NEW YORK STATE | Division of Criminal Justice Services | Research Consortium

Validation of the New York Release Assessment (NYRA) in Dutchess County: Research Brief

Practitioner
Dutchess County Office of Probation and Community Corrections

Academic Partner
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Summary
Researchers from John Jay College of Criminal Justice partnered with the Dutchess County Office of Probation and Community Corrections to evaluate the New York Release Assessment (NYRA) and its role in structured pretrial decision-making. The study assessed the tool's predictive accuracy, equity across demographic groups, and alignment with national benchmarks. Findings indicate that the NYRA meaningfully distinguishes risk in a pretrial population and performs equitably across gender, race, and age groups.

Background

Over the past several decades, criminal justice agencies have increasingly adopted structured risk assessment tools to improve the consistency, transparency, and reliability of pretrial release decision-making. Previous approaches to risk assessments relied heavily on professional judgment, which often produced inconsistent and less reliable outcomes. Differences in population characteristics, court practices, supervision capacity, and court appearance rates can affect both predictive accuracy and calibration, making local validation a critical priority for judicial decision-makers.

The New York Release Assessment (NYRA) was developed as a structured actuarial instrument designed to estimate the likelihood that a defendant will fail to appear (FTA) in court. Consistent with New York State law, the NYRA includes only items empirically linked to court appearance outcomes, rather than public safety risk. Dutchess County implemented the NYRA to support structured, fair, and transparent pretrial decision-making and sought to assess whether the tool performed accurately, transparently, and equitably within their local context.

The NYRA is based entirely on administrative records, drawing from three empirically grounded domains to predict pretrial failure:

1. Pending cases, reflecting current criminal justice system involvement
2. Bench warrant history, capturing relevant past non-appearance behavior (one of the strongest indicators of future FTA), and
3. Criminal conviction history, summarizing prior justice involvement and patterns of offending behavior associated with general recidivism risk.

Individual items are scored and summed up to produce a total NYRA score, classifying the individual into one of four classification bands that represent the increasing likelihood of failing to appear in court. These bands range from 1 (lowest likelihood of failure to appear) to 4 (highest likelihood of failure to appear). The tool itself does not determine if a person is released or detained but provides structured guidance to support individualized judicial discretion and inform pretrial decision-making.

Evaluation Overview

In 2025, researchers from John Jay College of Criminal Justice conducted a validation study of the NYRA in Dutchess County. The study examined 3,421 defendants screened with the NYRA between February 2023 and August 2024 and includes all individuals processed by the county during the study period. The evaluation aimed to determine whether the tool accurately predicted failure to appear, whether its classifications meaningfully distinguished levels of pretrial risk, and whether it operated consistently across demographic groups. Additionally, the study examined patterns of alignment between NYRA risk classifications and pretrial release decisions in Dutchess County.

NYRA records were linked to court, booking, and arrest records to capture prior criminal involvement, pending cases, bench warrants, demographic characteristics, and pretrial release outcomes. The study focused on four key outcomes measured within a one-year follow-up period: failure to appear in court, misdemeanor arrest, felony arrest, and violent felony arrest.

Researchers explored potential variation in the application of NYRA through comparisons of risk bands across gender, race, and age categories, and each of the outcomes measured.[1] To evaluate predictive validity, researchers estimated receiver operating characteristic curves and area under the curve (AUC) for each outcome. To examine potential differences in predictive validity, the research team compared AUC values across demographic categories.

Results/ Findings

The evaluation included 3,388 adults screened with the NYRA in Dutchess County. A small number of cases were excluded from analyses due to missing data, unknown gender, defendant death, or other circumstances. The final sample was predominantly male (80%), white (53%), and 25-39 years old (50%). NYRA risk classifications were distributed equally across Bands 1, 2, and 4, with 29 percent of the sample in each band. About 14 percent of the sample was classified into Band 3, a pattern that may justify a closer examination in future recalibration efforts.[2] Analyses of classification across demographic groups suggest the NYRA classifications are stable across gender, while variations observed among race and age may be due to limited sample sizes and should be monitored in future analyses.

