Risk-Based Pretrial Release Recommendation and Supervision Guidelines

Exploring the Effect on Officer Recommendations, Judicial Decision-Making, and Pretrial Outcome

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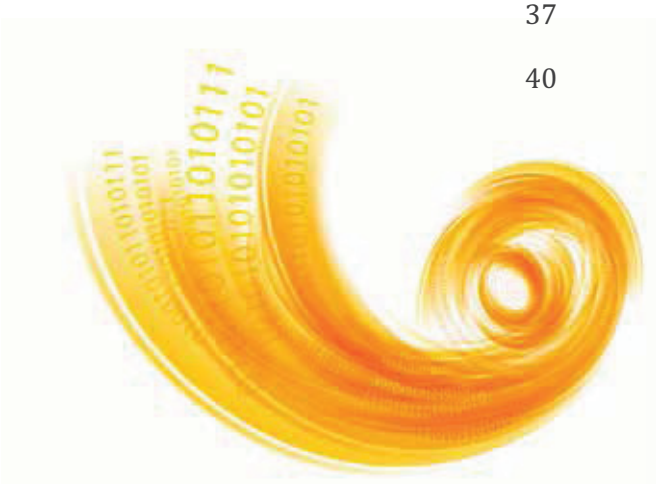

Executive Summary

Pretrial Services agencies in Virginia are actively engaged in identifying, testing, and implementing Pretrial Services Legal and Evidence-Based Practices (LEBP) that are consistent with the legal and constitutional rights afforded to accused persons awaiting trial, and that research has proven to be effective in reducing unnecessary detention while assuring court appearance and the safety of the community during the pretrial stage. The Virginia Pretrial Risk Assessment Instrument (VPRAI), known nationally as the "Virginia Model," was the first research-based statewide pretrial risk assessment in the country. The VPRAI examines eight risk factors that are weighted to create a risk score, and defendants are assigned to one of five risk levels ranging from low to high that represent the likelihood of pretrial failure.

Although Pretrial Services staff consider the results of the VPRAI, there was previously no guidance for making pretrial release recommendations to the court or determining appropriate levels of pretrial supervision until the development of the Praxis. The Praxis is a decision grid that uses the VPRAI risk level and the charge category to determine the appropriate release type and level of supervision. Further, recent research indicates that the administration of evidence-based supervision techniques to pretrial defendants is associated with reductions in failure to appear and re-arrest. The Strategies for Effective Pretrial Supervision (STEPS) program was developed to shift the focus of typical staff/defendant interaction from conditions compliance to criminogenic needs and eliciting prosocial behavior.

The current research project tested the use of both the Praxis release recommendation and supervision guidelines, and the STEPS evidence-based supervision techniques in an agency random assignment study. The 29 Virginia Pretrial Services agencies were randomly assigned to one of four groups: (1) Control, (2) Praxis only, (3) STEPS only, and (4) Praxis and STEPS. The research examined the effect of the Praxis on pretrial officer release recommendations, judicial release decisions, and pretrial supervision practices, and the effect of the Praxis and STEPS supervision techniques on pretrial outcomes. The study includes three research objectives and seven research questions.

The findings are as follows:

- The Virginia Pretrial Risk Assessment Instrument performs well and reliably predicts success or failure pending trial. ***(Research question 1)***
- The charge category is statistically significantly related to pretrial outcome. ***(Research question 2)***
- Praxis training and use effects release recommendations of officers. Pretrial officers in the Praxis groups follow the Praxis recommendation 80% of the time, and are 2.3 times more likely to recommend release at first appearance when compared to the non-Praxis groups. ***(Research question 3)***

- Praxis training and use effects the release decisions of judges. Judges release defendants at first appearance assigned to Praxis groups 1.9 times more often than those assigned to non-Praxis groups, controlling for other relevant factors. Overall, judges are 8.8 times more likely to release a defendant at first appearance when release is recommended by the pretrial officer. ***(Research question 4)***

- Praxis training and use effects the differential use of supervision. Praxis trained Pretrial Services staff follow Praxis supervision level recommendations 84% of the time. ***(Research question 5)***

- Praxis training and use effects the outcomes of defendants on supervision. Defendants in the Praxis groups are 1.2 times less likely to experience any failure than are those in the non-Praxis groups. They are 1.3 times less likely to fail to appear or to experience a new arrest pending trial; no statistically significant differences are observed for failure due to technical violation. ***(Research question 6)***

- STEPS training and use effects failure to appear for defendants on supervision but not any failure, new arrest, or technical violation. As compared to defendants supervised by Pretrial Services staff who received no training or who did not report skill usage, those defendants supervised by Pretrial Services staff who were trained and reported using STEPS skills at least five times are 2.2 times less likely to fail to appear. ***(Research question 7)***

Introduction

Pretrial Services agencies in Virginia are actively engaged in identifying, testing, and implementing Pretrial Services Legal and Evidence-Based Practices (LEBP). Pretrial Services LEBP are interventions and practices that are consistent with the legal and constitutional rights afforded to accused persons awaiting trial, and that research has proven to be effective in reducing unnecessary detention while assuring court appearance and the safety of the community during the pretrial stage.[1]

Consistent with LEBP, Virginia Pretrial Services agencies currently use an objective and research-based risk assessment to assess risk of flight and danger to the community posed by pretrial defendants. The Virginia Pretrial Risk Assessment Instrument (VPRAI; Appendix A.), known nationally as the "Virginia Model," was the first research-based statewide pretrial risk assessment in the country. It has been validated for use by all Virginia Pretrial Services agencies. The VPRAI examines eight risk factors that are weighted to create a risk score, and defendants are assigned to one of five risk levels ranging from low to high. The risk levels represent the likelihood of pretrial failure. Although Pretrial Services staff consider the results of the VPRAI, prior to the current research project, their pretrial release recommendations to the court and supervision practices were subjective because there was no guidance for making pretrial release recommendations or determining levels of pretrial supervision. As a result, many of Virginia's Pretrial Services agencies required the same frequency and types of contacts for all defendants during pretrial supervision while others had identified their own levels of supervision with varying frequencies and types of contacts. In both cases, there was no objective and consistent policy for providing differential pretrial supervision based on the risk of pretrial failure.

In an attempt to address the limited use of the risk assessment in release recommendations and differential pretrial supervision, the Virginia Department of Criminal Justice Services (DCJS) requested and was awarded a grant from the Bureau of Justice Assistance (BJA) to conduct an 18-month research project that was completed in 2011. The Virginia DCJS, in collaboration with the Virginia Community Criminal Justice Association, formed a Pretrial Advisory Committee and partnered with Luminosity, Inc. to develop guidelines that utilize the VPRAI to guide pretrial release recommendations and differential pretrial supervision. The development of these guidelines is consistent with research conducted in the federal pretrial system that demonstrated that the risk principle, which enjoys considerable support in post-conviction settings, might apply to release decisions and supervision conditions assigned to defendants under pretrial supervision.[2]

The research project resulted in the creation of research-based guidelines for use by Pretrial Services agencies that are (1) risk-based, (2) consistent with legal and evidence-based practices, and (3) provide guidance for both pretrial release recommendations and differential pretrial supervision.[3] The guidelines build upon the existing risk assessment instrument by adding a decision grid – the Praxis –

[1] VanNostrand, M. (2007). Legal and Evidence-based Practices: Application of Legal Principles, Laws, and Research to the Field of Pretrial Services, Washington, D.C.: National Institute of Corrections and Crime and Justice Institute.

