk

The main purpose of a bail-risk assessment is to aide judges in the decision of how to release a defendant. The lower the danger a defendant is to society and the lower he or she is as a flight risk, the more likely that individual will be released on recognizance. Preventative detention is sometimes the motive behind the use of cash bail or a condition of supervision with non-financial release (Fagan & Guggenheim 1996). There are risks in attempting to predict the future behavior of an individual and the use of preventative detention. The risks are that the prediction will be incorrect and result in a wrongful conviction, a wrongful detention, or more crime by the released individual (Leipold 2005). Another issue is that the incorrect prediction

during the pretrial stage violates the Fifth and Fourteenth Amendment Due Process Clauses' prohibition of cruel and unusual punishment (Tonry 1987). This is not only a problem for the judge making the decision to detain an individual, but for the individual being detained. The findings of the PRP (Abell Foundation 2001a; 2001b) and the LAB (Paternoster and Bushway 2001) support the idea that there are most likely extralegal factors inherent in the defendant's background that contribute to the violation of due process. Additionally, theses findings suggest that there is a potential for bias based on extralegal factors that must be taken into consideration when creating and evaluating bail risk assessments.

A major issue with preventative detention is that the current statutes are not specific. They often do not make a clear distinction in their definitions between threats to the community as a whole and threats to potential individual victims. They also do not have specific standards for determining dangerousness (Fagan & Guggenheim 1996). The common issue with preventative detention and the prediction of FTA is that it is difficult to validate the use of the prediction instruments. It is not possible to know what the person would have done provided they had been released or released with specific conditions, as the judges' decisions are "unfalsifiable" (Goldkamp 1979; Fagan & Guggenheim 1996; Glaser 1987). Glaser (1987) makes an important point concerning this matter. He contends that there are methodological issues in risk prediction concerning stability, accuracy, base rates, and interaction of prediction factors. Thus, it is not easy to understand prediction, and make empirical assessments of predictions that are made. For this reason, it is important to compare the characteristics of those who do FTA to those who do not.

One way to compare FTAs and nonFTAs is to ensure that the prediction instruments contain relevant factors. Tonry (1987) suggests that past involvement in crime is the best single predictor of future involvement in crime. He also indicates that for prediction purposes, the more indicators there are of past criminality, the more likely that a prediction of continued involvement in crime would be accurate. This suggests that the defendant's prior record is a relevant risk factor. There is concern over irrelevant and discretionary factors guiding the pretrial decision process. Petersilia and Turner (1987) advise, "unguided discretion can produce arbitrary, unconsidered decisions that fail to achieve sentencing objectives and cause inequitable treatment of offenders." Hence, it is essential that jurisdictions using bail-risk assessments seek legal and ethical guidance to construct their assessments. The American Bar Association (ABA) and NAPSA provide such guidance. The current ABA (2002) and NAPSA (2005) standards recommend that the following factors or a combination of these factors should be considered when using bail-risk assessments:

1) the nature and circumstances of the charges
2) the seriousness of the danger to any person or the community that would be posed if the defendant were released, the weight of the evidence
3) the person's age, mental condition, family ties, employment status and history, financial resources, length of residence, likelihood the defendant would leave the jurisdiction, community ties, history of drug or alcohol abuse, criminal history, and record of appearance at court proceedings.

4) whether at the time of the offense the person was on probation, parole, or on other release pending trial, sentencing, appeal, or completion of sentence for an offense
5) the availability of third party custodians for successful supervision in the community
6) any other facts justifying a concern that a defendant will present a serious risk of flight or of danger or the safety to the community or another individual.

The use of these factors is very important for prediction. They do not greatly vary from the factors in the original Vera point system and those used in 1976 (Clarke, Freeman & Koch 1976). However, there are two main problems when using these factors. The problems are that it is unknown how much weight each factor should have in determining risk and which factors are significant is unknown. Clarke et. al (1976) find that age, sex, race, and income has little or no effect on the defendant's probability of failing to appear and being rearrested. In fact, Clarke et. al find that many factors, such as employment and type of offense, that are supposed to be important for prediction have little or no effect on predicting an FTA. However, their research also does not completely disprove the potential importance of these factors due to data limitations. For example, Clarke et. al assume that most of the defendants in their sample are unemployed and do not have employment information for each defendant in their sample. In addition, they admit to not having a good measure of

criminal history[4], a control they use when analyzing the impact different offense types has on bail risk. When criminal history is not controlled for there is a statistical difference between those charged with felonies and those charged with misdemeanors. Clark et. al's research thus suggests that it is important to tailor prediction instruments to the jurisdiction in which they will be used.

There is still another issue when attempting to predict an FTA. Goldkamp and White (2006) identify two different types of FTAs. There are intentional FTAs and FTAs that are due to the defendant being "disorganized and dysfunctional" in life. The latter describes the defendant who misses court due to a lack of comprehending the requirements fully, while the former describes a defendant who consciously avoids their court appearance. The distinction between intentional and unintentional FTAs raises an issue with prediction. Even if the predicting instrument is accurate, it is only accurate if the servicing agency is able to execute the responsibilities of the defendant properly. Due to a lack of information regarding the reason why a defendant FTAed, it is difficult to examine the difference between intentional and unintentional FTAs in this study. However, this is an area of concern that should be addressed in future research.

Other States' Updates to their Bail-Risk Assessments

Goldkamp and White (2006) identify the pretrial release decision as representing the highest volume decision stage in the judicial process. They also

[4] Criminal history in Clarke et. al (1976) is measured as either being one or zero prior arrests or two or more prior arrests.

describe two goals for updating bail-risk assessments. The first goal is to devise a method of reducing and preventing excessive crowding in jail-facilities. The second goal is to maintain accountability over released defendants. Five jurisdictions in the last seven years have updated their bail-risk assessment scales. These states include: New York; Virginia; Philadelphia, Pennsylvania; Miami Dade County, Florida, and Minnesota. It is essential to examine how these states have tackled their assessment updates, as it is time for Baltimore City to have their assessment updated and evaluated. The examination of New York, Virginia, and Philadelphia are vital for this current research given their proximity to Baltimore City.

New York June 2002

The update for New York's bail-risk assessment comes from a sample of arrests made between January 1, 2001 and March 31, 2001. Siddiqi (2002), the project director, provides the following information regarding the update. The validation of their previous assessment, a sample from 1998 to validate the findings of the original sample from 1989[5], focuses on defendants whose cases were not completed at Criminal Court arraignment and who were at risk of pretrial FTA. The New York update uses a multiple logistic regression model to test the individual effect of the independent variables on the dependent variable. FTA is the dependent variable. This is measured by the issuance of a bench warrant at any appearance prior

[5] The best model from the 1989 data set focused on the defendant's community ties, criminal history, and type and severity of the top arrest charge. It was used to develop a point scale, and was validated on a three-month cohort of 1998 in 2000. All variables significant in the 1989 data remained significant, but the significance changed in magnitude (Siddiqi 2002).

to trial. The independent variables include factors relating to community ties, criminal history, and defendant characteristics.

The results from the 2002 analysis indicate that the defendant demographic characteristics do not differ greatly from the 1989 original sample, the 1998 validation sample, and the new 2001 validation sample. Most defendants in these samples are minority males with the mean age of 30. Additionally, these males report living at a New York City address and that they live with another individual. The measures relating to criminal history do not differ greatly between the 1998 and 2001 samples. In the 2001 sample, the following factors are still found significant in predicting FTAs as were found in the 1998 sample: whether or not the defendant has a working telephone, length at residence, the expectation of someone at their arraignment, who the defendant lives with, employment and education status, and if the defendant lives in the city.

Those with a telephone have a lower rate of FTAs. The FTA rate is also lower among those who expect someone at their arraignment other than the complainant or defense attorney. In addition, it is lower among those with full-time employment or who are full-time students. These factors suggest that the defendant has strong community ties and is less of a flight risk. Those with a criminal history, prior FTA, or who have open cases, when controlling for other factors, are more likely to FTA than individuals without those factors. Siddiqi (2002) indicates that the main difference between the 1998 sample and the new 2001 sample is the "magnitude of the relationship for some of the categorical community-ties variables." Although the magnitude indicates there is a difference in the strength of the relationship in some of

the variables between the samples, the change is not significant enough to impact the predictive power of the point scales New York uses.

Thus, Siddiqi's (2002) analysis did not produce any changes. Despite no changes being made to their bail-risk assessment, the evidence remains that the magnitude of the relationship between some of the variables changed over a three-year span. The current bail-risk assessment in Baltimore City is ten years old. Drawing from the evaluation in New York, it is likely that the relationship between relevant risk factors from 1999 has changed. It is important to investigate the possible change and to alter the bail-risk assessment to reflect the changes.

Virginia 2003

Virginia's Pretrial Risk Assessment Instrument[6], developed by VanNostrand (2003), is a model instrument in that it is shown to "equitably classify defendants regardless of their community type." In addition Virginia's Pretrial Risk Assessment Instrument is unbiased towards groups based on sex, race, and income. This means that the instrument can be used throughout the state and will not have a bias towards one jurisdiction's demographics. This finding is of interest due to the homogeneity of demographic in Baltimore City and the need to have an effective risk assessment. The data for the Virginia instrument comes from a sample of 2,348 defendants arrested throughout the state between July 1, 1998 and June 30, 1999. Data on the defendant is from personal interviews, arrest warrants and criminal records, references provided by the defendant, and current and prior adult criminal justice supervision records. To determine the relevant factors, VanNostrand used a Binary Logistic Regression model

[6] See Appendix 3 for the actual instrument

using a hierarchical approach. She identified the bivariate relationships first, and then grouped the models into risk factor categories to further analyze their effects. She used measures of: demographics, health, community and general stability, and criminal history to determine the risk of flight in her analysis.

VanNostrand (2003) ultimately found that those with a felony charge, pending charge(s), outstanding warrants, at least one prior conviction, two or more FTA convictions, and two or more violent convictions are more likely to FTA pending a trial. Moreover, those who are at their current residence for less than a year, who are not employed continuously, and who have a history of drug abuse are also more likely to FTA. These findings are significant as they are consistent with the risk factors NAPSA and ABA recommend to be considered when determining how to release an individual before trial, and are similar to the current risk factors used by Baltimore City.

In order to calculate a point value for a risk factor, VanNostrand (2003) used the beta coefficients in her logistic regression. She transformed them for each variable into a whole number. She did this by identifying the smallest significant beta coefficient, computing it to .500, and then applying the transformation to the entire model, rounding up each transformed number to the nearest whole number. The resulting scale from this transformation has nine risk factors to classify individuals in one of five risk levels for pretrial detention. The risk factors include the charge type, pending charges, outstanding warrants, criminal history, two or more FTA convictions, two or more violent convictions, length at current residence, employment/ child-caregiver status, and history of drug abuse. Prior FTAs are two

points on the scale while all other factors are one point. The greater the number of points a person receives, the greater the flight- risk they are (Appendix 3 and Appendix 4).

VanNostrand's scale is found to be an "accurate predictor of pretrial failure[7]. It correctly classifies defendants in risk categories using nine factors identified as the best predictors of FTA and based on the type of failure: FTA and arrest for a new offense pending trial. In addition, tests of proportions demonstrate there are no significant differences between group members based on sex, race, or income" (VanNostrand 2003). The findings from Virginia are significant for this research as they identify a statistical technique that can be used for constructing a risk assessment. It also provides insight for relevant factors to be considered when evaluating the current bail-risk assessment scale in Baltimore City. However, despite the fact that Virginia's instrument is shown to be unbiased and successful, Baltimore City's demographics are different from the urban demographics in Virginia. This suggests that the exact scale Virginia uses may not work for Baltimore City. However, the method VanNostrand (2003) used to construct the risk assessment can work for Baltimore City. It can assist in uncovering the relevant risk factors specific to Baltimore City and weight their importance appropriately.

Minnesota and Philadelphia 2006

The 2006 Scale Validation Study in Minnesota, headed by Podkopacz, examined whether or not the current Pretrial Evaluation Scale is able to reliably predict pretrial crime and FTA. It also examined if any of the scale items are racially

[7] See Appendix 4 for Virginia's Risk Levels and FTA Rate

biased. Podkopacz (2006) found that five out of nine factors are significant in predicting FTA and pretrial crime. The factors include employment status, the offense being on the list for judicial review[8], whether the charge is a felony or misdemeanor, criminal history, and previous FTAs. Factors relating to residency, whether the person lives alone, age, and whether or not a weapon was used in the offense are found to be non-significant for both pretrial crime and FTAs. The most significant factor in predicting FTAs is whether or not the person FTAed within the last three years. Additionally, those who committed felonies against people are found to be less likely to FTA. These findings are important as they both support and deviate from prior research. Typically, factors relating to residency are significant in determining flight risk. When predicting an FTA, the racially biased factors are living alone and being under the age of 21. They are statistically biased towards whites, while using a weapon is biased towards non-whites. This suggests that there may be an issue in the calculation of risk. The results from the Minnesota study insinuate that it is imperative to update risk assessment scales periodically and that they must be tailored to each jurisdiction. Although the effectiveness of a risk assessment depends on proper scales, it also depends on the actions of the pretrial officers' ability to implement the proper level of supervision.

Philadelphia currently uses a decision guideline matrix formed by the seriousness of the current charge and a four-level risk classification ranking defendants according to the likelihood of flight or rearrest. Goldkamp and White

[8] Judicial review offenses include, but are not limited to the categories of, homicide, assault, robbery, kidnapping, false imprisonment, crimes against unborn children, sex crimes, arson, and escaping from justice (Podkopacz et al 2006)

(2006) cite that some critics believe that FTAs are the result of the defendant not comprehending the proceedings after their arrest. However, Goldkamp and White found that in their Philadelphia experiment, that the effect of implementation of pretrial services on FTAs has little impact on the defendant's behavior. In addition, they found that the higher amount of supervision the defendant receives while on release would create a higher rate of compliance. There is a caveat to their findings. The caveat is that there is some question in the implementation of their experiment in terms of random assignments, the design of the experiment, and the control over the agencies to provide the services for the experiment. Despite the limitations, Goldkamp and White's findings are significant. These findings are important to the present research as it suggests that those who FTA have similar characteristics, the level of supervision a defendant receives while on release is important, and that bail-risk assessments do contain an element of validity.