Dutchess County NYRA Characteristics of Individuals Screened

		#	%
Total Screened		**3,130**	**100%**
Sex	Male	2,507	80%
	Female	623	20%
Race	White	1,669	53%
	Black	1,352	43%
	Other/ Unknown	109	4%
Age	<25 yrs	361	12%
	25-39 yrs	1575	50%
	40-55 yrs	909	29%
	55+ yrs	285	9%
NYRA Risk Distribution	Band 1	903	29%
	Band 2	875	29%
	Band 3	440	14%
	Band 4	912	29%
Release Decisions	Released	2,386	76%
	Detained	744	24%

Higher NYRA classifications were associated with lower probabilities of pretrial release across most demographic groups. Females were more likely than males to be released within each risk band. Across race and age groups, release probabilities declined as NYRA classification increased, indicating that the relationship between assessed risk and release decision was consistent across subgroups.

Analysis of pretrial outcomes over a one-year follow-up period indicated a consistent relationship between NYRA risk levels and the likelihood of failure to appear and new arrests. Individuals in higher risk bands experienced higher rates of court nonappearance and rearrest, with the strongest differences observed for failure to appear and felony offenses. Patterns for misdemeanors and violent felony recidivism followed a similar trend, although violent offenses were relatively rare. Across all analyses, the NYRA demonstrated reliable predictive accuracy

1. Note that ethnicity was not available in the data. Race categories included black, white, and other.
2. All percentages are rounded to the nearest whole number therefore totals may not sum to 100%.

and consistent performance across gender, race, and age subgroups. Although modest variations were observed, particularly in felony arrest outcomes across racial subgroups, these differences were limited in magnitude and did not indicate systematic over- or under-classification. Overall, the NYRA showed meaningful risk differentiation, aligned closely with national benchmarks for pretrial assessment tools, and provided a credible, evidence-based foundation for informing pretrial decision-making in Dutchess County. With continued monitoring and periodic refinement, the NYRA offers a strong framework for supporting equitable and informed decisions throughout the pretrial process.

Recommendations

Researchers recommend maintaining and strengthening performance over time:

1. Routinely analyze individual items.
2. Refine risk categories to better group cases. Clarify communication and expectations.
3. Incorporate consistent implementation practices.
4. Conduct periodic validation reviews.

Recommendations:

1. Routinely analyze individual items.

To ensure the tool is both fair and effective, individual items should be examined. This creates an evidence base if specific factors are:

- Disproportionately influencing risk scores
- Providing limited predictive value
- Contributing to differences across demographic subgroups

2. Refine risk categories to better group cases.

The current concentration of cases in specific bands suggests a potential need to recalibrate thresholds, creating a more balanced spread. This ensures the tool provides meaningful distinctions that help stakeholders better interpret differences and make clear pretrial decisions.

3. Incorporate consistent implementation practices.

To maintain the integrity of the data, departments should continue to prioritize structured training, standardized documentation, and routine audits. Consistent scoring is the foundation of the tool's predictive power and clear protocols ensure that it remains a reliable decision-making instrument, rather than a prescriptive mandate.

4. Conduct periodic validation reviews.

Full revalidation studies should be conducted regularly (e.g., every 3–5 years) or following major policy or practice changes. Findings from ongoing monitoring and revalidation should inform incremental updates to the NYRA, supporting transparent, data-driven refinements. This approach helps maintain public confidence in fair and evidence-based pretrial decision-making.

About the Research Consortium

An initiative of the state Division of Criminal Justice Services, the Research Consortium promotes criminal justice research and the use of data and evidence by facilitating partnerships between local practitioners and college and university-based researchers. The research design and conclusions detailed here are the sole work product of the academic partner that conducted the research. Neither DCJS nor the State of New York endorse the program, methodology or results.