[2] VanNostrand, M., and Keebler, G. (2009). Pretrial risk assessment in the Federal Court for the purpose of expanding the use of alternatives to detention. Washington, DC: U.S. Department of Justice, Office of the Federal Detention Trustee.

that uses the risk level dictated by the assessment and the charge category to determine the appropriate release type and level of supervision (Appendix B.). This research was recognized by BJA as a significant contribution to the Pretrial Services field and republished portions of the final report as "The State of the Science of Pretrial Release Recommendations and Supervision."[4]

Recent research also indicates that the administration of evidence-based supervision techniques to pretrial defendants is associated with reductions in failure to appear and re-arrest. These supervision techniques involve a shift in the focus of typical staff/defendant interaction from conditions compliance (office reporting, maintaining employment, submitting to urinalysis) to criminogenic needs and eliciting prosocial behavior. The current research used the Strategies for Effective Pretrial Supervision (STEPS) program based on existing supervision models in use in post-conviction supervision and pretrial supervision. STEPS was developed for this project by adapting the existing models to be sensitive to the purpose of pretrial supervision (i.e., to assure court appearance and public safety) and the legal and constitutional rights of defendants.

The current research project tested the use of both the Praxis release recommendation and supervision guidelines, and evidence-based supervision techniques. Specifically, the research examined 1) the effect of the Praxis on pretrial officer release recommendations, judicial release decisions, and differential pretrial supervision practices, and 2) the effect of the Praxis and STEPS supervision techniques on pretrial outcomes (court appearance, community safety, and release conditions compliance).

The 29 Virginia Pretrial Services agencies were randomly assigned to one of four groups: (1) Control (no new training, support, or technical assistance), (2) Praxis only (Praxis justice system stakeholder training, staff training, ongoing support, and technical assistance), (3) STEPS only (STEPS evidence-based supervision staff training, ongoing support, and technical assistance), and (4) Praxis and STEPS (both Praxis and STEPS staff training, Praxis system stakeholder training, ongoing support, and technical assistance). Implementing the Praxis involved the development of training curriculum and technical assistance protocols, initial and quarterly site visits, regional agency and system-wide stakeholder training events, and monthly progress check-ins/reports. The implementation of STEPS was particularly intensive as it included curriculum development and classroom training followed by individual onsite coaching, initial and follow-up audio-recorded distance coaching, webinars, and follow-up individual direct observation.

The project began in October 2012, training commenced during January 2013, the project was fully implemented beginning July 2013 for one full year, and cases were followed through December 2014. The dataset included 1) all cases that were investigated, had a completed risk assessment, a release recommendation made to the court, and a judicial decision, and 2) all cases under pretrial supervision with a VPRAI risk assessment, research factors, and pretrial outcomes. The data were cleaned and analyses completed during spring 2015.

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[3] VanNostrand, M., Rose, K., and Weibrecht, K. (2011). In Pursuit of Legal and Evidence-Based Pretrial Release Recommendations and Supervision, Richmond, VA: Luminosity, Inc. for the Virginia Department of Criminal Justice Services.

[4] VanNostrand, M., Rose, K., and Weibrecht, K. (2011). State of the Science of Pretrial Release Recommendations and Supervision, Washington, D.C.: Department of Justice Bureau of Justice Assistance and the Pretrial Justice Institute.

[5] Lowenkamp, C.T., Robinson, C. R., Vanbenschoten, S. W. (2011). Initial STARR results: A positive step forward. News & Views: A Biweekly Newsletter of the United States Probation and Pretrial Services System, p. 3-4.

Research Objectives and Questions

The study includes three research objectives and seven research questions.

I. Investigate the underlying assumptions of the Praxis regarding the Virginia Pretrial Risk Assessment Instrument (VPRAI) and charge category.

1. Does the VPRAI predict success or failure pending trial?
2. Is the charge category statistically significantly related to pretrial outcome (success or failure pending trial)?

II. Investigate the effect of the Praxis on pretrial officer release recommendations, judicial release decisions, and differential pretrial supervision practices.

3. Does Praxis training and use effect release recommendations of officers?
4. Does Praxis training and use effect release decisions of judges?[6]
5. Does Praxis training and use effect the differential use of supervision?

III. Investigate the effect of the Praxis and evidence-based supervision techniques on pretrial outcomes (court appearance, community safety, and release conditions compliance).

6. Does Praxis training and use effect the outcomes of defendants on supervision?
7. Does STEPS training and use effect the outcomes of defendants on supervision?

Sample Descriptions

Two samples were created to investigate the research questions. The supervision sample comprises cases supervised by Pretrial Services with a VPRAI risk assessment, charge category, demographic, supervision, and outcome data and was used to address research questions 1, 2, 5, 6, and 7 (Table 1, N=14,382).

[6] The original proposal included another research question: Does praxis training and use effect the release rates of defendants at first appearance? Upon analysis, it was recognized that this is the very same question as number 4 and so it was eliminated.

Table 1. Supervision Sample Description (N=14,382)

		N	%
Race	Non-white	6888	48.5
	White	7321	51.5
	Total	14209	100
Sex	Female	3677	25.6
	Male	10705	74.4
	Total	14382	100
Age	Mean		32.3
	Standard Deviation		11.4
	Median		29
	Range		17–85
	N		14380
Risk Level	Low	1661	11.5
	Below Average	2691	18.7
	Average	3524	24.5
	Above Average	3168	22.0
	High	3338	23.2
	Total	14382	99.9
Charge Category	Drug	3117	21.7
	Theft/fraud	2382	16.6
	Firearm	428	3.0
	FTA	774	5.4
	Traffic: non-DUI	333	2.3
	Non-violent misd.	801	5.6
	Violent	3478	24.2

Table 1. Supervision Sample Description (N=14,382), continued

		N	%
Charge Category, continued	Traffic: DUI	2208	15.4
	Other	861	6.0
	Total	14382	100.2
Outcomes	Failure to Appear	579	4.0
	New Arrest	790	5.5
	Technical Violation	1269	8.8
	Any Failure	2182	15.2
Lenth of Supervision (days)	Mean		106
	Standard Deviation		82.3
	Median		82
	Range		1 - 560
	N		14382
Assigned Supervision Level	Monitoring	53	0.5
	Level I	1779	16.5
	Level II	3774	34.9
	Level III	5208	48.2
	Total	10814	100.1

The recommendation sample contains cases investigated by Pretrial Services with a VPRAI risk assessment, charge category, demographic, officer release recommendations, and judicial decision data and was used to address research questions 3 and 4 (Table 2, N=32,760).

Table 2. Release Recommendation Sample Description (N = 32,760)

		N	%
Race	Non-white	18415	56.7
	White	14078	43.3
	Total	32493	100
Sex	Female	6527	19.9
	Male	26233	80.1
	Total	32760	100
Age	Mean		32.7
	Standard Deviation		11.5
	Median		30
	Range		17–91
	N		32750
Risk Level	Low	3091	9.4
	Below Average	4792	14.6
	Average	6957	21.2
	Above Average	7373	22.5
	High	10547	32.2
	Total	32760	99.9
Charge Category	Drug	4408	13.5
	Theft/fraud	6461	19.7
	Firearm	1067	3.3
	FTA	3728	11.4
	Traffic: non-DUI	1024	3.1
	Non-violent misd.	2093	6.4
	Violent	7598	23.2

Table 2. Release Recommendation Sample Description (N = 32,760), continued

		N	%
Charge Category, continued	Traffic: DUI	2954	9.0
	Other	3427	10.5
	Total	32760	100.1
Officer Recommended	PR or UA bond	9500	29.0
	Secured bond	9465	28.9
	No bond	13795	42.1
	Total	32760	100
Officer Recommended	Release at first appearance	9500	29.0
	Not release at first appearance	23260	71.0
	Total	32760	100
Judicial Decision	Released at first appearance	2984	11.3
	Not released at first appearance	23458	88.7
	Total	26442	100
Consistency Officer Recommendations/ Judges' Decisions About Release	Consistent	20218	76.5
	Judges did not release/ officer rec. release	5529	20.9
	Judges released/ officer rec. no release	695	2.6
	Total	26442	100
Consistency Officer Recommendations/ Judges' Decisions About Release & Supervision	Consistent	15631	59.1
	Not consistent	10811	40.9
	Total	26442	100

Research Objective One

Investigate the underlying assumptions of the Praxis regarding the Virginia Pretrial Risk Assessment Instrument (VPRAI) and charge category.