Empirical Research on the Pretrial Release Decision

The empirical research surrounding the pretrial release decision includes research on the effect of extralegal characteristics, such race, age, gender, and economic status on the pretrial release decision. It also includes the effect that the pretrial release decision has on subsequent decisions in the Criminal Justice process. It is essential to examine this research as extralegal factors, excluding race and gender, are recommended in the pretrial release guidelines by NAPSA (2005) and the ABA (2002) to determine a release method. These factors, whether implicitly or explicitly used in the assessments, may interact with race, gender, or another

extralegal characteristic creating a more significant disadvantage for the defendant (Steffensmeier, Ulmer & Kramer 1998). This in turn impacts not only the release outcome but also the outcome of the entire case (Albonetti 1997).

For example, Bynum (1982) found that there is a race variable in the decision to release someone on recognizance. He cites that blacks are 13 percent less likely to be released than non-minorities who possess the same characteristics. Additionally, his analysis indicates that minority status is the fourth strongest predictor in his model of who gets released. Demuth (2003) and Schlesinger (2005) found similar results. They found that Hispanic defendants are more likely to be detained than White and Black defendants, but the differences are found with drug offenses only. Although these three studies find similar results regarding race, it is important to address the fact that Bynum's study took place before the 1984 Bail Reform Act while Demuth and Schlesinger's analyses took place after the act. In addition, Demuth's analysis is limited to male defendants and three offenses: property, violent, and drug offenses. The extralegal variable, race, interacts with other extralegal variables, and creates a situation in which young, black, male offenders receive the most severe pretrial outcomes (Steffensmeier et.al 1998). However, these extralegal factors may also interact with legal factors, such as charge severity and prior record, as suggested in Demuth (2003) and Schlesinger (2005), to also produce outcomes that are not favorable for the minority or poor defendant (Zatz 1984; Steffensmeier, et al. 1998; Albonetti 1997).

An example of the impact the pretrial release decision can have on the final case disposition comes from Albonetti. Albonetti (1997) found that those who are

detained prior to trial are the defendants who ultimately receive the longer sentences net of other case characteristics. More support for this finding comes from Williams (2003). In her analysis of a Florida county, Williams found that when controlling for legal and extralegal variables (age, race, gender, previous felony convictions), those who are detained are more likely to be incarcerated and to receive longer sentences than those who were released. These studies suggest that the pretrial detention decision, and ultimately the factors surrounding the decision, is important in the short term and in the long-term for the defendant. However, the resulting sentencing decision and effect of pretrial release or detainment weighs heavily on the legal characteristics of the case. There is evidence that shows that the defendant's prior record, the strength of the state's case, and offense severity are often the principle factors in determining discretionary outcomes such as pretrial release and sentence outcomes (Egen & Gainey 2000; Turner, Secret, & Johnson 2003; Spohn 2008). Therefore, legal factors will likely carry more weight than extralegal factors, and have a greater impact on the decision to release or detain.

Those with more serious charges are often given a financial means of release due to the perceived danger they may pose to the community. Typically, a more severe charge will carry a higher bail amount, thus making it more difficult to make bail and to gain release (Free 2002; Williams 2003). In some cities, such as Baltimore City, a sizeable amount of the population falls below the poverty level. A high bail could therefore have a devastating economic impact on the defendant and their families, or more likely they fail to make bail and are detained pending trial with all the negative outcomes attendant to that. Furthermore, this detainment can impact

decisions made by the court and the defendant later in the Criminal Justice process. In fact, there is support that those who are detained prior to trial increase their chance of pleading guilty. Pleading guilty also has an impact on their current and future employment status and their community ties. It may remove the defendant from society for a more extended period of time, and it could prevent them from obtaining future employment (Census 2008, Frazier, Bock & Henretta 1980; Free 2002; Spohn 2008).

The empirical studies in this section are not the only studies involving the pretrial release decision and the impact it can have on a defendant during the Criminal Justice process. However, these studies illustrate the importance of considering legal and extralegal characteristics of the defendant in the pretrial decision. They also show how these characteristics interact with one another and the impact that an early discretionary decision can have on subsequent decisions. These studies thus signify the importance of evaluating Baltimore City's risk assessment for potential problems and altering the weight of predicting factors as necessary.

Maryland's Pretrial Release System

Maryland currently has a two-stage pretrial release procedure, in which the defendant will appear before a District Court Commissioner and then subsequent to that in front of a District Court judge. The bail review hearing is especially important, as it is the step in the pretrial process that has the most impact on the defendant's livelihood. Before the defendant appears in front of the District Court Commissioner to determine how they will release the individual, a judicial officer assesses the flight risk and dangerousness of the defendant. However, the initial recommendations are

made to the judicial officer by pretrial investigators. On the basis of an interview with the suspect (and frequently but not always some verification) the investigators consider the current charges, past record of court appearances, family ties, potential danger the person may bring to themselves or another, prior convictions, and drug use in making their recommendation to the judicial officer for pretrial release on nonfinancial or financial conditions.

The recommendation for pretrial release is difficult. Verified information is often missing, such as ties to the community and employment status, which are used to assess the defendant's flight risk. Maryland law states that judicial officers must consider the least onerous option before moving to the next available choice in pretrial release decisions (Abell Foundation 2001b). However, it is difficult to make an informed decision with missing information. The consequences for missing information are hefty for the defendant, as it could result in more severe treatment than necessary. This is a great concern and more reason to evaluate and update the current bail risk assessment scale in Baltimore City. If accurate predictions could be made on the basis of criminal history information alone, for example, this may make for easier release decisions since this information can be easily obtained. Much of the information that is currently available to pretrial investigators is due to the study of Maryland's Bail practices from the Lawyers at Bail Project Pilot Study and the Pretrial Release Project in Maryland.

Lawyers at Bail Project (LAB) 1999

LAB examined the role of legal representation at bail review hearings for non-violent indigent defendants via the study of two comparable groups of arrestees in which one group was randomly assigned a lawyer. The study identifies that the purpose of representation for the defendants in the pretrial phase is to provide information relevant to the bail decision, to correct erroneous information that may have been collected by the state, to have the defendant released on recognizance if at all possible and failing that, to have the bail reduced to an amount affordable for the defendant (Paternoster & Bushway 2001). Paternoster and Bushway (2001), the LAB examiners, found that the defendants who have representation spend less time in jail awaiting release. This finding is substantial given that many defendants are unable to afford counsel. Those who are employed often do not earn a substantial amount of money, and the requirement to post bail could produce a financial crisis for the defendant. In addition, many may lose their jobs due to a prolonged detention period (Paternoster & Bushway 2001). This in turn has serious consequences on the defendant's ability to provide for themselves and for their family.

The examiners also found that those who have legal representation are more likely to be released on recognizance than defendants without representation. This creates a shorter period of disruption in their lives and less serious consequences, but representation is not affordable for those who need it (Paternoster & Bushway 2001). Finally, those with representation were four times more likely to have their bail reduced. In essence, the Lawyers at Bail Project indicated that the Baltimore City bail

practices were not appropriate for the indigent population of the city. It relied too heavily on a cash bail system that frequently required the posting of full bail (rather than say a 10% refundable cash bail). The information from this study is of importance to the current research on the bail review risk assessment in Baltimore City as it specifically addresses the city's pretrial process history and some of the core issues Baltimore City defendants face. The Lawyers at Bail Project is the predecessor and reason for the extensive study of Maryland's Pretrial Procedures in The Pretrial Release Project in 2001.

The Pretrial Release Project: A study of Maryland's Pretrial Release and Bail System 2001

The Pretrial Release Project (PRP) (Abell Foundation 2001b) is the result of the Maryland State Bar Association's request to evaluate the entire bail review process in the state. They cite the finding of the Lawyers at Bail Project that legal representation does make a substantial difference in the pretrial process. The PRP examined five Maryland Jurisdictions' (Baltimore City, Baltimore County, Harford County, Frederick County, and Prince George's County) pretrial release decisions and procedures. The aim of the PRP was to find and address the issues surrounding pretrial release within Maryland and to make recommendations to address the problems. In examining these counties, PRP found that there are major concerns with pretrial release in Maryland.

One issue is that many non-violent, low-income defendants must use funds for rent, food, and utilities to secure release when they pose no risk to society. Technically, Maryland is said to operate under the "least onerous" rule so that few

defendants would have to pay for their release. "Maryland's least onerous rule requires that a variety of nonfinancial pretrial release conditions be considered. They range in intensity to match the level of risk posed by the individual defendant" (Abell Foundation 2001b). Although Maryland states that it operates under this rule and other standards in the bail reform procedures, many of the standards are not actively practiced by commissioners and judges. PRP found that about half of all defendants were released on recognizance, and the remaining were required to pay full financial bond (Abell Foundation 2001b). This made Baltimore's non-released suspects dependent upon city bail bondsmen.

Specifically, the Abell Foundation's PRP (2001a) cites five problems in Maryland's pretrial release system. The first problem is that there is inadequate legal representation at bail determination proceedings. The Abell Foundation recommends that more resources should be invested in supervising defendants, that the Public Defender needs to comply with its duty to represent indigent defendants at pretrial, and that Maryland should expand its pretrial release investigative agency statewide. The second problem is Maryland's excessive use of full financial bonds. Abell's solution is that Maryland should provide an automatic ten percent refundable cash bond and that monetary bond should have limited use. The third problem is the state's excessive reliance on bail bondsmen. To remedy this, non-financial bail should be used whenever possible. Maryland should study bail reform in other states where the use of commercial bail bondsmen has been eliminated. The fourth problem is that onerous bail does not serve a purpose, as flight is rare. The solution for this problem is yet again not to use onerous bail. The fifth and final problem is that Baltimore City

has inequalities more severe than the other jurisdictions in the study and its bail release procedures should reflect the financial limitations of the population. The problems the PRP cites are issues that must be taken into consideration when creating a bail risk assessment.

Baltimore City

PRP (Abell Foundation 2001b) information indicates that in Baltimore City one in every ten defendants had their bail amount increased at the bail review hearing and one in four bail amounts were reduced. Baltimore City judges also grant release on recognizance in less than ten percent of their cases. This is one of the lowest in the five Maryland jurisdictions studied in PRP. In actuality, Baltimore City is the most likely to impose conditions on pretrial release, with pretrial supervision being one of the most frequent conditions. In examining Baltimore City clients who are conditionally released, PRP found that 93 percent appear in court when required. They also found that the city's failure to appear (FTA) rate is one of the few in the state in the single digits (Abell Foundation 2001b). The low FTA rate may reflect the caution or "miserliness" with which release is granted in the city.

Financial bail is of particular concern in Baltimore City because of the socio-economic characteristics of its citizens. The PRP found that of the 40 percent of defendants released on financial bail, 84 percent of them gained release by paying a bail bondsman a ten percent *non-refundable* fee as opposed to the standard ten percent refundable fee the courts impose. The study found that fewer than five percent of defendants did not have to pay the full financial bond (Abell Foundation 2001b). Given the case density and poverty in Baltimore City, this is a significant

finding. Bail bondsmen have a lucrative market in Baltimore City, and their lobbyists are powerful in Annapolis. The reason why there are so many non-released defendants in Baltimore City is that the majority of the defendants awaiting release cannot afford to pay either the full amount of bail or the ten percent non-refundable bail to the court and the court often overlooks the ten percent refundable option. The bail bondsman will front the entire cost, but in the long term this will create more of a financial burden on the defendant than the court's actual fees. Even though the mean household income in Baltimore City is among the lowest in the study, Paternoster and Bushway (2001) found that Baltimore City defendants made a payment twice the average median to bail bondsman.

The issues surrounding financial and nonfinancial release in Baltimore City are too great to ignore. Baltimore City defendants often cannot afford the economic burden caused by financial bail. They also are not able to provide verifiable information to the pretrial investigators for an accurate bail recommendation. It is for this reason that it is necessary to examine how the pretrial detention services in Baltimore City has changed since the PRP eight years ago. It is also necessary to update the bail risk assessment scale as the current scale was constructed ten years ago. To more fully understand the factors significant in bail risk assessment, it is pertinent to also study the origin of bail risk guidelines.

The Need for a Bail-Risk Assessment Update in Baltimore City

It is clear from the research in New York, Virginia, Minnesota, and Philadelphia that each jurisdiction has distinct characteristics. It is also evident that it

is possible to create explicitly unbiased risk-assessment scales. The varying conditions of each area make it necessary to examine the bail-risk factors recommended by NAPSA and ABA as they pertain to each area. There are factors that are found to be significant in one area, such as residency and age, which are not significant in other areas (Siddiqi 2001; VanNostrand 2003; Podkopacz 2006). Furthermore, these updates and the empirical studies, support the idea that it is important to periodically evaluate and update bail-risk assessments. The reason is that demographics over time change, and a factor that is relevant at one point may not be relevant in the future.

Currently, Baltimore City uses two separate risk assessments to determine the release method for their arrestees[9]. The pretrial investigator first uses a six-factor scale to determine the level of supervision to recommend for the defendant. The second, more specific, risk assessment reclassifies the defendant's risk based on similar factors to determine if the initial recommendations should be altered or remain the same. These bail-risk assessments are ten years old. It is time to evaluate the accuracy of the scales to differentiate between those who FTA and those who do not. It is also important to determine if an update to the scales is necessary. Given Baltimore City's unique demographics, it is important to examine and compare variables related to FTAs in other jurisdictions with great caution. Baltimore City has a high population density, and a high rate of poverty where the majority of the people are of a racial minority (Census 2008). This makes it difficult to use the same risk factors that New York, Virginia, and Minnesota's instruments use without tailoring

[9] See Appendix 1 and 2 for the current assessments used in Baltimore City

them to Baltimore City. Those models are based on of populations that are more racially, economically, and socially diverse than Baltimore City. This makes it easier for these states to identify differences between those who are more likely to FTA than others and to identify areas of bias. The difference in the population density between the cities also makes it difficult to use the same models. The denser a population is, the more likely there is a concentration of community characteristics conducive to crime (Sampson & Groves 1989). Thus the homogeneity and the density of the population in Baltimore City makes it difficult to eliminate bias on income and race, as a great number of people are poor racial minorities. Although New York City faces problems similar to Baltimore City, New York is more heterogeneous, and has a much larger population. It is therefore important to approach the analysis of Baltimore City with a statistical technique that is appropriate.

