

# Introduction

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In 2009, I published *A Question of Evidence: A Critique of Risk Assessment Models in the Justice System*. This paper identified problems with both the logic and research that support many of the risk assessment models used in the adult and juvenile justice systems. Unfortunately, the issues addressed in that paper remain in force today, further complicated by increased expectations emanating from new methods of analysis. Excitement generated by extremely complex analytical methods has helped propel the belief that mathematical formulae can be applied to a wide variety of circumstances and decision points. As a result, some IT system integrators have taken steps to position themselves to participate and profit from a growing dependence on large-scale quantitative analysis, especially in the area of risk assessment. But success in one area does not mean that such methods can or should be applied to all decision points. While these methods may work well in predicting macro trends, there is little evidence that they can improve predictions of individual behavior. Such predictions would be riddled with false positives and false negatives. No methodology, no matter how sophisticated, can be so precise when it comes to predicting the behavior of individuals. And yet, even before the introduction of these seemingly sophisticated methods of analysis, the social sciences

began to adopt language that incorporates terms implying such precision. Risk classification has become risk “prediction”; correlations are frequently referred to as “effect size”; and needs that correlate, albeit modestly, with recidivism are called “criminogenic,” implying causation.

The first problem is that the role group data can play in individual decision making is, by definition, limited; and, as some including NCCD have noted, misapplication is fraught with both ethical and logical problems. NCCD has long supported the idea that group data have a place in decision making, but agencies need to exercise great care with how these data are used at the level of individual cases. Risk assessment is, for example, now used at sentencing and in parole board hearings. Such application is not entirely new, but growing confidence in the power of numbers has led to a reduction in safeguards previously considered crucial. The original Minnesota Sentencing Guidelines, for example, limited risk factors to those related to an individual’s prior record. Today, many risk instruments contain socioeconomic factors and rather crude measures of an individual’s psychological condition, and, as many have pointed out, use of such instruments at these decision points may be discriminatory and unconstitutional.

Applying statistical probabilities to individuals is raising questions in other fields as well. A 2014 article by Paul Kalanithi in the *New York Times* described the problem doctors face in applying information gleaned from group data to individual patients. It is one thing to know where patients with certain characteristics and medical histories fall on a survival curve; it is quite another to project how long a specific patient will survive. Kalanithi concludes that it is “impossible, irresponsible even, to be more precise than you can be accurate.” Yet that is exactly what assessment models used in adult and juvenile corrections systems do when “criminogenic needs” are identified as those that should be addressed in case planning and that “non-criminogenic needs” are unimportant. This practice, quite simply, implies a level of precision that cannot be justified.

Throughout the nation, over-reliance on statistics has, in fact, created a climate where abuse is commonplace. Examples of data being misunderstood, misused, and misreported abound. Several books, including *Proofiness: The Dark Art of Mathematical Deception*, detail how data have been cleverly manipulated to support particular viewpoints by the business community, politics, and science.



The social sciences, including corrections, have been victimized by such misrepresentation in the past, and the results have sometimes proved devastating. The massive growth in incarceration, for example, was driven to a large extent by seriously flawed analysis of the relationship between crime and incarceration rates, leading to policies that have not only cost taxpayers billions of dollars but have decimated African American communities throughout the nation. Policymakers, both liberal and conservative, are only now coming to grips with just how damaging this movement has been.

This over-reliance on statistical models is every bit as dangerous as failing to use data to help drive decision making. While NCCD has long supported the use of risk assessment and continues to do so, much of what has been published in the field over the last 15 to 20 years on risk assessment is based on suspect logic and poorly conducted research.

This series of briefs, titled *A Question of Evidence: Part Two*, will focus on adult and juvenile justice assessment models currently in use throughout the United States, Canada, and Europe. A recent review of the research behind these models indicates that much of what has been produced over the last two decades may well be far less evidence-based than their developers claim. Further, products of this research are often misapplied, thereby raising expectations far beyond what can be legitimately accomplished with risk assessment.

The purpose of this series is to clarify issues facing administrators charged with selecting risk assessment models. Administrators need to ensure that decisions are based on the best available information. These briefs address problems discovered during a thorough review of available risk models.

I acknowledge that some issues raised will be controversial given the level of acceptance particular concepts have attained. However, I feel that issues raised here and by the above-noted authors, as well

as by others with extensive experience in the field, are a clear indication of the need to inject clarity and transparency into the rhetoric currently dominating literature on risk assessment in adult and juvenile justice. A short description of each brief is presented below.

## **The Generations Myth**

The justice field has come to understand assessment models in terms of the “generation” each is said to represent. It is implied, and sometimes explicitly stated, that each succeeding generation offers greater “predictive” capacity. This brief explores the origins of those claims and discusses the promotional strategies that led to widespread acceptance of the “generations” terminology and associated claims.

## **Criminogenic Needs**

Criminogenic needs (often referred to as “dynamic risk factors”) have dominated the literature on risk assessment for years. While assessing needs is a critically important component of assessment, much of what is advocated conflates the roles of group data and the actual treatment needs of the individual. This brief identifies flaws in the logic employed to support the use of criminogenic needs in risk assessment and discusses the appropriate role of needs assessment in case planning and service delivery.

## **Developing and Validating Risk Assessment Instruments for Justice Agencies**

This brief explores the research behind many current models, discusses methods commonly used to measure “predictive power,” and outlines what is required to measure the efficacy of various approaches to risk assessment.



## **Structured Professional Judgment Models**

While other fields have moved to more structured decision-support systems, the justice field has seen the development and promotion of less structured approaches to risk assessment, commonly referred to as structured professional judgment (SPJ) models. This brief discusses the research behind this approach, including concerns with validity, reliability, equity, and utility of SPJ models.

## **Summary and Recommendations**

This final brief summarizes the major problems identified throughout the series regarding risk assessment models, then goes on to suggest four steps toward remedying those problems.