The Praxis relies on the Virginia Pretrial Risk Assessment Instrument (VPRAI) and charge category to guide pretrial officers in making release recommendations to the court and determining the level of pretrial supervision. The Praxis rests on two underlying assumptions: (1) VPRAI accurately predicts success or failure pending trial and (2) the charge category is related to pretrial outcome (success or failure pending trial). Two research questions investigate these assumptions using the supervision sample of 14,382 cases with data on VPRAI, research factors, and outcome.

Research Question 1

Does the VPRAI predict success or failure pending trial?

The Virginia Pretrial Risk Assessment Instrument performs well and reliably predicts success or failure pending trial.

Yes, the VPRAI reliably predicts success or failure pending trial as demonstrated in the bivariate and multivariate analyses. The majority of pretrial cases are successful. Those that fail do so because of failure to appear (FTA), new arrest (NA), and/or technical violation (TV). Of the 14,382 supervision cases, 15.2% experienced any failure (Table 3).

Table 3. Pretrial Failure Outcome Rates

	N	%
Failure to Appear	579	4.0
New Arrest	790	5.2
Technical Violation	1269	8.8
Any Failure (FTA, NA, and/or TV)[1]	2182	15.2

[1] Defendants may have more than one failure type; as a result, the FTA, NA, and TV rates do not total the Any Failure rate

Bivariate analysis reveals that each of the eight VPRAI risk factors is statistically significant (p<.001) in predicting success or failure pending trial (Table 4). To say that each of the VPRAI risk factors is statistically significant means that the differences observed between success or failure are reliable and not due to chance. This observation comes from the calculation of the "p-value" which refers to the probability of observing a difference if no real difference exists. A p-value of p<.001, which each of the risk factors has, means that fewer than 1 in 1,000 samples would present a meaningless (or random) difference. A p-value of .05 (5 cases in 100) is commonly accepted in social science research to indicate reliable, non-random results.

Table 4. Any Failure Outcome by VPRAI Risk Factors

		Total N	Total %	Any Failure N	Any Failure %
Charge Type*	Felony	8510	59.2	1602	18.8
	Misdemeanor	5872	40.8	580	9.9
Pending Charges*	Yes	3224	22.4	671	20.8
	No	11158	77.6	1511	13.5
Criminal History*	Yes	11060	76.9	1880	17.0
	No	3322	23.1	302	9.1
Two or More Failures to Appear*	Yes	1702	11.8	375	22.0
	No	12680	88.2	1807	14.3
Two or More Violent Convictions*	Yes	1883	13.1	365	19.4
	No	12499	86.9	1817	14.5
Lived at Residence Less Than One Year*	Yes	5302	36.9	878	16.6
	No	9080	63.1	1304	14.4
Not Employed for Two Years Prior to Arrest or Primary Caregiver at Time of Arrest*	Yes	8307	57.8	1371	16.5
	No	6075	42.2	811	13.3
History of Drug Abuse*	Yes	7102	49.4	1425	20.1
	No	7280	50.6	757	10.4

*The presence of the risk factor is related to any failure Outcome. p ≤ .001

Multivariate analysis using logistic regression confirms that the VPRAI as a whole is statistically significant in predicting pretrial outcomes (Table 5, p=.000). In addition, seven of the eight risk factors in the model are statistically significant; only "two or more violent convictions" is not significant at the .05 level. The analytical strategy included the calculation of AUC-ROC, Area under the Curve for the Receiver Operator Characteristic, a common measure of risk assessment performance. The AUC-ROC indicates the performance of the VPRAI in differentiating between defendants who were successful during the pretrial stage from those who experienced any failure pending case disposition. The AUC-ROC value of .666 is interpreted as 66.6% of the time when using the VPRAI, a randomly selected defendant who failed during the pretrial stage will have a higher score than a randomly selected defendant who was successful. The AUC-ROC value of .666 is in the good range; 1 indicates a perfect model while .50 suggests that the tool predicts no better than chance[7]. In sum, the VPRAI performed well and reliably predicts success or failure pending trial.

Table 5. Predicting Any Failure Outcome with VPRAI Risk Factors

	Odds Ratio	Significance
Charge Type	1.986	.000
Pending Charges	1.563	.000
Criminal History	1.585	.000
Two or More FTA	1.159	.000
Two or More Violent Convictions	1.120	.092
Lived at Residence Less Than One Year	1.159	.002
Not Employed for Two Years Prior to Arrest or Primary Caregiver at Time of Arrest*	1.170	.001
History of Drug Abuse	1.763	.000
Constant	.041	.000
Model X^2	633.505	p=.000
Nagelkerke R Square	.075	
AUC-ROC	.666	p=.000
AUC-ROC Confidence Intervals	Lower=.654	Upper=.678

[7] AUC-ROC values of .54 and below are poor, .55 to .63 are fair, .64 to .70 are good, and .71 to 1.00 are excellent. Values of 1.00 are not expected as this would suggest perfect prediction. Desmarais, Sarah L. and Singh, Jay P. (2013). Risk assessment instruments validated and implemented in correctional settings in the United States. Lexington, KY: Council of State Governments.

The eight VPRAI risk factors are weighted and scored and the VPRAI is collapsed into levels as follows: each risk factor is scored at 1 point with the exception of Two or More Failures to Appear which is assigned 2 points. The points are totaled to create a score from 0 to 9 and are used to create five risk levels [8]. The risk levels represent the likelihood of pretrial failure including failing to appear in court and danger to the community pending trial (Appendix A.). Because the Praxis uses risk levels, analyses beginning with research question 3 use VPRAI risk levels rather than individual VPRAI risk factors. Table 6 presents the pretrial failure outcomes by VPRAI risk levels.

Table 6. Failure Outcomes by VPRAI Risk Levels

	Total VPRAI Cases			Any Failure		FTA		New Arrest		Technical Violation	
VPRAI Risk Level	**VPRAI Score**	**N**	**%**	**N**	**Rate**	**N**	**Rate**	**N**	**Rate**	**N**	**Rate**
Low	0–1	1661	11.5	77	4.6	26	1.6	34	2.0	30	1.8
Below Average	2	2691	18.7	229	8.5	62	2.3	81	3.0	130	4.8
Average	3	3524	24.5	479	13.6	128	3.6	183	5.2	257	7.3
Above Average	4	3168	22.0	578	18.2	143	4.5	204	6.4	344	10.9
High	5–9	3338	23.2	819	24.5	220	6.6	288	8.6	508	15.2
Base Rate				15.20		4.00		5.50		8.80	
Agg R				1.00		0.98		0.99		0.99	
AUC-ROC				0.645		0.622		0.621		0.655	
Pearson's *r*				0.185		0.085		0.098		0.155	

[8] VanNostrand, Marie and Rose, Kenneth J. (2009). Pretrial Risk Assessment in Virginia. Virginia Department of Criminal Justice Services.

Research Question 2

Is the charge category statistically significantly related to pretrial outcome (success or failure pending trial)?

The charge category is statistically significantly related to pretrial outcome.

Yes, the charge category is statistically significantly related to pretrial outcome. As shown in Table 7, three of the nine charge categories have failure rates above the average failure rate of 15.2 (noted in Table 3 above): Drug, Theft/fraud, Firearm. Failure rates for Violent crimes and Traffic: DUIs are below the average failure rate. These results mirror more than 15 years of research in Virginia and are consistent with research in the federal court: "Specifically, defendants charged with Traffic – DUI and Violent offenses are the most likely to be successful, defendants charged with Drug and Theft/fraud offenses are the least likely to be successful, and defendants charged with Failure to Appear are no more likely and no less likely to fail than other defendants."