Chapter 3: Methods

Tarling and Perry (1985) assert that the purpose of a prediction instrument in criminology is to assign an estimate of the probability of an event to a person with certain combinations of attributes and to guide decisions. Furthermore, if a prediction instrument is to be used in Criminal Justice decision making, such as the decision for pretrial release, it is essential that the sample from which it is derived is drawn from the population on which it is to be used. Hence, it is important and necessary for this research that the sample comes from a population of defendants awaiting trial in Baltimore City. By doing this, it will be possible to identify the factors on the current risk assessments that differentiate between those who FTA and those who do not. It is also important that the proper method of analysis is employed when examining the data and that the results are validated on another sample. Data limitations need to be addressed as well to accurately assess, interpret results, and update the current bail review risk assessment. The purpose of this thesis is to evaluate the criteria currently used by Baltimore pre-release decision makers to make pre-trial release decisions, and to examine the possibility of other factors to be used if current criteria are found to be invalid. Based on these findings a mock-prediction device will be constructed using logistic regression analysis and applied to the current population. Validation of the new prediction device awaits the collection of a new set of pretrial release data.

Data Source

The data source for this study includes a sample of 757[10] closed and active FTA cases of arrestees awaiting trial between August 2006 and December 2009 from Baltimore City's Pretrial Detention Office. An active case is a case in which a defendant has not appeared in court due to an FTA and has a warrant for their arrest for this FTA. A closed case is a case in which the defendant has appeared in court and a decision has been made about his guilt or innocence (J. Cantos, personal communication, February 5, 2010). There are 534 males and 219 females in the sample. Additionally, there are 608 black arrestees, 125 white arrestees, 3 Asians, and 17 classified as "other". Data collection took place between July 2009 and December 2009 via a data collection instrument[11] designed around the information available on the outer file folder used by the Baltimore Office of Pretrial Detention for each file. Manual collection of data, by an assistant of the principle investigator, was necessary. The reason for the manual collection of data is that Baltimore City's Pretrial Detention office does not have an electronic database of active and closed cases. Generally, once the cases are closed they are permanently destroyed due to space reasons; however, the Pretrial Detention Office did not destroy the files used in this sample. The pre-trial office also identified active FTA cases for the purpose of this research. The active FTA cases include the same information as the closed cases and are kept open for three years. Once the three-year mark is reached, identified by the month the FTA occurred, those cases are destroyed (B. Weisengoff, personal

[10] It was the original intention to collect 500 FTA and 500 nonFTA cases to more adequately identify differentiating factors. However, this was not possible due to the limited availability of FTA cases.
[11] See Appendix 5 for the Data Collection Instrument

communication, July 22, 2009; J. Cantos, personal communication, September 3, 2009).

The closed and active FTA cases include information from official court records, personal interviews by the Pretrial Release Investigators, and urinalysis results. Official court records provide information relating to the arrestee's demographics (age, race, gender), current charge severity, arrest and charge history, probation and parole status and history, previous court dispositions, and previous FTAs. A distinction is made in the record between actions on the current charge (appearing in court or failing to appear in court), and failure to appear in previous cases. The personal interview records include information relating to the defendant's length of residency and whom they reside with, employment status and history, drug and alcohol usage and history, drug and alcohol treatment, military service, educational attainment, mental health and treatment, and hospital care status. The urine analysis, given at the time of intake, tests for the presence of cocaine and opiates. There is no test for the presence of marijuana due to budget constraints in the Baltimore Office of Pretrial Detention. There is no data relating to the time the defendant is at risk to FTA, as specific arrest dates were not recorded during data collection.

Data Limitations

There are many limitations to this data. Due to the closed cases being destroyed every month and the active-FTA cases being destroyed after three years, it is difficult to obtain a truly random and representative sample of defendants in Baltimore City. Additionally, since data collection took place across a period of five

months, and there is no electronic database of arrestee information the data is biased towards arrests occurring during 2009. Although active FTA cases range from August 2006 to December 1, 2009, there are only 264 total. The remaining 493 are non-FTA cases from arrests occurring during 2009. However, there is also an overrepresentation of current FTA cases in this data set, which creates additional bias. In addition to the bias in the year the arrests take place and the current FTA bias, there is incomplete, missing, and inconsistent data in the defendants' files.

One source of incomplete and/or inconsistent data comes from the classification of race. The Baltimore City Pretrial Detention Office currently uses National Crime Information Center (NCIC) codes. NCIC codes only code race as being Black, White, or Asian. There is no code for Hispanic. Hispanic defendants are then misclassified as either black or white. For instance, there are some cases where the defendant is recorded as white in the personal interview but is recorded as black on other documents in the file. Not only does this create problems in identifying possible race effects, it does not give a clear picture of the racial make-up of the arrestee population in Baltimore City. Due to only 20 arrestees (2.64 percent) that make up the Asian and other categories these cases will be dropped during analysis.

The data in the files is heavily reliant on the information the arrestee provides to the pre-trial investigator and the level of detail the pre-trial investigator records in the arrestee's file. The arrestee is likely to give false information about employment, residency, drug use, and prior probation and parole history. When employment information is available and it is recorded that the defendant is employed, prior employment history is not recorded. Residency information as well contains missing

data. Files do not at times include prior addresses, the length of time at the prior address, and if the person rents or owns their residence. It is possible that defendants do not provide all of the necessary information. It is also possible that the pretrial investigators do not record all of the information. In addition, due to the time it takes to verify this information and the volume of cases in Baltimore City, the false information can influence the initial recommendation for pretrial release and the amount of bail to be set[12].

In some cases, the personal interviews are missing entirely. In most cases, the files lack the desired amount of detail pertaining to the history of the pretrial decision. Thus relevant information such as the initial release recommendations, recommendation changes, the final bail amount, and if the defendant was able to post bail for release is missing. There is also a great deal of inconsistency among the records concerning drug charges. There are instances in which the type of drug in possession is recorded (cocaine, heroin, or marijuana), and in others it is simply recorded as "not marijuana." Current and prior drug use is as well very inconsistent. There are files that record current marijuana use as the person not having a drug problem, while others record it as being a drug problem. There is also a level of inconsistency over what time frame constitutes a current drug problem or a prior drug problem. It is difficult to verify the drug information when provided, as some files do not include the urinalysis results, and there is no test for marijuana.

[12] There is not good information on those defendants required to post a financial bail. It is possible that those who were able to post bail are different from those who were not able to post bail.

Although there are many limitations to this data and error associated with the limitations, there is a great amount of information available to update and evaluate the current Bail Risk Assessment. This data provides a substantial amount of information on a defendant's criminal history. It is information relating to the number of times a defendant has been charged with a specific type of offense, the number of times the defendant has been arrested, the number of times they have been on probation or parole, and the number of prior FTAs. In addition, it provides information relating to the defendant's economic situation. This includes information on employment status, if the position is full-time or part-time, the income of the defendant, and if they rent or own their residence. Having this information creates the potential to examine measures of relevant factors that are not currently used.

Finally, since there is no current electronic database for the Office of Pretrial Release in Baltimore City, this data will provide an opportunity to expand future research relating to pretrial release. It is risky to collect data by hand as it provides the possibility of another level of error. However, one person did the majority of the coding and collection of this data. This reduces the possibility of inter-coder error and maximizes the level of consistency among the use of the data collection instrument.

Method of Analysis

The method of analysis for this study will involve multiple steps. The first step will involve analyzing the use of the independent variables in the current risk assessments via contingency table analysis, logistic regressions and the classification of defendants risk with these assessments. The second step will be to develop a new

risk assessment based off of the results from the first two steps. This step will involve examining the relationships between the dependent and independent variables. Finally, the last step will be a preliminary evaluation of the new classification instrument and the current instrument (more extensive evaluation requires a new sample of cases). This will include reclassifying each defendant based off of the new assessment, comparing the results of the classification, and comparing the logistic regression results of the new assessment versus the current assessments.

Dependent and Independent Variables

For the purpose of this analysis, there will be two dependent variables. The first dependant variable is whether or not a defendant has a current FTA. The second dependent variable is if the defendant was released on recognizance without supervision. This variable will also be used as a control variable in the analysis of FTA. The analysis of release on recognizance will help to explain the characteristics of defendants who are considered a low risk for an FTA. It will also allow for a comparison of the characteristics to those who are at a medium to high risk for an FTA to those who are at a low risk of for an FTA, which will better explain the reasoning for why a person may be considered a flight risk. Release on recognizance will be measured using the variable ROR. Due to a current FTA and ROR being dichotomous variables, logistic regressions will be used to examine independent risk factors. The independent factors include: defendant attributes, current charges, criminal history and community ties.

Current Risk Assessments' Placement

The first analytical task will be to evaluate the accuracy of Baltimore City's current risk assessment in predicting flight risk. This will be done in two ways. First each variable used in the current evaluation instrument will be evaluated to see if it can significantly and meaningfully distinguish between those who appear, and those who fail to appear in court. This will be achieved by examining the bivariate relationships between each factor on the assessments and a current FTA in addition to their relationship with ROR. Secondly, logistic regression analysis will be used to assess the predictive ability of each variable in a multivariate model. Offenders will then be scored according to current assignment rules and a prediction will be made about expected appear or failure to appear based on the instrument. A cross-classification table of predicted outcomes will then be compared with observed outcomes.

First Risk Assessment

The first risk assessment[13] currently in use in Baltimore City calculates flight risk for defendants. With this assessment, defendants can either be placed in low risk (zero to two points) where it is recommended they receive ROR, medium risk (three to six points) where it is recommended that no change be made to the initial recommendations, a reduction can be made to the initial recommendation, or the defendant can receive conditional release (an increase to ROR), high risk (seven or

[13] See Appendix 1 for the actual assessment

more points) makes the recommendation of no change or an increase from the initial recommendations.

This risk assessment has six factors. With these factors you either receive all of the points associated with them or zero points. Factor one is "last arrest within one year" (one point). Factor two: Two or more prior felony arrests (two points). Factor three: Current Narcotics Charge (one point). Factor four: Currently under probation or parole supervision (two points). Factor five: Currently unemployed (four points). Factor six: Current violent felony charge (seven points). There are no points associated with a previous FTA, or a violation of probation or parole; however, both factors appear on the risk assessment.

There are no variables available to examine factor one. However, this would not likely have a great impact on the final recommendations for release from the risk assessment. The variables NUMPRIORARREST[14], PVIOLENCECHAR, PASSAULTCHAR, FELONY2, and PSELLINGCHAR will be used to calculate factor two. NARCOTICCHAR will be used for factor three, PROBATORPAROLE for factor four, EMPLOYED for factor five, and VIOLENTCHAR for factor six. The classification of the defendants based on these risk assessments will conclude the first portion of their evaluation.

[14] See Table 1 for variable definitions

Ten Factor Risk Assessment

The current 10-Factor Risk Assessment[15] calculates risk for a second time. It gives three different options for the level of supervision a defendant is to receive: Priority, Intensive I, and Intensive II. Priority cases are reserved for the most serious felonies (murder, rape, kidnapping, and domestic violence cases) and do not have a score associated with it's classification. Those who are charged with these offenses are automatically placed in the priority category. They are required to report to the pretrial services officer two times a week. If the defendant is employed, he or she is to call in. If they are unemployed, they are to report in person. Intensive I and Intensive II supervision is for defendants being charged for any type of crime as long as it is not a priority case. Intensive I supervision is more stringent than Intensive II. In order to be placed in Intensive I, the defendant's risk score must be 15 or higher. Intensive II supervision is for defendants scoring less than 15 points on the risk assessment. However, there is some leeway with defendants scoring less than 15 points. The pretrial interviewer can recommend an over-ride for a defendant scoring less than 15 points to be placed into Intensive I supervision. This often happens with defendants who have a prior FTA. In addition, it can be recommended that a defendant be monitored for drug use, and thus be placed in diversion rather than being released on recognizance (J. Cantos, personal communication, February 3, 2010).

The 10-Factor Risk Assessment assigns the most weight to the severity of the charges. A death penalty or life imprisonment case will give you 15 points, placing you in the Intensive I category if not priority. Other felonies will assign the defendant

[15] See Appendix 2 for the actual assessment

seven points, putting them at the half-way point to Intensive I with nine other factors still to be considered. Misdemeanors are considered the least serious and only assign one point to the defendant. This will be examined by looking at the variables CHARGE1, CHARGE2, CHARGE3, CHARGE4, and DRUGMISD[16]. The assessment also considers prior felony convictions in which two or more convictions assigns four points, and one prior felony conviction assigns two points. This will be calculated by examining the number of times on probation or parole and the previous probation or parole charges. This will also be examined by looking at the number of times the defendant has been arrested and the previous charges. The next factor considered is additional pending cases. For those with a pending felony case, four points are assigned to them, those with a pending misdemeanor case receive one point. There is no corresponding variable for this measure, as this information was not collected.

Factor four concerns the defendant's current parole and probation status. One point is assigned to those currently on probation or parole for a misdemeanor, and four points is given to those who are on probation or parole for a felony. The variables PROBATORPAROLE and PPCHARGE are examined to determine the number of points to assign to each defendant for this particular factor. Factor five concerns prior probation or parole revocations, violations, and unsatisfactory pretrial reporting services closings. PPVIOLATED will be examined to determine the number of points to be assigned according to this criteria. One or more of these

[16] Variable definitions are available in Table 1

behaviors will assign four points to the defendant's total score. Having one or more prior FTA or escapes will assign four points to the total score as well.

Vocational status allows for a bit of cushion. Those who are a student or retired are not penalized for being unemployed. However, unemployment alone will add three points to the defendant's risk score. EMPLOYED, STUDENT, and OTHERINCOMESOURCE will be examined to determine point allocation to each defendant. Community stability is only an issue if the defendant has been at their residence for less than one year, in which he or she will receive two points, or if the defendant does not have a fixed address or is out of state. In this case, three points will be added to the score. LENGPRESADDYR will be examined to determine point allocation for this factor.

Factor nine considers substance abuse. Substance use includes alcohol use and drug use. Current use of either substance adds five points to the risk score, while prior use will add one point. ALCPROB and DRUGPROB will be examined to determine the number of points to add to the total score for this particular risk factor. The last factor taken into consideration is age. Age is broken down into five different categories: Under 18, 18-25, 26-34, 35-49, and 50 and over. Being under the age of 18 assigns five points to the score, being 18-25 adds three points, 26-34 adds two points, 35-49 adds one point, and there are zero points added to the scores of those who are 50 or older.

