

## Racial Bias and Amelioration Strategies for Risk Assessment

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Over the last 40 years justice agencies have utilized risk and need assessments (RNAs) to guide supervision and program placement decisions. In the current day and age it is nearly improbable for an individual to contact the justice system and not be administered and RNA. Despite their wide-spread use many tools were developed decades prior and have yet to be updated to deal with modern issues of bias.

In 2016 ProPublica completed a review of the COMPAS risk assessment in Broward County Florida (see Angwin, 2016<sup>1</sup>). Despite longstanding claims that RNAs are ‘race-neutral’, ProPublica’s report uncovered substantial issues. Specifically, when comparing similarly scored White to minority individuals, White individuals recidivated at a much greater rate. This, and other related research, have identified that nearly all currently used RNAs *overclassify* minorities, mis-categorizing these individuals into higher risk categories. The findings of recent studies identify that criminal history measures, representing a substantial portion of RNA items, contain inherent racial bias (see Butler et al., 2022<sup>2</sup>; Miller et al., 2022<sup>3</sup>). More specifically, with law enforcement strategies targeting high-crime (and often minority) neighborhoods, there is a greater likelihood for minority residents to come into contact with the justice system and retain a criminal record. This well-known effect known as *disproportionate minority contact* (DMC) inflates criminal history records and provides an unequal assessment via RNAs.

To counteract these issues, the Pennsylvania Department of Corrections (PDOC) contracted with Vant4ge to create and implement an RNA that limited-to-no racial bias. Based on the development of the Static Risk Offender Needs Guide – Revised (STRONG-R) researchers optimized the tool for PDOC in an effort to reduce overclassification. First, using existing STRONG-R data, a matched sample of PDOC individuals were selected. This allowed for race/ethnicity and other demographic information to be equated prior to tool development. Next, statistical modeling was used to select and weight items to predict recidivism for the PA population. Finally, items identified to contribute to racial bias were strategically removed, allowing for a greater representation of non-criminal history item inclusion.

Through multiple iterations and modifications, the developed tool demonstrated some of the strongest predictive estimates seen in modern RNA development. Further, comparisons between groups identified racial parity, or the near absence of bias or overclassification. Delivered as part of PDOC’s prison and community case management system, the Pennsylvania

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<sup>1</sup> Angwin, J., Larson, J., Mattu, S., & Kirchner, L. (2016). Machine bias. In *Ethics of Data and Analytics* (pp. 254-264). *Auerbach Publications*.

<sup>2</sup> Butler, Hamilton, Krushas, Kigerl, & Kowalski. (2022). Racial Bias and Amelioration Strategies for Juvenile Risk Assessment. In *The American Society of Criminology Division on Corrections & Sentencing Handbook*.

<sup>3</sup> Miller, W. T., Campbell, C. A., Papp, J., & Ruhland, E. (2021). The contribution of static and dynamic factors to recidivism prediction for Black and White youth offenders. *International journal of offender therapy and comparative criminology*.

STRONG-R outlined a best-practice model for optimizing RNA development for agency needs that demonstrates a potential to be replicated by other states in an effort to remove bias known to plague correction assessments.