Table 7. Any Failure Outcome by Charge Category

Charge Category	Total N	Total %	Any Failure N	Any Failure %
Drug	3117	21.7	717	23.0
Theft/fraud	2382	16.6	509	21.4
Firearm	428	3.0	72	16.8
FTA	774	5.4	121	15.6
Traffic: non-DUI	333	2.3	50	15.0
Non-violent misd.	801	5.6	106	13.2
Violent	3478	24.2	315	9.1
Traffic: DUI	2208	15.4	177	8.0
Other	861	6.0	115	13.4

Multivariate analysis reveals that the charge category is statistically significantly related to pretrial outcome (Table 8, p=000). Table 8 presents the results of logistic regression containing the eight VPRAI risk factors and the charge category. The full model and all of the VPRAI risk factors are statistically significant, as are all of the charge categories with the exception of Other. All odds ratios of the eight VPRAI risk factors are above 1 indicating that their presence increases the likelihood of pretrial failure. With respect to charge category, as compared to defendants charged with the reference category of Traffic: DUI, those charged with all offenses except Violent offenses are more likely to fail. For example, defendants charged with Drug offenses or Theft/fraud are 1.8 times more likely to fail than are those charged with Traffic: DUI, when controlling for all VPRAI risk factors. The charge category is statistically significantly related to pretrial outcome.

[9] VanNostrand, M., Rose, K., and Weibrecht, K. (2011). In Pursuit of Legal and Evidence-Based Pretrial Release Recommendations and Supervision, Richmond, VA: Luminosity, Inc. for the Virginia Department of Criminal Justice Services. (quotation found on page 51)

Table 8. Predicting Any Failure Outcome by Charge Category

		Odds Ratio	Significance
Charge Category (Traffic: DUI is Reference Category)	Drug	1.828	.000
	Theft/fraud	1.768	.000
	Firearm	1.443	.020
	FTA	1.631	.000
	Traffic: non-DUI	1.414	.050
	Non-violent misd.	1.520	.002
	Violent	.816	.051
	Other	1.183	.202
Charge Type		1.717	.000
Pending Charges		1.481	.000
Criminal History		1.548	.000
Two or More Failures to Appear		1.133	.000
Two or More Violent Convictions		1.249	.001
Lived at Residence Less Than One Year		1.165	.002
Not Employed for Two Years Prior to Arrest or Primary Caregiver at Time of Arrest		1.134	.012
History of Drug Abuse		1.557	.000
Constant		.044	.004
Model X^2		788.941	p=.000
Nagelkerke R Square		.093	
AUC-ROC		.684	p=.000
AUC-ROC Confidence Intervals		Lower=.672	Upper=.696

Research Objective Two

Investigate the effect of the Praxis on pretrial officer release recommendations, judicial release decisions, and differential pretrial supervision practices.

While Virginia Pretrial Services agencies have long used the VPRAI to assess risk of flight and danger to the community posed by pretrial defendants, the lack of official guidelines – a Praxis – meant that pretrial release recommendations were subjective and the VPRAI considered to varying degrees. Further, supervision practices varied among Virginia's Pretrial Services agencies; many agencies required the same frequency and types of contacts for all defendants during pretrial supervision while other agencies identified their own levels of supervision with varying frequencies and types of contacts. The Praxis was developed to address the limited use of the VPRAI in release recommendations as well as to provide an objective and consistent policy for providing differential pretrial supervision based on the risk of pretrial failure.

The Praxis uses the VPRAI and charge category to guide pretrial release recommendations made by pretrial officers based on the risk principle and the seriousness of the offense charged. Pretrial officers report to jails across the state to identify defendants who are in custody pending a first court appearance. Pretrial officers identify new jail bookings and screen the cases to determine if they are pretrial defendants who will have a first appearance for charges in their jurisdiction. They then determine if they will attempt investigate the case, which involves a pretrial interview, information verification, and a criminal history check. If they decide to investigate the case, pretrial officers then complete the investigation followed by a risk assessment and a recommendation to the court at first appearance. Some defendants secure their release during this process and so not all defendants investigated have a risk assessment and recommendation completed. When the process is completed, a pretrial officer submits a recommendation to the Court and the judge makes a decision regarding release. The use of a Praxis as a structured decision-making framework has the potential to effect pretrial officers' release recommendations, judges' decisions, and ultimately whether defendants are released at first appearance (via personal recognizance or unsecured appearance bond) or not (secured bond or no bond set), as well as the supervision levels. The Praxis decision grid uses the risk level dictated by the VPRAI and the charge category to determine the appropriate release type and level of supervision (Appendix B.).

Three research questions investigate the effect of the Praxis on the release recommendations of pretrial officers, the decisions of judges, and the supervision practices.

Research Question 3

Does Praxis training and use effect release recommendations of officers?

Pretrial officers in the Praxis groups follow the Praxis recommendation 80% of the time, and are 2.3 times more likely to recommend release at first appearance.

Yes, Praxis training and use results in an increase in recommendations for release of defendants at first appearance on personal recognizance (PR) or unsecured appearance (UA) bonds in accordance with Praxis recommendations. Pretrial officers in the Praxis groups follow the Praxis recommendation 80% of the time, and are 2.3 times more likely to recommend release at first appearance on PR or UA bonds when compared to the non-Praxis groups.

Research question 3 was explored using the investigation sample that contains cases of defendants who were screened in, investigated, had a risk assessment completed, and a recommendation regarding release made by a pretrial officer. Thus, these cases contain VPRAI risk level, charge category, demographic, officer release recommendations, and judicial decision data (N=32,760).

For the purposes of investigating this research question, the Praxis group includes those officers trained in the use of the Praxis only as well as those officers trained in the use of the Praxis and STEPS. The non-Praxis group includes the control group and those officers trained only in STEPS.

Most of the time (79.9%, Table 9) officers trained in the Praxis followed its recommendations. The deviations that occurred were nearly always when pretrial officers rejected the Praxis recommendation for release.

Table 9. Consistency between Pretrial Officer Recommendations and Praxis Recommendations for Release at First Appearance

	Praxis		Praxis & STEPS		Total	
	N	%	N	%	N	%
Consistent	3788	85.1	4490	76.0	8278	79.9
Officers Recommended Secured / No Bond When Praxis Recommended PR or UA Bond Release	649	14.6	1344	22.7	1993	19.2
Officers Recommended PR or UA Bond Release When Praxis Did Not Recommend PR or UA Bond Release	13	0.3	74	1.3	87	0.8
Total	4450	100.0	5908	100.0	10358	100.0

Praxis training and use made a statistically significant difference in release recommendations between pretrial officers who were trained in its use and those who were not (Table 23, $p \leq .001$). While a minority (29%) of officer recommendations were to release on PR or UA bond, Praxis trained officers were statistically significantly more likely to make this recommendation (Table 10, $p \leq .001$). In fact, they were 57% more likely to recommend release at first appearance than were non-Praxis officers.

Table 10. Officer Recommendations by Praxis and Non-Praxis Groups*

	Non-Praxis Groups		Praxis Groups		Total	
	N	%	N	%	N	%
Release on PR or UA Bond	4940	23.9	4560	37.6	9500	29.0
Not Release on PR or UA Bond (Secured/No Bond)	15700	76.1	7560	62.4	23260	71.0
Total	20640	100.0	12120	100.0	32760	100.0

* Differences in pretrial officer recommendations between Praxis Groups and Non-Praxis Groups are significant. $p \leq .001$

Multivariate analysis confirmed that Praxis trained officers were 2.3 times more likely to recommend release on PR or UA bond than were officers who were not trained in the use of the Praxis when controlling for risk level, charge category, and demographic characteristics (Table 11, p=.000). The AUC-ROC of .722 indicates that the model is excellent and accurately predicts release recommendations 72.2% of the time. In sum, training and use of the Praxis results in increases in the release of defendants on PR or UA bond at first appearance in accordance with Praxis recommendations.