Bivariate Relationships

The second step in this analysis is to examine the bivariate relationships between the independent variables not currently used in the assessments and a current FTA. First, independent variables having less than ten percent missing data will be identified for analysis. This will help to detect relevant independent variables which are not currently used in the risk assessments and that may be considered for the new assessment. Since missing information is an issue for this sample even with the ten percent rule in place, cases will be dropped in any multivariate analysis via listwise deletion. However, due to potentially relevant factors missing a great deal of data, a dummy variable will be created in which cases that have missing information on a particular variable will be coded as "1" and all other cases coded as "0". This will prevent the sample from becoming too small.

New Assessment

A new assessment will be created using the logistic regression results from a new model created from significant factors. This model will only use a current FTA as the dependent variable. The aim of the new model is to explain a current FTA and not why a defendant is released without supervision. Independent variables found to be significant in the logistic regressions of the current assessments will be assessed in the newest model for the purpose of evaluation. In addition variables with significant bivariate relationships will be assessed to improve the current risk assessments. Special attention will be given to the variables relating to current charge severity, prior convictions, current probation and parole, prior parole and probation violations,

prior FTAs, vocational status, community stability, history of substance abuse, and age. The reason is that these factors are recommended by the NAPSA (2005) and ABA (2002) guidelines, are easily and cheaply obtained, and have been shown in other studies to be significant predictors of risk (Siddiqi 2001; VanNostrand 2003; Podkopacz 2006).

Some of the factors for the new model are currently used in Baltimore City; however, this study will incorporate different measures for these factors. For example, substance use is currently measured by the defendant's response to if they currently use drugs. This study will use whether or not the defendant has a positive urine analysis in addition to their response, as this is a better indicator of drug use due to the potential of false information by the defendant. After significant factors have been identified, weights will then be assigned to each factor depending. The weights will be based on the magnitude of the logistic regression coefficient. In addition a simple risk factor score for the scale will be used where a score of "1" is assigned in the presence of the factor and "0" in its absence. Finally, the new model's predictive accuracy will be tentatively examined via a predictability table of correct predictions.

The results of these analyses will be used to improve the current bail risk assessments. They will adjust the weight each risk factor has in proportion to their significance in the new model. It is possible that factors currently considered in the risk assessment are still significant, but the weight they receive is inappropriate for the present arrestee population in Baltimore City. In addition, the analyses will identify different measures for relevant factors that are significant and are better predictors of current FTA than the existing measures.

Definition of Variables

In this analysis, the definitions used by the Baltimore City Office of Pretrial Detention and the definitions for offense type by the UCR will be the basis for the definitions of the dependent and independent variables. The first dependent variable is whether or not the defendant has a current FTA. A current FTA is defined as the failure to appear for any court appearance resulting in a warrant issued by the pretrial service agency. The second dependent variable, ROR, identifies individuals who were released without supervision and are considered to be a low risk for an FTA. All others received some level of supervision. Since the majority of the cases in the sample lack the information pertaining to the final release method, the last release method recorded for each defendant will be used to create this dummy variable. Gender is either male or female. Age will be analyzed in the following categories based off their categorization in the Ten-Factor Risk Assessment: 1) Under 18, 2) 18-25, 3) 26-34, 4) 35-49, and 50 and over. Age will also be examined as a non-categorical, continuous variable.

Current charges will relate to the number of current charges. In addition, it will include measures for if the current charge is for a violent offense, a property offense, a weapons offense, a drug offense, or another offense. Violent offenses will include all of the UCR Part 1 offenses (assault, rape, murder and robbery). Property offenses will include charges for burglary, theft, motor vehicle theft, arson, and property damage. Drug offenses will be defined as either selling drugs or possession of drugs/ paraphernalia. Traffic offenses will include DUI, DWI, failure to stop,

revoked license, and driving on a suspended license. Assault charges, although a violent offense, will be examined alone as well. Finally there will be an "other" charge category. This category will include charges such as prostitution, previous FTA charges, and failure to obey an officer. The number of previous FTAs will be examined alone.

If the defendant is currently being charged for a weapons offense, it will be distinguished if the person is charged with possession, use, or both. Drug offenses will be distinguished between possession, selling, or both. They will also be categorized as either a felony or misdemeanor. Felonious drug charges include controlled dangerous substance (CDS) distribution of narcotics and CDS manufacturing charges. Misdemeanor drug charges include attempted CDS distribution/ manufacturing charges and possession charges. Prior paroles will include the number of times the person has been on parole or probation, if the probation or parole is in Baltimore City, how long the defendant was on probation or parole, and the kind of charge for the prior parole or probation. The kind of charges analyzed will be drug offenses, violent offenses, property offenses, and other offenses.

Current probation and parole status will be analyzed in the same manner as prior parole and probation. In addition to examining the current and prior parole and probation charges, the number of times the defendant has been charged with violent, property, drug selling, drug possession, traffic, other offenses, and assault will be examined. The number of prior FTAs will also be examined in the model. If these variables are not significant, they will not be included in the final model.

Vocational status relates to the person's current employment, education, and retirement status. Community stability is defined as the length of time the defendant has been living at their present residence. The length of time in the Baltimore area, the length of time at a prior address, and if the defendant stays at the residence every night will be examined. Currently, the length of time being less than one year or one year or more are used to determine community stability. Vocational stability refers to the employment and educational status of the defendant. The length of time the defendant has been working, whether the employment is full-time or part-time, and if the defendant has a present income will be analyzed. In addition, prior employment and the length of time since the defendant last worked will be analyzed to determine vocational status. Educational status will relate to whether or not the defendant is currently a student. Furthermore, educational attainment will be examined. This will include the highest grade completed by the defendant, and if the defendant has a GED.

History of substance abuse will include the analysis of alcohol abuse, the three most recent narcotics used by the defendant, the urinalysis results, and if the defendant has received drug treatment. The complete drug history will include if the person has current, prior, or no problem of drug or alcohol use, how long the defendant used the drug, how often, and the last time the drug was used. The drugs being analyzed are heroin, cocaine, crack, marijuana, methadone, and other drugs. Drug and alcohol treatment information will include when and how long the defendant received the drug treatment. The urinalysis will include if the defendant took a urinalysis, and if it tested positive for cocaine, opiates, or both.

The type of release the defendant received, and the initial recommendations at the appearance and bail review, and the final approved release will be examined to determine their contribution to a defendant's appearance or non-appearance in court. The different methods include release on recognizance (ROR), pretrial release supervision (PTRS), ROR/PTRS, cash bail/ amount, and other. ROR does not require reporting to the pretrial services office. PTRS, ROR/PTRS, and cash/bail require that the defendant report to the pretrial service office. *There are no individuals in this sample who were detained pending trial.* Detainment would not allow for the possibility of the defendant to have a current FTA (J. Cantos, personal communication, April 7, 2010).

Lastly, whether or not a defendant gave false information in the personal interview about drug use, employment, education, residency, and community ties will be examined. It is possible to verify the information from the personal interview with the results of the urinalysis concerning heroin and cocaine use. However, it will not confirm the use of other drugs, as there is no test for them. Pretrial release investigators verify defendant information with references provided by the defendant. Although the Baltimore City Office of Pretrial Detention does not currently use these factors in their risk assessments, it is possible that they will be relevant to whether or not the defendant will FTA.

Chapter 4: Results

Examining Current Pre-Trial Release Instrument

The first task at hand is to examine the factors that are currently used in the Baltimore Pre-Release Instrument to see if they and how well they are able to distinguish between those who fail to appear at trial (FTA) and those who appear (non-FTA). One limitation of our data set is that we do not have all of the information that comprises the two currently used instruments, but we do have measures or proxies of measures for most of them. Currently there are two instruments that are used to determine pre-trial release, an initial assessment instrument that consists of six factors:

1. Last arrest was within one year.
2. Two or more prior felony arrests.
3. The current charge is for a narcotic offense.
4. The defendant is currently under probation or parole supervision.
5. The defendant is currently unemployed.
6. The current charge is for a violent felony.

We do not have information in the existing data set on the first factor but do for the last five, all but one of which refers to current or past criminal activity. The second set contains ten factors that are more oriented to personal circumstance characteristics than the first instrument (for exact items see Appendix 2).

1. Nature of the current charge.

2. Prior felony convictions.
3. Additional pending cases.
4. Currently on probation and parole.
5. Prior parole and/or probation revocation.
6. Prior FTAs.
7. Vocational Status.
8. Community Stability
9. History of Substance Abuse
10. Age

Our data set contains sufficient information for eight of these ten factors (we do not know if the last arrest occurred within the past year nor do we know if there are any pending charges).

Table 4 reports some bivariate results for the pretrial risk factors from the first instrument. One of the risk factors is if the suspect had two or more prior felony arrests. Table 5 shows that this factor does in fact statistically differentiate between those who appear in court and those who fail to appear. While 31% of those with non prior felony arrests fail to appear, nearly 46% of those with two or more prior felony arrests fail to appear. Using this factor in the pre-trial screening instrument appears on this basis to be reasonable. The second factor in Table 4 is whether or not one of the current charges is a narcotics charge. This too appears to differentiate between those who fail to appear and those who do not. Among those whose current charge or charges does not include a narcotics offense 28% fail to appear for court, but among those with a narcotics charge 41% FTA, a difference of thirteen percentage points,

which is statistically significant. The third factor included in the initial pre-trial instrument is whether or not the defendant was currently under probation or parole supervision. This factor significantly differentiates those who FTA and those who do not. About one-half of those who were under probation or parole supervision at the time of their most recent arrest failed to appear for trial (50.9%) while less than a third of those who were not (29.2%). Whether or not the defendant was unemployed at the time of the arrest is another factor used in the initial screening instrument. This factor does differentiate between those who FTA and those who do not, but the two variables are only weakly related, not nearly as strong as the previous criminal-history-based factors. About 37% of those who were unemployed failed to appear for trial vs. 28% of those who were employed, a difference of nine percentage points. The final factor to be considered in the initial pre-trial screening instrument is whether or not one of the current charges is for a violent felony. Under the screening instrument guidelines, defendants who are charged with a violent felony are assigned seven points – escalating them to a more high risk category. However, empirically, having a violent felony charge as one of the charges predicts *appearance* at trial rather than failure to appear. If the only consideration for release is whether or not the defendant will appear for trial then committing a violent felony should be a mitigating consideration rather than the aggravating consideration that it is under the current instrument. There are two issues to consider here.

First, appearing at trial is only one consideration for criminal justice personnel considering whether or not (and how) to release a suspect pending trial. Another, perhaps equally compelling, consideration is the safety of the community. Criminal

justice officials may feel that it is unwise either because of safety concerns or their own political concerns to release into the community pending trial any suspect accused of a violent felony offense, even if that suspect has a high probability of appearing for trial.

Second, there is the possibility that a suspect who is charged with a violent felony will be released not without conditions but with some stipulation that they report to a pretrial supervision officer or to the court. It is possible that those charged with a violent felony were more likely to appear for trial because they had stricter supervision. We had no information on the supervision requirements (report once a week, once a month) for those on supervision, but we do know if they were released entirely without some sort of supervision or not. Those released on their own recognizance without conditions had no supervision or reporting requirements. One way to examine the possibility that the factors in Table 4 are "tainted" by difference in supervision requirements is to control for ROR status. That is, we can re-look at each factor controlling for whether or not the suspect was an ROR release or not. If any of the factors that were significant in Table 4 are no longer significant, then we might suspect that they differentiate between FTA and non-FTA is because of differences in supervision or reporting requirements.[17]

Table 6 reports the results of a series of multivariate logistic regression equations. In each equation the dependent variable is whether or not the suspect failed to appear at trial. There are two independent variables in each model: the variable

[17] Although reasonable, we do not believe that ROR status will affect any of the results. Among those who were released on their own recognizance without condition 33% failed to appear while among those released with conditions 35% failed to appear.

ROR, coded as "1" if the suspect was released on recognizance without condition, all other cases were coded as "0", and the second variable is each factor appearing in the pre-trial initial screening instrument. Notice that in each model the variable ROR is non-significant. This indicates that whatever differences there were in reporting or supervision, they had no effect on whether or not the suspect appeared for trial. Since this is true, we should not expect any changes in findings from Table 4 to Table 5, and in fact we do not. Each factor that was significant in Table 4 remains significant in Table 5. Importantly, having a violent felony as one of the current charges is a risk factor in favor of release. The logistic regression coefficient for having a violent felony charge is both significant and negative, as suggested by Table 4. Suspects charged with a violent felony are not more likely to appear at trial than other cases simply because they are under stricter supervision. Our conclusion would be that the factors that the Baltimore City pre-trial initial assessment instrument employs are valid factors in that they successfully differentiate between those who appear and those who fail to appear at trial. The strength of the individual factors differ; however, with employment status being the least discriminative.

We move now to evaluate the factors that Baltimore City uses for its second and more elaborate pre-trial screening instrument. Recall that this second instrument contains ten factors, of which we have information to evaluate eight of them. Table 6 reports the bivariate relationship between each risk factor used in this second instrument and whether the suspect failed to appear at trial. It should be noted that there is some overlap in the risk factors that are included in the initial (shorter) and second risk assessment instrument. The factor of having prior felonies, if the suspect

is currently under probation/parole supervision, were both on the initial screening instrument and they both significantly differentiate between those who FTA and those who do not. The second screening instrument also includes the factor of having prior probation or parole revocations. This factor significantly differentiates those who FTA and those who do not. One-half of those who have violated probation or parole in the past failed to appear in court for their current offense versus about thirty percent for those without a prior history of probation/parole revocation – a twenty percentage point difference. The second instrument also includes prior failure to appears as a risk factor, and not surprisingly it is the most important risk factor of any on either instrument. Confirming the adage that the best predictor of future behavior is past behavior, more than twice as many failed to appear for their current court date if they failed to appear for one or more others in the past. Another risk factor is if the suspect is unemployed vs. being employed or a student. Our data indicate that this factor adequately distinguishes between those who FTA and those who do not. Approximately 28% of those who are employed or are students fail to appear for trial vs. 38% of those who were unemployed at the time of their arrest. The second screening instrument also uses a measure of length of time in the community as a risk factor, penalizing by its point system those who were residents of their last address for less than one year. Our data suggest that this factor does not distinguish between those who FTA vs. those who do not, and any discrimination the variable has is in the opposite direction to that expected. Approximately 29% of those who have been at their present residence for less than one year failed to appear for trial compared with 36% of those who had been at their current residence for a year or more. History of

substance use does distinguish FTAs from non-FTAs. Among those with no history of substance use 24% fail to appear, for those with a prior history of substance use 37% fail to appear and for those with a current substance use problem 45% fail to appear. Finally, the second screening instrument considers the suspect's age, rewarding older suspects and penalizing younger ones. Our data indicate that this factor is not a very strong predictor of court appearance, and in any event failure to appear is not a monotonic function of age. The most likely age category of failure are those suspects between the ages of 35 and 49 (40% fail to appear) and those who are 50 years old or older (38.5% fail to appear), while the best risks are those between the ages of 18 and 25 (where only 28% fail to appear). The age of the suspect, then, operates in a way almost opposite to that expected under the current risk assessment instrument.