Table 11. Predicting Officer Recommendations for Release at First Appearance by Praxis and Non-Praxis Groups

		Odds Ratio	Significance
Praxis Groups (Praxis Only or Praxis & STEPS)		2.282	.000
Risk Level (Low Risk is Reference Category)	Below average	1.144	.005
	Average	.604	.000
	Above average	.404	.000
	High	.177	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.001	.988
	Theft/fraud	1.276	.000
	Firearm	.512	.000
	FTA	.558	.000
	Traffic: non-DUI	1.162	.059
	Non-violent misd.	1.084	.201
	Violent	.589	.000
	Other	.428	.000
Nonwhite		.981	.471
Female		1.148	.000
Age		.998	.144
Constant		.338	.000
Model X^2		4232.458	p=.000
Nagelkerke R Square		.175	
AUC-ROC		.722	p=.000
AUC-ROC Confidence Intervals		Lower=.716	Upper=.728

Research Question 4

Does Praxis training and use effect release decisions of judges?

Judges release defendants at first appearance assigned to Praxis groups 1.9 times more often.

Judges are 8.8 times more likely to release a defendant at first appearance when release is recommended by the pretrial officer.

Yes, Praxis training and use does effect the release decisions of judges. Bivariate and multivariate analyses indicate that pretrial officer recommendations do influence judicial decisions; when controlling for other relevant factors in multivariate analysis judges are more likely to release defendants at first appearance on PR or UA bonds with a Praxis recommendation. Judges release defendants at first appearance 1.9 times more often in Praxis groups than those in non-Praxis groups, controlling for other relevant factors. Overall, judges are 8.8 times more likely to release defendants at first appearance on PR or UA bonds when release is recommended by the pretrial officer.

The effect of the Praxis on judicial decision-making and release rates was explored using the investigation sample which contains cases of defendants who were screened in, investigated, had a risk assessment completed, a recommendation regarding release made by the pretrial officer, and a judicial decision (N=32,760).

Although judges released only 11.3% of defendants on PR or UA bonds at first appearance, they were 63% more likely to release defendants who were in Praxis groups than in non-Praxis groups (Table 12, $p \leq .001$).

Table 12. Judicial Decisions at First Appearance by Praxis and Non-Praxis Groups *

	Non-Praxis Groups		Praxis Groups		Total	
	N	%	N	%	N	%
Release on PR or UA Bond	1374	8.9	1610	14.5	2984	11.3
Not Release on PR or UA Bond (Secured/No Bond)	14001	91.1	9457	85.5	23458	88.7
Total	15375	100.0	11067	100.0	26442	100.0

*Differences in judges' decisions between Praxis Groups and Non-Praxis Groups are significant. $p \leq .001$

Multivariate analysis indicates that judges are 1.9 times more likely to release defendants on PR or UA bonds at first appearance when controlling for risk level, charge category, and demographic characteristics (Table 13, p=.000). The AUC-ROC of .706 indicates that this model is excellent and accurately predicts judicial release decisions 70.6% of the time.

Table 13. Predicting Judges' Decision to Release at First Appearance by Praxis and Non-Praxis Groups

		Odds Ratio	Significance
Praxis Groups (Praxis Only or Praxis & STEPS)		1.891	.000
Risk Level (Low Risk is Reference Category)	Below average	.702	.000
	Average	.447	.000
	Above average	.303	.000
	High	.160	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	.827	.021
	Theft/fraud	.774	.001
	Firearm	.362	.000
	FTA	.799	.007
	Traffic: non-DUI	1.006	.583
	Non-violent misd.	1.142	.132
	Violent	.575	.000
	Other	.591	.000
Nonwhite		.924	.056
Female		1.515	.000
Age		1.001	.413
Constant		.292	.000
Model X^2		1473.231	p=.000
Nagelkerke R Square		.108	
AUC-ROC		.706	p=.000
AUC-ROC Confidence Intervals		Lower=.697	Upper=.716

Table 14 (next page) reports the results of the previous model with the addition of officer recommendations. Judges' decisions to release defendants on PR or UA bonds increase 8.8 times when officers recommend release, controlling for other relevant factors (p=.000). This is a very high odds ratio and provides evidence that pretrial officer recommendations influence judicial decisions. The AUC-ROC of .813 is the highest yet seen in this research. In sum, Praxis training and use does effect the release decisions of judges. The analysis demonstrates that pretrial officer recommendations influence judges' decisions to release. When controlling for other relevant factors in multivariate analysis, judges are more likely to release defendants at first appearance on PR or UA bonds with a Praxis recommendation.

Table 14. Predicting Judges' Decision to Release at First Appearance by Officer Recommendation

		Odds Ratio	Significance
Officer Recommended Release at First Appearance		8.773	.000
Praxis Groups (Praxis Only or Praxis & STEPS)		1.362	.000
Risk Level (Low Risk is Reference Category)	Below average	.646	.000
	Average	.565	.000
	Above average	.462	.000
	High	.352	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	.808	.015
	Theft/fraud	.667	.000
	Firearm	.504	.000
	FTA	1.116	.223
	Traffic: non-DUI	.988	.922
	Non-violent misd.	1.183	.075
	Violent	.767	.001
	Other	.989	.910
Nonwhite		.919	.052
Female		1.503	.000
Age		1.002	.410
Constant		.073	.000
Model X^2		3706.564	p=.000
Nagelkerke R Square		.261	
AUC-ROC		.813	p=.000
AUC-ROC Confidence Intervals		Lower=.805	Upper=.821

Research Question 5

Does Praxis training and use effect the differential use of supervision?

Praxis trained Pretrial Services staff follow Praxis supervision level recommendations 84% of the time.

Yes, Praxis trained Pretrial Services staff overwhelmingly followed Praxis recommendations in assigning supervision levels. The Praxis groups followed Praxis supervision recommendations 84% of the time whereas the non-Praxis groups assigned the same supervision levels as the Praxis would have only 36% of the time.

The Praxis uses the VPRAI and charge category to guide supervision levels (frequency and types of contacts) provided by Pretrial Services staff based on the risk principle and the seriousness of the offense. While the use of differential supervision has the potential to effect pretrial outcomes, it is first necessary to discover the extent to which Pretrial Services staff actually adopted the Praxis recommendation for supervision level. To answer this question we examined the defendants placed on pretrial supervision who had both a VPRAI and an assigned supervision level (N=6,954). Table 15 demonstrates that Pretrial Services staff trained in the Praxis assigned supervision at the Praxis recommended levels 84% of the time.

Table 15. Praxis Supervision Level Assignment by Pretrial Officer Supervision Level Assignment for Praxis Groups Only

Assigned Level	Praxis Level I		Praxix Level II		Praxis Level III		Total	
	N	%	N	%	N	%	N	%
Monitoring	14	0.8	8	0.5	15	0.4	37	0.5
Level I	1335	78.6	74	4.2	84	2.4	1493	21.5
Level II	207	12.2	1498	84.4	381	10.9	2086	30.0
Level III	142	8.4	195	11.0	3001	86.2	3338	48.0
Total	1698	100.0	1775	100.1	3481	99.9	6954	100.0
% in Praxis Level		24.4		25.5		50.1		

The influence of Praxis training and use becomes even more dramatic when compared to the supervision levels assigned by non-Praxis trained Pretrial Services staff (Table 16). Only those defendants scored by Praxis for level II supervision were most likely to be assigned that level by staff, while those who scored lower were most likely to receive higher levels of supervision. Specifically, although 24.2% of defendants were scored by the Praxis at supervision level I, only 6.5% of them received that level of supervision by non-Praxis officers. Overall, non-Praxis staff assigned the same supervision levels as the Praxis would have only 36% of the time. In sum, Praxis trained staff overwhelmingly followed Praxis recommendations in assigning supervision levels; in contrast, non-Praxis trained staff were most likely to make supervision assignments that did not mirror those that were responsive to risk and charge.

Table 16. Praxis Supervision Level Assignment by Pretrial Officer Supervision Level Assignment for Non-Praxis Groups Only

Assigned Level	Praxis Level I		Praxix Level II		Praxis Level III		Total	
	N	%	N	%	N	%	N	%
Monitoring	3	0.2	2	0.2	8	0.3	13	0.3
Level I	80	6.5	35	2.9	60	2.3	175	3.5
Level II	918	74.8	891	73.2	1706	65.1	3515	69.4
Level III	227	18.5	290	23.8	845	32.3	1362	26.9
Total	1228	100.0	1218	100.1	2619	100.0	5065	100.1
% in Praxis Level		24.2		24.1		51.7		

Research Objective Three

Investigate the effect of the Praxis and evidence-based supervision techniques on pretrial outcomes (court appearance, community safety, and release conditions compliance).

The current research project tests both the Praxis – which contains release recommendation and supervision guidelines – and evidence-based supervision techniques to explore the effect of these on pretrial outcomes (court appearance, community safety, and release conditions compliance).

The Praxis decision grid uses the risk level dictated by the VPRAI and the charge category to determine the appropriate release type and level of supervision. Research indicates that the administration of evidence-based supervision techniques to pretrial defendants is associated with reductions in failure to appear and re-arrest[10]. These supervision techniques involve a shift in the focus of typical staff/defendant interaction from conditions compliance (office reporting, maintaining employment, submitting to urinalysis) to criminogenic needs and eliciting prosocial behavior.

Two research questions explore the effect of the Praxis and of evidence-based supervision techniques on pretrial outcomes. To answer these questions we examined the defendants placed on pretrial supervision who had a risk assessment completed, a supervision level was assigned, and for whom the risk factors and pretrial outcomes were known. The supervision sample comprises cases with VPRAI risk level, charge category, demographic, supervision, and outcome data (N=14,382).

Research Question 6

Does Praxis training and use effect the outcomes of defendants on supervision?

Defendants in the Praxis groups are 1.2 times less likely to experience any failure and 1.3 times less likely to fail to appear or to experience a new arrest pending trial.

Yes, Praxis training and use effects the outcomes of defendants on supervision. Defendants in the Praxis groups are 1.2 times less likely to fail for any reason than are those in the non-Praxis groups. They are 1.3 times less likely to fail to appear or to experience a new arrest pending trial; no statistically significant differences are observed for failure due to technical violation.

[10] Lowenkamp, C.T., Robinson, C. R., Vanbenschoten, S. W. (2011). Initial STARR results: A positive step forward. News & Views: A Biweekly Newsletter of the United States Probation and Pretrial Services System, p. 3-4.

Multivariate analysis reveals that defendants in the Praxis groups are statistically significantly less likely to experience any failure than are those in the non-Praxis groups, when controlling for VPRAI risk level, charge category, days on supervision[11], and demographic characteristics (Table 17, p=.000). Specifically, Praxis group defendants are 1.2 times less likely to experience any failure than non-Praxis group defendants. The AUC-ROC of .682 is in the good range. Further exploration of the data revealed that, as compared to the non-Praxis groups, defendants in the Praxis groups are 1.3 times less likely to fail to appear (Appendix Table C.1, p=.000, odds ratio=.793) or to fail due to a new arrest (Appendix Table C.2, p=.000, odds ratio=.801); no statistically significant difference between the two groups was found in failure due to technical violation (Appendix Table C.3).

[11] We calculated and controlled for the number of days on supervision since it is reasonable to expect that failure rates might increase as the time on supervision increased.

Table 17. Predicting Any Failure Outcome by Praxis and Non-Praxis Groups

		Odds Ratio	Significance
Praxis Groups (Praxis Only or Praxis & STEPS)		.845	.001
Risk Level (Low Risk is Reference Category)	Below average	1.704	.000
	Average	2.597	.000
	Above average	3.476	.000
	High	5.072	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.993	.000
	Theft/fraud	1.856	.000
	Firearm	1.500	.010
	FTA	1.425	.007
	Traffic: non-DUI	1.382	.068
	Non-violent misd.	1.313	.043
	Violent	.815	.046
	Other	1.149	.293
Nonwhite		.927	.068
Female		.902	.068
Age		.991	.000
Days on Supervision		1.000	.203
Constant		.066	.000
Model X^2		760.476	p=.000
Nagelkerke R Square		.091	
AUC-ROC		.682	p=.000
AUC-ROC Confidence Intervals		Lower=.670	Upper=.693

Research Question 7

Does STEPS training and use effect the outcomes of defendants on supervision?

Those defendants supervised by Pretrial Services staff who were trained and reported using STEPS skills at least five times are 2.2 times less likely to fail to appear.

Yes, STEPS training and use effects failure to appear for defendants on supervision. When controlling for use of STEPS skills, STEPS training and use is statistically significantly related to failure to appear but not any failure, new arrest, or technical violation. As compared to defendants supervised by Pretrial Services staff who received no training or who did not report skill usage, those defendants supervised by Pretrial Services staff who were trained and reported using STEPS skills at least five times are 2.2 times less likely to fail to appear.

STEPS training (without consideration of use) does not effect the outcomes of defendants on supervision. When controlling for other relevant factors, STEPS training is not statistically significant in predicting any failure, failure to appear, new arrest, or technical violation.

Certain Pretrial Services staff received training and coaching using Strategies for Effective Pretrial Supervision (STEPS) supervision techniques. The STEPS training is based on existing supervision models in use in post-conviction supervision and pretrial supervision. STEPS was developed for this project by adapting the existing models (e.g., EPICS-II, STARR) to be sensitive to the purpose of pretrial supervision (i.e., to assure court appearance and public safety) and the legal and constitutional rights of defendants. STEPS training had four components: court appearance plan, risk mitigation plan, thinking-action model, and event worksheet. In addition, pretrial officers were trained and coached, individually in-person and at a distance, in eight skills they could use with defendants to influence pretrial outcomes: reinforcement, disapproval, problem solving, effective use of authority, time out, motivation, role clarification, and supervision alliance.

Table 18 presents the failure rates by STEPS training and staff reports of skills usage.

Table 18. Staff Training and Report of STEPS Skills Usage by Pretrial Outcomes

	All Pretrial Officers		Any Failure		FTA		New Arrest		Technical Violation	
	N	%	N	%	N	%	N	%	N	%
Staff were not trained or staff were trained but do not report using STEPS skills	9912	68.9	1498	15.1	409	4.1	552	5.6	872	8.8
Staff were trained and report *one* use of STEPS skills	2371	16.5	369	15.6	102	4.3	129	5.4	206	8.7
Staff were trained and report *two* uses of STEPS skills	1038	7.2	152	14.6	38	3.7	60	5.8	83	8.0
Staff were trained and report *three* or *four* uses of STEPS skills	613	4.3	94	15.3	22	3.6	30	4.9	58	9.5
Staff were trained and report *at least five* uses of STEPS skills	448	3.1	69	15.4	8	1.8	19	4.2	50	11.2
Total	14382	100	2182	15.2	579	4	790	5.5	1269	8.8

Multivariate analysis revealed that STEPS training alone was not statistically significant in predicting any failure, when controlling for other relevant factors (Table 19). Additional exploration indicated that STEPS training had no statistically significant effect on failures due to failure to appear (Appendix Table C.4), new arrest (Appendix Table C.5), or technical violation (Appendix Table C.6).

Table 19. Predicting Any Failure by STEPS Training (includes all four groups)

		Odds Ratio	Significance
Staff received STEPS Training		1.061	.223
Risk Level (Low Risk is Reference Category)	Below average	1.710	.000
	Average	2.595	.000
	Above average	3.498	.000
	High	5.102	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.970	.000
	Theft/fraud	1.849	.000
	Firearm	1.476	.014
	FTA	1.446	.005
	Traffic: non-DUI	1.386	.066
	Non-violent misd.	1.305	.050
	Violent	.813	.043
	Other	1.181	.205
Nonwhite		.928	.130
Female		.904	.075
Age		.991	.000
Days on Supervision		1.000	.185
Constant		.058	.000
Model X^2		749.780	p=.000
Nagelkerke R Square		.090	
AUC-ROC		.681	p=.000
AUC-ROC Confidence Intervals		Lower=.669	Upper=.692

Further analysis was completed to include Pretrial Services staff reporting of how many times they used STEPS skills. In one instance STEPS training and use was statistically significant and that was in predicting FTA. As compared to defendants supervised by Pretrial Services staff who received no training or who did not report skill usage, those defendants supervised by Pretrial Services staff who were trained and reported using STEPS skills at least five times are 2.2 times less likely to fail to appear (Table 20, p=.000). STEPS training and use had no statistically significant effect on failures due to any failure (Appendix Table C.7), new arrest (Appendix Table C.8), or technical violation (Appendix Table C.9).