As a check on the possibility that the FTA rates reported in the various factor items partially reflect differences in levels of supervision or reporting requirements, multivariate logistic regressions were run with ROR. As for the first screening instrument a multivariate logistic regression analysis was run with ROR status as a predictor in models that separately include each risk factor. These results are shown in Table 7. The substantive results in Table 7 mirror those reported in Table 6 indicating that supervision or reporting requirement are unrelated to whether or not someone appears in court or not. Importantly, community stability continues to not predict FTA status, and age works in the opposite direction to that expected by the screening instrument.

In the initial examination of current screening instruments it was found that most of the risk factors currently used by the Baltimore City pre-release center are able to differentiate between those who fail to appear for court and those who do. A few factors were not related to appearance, however, such as the length of time one has resided within their most recent residence, and others such as age and committing a violent felony in the past are related to FTA in a way that is opposite to that reflected in the risk-scoring system. Since there is not complete information available on all of the risk factors used in the screening instrument, the precise pre-trial prediction scoring system cannot be exactly replicated. However, a proxy scoring system can be developed based on what information is available. Using the second screening instrument or what is called the Risk Classification & Assessment Instrument, each case will be scored and a comparison will be made of the probability of failing to appear at each score level will be estimated.

Each case was scored according to the second screening instrument and the distribution of scores is shown in Figure 1. The scores ranged from a low of 0 to a maximum of 29. The mean and median were about equal (12.77 for the mean and 13.00 for the median) and the distribution was approximately normal. Table 8 reports the percentage of cases that failed to appear for trial at each score, and the number of cases at that score. This total risk factor score is significantly related to whether or not someone appears or fails to appear for trial ($\chi^2 = 93.793$; $p < .001$; $\gamma = .40$). But the interesting thing is that with about the same explanatory power, and one could argue better explanatory power, the explanation can be found with simply one item –

whether the person has failed to appear at any time in the past ($\chi^2 = 71.625$; $p < .001$; $\gamma = .59$).

We turn now to an examination of additional explanatory variables examined as part of this research project. In addition to those explanatory variables already used in either the first or second risk screening instrument used by Baltimore City pre-trial officials, a number of other important factors were found[18]. One of the most important of these was whether or not the person had a positive drug urine analysis. Among those testing negative for drugs (other than marijuana) 23% failed to appear for trial, but among those who tested positive 52% failed to appear ($\chi^2 = 50.407$; $p < .001$; $\gamma = .57$). If the current charge was a violent offense or a weapons offense it also significantly predicted FTA status but in a "perverse" direction – those charged with a violent or weapons offense were more likely to appear for trial even after considering ROR status. Moreover, none of the "social factors" significantly predicted FTA – marital status, education, employment, length of time in current residence, having children, having to pay child support, prior military service, or whether or not the person owned their own home or rented.

Several of the factors that were found to be significantly related to FTA were then entered into a logistic regression analysis with a current FTA as the dependent variable. Explanatory variables included: (1) positive urine analysis, (2) prior arrests, (3) current narcotic charge, (4) currently under probation or parole, (5) prior probation/parole revocations, (6) prior FTA, (7) vocational status, and (8) history of substance use. Some of these explanatory factors are likely to be collinear, but the

[18] See Table 3 for bivariate relationships between other independent factors

initial model included all factors, and the results are reported in Table 9. In the initial logistic regression analysis three of eight were significantly related to failing to appear: positive urine analysis, currently under probation/parole, and prior FTA. The pseudo-R^2 for this model was .188. A second logistic regression model was estimated that included only these three significant predictors. All three are significantly related to FTA, and the pseudo-R^2 for this model was .184, which is not significantly different from the prior eight variable model (including ROR status did not change the reported results)

While validation of this model awaits the collection of additional data, this three variable model seems to do a better job than the second risk assessment instrument currently used by the Baltimore City Pre-Trial Release Center. When the total risk score for the second risk assessment instrument is included in a logistic regression, its pseudo-R^2 is only .04, substantially lower than the .184 of the three-variable model reported above. To roughly assess the predictive power of each model those whose score was at or above the 90^{th} percentile of the Baltimore City Pre-trial scale were predicted to fail to appear and the others were predicted to appear. In a cross-classification table, the chi-square was 20.081 and gamma was .50. Moreover, the model correctly predicted 68% of the total number of cases, but only 17% of the individuals who actually failed to appear. When the cut-off was set at approximately 30%, to reflect the percent of failures in this data set, the existing Baltimore assessment instrument then accurately predicted 49% of those who actually failed to appear (the chi-square improved and the gamma increased slightly to .53). One prediction instrument was made by creating a scale that consisted of a propensity

score from the logistic regression results reported in Table 6 [predicted y = -1.618 + 1.024(PositiveUrineAnalysis) + .458(CurrentlyonP/P) + .908(PriorFta)]. When the top ten percent of this distribution was predicted to fail and a cross-classification with current FTA was done, the model correctly predicted 72% of the total number of cases and 34% of those who actually failed to appear. This is better than the currently prediction device. When the cutoff was set at approximately the top 35% of the propensity scores, it correctly predicted 58% of those who actually failed to appear, again an improvement over the currently used instrument.

In sum, while verification waits for additional data, this analysis suggests that a better prediction instrument could be created for Baltimore City that involves focusing on three pieces of information that differentiate between those who FTA and those who do not and that would be simple to obtain:

1. A positive urine analysis
2. If the person is currently on probation or parole
3. The number of prior failure to appears.

These factors have the added feature of being fair. None of them were significantly related to the suspect's race.

Chapter 5: Discussion and Conclusion

Overall, this study suggests that Baltimore City's Bail Risk Assessments use some appropriate factors to predict who will FTA and who will not, but not all the factors they use to predict an FTA are relevant. Thus, the Office of Pretrial Detention is not doing a good job in preventing FTAs due to their use of irrelevant factors on the assessments. This is creating a situation in which defendants are unnecessarily penalized and considered a greater flight risk when they should not. Furthermore, their risk assessments can be improved and condensed into one scale rather than two. The use of two scales to predict flight risk is somewhat logical in order to provide a system of checks and balances. However, the two risk scales Baltimore City uses do not place the same weight on the same factors. They also do not consider the same factors when classifying defendant's risk. For example, the first risk assessment does not consider a prior FTA, a weapons offense, or age as risk factors. However, the Ten-Factor Risk Assessment places a considerable amount of weight on a defendant's age, a defendant having a prior FTA, and if the current offense is a weapons charge.

The bivariate results of independent factors related to ROR and FTA from the first risk assessment suggest that some of the independent factors currently on the assessment are useful in differentiating between those who FTA and those who do not FTA. Particularly, having two or more felony arrests, a current narcotics charge, current probation or parole status, and a current violent felony charge accurately identifies those who FTA and those who do not FTA. The further analysis of these variables, controlling for no supervision of the defendant, shows that there is not a great difference in the predictive power of these factors. However, as shown in the

results, being charged with a violent offense is negatively associated with an FTA. This suggests that a violent offense should be a mitigating factor. There are three possible explanations for this relationship. The results are likely the product of perceived safety concerns of letting a violent offender out into the community, political concerns, or the stipulation that these defendants are required to report more to the pretrial service agency. However, when supervision (ROR) is controlled for, there is no evidence that suspects with a violent felony are not more likely to appear in court simply because of stricter supervision. This suggests that the results are not simply a product of current policy, but that there are other factors that contribute to a defendant's non-appearance in court.

When the other initial risk assessment factors are analyzed independently with the variable ROR, in order to examine the difference between supervision levels and an FTA, the results indicate that there are no significant differences between the results from the first set of bivariate relationship (FTA only) results and this set. Thus there are no significant differences between those who do appear in court and those who do not appear in court based on the level of supervision. This implies that the factors of being on probation or parole, having more than two prior felony arrests, and being charged with a narcotics offense are all valid measures for predicting an FTA.

The analysis of the second, more comprehensive, risk assessment is very similar to the analysis of the initial assessment. This is not surprising as the instruments contain some overlap with their independent predictors. The second analysis continues to find prior felonies and current probation or parole status significant predictors of an FTA. In addition to finding these factors significant, the

analysis indicates that having a prior FTA is the most significant predictor for an FTA, and that a current substance abuse problem is also a significant predictor of an FTA. These predictors remain significant even when supervision is controlled for. This as well suggests that these factors are valid in predicting an FTA.

However, the analysis also shows that there are factors on the scale that are not greatly significant in differentiating between those who FTA and those who do not. In addition there are factors that are in the opposite directional relationship than predicted. Generally speaking, the "social factors" contained on this instrument are not significant predictors. The specific factors include vocational status and the length of time at the current residence. Although student and employment status does distinguish between those who FTA and those who do appear in court, these factors are not highly significant. Of particular interest is the length of time in the community. This factor is shown in other risk assessments to be predictive of an FTA when the length of time at the residence is less than 12 months (Siddiqi 2001; VanNostrand 2002). However, this analysis shows that not only does this factor not distinguish between those who FTA and those who do not, the direction of the relationship is actually the opposite of what it should be. Those who live at their residence for a longer period of time are actually less likely to appear in court. This analysis suggests that vocational status and the length of time in the community are not adequate predictors of an FTA in Baltimore City.

In addition, the analysis also suggests that age, a factor that is generally considered a good predictor for flight, does not work in the way that it should (Siddiqi 2001; ABA 2002; VanNostrand 2002; NAPSA 2005). Those who are young are

penalized the most on the second scale, while those who are older suffer less of a penalty or no penalty. Nonetheless, our results show that the penalties should be applied in the opposite way. In fact, those who are part of the older age groups (35 to 49 and 50 or older) FTA at a greater rate than those who are considered to be in the highest risk age group (18 to 24). This again suggests that age is not a good predictor. Additionally, when supervision is controlled for, age and community stability continue to be non- predictors and supervision is unrelated to the outcome. These results indicate that there are factors currently being used that should not be used as predictors of flight risk for Baltimore City, but that there are also valid predictors on the risk assessment.

Since it is not enough to analyze the predictive power of an FTA of each factor alone, it was necessary to examine the predictive accuracy of the instrument as a whole. Although an exact estimate of risk could not be calculated due to data limitations, the results are nonetheless startling. The propensity scores for the second instrument predict the current risk assessment's placement of defendants. They indicate that the current model can correctly classify the majority of the cases (when the score was at or above the 90^{th} percentile), but cannot accurately identify the majority of those who actually do FTA. When the propensity model was set to 30%, representing the number of current FTAs in the data set, the predictive accuracy increased to almost one-half. However, the results do suggest that there is room for improvement.

The logistic regression results of a model containing significant factors from both assessments and several factors not included on the scales demonstrate that

making some adjustments to the scales can make improvement possible. Specifically, the model included several social factors and variables related to an FTA. The results show that three variables: a positive urine analysis, current probation or parole status, and the number of prior failure to appears, are significant predictors of an FTA. It also demonstrates that other factors such as marital status, education, employment, and length of time at the current address are not significant predictors. When the three significant factors are put together for the creation of one new risk assessment, the propensity scores from the risk assessment show that the new model is an improvement over the current model. In fact, when the top ten percent were predicted to FTA, the model correctly predicted 72% of the cases and 34% of these did actually FTA. When the model was adjusted for the number of current FTAs in the sample, it correctly predicted 58% of those who FTAed. Therefore the new model is an improvement over the current models, and uses information that is easily and cheaply obtained. However, the results must still be verified.

Overall, the multivariate regression results for the current risk assessments indicate that the Ten-Factor Risk Assessment does a better job in explaining a current FTA than the initial risk assessment. This is not to say that the initial assessment is worse than the Ten-Factor Risk Assessment, but it suggests that the use of two assessments may be unnecessary and that there are factors on both scales that do not adequately differentiate between FTAs and nonFTAs. This study also shows that one assessment, using only three factors, is actually more effective in differentiating between those who FTA and those who do not. The three models suggest that the defendant's current and prior record are significant in explaining a current FTA. This

relationship is confirmed with the bivariate relationship results between independent factors and a current FTA and with the results when supervision is controlled for. Specifically, if a defendant is currently on probation or parole or has a prior FTA, the defendant is more likely to have an FTA. In addition, the new model and the second risk assessment both indicate that drug use is a relevant predictor of an FTA.

In addition to the factors that are important in each model, the finding of the insignificance of factors is just as important. The insignificance of community stability and age suggest that those factors are not relevant for Baltimore City's current population and should no longer be considered risk factors. Both age and community stability are risk factors that are insignificant as continuous and categorical variables in every model. In addition, they operate in the opposite direction. The models suggest that the older and the longer that you live in the community, the more likely you are to FTA. The literature, and the NAPSA (2005) and ABA (2002) guidelines suggest the opposite. Baltimore City's current risk assessments also operates under the assumption that the younger you are and the less time you are a member of a community, the more at risk you are for an FTA. Therefore there is an unnecessary penalty associated with being young and having less community stability in the current assessment that is not statistically supported. There is also evidence that employment and student status are insignificant predictors, despite the results of previous studies and the recommendations by the ABA (2002) and NAPSA (2005) guidelines. Thus the use of these insignificant (and extra-legal) factors may place defendants in an inappropriate risk category using the current assessments. However, there are two conflicting goals of pretrial release services.