The original scope of work included a final research question: "Is there a synergistic effect of Praxis and STEPS training and use on the outcomes of defendants on supervision?" Because STEPS training and use did not effect the outcomes of defendants on supervision with one exception, there was no reason to investigate a potential synergistic effect of Praxis and STEPS training and use.

Table 20. Predicting FTA by STEPS Staff Training and Report of Skills Usage (includes all four groups)

		Odds Ratio	Significance
STEPS Staff Training and Report of Skills Usage (No Training or Trained but do not Report Skill Usage is Reference Category)	Trained and used skills *once*	1.010	.933
	Trained and used skills *twice*	.916	.617
	Trained and used skills *three or four times*	.824	.401
	Trained and used skills *at least five times*	.445	.026
Risk Level (Low Risk is Reference Category)	Below average	1.456	.114
	Average	2.093	.001
	Above average	2.632	.000
	High	3.809	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.135	.456
	Theft/fraud	1.557	.009
	Firearm	.630	.190
	FTA	1.900	.001
	Traffic: non-DUI	.977	.944
	Non-violent misd.	1.112	.640
	Violent	.505	.000
	Other	1.128	.582
Nonwhite		1.254	.011
Female		1.102	.319
Age		.997	.434
Days on Supervision		.999	.015
Constant		.019	.000
Model X^2		215.516	p=.000
Nagelkerke R Square		.053	
AUC-ROC		.676	p=.000
AUC-ROC Confidence Intervals		Lower=.655	Upper=.698

Appendix A.

Virginia Pretrial Risk Assessment Instrument (VPRAI)[12]

The VPRAI consists of eight risk factors.

1. **Primary Charge Type** – Defendants charged with a felony are more likely to fail pending trial than defendants charged with a misdemeanor.
2. **Pending Charge(s)** – Defendants who have pending charge(s) at the time of their arrest are more likely to fail pending trial.
3. **Criminal History** – Defendants with at least one prior misdemeanor or felony conviction are more likely to fail pending trial.
4. **Two or More Failures to Appear** – Defendants with two or more failures to appear are more likely to fail pending trial.
5. **Two or More Violent Convictions** – Defendants with two or more violent convictions are more likely to fail pending trial.
6. **Length at Current Residence** – Defendants who live at their current residence for less than one year are more likely to fail pending trial.
7. **Employed/Primary Caregiver** – Defendants who have not been employed continuously at one or more jobs during the two years prior to their arrest or who are not a primary caregiver are more likely to fail pending trial.
8. **History of Drug Abuse** – Defendants with a history of drug abuse are more likely to fail pending trial.

[12] VanNostrand, Marie and Rose, Kenneth J. (2009). Pretrial Risk Assessment in Virginia. Virginia Department of Criminal Justice Services.

The eight VPRAI risk factors are weighted as follows: each risk factor is scored at 1 point with the exception of Two or More Failures to Appear which is assigned 2 points. The points are totaled to create a score from 0 to 9 and are used to create five risk levels: low, below average, average, above average, and high (Appendix Table A.1.) The risk levels represent the likelihood of pretrial failure including failing to appear in court and danger to the community pending trial.

Appendix Table A.1. VPRAI Risk Levels

VPRAI Risk Level	VPRAI Score
Low	0 – 1
Below Average	2
Average	3
Above Average	4
High	5 – 9

Appendix B.

Pretrial Praxis *(revised 2-11-2013)*

Risk Level / Charge Cateogry	Traffic: Non-DUI	Non-violent Misd.	Theft/Fraud	Traffic: DUI	Drug	Failure to Appear	Firearm	Violent
Low Risk								
PR or UA Bond	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pretrial	No	No	No	No	No	Yes	Yes	Yes
Supervision Level	N/A	N/A	N/A	N/A	N/A	I	II	II
Below Average Risk								
PR or UA Bond	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pretrial	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Supervision Level	N/A	N/A	I	I	I	II	III	III
Average Risk								
PR or UA Bond	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Pretrial	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Supervision Level	I	I	II	II	II	III	N/A	N/A
Above Average Risk								
PR or UA Bond	Yes	Yes	Yes	Yes	Yes	No	No	No
Pretrial	Yes	Yes	Yes	Yes	Yes	No	No	No
Supervision Level	I	I	II	III	III	N/A	N/A	N/A
High Risk								
PR or UA Bond	Yes	Yes	Yes	No	No	No	No	No
Pretrial	Yes	Yes	Yes	No	No	No	No	No
Supervision Level	II	II	III	N/A	N/A	N/A	N/A	N/A

Charge Category Priority Order – Violent, Firearm, Failure to Appear, Drug, Traffic: DUI, Theft/Fraud, Non-violent Misdemeanor, Traffic: Non-DUI

Pretrial Praxis Does Not Apply To – murder, homicide, manslaughter, or similar or an attempt to commit any of these crimes

Charges That Are Not Praxis Eligible Include – probation violation, contempt of court, fugitive from justice, escape, immigration violation/detainer, drunk in public, non-support, sex offender failure to register

FTA Recommendation – applies when the underlying charge is NOT violent or firearm, otherwise the violent or firearm category takes precedence

PR or UA Bond – [Yes] = Recommended for Personal Recognizance or Unsecured Appearance Bond; [No] = Not Recommended

Pretrial Supervision – [Yes] = Recommended for Pretrial Supervision; [No] = Not Recommended

Supervision Level – [I, II, III] = Recommended Level of Supervision; [N/A] = Supervision not recommended (level not applicable)

Structure for Differential Pretrial Supervision

Level I	*Level II*	*Level III*
Court date reminder for every court date	Court date reminder for every court date	Court date reminder for every court date
Criminal history check before court date	Criminal history check before court date	Criminal history check before court date
Face-to-face contact once a month	Face-to-face contact every other week	Face-to-face contact weekly
Alternative contact once a month (telephone, e-mail, text, or others as approved locally)	Alternative contact every other week (telephone, e-mail, text, or others as approved locally)	Special condition compliance verification
Special conditions compliance verification	Special conditions compliance verification	

In developing the three levels of supervision it was acknowledged that there may be times when active supervision is not feasible for a particular defendant. In these cases, defendants may be placed in monitoring status. Monitoring varies from all levels of supervision as there is no face-to-face contact requirement. Monitoring may be used to address extenuating circumstances and is not formally part of the differential supervision structure.

Appendix C.

Supplementary Tables

Appendix Table C.1. Predicting FTA by Praxis and Non-Praxis Groups

		Odds Ratio	Significance
Praxis Groups (Praxis Only or Praxis & STEPS)		.793	.008
Risk Level (Low Risk is Reference Category)	Below average	1.449	.118
	Average	2.103	.001
	Above average	2.609	.000
	High	3.745	.000
Charge Category (Traffic: DUI is Reference Category)	Drug		.472
	Theft/fraud	1.545	.010
	Firearm	.613	.164
	FTA	1.844	.002
	Traffic: non-DUI	.954	.885
	Non-violent misd.	1.130	.587
	Violent	.493	.000
	Other	1.064	.777
Nonwhite		1.224	.022
Female		1.099	.334
Age		.997	.387
Days on Supervision		.998	.007
Constant		.022	.000
Model X^2		215.405	p=.000
Nagelkerke R Square		.053	
AUC-ROC		.675	p=.000
AUC-ROC Confidence Intervals		Lower=.653	Upper=.697

Appendix Table C.2. Predicting New Arrest by Praxis and Non-Praxis Groups

		Odds Ratio	Significance
Praxis Groups (Praxis Only or Praxis & STEPS)		.801	.003
Risk Level (Low Risk is Reference Category)	Below average	1.295	.217
	Average	2.131	.000
	Above average	2.556	.000
	High	3.633	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.621	.002
	Theft/fraud	2.023	.000
	Firearm	1.430	.149
	FTA	1.115	.631
	Traffic: non-DUI	1.678	.049
	Non-violent misd.	1.530	.040
	Violent	1.004	.982
	Other	1.086	.699
Nonwhite		.734	.000
Female		.711	.000
Age		.983	.000
Days on Supervision		.983	.000
Constant		.036	.000
Model X^2		285.788	p=.000
Nagelkerke R Square		.057	
AUC-ROC		.674	p=.000
AUC-ROC Confidence Intervals		Lower=.656	Upper=.692

Appendix Table C.3 Predicting Technical Violation by Praxis and Non-Praxis Groups

		Odds Ratio	Significance
Praxis Groups (Praxis Only or Praxis & STEPS)		1.058	.363
Risk Level (Low Risk is Reference Category)	Below average	2.442	.000
	Average	3.344	.000
	Above average	4.816	.000
	High	7.096	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	2.508	.000
	Theft/fraud	1.711	.000
	Firearm	1.852	.002
	FTA	1.463	.028
	Traffic: non-DUI	1.254	.350
	Non-violent misd.	1.223	.282
	Violent	.868	.307
	Other	1.077	.683
Nonwhite		.945	.358
Female		.941	.387
Age		.992	.007
Days on Supervision		1.000	.889
Constant		.020	.000
Model X^2		565.871	p=.000
Nagelkerke R Square		.087	
AUC-ROC		.697	p=.000
AUC-ROC Confidence Intervals		Lower=.683	Upper=.712

Appendix Table C.4. Predicting FTA by STEPS Training (using all four groups)

		Odds Ratio	Significance
Staff Received STEPS Training		1.136	.143
Risk Level (Low Risk is Reference Category)	Below average	1.461	.110
	Average	2.094	.001
	Above average	2.641	.000
	High	3.795	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.108	.547
	Theft/fraud	1.533	.011
	Firearm	.593	.139
	FTA	1.882	.001
	Traffic: non-DUI	.958	.896
	Non-violent misd.	1.098	.682
	Violent	.488	.000
	Other	1.102	.656
Nonwhite		1.225	.022
Female		1.107	.295
Age		.997	.404
Days on Supervision		.998	.008
Constant		.018	.000
Model X^2		210.487	p=.000
Nagelkerke R Square		.051	
AUC-ROC		.674	p=.000
AUC-ROC Confidence Intervals		Lower=.653	Upper=.696

Appendix Table C.5. Predicting New Arrest by STEPS Training (using all four groups)

		Odds Ratio	Significance
Staff Received STEPS Training		.958	.574
Risk Level (Low Risk is Reference Category)	Below average	1.302	.207
	Average	2.126	.000
	Above average	2.582	.000
	High	3.653	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.612	.002
	Theft/fraud	2.028	.000
	Firearm	1.424	.155
	FTA	1.137	.570
	Traffic: non-DUI	1.689	.046
	Non-violent misd.	1.503	.051
	Violent	1.011	.946
	Other	1.137	.549
Nonwhite		.746	.000
Female		.712	.000
Age		.984	.000
Days on Supervision		1.002	.000
Constant		.032	.000
Model X^2		276.654	p=.000
Nagelkerke R Square		.055	
AUC-ROC		.673	p=.000
AUC-ROC Confidence Intervals		Lower=.655	Upper=.691

Appendix Table C.6. Predicting Technical Violation by STEPS Training (using all four groups)

		Odds Ratio	Significance
Staff Received STEPS Training		1.001	.993
Risk Level (Low Risk is Reference Category)	Below average	2.436	.000
	Average	3.322	.000
	Above average	4.794	.000
	High	7.062	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	2.515	.000
	Theft/fraud	1.711	.000
	Firearm	1.858	.002
	FTA	1.456	.031
	Traffic: non-DUI	1.251	.355
	Non-violent misd.	1.199	.325
	Violent	.868	.306
	Other	1.065	.727
Nonwhite		.945	.358
Female		.942	.395
Age		.992	.008
Days on Supervision		1.000	.878
Constant		.021	.000
Model X^2		565.327	p=.000
Nagelkerke R Square		.087	
AUC-ROC		.697	p=.000
AUC-ROC Confidence Intervals		Lower=.683	Upper=.712

Appendix Table C.7. Predicting Any Failure by STEPS Staff Training and Report of Skills Usage (includes all four groups)

		Odds Ratio	Significance
STEPS Staff Training and Report of Skills Usage (No Training or Trained but do not Report Skill Usage is Reference Category)	Trained and used skills *once*	1.064	.345
	Trained and used skills *twice*	.977	.809
	Trained and used skills *three or four times*	.973	.818
	Trained and used skills *at least five times*	.905	.473
Risk Level (Low Risk is Reference Category)	Below average	1.709	.000
	Average	2.594	.000
	Above average	3.498	.000
	High	5.108	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.981	.000
	Theft/fraud	1.858	.000
	Firearm	1.494	.011
	FTA	1.450	.005
	Traffic: non-DUI	1.391	.063
	Non-violent misd.	1.306	.047
	Violent	.820	.053
	Other	1.187	.192
Nonwhite		.933	.157
Female		.903	.071
Age		.991	.000
Days on Supervision		1.000	.155
Constant		.059	.000
Model X^2		750.040	p=.000
Nagelkerke R Square		.090	
AUC-ROC		.681	p=.000
AUC-ROC Confidence Intervals		Lower=.669	Upper=.692

Appendix Table C.8. Predicting New Arrest by STEPS Staff Training and Report of Skills Usage (includes all four groups)

		Odds Ratio	Significance
STEPS Staff Training and Report of Skills Usage (No Training or Trained but do not Report Skill Usage is Reference Category)	Trained and used skills *once*	1.063	.555
	Trained and used skills *twice*	1.068	.643
	Trained and used skills *three or four times*	.835	.362
	Trained and used skills *at least five times*	.651	.076
Risk Level (Low Risk is Reference Category)	Below average	1.297	.214
	Average	2.116	.000
	Above average	2.574	.000
	High	3.671	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	1.618	.002
	Theft/fraud	2.003	.000
	Firearm	1.447	.137
	FTA	1.139	.565
	Traffic: non-DUI	1.696	.044
	Non-violent misd.	1.508	.049
	Violent	1.018	.913
	Other	1.134	.557
Nonwhite		.745	.000
Female		.712	.000
Age		.984	.000
Days on Supervision		1.002	.000
Constant		.031	.000
Model X^2		281.573	p=.000
Nagelkerke R Square		.056	
AUC-ROC		.674	p=.000
AUC-ROC Confidence Intervals		Lower=.655	Upper=.692

Appendix Table C.9. Predicting Tech. Violation by STEPS Staff Training and Report of Skills Usage (includes all four groups)

		Odds Ratio	Significance
STEPS Staff Training and Report of Skills Usage (No Training or Trained but do not Report Skill Usage is Reference Category)	Trained and used skills *once*	1.014	.868
	Trained and used skills *twice*	.901	.394
	Trained and used skills *three or four times*	1.040	.790
	Trained and used skills *at least five times*	1.133	.434
Risk Level (Low Risk is Reference Category)	Below average	2.438	.000
	Average	3.323	.000
	Above average	4.800	.000
	High	7.047	.000
Charge Category (Traffic: DUI is Reference Category)	Drug	2.511	.000
	Theft/fraud	1.711	.000
	Firearm	1.843	.002
	FTA	1.458	.030
	Traffic: non-DUI	1.249	.358
	Non-violent misd.	1.196	.330
	Violent	.866	.298
	Other	1.065	.727
Nonwhite		.942	.331
Female		.941	.394
Age		.992	.007
Days on Supervision		1.00	.935
Constant		.021	.000
Model X^2		566.881	p=.000
Nagelkerke R Square		.087	
AUC-ROC		.698	p=.000
AUC-ROC Confidence Intervals		Lower=.683	Upper=.712