One goal is to ensure the appearance of the defendant in court, and the other goal is to protect the community. So although the results of this study suggest that there are only three significant factors to be considered for a risk assessment, other factors that may not be very predictive of an FTA are necessary to include in assessments. For example, being charge with a violent offense is not predictive of an FTA, but is an important factor that should be considered in a risk assessment for the purpose of protecting the community. In addition, to the above findings, these findings also stress the importance of tailoring a risk assessment to the population that it is to be used.

Unfortunately, the current risk assessments and the new model, demonstrate that tailoring the risk assessments to a population often requires the use of extra-legal factors. Specifically, a positive urine analysis and a defendant's prior record are very predictive of an FTA and are relevant for Baltimore City. These factors may be considered extra-legal. In addition, some of the extra-legal factors, that are not significant, often carry the same amount of weight or more weight than the legal factors in the risk assessments. The importance of the extra-legal variables is a concern considering the impact pretrial release decisions can have on subsequent court decisions. Fortunately, there is a level of discretion that can be used by pretrial investigators to mitigate the potential harm of the extra-legal factors. For example, the pretrial investigator can recommend that these individuals be placed under a higher amount of supervision or be placed under conditional release, such as diversion (for drug use). Although this does not completely offset the impact of pretrial release decisions on subsequent decisions, it can lessen its influence.

In order to ensure that a more appropriate risk assessment is created for Baltimore City in the future, it is recommended that the Office of Pretrial Detention in Baltimore City improve their record keeping. First, there should be an electronic database for defendants within Baltimore City so that manual collection of information is not necessary. Additionally, the Office of Pretrial Detention needs to ensure that there is a consistency in the level of detail each file has by all pretrial investigators, that all pretrial investigators are consistent in providing pertinent information in the defendants' files, that every defendant undergoes an urine analysis prior to release recommendations, and that information provided by the defendant is verified within an appropriate time frame. Doing these things will improve research pertaining to Baltimore City in the future and will also aide in conducting future research examining a process that we know very little about.

In addition to these changes, this research should be continued with the collection of additional cases to create a more random sample with a proportion of current FTA cases and non-FTA cases that is representative of what actually occurs in Baltimore City. After more cases are collected, the results of this study should be cross-validated on the new sample. Cross-validation would aid in establishing the validity of the new model and its predictive ability. Validity is important in this research and future research due to the possibility of false positives and false negatives produced by prediction instruments. It is necessary to cross-validate an analysis as the "cross-validation will provide evidence of the accuracy of a predictive equation" (Heyman, 2001: 474). It is also necessary to cross-validate one analysis on a second analysis due to the likelihood of shrinkage in the second analysis, and

because of the difficulty in predicting a low-prevalence event, such as FTA (Terry & Tarling, 1985; Heyman, 2001). Shrinkage occurs when an instrument is developed on one sample, and not validated on another, causing the statistics to capitalize on any source of variation and other chance relationships in the data that cannot be expected to exist in another sample (Terry & Tarling, 1985). In low-prevalence events, the predictive value of the device will be low. This furthers the need for cross-validation for this analysis by a future study as it is specifically examining current FTAs (Heyman, 2001).

Also a future analysis should also look at the interaction effects different independent variables have on the explanation of a current FTA and on the decision to release a defendant without supervision. This is relevant as this study shows that age may have an interactive relationship due to it being insignificant as a continuous variable and having an opposite predicted relationship as a categorical. An analysis looking at interaction effects would further the research of Steffensmeier et al. (1998) concerning the impact pretrial release has on being young, a minority, and a male.

Overall, the findings of this study are important. They show that there are current factors used to assess risk by Baltimore City that are still relevant. Nonetheless, the measures used for the still relevant factors and the weight each measure receives may need to be adjusted. There are also factors such as residency and vocational status that are not relevant and therefore should not be used. However, these results come with serious limitations that must be addressed in future research. The sample itself is not very representative of the population in Baltimore City. It also oversamples current FTA cases, thus the results of the analyses are

biased. Finally, the results of this study represent the ability of the pretrial officers to provide supervision. Unfortunately, this study could not identify the actual practices of the pretrial officers, nor could it properly identify the actual final release method of the defendants. The data limitations also put a constraint on the ability to fully understand the use of bail in Baltimore City. It was not possible to conduct analyses to distinguish between those who were able to post bail and those who were not. This is an issue as these two populations may be very different. Despite the issues in this study and the changes that probably should be made to Baltimore City's risk assessments, the current risk assessments should be continued to be used until further research can be completed and these results can be confirmed.

Tables

Table 1: Definition of Variables

Variable	Definition	Type of variable	Reference Category
Age	What is the defendant's age	Continuous	
Age18	Is the defendant between the ages of 18 and 25	Categorical	No
Age26	Is the defendant between the ages of 26 and 34?	Categorical	No
Age35	Is the defendant between the ages of 35 and 49?	Categorical	No
Age50	Is the defendant 50 or older?	Categorical	No
Alcprob	Does the defendant have a current, prior or no alcohol problem?	Categorical	"0" Current; "1" prior; "2" No problem
Charge1	What is the first current charge?		
Charge2	What is the second current charge?		
Charge3	What is the third current charge?		
Charge4	What is the fourth current charge?		
Drugmisd	Is the current drug charge a misdemeanor?	Categorical	No
Drugprob	Does the defendant have a current, prior or no drug problem?	Categorical	"0" Current; "1" prior; "2" No problem
Drugprob1	Does the defendant have a current drug problem?	Categorical	No
Employed	Is the defendant currently employed	Categorical	No
Felony2	If the defendant has more than two felonious arrests	Categorical	No
Highestgrade	What is the highest grade completed by the defendant?	Continuous	
Lengadd12mos	Has the defendant lived at their present address for less than 12 months?	Categorical	No
Lengpresaddmos	How long has the defendant lived at their present address	Continuous	

	in months?		
Lengpresaddyr	How long has the defendant lived at their present address in years?	Continuous	
Narcoticchar	Is the defendant currently charged with a narcotics offense?	Categorical	No
Numcurrchar	How many current charges does the defendant have?	Continuous	
Numpriorarrest	The number of prior arrest the defendant has	Continuous	
NumpriorFTA	How many prior FTA does the defendant have?	Continuous	
Otherincomesource	Are there other income sources for the defendant?	Categorical	0:Unemployment; 1:Social Service; 2: Social Security; 3: Pension; 4: SSI; 5: VA Disability; 6:Family Support; 7:Savings; 8:Worker's Comp; 9:Other
Passaultchar	The number of times the defendant was charged for an assault	Continuous	
Posurinalysis1	Did the defendant test positive for the presence of cocaine or opiates?	Categorical	No
Ppcharge	What is the current probation or parole charge?		
Pposschar	How many prior drug possession charges does the defendant have?	Continuous	
Ppviolated	Does the defendant have a current probation or parole violation?	Categorical	No
PriorFTA	Does the defendant have a prior FTA?	Categorical	No
Probatorparole	Is the defendant currently on probation or parole	Categorical	No

Psellingchar	The number of times the defendant was charged for selling drugs	Continuous	
Pviolencechar	The number of times the defendant was previously charged for a violent offense	Continuous	
ROR	Did the defendant receive release on recognizance?	Categorical	No
Staynight1	Does the defendant stay at their residence every night?	Categorical	No
Staynightver1	Is the information the defendant provided about staying at their residence every night verified?	Categorical	No
Student	Is the defendant currently a student?	Categorical	No
Violentchar	Is the defendant currently charged for a violent offense?	Categorical	No
Weaponschar	Is the defendant currently charged with a weapons offense?	Categorical	No

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	% Missing	No	Yes
Ftacurrent	737	0.3419267	0.4746773	0	1	0	485	284
ROR	722	0.3628809	0.4811642	0	1	2.03	460	262
Age	734	34.14169	12.35498	17	72	0.41		
Race	733	0.1705321	0.3763564	0	1	0.54	608 Black	125 White
Gender	733	0.2960437	0.4568222	0	1	0.54	516 Male	217 Female
Employed	722	0.3905817	0.488219	0	1	2.03	440	282
Student	726	0.0853994	0.2796679	0	1	1.49	664	62
Violentchar	737	0.2374491	0.4258087	0	1	0	562	175
Narcoticchar	735	0.4666667	0.4992274	0	1	0.27	392	343
Weaponschar	737	0.063772	0.2445124	0	1	0	690	47
probatorpa~e	725	0.24	0.427378	0	1	0.27	551	174
Priorfta	727	0.4126547	0.4926506	0	1	0.14	427	300
Numpriorfta	727	1.169188	2.245961	0	18	0.14		
lengpresad~s	708	79.52436	108.8915	0	600	3.93		
Lengadd12mos	737	0.7164179	0.4510425	0	1	0	209	528
Staynight1	737	0.8643148	0.3426866	0	1	0	100	637
staynightv~1	737	0.3921303	0.488557	0	1	0	448	289
Highestgrade	716	11.21508	1.852942	1	24	2.85		
Ppviolated	721	0.4257975	0.4948066	0	1	2.17	414	307
Alcprob	726	1.847107	0.5199853	0	2	1.49	666	60
Drugprob1	737	0.3962008	0.4894392	0	1	0	445	292
numpriorar~t	732	7.882514	9.364477	0	55	0.54		
Parrest2	732	0.6939891	0.4611494	0	1	0.54	224	508
posurinaly~1	737	0.2903664	0.4542397	0	1	0	523	214
Felony2	732	0.4098361	0.4921396	0	1	0.54	432	300

Table 3. Variables Missing Less Than 10 Percent Crossed with FTACURRENT

Variable	Chi2	Pr.	Gamma	Covariance	% Missing
District (7)	6.8576	0.4440	-0.0726		0.0000
Gender (1)	0.5710	0.4500	-0.0651		0.5000
Race (1)	0.3159	0.5740	0.0576		0.5000
Age				0.0983	0.3000
Bmoreadd (1)	0.1429	0.7050	-0.0445		1.0000
Bmoreaddver (1)	4.7956*	0.1870	0.1633		1.4000
Lengpresaddyr				0.0263	4.2000
Lengpresaddmos				0.0219	3.9000
Lengaddver (1)	0.4354	0.5090	-0.0600		3.6000
Livewith (4)	10.9937	0.0520	0.0327		4.8000
Livewithver (1)	3.9933*	0.2620	0.0790		4.6000
Marital (4)	7.8380	0.1650	0.1474		1.8000
Numchildren				0.0960	2.4000
Employed (1)	6.0895*	0.0140	-0.2001		1.9800
Presincome (1)	6.3289*	0.0120	-0.1972		2.1000
Incomever (1)	14.9738***	0.0000	0.3161		6.5000
Priorемploy (1)	1.9489	0.3770	0.0055		2.5000
Student (1)	5.0484*	0.0250	-0.3416		1.5000
Highestgrade				-0.0358	3.3000
Eduver (1)	20.2432***	0.0000	0.4410		1.8000
Military (1)	2.1756	0.3370	0.0360		1.3000
Hospitalcare (1)	0.4486	0.5030	-0.0648		1.6000
Hospcarever (1)	15.2841***	0.0000	0.4146		2.1000
Psychtreat (1)	4.4218*	0.1100	0.0887		1.4500
Psychhosp (1)	1.8298	0.1760	0.1522		7.7900
Psychver (1)	19.131***	0.0000	0.4757		2.1000
Alcprob (2)	0.5652	0.7540	0.1430		1.4500
Alcver (1)	19.7669***	0.0000	-0.4062		1.4500
Alctreat (1)	0.6899	0.7080	0.0603		1.4500
Drugprob (2)	33.0986***	0.0000	-0.3883		1.4500
Drugprob1 (1)	26.0663***	0.0000**	0.3816		
Drug1 (1)	26.172***	0.0000	0.3909		1.1800
Drug2 (1)	9.1692**	0.0020	0.2910		1.9800
Drug3 (1)	5.4538*	0.0200	0.3291		1.8400
Drugtreat (1)	25.3132***	0.0000	0.4201		2.1000
Probatorparole (1)	23.0906***	0.0000**	0.3987		1.5800
Priorpp (1)	26.4542***	0.0000**	0.3941		2.1000
Numtimespp				0.2094	3.3000
Ppviolated (1)	36.9307***	0.0000**	0.4495		2.2500
Priorfta (1)	71.4577***	0.0000**	0.5911		1.3200

Numcurrchar				-0.1315	0.0000
Violentchar (1)	45.1917***	0.0000**	-0.6393		0.0000
Propchar (1)	0.8038	0.3700	-0.0897		0.0000
Weaponschar (1)	12.378***	0.0000	-0.6481		0.0000
Weaponuse (1)	4.7252*	0.0300	-1.0000		0.0000
Weaponposs (1)	11.8264***	0.0010	-0.6399		0.0000
Narcoticchar (1)	13.2851***	0.0000	0.2772		0.0000
Numpriorarrest				0.1497	0.6000
Pviolencechar				0.1348	2.9000
Pviolenchargey (1)	4.0262*	0.0450	0.1616		0.7900
Ppropertychar				0.1505	2.3700
Ppropertychargey (1)	14.0246***	0.0000	0.2854		0.9200
Psellingchar				0.0634	2.6400
Psellingchargey (1)	13.764***	0.0000	0.2919		0.9240
Pposschar				0.1245	3.9600
Pposschargey (1)	43.6935***	0.0000**	0.5289		0.9200
Ptrafficchar				0.1194	1.5900
Ptrafficchargey (1)	9.2695**	0.0020	0.3420		0.9240
Potherchar				0.1111	3.8300
Potherchargey (1)	31.2455***	0.0000**	0.4425		0.9240
Passaultchar				0.0827	1.1800
Passaultchargey (1)	16.4181***	0.0000	0.3104		1.0500
Numpriorfta				0.3135	1.3200
Urinalysis (1)	0.1276	0.7210	0.0771		8.0500
Parrest3 (1)	36.1693***	0.0000	0.4574		0.6000
Lengadd36mos (1)	4.3887*	0.3560	0.1514		0.0000
ROR (1)	0.1843	0.6680	-0.0351		1.9800
Lengadd12mos(1)	2.1257	0.1450	0.1257		0.0000
Parrest2(1)	40.2309***	0.0000	0.5423		0.6800
Staynight1(1)	1.9719	0.1600	0.1648		0.0000
Staynightver1(1)	32.4533***	0.0000	-0.4472		0.0000
Age18(1)	4.9911*	0.0250	-0.1890		0.4000
Age26(1)	0.9746	0.3240	-0.0928		0.4000
Age35(1)	5.9174*	0.0150	0.1994		0.4000
Age50(1)	1.1131	0.2910	0.1146		0.4000
Posurinalysis1(1)	44.1192***	0.0000	0.5005		0.0000

* significant at p < .05 ** significant at p < .01 *** significant p < .001

Table 4: Bivariate Relationship Between Pre-Trial Initial Screen Factors and Failure to Appear

Prior Felony Arrests	FTA	NoFTA	χ^2	χ
None	31.1%	68.9%	10.811*	.23
One	34.9%	65.1%		
Two +	45.9%	54.1%		
Current Narcotic Charge				
No	27.9%	72.1%	13.326*	.28
Yes	40.8%	59.2%		
Currently Under Probation or Parole Supervision				
No	29.2%	70.8%	23.295*	.40
Yes	50.9%	49.1%		
Currently Unemployed				
No	28.4%	71.6%	6.004*	.20
Yes	37.2%	62.8%		
Current Charge Involve a Violent Felony				
No	40.3%	59.7%	43.962*	-.63
Yes	13.1%	86.9%		

*Significant at least at $p < .05$.

Table 5: Multivariate Results for Initial Screening Risk Factors – Control for ROR Status

	b	expb
ROR	.007	.964
2+ Felony Arrests	.305*	1.356
Constant	-.810	
ROR	-.154	.857
Narcotics Charge	.592*	1.808
Constant	-.897	
ROR	-.025	.925
Under P&P Supervision	.850*	2.339
Constant	-.876	
ROR	-.121	.896
Currently Unemployed	.404*	1.498
Constant	-.898	
ROR	-.211	.889
Violent Felony Charge	-1.528*	.217
Constant	-.304	

*Significant at least at $p < .05$

Table 6: Bivariate Relationship Between Pre-Trial Initial Screen Factors and Failure to Appear

Prior Felony Arrests	FTA	NoFTA	χ^2	χ
None	31.1%	68.9%	10.811*	.23
One	34.9%	65.1%		
Two +	45.9%	54.1%		
Currently Under Probation or Parole Supervision				
No	29.2%	70.8%	23.295*	.40
Yes	50.9%	49.1%		
Prior Probation/Parole Revocations				
No	29.5%	70.5%	23.136*	.41
Yes	50.0%	50.0%		
Prior Failure to Appear				
No	24.5%	78.6%	71.625*	.59
Yes	51.7%	48.3%		
Vocational Status				
Employed/Student	28.0%	78.0%	8.876*	.24
Unemployed	38.5%	61.5%		
Community Stability				
One year or more	35.8%	64.2%	3.246	.16
Less than one year	28.8%	71.2%		
History of Substance Abuse				
Non History	24.1%	75.9%	32.523*	.39
Prior History	37.5%	62.5%		
Current History	45.0%	55.0%		
Age				
50 and over	38.5%	61.5%	10.086*	.17
35-49	40.4%	59.6%		
26-34	30.8%	69.2%		
18 to 25	28.0%	72.0%		
Under 18	00.0%	100%		

*Significant at least at $p < .05$

Table 7: Multivariate Results for Initial Screening Risk Factors – Control for ROR Status

	b	expb
ROR	-.028	.972
Prior Probation/Parole Revocations	.826*	2.285
Constant	-1.163	
ROR	-.154	.857
Prior Failure to Appear	1.367*	3.922
Constant	-1.294	
ROR	-.121	.925
Vocational Status	-.475*	.622
Constant	-.443	
ROR	-.075	.928
Community Stability	.323	1.381
Constant	-.878	
ROR	-.089	.915
History of Substance Abuse	-.474*	.623
Constant	-.151	
ROR	-.104	.901
Age	.019*	1.070
Constant	-1.208	

*Significant at least at $p < .05$

Figure 1: Distribution of Scores for Baltimore Second Risk Assessment

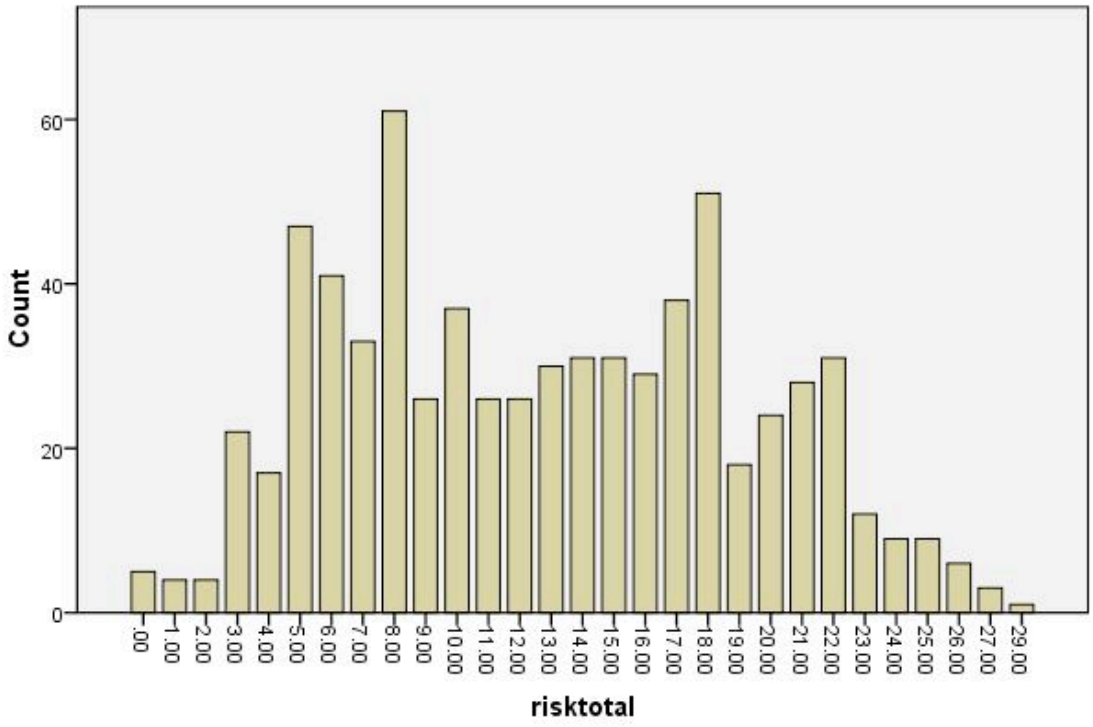


Table 8: Percentage of FTA Cases at each Risk Level

Score	% FTA	# of Cases
0	0.0	5
1	25.0	4
2	0.0	4
3	9.1	22
4	5.9	17
5	17.0	47
6	17.1	41
7	27.3	33
8	18.0	61
9	23.1	26
10	24.3	37
11	30.8	26
12	30.8	26
13	43.3	30
14	51.6	31
15	22.6	31
16	34.5	29
17	47.4	38
18	52.9	51
19	44.4	18
20	50.0	24
21	53.6	28
22	64.5	31
23	41.7	12
24	33.3	9
25	77.8	9
26	83.3	6
27	33.3	3
29	0.0	1

$\chi^2 = 93.793$; $p < .001$; $\gamma = .40$

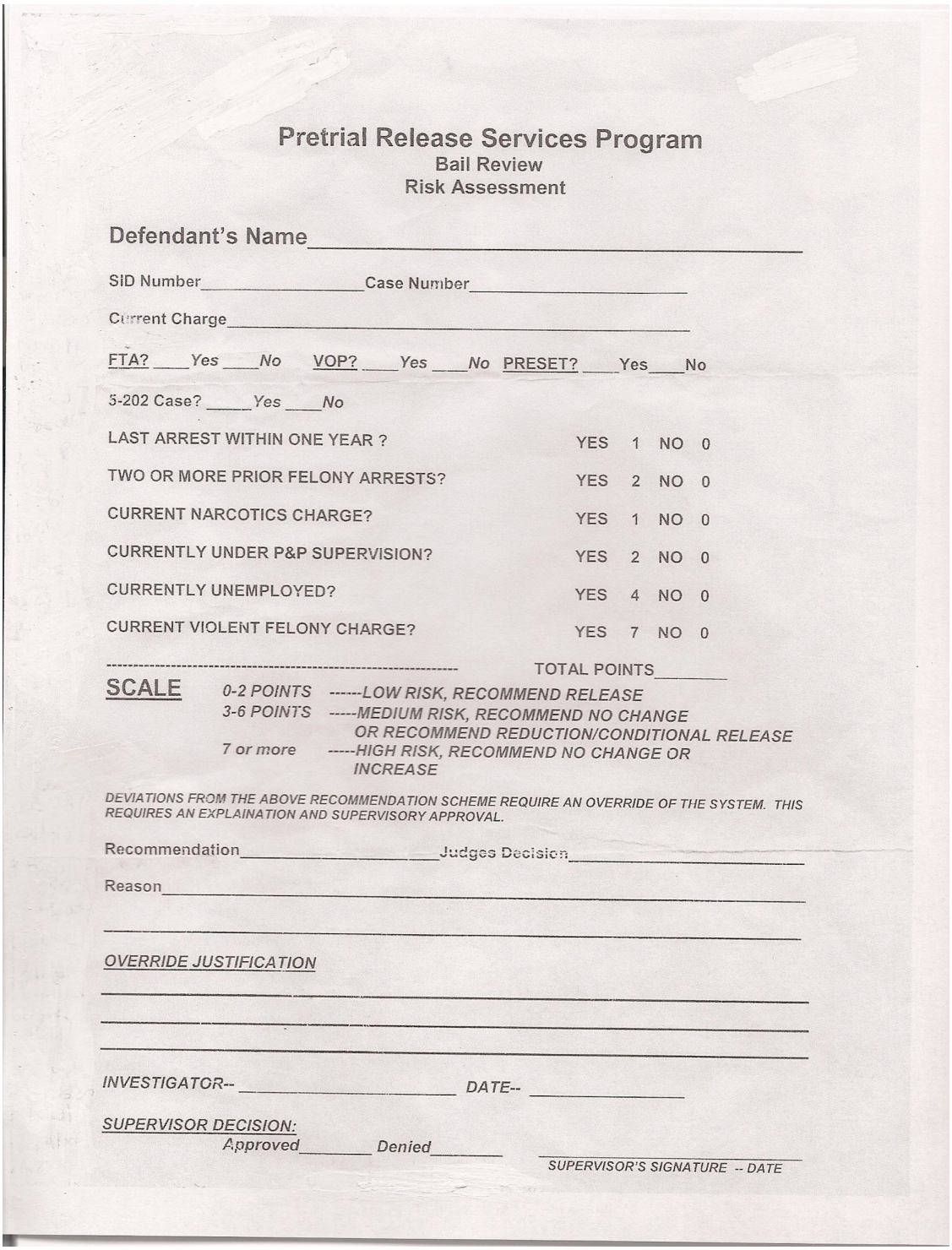
Table 9: Initial Logistic Regression Analysis for Pre-Trial Risk Predictors

	b	Exp b
Positive Urine Analysis	.838*	2.311
Prior Arrests	.017	1.017
Current Charge Narcotics	.278	1.321
Currently Under Probation/Parole	.527*	1.694
Prior Probation/Parole Revocations	-.040	.960
Prior FTA	.881*	2.413
Vocational Status	-.046	.955
History of Substance Use	-.076	.927
Constant	-1.620	

Pseudo-R^2 = .188
*Significant at least at $p < .05$

Appendix

1. First Risk Scale



Pretrial Release Services Program

Bail Review
Risk Assessment

Defendant's Name_____

SID Number_____Case Number_____

Current Charge_____

FTA? ____Yes ____No VOP? ____Yes ____No PRESET? ____Yes____No

5-202 Case? _____Yes ____No

LAST ARREST WITHIN ONE YEAR ?	YES	1	NO	0
TWO OR MORE PRIOR FELONY ARRESTS?	YES	2	NO	0
CURRENT NARCOTICS CHARGE?	YES	1	NO	0
CURRENTLY UNDER P&P SUPERVISION?	YES	2	NO	0
CURRENTLY UNEMPLOYED?	YES	4	NO	0
CURRENT VIOLENT FELONY CHARGE?	YES	7	NO	0

---------- TOTAL POINTS_____

SCALE
0-2 POINTS ------LOW RISK, RECOMMEND RELEASE
3-6 POINTS -----MEDIUM RISK, RECOMMEND NO CHANGE OR RECOMMEND REDUCTION/CONDITIONAL RELEASE
7 or more -----HIGH RISK, RECOMMEND NO CHANGE OR INCREASE

DEVIATIONS FROM THE ABOVE RECOMMENDATION SCHEME REQUIRE AN OVERRIDE OF THE SYSTEM. THIS REQUIRES AN EXPLAINATION AND SUPERVISORY APPROVAL.

Recommendation_____Judges Decision_____

Reason_____

_____

OVERRIDE JUSTIFICATION

_____

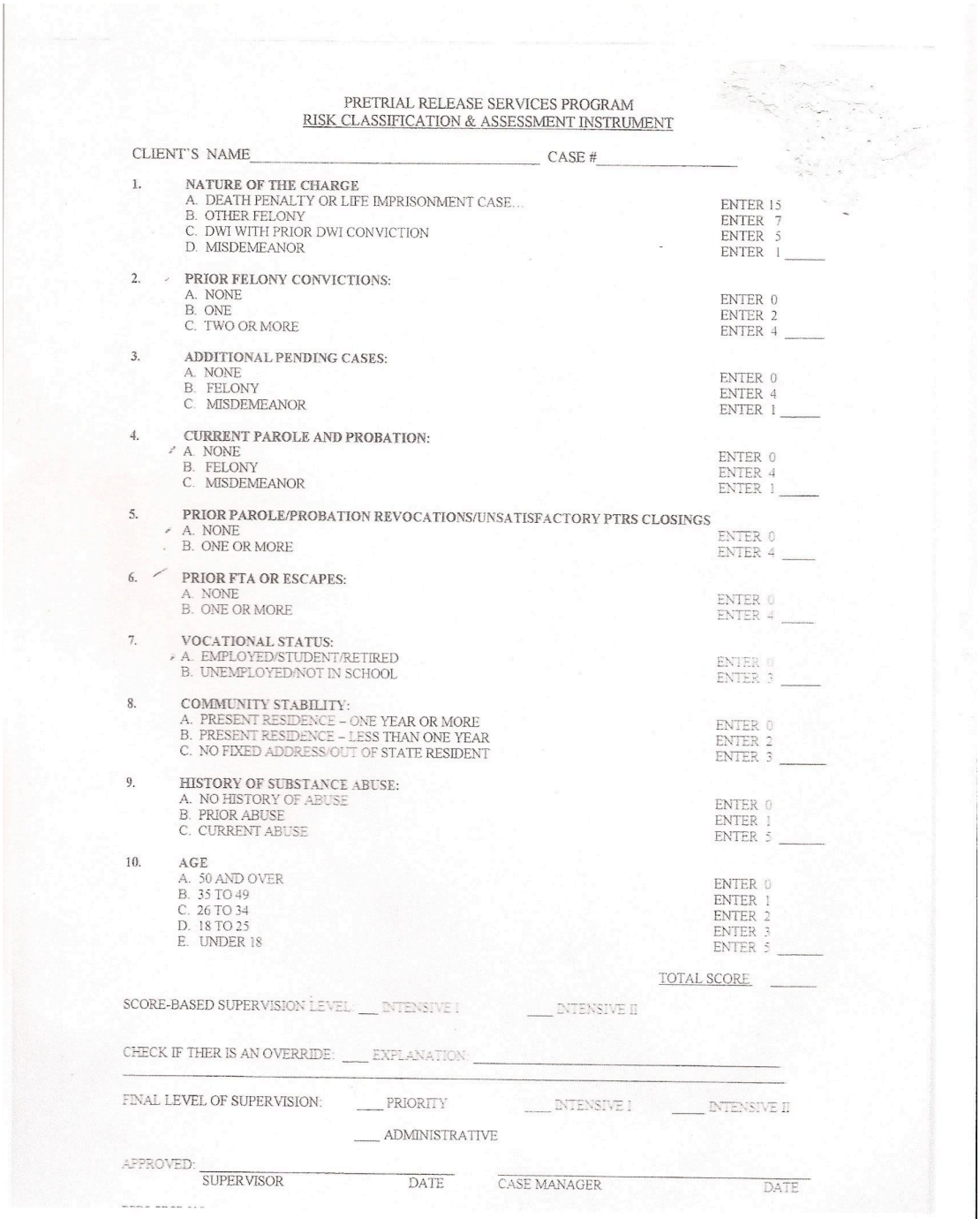
_____

_____

INVESTIGATOR-- _____ *DATE--* _____

SUPERVISOR DECISION:
*Approved*_____ *Denied*_____ _____
SUPERVISOR'S SIGNATURE -- DATE

2. Second Risk Scale



PRETRIAL RELEASE SERVICES PROGRAM
RISK CLASSIFICATION & ASSESSMENT INSTRUMENT

CLIENT'S NAME_____ CASE #_____

1.	**NATURE OF THE CHARGE**	
	A. DEATH PENALTY OR LIFE IMPRISONMENT CASE...	ENTER 15
	B. OTHER FELONY	ENTER 7
	C. DWI WITH PRIOR DWI CONVICTION	ENTER 5
	D. MISDEMEANOR	ENTER 1 _____
2.	**PRIOR FELONY CONVICTIONS:**	
	A. NONE	ENTER 0
	B. ONE	ENTER 2
	C. TWO OR MORE	ENTER 4 _____
3.	**ADDITIONAL PENDING CASES:**	
	A. NONE	ENTER 0
	B. FELONY	ENTER 4
	C. MISDEMEANOR	ENTER 1 _____
4.	**CURRENT PAROLE AND PROBATION:**	
	A. NONE	ENTER 0
	B. FELONY	ENTER 4
	C. MISDEMEANOR	ENTER 1 _____
5.	**PRIOR PAROLE/PROBATION REVOCATIONS/UNSATISFACTORY PTRS CLOSINGS**	
	A. NONE	ENTER 0
	B. ONE OR MORE	ENTER 4 _____
6.	**PRIOR FTA OR ESCAPES:**	
	A. NONE	ENTER 0
	B. ONE OR MORE	ENTER 4 _____
7.	**VOCATIONAL STATUS:**	
	A. EMPLOYED/STUDENT/RETIRED	ENTER 0
	B. UNEMPLOYED/NOT IN SCHOOL	ENTER 3 _____
8.	**COMMUNITY STABILITY:**	
	A. PRESENT RESIDENCE – ONE YEAR OR MORE	ENTER 0
	B. PRESENT RESIDENCE – LESS THAN ONE YEAR	ENTER 2
	C. NO FIXED ADDRESS/OUT OF STATE RESIDENT	ENTER 3 _____
9.	**HISTORY OF SUBSTANCE ABUSE:**	
	A. NO HISTORY OF ABUSE	ENTER 0
	B. PRIOR ABUSE	ENTER 1
	C. CURRENT ABUSE	ENTER 5 _____
10.	**AGE**	
	A. 50 AND OVER	ENTER 0
	B. 35 TO 49	ENTER 1
	C. 26 TO 34	ENTER 2
	D. 18 TO 25	ENTER 3
	E. UNDER 18	ENTER 5 _____

TOTAL SCORE _____

SCORE-BASED SUPERVISION LEVEL: ___ INTENSIVE I ___ INTENSIVE II

CHECK IF THER IS AN OVERRIDE: ___ EXPLANATION: _____

FINAL LEVEL OF SUPERVISION: ___ PRIORITY ___ INTENSIVE I ___ INTENSIVE II

___ ADMINISTRATIVE

APPROVED: _____ _____
SUPERVISOR DATE CASE MANAGER DATE

3. Virginia's Risk Assessment

Risk Factor	Criteria	Assigned Points
Charge Type	If the most serious charge for the current arrest was a felony	1 point
Pending Charge(s)	If the defendant had one or more charge(s) pending in court at the time of the arrest	1 point
Outstanding Warrants	If the defendant had one or more warrant(s) outstanding in another locality for charges unrelated to the current arrest	1 point
Criminal History	If the defendant had one or more misdemeanor or felony convictions	1 point
Two or more Failure to Appear Convictions	If the defendant had two or more failure to appear convictions	2 points
Two or more Violent Convictions	If the defendant had two or more violent convictions	1 point
Length at Current Residence	If the defendant had lived at their current residence for less than one year prior to arrest	1 point
Employed/ Primary Child Caregiver	If the defendant had not been employed continuously for the past two years and was not the primary caregiver for a child at the time of arrest	1 point
History of Drug Abuse	If the defendant had a history of drug abuse	1 point

4. Virginia's Risk Level and Failure Rate

Risk Level	Risk Scores	N	% Population	Failure Rate
1	0,1	471	24	10%
2	2	461	23	19%
3	3	412	21	27%
4	4	332	17	40%
5	5 thru 10	295	15	53%

5. Data Collection Instrument

IF ANY INFORMATION IS NOT IN THE RECORD, CODE IT AS NOT THERE. FOR EXAMPLE, IF THERE IS NO INFORMATION ON THE PERSON'S JOB THEN CODE THEM AS UNEMPLOYED. FOR INFORMATION THAT SHOULD BE THERE BUT IS NOT (GENDER, RACE, OR AGE FOR EXAMPLE) USE THE MISSING VALUE CODE OF -99.

1. Did this person fail to appear for the current offense?
_____ no
_____ yes

2. District _____

3. 1st Charge _____

4. 2nd Charge _____

5. 3rd Charge _____

6. 4th Charge _____

7. Initial Appearance Recommendation _____

8. Initial Appearance Bail Set _____

9. Bail Review Recommendation _____

10. Bail Approved
    _____ no
    _____ yes

11. Defendant's sex
    _____ male
    _____ female

12. Defendant's Race
    _____ white
    _____ black
    _____ asian

13. Dedendant's Date of Birth _____

14. Defendant's Age _____

15. Place of Birth _____

16a. verified?
____ no
____ yes

16. Length of time in Baltimore area
a. _____ years

b. _____ months

c. verified?
____ no
____ yes

17. Baltimore City Address?
_____ no
_____ yes

18a. verified?
____ no
____ yes

18. Length of Present Residence?
_____ years
_____ months

19a. verified?
____ no
____ yes

19. Residence
_____ own
_____ rent

20a. verified?
____ no
____ yes

20. Monthy rent/mortgage amount.
$_____

21a. verified?

____ no
____ yes

21. Do they stay in this residence every night?
_____ no
_____ yes

22a. verified?
____ no
____ yes

22. Who is defendant living with?
_____ parent
_____ spouse
_____ guardian
_____ other relative
_____ non-family person
_____ alone

23a. verified?
____ no
____ yes

23. Prior address in Baltimore City?
_____ no
_____ yes

24a. Length of time at this residence.
_____ months
_____ years

24b. Who was defendant living with at this prior address?
_____ parent
_____ spouse
_____ guardian
_____ other relative
_____ non-family person
_____ alone

24c. verified?
____ no
____ yes

24. Marital status?
_____ single
_____ married

_____ separated
_____ divorced
_____ widowed

26. Number of children? _____

26a. Does defendant provide support for these children?
_____ no
_____ yes

26b. If provided is the support voluntary or court ordered?
_____ voluntary
_____ court ordered

26c. verified?
____ no
____ yes

25. Is the defendant currently employed?
_____ no
_____ yes

26a. Full time _____
Part time _____

27b. How long ago did defendant work? _____

27c. verified?
____ no
____ yes

26. Type of work? _____

27a. Wages _____

27c. Length of employment _____

27d. verified?
____ no
____ yes

27. Can contact supervisor at work?
_____ no
_____ yes

28a. Will employer take defendant back at job?

_____ no
_____ yes

28b. verified?
____ no
____ yes

28. Length of income _____

29a. Any present income _____

29b. verified?
____ no
____ yes

29. Other sources of income for defendant? (check all that apply)
a. _____ unemployment
b. _____ social services
c. _____ social security
d. _____ pension
e. _____ SSI
f. _____ VA disability
g. _____ family support
h. _____ savings
i. _____ worker's comp
j. _____ other specify
_____

k. verified?
____ no
____ yes

l. How long? _____
m. Amount $_____
n. verified?
____ no
____ yes

30. Prior Employment
_____ no
_____ yes
a. How long _____
b. Full time _____
Part time _____
c. Type of prior work _____
d. Reason for leaving prior work _____

e. verified?
____ no
____ yes

31. Was defendant a student?
_____ no
_____ yes

a. Full time _____
Part time _____
b. How long in school _____
c. Highest grade completed _____
d. Verified?
_____ no
_____ yes

32. Did the defendant serve in the military?
_____ no
_____ yes

a. Branch _____
b. Rank _____
c. How long _____
d. Type of Discharge _____
e. Verified?
_____ no
_____ yes

33. Is defendant currently under a doctor's or hospital care?
_____ no
_____ yes
a. Verified?
_____ no
_____ yes

34. Did defendant ever receive psychiatric treatment?
_____ no
_____ yes
a. When _____
b. How long treated _____
c. Was defendant hospitalized?
_____ no
_____ yes
d. Verified?
_____ no
_____ yes

35. Does defendant have an alcohol problem?
    _____ present problem
    _____ prior problem
    _____ no problem
    a. Verified?
        _____ no
        _____ yes

36. Was defendant ever treated for an alcohol problem?
    _____ no
    _____ yes
    a. How long ago _____
    b. For how long treated? _____
    c. Verified?
        _____ no
        _____ yes

37. Does defendant have a drug problem?
    ____ present problem
    _____ prior problem
    _____ no problem

38. Has defendant ever taken drugs – first drug?
    _____ no
    _____ yes
    a. What drug? _____
    b. How often _____
    c. How long _____
    d. Was defendant addicted to this drug?
        _____ no
        _____ yes

39. Has defendant ever taken drugs – second drug?
    _____ no
    _____ yes
    e. What drug? _____
    f. How often _____
    g. How long _____
    h. Was defendant addicted to this drug?
        _____ no
        _____ yes

40. Has defendant ever taken drugs – third drug?
    _____ no
    _____ yes

i. What drug? _____
j. How often _____
k. How long _____
l. Was defendant addicted to this drug?
_____ no
_____ yes

41. How long ago drugs take? _____
    a. Verified?
    _____ no
    _____ yes

42. Has defendant ever been treated for a drug problem?
_____ no
_____ yes

a. How long ago _____
b. How long treated _____
c. Verified?
_____ no
_____ yes

43. Is defendant currently on probation or parole?
_____ no
_____ yes

a. For what charge? _____
b. In Baltimore City?
_____ no
_____ yes
c. How long has the defendant been on probation/parole?
_____

44. Has defendant previously been on probation or parole?
_____ no
_____ yes

a. For what charges? _____
b. In Baltimore City?
_____ no
_____ yes
c. How long ago? _____
d. How long was the defendant on probation/parole? _____

45. Including the current if any, how many times has defendant been on probation/parole?

_____ times

46. Has the defendant ever violated their probation/parole?
_____ no
_____ yes

47. Was it the current or prior probation/parole?
_____ current
_____ prior

48. Reason for violation. _____

49. Has the defendant ever failed to appear for a court appearance (not counting this one)?
_____ no
_____ yes
a. Reason _____

50. How many charges on the current offense does the defendant have?
_____ charges

51. Is one of the charges for a violent offense?
_____ no
_____ yes

52. Is one of the charges for a property offense?
_____ no
_____ yes

53. Is one of the charges for a weapons offense?
_____ no
_____ yes
a. weapon use or brandishing ____
b. Weapon possession _____

54. Is one of the charges for a narcotics offense?
_____ no
_____ yes

55.
a. selling _____
b. Possession _____
c. Both _____

55. How many prior arrests does the defendant have?
_____ arrests

56. Prior arrests for:
    a. Violence _____
    b. Property _____
    c. Selling Drugs _____
    d. Possession of Drugs _____
    e. Traffic _____
    f. Other _____

57. Does the defendant have prior failure to appears?
    _____ no
    _____ yes

    a. If yes, how many _____

58. Was there a urinalysis at the time of intake?
    _____ no
    _____ yes

    a. If yes, did the defendant test positive?
        _____ no
        _____ yes

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